

Navigating MNE control and coordination: A critical review and directions for future research

Rong Zeng (corresponding author)

Asper School of Business
University of Manitoba
66 Chancellors Circle
Winnipeg, MB R3T 2N2 Canada
Phone: +1 204 474 6566
rachel.zeng@umanitoba.ca

Birgitte Grøgaard

BI Norwegian Business School
Nydalsveien 37, 0484 Oslo, Norway
Phone: +47 46410535
birgitte.grogaard@bi.no

Ingmar Björkman

Hanken School of Economics
P.O.Box 479, 00101 Helsinki, Finland
Phone: +358 407040291
ingmar.bjorkman@hanken.fi

ABOUT THE AUTHORS

Rong (Ratchel) Zeng is an Assistant Professor at the Asper School of Business, University of Manitoba, in Canada. Her primary research interests are at the intersection of international business and business strategy. Specifically, her current research interests focus on integration challenges in multinational enterprises, foreign direct investments from emerging countries, and corporate social irresponsibility.

Birgitte Grøgaard is Professor in the Department of Strategy and Entrepreneurship at BI Norwegian Business School in Oslo, Norway. Her research interests include strategies of multinational enterprises, headquarter-subsidiary relationships, and foreign direct investments. Birgitte's research is currently focused on how firms develop organizational flexibility to address energy transition challenges, and the implications of this for internal and external control and coordination. Prior to pursuing a PhD, Birgitte worked for a multinational oil and gas company.

Ingmar Björkman is Rector (President) of Hanken School of Economics in Finland. His research interest focuses on management questions in international organizations, people management in particular. He is the author of 11 articles in *JIBS*. His latest book is *Global Challenge: People Management across Borders* (fourth edition, 2023, Edward Elgar), co-authored with Vladimir Pucik, Paul Evans, and Günter Stahl.

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ABSTRACT

Control and coordination efforts are at the heart of MNE functioning. Yet, our review reveals that the literature on MNE control and coordination lacks conceptual clarity, which may hamper the development of the field. In this critical review, we synthesize the literature over the past decade using a conceptual framework rooted in new internalization theory. Research remains fairly coarse regarding how various configurations and interactions of control and coordination mechanisms affect intended outcomes. We note a paucity of multilevel studies, direct investigations of microfoundations, and comparison studies between intra- and inter-MNE relationships. Insufficient attention has been paid to adaptation issues and the impact of external dynamics on the need for, and operationalization of, control and coordination mechanisms. These gaps are concerning since external trends are changing the organizational landscape and MNE boundaries are becoming increasingly fuzzy. Going forward, a more nuanced conceptualization of outcomes is needed, one that specifies proximal outcomes which mediate the achievement of distant goals. We use our augmented conceptual framework to identify other key areas for future research. We also call for more research on how disruptive forces affect both the use and outcomes of organizational mechanisms aimed at achieving control and coordination.

Keywords: MNEs; control; coordination; mechanisms; outcomes; international business research agenda

INTRODUCTION

During the last decade, environmental dynamics such as liberalization and deregulation of global and regional integration, rapid developments of information and communication technologies (ICT), and automation technologies, have driven down the costs for economic actors to organize economic exchanges. Accordingly, we have observed recent developments in multinational enterprises' (MNEs) strategies and structures, and the configuration of external relationships (Mees-Buss, Welch, & Westney, 2019; Narula, Asmussen, Chi, & Kundu, 2019). For example, digitalization has significantly changed the patterns of how MNEs manage their international operations (Autio, Mudambi, & Yoo, 2021; Menz et al., 2021; Nambisan & Luo, 2021). Similarly, advances in ICT have enabled fine slicing of various activities and facilitated collaboration with external partners (Banalieva & Dhanaraj, 2019). These developments have solidified the geographic dispersion of activities and resources and made the decoupling of ownership and control easier, and the growth of global value chains (GVCs), global platforms, and ecosystems (Kano, 2018; Nambisan & Luo, 2021). Some researchers argue that the above-mentioned developments reduce the need for control from headquarters (HQs) or leading MNEs. However, these changes generate more internal and external interdependencies, with implications for the control and coordination needs of the involved MNEs (Kano, Tsang, & Yeung, 2020).

The ability to effectively and efficiently control and coordinate resources and activities is critical to the success of MNEs. Thus, control and coordination within MNEs have been well studied in the subsidiary management literature for more than 50 years (Kostova, Marano, & Tallman, 2016; Meyer, Li, & Schotter, 2020). This research has identified several tools, which we will call “organizational mechanisms,” that MNEs can use to control and coordinate resources and activities across geographical and organizational boundaries (Ghoshal & Bartlett, 1998; Keupp, Palmié, & Gassmann, 2011). Curiously, despite extensive knowledge and deployment of these organizational mechanisms, we still lack a deep understanding of how and why MNEs choose particular ones to employ, along with which factors influence their effectiveness and related outcomes. These questions are exacerbated by recent

developments in MNE strategies and structures, growing reliance on new types of external relationships, and ongoing environmental dynamics.

