

**Business Model Innovation process of digital platform SMEs in developing economies:
an ecosystem perspective**

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Abstract

The Digital Platform Small and Medium-sized Enterprises (DPSMEs) introduced to the world as a disruptive innovation with a new Business Model Innovation (BMI) that relies on actors in the Business Ecosystem to create value. Yet, this innovation process is still unknown in the literature. Based on the analysis of rich qualitative data drawn from an in-depth multiple-case study of six DPSMEs that operate in developing countries, we contribute to the BMI literature by integrating and extending the Activity System, Dynamic Capabilities, and Business Ecosystem perspectives to the SE context.

Keywords: Business Model Innovation process, Sharing Economy, Digital Platform SMEs, Activity System, Dynamic Capabilities, Business Ecosystem.

1 Introduction

The concept of the Sharing Economy (SE) is shifting the business domain into a new paradigm: “you are what you can access” (Belk, 2014, p.1595). It has witnessed remarkable attention from researchers, practitioners, and governments alike (Acquier, Daudigeos and Pinkse, 2017; Ferrell, Ferrell and Huggins, 2017; Ritter and Schanz, 2018). While sharing itself is nothing new, people after the recession in 2008 have involved more systematically in the ‘sharing’ behavior by establishing and utilizing the extended networks using the so-called Digital Platforms (DPs) (Belk, 2014; Olson and Kemp, 2015). This has created an incredible opportunity to start a new era of businesses whose business model depends primarily on exploiting the under-utilized resources (Martin and Upham, 2016; Mair and Reischauer, 2017). As such, SE firms create value by digitally connecting owners of idle assets [providers] with those who need them [users] (Täuscher and Kietzmann, 2017). Among different types of SE firms, *Digital Platform Small and Medium-Enterprises* (hereafter, DPSMEs) are gradually regarded as the backbone of the small business sector (Ojala, Evers and Rialp, 2018). In fact, SE “platforms have become instrumental to the growth and success of small businesses in our digitalised economy” (Forbes, 2021). As the success in the Digital Economy does not directly depend on the company’ size, DPSMEs can rapidly grow and become industry leaders in both national and international markets (Gawer and Cusumano, 2008; Balboni *et al.*, 2019). Yet, it is notable that, while the extant research provides substantial insights about the Unicorns [large DPs], we still know much less about DPSMEs.

Addressing the above gap is much needed, as it is impossible to simplify SE to one size Business Model (BM) that can fit all companies’ sizes (Muñoz and Cohen, 2018). In this regard, BMs of SE start-ups [DPSMEs] are evolving and innovating in ways that differ from Uber and Airbnb [SE leaders or Unicorns] (Dabić *et al.*, 2022). At the same time, focusing predominantly on Unicorns can “lead to a distorted picture of the SE when considering smaller firms and start-ups” (Räisänen, Ojala and Tuovinen, 2021, p. 8). This is why several DPSMEs failed to gain the same benefits when coping with successful examples (i.e. implementing the existing BMs and Business Model Innovation (BMI) of these Unicorns) (Täuscher and Kietzmann, 2017; Zhao *et al.*, 2019) which puts pressure on DPSMEs’ survival and growth potential (Laczko *et al.*, 2019). This issue has been highlighted by recent Special Issues, (Dabić *et al.*, 2022) and (Wang *et al.*, 2018), who stressed the importance of investigating DPSMEs and emphasized the risk of the exclusive focus on Unicorns.

