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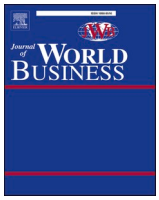

Orchestrating ecosystem resources in a different country: Understanding the integrative capabilities of sharing economy platform multinational corporations

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ABSTRACT

This paper investigates how sharing economy platform multinational corporations (SEP-MNCs) orchestrate ecosystem resources to drive sustainable growth in a different country, through a dynamic capability perspective. Based on a multiple-case design, we offer a process perspective that identifies three sets of distinct integrative capabilities that come to the fore at different stages of the SEP-MNC's ecosystem development in a different country. By arguing that dynamic capabilities need to be co-created, we posit that, ultimately, the platform ecosystem value creation requires collective engagements of both internal and external resources of the platform ecosystem in building and preserving the collaborative action that amplified their individual resources to identify new and novel opportunities. We therefore re-conceptualizing dynamic capabilities of SEP-MNCs resides at the ecosystem level where the capabilities become an emergent and highly integrated property, with recurrent patterns that only become apparent from continuous interactions with their ecosystem partners. We also contribute to the IB literature by offering a holistic view that infuses dynamic capabilities with the themes of interdependence, sub-national network coordination, and data intelligence; themes that are yet to be fully incorporated into IB scholarship.

1. Introduction

International business (IB) scholars have long acknowledged the centrality of firm-specific valuable, rare, hard-to-imitate, and non-substitutable (VRIN) resources to the understanding of the *raison d'être* of multinational corporations (MNCs) (Vahlne & Johanson, 2017). From this perspective, internationalization is seen as driven by the dynamic capabilities of MNCs, which enable them to reconfigure and renew their VRIN resources on a global scale in rapidly changing environments (Prange & Verdier, 2011; Teece, 2014). Recently, the emergence of sharing economy platform MNCs (SEP-MNCs) such as Airbnb and Uber has radically disrupted major traditional industries (Kozlenkova et al., 2021; Parente et al., 2018) and fundamentally reshaped the nature of internationalization processes in firms and business exchange globally (Coviello et al., 2017; Nambisan et al., 2019). The phenomenon of SEP-MNCs shifts the attention from the internal resources and assets of the MNC to the need to manage ecosystem-level resources as the basis for succeeding in a host country. For the purposes of our study, we defined SEP-MNCs as a special sub-type of digital platforms that, from their inception, provide online infrastructure and services aimed at facilitating the fulfilment of the immediate short-term needs of their platforms' users, and connect the independent and autonomous resources of micro-producers with the heterogeneous demand of users (Kuhn & Maleki, 2017; Lehdonvirta et al., 2019).

Rather than asset ownership, SEP-MNCs champion the accessibility of external assets that are owned and controlled by local independent micro-producers (Parente et al., 2018) who are "*legally autonomous and not linked through employment relationships*" (Gulati et al., 2012: 573). The services provided by these external producers are neither bound exclusively to a single platform (Li et al., 2019) nor, in most cases, transferable across borders as, for most SEP-MNCs, the producers and users need to be geographically co-located (Stallkamp & Schotter, 2021). As the locus of value creation is no longer inside but outside the platform-being driven more by multilateral ecosystem interaction (Chen et al., 2019), there is a need to reconsider the applicability of the dynamic capabilities of MNCs, which have hitherto been centred on augmenting and transforming the firms' existing VRIN resources across different geographic markets (Teece, 2014). Although the extant dynamic capabilities literature in the IB field is rich in explanations and predictions of how MNCs manage their internal VRIN resources to drive

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their internationalization process, it offers limited insights into the capabilities that are required to manage complex relationships with diverse, independent, and autonomous external ecosystem actors to drive sustainable growth in host markets. Recognizing this limitation, scholars have proposed that platform-based business models such as SEP-MNCs need sets of new capabilities-such as integrative capabilities that support their interactions and relationships with the external actors within their ecosystems (Helfat & Raubitschek, 2018) across borders (Nambisan et al., 2019; Li et al., 2019). However, we still do not know the answer to the question, "*What are the key elements of integrative capability for platform firms orchestrating ecosystems that transcend national borders?*" (Li et al., 2019: 1459). Although a growing stream of IB research has examined platform MNCs (Brouthers et al., 2016; Chen et al., 2017; Jean et al., 2021; Marano et al., 2020; Monaghan et al., 2020; Stallkamp & Schotter, 2021; Zeng et al., 2019), it has not focused on SEP-MNCs *per se*, nor has it provided insights into this vital question. This understanding is important because by shedding new light on managing complex relationships with diverse ecosystem partners in foreign markets, our research helps to make sense of phenomena that would otherwise be difficult to explain from the viewpoint of traditional dynamic capabilities theory predicated on the transferability and appropriability of a MNE's FSAs (Rugman, 1981).

We thus set out to fill this important theoretical gap by investigating, through the analytical lens of dynamic capabilities, how SEP-MNCs orchestrate ecosystem resources to drive sustainable growth in host markets. We chose a multi-case study research design and comprehensively tracked how the key elements of the integrative capabilities of SEP-MNCs are developed and transformed over time in host countries. This was appropriate because "*capabilities can only be properly understood as evolving through a continuous process over time in which they are always in flux and in a state of change, revision and improvement (or decline), rather than by the outcome of that process*" (Cantwell, 2014: 5). Many scholars (Van de Ven & Poole, 1995; Helfat & Peteraf, 2003) have also suggested that, capabilities can be developed gradually over time within the firm and in highly specific ways to the context in which they develop (Argote & Darr, 2000; Kay et al., 2018). We drew on a series of primary interviews and on extensive secondary data as a baseline for our six case studies and took several measures to corroborate our theorizing.

We make three main contributions to the IB literature. First, we explicate the key elements of integrative capabilities that are deployed by SEP-MNCs to manage the complex relationships with diverse, independent, and autonomous external ecosystem resources in order to drive sustainable growth in host markets, and how such capabilities unfold over time. We therefore complement the existing dynamic capabilities literature in the IB field, which has hitherto mainly focused on how MNCs manage their internal VRIN resources to drive their internationalization processes (Prange & Verdier, 2011; Teece, 2014). As such, our research represents a step forward in answering the recent calls made for a better understanding of the capabilities needed to orchestrate ecosystem resources in foreign countries (Banalieva & Dhanaraj, 2019; Parente et al., 2018; Li et al., 2019; Nambisan et al., 2019; Nambisan and Luo, 2021). Second, given that IB scholars have largely conceptualized dynamic capabilities as residing exclusively inside MNCs (Buckley & Casson, 1976; Rugman, 1981) and resting on managerial knowledge and subsidiary entrepreneurial initiatives (Birkinshaw et al., 2005; Cantwell, 2009), we advance the dynamic capabilities literature in the IB field by re-conceptualizing integrative capabilities—the key part of the dynamic capabilities of SEP-MNCs—as residing at the ecosystem level, where they become an emergent and highly integrated property, with recurrent patterns that only become apparent through the continuous interaction with their ecosystem partners. By arguing that such capabilities need to be co-created, we posit that, ultimately, platform ecosystem value creation requires the collective engagement of both the internal and external resources of the platform ecosystem in building and preserving the collaborative action that amplifies their individual resources to identify new and novel opportunities. Third, our findings reveal that because SEP-MNCs network effect are location bound where producers and users need to be co-located geographically to create value (Stallkamp & Schotter, 2021), spatial and demand heterogeneity at sub-national level and capability of SEP-MNCs are critical to explaining their value creation in host countries. For example, Uber tends to match drivers and riders within the same geography location, which means that a driver in London is unlikely to benefit from a rider joining the platform in Glasgow, and vice versa. We therefore propose that SEP-MNCs are subject to the liability of sub-national foreignness; i.e., the inherent cost involved in accessing, connecting, and facilitating external resource interactions between peers—providers and consumers—at various city or regional levels. This points to an understanding of the interwoven and symbiotic relationships that exist between place, space, and SEP-MNCs.

2. Theoretical background

2.1. The sharing economy and SEP-MNCs

In the strategy and economic fields, research on platforms has gained great momentum since the early 2000s (Mcintyre & Subramaniam, 2009; Mcintyre & Srinivasan, 2017). Building on the economic perspective of network effect-whereby the value of platform increases to each user when more users join (Katz and Shapiro, 1985), strategy scholars have attempted to understand the competitive dynamics of platforms in multi-sided markets by focussing on the firm-driven factors and actions that may influence platform development (Mcintyre & Srinivasan, 2017). The term 'sharing economy', which originally referred to amateur and not-for-profit transactions, has recently been extended to encompass commercial ones (Parker et al., 2016). An overarching feature of sharing economy platforms is their focus on the independent and autonomous micro-producers that offer products or services aimed at fulfilling the immediate short term needs of users (Kuhn & Maleki, 2017; Lehdonvirta et al., 2019).

Sharing economy platforms differ from traditional technological platforms in two distinctive ways. First, in order to deliver service, traditional technological platforms-such as video game (Boudreau & Jeppesen, 2014) or credit card payment systems (Sun & Tse, 2007) must enrol complementors to reach a critical mass (Hagiu, 2014) or develop complements in-house (Schilling, 2002). Such complementors are often firms or specialized professionals, and the development of platform specific complements require technical or specialized skills. On the contrary, the complementors for sharing economy platforms are often individuals who often enjoy great flexibility and freedom whereby they can opt in or out based on their individual goals, constraints, and availabilities (Nambisan, 2017). The development of products or services require the user of individuals' existing assets and non-specialized knowledge or skills (Kyprianou, 2018). Sharing economy platforms have to appeal to the noneconomic motivations of individuals such as entrepreneurial freedom and building social relationships (Belk, 2014). In addition, they need to manage the peer-providers' inexperience in delivering services to the individual users and cognitive biases by building trust and reputation mechanisms to drive interaction (Benoit et al., 2017).

Second, traditional technological platforms have gatekeeping rights suited to select appropriate complementors and to control and govern their conduct (Adner and Kapoor, 2010), and enjoy exclusive agreements that enable consumers to access products or services that are unavailable elsewhere (Hagiu & Lee, 2011). Conversely, in order to trigger a positive network effect (Boudreau, 2012), sharing economy platforms have to grant access and relinquish control to unknown complementors that fall outside of their direct purview (Parker et al., 2016). The contributors' network is also diverse and open, operates on a modular basis, and is often evolving (Boudreau, 2012; Nambisan, 2017).

IB scholars have recently devoted great attention to understanding the phenomenon of 'platformization' in the global context (e.g.,

Brouthers et al. 2016, Chen et al. 2019, Jean et al., 2021, Nambisan et al. 2019, Stallkamp & Schotter 2021, Zeng et al. 2019). For example, Brouthers et al. (2016) introduced the concept of ibusiness—which encompasses a wide range of platforms such as social network sites (i.e., Facebook), job websites (i.e., monsters.com), and business to business platforms (alibaba.com)—and argued that these firms face increased liabilities of user-network outsidership. Drawing evidence from Alibaba, Jean et al., (2020) provided useful insights into the antecedents and outcomes of digital platform risk for the internationalization of new ventures. Stallkamp and Schotter (2021) explicitly pointed out how the differences between within-country and cross-country network externalities affect key internationalization decisions-such as how to enter foreign markets and whether to pursue multi-domestic or global strategies. Li et al. (2019) further proposed the concept of ecosystem-specific advantages that enable digital platform MNCs to transfer advantages to new markets and called for research on the dynamic process of creating, transferring, and upgrading ecosystem-specific advantages. Kozlenkova et al. (2021) investigated the key strategic drivers of sharing economy participations and examined their relative effectiveness across global contingencies. The extant IB literature on platform has mostly focused on the general platform firms (e,g., Brouthers et al. 2016, Stallkamp and Schotter 2021) and challenges associated with managing cross-border knowledge flows and activities within a digital platform MNE (Jean et al., 2021; Stallkamp and Schotter; 2021; Li, et al., 2019; Kozlenkova et al., 2021). We are far less cognisant regarding the process through how SEP-MNCs manage complex relationships and interactions with open and diverse ecosystem partners to drive sustainable growth in host markets. By drawing attention to the ecosystem relationships that a SEP-MNC needs to build and manage in order to create value, this research can enrich and augment extant IB theories that are mainly predicated on the transferability and appropriability of a MNE's FSAs (Rugman, 1981) to accommodate the sharing economy phenomenon.

