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**Creating a Sustainable Ripple in Rural Entrepreneurship –
The Case of Deserttulip in resource-constrained rural Jordan**

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3 **Creating a Sustainable Ripple in Rural Entrepreneurship – The Case of**
4 **Deserttulp in resource-constrained rural Jordan**
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8 **Abstract**
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11 **Purpose:** This article aims to explore whether and how rural entrepreneurs navigate the
12 challenges they face to support rural development, with particular focus on sustainable
13 entrepreneurial development in Jordan.
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17 **Design/ Methodology/ Approach:** Drawing on Structuration Theory (Giddens, 1984), the
18 article is underpinned by the Position-practice perspective and its four interrelated elements:
19 praxis, positioning, capabilities and trust. A qualitative methodology is applied to explore the
20 case study of Deserttulp in Jordan and its utilisation of the innovative agricultural Groasis
21 Waterboxx-Technology.
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27 **Findings:** Findings indicate that Position-practice of rural entrepreneurs becomes
28 contextualised between enablers and constraints that shape entrepreneurs’ praxis, positioning,
29 capabilities and trust. Pervasive constraints are evidenced through limiting external structures
30 and resources. Yet, these are challenged by enablers observed through the agentic roles of REs
31 and the utilisation of innovative tools in ways that minimise the limitations of constrained
32 contexts.
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39 **Originality:** The article highlights the specificity of constrained entrepreneurship in ways that
40 allow re-interpreting Position-practice of rural entrepreneurs around collective social systems,
41 rather than individual entrepreneurs. A *Sustainable Ripple* is conceptualised, whereby
42 expanding sustainable entrepreneurial development initiatives are observed around collective
43 acts that stress the accountability and mutual dispositions of rural entrepreneurs towards
44 developing and sustaining their contexts.
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51 **Practical implications:** The article has practical implications within countries with extreme
52 constraints – including environmental (drought), financial and institutional constraints – where
53 collective sustainable initiatives, alongside utilisation of innovative tools, are called for in order
54 to minimise the impact of limited resources and institutional support, while promoting
55 empowerment, cohesion and sustainable entrepreneurial development.
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Introduction

The importance of contexts is not new to entrepreneurship studies. However, resource-constrained contexts, which remain under-explored, have only gained more interest over the past few years (Gittins et al., 2022; Refai and McElwee 2022). Examples can be drawn from growing evidence of entrepreneurship within challenging contexts that constrain entrepreneurs' ability to act, such as rural (Elkafrawi et al., 2022; Gittins et al., 2022), refugee, crisis (Refai and McElwee, 2022), minorities, migrants (Chaudhry et al., 2023), poverty (Smith et al., 2018), women, developing countries (Zaayadin, 2022), prison (Hwang et al., 2022), and others. Such contexts have given rise to the phenomenon of constrained entrepreneurship, whereby agents' actions are constrained by various contextual factors (Gittins et al., 2022; Refai and McElwee 2022). This rise is noted not least because constrained entrepreneurship happens within the less scholarly-inhabited 'everyday entrepreneurship' that represents the vast bulk and diversity of the entrepreneurship phenomenon, which demands further theoretical development, particularly in relation to insights on value and value for whom (Welter et al., 2017). Without devoted exploration of this largely-populated entrepreneurship area, the field is limiting itself from recognising the variety of ways in which entrepreneurship unfolds (Welter et al., 2017), and understanding the importance of the agentic role of entrepreneurs who navigate multiple constraints (Harima, 2022; Refai and McElwee, 2022).

This article addresses the lacuna in research exploring constrained entrepreneurship by focusing on rural entrepreneurship in a developing country, namely Jordan, considering the resource constraints in both the rural and Jordan as detailed later in this article. The main question in this article is *whether and how rural entrepreneurs (REs) navigate the challenges they face to support rural development, with particular focus on sustainable entrepreneurial development (SED) within the Jordanian context*. SED is defined as 'the discovery, creation, evaluation, and exploitation of opportunities to create future goods and services that is consistent with sustainable development goals' (Pacheco et al., 2010:471). While rural entrepreneurship research has witnessed significant growth in the past two decades (e.g. Newbery et al., 2017; Müller and Korsgaard, 2018; Elkafrawi, 2022; McElwee, 2022), this article contributes to calls for further research on agricultural entrepreneurship (Gashi Nulleshi and Tillmar, 2022), and more specifically sustainable agricultural entrepreneurship (Lupoae et al., 2023). Additionally, rural entrepreneurship research has thus far largely focused on developed economies (Newbery et al., 2017), with lesser more recent examples from

developing ones, particularly within Arab nations (e.g. McElwee and Meaton, 2017, Ghouse et al. 2021; Elkafrawi and Refai, 2022). Rural areas thus remain under-explored in emerging and developing economies, like Jordan, which cannot be positioned as ‘passive recipients on which to test colonial theory established in mature, urbanized economies’ (Newbery et al., 2017:3).

The study employs the Position-practice perspective, part of Stones’ (2005) Strong Structuration Theory (SST), thus contributing to minimising the theoretical gap in rural studies literature (Gittins et al., 2022). Structuration lens has been employed in accountancy research (Jack and Kholeif, 2008; Coad and Glyptis, 2014; Kholeif and Jack, 2019), but less so in entrepreneurship research, with a focus mainly on understanding structures of signification (meanings through practice and discourse), domination (applying power to control resources) and legitimation (consisting of norms and values) (Elkafrawi et al., 2022). Nevertheless, utilising the Structuration lens to explore the manifestation of agents’ roles within contexts remains under-explored (Coad and Glyptis, 2014; Elkafrawi et al., 2022). This article addresses this gap through employing the Position-practice perspective, which focuses on agents’ social positions and their attached identities and practices, placed within a network of social relations that identify and support them (Stones, 2005). Position-practice is thus conducive to this article’s focus on agents’ (entrepreneurs’) roles in supporting SED in the constrained Jordanian rural context, and understanding their practices at particular times and places through the four inter-related elements of Position-practice including, praxis, positioning, capabilities and trust (Stones, 2005), as will be established in this article.

A qualitative approach is employed to explore the case of Deserttulip; an agricultural Supplies Jordanian Limited Liability Company. Deserttulip was established in 2010 as a spin off from a 100-year-old family business, and currently manages 250,000 m² of land in rural Jordan. The Company’s mission is ‘to serve the agricultural needs and requirements in The Middle East by creating a one stop shop of innovative and modern agricultural products and machinery’ (Deserttulip FB page, 2023). Deserttulip activities are focused on agricultural based industries, services and products, and non-chemical cattle breeding. One main turn-point for Deserttulip was the acquiring of Groasis Waterboxx-Technology (GroasisWBT) in 2011, which came as an ideal addition to the company’s portfolio through its innovative mechanism that reduces plants’ water consumption by 90%, thus adding value to promote agriculture in rain-deprived areas as Jordan (Picture 1). The GroasisWBT is central to this article’s innovative methodology

which involves a practical exploration of its value in promoting socio-economic development, as will be demonstrated later.

[HERE] Picture (1): GroasisWBT sustaining agriculture in sandy soil

Through its contextualised view, the article extends context discussions in entrepreneurship research beyond the regularly acknowledged ‘historical, temporal, spatial, institutional and social contexts’ (Welter, 2011:165) to involve environmental contexts defined as ‘the complex of physical, chemical, and biotic factors (such as climate, soil, and living things) that act upon an organism or an ecological community and ultimately determine its form and survival’ (Merriam-Webster Dictionary, 2023). The focus on rural Jordan demonstrates how constrained contexts, in resource-constrained times and places, shape entrepreneurs’ practices and outcomes through sustainable value-adding acts formed around accountable and mutual dispositions, which are reinforced by using innovative tools, leading to what this article conceptualises as the emergence of a sustainable ripple.