More specifically, it is still unclear how DPSMEs can innovate their BMs to survive (Balboni *et al.*, 2019; Zhao *et al.*, 2019; Sanasi *et al.*, 2020; Zhu and Liu, 2020). Accordingly, three related calls have been issued in order to build a comprehensive understanding of the dynamic process of DPSMEs BMI. These calls emphasized the need to explore the evolution process of DPSMEs’ BMs (Teece *et al.*, 2020). Moreover, several scholars (i.e., Ciulli and Kolk, 2019; Nambisan, Lyytinen and Yoo, 2020; Dabić *et al.*, 2022) called to embrace a multi-level perspective (e.g., macro and micro) to study the dynamic complex system of SE, as BMI requires considering the interactions between the firm level [micro] and its boundary-spanning [macro]. Despite scholars have suggested that DPSMEs BMs are a system of interdependent activities that are “Ecosystem-centric in their design” (Zhao *et al.*, 2019, p. 15; Zeng, Tavalaei and Khan, 2021), most of the researchers have investigated BMI from micro perspective [firmview] without considering the Ecosystem-embedded in BMI [macro perspective] (Frishammar and Parida, 2019; Yi, Chen and Li, 2022). Finally, researchers call for focusing on DPSMEs as there are relatively limited studies in the context of SMEs based in developing economies that are part of the SE (Räisänen, Ojala and Tuovinen, 2021).

To address these gaps, we set two questions for this study:

R1 [Micro-level/ firm view]: “How can DPSMEs innovate their Business Model to survive in developing economies?”

R2 [Macro-level/ ecosystem view]: “How can the Business Ecosystem influence of DPSMEs’ BMI in developing economies?”

To address these questions, we adopted a multiple in-depth case approach using six DPSMEs (at different maturity stages) founded in Jordan and the United Arab Emirates. Overall, our analysis provided a number of theoretical contributions.

2 Conceptual background

2.1 Sharing Economy and DPSMEs

Lacking a consistent definition in the literature (see Table 1), we define SE as a socio-economic system enabled by Digital Platforms (DPs) that intermediates a set of accessing, selling, renting, exchanging, gifting, and sharing of all types of assets (including underutilized or idle assets) between Peer-to-Peer (P2P), B2B, B2C, and C2B for monetary or non-monetary benefits.

Table 1 Recent Sharing Economy definitions

Source	Definition
(Dellaert, 2019, p. 240)	“Value creation systems in which part of the capital goods and services are provided by individual consumers rather than firms, including consumer co-production that is provided for a commercial purpose”.
(Leung, Xue and Wen, 2019, p. 50)	“An Ecosystem as it incorporates multiple interconnected “organisms” (i.e., interest groups) that coexist and interact in a dynamic environment”.
(Akande, Cabral and Casteleyn, 2020, p. 2)	“A new economic model based on the peer-to-peer activity”.
(Davlembayeva, Papagiannidis and Alamanos, 2020, p. 1)	“Enables the use of resources without their possession either for free or for compensation through the practices of collaborative consumption, sharing, gift-giving and commodity exchange”.
(Markman <i>et al.</i> , 2021, p. 927)	“Multisided platforms that facilitate user access to – rather than ownership of – assets that are rivalrous in their use, and that are not owned by said platforms.”
(Zeng, Tavalaei and Khan, 2021, p. 451)	“Digital platforms in which the supply of capital and labour, coordinated through peer-to-peer transactions, is provided by decentralized crowds of individuals and small/independent businesses— i.e., consumers and supplier.”
(Belezas and Daniel, 2022, p. 1)	“SE organizations are defined as all commercial or non-commercial product-service systems that capture and redistribute idle resources or assets in crowd-based networks through true sharing, pseudosharing, or collaborative consumption, and that use mediation platforms, that are most often electronic and accessible via the internet, to promote an efficient use of resources and value creation.”