Our perusal of the relevant literature suggests that little attention has been paid to how these recent developments intersect with MNEs' use of control and coordination mechanisms. Notably, the changing definition of the MNE—an enterprise that now does not necessarily directly own value-adding activities in foreign countries (Narula et al., 2019)—blurs the boundaries between internal and external activities (Forsgren & Holm, 2022). Control may become even more critical in light of expanded boundaries (Narula, 2019). Mechanisms used to control and coordinate intra-MNE activities (Galli Geleilate, Andrews, & Fainshmidt, 2020; Zeng, Grøgaard, & Steel, 2018) may not be appropriate and sufficient when it comes to inter-MNE relationships (Vahlne & Johanson, 2021). Similarly, the growth of talent and capabilities in emerging markets has created opportunities for both foreign and local firms to develop unique resources and activities in areas like R&D (Narula, 2014; Rugman, Verbeke, & Yuan, 2011b), which changes internal and external control and coordination needs.

Thus, to build a clearer picture of control and coordination in MNEs, we review the contemporary literature on intra- and inter-MNE control and coordination. Previous reviews have primarily focused on intra-MNE relationships (for reviews, see Galli Geleilate et al., 2020; Zeng et al., 2018), but we argue that a review needs to cover *both* intra- and inter-MNE relationships. Here, we want to address one critical question: How has the MNE control and coordination research evolved during the last decade? To this end, we synthesize research on MNE control and coordination, considering both internal and external relationships, to capture the impact of blurring organizational boundaries.

The next section begins by defining control and coordination. Drawing on new internalization theory, we develop an initial framework to guide and organize our review of 126 articles that focused on MNE control and coordination. This is followed by a brief discussion of our review methodology and preliminary descriptive findings. We then assess the reviewed literature, identify knowledge gaps, present an augmented conceptual framework based on insights from our review, and suggest avenues for future research.

Specifically, future research needs to address the current lack of conceptual clarity and tease out nuances of the use of organizational mechanisms in internal and external relationships. We also recommend that future studies explore different types of outcomes and their dynamic relationships. Further, the complexities of control and coordination need more attention, calling for studies that focus on different configurations and various interactions (interplay) of organizational mechanisms, and explore the impact of disruptive external trends. Future research designs also need to incorporate multilevel factors and temporal factors, and capture the dynamics of organizational mechanisms. Our main purpose with this review is thus to provide an understanding of the current state of the field, as well as to support future research that generates knowledge to support MNEs as they tackle increasingly complex challenges.

A FRAMEWORK FOR THE LITERATURE REVIEW

Defining Control and Coordination

To ensure a common base for reviewing the existing literature, we sought suitable definitions of MNE control and MNE coordination. We not only examined the definitions used in the IB literature (examples of which are presented in Table 1) but also reviewed the broader management, organization, and strategy literatures.ⁱ Key articles on control and coordination in the broader literature suggest that “influence,” “power,” “authority,” “compliance,” and “regulate” are emphasized in *control*, with the aim of adhering to goals and behaviors (Cardinal, Kreutzer, & Miller, 2017). *Coordination* is associated with “linkage,” “interdependence,” “collaboration,” and “interaction” across different units to align goals, resources, and activities (Gulati, Wohlgezogen, & Zhelyazkov, 2012; Okhuysen & Bechky, 2009).

-----Insert Table 1 about here-----

In this study, we define control as *efforts to ensure that organizational units strive to pursue organizational goals and intentions*. These efforts may include a variety of organizational practices, such as the setting of objectives and specific targets (Sihag & Rijdsdijk, 2019), as well as different means through which the goals are reached (Manolopoulos, Söderquist, & Pearce, 2011; Sinkovics, Jean, Roath, & Cavusgil, 2011; Vahlne, Schweizer, & Johanson, 2012). This definition covers efforts within the MNE

as well as across firms. Given these various aspects, MNE control is multifaceted; thus, it is not fully captured in studies on singular mechanisms (Cardinal et al., 2017).

MNE *coordination*, in turn, focuses on the interactions and adjustments taking place between interdependent units (Srikanth & Puranam, 2014). This is in line with the arguments made by Okhuysen and Bechky (2009), who argued that the core of coordination is that “(1) people work collectively; (2) the work is interdependent; and (3) a goal, task, or piece of work is achieved” (p. 469). Therefore, an additional key component of coordination is that the parties strive collectively towards a joint goal or objective (Gulati et al., 2012; Okhuysen & Bechky, 2009). Consequently, we define coordination as *efforts to align goals, resources, and activities across interdependent organizational units*. This definition not only covers efforts to enhance intra-MNE coordination but also includes inter-firm coordination, such as among GVC partners. Further, as with control, exercising coordination is not only limited to processes, but can include different organizational mechanisms. The main distinction between control and coordination is that the former is oriented towards top-down, power-based influences (Cardinal et al., 2017), whereas the latter focuses on interdependence and mutual adjustments among the actors involved (Srikanth & Puranam, 2014).