2.2. Dynamic capabilities for platform development

Dynamic capabilities can be defined as an MNC's ability to shape, reshape, configure and reconfigure the FSA base so as to respond to changing technologies and markets in the global marketplace (Dunning and Lundun, 2010). Such capabilities differ from operational ones in that they are high-order competencies that enable a firm to improve its performance and compete more effectively (Ambrosini & Bowman, 2009; Teece, 2014). Recognizing that firm-specific resources may lose value both in different geographic locations and in changing environments, IB scholars have highlighted the importance of dynamic capabilities, which enable MNCs to adapt to fast changing environments (Pitelis & Teece, 2010; Teece, 2007, 2014). This well-established theoretical perspective often focusses on the MNC level through R&D and innovation; the level at which a firm develops and possesses the FSAs that can subsequently be transferred within the MNCs to internalized activities abroad (Buckley & Casson, 1976, Rugman, 1981) or at the subsidiary level through local embeddedness, which leads to knowledge and capability development, experiential learning, entrepreneurial initiatives, and innovation output among subsidiaries (Birkinshaw et al., 2005; Cantwell, 2009). Pitelis and Teece (2010, 2018) further proposed that learning and the role played by entrepreneurial management in orchestrating system-wide value creation through ecosystem co-creation is vital to advance private appropriation. Such system-level asset orchestration often takes the form of global value chains in which the focal firms seek to "*control an entire system architecture*" (Pitelis & Teece, 2018: 19) that involves multiple tiers of suppliers and other partners (Gereffi et al., 2005; Pitelis & Teece, 2018). The implicit assumption of such asset orchestration theory in the field of IB is that the activities of an MNC's partners can be governed by the most efficient mode to curtail any issues associated with bounded rationality and opportunism (Kano, 2018; Li et al., 2018).

Although the literature on dynamic capabilities has developed rich conceptual arguments in relation to why and how MNCs configure their resource base to compete in rapidly changing environments (Cantwell, 2009; Teece, 2014; Weerawardena et al., 2007), it has hitherto failed to capture the dynamics and uncertainties inherent in the unique value creation process of SEP-MNCs. First, platforms often operate in ecosystems that can only create value in the presence of all their complementary components (Adner & Kapoor, 2010). Although asset bundling between existing FSAs and country-specific advantages (Hennart, 2009; Verbeke, 2009) results in location and non-location bound FSAs, SEP-MNCs have no value on their own (Armstrong, 2006). Indeed, value can only be created through multilateral interaction between various participants in pursuit of a shared value proposition (Adner, 2017). Second, the complementary products of platform ecosystems cannot be governed in traditional ways as they are typified by complex systemic interdependencies among independent and autonomous producers who can opt in and out based on their own flexibilities (Adner, 2017; Nambisan, 2017). In order to trigger the network effect, SEP-MNCs have to grant platform access to independent and autonomous producers that they do not even know (Li et al., 2019), which entails a level of uncertainty that is yet to be fully acknowledged in the extant dynamic capabilities discussion. Third, recognizing the importance of dynamic capabilities in mobilizing external competencies (Teece, 2007) in the platform context (Helfat & Raubitschek, 2018; Teece, 2012, 2018), scholars (e.g., Helfat et al. 2018, Teece 2018) have conceptualized different types of dynamic capabilities in digital platform-based ecosystems and their ability to integrate different resources—i.e., their integrative capabilities—in order to develop business models and coordinate partners and other stakeholders. Many scholars (Li et al., 2019; Nambisan et al., 2019) have further raised important issues pertaining to how platform MNCs develop the integrative capabilities that support interactions and relationships with external parties within their ecosystems in foreign markets. Extant IB dynamic capabilities theory are rich in explaining transferring and reconfiguring internal resources in cross-border markets, but offer limited insights into external resource orchestration in different countries. Investigating SEP-MNCs' external organizing and governance in the context of platform ecosystem in foreign market could provide valuable insights suited to advance our theorizing about platform MNCs such as SEP-MNCs.

From these observations, it followed that the best way to understand the international activities of SEP-MNCs was to undertake an inductive analysis that, while building on the existing literature, would yield new analytical insights into how SEP-MNC host country strategies emerge. To glean these insights, we took a multiple case study approach to answer the following research question: "*How do SEP-MNCs orchestrate ecosystem resources to drive sustainable growth in host markets?*" Specifically, we aimed to investigate what and how—capabilities are created and developed to enable SEP-MNCs to orchestrate ecosystem resources across borders.

3. Research method

We conducted an inductive multiple case study (Eisenhardt, 1989) because this approach deepens the understanding of a particular phenomenon, enables the collection of comparative case data, and is likely to yield more powerful explanations and more accurate and generalizable theory than single case ones (Yin, 2013). We followed a logic of literal replication (Yin, 2013)—whereby the identification of empirical regularities across cases provides contextualized explanations with a strong emphasis on theory—which is often regarded as suited to provide more compelling support for the development of testable hypotheses, hence rendering the overall study more robust (Yin, 2013).

In selecting our cases, we followed a purposeful sampling strategy aimed at maximizing the opportunities to "*gather the most relevant data about the phenomenon under investigation*" (Strauss & Corbin, 1990: 181). We first mapped the different business models (e.g., firm- or privately-

owned assets) onto a graph divided into SEP-MNCs categories. We noted that many business-to-consumer (B2C) platforms—such as Zipcar, which owns and provides products/services to consumers—also claim to be sharing economy platforms. We regarded the peer-to-peer condition as necessary to distinguish between SEP-MNCs and B2C platforms, which merely provide rental offerings. We then adopted a sampling form that sought 'maximum variation' (Lincoln & Guba, 1985), whereby the sample cases needed to be from diverse industries (e.g., taxi transportation and hospitality) and to operate in different economies, with shared mobility and tourism being the most active sharing economy platform-based business models. We selected our case SEP-MNCs by addressing four distinct types of sharing economy markets: transportation, hospitality, online marketplace, and on-demand household tasks. These four specific markets enabled us to control for environmental variation (Eisenhardt, 1989; Pettigrew, 1988), while our focus on selecting SEP-MNCs that had internationalized and had subsidiaries operating in different countries (i.e., UK, China and Germany) enabled us to narrow down any possible different institutional impacts upon these firms' actions. Such a diverse set of firms enabled us to capture the dynamics of internationalization in the SEP-MNC context. The selected SEP-MNCs were the key actors in their respective markets and led market growth during our study. In selecting our six case SEP-MNCs, we used theoretical sampling in order to focus on our core interest in behaviours and processes (Glaser and Strauss, 1967): how they built capabilities to drive value creation in a host country over time. This sampling was appropriate for an inductive study such as ours as it would enable us to explore the capabilities and processes that were our core interest, thus improving theoretical accuracy. To fully capture the orchestration of capabilities and the operation of SEP firms to operate in multiple host markets, we sought an in-depth exploration of a single subsidiary of the SEP-MNC.

3.1. Data sources

For our six cases, we relied on a combination of primary interview data and secondary archival data. Over an 18 month period—February 2017 to August 2018—we conducted a total of 71 interviews with selected informants from our sample firms. Our informant selection was based on three criteria: 1) direct involvement in their respective firms' strategic planning and management, which would provide rich, first-hand knowledge; 2) reasonable tenure in their firms, which would provide a temporal perspective on the firms' operations in China, the UK, and Germany; and 3) functional and hierarchical variety, which would enable us to obtain a variety of perspectives. As two out of our six SEP-MNCs' subsidiaries had exited the market, we contacted their former senior managers (including marketing executive and senior product managers) to invite them to participate in our research. One of these SEP-MNCs had exited from the Chinese market due to low market share but still held considerable market share in other countries. The other one had been able to secure a large number of users very quickly in different cities and had held considerable market share, but had eventually lost the battle to their local competitors, which were supported by local platform giants. Such retrospective cases, combined with the real time ones, helped to mitigate any bias, e.g., "exaggerating the salience of a datum because of its ready availability, or biasing estimates because of unconscious anchoring" ((Leonard-Barton, 1990, p250).

Each interview lasted between 60 and 150 min and was conducted either in Chinese or English (our informants based in Germany were fluent in English). We were given permission to record 64 of the 71 interviews. Our informants' positions included senior product manager, social media coordinator, operational director, and senior IT engineer. For those interviewees who did not give their permission to be recorded, we took very detailed notes both during and immediately after the interviews, making sure to record the informants' exact words. Our interview guide was made up of two main sections. The first included open-ended questions that enabled the informants to provide a broad view of the relevant local market conditions and of the focal firm. The second focused on two elements: the challenges of expanding abroad and the capabilities enacted to overcome them. Additional questions were added to the interview protocol in order to probe any emergent themes or to take advantage of any special opportunities that may have presented themselves in a given situation (Eisenhardt, 1989). Table 1 provides details of our sample firms and of the distribution of our interviewees.

Following the guidance provided by well-established qualitative scholars (e.g., Eisenhardt 1989, Langley & Abdallah 2011), we adopted several approaches aimed at addressing any potential informant bias. First, we adopted a 'courtroom questioning' style, whereby the questions were focused on facts, events, and direct interpretations, rather than on hearsay or vague commentary (Eisenhardt, 1989). This technique yielded factual accounts of what our informants had done themselves or had observed others doing (e.g., dates, meetings, and participants) (Huber & Power, 1985) and avoided informant speculation (e.g., "*Why did you fail?*"). Second, we used secondary data—such as archival data in the form of published news articles and background papers, including strategic meeting memos that were not publicly available—in order to validate and confirm those provided by the interviewees (Jick, 1979). Third, we involved informants from multiple hierarchical levels to gain a variety of perspectives. This not only enabled us to mitigate the potential biases of any individual respondent by enabling the confirmation of all information by several sources (Yin, 2013), but also produced richer and more elaborated explanations (Jick, 1979). Lastly, we provided our informants with assurances of anonymity to encourage candour.

3.2. Data Analysis

Adhering to the suggestion proposed by Langley et al., (2013: 11), our empirical observations were "*connected to extant theoretical ideas to generate novel conceptual insight and distinctions*". This analytical process required us to construct theoretical models while remaining disciplined and examining competing explanations in light of empirical evidence.

Following common recommendations for multiple case theory building (Eisenhardt, 1989), we conducted within-case and cross-case analyses with no a priori hypotheses; the subsidiaries being our units of analysis. Our within-case evidence was acquired by taking notes and writing narratives in order to develop preliminary concepts and a rough theoretical explanation for our cases. For this purpose, we focused on analysing the interview data as well as on integrating and triangulating facts from various data sources. We began our analysis by taking an open coding approach (Strauss & Corbin, 1998) and allowed the data to speak to us (Suddaby, 2006) while categorizing and labelling the informants' statements. In order to provide a devil's advocate (Nemeth et al., 2001) to improve the quality of the theorizing, we recruited a research assistant to support the data analysis process by asking critical questions and introducing alternative explanations for the data. Any differences of opinion invariably took us back to the interview script for a clarification of the text and metaphors comprised in our categories. With the development of the first order categories, we started identifying the relationships among the categories and consolidated them to the second-order themes. Specifically, we clustered the first-order codes into higher-order themes to develop, relate, and segregate categories (Strauss & Corbin, 1998). Through the analysis of the data, we started to recognize patterns. The triangulation of archival and interview data yielded a richer and more reliable description of each case (Jick, 1979) and improved construct validity (Yin, 2013). We used tables and graphs to facilitate analyses (Miles & Huberman, 1994). We used different codes for the evidence emerging from our dataset. For example, "A" referred to evidence emerging from three or more interviews conducted with different informants from the same company; "a" referred to evidence obtained from fewer than three interviews with different informants from the same company; "B" referred to evidence obtained from three or more archival sources; and "b" referred to evidence

Table 1
Background characteristics and data sources for cases.