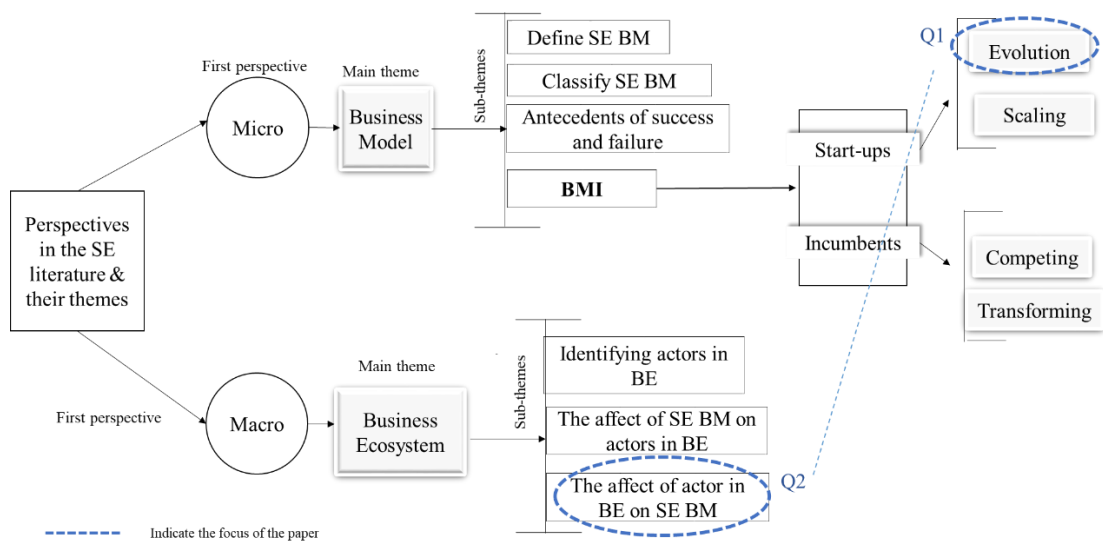
Specifically, we define SE companies as newly emerged companies that utilize DPs to connect and intermediate the transactions of renting and selling (market logic) and sharing, temporary accessing, lending, gifting, and swapping (non-market logic) between owners (providers) of assets (all types of assets) with those who need them (users) for monetary and non-monetary benefits. These companies are assts-light as they create value by depending on third parties to provide goods and services

(providers). Companies' activities are not limited to P2P sharing activities. They have also extended to B2B, B2C, and C2B.

We distinguish between different companies that operate within the SE activities. The first category, **born digital** as Sharing companies (start-ups). These companies start from the beginning as sharing DPs (digital from inception) (Monaghan, Tippmann and Coviello, 2020). This category has four subcategories; 'national DPs', 'multinational DPs', 'large DPs', and 'DPSMEs'. While *national DPs* are the sharing companies that exist and expand within one country, *multinational DPs* are sharing companies that are born globally from inception and exist in several international markets. *Large DPs* (also the so-called Unicorns or Big players) share companies with more than 300 employees. *DPSMEs* are the sharing companies that have less than 300 employees. Both large DPs and DPSMEs can be national or multinational DPs. The other category is the **transformer companies (incumbents/established companies)**. These companies were non-sharing companies that transformed to be sharing companies. This category has two sub-categories; 'gone digital' and 'going digital'. While *gone digital* has transformed and innovated its BM to become a part of the digital sharing companies, *going digital* is still transforming (Monaghan, Tippmann and Coviello, 2020). In essence, the transformers emerge into the SE activities by adapting the BMI process differently from the first category [born-digital] (Leung, Xue and Wen, 2019). In this study, we focus on the DPSMEs both national and multinational.

2.2 Perspectives on the SE

Reviewing the SE literature shows two main perspectives; micro perspective and macro perspective (as demonstrated below in Figure 1). Figure 1 also illustrates the focus of this paper within the existing literature and therefore demonstrates the contribution.



SE Sharing Economy, SE BM Sharing Economy Business Model, BMI Business Model Innovation, and BE Business Ecosystem

Figure 1 the perspectives and themes of the Sharing Economy research

In the *Micro-perspective*, BM is the mainstream theme in the SE literature. Some researchers have identified and categorized SE BM. For instance, researchers (e.g., Apte and Davis, 2019) have focused on service companies to propose building blocks for SE BM, whereas others (see Cohen and Kietzmann, 2014) have concentrated on the mobility sector to identify 12 classifications for SE BM within three subsectors; carsharing, ridesharing, and bike-sharing. Furthermore, scholars (Piscicelli, Ludden and

Cooper, 2018; Guyader and Piscicelli, 2019) have focused on different factors that affect the success of SE BM. Other researchers have investigated **BMI in the SE companies** (e.g., Ciulli and Kolk, 2019). For example, some scholars (see Wiprächtiger *et al.*, 2019) have developed an innovative framework to guideline the decision-makers in the frontier markets context which identifies three options for BMI (digital pioneer, urban digital, and pragmatic remote) and four prerequisites consideration before innovating (affordability, accessibility, availability, and awareness). Others (see Zhao *et al.*, 2019) have investigated the evolution of 12 multi-sided platforms in China in the context of fierce competition using the Activity System perspective. They called to investigate the design elements in-depth to understand the evolution. Researchers (Mont *et al.*, 2020; Zhu and Liu, 2020) called for further research on the BMI of these companies to explore their evolutions over time.