A Review Framework Guided by New Internalization Theory

We developed a review framework rooted in a general theory of MNEs, new internalization theory, to guide us in systematically categorizing and analyzing recent studies on MNE control and coordination (Kano & Verbeke, 2019; Narula et al., 2019). We found this theory particularly suitable for our review for various reasons. Importantly, as championed by Rugman and Verbeke (2001), the theory expands the focus from initial governance decisions towards managerial governanceⁱⁱ systems; this means that the focus on ownership forms and organizational structures, in which ownership and control are linked, shifts towards “decision rules and practices or routines deployed within MNE governance structures” (Verbeke & Fariborzi, 2019: 1214). This orientation informs understanding of choices about organizational mechanisms to control and coordinate activities and resources. New internalization theory assumes that

firms select and use the most efficient organizational mechanisms to organize various economic exchanges between different actors and locations (Kano, Narula, & Surdu, 2022).

Further, new internalization theory recognizes that subsidiaries are embedded in different external contexts and that developing firm-specific advantages (FSAs) may occur throughout MNEs' internal and external networks. They may also take various forms: subsidiary-specific advantages, alliance-specific advantages, and ecosystem-specific advantages (Li, Chen, Yi, Mao, & Liao, 2019; Rugman & Verbeke, 2004). When MNEs develop important FSAs across organizational and geographic contexts, control or coordination mechanisms must follow to facilitate transferring such FSAs. The theory is helpful when extending the unit of analysis to the network, whether it is intra-firm, inter-firm, or a combination of both (Lee, Narula, & Hillemann, 2021). Finally, this theoretical perspective incorporates multiple levels of analysis: micro-, firm-, and macro-level factors that influence the choice of organizational mechanisms. Our review framework, as illustrated in Figure 1, is composed of five key elements at different levels, and works with intra-firm and inter-firm analysis, or a combination of both: microfoundations, MNE characteristics, organizational mechanisms, outcomes of the organizational mechanisms, and macro context.

-----Insert Figure 1 about here-----

Organizational mechanisms represent the efforts, or “tools,” that MNEs have at their disposal to achieve their intended goal and outcomes (Keupp et al., 2011). Extant theory in the IB and general management fields points to four key categories of organizational mechanisms for control and coordination: centralization, standardization, socialization, and output-oriented mechanisms. *Centralization* mechanisms use positions of power or hierarchies, like centralized decision-making, to achieve intended outcomes. Although new internalization theory has traditionally equated power with ownership, enabling top-down control and coordination, decision-making authority and power have also increasingly been recognized in non-equity, inter-firm relationships, such as in the GVC literature (Narula, 2019; Zhou & Xu, 2012). The *standardization* mechanisms enable MNEs to control and coordinate by using standardized processes and procedures. Such mechanisms help firms economize on bounded

rationality (BRat), which assumes that individual decision-makers have inherent cognitive limitations, and bounded reliability (BRel), which refers to the inability to make good on promises (Kano & Verbeke, 2015, 2019). These aspects have particularly been emphasized in intra-MNE control and coordination (Keupp et al., 2011).

Socialization mechanisms emphasize efforts to connect and pull together resources, people, and organizations to achieve intended outcomes. New internalization theory has increasingly recognized the importance of socialization mechanisms, which are relational in nature (Verbeke & Fariborzi, 2019) and are considered critical for GVCs to achieve their desired output (Kano, 2018). *Output-oriented mechanisms* focus on setting targets, pushing firms to economize on BRat and BRel (Verbeke & Kenworthy, 2008). Hence, they represent a “hands-off” approach to reaching outcomes. Examples here are budgets, detailed targets, incentives, and rewards to motivate organizational units to achieve the set goals and objectives. Although rooted in IB theory, our above categorization of organizational mechanisms aligns with the broader management literature, across theoretical perspectives (Brenner & Ambos, 2013; Sihag & Rijdsdijk, 2019).

Multiple factors influence the MNE’s choice of control or coordination mechanisms. New internalization theory also emphasizes the impact of behavioral microfoundations on firm-level outcomes. Microfoundations refer to individual-level assumptions underlying firm-level or network-level behaviors and interactions, affecting the outcomes of the firm or the whole network as a result. BRat and BRel are both microfoundational assumptions central to new internalization theory: Firms make rational decisions to economize on BRat and BRel by choosing organizational mechanisms that most efficiently control and coordinate activities and resources to achieve intended outcomes.

At the firm level, key MNE characteristics include FSAs and related strategy. FSAs may be transferred across contexts, making them non-location-bound, or developed in a foreign market to meet the specific needs of the local market, in which case they are location-bound. The MNE’s strategy influences its intent to leverage and exploit FSAs across geographical and organizational boundaries (Rosa, Gugler, & Verbeke, 2020), affecting the perceived need for control and coordination, and the

suitability of different organizational mechanisms (Ghoshal & Bartlett, 1998; Roth, Schweiger, & Morrison, 1991). The more focused the MNE is on global integration, the greater the need for mechanisms that support FSA transfers (Meyer & Su, 2015).

Macro factors also influence the choice of organizational mechanisms. Consistent with new internalization theory, we recognize that such factors, like country-specific advantages, are essential for understanding firm-level, efficiency-driven decision-making. For example, institutional and cultural differences may enable or constrain firm-level FSA development and exploitation, which in turn influence the need for control and coordination. For example, distances can affect the ease of transacting assets/resources through contractual relationships and favor centralization mechanisms (Narula et al., 2019).

