



Sustainable entrepreneurship development in Oman: A multi-stakeholder qualitative study

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Purpose: Even though sustainable entrepreneurship has increasingly received researchers' attention in recent years, the topic remains rather under-researched in natural resources' rich Arabian gulf countries such as Oman. Hence, the current paper fills this gap in the literature and is one of the first attempts to assess the state of sustainable entrepreneurship development in Oman from a multi-stakeholder perspective.

Design/Methodology/Approach: The current paper uses a qualitative research approach where in-depth semi-structured interviews were undertaken with twelve (12) respondents representing relevant stakeholders of sustainable entrepreneurship development in Oman. Our interviewees included four (4) sustainable entrepreneurs, four (4) policy makers, and four (4) educationists representing entrepreneurial skills development institutes in Oman.

Findings: Our findings highlight that despite some positive improvements, several critical challenges remain, which hinder sustainable entrepreneurship development. We further found the role of FinTech to be critical in this concern by all stakeholders, though its usage and acceptance remain low. Also, the costs associated with the post-carbon (sustainable) economy and different profitability evolution have resulted in a slow change in the policy development in this concern. From educational (skills development) perspective, a lack of context specific training programmes and culture-based hesitations appeared to be hindering achieving sustainable entrepreneurship possibilities in Oman. The premature entrepreneurial ecosystem, bureaucracy, and lack of human capital (attaining as well as retention) appeared to be significant challenges for entrepreneurs. Finally, our findings highlighted the need for cross-sector collaboration with clear benchmarks for effective policy development concerning sustainable entrepreneurship in Oman.

Originality: The current paper is the first academic study explicitly highlighting the state of sustainable entrepreneurship in Oman by incorporating the development initiatives as well as the major challenges in the analysis. Secondly, our study is also a pioneering work specifying the interlinkage between financing (FinTech), policy initiatives and skills development, and the development of a sustainable entrepreneurship ecosystem in an under-researched context of Oman. Finally, the transition to a sustainable economy is challenging in natural resources' dependent economies like Oman, as it needs to be supported by the mindset change in the larger society (legitimacy). In this concern, our paper is one of the first academic endeavours to also specify the role of legitimacy from the perspective of different stakeholders (and larger society) for sustainable entrepreneurship development in such contexts.

Paper Type: Research Paper

Key Words: Entrepreneurship, FinTech, Oman, Skills Development, and Sustainable.

1. Introduction

There is increasing recognition in the extant literature that to achieve sustainable development goals (SDGs) set by the UN, a major shift needs to take place towards sustainable energy resources, thereby moving away from carbon-based resources like oil and gas (e.g., Dodds *et al.*, 2016; Fu and Ng, 2020). This significant shift due to increasingly visible environmental challenges has resulted in a transition process in firms and countries (e.g., Laurent, 2020). However, such a transition becomes challenging in countries like Oman (and other Gulf countries), which have built their economic prosperity in the last few decades based on carbon-based resource exploitation and exports (e.g., Beblawi, 2020). At the same time, alongside environmental sustainability, social sustainability is increasingly a visible need and a policy challenge in such countries (Azar and Raouf, 2017), although the focus on this specific aspect in academic discourse has been rather limited. There is significant evidence in the literature that sustainable entrepreneurship initiatives have specific financing needs, including raising startup capital (Bocken, 2015; Schaper, 2016; Vismara, 2019) because profitability and scale achievement in such cases differ from traditional business ventures (e.g., Youssef *et al.*, 2018; Schimpeter and Bungard, 2022). In the context of financing, the role of FinTech has been referred to as being critical as it opens doors for financing for entrepreneurs who in the past, may be restricted by strict criteria of traditional banks or had to solely rely on the local (home country) financing whether public or private (Reyes-Marcado, 2021; Arslan *et al.*, 2022a). Fintech is the range of digital financing technologies, including mobile payment platforms, artificial intelligence, big data, IoT, blockchain, and cryptocurrencies (Reyes-Marcado, 2021). The total Fintech investment in 2021 reached \$210 billion invested globally, showing a continuing trajectory of growth not influenced by even the COVID-19 pandemic that much (KPMG, 2022). Fintech's constant growth has been fuelled by the sharing economy's success, increasingly supportive regulations, constant innovations in ICT, and the rise of Industry 4 globally (Sun *et al.*, 2022). FinTech has specifically been highlighted as a core driver toward the development and success of sustainable ventures because of the reduced cost of capital, as well as scale and speed in matching investors with entrepreneurs (Pizzi *et al.*, 2021). As a result, FinTech has been recognised by the United Nations also as a critical player in achieving sustainable development goals (Michael *et al.*, 2022; Tao *et al.*, 2022). Hence, an assessment of the role of FinTech is increasingly critical for any academic study focusing on sustainable entrepreneurship.

However, it should be noted that financing and FinTech are not the only vital elements for developing successful sustainable entrepreneurial ventures. Prior studies have highlighted that a sustainable institutional environment supplemented with favourable and targeted policies (Hummels

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3 and Argyrou, 2021), as well as the availability of critical human capital (with specific skills to
4 contribute to such ventures), are required (Lasardo and Pereira, 2018; Argade *et al.*, 2021). Along
5 with these factors, sustainable entrepreneurship is significantly influenced by legitimacy and
6 acceptance by the larger society as well as key stakeholders (e.g., Pankov *et al.*, 2021). As a result, a
7 multiple stakeholder analysis is needed to develop a relatively comprehensive understanding of
8 sustainable entrepreneurship development. So far, no prior study (at least to our knowledge) has
9 specifically undertaken an analysis of sustainable entrepreneurship development in Oman, although
10 entrepreneurship is a critical element of the Oman 2040 vision. Hence, there is a visible gap in the
11 literature, which our study aims to fill. We undertake an exploratory qualitative assessment based on
12 interviews with stakeholders representing three critical sections linked to sustainable
13 entrepreneurship development in Oman (Entrepreneurs, policy makers, and education/skills
14 development institutes). By incorporating the views of stakeholders from these diverse backgrounds,
15 our paper does not suffer from the limitation of narrow segment-specific analysis (based on the
16 perceptions of only entrepreneurs, policymakers, or skills development institutes) but rather aims to
17 present a picture with input from all critical segments. Hence, we build on the prior works like that
18 of Shane *et al.* (2003) on general entrepreneurship and Argade *et al.* (2021) on sustainable
19 entrepreneurship, where it is suggested to incorporate both individual entrepreneurial factors and
20 external factors in the analysis for these specific topics.
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34 By doing so, we offer three major contributions to the extant sustainable entrepreneurship,
35 FinTech, and policy literature. Firstly, our paper is the first study explicitly highlighting the state of
36 sustainable entrepreneurship in Oman by incorporating the development initiatives as well as the
37 major challenges in the analysis. Secondly, our study is also a pioneering work specifying the
38 interlinkage between financing (FinTech), policy initiatives and skills development, and the
39 development of a sustainable entrepreneurship ecosystem in an under-researched context of Oman.
40 Finally, the transition to a post-carbon economy is challenging in natural resources-dependent
41 economies like Oman, as it needs to be supported by the mindset change in the larger society
42 (legitimacy). In this concern, our paper is one of the first academic endeavours to also specify the
43 role of legitimacy from the perspective of multiple stakeholders for sustainable entrepreneurship
44 development, particularly in the context of economies aiming to transition from carbon-based to non-
45 carbon based.
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54 The rest of the paper is organised as follows. The next section presents a brief literature
55 review, followed by a discussion of the research methodology and a presentation of study findings.
56 The paper concludes by presenting study implications, limitations, and future research directions.
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2. Literature Review

Sustainable entrepreneurship, like the main field entrepreneurship, has been defined, conceptualised, and perceived in several ways by scholars according to the context and focus of their studies. However, the elements of ecological, social, and, in some cases, economic sustainability are always there in these definitions. For example, Pinske and Groot (2015: 634) define sustainable entrepreneurship as “the discovery, creation, and exploitation of entrepreneurial opportunities that contribute to sustainability by generating social and environmental gains for others in society”. In another work, Belz and Binder (2017:2) define this concept as the “recognition, development and exploitation of opportunities by individuals to bring into existence future goods and services with economic, social and ecological gains.” Prior studies on sustainable entrepreneurship have usually highlighted the role of individual factors like motivations and perceptions (e.g., Hoogendoorn *et al.*, 2019), prior knowledge and experience (e.g., Belz and Binder, 2017), entrepreneurial values and sustainability orientation (Munoz and Cohen, 2018). Recently, contextual factors, including institutional dynamics and policies, have received the attention of researchers in this area (e.g., Lindgreen *et al.*, 2018; Argade *et al.*, 2021).