In the *Marco-perspective*, Business Ecosystem (BE) is the key theme in the SE literature. Researchers have focused on identifying the actors in the BE. While Leung, Xue and Wen (2019) identified seven interest groups in the Ecosystem of SE; platform, customer, provider, community, competitor, government, partner, Gurău and Ranchhod (2020) identified six stakeholders and the relation between them including; providers, customers, intermediaries, competitors, governments, and the general public. Moreover, scholars have investigated how SE affect different players in BE, for example, the impact of SE on incumbents (Zhang *et al.*, 2018), the nature of employment (Sun, Wang and Wan, 2019), sustainability (Geissinger *et al.*, 2019), and consumer behaviours (Wang, Hung and Huang, 2019). Others have studied how **SE is affected by the macro-environment actors** (Cherry and Pidgeon, 2018; Kong *et al.*, 2019; Paik, Kang and Seamans, 2019). Most of the research (e.g., Cherry and Pidgeon, 2018; Kong *et al.*, 2019; Paik, Kang and Seamans, 2019) has investigated the impact of one actor in BE on the SE companies. For example, the impact of users on the legitimacy of SE (Zvolska, Voytenko Palgan and Mont, 2019). To date, limited research has been done to understand the overall impact of the factors in the Ecosystem on SE especially surrounding DPSMEs. Recently, a study (Pankov, Velamuri and Schneckenberg, 2019) has proposed two sets of factors; stimulating and restricting that illustrate how these factors affect the sustainability of sharing platforms on the entrepreneurial Ecosystem.

2.3 Business Model Innovation (BMI): micro perspective

BM is “a boundary-spanning activity system that centers on a focal firm, yet may encompass activities performed by its partners, suppliers, and customers in the pursuit of value creation and capture” (Snihur, Zott and Amit, 2021, p. 4). Activity System (AS) includes two parameters to design BM; the activities (design elements) and the linkage between these activities (design themes). Design elements are content (What) [the bundle of resources and capabilities (activities) that firms need to create value by the transactions between a firm and its partners], structure (How) [the linkage between the activities, identifies the sequences and order of these activities, and selects the market mechanism], and governance (Who) who do these activities (Amit and Zott, 2001; Zott and Amit, 2010). These elements (activities) are linked in different ways called themes. Design themes can be novelty, lock-in, complementarities, and efficiency. Each theme has differently orchestrated design elements, and the change in these elements affects them (see Amit and Zott, 2001). Indeed, BMI is the changes that occur over time (evolution) in designing BM regarding its elements (activities) and themes. Adapting AS perspective in BMI “provides insights into the process that enable the evolution of a platform firm’s Business Model over time” (Zhao, Y. *et al.*, 2019, p.5, Velu, 2017 (Amit and Han, 2017) and the interdependences between activities which is still unknown in the DPS’ literature (Frankenberger and Sauer, 2019; Zhao *et al.*, 2019). We respond to researchers (Frankenberger and Sauer, 2019; Zhao *et al.*, 2019) call for focusing on the four design themes (not only the novelty and efficiency) by adopting both design elements and themes to create a comprehensive understanding of BMI in DPSMEs.

In order to gain an in-depth understanding of DPSMEs' BMI over time, Dynamic Capabilities (DCs) play a significant role to create and implementing the BMI process. According to Amit and Zott (2014, p.9), BM design “, in and of itself, can be viewed” as DCs. As BMI is “foundation to DCs” (Teece, 2007, p. 1330), DCs undergird the process of creating and capturing value (Leih, Linden and Teece, 2015; De Silva, Al-Tabbaa and Khan, 2019). In fact, the dynamic aspect of BMI results from the interaction between BM elements to exploit the potential opportunities. To be competitive, there is a need to change BM design by sensing, seizing and transforming the resources (Teece, 2007, 2018; see Hacklin, Björkdahl and Wallin, 2018).