Knowledge transfer, as noted, is often perceived as the most important outcome of MNEs' organizational mechanisms (Zeng et al., 2018) given the importance of knowledge assets (Gupta & Govindarajan, 2000; Kogut & Zander, 1993; Rugman & Verbeke, 2001). However, developing, transferring, and recombining FSAs may occasionally create tensions with the MNE's performance outcomes—in particular, efforts to achieve rational goals and process efficiency. This highlights the need to recognize the value of multiple outcomes, as unlimited investment in FSA transfer and recombination may not necessarily use resources most efficiently.

RESEARCH METHODOLOGY

Data Collection

For this review, we conducted a multistep process consistent with other reviews (e.g., Aguilera, Marano, & Haxhi, 2019), and drew on established methodologies to review the literature (Kano et al., 2020; Meyer et al., 2020). Our multistep process encompassed the following iterative stages: (1) planning, (2) article collection, (3) preliminary screening, (4) coding, and (5) analysis. Each step is described in more detail in online Appendix A.

In line with Kano et al. (2020), we focused on the articles published in the most recent decade (2010–2021) to ensure that our review reflects the current state of the research in the field. The iterative multistep process yielded a final set of 126 articles for the analysis. We coded the articles with the coding platform arising from our review framework shown in Figure 1. For each article, we identified its definitions of control and/or coordination, the organizational mechanisms mentioned, the outcomes and focal relationships studied (or proposed in the case of conceptual papers), the key findings, the theoretical perspectives used, the controller or coordinator vs. target(s), the sample characteristics, and other items deemed relevant. We also classified whether the articles focused on control, coordination, or both, according to the terminology used in the reviewed articles and our own definitions. We discussed and reached a consensus whenever we encountered an article we were unsure of—that is, any for which we were unclear about its focus, categorizations of mechanisms and outcomes, or other issues. Stages 4 and 5 were iterative since preliminary analyses provided us with more insights, which then required greater nuance in our coding schemes. During regular meetings, key articles enabled us to discuss emerging themes, relevant contributions to the literature, and any necessary adjustments to our coding scheme, similar to Aguilera et al. (2019).

Descriptive Findings

Of the 126 articles reviewed, the majority (87%) were empirical; more than two-thirds of these used quantitative methods, and roughly an eighth were conceptual, including theory papers, editorials, and qualitative review papers (see Table 2). About two-thirds of the total set of reviewed articles on MNE control and coordination were published in IB journals (see online Appendix B).

Our initial descriptive analysis reveals that only a small minority of the papers published during the period of 2010–2021 contained formal definitions of the control and coordination concepts. Although explicit definitions of both MNE control and MNE coordination have existed for decades (Cray, 1984), we could not trace any clear developments of these core concepts over the period covered in our review. Table 1 provides examples of definitions we found in the reviewed articles.

When coding the articles based on our definitions and review framework, we found that more articles focused on control than coordination, with over 70% of the studies targeting intra-MNE control and coordination. The details of the descriptive statistics are summarized in Tables 2 and 3. Of the reviewed articles with specific information about home countries, the vast majority studied MNEs based in developed countries.

-----Insert Tables 2 and 3 about here-----

Our preliminary analysis also shows limited research on factors influencing the choice of organizational mechanisms—similar to the pattern in recent reviews of the research on general organizational control (Cardinal et al., 2017). Surprisingly, most of the reviewed papers do not have a clear theoretical foundation. Among the papers with a theoretical anchoring, multiple perspectives were used.

REVIEW OF THE MNE CONTROL AND COORDINATION

LITERATURE

Given our review framework, we structure our review below into five main sections: organizational mechanisms, outcomes of the organizational mechanisms, microfoundations, MNE characteristics, and macro context. The online Appendix C contains more details of the selected articles under each section. We reviewed the selected articles to understand how MNEs use organizational mechanisms to achieve the intended outcomes, and to assess if impacts of external dynamics have been incorporated in the research on MNE control and coordination.

Organizational Mechanisms to Control and Coordinate Cross-border Activities

We observed heterogeneity in the use of terminology, noting that the same mechanisms were employed for both control and coordination purposes, often without a clear conceptual distinction. We found that although authors sometimes categorized and clustered control and coordination tools and efforts differently (e.g., Brenner & Ambos, 2013),ⁱⁱⁱ the four categories of organizational mechanisms identified

in our review framework effectively capture most mechanisms in the reviewed articles. Table 3 summarizes the number of studies that include these categories of organizational mechanisms.

Centralization mechanisms. We anticipated that centralization mechanisms would primarily be linked to control given the formal power and hierarchical structures associated with decision-making. While true—as this was indeed the case in the majority of studies examining control—centralization mechanisms appear in a third of the studies focusing on coordination (e.g., Andersson, Buckley, & Dellestrand, 2015; Decreton, Nell, & Stea, 2019). Studies on centralization emphasized the use of hierarchies in decision-making (Decreton et al., 2019) and use of power to influence intended outcomes (Hong & Snell, 2013). We found no clear difference between the studies on control compared to coordination vis-à-vis which decisions they focused on, or their operationalizations.