In this concern, it is important to mention that sustainable entrepreneurship is significantly more complex than regular entrepreneurship due to the need to combine the pursuit of self-interest and collective interests (Pinkse and Groot, 2015). The additional complexities are related to the discrepancy between social value creation (which is the primary concern of sustainable entrepreneurs) and private value or profit (Belz and Binder, 2017; Hoogendoorn *et al.*, 2019). Hence, the barriers faced by sustainable entrepreneurs tend to be higher than regular entrepreneurs as well. For example, access to financing is a common barrier mentioned in the entrepreneurship literature. However, for sustainable entrepreneurs, this issue can be further complex because of standardised measures used for the evaluation of business performance by many banks and investors, which tend not to include value creation (social and environmental) by such ventures (Lindgreen *et al.*, 2018). Hence, such ventures may be perceived as less profitable by traditional financiers like banks as their yield returns and timescales tend to be different, and the value created by them is subjective (Davies and Chambers, 2018). As a result, the role of FinTech is critical for sustainable entrepreneurial ventures, as highlighted earlier in this paper. FinTech offers reduced cost of capital, as well as scale and speed in matching sustainability-conscious investors with entrepreneurs (Pizzi *et al.*, 2021), and offering crowdfunding possibilities (Galic and Shevchenko, 2020; Tenner and Horisch, 2021).

It has been argued earlier in this paper that a sustainable institutional environment supplemented with favourable and target policies is needed for the development of sustainable entrepreneurship

(Hummels and Argyrou, 2021), particularly in countries like Oman, which are going through a significant paradigm shift. The role of a supportive institutional environment and friendly policies has long been established as being critical for entrepreneurship development (e.g., Salimath and Cullen, 2010). In the specific context of sustainable entrepreneurship development, the role of institutions has been highlighted as a major element in studies focusing on other Gulf countries in recent studies as well (Azar and Raouf, 2017; Alfalih, 2021). Institutional influences are also closely related to the concept of legitimacy, which is also found to play a critical role in sustainable entrepreneurship development (Pankov *et al.*, 2021). Finally, the issue of skills development and targeted training for sustainable ventures to access the talent they need to succeed is important as highlighted earlier (Lasardo and Pereira, 2018; Argade *et al.*, 2021). There has been evidence in the literature that many university programs and degrees are not able to incorporate these skills in many cases unless there is a dedicated orientation for that (Fichter and Tiemann, 2018). However, so far, all these elements have been assessed together in relation to sustainable entrepreneurship in resource-based economies such as Oman. Hence, we undertake an exploratory qualitative assessment of sustainable entrepreneurship develop from multiple stakeholder perspectives, as explained further in the forthcoming section.

3. Research Methodology

3.1 Data Collection

This section provides a thorough analysis of the research activities we undertook during our data collection and analysis processes, which demonstrates the degree of rigour involved in our research (Gioia *et al.*, 2013; O'Reilly *et al.*, 2012). This also shows the level of reliability and validity of our research (Gibbert and Ruigrok, 2010). The methodology adopted is a qualitative one, with an interpretive philosophy. The research design was exploratory, and the raw data was gathered via in-depth semi-structured interviews with 12 participants, all in Oman. Our interviews ended after the 12th participant was interviewed, as data saturation was observed at this stage. The interviewees included– 4 sustainable entrepreneurs, 4 policymakers and 4 skills development practitioners (trainers). Given the well-defined characteristics of our participants (Saunders *et al.*, 2019), we adopted a purposive sampling approach (White *et al.*, 2018). Our respondents can be considered very well informed as they are one of the few individuals in the country who are directly involved with sustainable entrepreneurship, skills development, policy making and FinTech development in the country. The key characteristics of study respondents (interviewees) are summarised in the following table 1 while ensuring their anonymity.

Insert Table 1 here

In the in-depth semi-structured interviews, we followed McConville *et al.*'s (2018) recommendation on exploring each participant's experience in detail. Therefore, we wrote a set of guided questions, follow-up questions and several probes to help us ascertain each participant's opinion on sustainable entrepreneurship in the Omani context in detail. During the conversations, we observed Liu and Rong's (2015) recommendations that each participant is allowed ample time to respond to each question in their way without being interrupted. Therefore, we allowed each participant to elaborate freely on their views on 1) sustainable entrepreneurship in Omani context, 2) their link to sustainable entrepreneurship, 3) opportunities, 4) challenges and difficulties, 5) sustainable entrepreneurship policies, 6) skills development, training and human capital situation linked to sustainable entrepreneurship, and 7) any other useful and relevant information concerning state of sustainable entrepreneurship in Oman. Consent was sought via emails sent to each participant. Consequently, willingness to participate was high, but not without some stipulations. For example, participants requested that the conversations be paused at their requests to enable them to attend to their urgent professional needs, at times. Due to Covid-19 restrictions at that time, the interviews occurred via videoconferencing. We undertook the interviews between August 2021 and January 2022.

3.2 Data Analysis

3.2.1 Structuring the data analysis

Our data analysis process draws from Braun and Clarke (2006) six-stage process of qualitative data analysis. These include: Data familiarisation; Generating the initial codes; Searching for themes; Reviewing the themes; Re-definition and renaming of themes; and Report writing. To familiarise ourselves with our raw interview data, we listened to the recorded audio data a few times before transcription. After transcription, we also crosschecked (the transcribed data against the raw data) to ensure nothing was omitted. We then generated the initial codes, tagged, and grouped the data sets based on similarities in their meaning, and assigned each data group a code. This grouping and coding facilitated the thematic analysis, as each data group was assigned a theme. Based on the literature review (and the key issues addressed in this research), we wrote three distinctive statements (i.e., the themes) to show the link between entrepreneurial policies, entrepreneurial education (skills development), and sustainable entrepreneurship in the Omani context. At this stage, we then put the data analysis process (and the entire work) to peer scrutiny, where we spent a few days vetting each

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3 other's contributions before sending the entire work to two critical friends for review. Following the
4 reviews, we had to recode and regroup a few data units until a consensus was reached. Due to the
5 recording and regrouping, to help enhance the readers' understanding of the significant relationships
6 among the various constructs in our study, we, therefore, had to redefine and rename some of the
7 themes. Finally, we produced a robust report which further clarified and strengthened the relationship
8 between our data and the corresponding literature. To achieve this purpose, we moved back and forth
9 between the interview responses and the literature to ensure an extensive comparison and connection
10 between the findings and the dominant theory (Liu and Rong, 2015; Alo, 2020).

17 **3.2.2 Building the theoretical argument**

21 Given the level of rigour required to connect the views of the entrepreneurs, policymakers,
22 and skills development practitioners, ideas from the "Eisenhardt Method" were too fascinating to
23 ignore. A renowned method for building a theoretical argument that hooks the readers' attention in
24 case study research is the "Eisenhardt Method" (Eisenhardt, 2021; Eisenhardt, 1989). To attain such
25 a robust theoretical argument needed to address our research questions, we also draw insights from
26 Yin's (1984) work on cases and repetition logic, as well as Glaser and Strauss' (1967) theoretical
27 sampling and saturation and iterative process of continuous comparison of data and theory.

33 Given the lack of prior theory and/or empirical evidence that explores the relationships
34 between entrepreneurial policies, entrepreneurial education, and entrepreneurial practice in
35 developing sustainable entrepreneurship in the context such as Oman; there is a high likelihood that
36 our results will provide abundant opportunities for building theories (Eisenhardt, 2021). By linking
37 sustainable entrepreneurial policies, skills development (education), and practice in Oman, our
38 research questions also explore an uncharted territory in a relatively well-researched domain
39 (Eisenhardt, 2021). Our research questions can also be seen as examining inside the "black box" of a
40 process [of achieving sustainable entrepreneurship] (Bingham and Eisenhardt, 2011). To answer our
41 research questions, our research will extend into the vast entrepreneurial (e.g., Shane *et al.*, 2003) and
42 sustainable entrepreneurship literature (e.g., Argade *et al.*, 2021) that explores how entrepreneurial
43 education and policies help entrepreneurs engage in behaviours that produce sustainable
44 entrepreneurship in Omani context – which is also the focus of our research questions and interview
45 questions (Eisenhardt, 2021).

56 Furthermore, by focusing on a unique setting (i.e., entrepreneurs, policymakers, and skills
57 development practitioners in Oman) and theoretical sampling (i.e., a careful case selection of only
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individuals that belong to these categories), our sampling method not only eliminates cases of non-theoretical interest (e.g., not belonging to either of these three groups), but enhances the generalizability of the emergent theory (Eisenhardt, 2021). Yet, similarities and differences in findings from such multiple cases (with the same focal point) has the potential to enrich the theoretical focus (Eisenhardt, 2021) i.e., sustainable entrepreneurship; along with enriching the empirical focus (Eisenhardt, 2021; Hallen and Eisenhardt, 2012) i.e., Oman.