Figure 2 illustrates the dynamic of the BMI process by integrating and extending AS (Zott and Amit, 2010) and DCs (Teece, 2007). It shows the abilities of the firm to sense the global opportunities and threats (this set of capabilities includes; scanning the environment, identifying the possibilities and threats, and assessing them), the ability to recognize and translate these opportunities to the need to change by developing different alternatives of BM's themes (NICE) before downsizing them and selecting a dominant theme, and the ability to redesign, reconfigure, and innovate BM elements (content, structure, and governance) by investing in new resources. These capabilities have a repeated manner, which means, for example, that if DPSMEs are in the seizing stage, they can return to the sensing stage (if there is a need for that).

Accordingly, we define BMI as a *dynamic process of exploiting the market opportunities and changing the BM design (design elements, design themes) to create and capture the value that is highly interdependent on third parties as a part of the firm's BM.*

2.4 Business Ecosystem: macro perspective

DPSMEs are not isolated, stakeholders have different roles in creating and capturing value (Parente, Geleilate and Rong, 2018), and these actors can play different roles in different Ecosystems (Phillips and Ritala, 2019). Monitoring and reacting to Ecosystem changes are critical (Teece, 2007) to understand the main actors and relationships that influence DPSMEs' BMs. Hence, adopting BE and insight from the network theory enables us to create a comprehensive understanding of the dynamic effect of actors on DPSMEs' BMI (Parente, Geleilate and Rong, 2018).

The *BE* is “an economic community supported by a foundation of interacting organizations and individuals -the organisms of the business world” (Moore, 1996, p. 6). It involves all relevant actors in the environment who directly or indirectly interact and impact each other “beyond the boundaries of a single industry” (Jacobides, Cennamo and Gawer, 2018, p. 2257; Parente, Geleilate and Rong, 2018). To study the impact of BE on DPSMEs BMI, we consider the methodological problem in the Ecosystem research about “how to set boundaries for the Ecosystems, as well as how to examine their structures and relationships, as well as to explain the inherent dynamics and co-evolution” (Phillips and Ritala, 2019, p. 10). In order to overcome this problem, we adopt three dimensions for the Ecosystem to avoid the methodological problem in the Ecosystem and increase the power of research (see Phillips and Ritala, 2019 for more detail) (as discussed in Figure 3).