SEP-MNCs (anonymous)	Types of platform	Headquarter location	Participated subsidiaries and offices locations	Number of semi-structured interviews	Archival sources
Yellow	Transportation network platform connecting drivers and riders	US	**China** Guangzhou Chongqin Shanghai	11 Senior product managers; Marketing director; Operation officers; Senior IT engineers; Project coordinator; Growth partnership specialists; Growth operations leads	Press articles Internal correspondence and memos Minutes of meetings Company newsletters
Orange	Hospitality service connecting room providers and consumers	US	**China** Shanghai Shenzhen	14 Growth marketing managers; Connections and media activation manager; Senior product managers; Senior experience researcher; Front end and back end software engineers; Senior data scientist	Press articles Internal correspondence and memos Minutes of meetings Company report
Blue	Online mark et place connecting sellers and buyers	US	**China** Beijing Shanghai	15 Users operation managers; Deputy marketing executive; Senior product managers; Web engineer	Press articles
Black	Transportation network platform facilitating carpooling	France	**UK** London	9 Social marketing manager; Senior real time analyst; Experience/design led developer; Data Science managers; Senior growth and strategy managers	Press articles Internal correspondence and memos Minutes of meetings
Red	Online handyman service platform connecting service providers and consumers	US	**UK** London Cardiff Glasgow	12 Senior community coordinators; Localization programme managers; Senior product managers; Ground control coordinators	Press articles Minutes of meetings Company newsletters
Brown	Hospitality service connecting venue providers and consumers	UK	**Germany** Berlin Hamburg	10 Senior network engineer Senior experience designer directors Experience designer officers Senior IT engineers	Press articles Minutes of meetings Company newsletter

yielded by fewer than three archival sources. We then developed an understanding of the main themes emerging from our data, which we reconciled by going back to the data themselves and, occasionally, to the informants.

Once the individual case studies had been completed, we performed a cross-case analysis, relying on the methods suggested by Miles and Huberman (1994) and Eisenhardt (1989) to probe for any alternative theoretical relationships and constructs that might fit the data better than our initial emergent theory (e.g., Eisenhardt 1989). To preserve replication logic integrity across cases (Eisenhardt, 1989; Yin, 2013), we

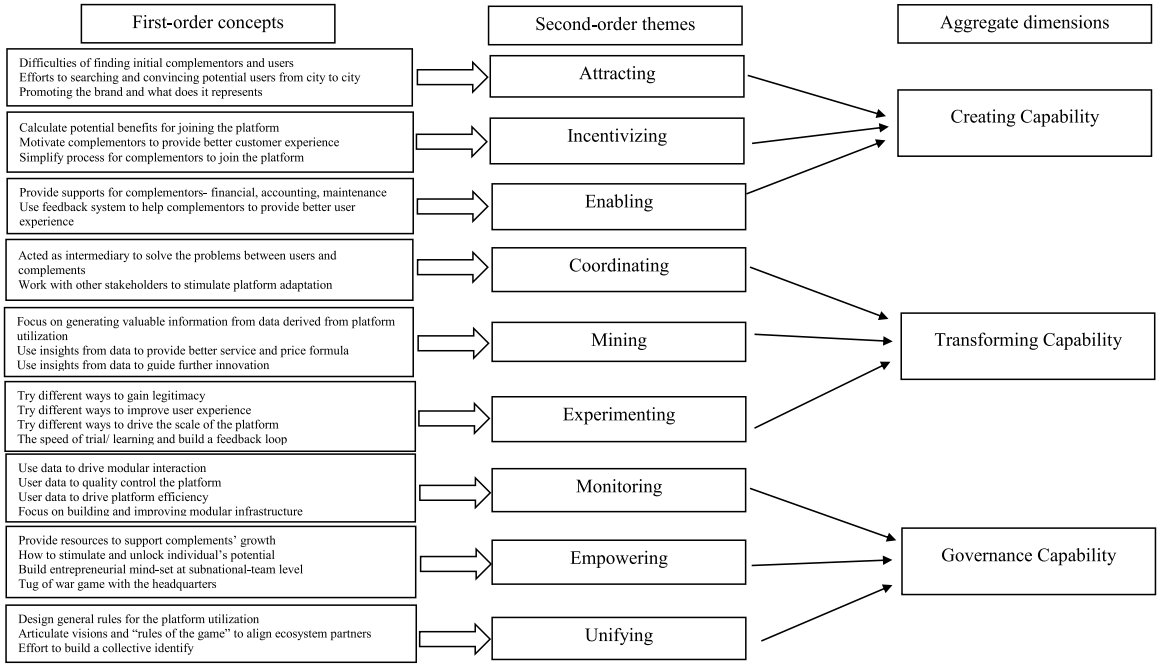

Fig. 1. Data structure.

began this cross-case analysis after most data had been collected. Initially, we compared cases to identify any common dilemmas, and refined the unique aspects of each particular case. Focal firms and themes were grouped randomly and by variables of potential interest to facilitate comparisons and develop propositions. Comparisons were initially made between varied pairs of cases. As patterns emerged, other cases were added to develop more robust theoretical concepts and causal relations. Any discrepancies and agreements in the emergent theory were noted and investigated further by revisiting the data. We followed an iterative process that involved cycling among theory, the data, and the literature to refine our findings, relate them to existing theories, and clarify our contributions. In order to refresh our thinking, we took several breaks during our data analysis, using the technique recommended by Brown and Eisenhardt (2010). We continued reading broadly in an effort to gain insights into the data (Glaser, 2004). Fig. 1 summarises our coding process.

As the theoretical frame became clearer, we compared it with the extant literature to highlight any similarities and differences, strengthen the internal validity of the findings, sharpen the construct definitions, and raise the generalizability of the emergent theory. We also presented the inductive model to our informants, inviting their feedback and comments. Using replication logic, we developed preliminary theories from some cases and then tested them on others to validate and refine the emergent theory (e.g., Eisenhardt 1989). The theoretical logic of each proposition was thus typically a blend of arguments from case evidence, prior research, and stand-alone logic (Eisenhardt & Graebner, 2007). We cycled until we achieved a strong match between the cases and the emergent theory. To further bolster the validity of our analysis, we organized a workshop during which we displayed and discussed our analysis with our peers with the aim of inducing alternative explanations. Different ideas were discussed and referred back to our informants with the aim of generating alternative explanations. We then used the first draft of this paper to test our interpretation of the events with some of our informants and took their comments into consideration.

3.3. Findings

In this section, following the multi-case study findings presentation structure suggested by Eisenhardt (2009) and her colleagues, we first describe the challenges encountered by SEP-MNCs from entry into a new market, to growth and maintenance, and the capabilities they enact to address these challenges, and then present a second layer of findings suited to explain why some SEP-MNCs differ in their capabilities to create value in foreign countries. We intersperse the narratives with significant quotes intended to illustrate our interpretations, as recommended by Langley and Abdallah (2011). Further, in Tables 2–4, we display additional selected quotes to illustrate and document the robustness of our claims.

3.4. Building a critical mass in a foreign country and deployed capabilities

Existing IB theory postulates that the proprietary ownership of intangible resources is the key to create isolating mechanisms that enable MNCs to overcome their liability of foreignness (Rugman & Verbeke, 2002). Scholars generally acknowledge that dynamic capabilities enable MNCs to renew and augment their existing resource base in a host country. The purpose and direct effect of such renewal is the adaptation of existing product/service lines to respond to the local market through various degrees of innovation and experimentation (Cantwell, 2014; Teece, 2014).

Our research yielded a different view. We noted that some of our case SEP-MNCs had tended to overestimate the true transferability of their existing resources and underestimate the effort required to build new resources from scratch in their host countries/cities. The emphasis here had no longer been on the renewal and augmentation of their existing resource bases, but on accessing and building new resource bases in host countries. For example, Yellow had inherited a 'global playbook' (Monaghan & Tippmann, 2018) that summarized its global expansion experiences in different countries, such as how to conduct market research, how to set up a pricing strategy, and where to find an initial network of riders and consumers. Such knowledge and experience, which Yellow had accumulated from its home country and other locations, is often considered to be part of the intangible assets of ownership advantage. However such knowledge and advantage cannot be easily transferred due to geographical differences (Stallkamp & Schotter, 2019), nor can it be applied to an 'empty shell' (a zero customer base).

From the moment a SEP-MNC enters a host country, the interdependency between producers and consumers and the limited transferability of the network effect from the home country creates a chicken and egg problem (Armstrong, 2006) that challenges the early stages of value creation. Our findings reveal that, at the initial stage of ecosystem development in a host country, the possession of 'superior' FSAs is not always as important as previously assumed. Rather, it is a firm's capabilities that enable it to build network resources from scratch. The main point here is that, at this stage, the capabilities in play are not related to renewing and reconfiguring existing resources, but to accessing and creating new ecosystem resources in host countries. The boundaries of DCs, at this stage, are more interactive and heavily involve three abilities—attracting, incentivizing, and enabling—whereby SEP-MNCs can connect external demand and resources (consumers and producers) to drive initial platform growth.

In order to appeal to the economic and non-economic motivations of individuals (Belk, 2014) and manage the participants' inexperience (Benoit et al., 2017), our case SEP-MNCs' subsidiaries had deployed three capabilities to create a critical mass in the host countries: *attracting, incentivizing,* and *enabling*. Attracting is defined as the capability of raising awareness of the platform, of drawing the attention of the potential complementors and users of a platform, and of driving the initial network effect. Incentivizing is defined as the capability of convincing and motivating complementors and users to utilise a platform. Enabling is defined as the capability of taking purposeful action to support complementors in driving their businesses.

A good example was provided by Orange. Orange is an accommodation SEP-MNC operating in China. Such a Customer to Customer (C2C) model relies heavily on a safety and credit system. Whereas in developed countries, such as the US and the UK, users enjoy the benefits of a comprehensive credit system once they verify their identities, in China there is no established personal credit system that enables users to comfortably use such services. As a result, Orange's initial strategy had been to promote itself to Chinese tourists who travelled overseas, rather than opening up new markets in China. However, Orange's user base had become rather stagnant and local competitors had sprung up, which, according to our informant, had pushed Orange to "*up their game*" and to be more proactive in building up a customer base at the local level. One informant commented, "*It was quite challenging to get people's attention. No matter where we went, restaurants, events and social gatherings, we tried to get people to understand our platform, our ethos, who we are and how we can help them.*" The effort of attracting enabled Orange to quickly accumulate a decent number of users. Pressured by the local competition, Orange had spent considerable time interacting with potential local hosts to understand their reservations and difficulties, One informant described such intense interaction as an "*eye opening exercise*" that had provided guidelines and inspiration for Orange to offer different services to *incentivise* and support its complementors. For example, Orange had introduced a 'Host Marketing Platform' that offered different promotions to help the host to attract more users; it had established an 'Orange Host Academy' that organized regular formal and informal gatherings for the hosts to share their experiences and knowledge, and had invited some hosts from China to visit their counterparts from other countries to share their experiences. One informant stated, "*Communities are our soul. Helping them is helping us.*" Such incentivizing led to an enabling action whereby Orange provided a lot of

Table 2
Building an initial customer base.