The article proceeds with an introduction of this study’s context, Jordan, followed by a discussion of literature on rural entrepreneurship and its value in achieving SED. Then, the Position-practice lens is presented, followed by the study’s methodological approach. Next, findings are presented alongside a discussion in relation to recent and relevant literature debates. The article concludes by revisiting its main aim and highlighting its novelty and contribution.

Context of the study – The resource-constrained Jordanian context

The focus on Jordan, a resource-constrained Middle Eastern country, adds to the novelty and richness of this article’s exploration of constrained entrepreneurship. Jordan, with an estimated area of 91,880 km² and a population size of 11,148,278 (World Bank, 2023), faces several challenges that threaten its socio-economic development, including rural development. The specificity and relevance of Jordan to research on constrained rural entrepreneurship can be discussed in relation to several challenges. First, Jordan is one of the world’s driest countries facing threatening drought hazards. This can be depicted in Jordan’s map (Online Appendix 1) highlighting prevalent low desert lands covering over four-fifths of its area (USAID, 2017). Agricultural lands are limited to Western uplands overlooking Jordan valley. Bordering water surfaces are also very limited and confined to the Dead Sea, Gulf of Aqaba and Sea of Galilee,

along with River Jordan that runs for less than 2km before draining into the Dead Sea. In 2018, Jordan's agricultural land was estimated at 11.4%, forests at 1.1%, and others at 87.5% of the total area (World Bank, 2023). In a country already importing 90% of its energy and grain needs (World Bank, 2023), the percentage of Jordan's green-land is expected to drop considering extremely low water levels/capita/year, which fall below the standard water poverty threshold of 500m³. Water levels have significantly dropped from 3600m³/capita/year in 1946, to 145m³/capita/year in 2008. Accompanied with average temperature increases and continuously growing population, water levels are expected to fall to just 50m³/capita/year by 2026 (USAID, 2017). Drastic climatic hazards are also predicted to reduce agricultural production, thus posing serious threats to food supplies, biodiversity, ecosystems and economic livelihoods (USAID, 2017).

Secondly, while Jordan's overall population has more than doubled in 20 years (World Bank, 2023), its rural population has steadily dropped from 49.12% to 8.58% between 1960-2020, rendering rural to urban migration a core fact of life that left Jordan at a low ranking of 134 out of 203 countries in terms of its rural population (World Bank, 2023). Coupled by unsustainable urbanisation practices, rural-to-urban migration will increase competition for resources in a country that is already suffering economically – by adding pressure on basic life amenities and housing in urban areas, while simultaneously increasing food-security risks and inequalities between urban and rural areas, but also within urban areas themselves.

Thirdly, poverty rates in Jordan (i.e., percentage of population living below national poverty line) reach up to 11% in Amman (the capital) and 27% in other cities, with predicted risks of growing rates according to Jordan's Poverty Reduction Strategy (USAID, 2017). Poverty incidence and gap is higher in rural areas, which host more than 800,000 individuals. Poverty threats are maximised considering high unemployment of 22.6% in Q2-2022, with staggering rates of 46.1% among youth (< 25 years), and 29.4% among women (World Bank, 2023). High youth unemployment rates entail specific threats as the Jordanian society is one of the world's youngest, with 63% of its population under the age of 30 (World Bank, 2023).

Fourthly, due to its critical role in anchoring regional stability, Jordan became the home for 1.3 million Syrian refugees (13% of population), following the 2011 Syrian War (World Bank, 2023). For instance, Zaatari village, located 1km away from Zaatari camp (the world's second largest refugee camp), currently hosts an equal number of Syrians as it did Jordanians before

the War, thus, exacerbating challenges imposed by geographic intersections of the refugee crisis (USAID, 2017).

This article's focus on rural entrepreneurship thus becomes relevant to Jordan since the highlighted challenges continue to undermine Jordan's SED efforts including food security, poverty alleviation and refugee integration, which are among core developmental areas on the United Nation's Sustainable Development Goals (SDGs) generally, and the Jordanian agenda (USAID, 2017) particularly. Through exploring whether and how REs play a role in supporting SED in Jordan, this study cultivates the value of rural entrepreneurship as a vehicle for supporting emerging and developing economies (as Jordan) in harnessing innovation (Lupoae et al., 2023; Battisti et al., 2013) and creating stability, income resources and employment opportunities (Cohen and Winn, 2007; Newbery et al., 2017; McElwee, 2022), alongside achieving rural development, gender equality, empowerment and emancipation (Roos and Gaddefors, 2022; Zayadin et al., 2022).

Next, the article explores the literature on rural entrepreneurship.

Rural entrepreneurship

Rural areas set examples of resource-constrained contexts that have fuelled more interest in the overlooked phenomenon of constrained entrepreneurship (Gittins et al., 2022). The limiting, yet sometimes promoting, rural contextual factors add to the uniqueness and novelty of rural entrepreneurship (Newbery et al., 2017; Müller and Korsgaard, 2018; Elkafrawi, 2022). Examples can be drawn from the many challenges facing REs due to peripherality of rural areas from centres, which causes inequalities in relation to poverty, accessibility to opportunities and rural developmental levels (Newbery et al., 2017; Müller and Korsgaard, 2018). Other challenges relate to tacit rural social norms that restrain actors' movements, particularly when it comes to women (McElwee and Meaton, 2017; Ghouse et al., 2021; Elkafrawi and Refai, 2022; Elkafrawi et al., 2022). Such challenges embedded in rural contexts will entail more effort to lead rural enterprises (Elkafrawi et al., 2022; Roos and Gaddefors, 2022).

Simultaneously, rural contexts present with unique 'microstructures' that distinguish them from urban contexts, and can act as drivers to entrepreneurship (Korsgaard et al., 2015; Müller and Korsgaard, 2018; Elkafrawi et al., 2022)). These include, for example, relatively low running costs of businesses, low employment turnover and wide landscapes that offer various

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resources (Korsgaard et al., 2015). Furthermore, despite constraining social norms, these can be equally comprehensible and supportive in term of promoting entrepreneurial initiatives through social cohesion and embeddedness (Elkafrawi et al., 2022; Roos and Gaddefors, 2022).

The unique rural ‘microstructures’ generate interest in rural ‘locality’ (Elkafrawi et al., 2022). Korsgaard et al. (2015) argue concepts of entrepreneurship in the rural and rural entrepreneurship as two ideal types in relation to entrepreneurship and rurality. While entrepreneurship in the rural is positioned through profit-oriented activities that are embedded to a limited extent within space, rural entrepreneurship leverages local resources to re-connect place to space. Rural entrepreneurship holds potential for optimized use of resources in rural areas through ventures that are unlikely to relocate even if economic rationality would suggest so (McElwee, 2022). This article coincides with the latter definitions on rural entrepreneurship, while stressing a core principle underpinning both types, and that is their contribution to local rural development. Such view aligns with McElwee (2022) that rural entrepreneurship is not a distinctive phenomenon, but rather one that happens in rural environments, and focuses on both value-extraction and creation from rural contexts.

Through value-extraction and value-creation within resource-constrained rural contexts, rural entrepreneurship is shown to be a promoter of SED (Gittins et al., 2022; McElwee, 2022; Lupoae et al., 2023). This is relevant to this study’s focus on the challenging Jordanian context that is in need for sustainable initiatives (World Bank, 2022) to promote its growth through endless socio-economic value and wealth creation possibilities (Frank and Landström, 2016). Through SED, SDGs are promoted across different disciplines and society levels, thus reinforcing the notion that business enterprises can produce social, environmental and psychological value, alongside profit, to support regional development (Cohen and Win, 2007; Pacheco et al., 2010). A sustainability agenda is not perceived as a cost burden in entrepreneurship; it rather draws attention towards the social obligations of entrepreneurial intentions (Cohen and Winn, 2007). These obligations contribute to legitimising entrepreneurship value perceptions (Frank and Landström, 2016; Loi et al., 2022) in ways that promote social and environmental innovation opportunities (Cohen and Winn, 2007; Lupoae et al., 2023; Battisti et al., 2023), thus furthering the relevance of this study.