Our review shows that centralization mechanisms are also central to how the MNE deals with external relationships. GVCs typically exercise centralization mechanisms through lead MNEs that orchestrate network activities and make key decision (Kano, 2018; Zhou & Xu, 2012). Hence, key actors in the GVC may have substantial decision-making authority, even when not formalized through a traditional hierarchy. Lead roles may also shift over time (Lunnan & McGaughey, 2019). This aligns with recent studies that have emphasized the importance of separating decision-making power from equity ownership (Albers, Wohlgezogen, & Zajac, 2016). The focus on centralization mechanisms to manage external relationships also includes efforts to strengthen the MNE's power through, for example, centralization of global accounts management (Sinkovics et al., 2011) and supplier relationships (Gooris & Peeters, 2016).

Standardization mechanisms. Over half of the studies incorporated standardization mechanisms. Most studies that identify mechanisms within this category focused on standardization of rules, procedures, and processes. In inter-MNE relationships, standardization mechanisms include the use of written contracts, where expected behaviors are codified and standardized (Albers et al., 2016; Zhou & Xu, 2012). Almost all combine standardization with other organizational mechanisms, whether the focus is on control, coordination, or both. Studies focusing only on coordination combine standardization most

often with socialization mechanisms. Our analysis of the results in studies of standardization mechanisms with other types of mechanisms indicates that standardization mechanisms may successfully enable alignment of goals, resources, and activities without requiring formal power or decision authority.

Socialization mechanisms. Our review shows that socialization mechanisms are important for both control and coordination but are most often combined with other organizational mechanisms. Socialization mechanisms are also more prevalent in studies of MNE coordination. We saw mention of numerous socialization mechanisms: efforts to communicate values and develop an organizational culture; efforts that enable communication and informal interaction; expatriation and other forms of personnel visits and exchanges across units; employee training and development programs with participants from different units; and extensive use of task forces with members from various parts of the MNE and/or its partners (Ambos, Kunisch, Leicht-Deobald, & Schulte Steinberg, 2019; Stendahl, Schriber, & Tippmann, 2021; Torres de Oliveira, Sahasranamam, Figueira, & Paul, 2020). We noted no clear distinctions between the operationalization of socialization mechanisms in studies focusing on control versus coordination.

Socialization mechanisms are central for both intra-MNE and inter-MNE relationships, although studies that focused on the latter particularly emphasized the importance of socialization mechanisms for building network relationships characterized by trust, as well as the alignment of goals and behaviors (Kano, 2018; Lunnan & McGaughey, 2019). Socialization mechanisms influence behaviors and actions to align with the established norms and expectations. For instance, communities of practice contribute to the development of shared understandings as well as social relationships across units that, in turn, provide access to relevant resources and shape the behaviors of their members.

Output-oriented mechanisms. This is the least studied organizational mechanism in our sample. Unlike the three previous categories, output-oriented mechanisms do not focus on processes, behaviors, or the means to achieve desired outcomes (Brenner & Ambos, 2013). Instead, they emphasize the setting of clear and measurable targets and objectives, as well as the follow-up related to whether these aspects have been achieved (Ambos et al., 2019). This is commonly discussed in contractual relationships (Zhou & Xu, 2012). Not surprisingly, most of the articles that include output-oriented mechanisms focused only on

control. However, very few articles examine output-oriented mechanisms (e.g., Friesl & Silberzahn, 2017), all with an intra-MNE focus. Interestingly, few of the reviewed GVC articles (for exceptions see e.g., Jean, Sinkovics, & Cavusgil, 2010) focused on output-oriented mechanisms. This is surprising, as we assumed that coordinating external relationships is often driven by setting clear contractual goals, without the MNE necessarily monitoring the processes by which external partners reach these goals.

Other categorizations. Some studies highlighted mechanisms that cannot easily be classified into a single category. For instance, we referred above to the use of expatriates and other forms of personnel rotation as a socialization mechanism (e.g., Rickley & Karim, 2018), since such individuals contribute to the sharing of values, cognitions, and norms across units, as well as the development of inter-unit social capital. However, expatriates have also been viewed as a centralization mechanism to align decisions within the hierarchy; some were even examined as a separate category (Amann, Jaussaud, & Schaaper, 2021; Chatzopoulou, Spanos, & Lioukas, 2020). The diverse perspectives on expatriation in the articles that we reviewed emphasized the importance of context and purpose. Some mechanisms, like expatriation, thus span different categories depending on the strategic intent of the organizational mechanism.

The Influence of Organizational Mechanisms on Organizational Outcomes

A significant proportion of the reviewed papers examine the outcomes that follow different organizational mechanisms, as we discuss below.

FSA development, transfer, and recombination. Most studies focused on the FSA development, transfer, and recombination category. The specific outcomes under this category include knowledge development and transfer, organizational learning, innovation, capability development, and the speed (or “agility”) at which changes occur (e.g., Andersson et al., 2015; Crespo, Lages, & Crespo, 2020; Rabbiosi & Santangelo, 2013).