	Rating of Examined Evidence	Dynamic capabilities Attracting	Incentivizing	Enabling
Definition		The capability of raising awareness about the platform and drawing the attention of potential complementors and users towards the platform in order to drive the initial network effect	The capability of convincing and motivating complementors and users to utilise the platform.	The capability of taking purposeful action to support complementors in driving their businesses
Firms		*Illustrative quotes*		
Yellow		*"We are essentially a start-up, not just in Chongqin, but in Shanghai and other places. We had to find local drivers and riders. With limited resources, it was impossible to focus on the individual drivers first, that can take forever. We all started as drivers, and then had to persuade local car hire companies. No matter where we were, we always talked to people around us about Yellow, downloaded the apps for them, and sometimes offered them rides there and then"*	*"Customer experience is everything, we had experienced researchers and product managers who were constantly working with customers to understand the whole journey, not just from the supply, but also the demand side. We learned what worked and what did not in the process, and we had to respond quickly"*	"*We bought and supplied tailored shirts and suits for them. In the beginning, to provide a professional image, we helped them to sort out the account, to handle customer complaints, and sometimes even to intervene in team conflicts. We often joked that we provided all in one services for our initial drivers"*
Attracting	A, B			
Incentivizing	A, B			
Enabling	A, b			
Orange		"*Each city is a separate battlefield. The good thing is that we have a very localized team, not being parachuted from the top. Each team has a difficult task, to build it from scratch, not just 0 customers, but 0 (peer) providers. We have to build everything from scratch. Luckily, some of our customers have used our hosts overseas so they have the gist of the whole idea, and we tried to turn them into the first hosts in China. We were telling stories about our hosts from other countries, their experiences and what we could do for them, to at least get them interested in the idea"*	*"We created a local host network encouraging them to share their tips and experiences, we showed our hosts who were doing extraordinarily well overseas and connected them (initial hosts) to see the potential with their own eyes, we were constantly reassuring them that we would be there the whole time, helping them along the way, taking good photos, attracting quality customers, we stayed with our hosts as well, trying to get a sense of what motivates them to join us"*	*"In China, the 'stranger danger' is the norm and simply by convincing people to let strangers to stay at their house for a fee was impossible. There were too many 'what if' scenarios they were worried about, that's why you see so many empty houses in China, people buy them for the property value, but would rather keep them empty than let strangers stay for a small amount of money. In Beijing and Shanghai, where they are more exposed to our model in the States, sometimes it was a novelty, but in other cities it took us forever to build an initial base. They (China) also do not have a credit system, which made it all rather difficult, so lots of work was being done to ease their concerns and to narrow the gaps between our hosts and customers"*
Attracting	A, B			
Incentivizing	A, B			
Enabling	A, B			
Blue		*"We made great efforts to advertise our platform, quite heavily actually, on TV, on the subway, to get people's attention, to promote our platform"*	*"We took our market share for granted when we acquired a local platform. After we started losing our customers, we offered up to three items free per month to incentive our sellers, but it did not work. With our rival offers free listing, it created another free channel to make a sell for our sellers. We were losing the numbers very quickly"*	*While we were enjoying the "pre-existing "network, our competitor was working hard to solve interaction problems, to solve trust issues, to solve logistics problems. They were doing everything they could to bridge the gap between them (customers), to help sellers. We, on the other hand, stuck our heads in the sand and casually ignored the threats"*
Attracting	A, B			
Incentivizing	a, b			
Enabling	A			
Black		*"We did not make much noise in the market, about who we were, about our platform. The initial marketing strategy worked well as we are not like others, such as Uber that threatened the taxi drivers' business, We are more sustainable, to reduce fuel consumption, to be more green. However, this is just it. We advertised online to get people's attention, but getting attention is one thing, whether you have enough drivers that sign up and are willing to offer their spare space is something else, something that is more fundamental to our business. Without them, we have nothing to offer"*	*We provided financial incentives to acquire customers, this is the norm for all platforms, and it's the customer acquisition costs. We looked at the demographics like millennials, city dwellers and those who do not own a car and are open to the sharing rides ideas and think about ways to motivate them to use our platform"*	*In theory, the UK is a fantastic market with expensive petrol and train fares. Trains are also quite crowded and services are not that good. Good roads and millions of people make routine commutes between different cities. But we have not done much to really understand the issues that put people off from using our service.*
Attracting	a, b			
Incentivizing	a			
Enabling	a			
Red		*"We tried all sorts of places to find our taskers, online, local community Facebook pages, local workforce brochures and newspapers. And we also had to pretend to be the customers, contacting them to help us with different jobs. It was funny that, at the beginning, we had to rotate with different requests, otherwise they (peer-providers) would know it was us faking the demand. We then talked to our neighbourhoods, introducing Black to all of them, handing out free voucher code so they could get a taste of what we offer, understand their experiences when their (consumers) used our services, and how we can work with them (peer-providers) to improve the offering.*	*"We tried different ways to help our tasks to find jobs nearby, to make the whole process easier for them to register and to engage with us. Each city is a different battleground and compared to tasks in London, tasks in Cardiff and Glasgow are more laid back so they need different incentives. We were using these tasks for ourselves, to get our relatives and friends to use it as well, to create an impression that there was a market demand out there, so they (tasks) would be more willing to continue using our platforms"*	*"Sometimes, the tools can be expensive and we were helping the tasks to rent the tools so they could provide the service. We were helping them with taxes, to help them communicate with customers, it was a learning process for all of us. We were learning their experiences, the good practices, the things to be aware of, then shared it with others. Essentially, we wanted to help them to run a good business over our platform, the mind-set is how can we help them to make money"*
Attracting	a, b			
Incentivizing	A			
Enabling	a			
Brown		"*We did a lot of heavy lifting, signing up many different venues, talked about how they could benefit from it by maximizing the value of their venues, and nobody likes empty venues, just like no hotel likes empty rooms. But then it's a rather*	"*It's about the money game, throwing money at them, that's their mind-set, to acquire customers. We provided free venue hire, just to kick start the process, to get us known by the customers"*	n/a
Attracting	a			
Incentivizing	a			

(*continued on next page*)

Table 2 (*continued*)

Enabling	*imbalanced effort, too much emphasis on venue providers, but if there are no customers, these providers would not see much value of it after all"*

Notes: codes for the evidence categories are as follows: "A", evidence from three + interviews with different informants from the same company; "a", evidence from less than three + interviews with different informants from the same company; "B", evidence from three + archival sources; "b", evidence from less than three + archival sources.

support in helping its host to drive their businesses.

Black, another sample firm, provided a second example. Although Black had attempted to attract, incentivise, and enable both complementors and users, their approach had been much more passive. After entering the UK market as a car sharing platform, Black's market share had not increased, and it had remained one of the smaller players in the market. One informant described Black's approach to attract customers, "*The market is very sleepy here and there is no fighting spirit. We followed the same business model, to be honest; this business model is quite easy to copy and I would not be surprised if someone takes over our business in the near future. It is rather passive here, but I guess platforms are passive in nature because you are relying on others to deliver the service.*" The number of complementors and users had increased rather slowly in the UK. In terms of incentives, Black had provided different discounts to attract users, but it had never really tackled the actual issue—how to get strangers to feel comfortable in sharing a car. One informant commented, "*We never really made any proper effort to understand them. They do not like share cars, period, it's not about fuel arrangements that detered them- simply because they tried to avoid the awkwardness associated with car sharing, let alone getting an unknown bottom on their driver's seat. So we called it a day and gave them some discount as an incentives, nothing else*"

Black's passive attempt to attract, incentivise, and enable complementors and users had limited its ability to build an initial customer base, which is crucial to drive platform strategy.

Yellow, is another good example. After it entered China, the Launchers' key responsibilities were to understand the local transportation pain points and market opportunities, recruit and train local teams, form relationships with local press, build initial customer bases and scale them up rapidly. Our findings reveal that most efforts and time had been devoted to finding ways to promote an awareness of the platform and attract potential complementors and riders. Only one person from a Launcher team had been in charge of finding riders in Shanghai. She described, "*You can not just go out to find individual riders on the street with limited resources like us, that's not economic*". She had started by approaching the large car rental companies that provided services for companies, events, and celebrations such as weddings, and local small-medium privately owned car rental firms, while simultaneously promoting the app to users whenever she had found opportunities. Once the initial network base of complementors and users had been built, Yellow had spent considerable time trying to motivate both sides of the market to make frequent use of the platform. They had often grappled with questions such as, "*How do they* [complementors and users] *benefit from using the platform?*" and "*How can we motivate them* [complementors] *to provide a better user experience?*" At the same time, Yellow had been working closely with its initial network of complementors to convey the market potential and financial returns and convince them to start growing their own businesses through the Yellow platform. Yellow further drew our attention to the need to take more customized approaches in different cities. One informant stated, "*The motivations to register as drivers are very different in different cities in China: Guangzhou is heavily populated with immigrant drivers from less developed cities and villages; some Shanghai drivers use this opportunity to practice their English and/or to simply experiment with a different lifestyle. Our job was to understand the context and do everything we could to enable them to do the best job, to attract more customers.*" Overall, our data indicated much variation in the use of the attracting, incentivizing, and enabling mechanisms to build initial customer bases. Table 2 summarizes our data on these three capabilities. More significantly, we found that those SEP-MNCs who proactively use these three capabilities are more likely to build initial customer bases, which is crucial to the building of ecosystem advantages in host countries.

The network creation process enacted through the attracting, incentivizing, and enabling capabilities is effective for several reasons. First, as the producers and users of SEP-MNCs need to be co-located geographically, the network effects of SEP-MNCs are not always transferable across borders (Stallkamp & Schotter, 2021). As a result, the internationalization of SEP-MNCs largely depends on whether their platforms can attract ecosystem participants in local markets and align their goals with their own (Ojala et al., 2018). Rather than focussing on renewing and augmenting their existing resource bases in host countries, SEP-MNCs have to create new resource bases by first attracting independent and autonomous external producers to solve the traditional chicken and egg problem. Second, incentivizing and enabling are effective because SEP-MNCs have to not only manage the participants' inexperience and cognitive biases (Benoit et al., 2017), but also appeal to the economic and non-economic motivations of individuals (Belk, 2014). As platform ecosystems rely primarily on non-contractual mechanisms (i.e., modular complementarity and coordination structures) to strike a balance between generativity and coherence in ecosystem outputs (Jacobides et al., 2018; Wareham et al., 2014), SEP-MNCs need to pay more attention to engaging with external resources/producers and to understand the broader institutional context that affects these micro-producers' motivations and consumer experiences. Third, local platform ecosystems have to entail elements of reciprocity whereby SEP-MNCs support and enable external producers to deliver excellent service to their consumers; in return, they help SEP-MNCs to drive the network effect. We noted that, while some SEP-MNCs are proactive in attracting, incentivizing and enabling those loosely coupled and autonomous ecosystem players, others tend to overestimate the true transferability of their intangible owned and controlled resources and to underestimate the efforts that are required to build new customer bases. Our analysis indicated that those SEP-MNCs that are more proactive in developing attracting, incentivizing, and enabling capabilities tend to be associated with greater levels of ability to build a critical mass in a host country. As a result, we argue that these three capabilities are critical and a pre-requisite to building an initial customer base in a host country.

3.5. Stimulating local network growth and deployed capabilities

Prior research had noted that entrepreneurial management and learning play a crucial role in supporting MNCs in the co-creation of value in host markets (Cantwell, Cantwell, Dunning & Lundan, 2010; Teece, 2014). Recognizing the importance of the ecosystem, Teece (2014) pointed out that collaboration and ongoing engagement with ecosystem partners, when done well, can augment a firm's internal capabilities (Capron & Mitchell, 2009; Chesbrough, 2003). However, these studies were situated in the context of formally structured relationships in the form of strategic alliances. Due to the multi-lateral interdependency found among ecosystem players, and to the scale and diversity of the players involved, how to constantly engage with these actors to augment a firm's internal capabilities is largely unknown.