Theoretical lens

The discussion in this article is underpinned by the Position-practice perspective (Giddens, 1984; Cohen, 1989; Stones, 2005), depicted in Figure 1. In line with structuration theorists, entrepreneurs are agents who occupy social positions (circles in Figure 1), and utilise structures, including personal and organizational resources, processes and tools, in an ongoing process of mutual interaction through which structuration and change happen (double-headed arrows in Figure 1). By focusing on Position-practice, structuration facilitates exploring entrepreneurial practices at particular times and places through considering four interrelated elements: praxis, positioning, capabilities and trust (Stones, 2005).

[HERE]

Figure 1: Position–practice relations (Reproduced from Coad and Glyptis, 2014, based on Cohen, 1989; Stones, 2005).

Praxis, in Position-practice relations, is the process of enacting and practicing policies and activities (Coad and Glyptis, 2014). Praxis includes ‘the nature, conditions, and consequences of ... situated activities and interactions produced through the agency of social actors’ (Cohen, 1989:2). For example, legal processes through which entrepreneurs register businesses and pay taxes are a legal praxis. Through praxis, agents are ‘accountable’ for their actions, which are based on both reasons and normative foundations that make them ‘justified’ (Coad and Glyptis, 2014). *Positioning* relates to different identities/roles revealed in different social relations, where every identity is associated with particular obligations and entitlements (Coad and Glyptis, 2014). An agent can occupy various positions simultaneously at different hierarchical levels (Coad et al., 2015); e.g., when entrepreneurs promote businesses that encourage social development and target economic growth. Understanding these identities demands an in-depth analysis of interactions between agents in organizational settings (Giddens, 1984; Stones, 2005). *Capabilities* relate to agents’ capacities to use power, resources and rules to impact other agents’ actions. This can be seen through making use of established routine practices in an organisation, obtaining services from resources, and the capability to foresee future position–practice relations (Coad and Glyptis, 2014). *Trust*, the fourth element of Position-practice, is an essential element to reduce potential uncertainty between agents and harmonize their relationships (Giddens, 1984; Coad and Glyptis, 2014). Trust develops through the interplay between personality development, routinisation processes and reflexive monitoring, and can be either personal trust (facework commitment) in the goodwill and technical competence of

others, or system trust (faceless commitment) in reliable systems to achieve progress and development without needing personal interactions (Giddins, 1984).

Understanding Position-practice entails that an entrepreneur might trade in high-tech products, without knowing how they are made from a technology perspective (Jack and Kholeif, 2008). This is conducive to this study, which explores the practical application of an innovative tool, potentially by lay people, to promote sustainable agriculture in Jordan. Consequently, agents' (entrepreneurs') actions are a reflection of how they utilise their internal structures as well as their knowledge of other agents' internal structures to take a specific position (Jack and Kholeif, 2008). This utilisation clarifies how internal structures vary widely from one agent to another as they comprise attitudes, skills and morals, alongside specific knowledge and expertise that can be employed in a particular context to achieve outcomes (Stones, 2005). Outcomes can be intended or unintended depending on how institutionalised Position-practice is challenged or reproduced in a continuous process of structuration (Stones, 2005; Coad and Glyptis, 2014; Coad et al., 2015).

Therefore, Position-practice facilitates analysing relationships between social positions and social interactions (Stones, 2005; Coad et al., 2015) by understanding multiple dynamics of identities, power and activities between internal and external structures (Jack and Kholeif, 2008). This understanding supports this article's aim in exploring whether and how REs in Jordan support SED in its constrained rural context, particularly considering feelings of belonging that REs present with generally (Elkafrawi et al., 2022). Such belonging also reflects on the Positioning of entrepreneurs' role/identities within contexts that are extremely constraining to them, yet they feel obligated to sustain (Korsgaard et al., 2015; Elkafrawi et al., 2022).

Next, the methodology is discussed, followed by the study's findings.

Methodology

This article draws on a qualitative methodology of a single case study to explore the case of Deserttulip in Jordan, following from previous research on rural entrepreneurship that apply a similar methodology (e.g. Gittins et al., 2020; Elkafrawi et al., 2022). According to Yin (2014, p. 59), a single case study is 'eminently justifiable' when it sets a unique, atypical or quintessential example to reveal significant/new findings. Thus, a single case study is

conductive to this article's methodology which explores an increasingly important, yet largely uncommon and atypical example of sustainable agriculture in Jordan (World Bank, 2022) by utilising an innovative tool (GroasisWBT), within extremely challenging circumstances. The number of selective RE respondents identified in this case study are regarded as exemplary representatives from which valuable knowledge can be derived to support SED, particularly within Jordan. In line with Flyvberg (2006), findings from single case studies can be generalisable and contribute to scientific knowledge, therefore promoting the revelatory potential of this study's recommendations to overcome socio-economic challenges in constrained contexts, with focus on sustainable agriculture. Furthermore, a selective sample size should not necessarily undermine the trustworthiness of research findings, particularly when dealing with a homogeneous sample, which is the case in this research (i.e. all REs in Jordan) (Flyvberg, 2006; Yin, 2014).

The article's methodology employed three approaches in line with this study's Position-practice structurationist ontology, where it is not possible to understand one construct on its own since the make-up of social activity of any construct cannot stand apart from others (Coad and Glyptis, 2014). This also supports the case study method since 'any case study finding or conclusion is likely to be more convincing and accurate if it is based on several different sources of information' (Yin, 2014, p.199). These included:

- (a) A novel methodological approach was applied following from Gittins et al. (2020), whereby a practical exploration of the value of an innovative agricultural tool, namely GroasisWBT, became part of the investigation. This practical exploration allowed uncovering the uniqueness of GroasisWBT for REs, and its potential role in overcoming challenges within constrained contexts (Gittins et al., 2020).
- (b) Face-to-face interviews, including:
 - a. 90-minute interview with Michael, founder of Deserttulip, to explore his journey, motives/passions, interests and aims as a RE, and the value of GroasisWBT to his journey.
 - b. Michael's interview was followed by six interviews with six REs, who founded four different rural enterprises (detailed in Table 1). These REs were selected because their enterprises were largely inspired by Deserttulip. These interviews allowed exploring how respondents' entrepreneurial journeys were influenced by Deserttulip, and whether and how GroasisWBT played a role.

(c) The main author connected with Deserttulip and/or its founder on LinkedIn, X. (formerly Twitter) and Facebook, and those social media accounts were regularly visited to support trust-building (Baker 2013) and following up on events/changes involving Deserttulip, thus enhancing research transparency (Elkafrawi et al. 2022).

[HERE]

Table 1: Interviewee details

Consent forms were communicated and agreed with interviewees. All interviews were held online using Zoom video calling, and were recorded and transcribed by the lead author. Apart from the interview with Michael, which was conducted in English, interviews were conducted in Arabic by the lead author (whose mother tongue is Arabic), who then translated and transcribed those interviews. The second author (whose mother tongue is also Arabic) conducted back translation of three randomly-selected interviews with REs to add to rigour (Dagmar et al., 2021). No major discrepancies were noted in translation.

Data analysis followed from Corbin and Strauss’ (1990) three-stage coding process (summarised in Table 2):

- (a) Open coding: transcripts were read by first and second authors several times to highlight main issues and events in three stages: (a.1) open codes around Michael’s views on the value of GroasisWBT (e.g. uses, advantages, uniqueness, challenges), (a.2) open codes around Michael’s views on challenges and promoters of business start-ups in Jordan (e.g. inception of Deserttulip, processes, institutions, growth, long-term vision and success), and (a.3) open codes from interviews with REs to explore the same codes explored with Michael, alongside codes on impact of Michael, Deserttulip and GroasisWBT on their entrepreneurial journeys (e.g. inspiration, support, growth, mentoring).
- (b) Axial coding to assemble open codes into main categories and subcategories. This step enhanced the analysis rigour by allowing cross examination of relationships and connections across all codes identified in open coding, affirming alignment between Michael’s and REs’ views, and confirming the importance of GroasisWBT to REs’ journeys.
- (c) Arriving at overriding themes (summarised in Table 2) as detailed next.