The organizational mechanisms enable the MNE to transfer knowledge efficiently and effectively across national and regional borders within its network, and between different partners in the GVC and ecosystem. For example, socialization mechanisms like training, staffing, and interactions contribute to knowledge transfer from acquired subsidiaries (Park & Choi, 2014). Socialization mechanisms facilitate

new capability development across ecosystems by spanning boundaries and involving suppliers through the lead MNE (Hong & Snell, 2013). Output-oriented mechanisms help increase supplier innovation; in contrast, standardization mechanisms hinder supplier innovation (Jean et al., 2010).

The impact of organizational mechanisms on FSA transfer varies with the different dimensions of such transfer. For instance, centralization mechanisms facilitate the speed of knowledge transfer but not its effectiveness (Ciabuschi, Dellestrand, & Kappen, 2011). Centralization mechanisms are more likely to affect intra-firm knowledge flows than inter-firm knowledge flows (Anand, 2011). The direction of knowledge flows also influences whether these control mechanisms create benefits for the MNE network (Zeng et al., 2018), pointing to a number of complexities in how organizational mechanisms influence organizational outcomes.

The achievement of rational goals. Many of the papers we reviewed examined the achievement of performance outcomes, also known as rational goals (Cardinal et al., 2017), from the use of organizational mechanisms. Studies on external control and coordination tend to favor the achievement of efficiency-related rational goals, incorporating a number of performance measures, such as return on assets/equity/investments, product quality, and sales (e.g., Jean et al., 2010; Williams, Colovic, & Zhu, 2017). Based on our review, we identified a need to further nuance the outcomes under the achievement of rational goals. The reviewed articles suggest that organizational financial performance is enabled by *process efficiency*—the smooth functioning of processes and tasks in the unit(s) in question and/or between the unit and other parts of the MNE or ecosystem. Examples of relevant process efficiency outcomes include well-functioning workflow processes and effective information flows across units (Gooris & Peeters, 2016). This suggests that the research on outcomes needs further fine-tuning, as rational goals and process efficiency may be separate, but interdependent, outcomes; process efficiency may also influence financial goals.

These four categories of organizational mechanisms—centralization, standardization, socialization, and output-oriented mechanisms—contribute to process efficiency and the achievement of rational goals in various ways. Centralization mechanisms enable HQs to align and coordinate FSAs throughout the

MNE and the ecosystem; this then ensures that organizational units or external partners do not make suboptimal decisions related to the MNE's resources and activities (Lazarova, Peretz, & Fried, 2017). Centralization mechanisms also simplify the information flow and increase process efficiency as they speed up exploitation and implementation of FSAs (Chen, Paik, & Park, 2010; Keupp et al., 2011). Standardization mechanisms and output-oriented mechanisms routinize FSAs at an organizational level, through written policies, rules, and standard procedures in internal or external networks. When units rely on them and on known targets, they are less likely to deviate from the established behavior and goals of the network (Beddewela, 2019; Wijethilake, Munir, & Appuhami, 2018). Socialization mechanisms reduce behavioral differences and facilitate efficiency by aligning goals and values, and developing trust and cooperation between HQs and subsidiaries or other partners in the ecosystem (Chatzopoulou et al., 2020; de la Torre & Chacar, 2012).

Introducing proximal outcomes. Interestingly, several studies investigating the outcomes related to FSAs and rational goals argued that organizational mechanisms first align the behavior and/or goals of different parties. Implicitly, they claim that aligned goals and behaviors become proximal outcomes of control and coordination. However, only a few studies directly test whether this occurs (Kim, Jean, & Sinkovics, 2018; Srikanth & Puranam, 2014). Nonetheless, this view highlights the importance of clarifying and calibrating outcomes.

Microfoundational Considerations

Since research on MNE control and coordination has predominantly been phenomenon-driven, we expected to find explicitly observable microfoundational assumptions that address their managerial relevance, as new internalization theory emphasizes the link between specific manager behavior and firm-level outcomes (Kano & Verbeke, 2019). Although most of the core IB strategies or frameworks implicitly build on microfoundations, and recent conceptual studies of GVCs emphasized their importance (e.g., Kano, 2018; Narula, 2019), few empirical studies from our sample explicitly addressed the impact of microfoundations on the configuration of, or the relationship between, organizational mechanisms. However, Wareham, Fox, and Giner (2014) found that increased use of standardization mechanisms help

safeguard against BRat and BRel concerns stemming from the various tensions that can arise between partners from different countries in technology ecosystems. Similarly, Fraccastoro, Gabrielsson, and Chetty (2021) discussed how socialization mechanisms, such as frequent communication and the use of social media, could overcome BRel threats, increase the level of trust and commitment from foreign partners in a new strategic network, and facilitate learning.

A stream of microfoundational research has argued that the reduction of macro-concepts and constructs to constituent components (e.g., individual-level perspectives) reflect microfoundational or micro-level research (Foss & Pedersen, 2019). However, this perspective differs from the microfoundational assumptions embedded in the new internalization theory that guides our review framework.