Once the initial network effect is established, a different set of capabilities is required to stimulate platform growth. We note that, at this

Table 3
Stimulating local network growth.

	Rating of Examined Evidence	Dynamic capabilities Coordinating	Mining	Experimenting
Definition		The capability of working with complementors and users to improve the user experience	The capability of generating value from the data collected from platform interaction and utilization	The capability of trying new and innovative ideas and developing a feedback loop to guide further actions
Firms		*Illustrative quotes*		
Yellow		*"We had to think about different contexts to coordinate our drivers and riders. In China, it's tricky, you have many footbridges, so we need to be careful to decide where the pickup points will be. We also need to rethink about GPS to orchestrate a quick, efficient and convenient pickup. We also need to think about different scenario of pick up, family, parties, professionals, elderly etc. And we need to take these into consideration when we coordinate our drivers and riders.*	*Essentially we are a data company, relying on data to calculate our fares, to match the most suitable drivers, using GPS, street data, we even collect data when the driver has no passengers. And we predict supply and demand from our dataset, look at how transportation and traffic is handled locally, and adjust the bottleneck and other common issues. The data itself is our blood supply, without it, it's impossible for us to do what we do. We have recruited many data analysts, scientist to help us to make sense of all the data we gathered.*	*"The Google map is being blocked in China so we had to quickly come up with an alternative to provide the GPS system for our users. We also need to broaden our scale as previously we were focusing on luxury car service, this require us to change our image to become more cost friendly to our potential users. The difficulties is that how can we broaden our range without losing the quality that often associated with luxury car service. We also constantly updating our features through a series of experimentation, the ability to find locations and addresses, show drivers and riders their estimate time of arrival, and the road dynamics change as well, due to road block and constructions, move from 2d to 3d map system. It was a constant learning process"*
Coordinating	A, B			
Mining	A, B			
Experimenting	A, B			
Orange		*"We coordinate with the local travel agencies, government bodies, local travel hot spots, and even famous restaurants to think about ways to get our customers to travel different places. We also worked with local communities, and with our hosts and customers to design a better online and offline interaction, to improve the quality of our brand.*	*"When we have the numbers (customer numbers), we have the data, when we have the data, then that's where the magic starts to happen. You will be able to see the trends, patterns from those data generated from users themselves, and from the platform interaction. They often leave a digital print, which is like a bread crumps, leaving us a lots of clues and hints about their general pattern of behaviour. Such information is incredibly valuable to drive the network effect"*	*"We need to be creative in terms of thinking about customer experience, what constitutes one star, two star and even seven stars, what can we do to ensure the safety of our users, we introduced an online safety centre and emergency alarm features and we work closely with local travel government agencies to promote its heritage culture through different programmes. Some of them went very well and we also learned a few lessons from others"*
Coordinating	A, b			
Mining	A, B			
Experimenting	A, B			
Blue		*We did what we supposed to do, platform maintenance, monitor the abnormality and possible fraud, marketing and brand building to attract more customers to use our site.*	*"We got a lot of clues from a/b testing, to monitor the data to see our customers reaction, and analyse and optimize the usage and capability. But again, with customer are migrating to our competitor, the data is gone with them as well"*	*"We were trying different ways to attract our customers, introduce different policies to get them engaged and interested, and to get them more comfortable using our site. Back then, online auction and buying stuff online was quite daunting as the infrastructure was not build to support this kind of activities, so we had to try different ways to improve the reliability of our platform"*
Coordinating	A, b			
Mining	A			
Experimenting	a			
Black		*We use GPS tracking, vehicle details and real time location to coordinate our drivers and riders. We also approached insurance companies to provide service for our customers. We worked hard to ensure the offline interaction is run smoothly. We provide detailed user profile, link with their Facebook and Linkedin accounts to increase trust.*	*"We are looking for clues from the data we collected, for example, it allows us to see the geographic segmentation and how the riding activities were structured. We have departure routes, meet up routes, and drop off routes, and who were looking for the same routes. The data can help us to configured to display possible meet up route on the routes of the drivers and not far from it's the initial destination point and we can then discover new routes when you arrive in that city".*	*"Running different experiments such as A/B testing is a norm for platform, we modify our communication tool, message tool and matching statistics, we design our own experiments in a controlled market place, customized to limit interference. In this case, we can control the risks that associated with the experimentation. In the past, we also tried "ladies only" option but it was not successfully. We also tried within city carpooling focusing on short distance. We are constantly re-evaluating our business model.*
Coordinating	A			
Mining	A, b			
Experimenting	A			
Red		*Our main purpose is to provide sustained business opportunities to our tasks, to think about what makes them grow, we need to create this ecosystem to have different parties that can be connected to support our tasks' business, customers, how our technologies can be designed to support and service this important purpose, I think our main priority is to coordinate these different players to form a seamless experience, not just for our customers, but more for our taskers.*	*Data tells us a lot of things, what kind of profile picture will increase the likelihood of being hired by the clients, and what features that can maximize both the client selecting a tasker and the tasker successfully completing the task to a high standard. And also given the tasker's history and experience, what would be the right price point to make them competitive in the marketplace. We have a group of data analysts and engineers to make sense of the data we have"*	*We tried one time tasks, recurring tasks, and given the specifics of the tasks, we also tried different ways to render who is the most suitable and relevant taskers that can do the job for our customers, and what kind of features that presented by our taskers can attract our customers, you know, what do our customers look for when they hire a tasker, or what kind of jobs our customers may want next. And we also test what kind of jobs are required when it comes to certain demographic, certain areas of the region, so we can be more purposefully attract certain taskers.*
Coordinating	A, B			
Mining	A			
Experimenting	A, B			
Brown		*There is so much we can do, to understand the communities, to work with schools to maximize the utility of their spaces, to proactively think about the events and workshops that can connect local talents and customers, how these events can benefit the local communities and thus become a recurring theme that can benefits our clients in the long term. But what we have here is rather like a quite poodle, nothing exciting and feels like no life.*	*We do not have much data to start with as everything moves slowly and our numbers (customer numbers) did not grow that much. Of course, we do the basic ones, we clean and aggregate data for analysis, to understand our clients and venue providers, to understand their patterns of behaviours.*	*N/A*
Coordinating	A			
Mining	a			
Experimenting				

Notes: codes for the evidence categories are as follows: "A", evidence from three + interviews with different informants from the same company; "a", evidence from less than three + interviews with different informants from the same company; "B", evidence from three + archival sources; "b", evidence from less than three + archival sources.

stage, data and AI algorithms are the key resource ingredients that drive the value creation of a platform through such abilities. The capabilities developed in the home country—including heritage assets such as AI algorithms and administrative coordinating mechanisms—can now be transferred to the host country. Our data indicate that, once an initial network base has been created among complementors and users, SEP-MNCs adopt three capabilities—*coordinating, mining,* and *experimenting*— to augment their internal competencies. Coordinating is defined as the capability of working with complementors and users to improve user experience and transaction efficiency. Mining is defined as the capability of generating value from the data collected from platform interaction and utilization. Experimenting is defined as the capability of trying new and innovative ideas and developing feedback loops that guide further actions.

Red provided an excellent example. Red had been able to build an initial customer base from scratch in London and had then gradually moved to other cities to scale up its operation. As the taskers (on demand handyman) were not hired by Red to execute a specific task, how to deploy effective coordination capability to manage interdependency between multiple actors, and to reduce the coordination costs and improve user experiences had become a key priority for Red. One informant stated, "*It's all about how can we constantly improve the user experiences, the interaction between the tasks and users, how to match them more quickly, and how to connect the right ones for our users. The right one means different things for our users; costs, availabilities, quality of the work, sometimes even the picture of our taskers make a difference, believe it or not. We now have the data and tools from what we have developed before, it is definitely helping a lot.*" As the locations differed at the sub-national level, the tasks also changed accordingly. An informant commented, "*London is very dense, fast paced and diversified; the tasks required by the customers are very different from those of a city like Cardiff, which is much more laid back. So we have lots to learn to connect people from different places.*" When it had built a large customer base, Red had started to pay great attention to the data generated from its platform. Given the specifics of the tasks, Red had to filter the most relevant taskers that could do the job for the users.

Our informants stated that importance of the mining capabilities to stimulate network growth. For example, by mining historical data, Red could predict what was next for the users and tasks. And by analysing both the users' and taskers' to do lists, Red could suggest the times and dates when the taskers would be in the users' areas so that the taskers could get more work done within their close proximity. Our informants highlighted that the data generated from local markets had also helped to sharpen up the machine learning analysis that had been transferred from the headquarters. "*It is a good cycle, the more data we have, the better it* [the machine learning analysis] *gets and, the better it gets, the more it helps us to further improve their experiences, and we can then attract more users and generate more data.*" The user generated data and the mining capability developed by Red had also enabled the firm to experiment with new ideas. One informant pointed out, "*Our key mission is to generate repeat business opportunities for our taskers, so we are constantly experimenting with new ways to reduce their costs and improve the quality of their services to our users. Not just get the job done, but starting from how to make a good impression before they* [the taskers] *even meet their clients, and how to help them to deliver services that are beyond our clients' expectations.*"

Similar examples were found in Orange. According to our informant, the AI algorithms developed at the headquarters had helped Orange to improve its users' search experience, to help its hosts to optimize pricing, to predict user concerns, and to prevent fraud in the host country. For example, the hosts could sometimes be busy and were thus not always available to answer their guests' enquires. Orange had been able to help the hosts to answer questions about, for instance, details on bookings, refunds, and trip planning by communicating the intent of the message. Our informants also emphasized that, rather than just using existing AI algorithms to optimize coordination among ecosystem players, the development of mining capabilities to generate insights from data collected from China is also instrumental in creating value for a platform. One informants stated, "*China is quite far ahead of other countries in terms of its technological development; cashless cities and facial recognition are becoming the norm here, and we were able to generate so much more data from here, so we needed to develop our own algorithms to make sense of these data.*" Such mining capabilities had further improved Orange's coordination and experimenting capabilities. For example, the insights generated from the data had enabled Red to introduce new programmes—such as 'Summer learning holidays' and 'Cultural visits' for the guests, and a 'Host business growth system' and a 'marketing support system' for the hosts.

Conversely, our respondents from Black and Brown made little mention of discovery and of creating new opportunities. An informant from Black commented on the differences in user interaction in the host country, "*The customers in the UK are very different from those in other European countries; they are much more reserved and, in their own words, I was told that 'I could not be bothered to engage in conversations but, at the same time, it felt quite rude not to.' The traits Britishness really made it difficult to expand."*

With a stagnating network, Black had been unable to collect sufficient data to further guide its operation. A similar example was found in Brown, a hospitality service platform connecting venue providers and consumers. Although the informants had argued that it was necessary to try different approaches to instil some energy into the market, there had been "*little noise or incentive*" from the headquarters to encourage this entrepreneurial behaviour at the subsidiary level.

Blue presented another example of a lack of the capabilities needed to stimulate the network effect. Having acquired a local platform, Blue had initially been able to take over more than 70% of China's market share. However, this had soon declined when a local competitor had introduced a free business model and additional mechanisms to facilitate interaction between buyers and sellers. An informant from Blue recalled, "*We saw our* [customer] *numbers dropping quite significantly every day; everybody talks about the network effect and thinks that, once you dominate the market, then you are safe. Well, once we started losing the traffic, we went down quite quickly as well.*"

Our secondary data and other informants confirmed that Blue had been rather reluctant to understand the customer experience and the local context that influenced user (buyer/seller) interaction, and to engage in experimental learning to maintain a positive network effect. One informant further explained, "*The direct interaction is no longer between us and customers; it is between customers* [peer-providers] *and consumers. Their level of interaction is much more embedded in the local culture and what we do is to facilitate such interaction, make it more cost-efficient and smooth. This requires a different level of commitment, which we are not achieving.*"

Table 3 presents a comparison between our case SEP-MNCs' use of the coordinating, mining, and experimenting capabilities to stimulate the local network effect. As shown, those SEP-MNCs that proactively use a mix of these capabilities to stimulate their network interaction are likely to generate more value in host countries.