[HERE]

Table 2: A summary of the analysis process

Data Analysis

Deserttulip – Background:

Deserttulip started as a personal initiative by Michael, a Dutch residing in Jordan with his Jordanian family. Deserttulip is Michael's first business startup endeavour, founded in 2011 to offer solutions to fight drought hazards in Jordan. During his past employment, Michael came across GroasisWBT by coincidence:

"I used to work at Schiphol Airport when I saw someone carrying GroasisWBT in a bag; he was the former business partner of GroasisWBT inventor. I asked about it. He explained and walked along, but I kept that product in mind".

Two years after settling in Jordan and understanding its challenges, Michael pursued acquiring rights to GroasisWBT in Jordan and surrounding countries, and founded Deserttulip with exclusive rights to sell GroasisWBT in the Middle East.

Theme One: Structure and resource-constrained Position-practice

REs find it difficult to utilise external structures and resources to support SED within rural communities. Such structures are essential for supporting rural entrepreneurship (Müller and Korsgaard, 2018; Elkafrawi et al., 2022). Prominent constraints included environmental drought hazards that increase soil's saltiness, poor economic conditions that constrain government funding and long-term plans to support innovative technologies as GroasisWBT, slow/inefficient procedural handling, and inflexible regulations and policies in rural areas. Poor financial conditions of farmers coupled with high unemployment rates added further challenges. Michael explained,

"I don't see much-long term plans coming up, but our soil is getting saltier, and we have lots of problems with follow up. For example, I do a pilot with the Ministry of Agriculture, and nothing results afterwards. Or, I go to farmers who spend lots of

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3 *money on pumping water and dissemination plans, but can't have funding to use*
4 *GroasisWBT!"*
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8 Michael reflected on the difficulty of changing processes and strategies that are essential to
9 accommodate sustainable practices:
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12 *"If I go to the to the ministry, and compare things against 2011, I can't see much change*
13 *in people or practices. I'd like to see change, and a living and growing tree at the heart*
14 *of plans and business models! There's no sense in planning if the tree is dead!"*
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19 The highlighted formal institutional constraints align with Newbery et al. (2017) and Müller
20 and Korsgaard (2018), and have been equally stressed by REs. For example, R5 highlighted
21 poor communication practices between policy makers and REs, which impede entrepreneurial
22 initiatives,
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27 *"I wish the government offers more facilities to make business registration less*
28 *cumbersome and costly, particularly for us, the youth".*
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32 REs also elaborated on informal institutional constraints (Roos and Gaddefors, 2022) relating
33 to negative societal perceptions about entrepreneurship, constraints on women's work
34 (McElwee and Meaton, 2017; Ghouse et al., 2021; Elkafrawi and Refai, 2022; Elkafrawi et al.,
35 2022) and tribal mindsets in Jordan (Koburtay et al., 2018), where it is unpreferable to lease
36 unutilised land for investment and SED purposes to anyone outside the tribe/family. The latter
37 is rather unique to rural entrepreneurship literature due to the specificity of Jordan's cultural
38 context. R6 highlighted,
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45 *"In a tribal community, land is very precious. Some landowners find it difficult to lease*
46 *their lands to support projects, particularly those run by women".*
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50 Alongside formal and informal institutions, resource constraints were stressed as barriers to
51 entrepreneurs' praxis and enactment of policies (Coad and Glyptis, 2014). This confirms
52 Kholeif and Jack (2019) and Elkafrawi et al.'s (2022) calls for stronger focus on external
53 resources, which remain under-explored within the Structuration perspective. Limited
54 resources identified included poor population density and finances (Newbery et al., 2017;
55 Müller and Korsgaard, 2018), alongside limited environmental resources (including soil
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3 saltiness and water shortages due to low rainfall), and structural resources (including poor
4 water-preserving infrastructures). R3 highlighted,

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8 *“It’s unfortunate to see poor water drainage systems wasting the already limited*
9 *rainfall”.*
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12 A unique resource unveiled in light of extreme environmental hazards is time. Michael stressed
13 the need for urgent actions against challenges facing rural Jordan, and described overcoming
14 those challenges as a race against time,
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19 *“We must hurry! Otherwise it’ll be too late! The soil is becoming saltier. You won’t be*
20 *able to grow anything”.*
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23 ***Theme Two: Rural entrepreneur-enabled Position-practice***

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25 This theme stresses the significant agentic role of REs, viewing them as active agents who
26 drive SED, rather than victims of constrained contexts (Refai and McElwee, 2022). Michael
27 saw hope through encouraging entrepreneurs, particularly the youth, to promote SED. His
28 passion to young entrepreneurs transpired, and he asserted that Deserttulip could not be fully
29 comprehended without understanding their perspectives; he added,
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36 *“They’re [the youth] change makers... it’s really important to hear their voice, they’re*
37 *part of my story. I’m very excited that you’ll talk to them”.*
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41 Michael added that REs needed support within challenging contexts:

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43
44 *“They have brilliant ideas, but face problems. In Ajloun¹ we have brilliant*
45 *entrepreneurs, but they need a push in the right direction”.*
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48 Hope, perseverance and motivation transpired in interviews with REs too despite the
49 challenges. R6 reflected,
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53 *“I’m an entrepreneur because my instinct tells me I need to develop and grow...*
54 *Everyone should be an entrepreneur with a goal in life, and work to achieve change.*
55 *This’s how we create our happiness.”*
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¹ A hilly town in the north of Jordan, noted for its rich agricultural soil.

R5 also saw SED as a means to improve the society's negative perceptions about entrepreneurship,

"We still have negative perceptions on entrepreneurship in Jordan; it's not encouraged. I want to change that through my success".

Theme Three: GroasisWBT-enabled Position-practice

This analysis highlights how REs establish routine practices that reflect the value of utilising GroasisWBT as a tool, rather than an aim in itself (Elkafrawi et al., 2022). Routine practices promote Position-practice within constraints through supporting capabilities (Coad and Glyptis, 2014) as reflected in the sub-themes listed here. Michael expanded on GroasisWBT's value through his enterprise Deserdtulip to promote his commitment of targeting SDGs in rural Jordan, and so did REs who became inspired by Michael's enterprise. This value is enhanced by the simplicity and easiness using and maintaining GroasisWBT, rendering it **a simple and practical tool to apply (Theme 3.1)** in ways that meet the needs of skilled and lay people alike. This simplicity facilitated utilising GroasisWBT as **a tool for enabling environmental development (Theme 3.2)** through reducing soil saltness and problems around desertification and agriculture in drought-threatened areas, considering the GroasisWBT's suitability for use on sandy, rocky and hilly slopes. Michael explains,

"We have a tool that solves many problems and tackles SDGs... It isn't rocket-science; anyone can assemble it in 10 minutes, and start planting... I used it to expand green-lands in East Jordan. GroasisWBT helps reduce soil saltiness... It doesn't need maintenance; just watch your waterboxxes and change a simple part when needed... It doesn't need electricity and can be planted on any type of soil, steep slopes, sandy soil, rocky soil. Amazing!"

Through Deserdtulip, Michael utilises GroasisWBT as **a tool for educating, mentoring, learning-by-doing and learning-through-failure (Theme 3.3)**, thus offering a safe environment for REs to trial, fail, discuss, debate, and arrive at solutions:

"I use it for education... I tell them it's learning by doing. Go and see if your project is valuable. If people like it and would buy it, then you've got a business! I advise them to have fun! and have lots of zoom meetings with them to deconstruct their ideas..."