The Impact of MNE Characteristics

Our review shows that the international strategy influences the *configuration* of organizational mechanisms. For example, the positive effect of socialization on knowledge transfer within the MNE is stronger for firms that are not pursuing global strategies (Rabbiosi, 2011). We also coded variables—like global versus regional activities, subsidiary mandates, and entry modes—if the paper contained this information. While our detailed review shows that these MNE characteristics seem to affect the choice and configuration of organizational mechanisms, results were inconclusive across studies.

We also explored whether intra-firm and inter-firm control and coordination rely on different mechanisms or configurations. Our review shows that most work has been devoted to the mechanisms that control and coordinate internal rather than external relationships (see Table 3). However, we saw some differences between intra- and inter firm relationships. For example, when international projects were co-located, there were no differences in coordination mechanisms between inter-firm and intra-firm relationships. But for geographically dispersed projects, the differences exist when intra-firm projects rely heavily on socialization mechanisms (Srikanth & Puranam, 2014). The use of mechanisms may also influence internal and external relationships differently. For example, a lower reliance on centralization

mechanisms from HQs will directly lead to more connections with the inter-firm partners, but fewer intra-firm connections (Gammelgaard, McDonald, Stephan, Tuselmann, & Dorrenbacher, 2012).

The Impact of Macro-level Factors

The reviewed literature provides evidence that the configuration of organizational mechanisms is contingent on several macro-level characteristics, such as regulatory environments, government policy interventions, uncertainty, and cultural characteristics. However, macro-level influences were only directly captured in a smaller set of studies. The majority of the MNEs studied were based in developed countries; we found relatively few studies with developing-country MNEs that have subsidiaries in developed countries (with exceptions of Torres de Oliveira et al., 2020; Wang, Luo, Lu, Sun, & Maksimov, 2014).

We found that the impacts of formal institutional distances on the choice of organizational mechanisms differ from that of cultural distances. Distances also affect the relationship between use of organizational mechanisms and subsequent outcomes, a result of increased transaction costs from higher perceived uncertainty. For instance, distances create BRat challenges and therefore limit the knowledge transfer between HQs and subsidiaries (Ambos, Asakawa, & Ambos, 2011) or with external partners (Ceci & Prencipe, 2013). However, the relationship between distances and the choice of control and coordination mechanism is complex.

CRITICAL REVIEW AND SUGGESTIONS FOR FUTURE RESEARCH

Our review of the MNE control and coordination literature identified important contributions and developments, but also suggests scope for further development. Based on the insights from our review, we developed an augmented conceptual framework (Figure 2) to map knowledge gaps that illuminate promising research directions, which we discuss in the following sections.

-----Insert Figure 2 about here-----

Insight #1: The Dire Need for Conceptual Clarity and Clear Operationalization

Concepts are at the core of any social science. Clear concepts are needed to “address the basic question in social research: what are we talking about?” (Gerring, 2011: 112). Conceptual clarity is also essential for advancing our understanding of the phenomenon under study, including its antecedents and effects (Podsakoff, Mackenzie, & Podsakoff, 2016). Our inability to identify a clear theoretical foundation in most of the articles we reviewed illustrates the importance of conceptual clarity and theoretical anchoring to synthesize and move the field forward. Our review underscores that the research field of MNE control and coordination lacks this conceptual clarity, making it difficult to navigate and expand this field of study.

In many of the reviewed studies, key concepts are undefined; further, many studies use control and coordination interchangeably (e.g., de la Torre & Chacar, 2012; Rabbiosi, 2011), but potential nuances or differences remain unexplored. Our definitions position them as intertwined but with different foci—the focus on control is more about power and authority, while the focus on coordination is more about collaboration and interdependence. This understanding also aligns with the definitions found in general management literature (e.g., Cardinal et al., 2017; Okhuysen & Bechky, 2009). Future studies should explicitly declare why control or coordination is more appropriate, based on the research focus. We encourage more research like that by Brenner and Ambos (2013), which articulates both clear definitions and an ontology. Increased conceptual clarity may help to further refine the conceptual framework, such as more carefully parsing the types of organizational mechanisms appropriate for control or coordination needs.

Clear concepts are important in both qualitative and quantitative work, but arguably, this is particularly important for studies relying on quantitative methods, since this clarity will guide the operationalizations of measurable constructs (Podsakoff et al., 2016). Our review indicates that precise operationalizations of organizational mechanisms vary considerably, particularly with respect to how the items reflect the key meaning of relevant constructs. Because of this inadequate conceptual clarity, some

empirical studies operationalized outcomes as mechanisms—proximal outcomes in particular—a challenge that will be elaborated more under Insight #2.

In organizational studies, the operationalizations should capture the contemporary organizational realities of the phenomenon in question. A good example can be found in the work of Gooderham, Minbaeva, and Pedersen (2011), which operationalized socialization mechanisms using perceptual measures of individuals rather than those imposed from the top. In our review, we found that the operationalizations of organizational mechanisms have remained fairly static over time, despite recent technological developments and the new control or coordination needs emerging from external dynamics and firm-level changes (Stendahl et al., 2021). For example, the operationalization of standardization mechanisms refers to the extent to which rules and procedures are explicitly formulated (Ambos et al., 2019). However, this does not yet fully capture the changes in the accessibility and communication of standardized rules and procedures enabled by ICT advancements. Digitalized organizational mechanisms may also expand how units behave (discussed in further details under Insight #7), as in recent observations regarding how increased transparency strengthens peer control (De Jong, Bijlsma-Frankema, & Cardinal, 2014; Stendahl et al., 2021).