Network stimulation through coordinating, mining, and experimenting at the sub-national level is effective for several reasons. First, IB scholars generally take the country as a unit of analysis, emphasizing the learning and entrepreneurial ability of MNCs to coordinate with local complementary assets to increase transaction efficiency (Gereffi et al., 2005; Pitelis & Teece, 2010, 2018). We noted that some SEP-MNCs

Table 4
Governing local ecosystem.

	Rating of Examined Evidence	Dynamic capabilities Monitoring	Empowering	Unifying
Definition		The capability of using big data and artificial intelligence to gain a holistic and real time overview of the ecosystem and use insights generated from it to automate the decision-making process	The capability of providing the authority and means needed to unlock and maximize both the subsidiary and its ecosystem actors' potential	The capability of creating shared goals, beliefs, and norms with ecosystem players.
Firms		*Illustrative quotes*		
Yellow		*"We have to coordinate millions of rides per day and we have to balance the immediacy and quality of a response in automated decision-making. This requires real time optimization for the positioning of the driver and the matching process between our driver and customers. It also helps us to understand our customers, their needs, habits, preferences, to help us with the pricing, how much the customers are willing to pay, everything is done by the computer, they are getting scarily good and without it (AI), our operation would fall apart"*	*"Even from the start, when we got our drivers tailored suits to make them feel proud of what they were doing, to the moment when we saw their business growing, from a one person driver to becoming an independent company managing over 150 drivers. We felt quite blessed to witness, to be part of their journeys. Our mind-set is always from the outside in, how we can empower our drivers to how we can empower the city, to help it (city) to ease their traffic. We also feel very blessed to work for a company that gives us the opportunity to drive from A to Z, to build our network from scratch".*	*"Of course, we have governance rules where everyone has to oblige, to respect others, to respect the system as a whole. They also know that the purpose of our business, the reason why our business exists, why we do what we do. This helps them (ecosystem partners) to know where we are coming from, and how we can work with each other to build this healthy network system, by forming a collective identity"*
Monitoring	A, b			
Empowering	A			
Unifying	A			
Orange		*" One of our priorities is to ensure our hosts have the right consumers. We are currently investing heavily in AI using algorithms that take information from different channels, blog posting, general websites to form a person graph to determine the suitability of the guest. Over the years, we have also accumulated a large amount of data: image from host photos, location data, customer feedback, transaction data, and we use algorithms to decide what content will be presented for individual customers, etc. We mainly use modelling and machine learning to train our data, to decide the price based on things like neighbourhood, AI plays a massive role in serving millions of guest in China, to give us an overview of the general ecosystem coordination, to help us to control the quality of the service our guests receive from our hosts"*	*"We work in close collaboration with communities and villages to empower them to benefit from tourism, to promote their culture and heritage. It has always been our goal to empower our hosts not only economically, but also socially, to build a sense of belonging. We also provide tools that are personalized to meet the individual needs of our hosts, including smart pricing, host toolkits, host mentors, host assistance. We want to ensure that our host community is our priority because they are the fundamental drivers to make us the way we are today. Everything we do is to build a set of tools that provide tailored insights to help our hosts to meet their goals".*	*We often engage in routine activities to participate with our hosts, by building a bond with our team members, hosts, customers, and local communities where we do our business, supporting online and offline host groups, We engage with local communities and villages to learn about their stories and what we can do together to make a difference. We share our stories and identify with not just our hosts and customers, but with the broader community/ network. We want to build a common identity to tap into unexplored opportunities so all of us can be a part of it.*
Monitoring	A, b			
Empowering	A, B			
Unifying	A			
Blue		*We relied heavily on seller's reviews but, back then, a lot of reviews were not legit, and we had to work hard to filter them. It is impossible to use human attention to monitor the whole platform because there are too many (users and transactions). We rely on machine intelligence, it was less developed back then compared to what platforms use AI to do now, but the key principle has not changed, what has changed is the amount of users, the amount of data.*	*"For me, empowerment is about providing the tools, weapons and services that enable our sellers to provide better service to our users. But it's also about empowering us to have that start-up mindset, to have the flexibility, passion, and drive to think differently about how to crack this market. For us, it's about maintaining and defending our position. Unfortunately, our passion was worn out by our headquarters, we were told the things we needed to do, and the targets we needed to reach, but without the tools, weapons, but not even these, without the flexibility*	*n/a*
Monitoring	A			
Empowering	a			
Unifying				

(*continued on next page*)

Table 4 (*continued*)

			and freedom, it is simply mission impossible"	
Black Monitoring Empowering Unifying	A a	*We use AI in every part of our application. With thousands of customers getting connected and getting routed to the most relevant agents, AI helps them with the potential response. We are also able to provide the service by knowing customers' needs, habits, and preferences, understanding the segments of customers, understanding the clusters"*	*We have a clear business model and it is the same business model that took the company where we are today. So I could not comment on that. But with the platform mode, it requires much more than that because, everywhere you go, you need to empower the local drivers, you need to provide support, confidence, trust and convenience between drivers and riders. This kind of local connectivity is not between us and our customers, it is between our customers themselves. This requires much more in-depth understanding of the market, the customers, the ecosystem around it"*	n/a
Red Monitoring Empowering Unifying	A a	"When a customer posts a task, our computer will match the most relevant tasks that could do the job for him or her. We are getting better at rendering the best taskers through machine learning algorithms. The data covers the location, breakdown skills required for different tasks, the reputation of our taskers; everything is done automatically. If anything unusual happens, it will reflect from the data, and our algorithms usually flag it up and we can then follow it up. AI plays a crucial role to connect and optimize the tasks. We are investing more and more in machine learning as it helps us to keep a finger on the pulse of our ecosystem"	*"It's about creating a new workforce, the workforce that can enjoy their freedom and be their most productive and we can connect them through on-demand call. We are exploring more ways to make their work more sustained, attract more clients and grow their own businesses"*	*n/a*
Brown Monitoring Empowering Unifying	a	*" We do not have that level of intelligence just yet, because the intelligence is based on data and, with our current business movement, we can see the potential"*	*n/a*	n/a

Notes: codes for the evidence categories are as follows: "A", evidence from three + interviews with different informants from the same company; "a", evidence from less than three + interviews with different informants from the same company; "B", evidence from three + archival sources; "b", evidence from less than three + archival sources.

are highly bounded by geographic distance; therefore, coordination among ecosystem players at the subnational level (i.e., at the regional and city level) becomes crucial to stimulate local network growth. Second, mining is effective because SEP-MNCs are the epitome of data-based organizations—i.e., organisations that rely heavily on the use data to generate insights and information suited to enable/facilitate interactions between different groups of users in order to create value (Parker & Van Alstyne, 2005). The mining capability not only enables SEP-MNCs to offer new personalized features to their users, but also to drive platform transaction efficiency. It is only at this stage that the capabilities a SEP-MNCs has built in its home country—such as AI capabilities and processes of how to coordinate a diverse, autonomous, and evolving network of partners—can be transferred to a host country to transform its operations. Third, the experimenting capability is effective because of the high uncertainty associated with the generativity- the capacity to produce unprompted change by large, uncoordinated sets of actors (Zittrain, 2008)-that drives a platform's operation and the externalized value creation process (Chen et al., 2019). Such experimental learning can create feedback loops within ecosystems, which is crucial to create value in host countries. As the value propositions of SEP-MNCs are externalized, based on external user participation and exchange—which involves a community of diverse and evolving network of users—and based on generative technologies—i.e., technologies that have the potential to bring about unprompted change and to create a significant variety of potential future applications (Gruber et al., 2008)—such coordinating, mining and experimental learning will enable firms to overcome their liability of outsidership—caused by the general dearth of relations with other firms and potential collaborators in the foreign market (Brouthers et al., 2016)—in accessing and connecting local resources and knowledge.

3.6. Governing local ecosystems and deployed capabilities

It is generally agreed that, to govern their value creation in a host country, MNCs need to develop a mix of contractual and ownership relationships in their global operations in order to minimize their bounded rationality and partner-bounded reliability (Verbeke & Greidanus, 2009). By their very nature, SEP-MNCs facilitate and coordinate

external resources without internalizing them (Li et al., 2019). Therefore, they are unable to internalize this key driving force of competitive advantage in a different country, or even in a different city, nor can they control the behaviours of these diverse, independent and autonomous external actors. Therefore, some of the traditional governance mechanisms that are highlighted by existing IB theory fail to explain the SEP-MNCs' activities in host countries.

As a platform ecosystem is made up of a broad and heterogeneous set of independent and autonomous actors, the creation of a governance mechanism suited to ensure quality control is crucial to sustain its growth. Our findings reveal that the ability to govern—i.e., to efficiently design and implement a governance structure—is itself a distinct dynamic capability. Our data indicated that our case SEP-MNCs had deployed three types of governance capabilities—monitoring, empowering, and unifying—to maintain dynamic control over their emergent, uncertain, and evolving local ecosystems. Monitoring is defined as the capability of using big data and artificial intelligence to gain a holistic and real time overview of an ecosystem and to use any insights generated from it to automate the decision-making process. Empowering is defined as the capability of exercising the authority and means needed to unlock and maximize both a subsidiary and its ecosystem actors' potential. Unifying is defined as the capability of creating shared goals, beliefs, and norms with ecosystem players.

Orange provided an excellent example; having accumulated a large customer base, it had devoted significant time to improve its AI technologies to screen its guests, to offer more personalized services to its users, and to predict the likelihood that a host would accept a guest's booking and that a guest assign a high rating to a trip or experience. One informant commented, "*It is impossible to ensure the health of our ecosystem based on manpower. We put lots of effort into training the computer to be intelligent enough to make real time decisions to connect our users and hosts, to analyse their* [the users'] *online personalities to calculate the risk of trashing a host's house, to instantly evaluate the hundreds and thousands of signals that help us flag and investigate suspicious activity before it happens.*"

Such AI, which is built on the big data collected from the platform, can learn through continuous iterations and constantly improves its accuracy as the volume and diversity of data increase. In 2018, Orange had connected its platform to the largest Chinese social network platform in order to extend its reach to customers and improve user experience. One informant explained, "*In the beginning, they* [the headquarters] *did not know what the micro-app was in Wechat. We organized a series of 'This is China' activities to showcase the unique features of the Chinese market just to deliver a single message; China is a different operating system. It's like the differences between Android and IoS; you can not just adapt it, you need to build it up from scratch to connect and satisfy users.*"

Such entrepreneurial mind-set needs to be empowered by the headquarters, not just for the subsidiary, but also for the complementors. Many new services were introduced with the aim of encouraging the ecosystem actors to be more innovative in order to drive the users' experiences. For example, Orange had provided marketing and transaction data analysis for the hosts to strengthen their businesses, had worked with local governments to stimulate village economic growth through travel, and, as part of 'anti-poverty initiatives', it had helped village hosts to improve their accommodation conditions to attract travellers. One informant described, "*We have one vision: to create a community where you have a sense of belonging, no matter where you are in the world. We heavily rely on this mission to bond everyone together.*" Such vision was constantly communicated to Orange's ecosystem partners and acted as the key guidance that drove Orange's strategy development.