Finally, to help us achieve a fit between our raw interview data and the dominant theory, we adopted a persistent and creative iteration process (Eisenhardt, 2021, 1989). Past researchers have suggested the creation of more abstract conceptualisation (Walsh *et al.*, 2015), through continuous comparison (of data and dominant theories) (Glaser and Strauss, 1967) and repetition of logic (Yin, 1984), facilitated by iterative (re) organisation and (re)grouping of the raw data (Braun and Clarke, 2006), as such methodical rigour helps to justify why particular emergent relationships between constructs are likely to hold (Eisenhardt, 2021). Our analysis takes insights draw from these methodological scholars' recommendations.

4. Findings

This section shows participants' responses to our interview questions and addresses our two research questions. Specifically, responses from the policymakers show that Oman recognises the importance of sustainable entrepreneurship when making policies that govern the conduct of entrepreneurs in the country. Similarly, responses from entrepreneurial skills development practitioners also show that sustainable entrepreneurship is embedded in their education curriculum. It was not surprising that the entrepreneurs' responses show that they pursue sustainable entrepreneurship in their day-to-day practice. To help us make sense of the raw interview data, we have used three themes that we have termed – *linking entrepreneurial policy-making with sustainable entrepreneurship*, *linking entrepreneurial education with sustainable entrepreneurship*, and *linking entrepreneurs' day-to-day practice with sustainable entrepreneurship* – to help us present and analyse the interview quotes.

4.1. Linking entrepreneurial policy-making with sustainable entrepreneurship

Despite the fact that sustainable entrepreneurship development in Oman is still embryonic, participants reveal policymakers' efforts to develop policies that aim to improve the lives of the community through sustainable entrepreneurship, despite inherent hindrances faced. The next set of quotes links such policies to a positive entrepreneurial culture and serving humanity:

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3 “Developing entrepreneurship in Oman only started in 2013...and there are still small efforts
4 to get on there...for instance, access to finance is still an issue...the entrepreneurs are still
5 trying to showcase successful models, trying to serve humanity, the community...” (Policy
6 maker 1).

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8 “I think the role of the education is extremely important... Education provides graduates with
9 the right training, the right skill sets, the right mindsets. This is very important...education is
10 the foundation, as it makes people just think differently” (Policy maker 2).

11
12 “The government also provides some incentives...the government asks you to hire Omanis and
13 you don't pay them a salary, but the government pays that. And in 2022, the government pays
14 half of Omanis employees' salaries. So that is another incentive that is already in place” (Policy
15 maker 3).

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17 “... the majority, say 80 to 85 percent [of entrepreneurs] are probably driven by the idea of
18 creating alternative employment for people other than seeking government jobs. Mostly, the
19 government is saying we don't want people to be looking for government jobs because there
20 aren't any...” (Policy maker 4).

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23 The role of a supportive institutional environment and friendly policies for the development of
24 sustainable entrepreneurship has also been highlighted (Azar and Raouf, 2017; Alfalih, 2021).
25 Previous studies (e.g., Pinske and Groot, 2015: 634) also view sustainable entrepreneurship as “the
26 discovery, creation, and exploitation of entrepreneurial opportunities that contribute to sustainability
27 by generating social and environmental gains for others in society”.

31 32 4.1.1 Challenges

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34 Despite some positive developments as highlighted above, participants also lamented some of
35 the hindrances to achieving sustainable entrepreneurship development in Oman. The next set of
36 quotes shows issues around culture, lack of up-to-date policies, bureaucracy, lack of funding, and
37 lack of popularity of FinTech:
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42 “When it comes to the cultural side...I think where we are still very far away in terms of the
43 latest literature and latest policy policies around entrepreneurship. When it comes to business
44 hindrance, generally, whether it's a start up or a large company, is government bureaucracy,
45 red tape, labour related regulations. When it comes to financing, the same usual requirements
46 with collateral makes it very difficult to get funding” (Policy maker 1).

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48 “I think in Oman right now, the entrepreneurial culture, the entrepreneurial spirit, the
49 awareness and ecosystem are already there. The interest is there, but I think that one thing that
50 is now lacking is the motivation. I know some people that have the skills, the knowledge, but
51 that the motivation probably needs much more boost. What we need is to incentivise the youths,
52 whether through open innovations, for example, hackathons, competitions, introducing classes
53 and courses related to entrepreneurship. And I think probably through the public messages,
54 some of the government agencies is doing that by showcasing some of the success of stories...”
55 (Policy maker 3).
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3 In terms of the move from carbon-based economy to a sustainable economy, the policy makers
4 acknowledged that more still needs to be done. Also, policymakers are sceptical about Oman's
5 readiness to move out of the carbon-based economy:
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9 *"In terms of the diver diversification and diversify from carbon-based economy, although we
10 are going in the right direction, but we are not going as fast as we should, and we are not as
11 focused as we should be, but we're in the right direction...I think if we want to diversify the
12 economy, a very key word in the heart of everything is more in-country value [which is
13 predominantly oil and gas resources]" (Policy maker 1).*
14

15 *"The simple answer is that we are not ready [to move out of a carbon-based economy], and we
16 will not be ready for the next couple of years...But our mind is not really aligned right now. We
17 are trying to survive. Because if you were to establish a company now, what is your goal? For
18 me, I want to make money. If you want to make money, would you want to use a circular
19 economy where you are circulating the same material, or would you like to be harming the
20 environment, which is a much more profitable thing to do? Basically, you would like to make
21 much more money by harming the environment. Yes. And this is where I'm most likely going to
22 go because I would like to make more money...And this is why all the companies make a lot of
23 money because they are harming the environment. If you want to make a lot of money – harm
24 the environment. Period. So basically, going to the carbon free economy, we still have a long
25 way to go. For example, in the EU, they provide you money to meet the SDGs. In Oman, what
26 and how much do they support? Nothing" (Policy maker 3).*
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30 *I think we need to generally improve the business climate to begin with...if we want to create
31 that environment for our own entrepreneurship system, we need to make it easier and
32 understand how carbon-zero fits in with the overall business environment..." (Policy maker 4).*
33

34 The above quotes imply that even the policymakers will avoid making policies that will protect
35 the environment at a reduced profit for the (indigenous) companies. This highlights why the transition
36 to a post-carbon economy is harder to achieve in natural resources-dependent economies like Oman,
37 as it needs to be supported by the mindset change in the larger society (legitimacy). Yet, sustainable
38 entrepreneurship is significantly influenced by legitimacy and acceptance by the larger society as well
39 as key stakeholders (Pankov *et al.*, 2021). In terms of the infrastructure, participants also revealed
40 different efforts put in place to facilitate entrepreneurial growth in the country, yet there are still
41 significant constraints:
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48 *"We still need to do lots of good work on this aspect of financial technology infrastructure
49 because the adoption is still is not too high compared to other countries" (Policy maker 2).*
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51 *"Maybe there is also some sort of a trust issue. Still, trust issues could be a factor. Although
52 we have some regulations, they are not yet enabled in our sector in general. I'm talking about
53 high tech sector. We still need good support from different stakeholders to make the high-tech
54 sector more promising and which will also help the homegrown interlocutors, high tech
55 entrepreneurs to really be able to enter the global markets, if not the global market, at least the
56 regional markets. So yes, we still need to do a lot to really support these high-tech
57 interlocutors" (Policy maker 2).*
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Prior research on sustainable entrepreneurship initiatives highlights the difficulty in raising startup capital (Bocken, 2015; Schaper, 2016; Vismara, 2019), as profitability and scale achievement in such cases differ from traditional business ventures (e.g., Youssef *et al.*, 2018; Schimpeter and Bungard, 2022). The next set of quotes shows how Oman provides grants to help these high techs or their FinTech companies to start up their businesses. In particular, participants decried the difficulty in obtaining a loan as a startup:

"Well, I think in terms of financing, it's going to be months for these startups to secure a loan or funding through venture capitalist or angel investment...for startups, we don't have enough angel investment, if not really the absence of venture capitalists...From my point of view of startups, they always try to avoid going to take a loan and financing from the traditional, banks or finance company because of the high interest rate, because of the different requirements compared to others" (Policy maker 2).

"Different payment methodologies - FinTech and everything – has been an opportunity for businesses to grow. But I think regulations of the central bank are very helpful, I think consumer awareness as well is also important. But I see a lot of FinTech-oriented companies still facing obstacles in terms of regulations. So, it's not really out there yet" (Policy maker 4).

Participants also decry a lack of an entrepreneurial ecosystem to drive sustainable entrepreneurship in Oman:

"...in terms of the FinTech right now, the ecosystem is really not there...because the government is not yet in place...I'm not willing to invest in something that I don't know what it would cost me...They don't have the record...Right now, we don't have regulations of data classification. How do they classify? We don't have a regulation of open data. We don't have privacy..." (Policy maker 3).