Michael's mentorship was stressed by REs, who reflected on his inspiration and motivation to develop rural Jordan, thus adding to their confidence and self-belief. R2 mentioned:

"I don't know where he finds time, but he does! He's always checking on us, what we've managed to sell and whether we need help. That support is so reassuring; it makes you feel appreciated and of value. Such great inspiration".

Michael's empowering and inspiration confirms his animateurship, 'inspiring others to take entrepreneurial initiatives and action' (McElwee, Smith and Somerville, 2018:174), with feelings of obligation towards supporting, mentoring, and working actively to develop rural contexts. Through mentorship and learning, coupled with low running costs of GroasisWBT in financially-constrained contexts, Michael reflected on GroasisWBT becoming **a tool for enabling social development (Theme 3.4) and personal development (Theme 3.5)** through decreasing social problems, developing life-long skills and promoting employment and rural enterprises. Michael elaborated,

"There're problems of drug abuse, sexual abuse and others. These happen everywhere, but through these projects you help people step out of them, and grow their personalities... Once they see success, that nice feeling stays with them forever, it changes their lives and brings positivity".

The role of GroasisWBT in rural development was shared by REs. For example, R3, who described rural Jordan as *"a forgotten story which everyone would like to listen to, but hardly anyone remembers to tell"*, saw great inspiration in GroasisWBT through igniting interest in rural Jordan and its development,

"We have many unemployed young people in Ajloun, with agricultural degrees. innovations like GroasisWBT can change their lives and mindsets, and help them develop their community, while earning modest income".

Thus, GroasisWBT represents a **tool for enhancing entrepreneurial mindsets (Theme 3.6)**. Through inspiring mentorship, Michael connects his business networks with REs and community members to support them in developing potential enterprise and business ideas that enhance entrepreneurial mindsets and rural development:

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2
3 *"I'm just connecting the dots. Watching them develop their entrepreneurial mindsets is*
4 *wonderful! I connect them with beekeepers... with people with all kinds of trees and*
5 *plants that are on the red-list...almost extinct! so you create value diversity and a*
6 *greener community".*
7
8
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11 Through utilising GroasisWBT as a tool, REs become inspired and empowered with life-long
12 skills, confidence is built, funding is sought and sustainable enterprises are initiated to promote
13 SED; all of which are important for overcoming challenges in constrained contexts (Gittins et
14 al., 2020; Gittins et al., 2022).
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19 **Theme Four: Position-practice enabled outcomes – The emergence of a sustainable ripple**
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22 This theme observes how Michael's role and his utilisation of GroasisWBT as a tool, has
23 supported SED through REs, where the *emergence of a sustainable ripple* becomes evident.
24 This ripple emerges as REs act with accountability showing agentic abilities to extract value
25 from limited resources, occupy social positions (Jack and Kholeif, 2008; Refai and McElwee,
26 2022) and influence others. Findings show how entrepreneurial initiatives and enterprises
27 emerge, one after another, to support SDGs as reflected in the sub-themes here. Those emerging
28 enterprises are not necessarily built around GroasisWBT itself, thus, confirming earlier
29 interpretations of GroasisWBT being a tool, rather than an aim in itself, which can lead to
30 various outcomes that are not always predictable and intentional (Elkafrawi et al., 2022),
31 observed here through the sustainable ripple, Michael explained:
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41 *"...I connected them with the media, and in two months they were on national*
42 *television, and have since started a radio station; they broadcast live on Facebook and*
43 *radio!".*
44
45
46

47 The sustainable ripple evidenced confirms that rural entrepreneurship is key for rural
48 development in emerging economies, as it is in developed (Newbery et al., 2017; Ghouse et
49 al., 2021), through uncovering sustainable enterprises as follows:
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53 ***Theme 4.1: Enterprises to promote food security and fight poverty***
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56 R3 asserted the supportive contribution of GroasisWBT to his enterprise, which aims
57 to promote environmental development through preserving natural resources and
58 promoting food security. His enterprise is driven by a motive to overcome water-
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shortages in rural Jordan, which he is passionate about, but suffers from under-developed water drainage infrastructures. Utilising GroasisWBT, R3 delivers workshops in his community to encourage SED. Through his initiatives, several households were encouraged to utilise small or large landscapes around their houses to grow agricultural products that cover basic household needs, and sometimes more. R3 reflected:

“We were able to help a group of men and women grow fruits and vegetables using only 16L of water over 6 months. That helped them cover some of their household needs”.

Partnering with R3, R4 continued his entrepreneurial journey seeking further networks with government representatives and policy makers, and founded another start-up focusing on innovative agricultural technologies to grow land in poverty areas and unutilised lands.

R2 also expanded and founded a rural enterprise for recycling near-expiry food products, and selling them in poverty areas for half or lower prices, while also helping to reduce environmental waste and shops' losses. R2 reflected on Michael's role through Deserttulip,

“His [Michael's] support gave us confidence to fight poverty under very challenging circumstances”.

Theme 4.2: Enterprises to reduce water consumption and promote reusable technology

GroasisWBT is not a radical innovation in itself, but offers great potential to support rural development in Jordan through a creative design that facilitates water preservation and a reusable technology, thus, supporting the potential of rural entrepreneurship in harnessing innovation (Lupoae et al., 2023; Battisti et al., 2023). R4 noted:

“We use it [GroasisWBT] with lemon and orange trees for 6 months. When the trees are strong enough to survive on their own, we remove it and re-use it to grow other trees, thus, helping more entrepreneurs and families to grow more land with lower costs”.

Theme 4.3: Enterprises that promote women's entrepreneurial engagement

Findings support the role of rural entrepreneurship in promoting rural women's employment/self-employment (Newbery et al., 2017) and overcoming constraining cultural norms (McElwee and Meaton, 2017; Ghouse et al., 2021; Elkafrawi and Refai, 2022; Elkafrawi et al., 2022). This was highlighted by R1 who founded a news platform run by women to publish environmental news and updates; the first of its kind in Jordan. She reflected on the role of Desserttulip:

"I've always been proactive with great ambitions. I met Michael through volunteering on another project and learned about GroasisWBT, which has created a buzz here in Ajlun. Great stuff to promote on media. He's incredibly supportive and always happy to advise".

Theme 4.4: Enterprises/initiatives by marginalised groups with mental health issues

Michael utilised GroasisWBT to run projects with groups with mental disabilities, enabling them to carry on with enterprise initiatives on their own, thus, confirming the value of SED in achieving social and psychological outcomes (Pacheco et al., 2010). Michael reflected:

"I ran an agricultural project with like 200 students with mental disability... we had 50 waterboxxes; I planted 20 trees and they did the remaining 30 themselves. We set up a greenhouse; completely organic with no chemicals! Now they're harvesting and developing their cooking skills! and when they have extra, they sell to the market!".

Theme 4.5: Enterprises that enhance community integration and cohesion

Community sharing practices were promoted through GroasisWBT. R3 explained,

"Waterboxxes are re-usable. Families often offer them for re-use to others in their community, who cannot afford to buy them, and some would request a small percentage of outputs for a certain time".

R4 also reflected on integration and cohesion highlighting how his rural enterprise's income would be used to support other community initiatives,

"Our agricultural output isn't enough to sell to regional markets. Instead, we use it to support other rural initiatives by selling it to women running rural production kitchens, which support rural development, for a modest price".

Working together, REs reflected on how they promoted cohesion among themselves based on common motives and dispositions around reviving the rural and supporting its SED, particularly considering the race-against-time. The role of temporality became more evident (Welter, 2011), and priorities were focused on SED and the creation of stability through rural entrepreneurship (Newbery et al., 2017). Such dispositions indicate that trust develops spontaneously, rather than being actively sought by REs, through collective social initiatives that offer harmony and reassurance (Giddens, 1984; Coad and Glyptis, 2014). R5 reflected on her relationship with her business partner,

"I barely knew her when we started, but we both had similar goals and passions, and we're good friends now".