Another example was provided by Black. After entering the UK market, Black's team had worked closely with local players to find new ways to attract customers and drive ride transactions. However, such initiative had been dismissed by the headquarters. An informant stated, "*When we put in so much effort and it was all for nothing, we really lost our motivation.*" Blue also brought up similar concerns in relation to the choice between centralization and decentralization. An informant commented that, "*It goes far beyond centralization and decentralization; it's about how to create that start-up spirit and culture in different countries. We are essentially a start-up that has to build the market from the ground up; however, the existing governance mechanisms to encourage and stimulate start-up behaviour and to manage our individualized network at the local level are really ill-formed.*"

After witnessing stagnant growth in China, Blue's subsidiary in the country had spent a few months waiting for approval to take a different approach to tackle the competition. However, after a wait of nearly six months, its 72-page proposal had been dismissed and the headquarters had formulated a new defending strategy that, according to our informants, "*did not make any dent in the market.*" Without a large user base, Black and Blue had been unable to generate the large volume of data that could lead to governing the platform efficiently.

Similar to Orange, Yellow had been much more active in governing its ecosystem. Many informants pointed at the simple and fair rules applied to all participants, but the key tool to monitor such evolving ecosystems is big data, and live data in particular. One informant described, "*If you see us as a complex network, then the data represent the blood running through our veins. They are in our DNA, and that's why they* [the parent company] *always refer to us as technology companies. The* [data] *intelligence can help us to optimize operations, but you have to react quickly because live data lose value very quickly in a fast-moving environment. Machine-learning algorithms generated from big data are critical to automating and governing our daily business operations.*"

For example, Yellow's algorithm matched cars and drivers, minimizing wait times and making mapping calculations in ways that no human dispatcher could. While the volume of the data increased, Yellow had recruited many data scientists to make its algorithms more effective in governing its evolving ecosystems. One informant explained, "*You cannot manage them* [the ecosystem players]*; first of all, there are too many and, technically, you are incapable to do so anyway because they are their own bosses. Nearly all the decisions we make here are automated and constantly run real-time data.*"

Such intelligence capability is crucial in enhancing coordination and optimizing operations.

However, Yellow also highlighted the importance of organizational structure in supporting local execution. We noted two key issues that were hindering Yellow's operation in China: slow response times and a lack of indirect local ecosystem partners. Although the teams in China had been given great flexibility and freedom to drive the network effect, some of the key features—such as a direct customer service phone line—had not been set up. An informant stated, "*When I presented the ideas and data to show the importance of a direct customer service phone line in China, I was surprised by how quickly they were convinced, but the execution time took forever.*" By the time Yellow had sold its operation in China, this action had still not been completed. Another key issue affecting Yellow's operation in China had been the availability of venture capital funds to secure and grow its market position. An informant stated, "*Our two main competitors were backed by the two largest platform firms in China. When you are in the platform business, you know the importance of user acquisition costs. We heavily relied on the top* [the headquarters] *to get money for us, rather than securing the money ourselves in China to maintain our position in the market. The local ecosystem should not just focus on drivers and users, but on all the other key players, including venture capital, to improve our resilience.*"

Table 4 compares our case SEP-MNCs' use of dynamic control to govern their local ecosystems. As shown, those SEP-MNCs who are able to achieve a critical mass and proactively use a mix of monitoring, empowering, and unifying to govern their ecosystems are more likely to create value in their host countries.

Why is dynamic control exerted through monitoring, empowering, and unifying effective? First, compared to existing governance modes,

which focus on the choice between market and hierarchies, SEP-MNCs operate on the basis of platform ecosystems that involve diverse, autonomous, and evolving sets of actors. Therefore, an alternative governance mode—one that goes beyond external market vs. inter-hierarchy—is necessary to support the SEP-MNCs' host country actions. Recent research has documented how controlling production, knowledge, and innovation along the value chain can mitigate any performance failures and minimize inefficiency under various conditions of power asymmetry and information codifiability (Strange & Humphrey, 2019). In contrast, controlling the platform architecture—the very infrastructure upon which the platform is built—gives platform firms gatekeeping rights and a highly asymmetric level of power over a host of replaceable complementors (Boudreau, 2010; Parker et al., 2017). Second, monitoring through big data and artificial intelligence is effective because it enables platforms to achieve scale of ecosystem coordination while, at the same time, managing platform ecosystem level of transaction efficiency. The ability to perform or even surpass human-like cognitive functions makes AI radically different from many other types of technologies historically used in organizations. This unique characteristic makes AI interesting in its own right, but particularly so because it enables an ever increasing transparency of customers and work processes (Lazer & Radford, 2017) and creates new possibilities for value creation, innovation, and collaboration within and across organizations (McKinsey, 2018). Third, empowering is effective because SEP-MNC value creation is dependent on their subsidiaries' ability to create, stimulate, and govern diverse and evolving ecosystem partners, and on the ecosystem partners' ability to keep attracting new users and improve user experiences. Therefore, providing the authority, flexibility, and means needed to unlock and maximize an ecosystem's full potential is key to value creation. Forth, unifying is effective because it enables SEP-MNCs to form a collective identity. It is evident from the data that an ecosystem is only sustainable if its environment is harmonious and prosperous for all constituents. We propose that a firm is not a self-contained entity; therefore, its sustainable strategy depends on its ability to establish and maintain reciprocal co-evolving relationships with all its stakeholders. Our findings show that, by creating a shared cognition that addresses both societal and individual needs, SEP-MNCs are able to redefine their market scope and tap into new cross-border business opportunities, which leads to further sustainable growth.

3.7. Theoretical framework: developing integrative capabilities for SEP-MNCs

Our multiple case analysis revealed three sets of distinct integrative capabilities that manifest themselves at different stages of SEP-MNC development in a host country, as well as a set of common mechanisms suited to purposefully connect and integrate internal and external resources, leading to value creation. As SEP-MNCs create value by generating direct and indirect network effects between different sets of users, we define value creation as the contribution of the utility of a platform network to the users from different sides of a market, with most of the economic value being created at the scope and scale of platform ecosystems. We propose that the capabilities built by SEP-MNCs go through three specific stages: *creating capability, transforming capability, and governance capability*. We now articulate a theoretical explanation outlining how each of the capabilities - and their sub-capabilities contribute to value creation. Fig. 2 illustrates the theoretical framework emerging from our data.

When SEP-MNCs enter host countries, neither side of the market yet exists. The key priority is to build a critical mass to trigger the positive network effect. Our findings revealed that a set of capabilities- attracting, incentivizing, and enabling- was developed to initiate the network effect. We label these three capabilities with the higher order construct of creating capabilities. Such a higher order capability requires wide ranging cross functional integration (Winter, 2003) that involves the integration of first order capabilities to manage the ecosystem in the home market. Attracting has a dynamic attribute because it provides the resource access that is instrumental to initiate the network effect. By continuously gaining access to external resources and attraction from users, SEP-MNCs are able to create greater opportunities for novel recombinations of ecosystem resources. The incentivizing capabilities can generate more variety in value creation through the participation of a greater number of ecosystem partners with diverse capabilities, therefore improving a SEP-MNC's ability to meet heterogeneous user

Process	*Creating Capability*	*Transforming Capability*	*Governance Capability*
Emerging challenges	Difficulties of transferring FSAs across borders (localized network effect) Difficulties of building a customer base from scratch	Difficulties of stimulate platform growth at the national or subnational level Difficulties to manage interactions between producers and users, and quality offering	Difficulties of governing platform transactions due to evolving, scale and diversity of the ecosystem
Deployed capabilities	Attracting Incentivising enabling	Coordinating Mining Experimenting	Monitoring Empowering Unifying
Boundary	Mainly driven by internal venturing capabilities to build an interactive dialogue with customers to build a critical mass	Driven by integration between internal and external resources Integrate entrepreneurial efforts with those of participants	Driven by integration between internal and external resources
Underlying logic	Internal: using limited internal resources to solve the chicken and egg problems and to initiate positive network effect by gaining accessing to the local external resources. External: creating a network effect which is essential to platform survival. The scale of external resources, when coupled with SEP-MNCs internal resources, can act as isolating mechanisms to drive SEP-MNCs cross border activities.	Internal: coordinating different sides of customers, drawing insights from the data generated from the demand-side; experimenting with new and innovative ways to stimulate platform growth External: the data and network effect generated from the initial customer base can serve as stimuli to transform SEP-MNCs capability	Internal: developing AI competence to monitor and automate decision-making process; to provide the means and tools needed to empower SEP-MNCs ecosystem, players; to build a collective identify by creating shared goals and vision. External: The greater, more diversified amount of complementary resources, the greater the ecosystem's value. The data generated from ecosystem level of coordination create a foundation for SEP-MNCs to build governance capability
Theoretical implication	Dynamic capabilities stem from the continuous dynamic interaction between a firm and its external partners to build an initial customer base. The emphasis here is to create value from outside in by building an initial network of producers and users.	Dynamic capabilities become more latent and emergent. Some of the capabilities such as AI and coordination capabilities that are developed in the home countries can now be transfer to the host country to generate more value creation opportunities.	Dynamic capabilities are highly integrative between internal and external resources and have relational properties. Therefore, they are shared and co-created by SEP-MNCs and their ecosystem resources.

Fig. 2. Theoretical framework of the dynamic capabilities of SEP-MNCs.

demands in a host market. Enabling is important because a SEP-MNC's value creation is heavily dependent on its ability to establish and maintain reciprocal co-evolving relationships with all its ecosystem partners. Such relation-specific assets invested by SEP-MNCs play an important role in channelling complementor perceptions, which increase the partners' commitment and engagement. The newly established network resource base, made up of both producers and users and of the data they generate, coupled with the SEP-MNC's internal resources, can then act as an isolating mechanism that provides the foundations upon which the SEP-MNC can generate superior economic rents. The underlying logic at this stage is that SEP-MNCs use limited internal resources to initiate positive network effect by gaining access to the local external resources. The scale of external resources, when coupled with SEP-MNCs' internal resources, can act as isolating mechanisms to drive SEP-MNCs cross border activities.

Once the initial network effect is established, a different set of capabilities is required to stimulate platform growth: coordinating, mining, and experimenting. We label these three abilities as transforming capabilities because those developed in the SEP-MNCs' home countries can not only act as catalysts to transform the value of the resource networks newly created by these firms in their host countries, but also trigger a self-reinforcing effect whereby the more data are collected from such networks, the more these capabilities become suited to create better user value, which, in turn, leads to more value creation opportunities. The coordinating capability enables the value creation activities of the SEP-MNCs' ecosystem to be transformed into decentralized, scalable, flexible, and optimized processes. The mining capability has a dynamic aspect because it enables firms to not only innovate and fine-tune their product or service features, but also to provide much more accurate and individualized services to both producers and users. As the diverse and autonomous participants may transform how value is created in unexpected ways through generative technologies, SEP-MNCs need to continuously experiment (e.g., with new products and services, new business models, new organizational structures and processes) by 'morphing' (Rindova & Kotha, 2001) and developing feedback loops that guide further actions, which is crucial to replace and adapt existing products/services in response to evolving market needs. The underlying logic here is that by drawing insights from the data generated from external resources can allow SEP-MNCs to experiment with new innovative ways to stimulate platform growth. This can in turn create further positive network effects that serve as stimuli to transform SEP-MNCs capabilities.