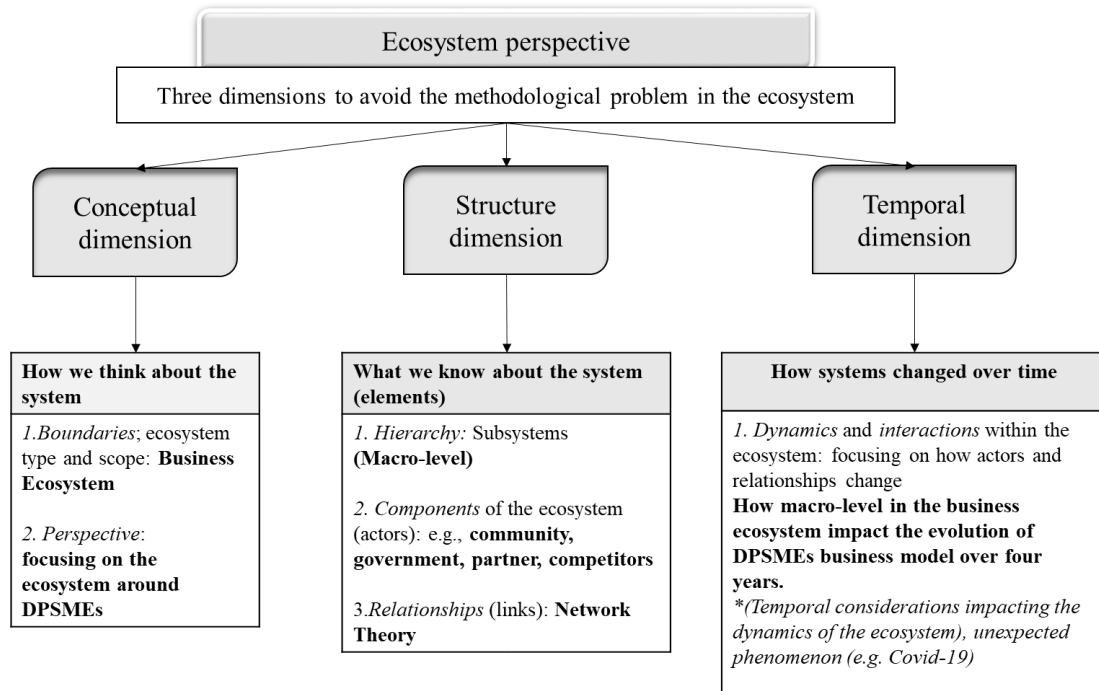


Figure 2 BE and network theory according to the focus of this paper

To sum, we developed a conceptual framework (see Figure 4) “as a source of inspiration, identification and interpretative the patterns” (Dubois and Gadde, 2002; Flick, 2017, p. 52) to reduce the theoretical gaps between DPSMEs and the traditional theories (e.g., Activity System, Dynamic Capabilities, Business Ecosystem and Network Theory) enriches and strengthens the field of research.

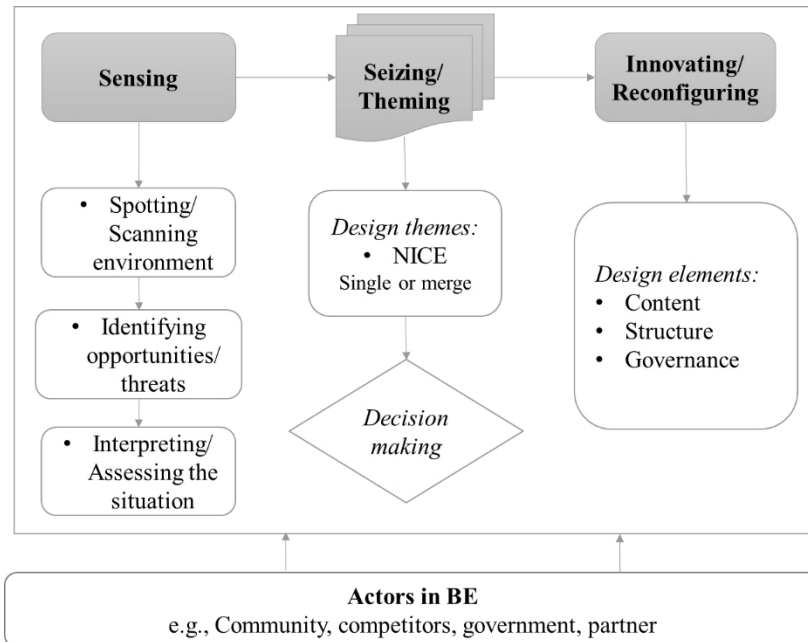


Figure 3 The conceptual framework for this paper (developed by the researchers)

3 Methodology

3.1 Research context and case selection

We focused on developing countries, in particular, the Jordanian and UAE contexts based on the following three reasons. *First*, developing countries offer a vast opportunity for businesses to grow