Common dispositions and harmony were confirmed by Michael, who asserted never facing any struggles with rural communities because of his Dutch background, despite the dominant tribal culture (Koburtay et al., 2018),

"they accept you with a warm welcome... they all took very good care of me; never saw me as the foreigner, but as somebody who belongs to the Community. I never faced problems".

Dispositions for community cohesion were further enhanced through social entrepreneurs who do not target profit primarily, and do not view their enterprises as a cost burden, but rather as initiatives to support future rural development. Endless sustainable outcomes can be achieved (Pacheco et al., 2010) through the emerging sustainable ripple, thus embracing wider value perceptions (Welter et al., 2017; Loi et al., 2022) that go beyond economic focus in entrepreneurship. Michael explained:

“They see the possibility of influencing other peoples’ lives and making their projects sustainable, so when funding is over, they still sustain themselves. They never see it as a temporary project”.

R1 also confirmed this and added, “You must give before you get back. Be patient, and in time it’ll give back to you and the community”.

Discussion

Through utilising Position-practice, this study offers in depth exploration of the role of REs through unveiling how the specificity of constrained contexts shape ways through which Position-practice of entrepreneurs emerges. In other words, Position-practice has allowed more focused understanding of how entrepreneurs, operating within constrained contexts, develop and sustain those contexts by observing their social positions, identities and practices within a network of social relations (Stones, 2005).

Findings indicate that Position-practice of REs becomes contextualised between enablers and constraints that shape entrepreneurs’ praxis, positioning, capabilities and trust (Stones, 2005), in ways that ‘both provide opportunities and set the boundaries’ (Welter, 2011:165) for rural development in Jordan. This is depicted in Figure 2, where enablers are evidenced in the prominent enabling roles of both agents (here, REs) and the utilisation of innovative tools (here, GroasisWBT), while constraints are observed through limiting external structures and resources. Yet, the specificity of constrained contexts in terms of their resource limitations and unique structures (Korsgaard et al., 2015; Müller and Korsgaard, 2018; Elkafrawi et al., 2022) has facilitated re-interpreting Position-practice around collective social systems, rather than individual entrepreneurs, to facilitate SED. Consequently, contextual interrelations lead to Position-practice-enabled outcomes observed through the emergence of what this study conceptualises as a *Sustainable Ripple* that facilitates SDG.

[HERE]

Figure 2: Conceptualising the emergence of a sustainable ripple through re-interpreting Position-practice around collective social systems (Developed from Position-practice by Coad and Glyptis, 2014, based on Cohen, 1989; Stones, 2005)

Conceptualising a sustainable ripple adds clarity to Stones (2005) and Coad et al.'s (2015) arguments around ways in which outcomes of actions vary according to how institutionalized Position-practice is challenged or reproduced. The article stresses the role of *collective social systems* that harness various internal structures of multiple agents to bring together different attitudes, skills and morals (Jack and Kholeif, 2008) (depicted in multiple black circles in Figure 2 – socially inter-linked with connecting arrows). Collective social systems stress that REs are knowledgeable actors with agency, who deploy their capabilities (Stones, 2005), despite limited resources in constrained contexts. This agentic role is also evident in harnessing the value of innovative tools (here, GroasisWBT) that enable Position-practice through partially compensating for resource-limitations, mainly water, within constrained contexts.

Mutual praxis thus develops midst constraints, whereby REs act collectively with accountability based on reasons and normative foundations. They deploy their capabilities to *empower* other agents to extract value from limited resources (Ghouse et al., 2021; McElwee, 2022; Lupoae et al., 2023), develop life-long skills, and promote the emergence of a sustainable ripple to achieve SED. Examples of rural value-extraction are evidenced in utilising limited landscapes around households (as opposed to wide landscapes which are commonly cited among rural resources in Western studies (Korsgaard et al., 2015)), deriving services from limited local community initiatives (as small community kitchens run by rural women) and recycling near-expiry food products to promote food security.

As collective social systems grow and the sustainable ripple expands, so do mutual dispositions of SED that become demonstrative of collective systems, rather than individual entrepreneurs. These dispositions become foundations to building trust around harmony, reassurance and stability-creation (Newbery et al., 2017) through SED in a race-against-time, within extremely constrained contexts that stress the significance of temporality (Welter, 2011). Mutual dispositions span across different hierarchical levels (Coad et al., 2015), including community members, established entrepreneurs, budding entrepreneurs, and older and younger entrepreneurs, who all act with conviction and accountability to achieve SED. Through these dispositions, positioning becomes a structured praxis (Coad and Glyptis, 2014) built around commitment and social obligations towards rural SED (Cohen and Winn, 2007) in ways that enhance 'justification' of practices (Coad and Glyptis, 2014) and legitimization of enterprises (Frank and Landström, 2016). Collective social systems, thus, fuel further community

cohesion, while reflecting REs’ positioning as animateurs (McElwee et al., 2018) who inspire other entrepreneurs to encourage further collective acts.

Conclusion

Despite growing interest in research on constrained entrepreneurship, it remains largely focused on exploring structures and resources in which entrepreneurs operate, various intersections in which entrepreneurs are embedded, and how those hinder or promote entrepreneurship, rather than stressing how agents operate to sustain and develop those constrained contexts, and what role they play in effecting change and growth (Harima, 2022; Elkafrawi et al., 2022; Refai and McElwee, 2022, Villares-Varela et al., 2022). This article contributes to this gap by expanding constrained entrepreneurship literature (Refai and McElwee, 2022), focusing on rural contexts in particular (Elkafrawi et al., 2022). The article highlights the importance of acknowledging the specificity of constrained entrepreneurship contexts, and how they shape ways through which entrepreneurs navigate challenges, focusing on REs in Jordan. Through utilising Position-practice, the study indicates how entrepreneurs’ actions within constrained contexts become shaped around collective social systems, rather than individual entrepreneurs. Collective systems highlight the agentic role of entrepreneurs, who act collectively with accountability and conviction to compensate for resource-limitations and institutional constraints to achieve SED. This agentic role becomes further enhanced through utilising innovative tools that help to minimise the resource-shortages and facilitate SED. Consequently, Position-practice outcomes become enabled through various enterprises targeting SDGs, leading to what this study conceptualises as the emergence of a sustainable ripple – offering a platform for fostering SED with endless possibilities for creating social and environmental value across different society levels.

This article also extends structuration literature – whereby agency is often bracketed out of attention (Coad and Glyptis 2014; Kholeif and Jack, 2019) – by contributing to the underexamined ‘paradox of embedded agency in which structurally embedded agents are able to introduce structural change’ (Kholeif and Jack, 2019, p. 61). Rather than viewing REs as victims of institutional constraints (Refai and McElwee, 2022), this study elaborates on Position-practice-enabled outcomes by considering how entrepreneurs in constrained contexts empower other entrepreneurs’ actions and foresee future position-practice relations, despite inadequate and hindering structures and resources (Coad and Glyptis, 2014). While literature often views power as ‘political’ or ‘economic’ (Giddens, 1984), constrained resources and

institutions render it difficult to achieve that as domination and subordination of power structures become fragile and subject to alteration (Coad and Glyptis 2014). Alternatively, power becomes evident through *empowering* other entrepreneurs through collective social systems built around mutual dispositions that capitalise entrepreneurs' positioning and capabilities, leading to a sustainable ripple.

Methodologically, this study confirms Gittins et al.'s (2022) innovative methodological approach, indicating that incorporating innovative tools (here, GroasisWBT) in research methodologies can enable uncovering valuable findings, which otherwise could not be revealed. More specifically, this study shows how utilisation of GroasisWBT becomes part of entrepreneurial journeys; enabling entrepreneurs to partially compensate for resource-limitations (mainly, water) and achieve SED in constrained contexts.