"We had a unique idea originally, but we do not have the funding at the idea phase. You know, when someone has a very good idea and wants to develop it but no one is willing to take a chance to give you seed funding. As far as I know, that can be extremely, extremely difficult for someone to be able to get the idea further. There are things behind the regulations that have to change. You have to be able to have the right mentors, have to have the right structure and you have to be able to attract other people to come and fund along with you and also open the market so that ideas can be launched from here...But again, the information is not clear, it's not transparent. So, I think that is what's lacking" (Policy maker 4).

Participants also highlighted the challenges associated with the theory-practice gaps (especially in teaching and skills development context), and suggested some measures to address them through policy making in the Omani context:

But we know that worldwide, there is a gap between what the market requires and what students graduate [with] in terms of knowledge, and skill sets. What the market is needing now is a bit different from what most graduates can offer, especially as the technology is changing. So, we need to include governmental bodies in collaboration with education and industry sectors in collaboration to assess this gap and to ensure to make sure that graduates from the Universities and Colleges have the right incubation and acceleration programs to incubate these people, incubate ideas with acceleration, to push them toward the market...so they are really aligned

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3 with the local market needs, with the global market needs in terms of technology firms, FinTech,
4 and digitisation, fourth industrial revolution...And this is something I think we are working on"
5 (Policy maker 2).
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8 "I think all universities all over the world and online is no different needs to continue to work
9 very, very closely [with industries] and reach out to the private sector... Universities should
10 starts reaching out to them to be able to come up with solutions [to businesses' problems]"
11 (Policy maker 4).
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13 Previous research also found weaknesses in many university programs and degrees in terms of
14 integrating these entrepreneurial into their modules/programmes (Fichter and Tiemann, 2018).
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16 17 **4.1.2 Opportunities** 18

19 Along with referring to the above-discussed challenges, study respondents also referred to
20 positive developments and opportunities. They highlighted some steps taken by the authorities and
21 stakeholders towards developing sustainable entrepreneurship in the country.
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25 "Yes, we had a private venture capitalist called Face Ventures. So, for the first time, we have
26 a private venture capital fund. We had grants coming from places like these Xavier Assessment
27 Centre, giving startups who pass a certain level opportunity to get a \$10000 grant. We have a
28 number of what were called the offset fund, which was mainly subsidised loans like a drafted
29 option. And so, these are the only ones that exist today, but we still don't have a culture of angel
30 investors...One of the resolutions in BAHALA was to have an entrepreneurship club, and the
31 idea there was that the targeted angel investors will be meeting startups to look at their
32 potential...but this never materialised" (Policy maker 1).
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35 "We have an example of paperless payment services and digital payment gateway... We have
36 a Real-Time Gross Settlement System Automated Clearing House operating 24/7 Mobile
37 Clearing System, which allows people to pay using QR codes, allow people to transfer money
38 from a mobile number... of course, which support the growth of e-commerce as it facilitates
39 customers to pay online" (Policy maker 2).
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42 In terms of policies that support sustainable entrepreneurship development, participants also
43 emphasised the role of government and skill development institutions:
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45 "When it comes to training and development and mentoring opportunities, we have gone a long
46 way in the past and I would put ourselves at least eight out of 10. High schools provide
47 programs to encourage business and entrepreneurship. Universities do the same...combined
48 with [the role of] Rolls-Royce in the Ministry of Education" (Policy maker 1).
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51 "What we are doing is we are trying to activate a more industrial linkage...For example, we
52 are trying to link incubators with the industry. We have a private company now that already
53 contacted us. They want to support a students' company that does private probiotic stuff... We
54 have another company, a student company called Buffalo, who are using up the holiday to make
55 feed for fish. So, we have talks with other companies to fund that...as told you, we don't have
56 regulations to fund student projects. We don't have the capacity yet in place, but we are trying
57 to build that sort of like multiple stakeholders that have, and they can find a way to support,
58 you know..." (Policy maker 3).
59
60

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2
3 Despite these focuses on entrepreneurial training, participants still highlighted some
4 institutional voids that hinder entrepreneurial training and development in the Omani context:
5
6

7 *“Although you can always do these basic business training in accounting, finance and*
8 *marketing and attend workshops, but many are not thinking international business or thinking*
9 *abroad, which means, potentially, medium enterprises and small businesses might lack an*
10 *understanding of how to access other markets, or the modern franchising model or other models*
11 *behind it. There is this gap that we can help them do” (Policy maker 1).*
12

13
14 *“In terms of the drivers of entrepreneurship and startup policy in Oman...I think we have made*
15 *a lot of progress, but we're not there yet... in terms of alternative funding methods, the most*
16 *common one is taking a loan and now with COVID 19 and its impact on smaller businesses,*
17 *the government is trying to do no to reduce the burden on them, but it's still not enough. You*
18 *know, things like being able to access angel investment is not available, the alternative funding*
19 *mechanisms that you can get in some of the developed, well-developed countries... where you*
20 *can raise funding by a platform, like Kickstarter, that's still not available [in Oman]. So, I think*
21 *this is something that needs a proper framework [and rules] to encourage. In fact, we're still*
22 *not there yet. Banks are still very conservative in their approach and that's because we don't*
23 *have alternative institutions...I have seen some family-oriented companies starting their own*
24 *funds to invest in high tech. But due to lack of cutting-edge technologies they're still not there”*
25 *(Policy maker 4).*
26
27

28 One common theme running through what our participants are saying above is that although the
29 country is making some remarkable improvements towards developing sustainable entrepreneurship;
30 challenges linked to still remain major barriers to achieving sustainable development goals (SDGs)
31 set by the UN.
32
33

34 **4.2 Linking entrepreneurial education (skills development) with sustainable entrepreneurship**

35

36
37 In terms of entrepreneurial training provided by these skill development practitioners, participants
38 highlighted several strategies and steps they adopt to nurture a positive entrepreneurial ecosystem and
39 foster sustainable entrepreneurial development in the country:
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43
44 *“We started off with awareness creation, i.e., in terms of public awareness and cooperation*
45 *with different stakeholders...So, we began by visiting some colleges to introduce things like*
46 *small workshop with the aim of moving into partnership. We created something we called a*
47 *club – the club involves people with a basic bunch of skills and capabilities...so bringing some*
48 *experience together...we talked about cluster activities, where people sit with student, talk with*
49 *them and let them experience the real life outside the campus” (Educationist 1).*
50

51
52 *“It is a matter of awareness and culture. Sometimes I feel the students are not seeing*
53 *entrepreneurship as a potential career path...sometimes the student are not believing this could*
54 *be a life-changing game...So, I start my lectures by showing videos from Oman, preferably the*
55 *Arab League...I also bring cases from within Oman and from within the region to make the*
56 *student believe that for innovation, you don't have to create a rocket, as a novel idea for solving*
57 *a problem can be found within the society and that it can change your life forever...For this,*
58 *I'm trying to open doors I never dreamt of before” (Educationist 2).*
59
60

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2
3 *“At the beginning, you might have lots of ideas that are coming to you. But what we really look*
4 *at is to help you set the pipeline on...As a procedure, we first listen to the ideas and later the*
5 *team who brought up the idea would be informed whether it is technically feasible...then we*
6 *talk to you about what element might be missing...but if your idea is viable, we might tell you*
7 *what business opportunities are there that might be willing to be involved in the process”*
8 *(Educationist 3).*
9

10 In terms of solving the problem of environmental degradation caused by unethical businesses
11 practices, entrepreneurial training in Oman is also tailored to help protect the environment:
12

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14
15 *“My current focus is how the student as business people can help solve the problem of plastic*
16 *waste...this is a contemporary issue that the country is trying to solve, and for them as well to*
17 *see that their business ideas can fit a need in the country strategy” (Educationist 2).*
18

19 *“In terms of training the trainers, sometimes we bring people from abroad to talk about their*
20 *university's experience and we also did some workshop for the faculty, for the students...this is*
21 *particularly important because after 2018 a whole lot of change has been taking place in the*
22 *global business environment...” (Educationist 3).*
23

24 In response to questions about raising capital, this participant suggested the need for
25 crowdfunding:
26

27
28 *“As a way of overcoming the problem of commercial funding, I believe we should have the*
29 *crowdfunding...and I'm sure there are good people in the country who are happy with little*
30 *money to sponsor” (Educationist 2).*
31

32 One key area of our conversation with the educationists was if, and how the trainers are
33 delivering the right message about entrepreneurship to their students, and the participants revealed
34 how they approach their job of training the trainers:
35

36
37
38 *“I ensure that each trainer is passionate about the topic of entrepreneurship...I mean, when*
39 *you are passionate, and by showing them case examples of successful entrepreneurship, you*
40 *will be convincing to the students that entrepreneurship is a viable career for you”*
41 *(Educationist 2).*
42