(Bocken, Fil and Prabhu, 2016). These countries receive massive attention from companies as they consider them untapped markets with innovative solutions (Bocken, Fil and Prabhu, 2016, p.295). Several challenges face these countries that are different from developed countries (Dreyer et al., 2017), such as lack of “the infrastructural and institutional features needed for markets to operate efficiently” (Dreyer et al., 2017 p.295). Thus, these countries enable us to understand the macro environment and how SE in different contexts has distinctive effects on DPSMEs which remains unexplored in the literature (Davidson, Habibi and Laroche, 2018). *Second*, despite Jordan and UAE considered developing countries that have common characteristics such as location (in the same region), population, and language, they have different economic situations, unemployment rates, and growth patterns that allow comparative analysis. Impressively, despite the difficult socio-economic conditions, Jordan improved (as depicted in Table 2) in the global entrepreneurship index from 72 to 49 in 2018. Also, 27 of the 100 top start-ups that participated in the World Economic Forum (WEF) in 2019 was Jordanian start-ups (World Bank, 2019). The World Bank report: Doing Business 2020 ranking [investigates the business regulation in 190 countries] shows that Jordan has jumped to rank 75 compared with 104 in 2018. Jordan considers an excellent example to understand SE in a challenging environment and benefits from the experience of DPSMEs there.

Table 2: Compare the economic situation in Jordan and UAE

Indicator		Jordan	UAE
1.	Annual GDP ¹	42,291M. \$ ²	414,179M. \$
2.	GDP per capita	4,248\$	43,005\$
3.	Population	9,956,011	9,630,959
4.	Doing business	104	11
5.	Personal income tax	20%	0%
6.	Unemployment rate	15.03%	2.57%
7.	Expenditure per capita (2017)	1,224\$	12,271\$
8.	Global rank	203	99
9.	Business score	0.81	2.08
10.	Strength of the start-up ecosystem	67 globally among 202 countries	43 globally among 202 countries
11.	Global Innovation Index 2020 ranking (Globally 131 countries)	81	34
12.	Global Innovation Index 2020 ranking (NAWA) ³	13	3 rd innovation economies in the NAWA region ³
13.	Global Entrepreneurship Index 2018	49 out of 137 countries	26 out of 137 countries
14.	Abilities Sub-index (Can you do it? Do you have the skills?) 2019	59 out of 137 countries	27 out of 137 countries

Source: Compiled from (Coutryeconomy.com, 2018; GEDI, 2018; Knoema, 2019; Dutta, Lanvin and Wunsch-Vincent, 2020; startupblink.com, 2020)

¹ Gross Domestic Product GDP ² USD ³ Northern Africa and Western Asia

Third, SE has witnessed high success and acceptance between citizens and start-ups in both Jordan and UAE. On the one hand, SE is rapid growth in GCC and especially in UAE. While the GCC expenditures on SE are \$10.7 billion, UAE has the highest spending on SE (\$5.57 billion). UAE hosts 80% of all global sharing platforms in GCC. Importantly, the first unicorn in the GCC region, “Careem”, was founded in UAE, which competes with Uber in the Middle East. On the other hand, citizens in Jordan suffer from shortcomings in the infrastructure and across different sectors (Dupire, 2018). In fact, technology plays a significant role in meeting the shortcomings and providing efficient solutions for challenging environments such as Jordan. For instance, the poor transportation system and long waiting time for taxis drive Jordanians to use DPs such as Uber and Careem to solve these deficiencies and other local problems. With the idea of sharing and utilizing underutilized assets, SE creates local solutions for local problems (Dupire, 2018). *Finally*, to “meet the nation’s developmental needs in a constantly changing world”, a unique Ministry of Digital Economy and Entrepreneurship has been created (The Jordan Times, 2019). While the Ministry of State for Artificial Intelligence, Digital

Economy and Remote Work Applications is in UAE, the Ministry for Digital Economy and Entrepreneurship (MoDEE) is in Jordan.