A sustainable ripple stresses Korsgaard et al. (2015) and McElwee's (2022) views that value in entrepreneurship, be it rural entrepreneurship or entrepreneurship in the rural, lies in re-connecting place to space and achieving social and environmental development, despite potentially profit-scarce opportunities. Through emerging sustainable rural initiatives, that are not profit-focused, REs act collectively with conviction and accountability to achieve SED, and are unlikely to shift commitments, even if economic rationality would suggest so (McElwee, 2022). Entrepreneurship here is not limited to the mechanics of business functionality or profit margins, but to promoting SED in rural Jordan, where every little helps.

The article calls for research exploring the agentic role of entrepreneurs in constrained contexts, power structures within collective social systems, and how those reflects on long-term SED. The study advocates innovative methodologies to understand how innovations shape constrained entrepreneurship, while also calling on policy makers to support funding for innovations in the agricultural sector to promote SED and collective socio-economic initiatives. Limitations are noted in this study's qualitative approach within a single specific context; rural Jordan. Yet, through its original methodological and theoretical underpinnings, the article sets strong foundations to further explore constrained entrepreneurship.

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References:

- Battisti, M., Huang, S. and Pickernell, D. (2023), "Ecological resource deficits as opportunities for environmental innovation across countries", *International Journal of Entrepreneurial Behavior & Research*. <https://doi.org/10.1108/IJEBr-12-2022-1102>.
- Chaudhry, S., Crick, D. and Crick, J.M. (2023), "I'll be there for you: coopetition and competitor-oriented activities among South Asian restaurants in two UK regional clusters", *International Journal of Entrepreneurial Behavior & Research*, doi.org/10.1108/IJEBr-08-2022-0694
- Coad, A., Glyptis, L.G. (2014), "Structuration: a position–practice perspective and an illustrative study" *Critical Perspectives on Accounting*, Vol. 25 No. 2, pp.142-161.
- Coad, A., Jack, L., Kholeif, A. (2015), "Structuration theory: reflections on its further potential for management accounting research", *Qualitative Research in Accounting & Management*, Vol. 12 No. 2, pp.153-171.
- Cohen, I.J. (1989), *Structuration theory: Anthony Giddens and the constitution of social life*. Macmillan International Higher Education: London.
- Cohen, B., Winn, M.I. (2007), "Market imperfections, opportunity and sustainable entrepreneurship", *Journal of Business Venturing*, Vol. 22 No. 1, pp.29–49.
- Corbin, J. and A. Strauss. (1990), "Grounded theory research: Procedures, canons and evaluative criteria", *Qualitative Sociology*, Vol. 13 No. 1, pp.3–21.
- Dagmar, A., Mueller-Seeger, J. and Raich, M. (2021), "Translation decisions in qualitative research: a systematic framework", *International Journal of Social Research Methodology*, Vol. 24 No.4, pp.469-486.
- Deserttulp FB page (2023) Deserttulp. [online]. Available at https://www.facebook.com/groasis.jordan/about_details. Accessed 11/02/2023.
- Elkafrawi, N. and Refai, D. (2022), "Egyptian Rural Women Entrepreneurs: Challenges, Ambitions and Opportunities", *International journal of entrepreneurship and innovation*, Vol. 23 No. 3, pp.203–214.

- Elkafrawi, N., Roos, A., Refai, D. (2022), "Contextualising Rural Entrepreneurship – A Strong Structuration Perspective on Gendered-Local Agency", *International Small Business Journal*, Vol. 40 No. 8, pp.1019–1040.
- Flyvberg, B. (2006), "Five misunderstandings about case study research", *Qualitative Inquiry*, Vol. 12 No. 2, pp. 219–245.
- Frank, H., Landström, H. (2016), "What makes entrepreneurship research interesting? Reflections on strategies to overcome the rigour–relevance gap", *Entrepreneurship and Regional Development*, Vol. 28 No. 1–2, pp.51–75.
- Gashi Nulleshi, S. and Tillmar, M. (2022), "Rural proofing entrepreneurship in two fields of research", *International Journal of Entrepreneurial Behavior & Research*, Vol. 28 No. 9, pp.332-356.
- Ghouse, S.M., Durrah, O. and McElwee, G. (2021), "Rural women entrepreneurs in Oman: Problems and opportunities", *International Journal of Entrepreneurial Behavior & Research*, Vol. 27 No. 7, pp.1674-1695.
- Gittins, P., McElwee, G., and Tipi, N. (2020), "Discrete Event Simulation in Livestock Management", *Journal of rural studies*, Vol. 78 No. 2020, pp.387–398.
- Gittins, P., McElwee, G. and Lever, J. (2022), "Constrained entrepreneurship in UK agriculture: A Weberian analysis", *Journal of Rural Studies*, Vol. 95 No. 2022, pp.495-504.
- Giddens, A. (1984), *The Constitution of Society: Outline of the Theory of Structuration*. University of California Press: Berkeley.
- Jack, L., Kholeif, A. (2008), "Enterprise resource planning and a contest to limit the role of management accountants: a strong structuration perspective", *Accounting Forum*, Vol. 32 No. 1, pp.30-45.
- Kholeif, A.O.R. and Jack, L. (2019), "The Paradox of Embedded Agency from a Strong Structuration Perspective: An Illustrative Case Study of Resistance to Change in

- Budgeting Processes.” *Qualitative research in accounting and management*, Vol. 16 No. 1, pp.60–92.
- Koburtay, T., Syed, J., & Haloub, R. (2018). Implications of religion, culture, and legislation for gender equality at work: Qualitative insights from Jordan. *Journal of Business Ethics*, 164(3), 421–436.
- Korsgaard, S., Müller, S. and Tanvig, H.W. (2015), “Rural entrepreneurship or entrepreneurship in the rural-between place and space”, *International Journal of Entrepreneurial Behavior & Research*, Vol. 21 No. 1, pp.5-26.
- Loi, M., Fayolle, A., va Gelderen, M, Riot, E., Refai, D, Higgins, D, Salusse, M.A.Y., Lamy, E, Verzat, C., Cavaretta, F. (2022), “Entrepreneurship Education at the Crossroads: Challenging Taken-for-Granted Assumptions and Opening New Perspectives”, *Journal of Management Inquiry*, doi.org/10.1177/10564926211042222.
- Lupoae, O.D., Radu, R.I., Isai, V.M. and Mihai, O.I. (2023), "Sustainable entrepreneurship in the equestrian sector through horse manure: a PLS-SEM approach", *International Journal of Entrepreneurial Behavior & Research*, Vol. 29 No. 7, pp.1497-1515.
- McElwee, G. (2022) “Artisan Enterprise in the Rural Economy: Drystone Walling in North Yorkshire”, In Dana, L.P., Ramadani, V., Palalic, R. and Salamzadeh, A. (ed.), *Artisan and Handicraft Entrepreneurs - past, present and future*, Management Science Book Series, Springer Links. ISBN: 978-3-030-82303-0
- McElwee, G., Meaton, J. (2017), “Barriers to rural women entrepreneurs in Oman”, *International Journal of Entrepreneurial Behaviour & Research*, Vol. 23 No. 6, pp.998-1016.
- McElwee, G., Smith, R., Somerville, P. (2018), “Conceptualising Animation in Rural Communities: The Village SOS Case”, *Entrepreneurship and Regional Development*, Vol. 30 No. 1-2, pp.173-198.
- Merriam-Webster Dictionary (2023). [online]. Available at , last updates Feb 2023. Accessed 11/02/2023.