While traditional control mechanisms for system-wide value co-creation are focused on controlling an entire system's architecture in order to curtail any issues associated with bounded rationality and opportunism (Pitelis & Teece, 2018; Kano, 2018) through power asymmetry and information codifiability (Strange and Humphrey, 2019), our findings reveal an alternative mode of cooperative governance. We identified three governance capabilities—monitoring, empowering, and unifying. For example, the monitoring capability is largely powered by AI algorithms that incorporate different metrics—such as client feedback and transaction data—to automatically implement decisions aimed at ensuring quality control. The empowering capability has a dynamic element because such relationship-specific investment can promote a collaborative attitude toward ecosystem activities and help to diffuse the assumption of mutual trust among participants. As ecosystems largely rely on non-contractual mechanisms to strike a balance between generativity and coherence in their outputs (Jacobides et al., 2018), the unifying capability is crucial to the creation of a collective identity among the diverse and evolving network of ecosystem players. Our observations suggest that, over time, continuous engagement in these activities, intensified by a growing realization regarding user benefits, may have long-lasting effects on SEP-MNC value creation opportunities in host countries. We therefore argue that superior economic rents can be generated by more governance-capable platforms through the exercise of the monitoring, empowering, and unifying capabilities. The underlying logic at this stage is to use internal AI competence to monitor and automate decision-making processes; to provide the means and tools needed to empower SEP-MNCs' ecosystem players; to build a collective identity by creating shared goals and vision. As a result, it can create a foundation for SEP-MNCs to build governance capabilities.

Our findings suggest that the ability to manage ecosystem resources tends to be progressive, as it advances with the adjustment of the system to the new scale opened to it, and therefore requires a different emphasis to address the temporal and spatial patterns of platform ecosystem development. We argue that integrative capabilities, as the meta-capabilities (Winter, 2003), include higher order capabilities (creation, transforming and governance capabilities) and each capability also includes a set of first order capabilities. Such capabilities enable SEP-MNCs to continuously interact and integrate within the platform's ecosystem resources to generate a double feedback loop that provides an extra layer of critical insights to allow the platform to build, stimulate, and sustain its ecosystem's development. Rather than working in isolation, SEP-MNCs and their ecosystem players are integrated in complex interweaving resource linkages suited to adapt to and even drive environmental change through different and novel forms of resource combinations. The emphasis here is placed upon the continuity of the processes and sequences of resource changes, which are enabled by three sets of SEP-MNC integrative capabilities. We propose that such dynamic capabilities no longer reside at the MNC or subsidiary level, but at the ecosystem one, that are reposed on nurtured and forged through the close interaction and integration between internal and external resources. Such ecosystem-level dynamic capabilities help to provide a more holistic explanation of how SEP-MNCs orchestrate their ecosystem resources to create value in host countries.

4. Theoretical discussion and contribution

Drawing from our insights, a primary contribution made by this research is that it offers a granular theoretical and empirical understanding of internationalization of SEP-MNCs, a unique set of digital firms that champion the accessibility of external assets that are owned and controlled by local independent micro-producers (Parente et al., 2018). Despite the great strides that prior research has made in elucidating the phenomenon of 'platformization' in the global context (e.g., Brouthers et al. 2016, Chen et al. 2019, Jean et al. 2020, Nambisan et al. 2019, Stallkamp & Schotter 2021, Zeng et al. 2019), they have mostly focused on the general platform firms (e,g., Brouthers et al. 2016, Stallkamp and Schotter 2021) and challenges associated with managing cross-border knowledge flows and activities within a digital platform MNE (Jean et al., 2020; Stallkamp and Schotter; 2021; Li, et al., 2019; Kozlenkova et al., 2021). Responding to the calls made for the study of multinational digital platforms (Chen et al., 2017; Li et al., 2019; Ojala et al., 2018; Parente et al., 2018), our research enriches and augments extant IB theories that are mainly predicated on the transferability and appropriability of a MNE's FSAs (Rugman, 1981) to accommodate the sharing economy phenomenon. As such, our research represents a step forward in answering recent calls to better understand platform ecosystems—particularly those of sharing economy platforms—in the international context (Banalieva & Dhanaraj, 2019; Brouthers et al., 2016; Chen et al., 2017; Li et al., 2019; Parente et al., 2018).

Our second contribution is offers a more fine-grained understanding of the integrative capabilities that enable SEP-MNCs to manage complex relationships and interactions with diverse, independent, and autonomous ecosystem partners in host markets. We identified the key elements of integrative capabilities that are deployed by SEP-MNCs to orchestrate their ecosystem resources in different countries and how such capabilities unfold over time. We thus unbundled the concept of dynamic capabilities by going beyond the previous focus on traditional MNCs, born global firms, and SMEs, and discussed how such capabilities specifically relate to SEP-MNCs. We showed the interrelated

capabilities, why they are effective, and how they unfold over time to enable SEP-MNCs to orchestrate resources in their host countries. The emphasis here is no longer centred on owning and controlling valuable resources, but on orchestrating ecosystem ones. Although, to various extents, some of these capabilities have been discussed in the IB literature, our unique dataset and related results enabled us to illustrate how SEP-MNCs deploy these capabilities to manage complex relationships and interactions with diverse ecosystem partners to drive sustainable growth in host markets over time. We therefore complement the existing dynamic capabilities literature in the IB field (Buckley & Casson, 1976; Birkinshaw et al., 2005 Rugman, 1981; Teece, 2014), which has hitherto mainly focused on how MNCs manage their internal VRIN resources to drive their internationalization processes.

Our conceptualization of the integrative capabilities of MNEs is twofold. First, such capabilities no longer reside exclusively inside the MNCs themselves; rather, they are an emergent and highly integrated property, with recurrent patterns that only become apparent through continuous interactions with their ecosystem partners. The traditional application of dynamic capabilities has extensively concentrated on the reconfiguring and rebalancing of a firm's specific assets. However, our research has recognized the contributions made by diverse and autonomous ecosystem partners. While the existing literature perceives dynamic capabilities as path-dependent routines (Helfat and Winter, 2011) or entrepreneurial efforts to stimulate a firm's dynamism—such as innovation (Cantwell, 2014; Teece, 2014)—we consider ecosystem partners as a source of knowledge that can enable SEP-MNCs to renew their competencies and demonstrate flexibility. Second, due to the important role played by ecosystem actors in contributing to sustainable growth in host markets, we argue that integrative capabilities reside at the ecosystem level and are in a continuous state of becoming, whereby they arise from the continuous interactions between a platform's internal resources and its ecosystem ones. In other words, the possession of integrative capabilities is an attribute of the ecosystem as a whole, is collaboratively created by the collective entities, and cannot be reduced to what any MNC possesses, or even to any single aggregation of the various capabilities of all individuals and sections of a firm. By arguing that integrative capabilities need to be co-created, we argue that, ultimately, a platform ecosystem's value creation requires the collective engagement of both its internal and external resources in building and preserving the collaborative action that amplifies the individual resources of SEP-MNCs to identify new and novel opportunities. This perspective represents a clear extension of the existing understanding of MNC international processes and, more importantly, partly reorients the growing body of work on the creation of the isolating mechanisms that preserve an MNC's international process in order to open up broad opportunities suited to fully exploit resource potential in the platform ecosystem context.

Another key contribution made by our work is a revisitation of MNC organizational boundaries. Scholars generally agree that a firm's choice of boundaries can have a major impact on its capabilities (Teece, 2007). The value creation of MNCs rest on their utilisation of any valuable resources that are transferable across borders, and on the diverse knowledge located in dispersed headquarters and subsidiaries (Bartlett & Ghoshal, 1989; Kogut & Zander, 1993). IB scholars tend to view location as one of the exogenous factors—such as cross country distances—that act as key constraints on growth (e.g., Berry, Guilleń, & Zhou, 2010; Schu et al., 2016). Our research illustrates how the evolving boundaries of SEP-MNC ecosystems enable such firms to access, connect, integrate, and govern ecosystem resources. As the SEP-MNCs' advantage is no longer centred on asset ownership, but on asset accessibility (Nambisan et al., 2019)—whereby such firms are heavily reliant on local resources and on network effects to drive platform value—our analysis points to the critical role played by location in driving SEP-MNC activities in host countries. Location, in this context, is no longer an exogenous constraint but a key contributor in driving the SEP-MNCs' international processes.

Our research shows that, as some network effects are highly restricted by geographic distance, spatial and market heterogeneity have become crucial to explaining SEP-MNC host country interactions and value creation. Therefore, location, which takes the country as its unit of analysis, needs to be addressed with caution because sub-national entities—the territorial and administrative jurisdictions organized below the national tier, such as regions and provinces (Monaghan et al., 2014; Santangelo et al., 2016)-present new battlegrounds for SEP-MNCs to access any local peer-provider underutilized resources and assets. This is in a similar vein to Marano et al., (2020) who accentuate the critical importance of regional and municipal institutional forces for developing a more holistic understanding of the challenges encountered by internationalizing firms with disruptive business models such as sharing economy platforms. We propose that SEP-MNCs are subject to the liability of sub-national foreignness-the inherent cost involved in accessing, connecting, and facilitating external resource interactions between peers (providers and consumers)—at different city or regional levels. This opens a way to achieving an understanding of the feedback generated by the interactions between the platform and its local ecosystem partners, to place them in their spatial and temporal contexts, and to examine their effects on ecosystem inputs and outputs among diverse partners. In this regard, we argue that platform ecosystem boundary dynamics should take subnational entities as their level of analysis, whereby platforms can continuously engage and coordinate their resource management at the subnational level. Our observations, therefore, provide further evidence of the importance of location as a variable affecting SEP-MNC value creation processes, which should therefore not be underestimated in the IB literature.

5. Boundary conditions, limitations and further research

The dynamics that we captured are likely to play out in other types of intermediary platform ecosystems in which external actors are independent and autonomous and need to interact directly with each other to create value. Therefore, the mechanisms and capabilities we identified may be applicable to other platforms that share many characteristics with SEP-MNCs. In common with other research, this study has several limitations. First, although we attempted to investigate cases from different countries, our qualitative approach provides a limited basis for generalisation (Yin, 2013). Due to the availability of these platforms, we were only able to get access a single country internationalization case for each of our case SEP-MNCs. It would be useful for future research to expand or test (e.g., by using quantitative methods) our framework on a larger sample of SEP-MNCs operating across borders. Second, our research design only included one foreign location per MNC, therefore potentially providing a limited overview of each MNC's ecosystem capabilities. Future studies could investigate whether such findings can be replicated in different foreign locations per MNC. Our findings highlight that SEP-MNC cross-border activities involve much more than the simple replication of a firm's existing activities in new locations. The orchestration of ecosystem resources require new forms of subsidiary entrepreneurship. Future work could investigate the mechanisms that cultivate and stimulate to promote such subsidiary entrepreneurship that enable SEP-MNCs to build ecosystems in foreign markets. We made a start in conceptualizing dynamic capabilities residing at the ecosystem level in foreign markets. Future studies can explore how digital platforms can create ecosystem advantages in a different country and under what circumstances these ecosystem advantages are transferable across countries. As the findings emerging from our data assign great importance to building networks of peer-providers, further research could explore how such firms establish demand in a multi-sided market and investigate the role played by city size in the choice of international expansion. From a global integration-local responsiveness perspective, future research can investigate the traditional emphasis on the parent-subsidiary relationship to embrace a new context—the platform's associated ecosystem and how such ecosystems enable digital platforms to creatively exploit and

leverage ecosystem specific advantages.

6. Conclusion

The central aim of this paper was present our exploration of how SEP-MNCs orchestrate ecosystem resources to drive sustainable growth in host markets. Our research extends the dynamic capabilities literature in the IB field by unpacking the key elements of the integrative capabilities that are needed to manage complex relationship with diverse, independent, and autonomous external ecosystem actors in order to drive sustainable growth in host markets. Our theoretical framework embraces the uncertain and evolving nature of platform ecosystem development and incorporates the continuous and dynamic processes related to it (Li et al., 2019); in doing so, it outlines the gradually deployed capabilities that illustrate how SEP-MNCs can create, transform, and govern their ecosystem resources when they transcend national borders. We hope that our study will spur more research aimed at exploring the fertile intersection of ecosystem-level research and the dynamic capabilities of MNCs.

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