We purposefully selected six DPSMEs from Jordan and UAE who were operate their BMs locally and internationally. The reason behind using this theoretical sampling is that each DPSMEs has its worldview, and this study aims to reach the most relevant DPSMEs to answer questions. Indeed, we have selected the cases in a way that enable to replicate and extend theory (Eisenhardt, 1989). Due to the various methods companies use to BMI, this study focuses only on DPSMEs as a born-digital (both national and international) within two different economic situations (weak and strong) in developing nations. Accordingly, we applied two levels of sampling; *context (country and sector) and participants (cases/ company)* (Bryman, 2016; p.409). In term of *context*, cases were selected from two different countries, Jordan and the UAE, and different sectors. Despite Jordan and the UAE considered developing countries, they have different economic situations, unemployment rates, and growth patterns that allow comparative analysis. Thus, these countries enable us to understand the macro environment and how SE in different contexts has distinctive effects on DPSMEs which remains unexplored in the literature (Davidson, Habibi and Laroche, 2018). Regarding the *participants*, we used four criteria to select seven cases. *First*, considering the first level of sampling as mentioned above, cases must be initially started to operate in Jordan or the UAE before scaling to other countries, and they must be from different sectors (i.e., delivery, dry-clean, and education). “As little is known about where the SE is gaining momentum beyond transportation and accommodation” (Geissinger, Laurell and Öberg, 2021, p.1), adapting cases from different sectors is critical to understand the special case of SE in several sectors. This is valuable for “tracking the long tail of the SE” “beyond Uber and Airbnb”(Geissinger, Laurell and Öberg, 2021, p. 1). *Secondly*, cases were selected from born-digital companies (not transformer companies) that create value by using DPs to intermediate between users and providers in both the “demand- and supply-side”. *Thirdly*, cases were selected from DPSMEs (Not large DPs) that generate economic value. *Finally*, to ensure a sufficient variety in responses, cases must be innovated their BMs in terms of activity, structure, and governance, and themes locally and internationally.

3.2 Data collection

Primary data was obtained through conducting semi-structured interviews with the key informants in DPSMEs (the selected cases) from the different managerial levels who contribute to the process of planning, managing, and innovating their BMs and secondary data was collected from the published documents related to this study, including web articles and press releases, Online DPSMEs reports and websites, Digital Government reports, research proposals, and projects. Our interview guide includes open-ended questions related to the BMs of DPSMEs, the BMI process, and the impact of the factors on the BMI process. All 38 semi-structured interviews were recorded and transcribed (the sum of all interview durations is 1810 minutes).

3.3 Data coding and analysis

We conducted the analysis following the recommendation for multiple case theory building of Eisenhardt (1989) as the *method* and integrated it with the Gioia method as a *technique* (Gioia, Corley and Hamilton, 2013), which led to the construction of two theoretical models via four steps. The essence of the analysis was to “systematically move from the raw data to the theoretical interpretation” (Stadtler and Van Wassenhove, 2016, p. 663).

Table 3: The four stages of data analysis

Stages	Analytical activities	Output
1. Relying on the adapted theories (AS, DCs, & BE) to generate initial coding	Identify five dimensions: existing BMs of DPSMEs as an activity system, sensing, changes in BM (theming and innovating stages), factors, and actors in the ecosystem. insights	□ Dimensions Codes are theory-driven
2. Identifying recurring patterns regarding five dimensions (e.g.	Existing BMs of DPSMEs as an activity system [...] Engaging in open coding : using NVivo 12 to record, group and regroup data segments via codes. Sorting the interviews and documents into data incidents .	Several iterations to move from mass descriptive codes into firstorder codes by analysing

data incidents' similarity or difference (internal consistency)	• Within-case analysis (case by case)	• First-order codes
3. Generating overarching concepts	Organize and regroup 1st-order codes into 2nd-order (theorycentric) themes by search for similarities and differences in <i>crosscases analysis</i> Distil 2nd-order themes into overarching theoretical dimensions Assemble terms, themes, and dimensions into a "data structure" and engage in a constant iteration between theory and data (empirical evidence)	□ Cross-case analysis □ Second-order themes □ Aggregate dimensions □ Building two data structures
4. Incorporating data and literature to build a theoretical model and reframing the conceptual framework	Formulate dynamic relationships among the 2nd-order concepts in the data structure Transform <i>static</i> data structure into a <i>dynamic</i> theory model Refine articulation of emergent concepts and relationships Incorporate existing literature to inform the 3Ts model and BE of DPSMEs	□ Develop theoretical models from the data structures □ Conduct additional consultations with the literature to refine articulation of emergent concepts and relationships within the literature

After the first-order codes, second-order themes, and aggregate dimensions were finalised and identified, data structure for each research question were built (see Table 5).

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