43 *“Also, a part of the education is that we let them know that lawsuit is not something you get*
44 *over easily...because those who fail to pay back their loans are liable to face lawsuits...But at*
45 *least [it serves as] a kind of make them avoid failures...It's now a knowledge that you should*
46 *learn as a recipe” (Educationist 3).*
47

48
49 Some of the key parts of entrepreneurial training in the Omani context are effective
50 communication, self-determination, and self-confidence. For instance, trainees are taught how to
51 articulate and present their (business) ideas to clients within a specific time frame, how to persevere
52 in the face of adversities, and to believe in themselves:
53

54
55
56 *“We emphasise teamwork and presentation skills, particularly pitching. For example, the*
57 *students have to articulate their arguments within 90 seconds. Sometimes I invite people from*
58 *outside the college and my students have to convince the audience within 90 seconds that their*
59
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3 *idea is worth investing in...They are also meant to understand that entrepreneurial success is*
4 *just a matter of perseverance and believing in yourself” (Educationist 2).*
5

6 The educationist also stressed the role of communities of practice in knowledge creation and
7 knowledge sharing:
8
9

10 *“So, we had a small booklet about enterprise, which we distributed to all the colleges involved*
11 *in our partnership. We are also into partnership with international enterprises, such as the*
12 *Planet Business School, Harvard Business School, and the George Washington's Foreign*
13 *National School. Most of the activities here and online...we also work with different*
14 *organisations to support graduates to start their own business” (Educationist 1).*
15

16 The role of benchmarking Omani’s entrepreneurial activities and its entrepreneurial ecosystem
17 against best practices was also stressed for quality improvement:
18
19

20
21 *“Yes, we benchmark our training [in universities and colleges] and our Fintech industry with*
22 *their overseas partners in the USA and the United Kingdom...So, whatever curriculum or the*
23 *training material those organisations provide, we're going to provide the same so we can drive*
24 *the needed change and transformation” (Educationist 1).*
25

26 *“I recently introduced an academic course where my students are trying to solve the plastic*
27 *waste problem...The students are learning how to define the customer profile...So I looked*
28 *around the world and find where people nowadays are fleeing into or relying on this concept*
29 *of lean startup methodology, which wasn't there before...So I thought I would use the American*
30 *model as a pilot to introduce this to my courses” (Educationist 2).*
31

32
33 *“My training proposal normally goes through lots of reviewing and we send it to experts*
34 *overseas to look at it...but the reviewers also tell me that every country has its local context...for*
35 *example, what might work in Australia, or the United States might not work in Oman...so, we*
36 *have characteristics that we need to consider” (Educationist 3).*
37

38 The above quotes show that through benchmarking with best practices across the globe,
39 entrepreneurial students unlearn some negative aspects of their culture, which are viewed as major
40 obstacles to achieving sustainable entrepreneurship in the Omani context.
41
42

43 44 **4.2.1 Challenges** 45

46
47 The challenges concerning sustainable entrepreneurship development in Oman highlighted by
48 our respondents include the difficulty in developing their businesses internationally, lack of auditing,
49 and poor financial management:
50
51

52
53 *“One of the challenges we face is opening windows for your product. What I mean by this is*
54 *we have great products, so many products, consumers locally, but the marketing aspect [to go*
55 *overseas] is not there...only they cannot go outside the country as at now...as there are lots of*
56 *competition there...and coupled with poor management skills...some of them cannot set aside*
57 *business money from other money” (Educationist 3).*
58
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1
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3 “On the part of financial management, you notice that some of the entrepreneurs struggle to
4 manage their cash. Probably they have good cash coming in. But then how it is managed
5 becomes the issue...Also, Angel investors is another thing which I think is missing in the
6 market” (Educationist 4).
7

8 A lack of focused support also emerged in the interview discussions:
9

10
11 “The problem we face is just how you can turn the idea into reality...the big challenge we are
12 facing is financing...not just how to source the funding, but how to manage their finances during
13 the good times and bad times. This is something that is critical” (Educationist 1).
14

15 “In terms of benchmarking our entrepreneurial ecosystem against best practices across the
16 globe, we need to learn why the agricultural sector in countries like India is thriving, for
17 example in the production of tomato, while the Omani farmers are struggling with the
18 techniques for growing tomatoes” (Educationist 4).
19

20
21 The planned move from a carbon-based economy to a more sustainable economy has also
22 brought a whole new challenge for the training providers and entrepreneurs themselves, who are now
23 reviewing and adapting their training programme to make sure it is still fit for purpose:
24

25
26 “They're looking for a different way of sustaining their business, in a rather sustainable
27 manner. We have been trying to talk with different stakeholders...Maybe next week we're going
28 to have a meeting to see which type of [training] program that we can do in this concern”
29 (Educationist 1).
30

31 However, concerns regarding the viability of this change in the entrepreneurship development
32 context were also visible in the discussions:
33

34
35 “You mentioned green energy or carbon emission reduction...I see something [that is] missing
36 is a body which can come out with these kinds of studies, which have more data driven
37 histories” (Educationist 4).
38

39 Also, authorities and educationists often fail to follow up on their efforts or to track and trace
40 the businesses to assess the impact of their training. This undermines the whole effort:
41

42
43 “Our academy has launched a mentoring scheme in association with the other partners, where
44 we have mentored a few businesses...We have a dedicated incubator. We also provide
45 conference facilities and all other things...but how many of them are doing well? We really
46 don't know that [as] the data is missing. We know that there are 2000 companies registered in
47 one particular sector, but how many of them are actually doing business? We will be digging
48 through the data...A lot of SMEs have lost their business, due to lack of process, knowledge
49 and lack of financial knowledge” (Educationist 4).
50
51

52 The above quote highlights the need to inject more funds into the system to facilitate monitoring
53 and thus save the invested fund from wasting. However, participants also highlighted the need to
54 build an entrepreneurial mindset in prospective entrepreneurs:
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3 *“In the school, we give them a lot of success stories from around the world. So, they understand*
4 *what sort of mindset or kind of set skills needed to succeed as an entrepreneur”* (Educationist
5 4).
6

7 Furthering the discussion on how to build an entrepreneurial mindset, the educationist added:
8

9 *“We make them understand the state of the country...The population is very small. So, one has*
10 *to understand also that there are certain ideas that required a huge population, say, for*
11 *example, an idea that works in India, Thailand or other countries might not work in Oman. The*
12 *reason being the density of the population and the ease of internet in shopping over there...so,*
13 *there is the need to align [the business opportunity with the state of the nation]”* (Educationist
14 4).
15
16

17 *“We wanted to bring in an investor from India who was willing to invest both in terms of*
18 *technology, in terms of funding, i.e., in dual mode. But the limitation was the regulation over*
19 *here which does not allow a foreign investor...they are seen as limiting the opportunities of*
20 *local partners”* (Educationist 4).
21
22

23 *“Another thing I feel that is missing is that we need to move away from education/training to*
24 *consultancy, and these consultancies should be a non-profit consultancy that it will take them*
25 *to the next stage...but this will be very difficult to achieve because there has been this lack of*
26 *trust, lack of coordination and lack of synergy between the various arms of the government, the*
27 *banks, the private sector and foreign investors...they need to work together”* (Educationist 4).
28

29 Prior research also highlights that a sustainable institutional environment supplemented with
30 favourable and target policies (Hummels and Argyrou, 2021), as well as the availability of critical
31 human capital (with specific skills to contribute to such ventures), are required (Lasardo and Pereira,
32 2018; Argade *et al.*, 2021). This emphasises the role of educationists as key stakeholders in the
33 sustainable entrepreneurship development of any country.
34
35
36

37 38 **4.2.2 Opportunities** 39

40 Educationists also highlighted the role of entrepreneurial training in providing much-needed
41 jobs for graduates who have continued to face untold disappointments in their search for jobs, in the
42 face of worsening economic crisis across the globe:
43
44

45 *“The job market is getting tougher and tougher, and I see personally going into business as a*
46 *viable alternative for job-seeking”* (Educationist 2).
47

48 *“You come out with a model of aggregation and then you expand it...once you've invested into*
49 *a good app, expanding it to other countries becomes very easy”* (Educationist 4).
50

51 The above set of quotes is inconsistent with prior research that highlights the role of a supportive
52 institutional environment and friendly policies in sustainable entrepreneurship development in studies
53 of other Gulf countries (Azar and Raouf, 2017; Alfalih, 2021). This section also highlights the role
54 of skills development and targeted training in helping sustainable ventures to access the talent they
55 need to succeed, as also highlighted by earlier research (e.g., Lasardo and Pereira, 2018; Argade *et*
56 *al.*, 2021).
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4.3 Linking Omani entrepreneurs' day-to-day practice with sustainable entrepreneurship

Participants highlighted their drive for engaging in entrepreneurship, which included incentives from the government, a perceived need/gap in the market, passion, motivation to give back to their communities, and lack of government job:

"I see that as an opportunity in the market and marketing is my passion. I love marketing...So, I decided to start my own business to fill the gap" (Entrepreneur 1).