- Müller, S., Korsgaard, S. (2018), "Resources and bridging: the role of spatial context in rural entrepreneurship", *Entrepreneurship & Regional Development*, Vol. 30 No. 1-2, pp.224-255.
- Newbery, R., Siwale, J., Henley, A. (2017), "Rural entrepreneurship theory in the developing and developed world", *The International Journal of Entrepreneurship and Innovation*, Vol. 18 No. 1, pp.3-4.
- Pacheco, D.F., Dean, T.J., Payne, D.S. (2010), "Escaping the green prison: Entrepreneurship and the creation of opportunities for sustainable development", *Journal of Business Venturing*, Vol. 25 No. 5, pp.464-80.
- Refai, D. McElwee, G. (2022), "Refugee Subentrepreneurship – The Emergence of a Liquid Cage", *Work, Employment and Society*. DOI: doi.org/10.1177/09500170211062817
- Roos, A. and Gaddefors, J. (2022), "In the wake of the ironworks - entrepreneurship and the spatial connections to empowerment and emancipation", *International Journal of Entrepreneurship and Innovation*. doi.org/10.1177/14657503221089802
- Smith, A. M. J, Galloway, J. Jackman, L. Danson, M. and Whittam, G. 2018. "Poverty, Social Exclusion and Enterprise Policy: A Study of UK Policies' Effectiveness over 40 Years." *International journal of entrepreneurship and innovation* 20, 2: 107–118.
- Stones, R. (2005), *Structuration theory*. Palgrave Macmillan: London.
- USAID (2017), *Fact Sheet: Climate Change Risk Profile – Jordan*. Available at: https://www.climatelinks.org/sites/default/files/asset/document/2017_USAID_Climate%20Change%20Risk%20Profile_Jordan.pdf. Accessed 25/01/2023.
- Welter, F. (2011), "Contextualizing entrepreneurship—conceptual challenges and ways forward", *Entrepreneurship theory and Practice*, Vol. 35 No. 1, pp.:165-184.
- Welter, F., Baker, T., Audretsch, D.B., Gartner, W.B. (2017), "Everyday Entrepreneurship—A Call for Entrepreneurship Research to Embrace Entrepreneurial Diversity", *Entrepreneurship theory and practice* Vol. 41 No. 3, pp.311–321.

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World Bank (2022), *US\$125 million to Support Jordan’s Agriculture Sector and Improve its Climate Resilience*. Available at: <https://www.worldbank.org/en/news/press-release/2022/10/11/us-125-million-to-support-jordan-s-agriculture-sector-and-improve-its-climate-resilience>. Accessed 12/07/2023.

World Bank (2023), *The World Bank in Jordan*. Available at: <https://www.worldbank.org/en/country/jordan/overview#1>. Updated 09/01/2023. Accessed 15/02/2023.

Yin, R.K. (2014) *Case Study Research: Design and Methods*. Fifth edition. Los Angeles: SAGE.

Zayadin, R., Zucchella, A. and Anand, A. (2022), “Exploring the emancipatory role of entrepreneurship in a developing context”, *International Journal of Entrepreneurial Behavior & Research*, Vol. 28 No. 2, pp.527-547.

[HERE] Online Appendix 1: Map of Jordan (Reproduced from USAID (2017))



Picture 1

541x722mm (72 x 72 DPI)



Online appendix 1

169x169mm (38 x 38 DPI)

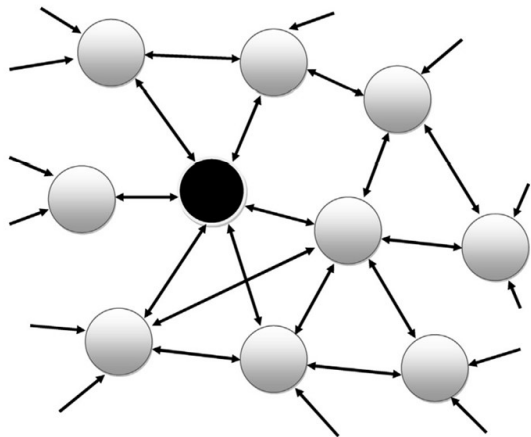
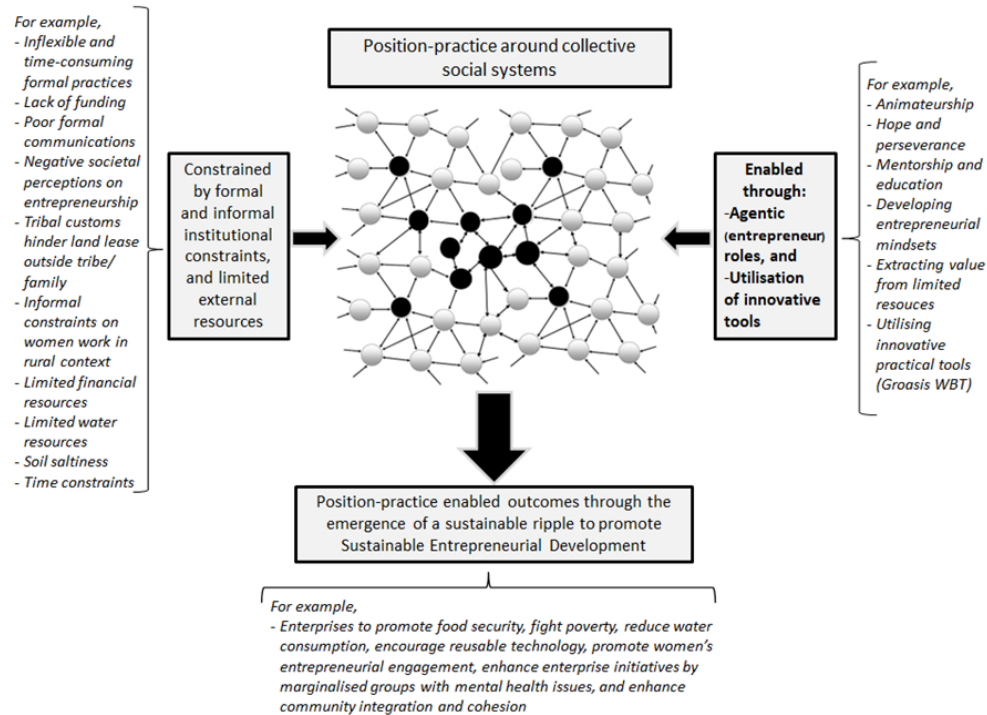


Figure 1
338x190mm (96 x 96 DPI)



402x289mm (57 x 57 DPI)

Table 1: Interviewee details

Interviewee	Rural enterprise	Gender	Duration of interview
Michael*	Founder Deserttulip*	Male	~90 hour
R1	Founder of a rural news platform run by women	Female	~45 minutes
R2	Co-founder of a food recycling enterprise to fight poverty in rural and urban areas	Female	30 minutes
R3 and R4/ joint interview	Co-founders of a social enterprise aiming for food security and sustainable development in rural areas.	Both males	70 minutes
R5 and R6/ joint interview	Co-founders of a social enterprise to promote sustainable land use in rural areas.	Both females	60 minutes

***Real name as requested by the interviewee**

Table 2: A summary of the analysis process

Interview with Michael		Interviews with REs	
(a) Open coding:		(a) Open coding:	
Codes around the story of Deserttulip and GroasisWBT, and Michael's motives		Not applicable to the REs	
Codes around challenges facing rural Jordan and business startups: Finances, infrastructure, mentalities/ attitudes, governmental support		Codes confirmed with no major discrepancies noted. In-depth insights on structural and informal barriers	
Codes around the GroasisWBT: usefulness, uniqueness, suitability, tool		Codes confirmed with no major discrepancies.	
Codes around startups, enterprises, growth, development, sustainability		Codes confirmed with no major discrepancies.	

(c) Arriving at overriding themes:				
Deserttulip – Background The story behind the GroasisWBT	Theme one: Structure and resource-constrained Position-practice	Theme two: Rural entrepreneur-enabled Position-practice	Theme three: GroasisWBT-enabled Position-practice (with 6 sub-themes)	Theme four: Position-practice enabled outcomes – The emergence of a sustainable ripple (with 5 sub-themes)