"I have a passion for making a positive impact on the people...and bring about positive changes in the community... also, there is a gap in the market...There was no government job...and coupled with my self-motivation...I also received an incentive from the government to establish my own company" (Entrepreneur 2).

"I would say market need and foreseen opportunities are my motivation for going into entrepreneurship" (Entrepreneur 3).

"Well, I had options. I had several pretty decent job-offers...However, I'm not very much a salaried person. I'm not like an employee. Employees are a person that just likes to go to the office, do the work and leave it behind. For me, work is a bigger thing than just going to work and finishing that little task... I wanted to do something big...to set a high standard, I need recognition or to show people that I am giving something back to the community, something that's actually good for everyone. At least, I knew that I didn't just want to have a normal job" (Entrepreneur 4).

The next set of quotes shows that some of the entrepreneurial practices in the Omani context have a direct bearing on developing environmental sustainability in the country:

"If it's the plastic item, we try to help our clients choose recyclable plastic to help support the community... You know when you drive past these oil rigs, you see these giant fire flares coming off of the oil rigs. Our clients take those flares and they turn them into products, instead of the flare affecting the environment and burning into the atmosphere. They turn it into products that are highly sellable and basically reusable. So, even though we don't usually have a direct impact, we do try to find ways to manage our clients in a way that their vision matches that kind of [environmental sustainability] vision and principles" (Entrepreneur 4).

"...we try to always promote things that were either environmentally sustainable or helping support that environment. Or something for the youth because that really matters to our community at the moment. We've been helping our customers to choose the right material for the printing... we usually try to help them choose carbon-based instead of plastic-based" (Entrepreneur 4).

Participants also highlighted various factors that foster entrepreneurial development. These include effective communication, funding, and timely response to a perceived market need:

"It is all about communications, all about the culture, of the local culture and language and accent and our money, about things which affect the people's hearts and minds" (Entrepreneur 1).

1
2
3 “There is an improvement in the regulation, but there is a sort of a change in the policies”
4 Entrepreneur 2).

5
6 “One of the biggest clients that help us to grow is BP. Through the BP social investment
7 programs, they invest in the four pillars – Education, enterprise development, environment and
8 nature. But they are all focusing on [environmental] sustainability. They don't build roads or
9 make things similar to that. They focus on building the human capital, and offering money and
10 their investment and programs really help a lot of beneficiaries to innovate...And we as startups
11 or SMEs learned a lot, as they uplifted the standards of our products or services delivery as we
12 must measure up to their standards” (Entrepreneur 3).

13
14 Entrepreneurs also highlight the role of universities in achieving sustainable entrepreneurship.

15
16
17 “The universities provide my staff with the basic knowledge to start their business or work for
18 a company...then from that, we do our own training to build the culture and knowledge to
19 succeed...Some of the courses [taught in universities] are linked to what we want [i.e., in terms
20 of skills and knowledge] and what the global business environment wants...they also teach
21 developments in the global business environment” (Entrepreneur 2).

22
23
24 “The higher education institutions are producing a good outcome, I would say... I can see there
25 are graduates with really good discipline. They have really good communication skills and
26 technical skills as well. Overall... we don't have a problem with the outcomes of higher
27 education...I really benefited from being a student here in Oman, especially compared to people
28 who studied abroad. They come with very brilliant, good ideas, but they don't understand their
29 markets and also how to market their market-offering...” (Entrepreneur 3).

30
31
32 “When you look at a lot of successful entrepreneurs, they are Stanford and Harvard graduates
33 and we need to focus on those examples because they are the vast majority” (Entrepreneur 3).

34
35 “I will start with my own experience, I do think that at the college level or university level,
36 education was very valuable. As a business student, you learn a lot already about finance,
37 accounting, and understanding things that are basic needs for any startup. So, it definitely
38 supported me, and it helped me gain some confidence. You know, theoretically, I understand it.
39 So practically, if I try it, maybe I'll understand it” (Entrepreneur 4).

40
41 The role of FinTech was also emphasised during the interview. Participants' responses show
42 the role of FinTech in achieving sustainable entrepreneurship development in the Omani context.
43 They also highlight the advantages of FinTech over traditional financial banking services:

44
45
46 “We recommend to our clients and also help them choose different payment options such as
47 PayPal that may support the community instead of just buying traditional banks' services. We
48 also do that for ourselves...and there's no taxation. It's much easier. It's faster, it's safer for
49 them as well than just normal banking transactions” (Entrepreneur 4).

50
51
52 The crucial role of FinTech in achieving sustainable entrepreneurial development including
53 reduced cost of capital, scale, speed (Pizzi *et al.*, 2021), and offering crowdfunding possibilities
54 (Tenner and Horisch, 2021) have been emphasised. Little wonder that the United Nations have
55 recognised FinTech as a critical player in achieving sustainable development goals (Tao *et al.*, 2022).
56
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4.3.1 Challenges

Participants referred to sustainable entrepreneurship development challenges including lack of trust, lack of funding, poor talent attraction and retention, high staff turnover, premature entrepreneurial ecosystem – poor government policies and bylaws, and bureaucracy:

"In the advertising sector, there are too many big names and international brands, so we struggle to compete with them. Also, if you want to partner with the big brands, they do not trust the small brands like us... as a small company, you do not enrol your staff to attend staff development programmes in external institutions because you cannot fund such programme... staff retention has been a major problem for us, as our experienced staff keep leaving to join big companies. So, high staff turnover has been a major issue for us... we also struggle with attracting graduates, as they prefer to work for the big brands... We also face delay in payments due to the bureaucratic systems" (Entrepreneur 1).

"Our first major issue was financing the investment. Then we also struggled to gain the trust of the community. We struggled to convince them to want to do business with a small startup tech company like us" (Entrepreneur 2).

"...we don't have a mature ecosystem or willingness to venture into partnership within the community, that goes down from the marketers up to the government and policy makers... we have very small market and the startup are not many, and many of them are struggling to survive due to lack of cash... The market behaviour is not really encouraging as well. When we go to investors, we have the same issue. The behaviour, mindset and the number of investors and their lack of willingness to support startups have been some of our major challenges... So again, it's all about the maturity of the ecosystem. It's improving, but we are not yet there, not even close" (Entrepreneur 3).

"Funding wasn't the only difficulty that we had to face... It's making the money after that, as it was even harder sustaining that investment... The first two years were very, very difficult... We hired the wrong people who played around with the money, throwing it all in different areas without managing them properly and we didn't control it... So eventually, by the end of the second year, we had to almost like start all over again or maybe even from zero..., and we had to eventually bring that money back up, hire the right people, gain back our reputation, control our clients" (Entrepreneur 4).

In terms of financing, entrepreneurs reveal that the country needs more institutions that are willing to take more risks to finance startups:

"Yes, we have really enough financial aid organisations. We have Shanaka, we have the development bank, we have a lot of those who really help in terms of number. But again, in terms of their behaviour, they are risk averse, their appetite to take risk in the startups are not really high. They ask for collateral. They want to safeguard their assets, and it's understandable. But we really need some venture capital, some kind of investment authority that can finance those startups" (Entrepreneur 3).

"First of all, we weren't very lucky with the funding to start with. But later, we got the investment from somebody who believed in us from the family. So, we're very lucky and there's somebody in the family who was willing to support our dream, and he is a partner in the company because of that payment. It's not like it's like just the funding and he goes away and, you know, he's actually one of the board members now" (Entrepreneur 4).

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“The only concern we have is the low-cost, low-quality freelancers that work in the market. I think there are some really good quality freelancers...but if you don't have a high budget there are some really low-cost, low-quality freelancers that are really destroying the reputation of marketing...They don't understand the depth of what it really means to do marketing and where to start from” (Entrepreneur 4).

The next set of quotes reveals entrepreneurs' perceptions about the challenges and benefits of trying to implement financial technology compared to traditional banks:

“Again, we have issues with policymakers. They are really conservative when it comes to policies...there is this long bureaucratic process. So, we do face a challenge. I tried to work on crowdfunding, but did not get the support. Again, we [as a country] are conservative when it comes to money. So, I faced a lot of challenges that we decided not to go through with this venture...so I feel that government regulations and the bylaws need to be a little bit easier. I mean, compared to other neighbouring markets where they facilitate the FinTech and which makes it a bit easier in terms of documentation” (Entrepreneur 3).

Similar to the educators, entrepreneurs also decried the lack of coordination between the various arms of the authorities:

“So, there is no partnership between government universities, SMEs, and banks...that will not help...We need to work together...So, everyone is hiding his agenda. Everyone is trying to show that he's supporting, but they don't talk to each other with honesty and open discussion. So, I think we have this kind of lapse in the system” (Entrepreneur 1).

The entrepreneurs also critiqued the worth of university education about practical aspects of doing business:

“The university will give you the courses, the materials, but actually there is a life that you can learn from a business that you cannot learn from anywhere...you cannot teach entrepreneurship internally...I think entrepreneurship does not just mean having a business, it's a culture, the environment, and the way entrepreneurs live their lives...it is about passion...about a better understanding of the market needs.” (Entrepreneur 1).

“There is definitely a gap between theory and practice because sometimes the books show you the steps. But when you try to implement it, in reality, it's very different. So, I don't want to say that education was 100 percent fine, as there are some skills that we still needed to gain through practice. And that's normal. But if I was having an engineering background, I would probably have a much bigger learning curve to go through because start up requires a lot of business skills, a lot of human skills, a lot of management skills that probably they didn't learn” (Entrepreneur 4).

“So, you have to reteach them and sometimes you have to make them unlearn some things so that they have to learn the new things, which is really costly for us” (Entrepreneur 4).

The next set of quotes also shows whether participants feel that formal education is relevant in attaining sustainable entrepreneurship development in Oman, i.e., whether graduates possess the requisite skills needed to thrive in the world of business. Sustainable entrepreneurs faced some difficulties regarding those soft skills needed to start-up and thrive, even though some of them had business education:

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2
3 “Another problem I faced was soft skills. So, we didn't really get a lot of chances to try and
4 improve our soft skills [while in the university]. You know, selling, pitching, communicating
5 with clients in negotiation. All of those things like presentations and writing reports are things
6 I had to learn from zero. I mean, this is a daily thing that you need to do, and it was very hard”
7
8 (Entrepreneur 4).

9
10 “Unfortunately, the only gap I can see in our [Omani Universities’] outcomes is the English
11 language. OK. And I don't blame the students because they've been studying for 12 years in
12 Arabic, and all of a sudden, they have to study in English. So, this is the only gap I can see. But
13 in terms of skills and technical knowledge, most of them are good. They just lack some of that
14 practical experience that they can get on job training” (Entrepreneur 3).

15
16 “I think that's a big shame that some of our bachelor's degree holders who are looking for a
17 job don't even know how to write an email. I know a lot of people who are submitting their CVs
18 to us, and you can barely read it. You don't understand what kind of skills they have...So, I don't
19 know if it's I'm guessing it's because our education system needs to be improved a little bit. I
20 would love if they can somehow and add social skills and soft skills...The quality of our
21 education seems to be very poor” (Entrepreneur 4).

22
23 Entrepreneurs also revealed the need to align training and education to business needs. The next
24 set of quotes shows that business students outperform their counterparts who major in, say,
25 engineering, computer science, or natural science when starting a sales or marketing related business,
26 for instance. They also suggested how to improve the quality of formal education to prepare and equip
27 graduates for sustainable entrepreneurship development:
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31

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33 “I know a lot of my peers that have tried starting their businesses with different backgrounds
34 like application, or literature, or engineering, or science. But the learning curve, as I said, is
35 much bigger for them and it's something more complicated because they don't know even the
36 basic terminologies in Business and Management. So, even when a client asks them to send an
37 email, they don't understand how and what to write in the email...they have to start from the
38 basics...So I think we need more coaching maybe or maybe improving a bit on our education
39 system so that people who didn't have opportunities to study business can at least have some
40 kind of another way to gain that kind of skill level that they need, at least on a basic level”
41
42 (Entrepreneur 4).

43
44 “We made some mistakes in the past by hiring entry-level fresh graduates who didn't know
45 anything about the markets, and we didn't have experience ourselves...It was a trial and error
46 kind of process until eventually, we were able to hone it a little more and then know how to
47 hire. Another problem that we face was government policy. A lot of the ideas that we came up
48 with are innovative. But, when you come up with any of these ideas, there's usually no policies
49 to support that concept...” (Entrepreneur 4).

50 51 **4.3.2 Opportunities**

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53 Entrepreneurs also highlight some of the opportunities brought by sustainable entrepreneurship
54 development. These include FinTech, benchmarking, and quality improvement:
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58 “FinTech provides us simplicity in transactions...a lesser percentage and as well as
59 commissions in the payment system itself...we are working together towards enhancing the
60 FinTech side because our business model is based on a subscription model. So, for example,

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3 *we subscribe in Netflix...The pandemic has helped us because during the pandemic, more*
4 *people want to use tech companies like the YouTube and Netflix" (Entrepreneur 2).*
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6 *"So specifically, if you look at the marketing standards, you'll see a huge gap between what*
7 *we're getting from our local companies and what the international standard is, and we actually*
8 *want to have a hand in changing that kind of culture. So, we're not focusing on competing with*
9 *locals, we're focusing on showcasing what should happen internationally, but in a way that*
10 *matches our markets internally" (Entrepreneur 4).*
11

12 The next quote shows that sustainable entrepreneurship development brings about competition
13 on a different scale, which fosters quality improvement in a unique way, such as product/service
14 differentiation:
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18 *"For us in marketing, I don't think competition is as big a deal, as maybe in like real estate or*
19 *things like that. For marketing, there is definitely competition. But because our vision is entirely*
20 *different. We're thinking about how to bring the international standard to our local market. So*
21 *already we were thinking in a different way...even the types of services we're selling are the*
22 *same services as every other marketing company, but we're selling them in a different way. And*
23 *I think because the way we process our service is different to our customers, ours is a different*
24 *service...Our quality of work is different...So we're already doing pretty well" (Entrepreneur*
25 *4).*
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28 This participant also suggested strategies for improving the quality of entrepreneurial training
29 and education, which ultimately have a significant bearing on sustainable entrepreneurship
30 development in any country:
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34 *"There are some things that educators should teach our youth and maybe support and coach*
35 *people after they become entrepreneurs because a lot of them don't take the risks, due to fear*
36 *of failing, which is literally the opposite of entrepreneurship. An entrepreneur is somebody*
37 *who's willing to take risks that others in the business usually don't. So, if they're not willing to*
38 *take the risk, they'll never succeed. So that's what I mean. I mean, it's just so many to coach*
39 *them, to help them, to guide them" (Entrepreneur 4).*
40

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42 *"When it comes to our employees, we are still investing a lot in training, especially in their first*
43 *two years... We have to keep continuing investing a lot because a lot of the time we hire entry-*
44 *level or fresh graduate students, who come with some good technical skills. Like if they're*
45 *designers, for example, they know how to design, how to use programs like Adobe in Photoshop*
46 *and Illustrator and whatever. And if they are photographers, they know how to use a camera,*
47 *but they don't know how to make that a job. So, when you come and bring them to the startups*
48 *like us, their role is very different and direct. It is not like in a big company where your role is*
49 *much smaller, the impact you make in big companies is much smaller than in ours. So, each*
50 *person's impact must be very clear" (Entrepreneur 4).*
51

52
53 *"I think it is the media that makes people feel too ashamed to try something that they may fail*
54 *in, instead of supporting themselves. The media has to celebrate the challenges, the hurdles,*
55 *successes and failures that successful entrepreneurs face, and not just evoking the fear of failure*
56 *in our young people" (Entrepreneur 4).*
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58 Consistent with Hummels and Argyrou (2021), one common theme running through what our
59 participants are saying above is that a supportive institutional environment supplemented with
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3 favourable and targeted policies is needed for the development of sustainable entrepreneurship in
4 Oman. Furthermore, the role of a supportive institutional environment and friendly policies for the
5 development of sustainable entrepreneurship has been also highlighted as a major element in previous
6 studies focusing on other Gulf countries (Azar and Raouf, 2017; Alfalih, 2021).
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10 The study findings are summarised in the following figure 1.
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13 *Insert Figure 1 here*
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17 **5. Implications, Limitations and Future Research Directions**

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20 The study findings offer theoretical and practical implications. Firstly, from a theoretical
21 perspective, our study has highlighted the need for context-specific theorisation of sustainable
22 entrepreneurship, as the enablers along with hindrances in the case of Arabian Gulf countries like
23 Oman (with significant dependence on oil revenues) differ from developed western economies or
24 other emerging economies. Hence, specificities of such small and relatively developed economies,
25 where carbon-based natural resources (oil and gas) played a dominant role in all spheres of economic
26 life with the public sector still very visible in every aspect, should be part of the theorisation of
27 sustainable entrepreneurship. From a practice perspective, bureaucracy, and slow change (including
28 FinTech regulations and acceptance) emerged as major obstacles to developing a sustainable
29 entrepreneurship ecosystem. In this concern, we suggest, the incorporation of cross-sector
30 collaboration, which is a very useful tool in addressing complex problems with multiple stakeholders
31 (Selsky and Parker, 2005; Arslan *et al.*, 2021). Therefore, policies related to sustainable
32 entrepreneurship development should be based on cross-sector collaboration with critical input from
33 private entrepreneurs and other stakeholders. As financing and access to financing were highlighted
34 as challenges by entrepreneurs, their input should be part of FinTech associated policymaking as well.
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45 From a skills development (education perspective), a key takeaway from our study is a shift from
46 a traditional approach to teaching entrepreneurship (usually at a theoretical level) in educational
47 institutions (including universities), towards a practice-based approach with clear benchmarks. Also,
48 the incorporation of context specific elements (unique opportunities as well as challenges of being a
49 sustainable entrepreneur in Oman) should be part of such skills development initiatives. Here, also
50 cross-sector partnerships with clear goals and benchmarks between public bodies, universities, firms
51 (entrepreneurs), and the financial sector (particularly FinTech) can be very useful. Also, visible
52 incorporation of entrepreneurship and sustainable entrepreneurship skills in business education
53 curriculum is needed, as the findings showed that so far, most educational curriculums usually focus
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3 on generic business skills, which have fewer applications for such ventures. An emphasis on practical
4 skills, including opportunity recognition, opportunity utilisation, acquiring and retaining human
5 capital, financial management and marketing for startups were highlighted as areas that should be
6 significantly supplemented in the skills development initiatives and educational programmes. Finally,
7 cultural and perceptual barriers to entrepreneurship in general and sustainable entrepreneurship in
8 particular that were highlighted by our study participants also need attention. In this concern, along
9 with incentives at the policy level, more visibility of such entrepreneurs and their ventures in the
10 public sphere including educational institutions and the use of mentoring during studies (of future
11 entrepreneurs) can be helpful. Such strategies are also expected to support and strengthen the
12 legitimacy of sustainable entrepreneurship in society in general.
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20 Our paper has limitations like any other academic paper. Firstly, the findings are based on 12 in-
21 depth interviews with people linked to sustainable entrepreneurship from policy making, skills
22 development and practice sides. Hence, the findings may be difficult to generalise. However, keeping
23 in view, the dearth of research on this topic particularly in Oman and, also the incorporation of the
24 views of stakeholders from all relevant groups, our paper has highlighted critical points concerning
25 the sustainable entrepreneurship landscape in Oman, as well as offering useful, practical suggestions.
26 Hence, our paper can act as a springboard for future researchers to undertake in-depth analysis in
27 different sectors like software, logistics, tourism, or project-based work, to untangle the different
28 facets of sustainable entrepreneurship there, as well as specify the potential for FinTech there.
29 Moreover, even though FinTech was a major theme in our study, we did not particularly analysed
30 FinTech specific regulations, perceptions of the users as well as future potential in Oman. As the
31 acceptance of FinTech appeared as a somewhat problematic issue in our study, future researchers can
32 undertake a more detailed analysis of this issue from a behavioural as well as financial lens and offer
33 specific implications to the industry as well as policy audience. Finally, generational differences
34 among the organisational leaders are a major issue identified in academic literature, especially in
35 high-tech sectors (e.g., Arslan *et al.*, 2022b). This aspect needs to be explored in cultural contexts
36 such as Oman, which are in the process of a major transition, and future researchers can explore these
37 differences in issues such as sustainable entrepreneurship, FinTech, and work meaningfulness
38 (including entrepreneurship compared to traditional jobs). Such research can potentially enrich both
39 theory and practice of sustainable entrepreneurship, especially in under-researched contexts of the
40 Middle East and Arabian Gulf region.
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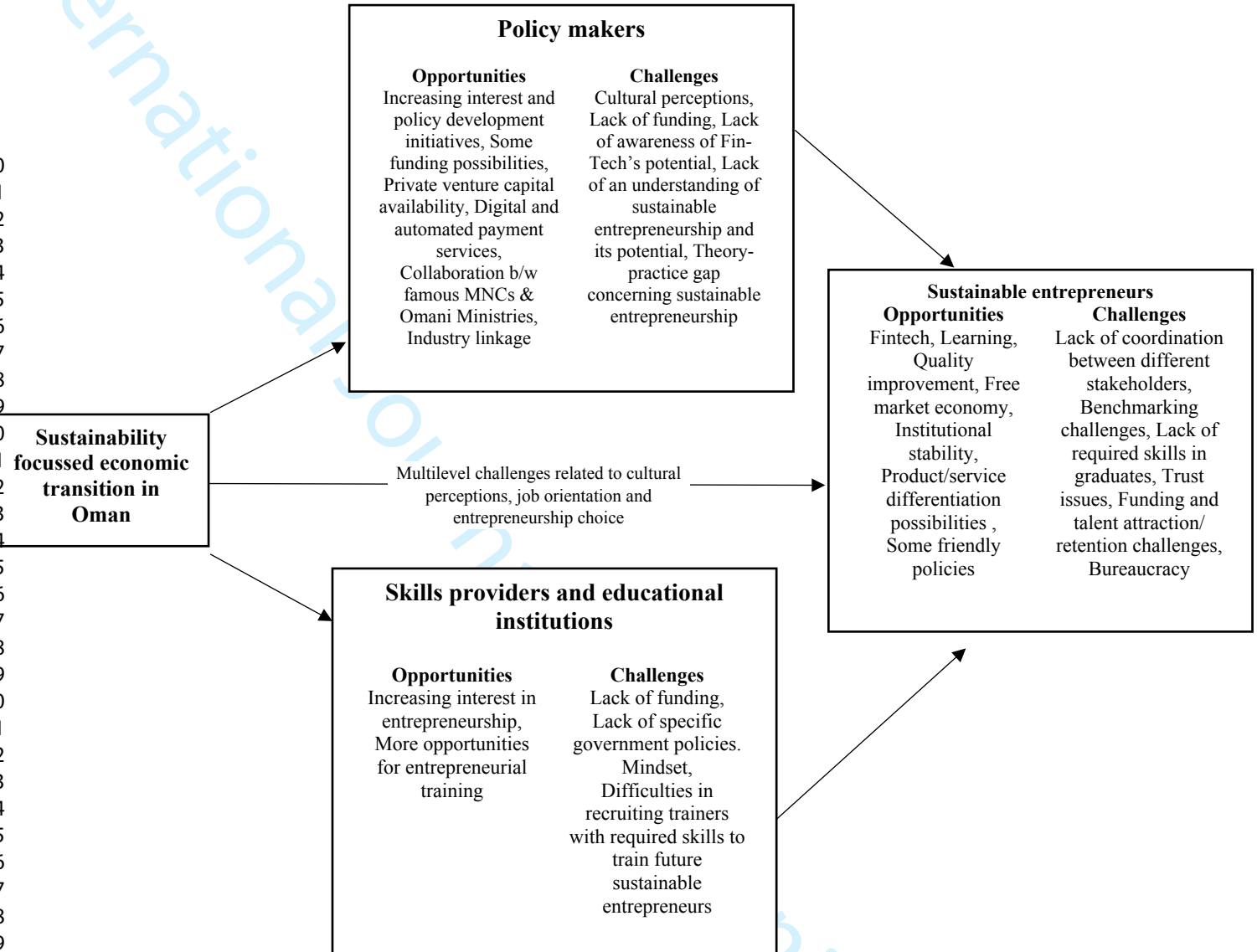
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Table 1: Interviewees' background and dates of interviews

No.	Name/Code	Title and info.	Interview Date
1.	Entrepreneur 1	CEO of an emerging sustainable entrepreneurial venture.	October 27, 2021
2.	Entrepreneur 2	Co-founder of a technological venture.	October 26, 2021
3.	Entrepreneur 3	CEO of one of the top business consultancy firms.	October 24, 2021
4.	Entrepreneur 4	Managing Partner at one of the top advertising and marketing consultancy firm.	October 24, 2021
5.	Educationist 1	Head of a major SME training institution	August 22, 2021
6.	Educationist 2	Multiple teaching and training experiences including at a co-director level of a major educational and training institution.	October 31, 2021
7.	Educationist 3	Multiple innovation and entrepreneurship related educational, training and leadership experiences	November 18, 2021
8.	Educationist 4	Multiple educational leadership experiences including in the area of social development.	October 28, 2021
9.	Policy maker 1	Key leader (CEO) of a major public authority dealing with sustainability and entrepreneurship affairs.	January 26, 2022
10.	Policy maker 2	More than 30 years of policy development and leadership experiences linked to entrepreneurship, innovation, and management in both public and private sector.	January 30, 2022
11.	Policy maker 3	One of the key policymakers directly dealing with FinTech development in Oman.	January 27, 2022
12.	Policy maker 4	Leadership and policy making background in technology transfer and business development.	January 30, 2022

Figure 1: Summary of Study Findings



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