Insight #2: Fine-tuning Different Types of Outcomes and Their Relationships

Despite significant attention to the outcomes arising from various organizational mechanisms, little effort has been made in the IB literature to develop a comprehensive conceptualization of control and coordination outcomes, along with the relationships between different types of outcomes. As our review shows, process efficiency differs from achievement of rational goals, although they are not always independent. While much of the literature has assumed, whether implicitly or explicitly, that MNEs act rationally, and that their control or coordination efforts contribute to enhancing performance, the general management literature has identified a negative association between the use of output-oriented mechanisms and process efficiency (Sihag & Rijdsdijk, 2019). More research is therefore needed to tease out the relationship between mechanisms and process efficiency, as well as the interdependencies of process efficiency and achievement of rational goals, such as sales and return on assets.

In addition, conceptually it is necessary to distinguish between setting clear goals and developing a shared understanding of these goals. Different organizational units may set clear goals, but this does not ensure that they are aligned with the goals of the MNE as a whole, or that the goals are internalized by key actors across all organizational units. Similarly, external collaborators, such as alliance partners or GVC members, may have divergent goals for the collaboration. Given these differences, it is helpful to distinguish between the setting of goals and the degree to which said goals have been reached (as discussed in our section on proximal outcomes). The output-oriented mechanisms reflect the efforts made to set clear objectives and targets against which the units can be assessed, but they do not reflect the extent to which this effort to control or coordinate is achieved (Chen et al., 2010). We recommend that both proximal and distal outcomes be studied, as shown in our augmented conceptual framework (see Figure 2). Proximal outcomes may be expected to serve as a mediator between mechanisms and distal outcomes, but this relationship remains largely unexplored.

A related challenge is whether some variables should be considered as mechanisms or outcomes. For example, several researchers perceived trust as a coordination mechanism (e.g., Benito, Petersen, & Welch, 2019; Vahlne & Johanson, 2021), but we argue that trust, one type of social capital, should be regarded as a proximal outcome as trust must be developed through certain organizational mechanisms. Inter-unit social capital may also mediate the relationship between organizational mechanisms and knowledge transfer (Gooderham et al., 2011). As Rabbiosi and Santangelo (2013) identified, socialization mechanisms enable trust and shared vision (alignment of goals), which in turn promote reverse knowledge transfer. Future research needs to distinguish the mechanisms from the outcomes (proximal outcomes in particular) as a means to provide clear conceptual definitions, such as those provided in Brenner and Ambos (2013).

We propose that dynamic feedback loops from distal outcomes to the proximal outcomes are likely (see Figure 2). Inter-unit social capital increases the likelihood of the parties adapting their operations to better fit with each other (Furusawa, Brewster, & Takashina, 2016; Torres de Oliveira et al., 2020). As shown by Kim et al. (2018), trust is important to coordinate relationships between parties in international

value chains. It takes time to achieve coordination and sharing possibly confidential information may be necessary. As such, parties must share mutual trust if they are to be willing to make such investments. Thus, we recommend that future research examine how the actual level of control or coordination—in terms of goals and behavior alignment—mediate and/or moderate the relationship between the use of organizational mechanisms and distal outcomes. For instance, if HQ executives perceive that a foreign subsidiary does not adhere to the expected goals or behaviors, they may hypothesize that efforts to control the unit in question have intensified or changed (Stendahl et al., 2021). Conversely, it is conceivable that strong adherence by subsidiaries to stated goals may either lead the organization to reduce its resources for controlling and coordinating activities, *or* institutionalize existing successful control and coordination practices. However, these possibilities would certainly need to be examined empirically. To capture goal and behavior alignment, Ahlvik, Smale, and Sumelius (2016) analyzed the extent to which controllees had implemented the transfer of human resource management practices that the MNE HQs wanted.

The attention-based view of the firm could be a fruitful framework to examine the dynamics in HQs-subsidary and other controller-controllee relationships in MNEs, and between MNE actors and external business partners. Such research could also shed light on the dynamic and political aspects of how rhetoric and other communication tactics influence attention in MNEs (Ocasio, Laamanen, & Vaara, 2018). More research is needed on this issue, including the development of appropriate scales for goal adherence, both within MNEs and among external relationships.

In addition to the intended outcomes in Figure 2, control and coordination efforts can lead to unintended consequences. As argued by Foss, Foss, and Nell (2012), executives may select an organizational mechanism based on their personal interests. Those with the power to impose organizational mechanisms may not be fully informed about the units they are trying to control or coordinate and the context in which they operate (Hoenen & Kostova, 2015), suffering from BRat and BRel challenges (Verbeke & Fariborzi, 2019). Therefore, examining such mechanisms' effectiveness in achieving desired outcomes as well as their unintended effects would enhance understanding of how they function in the IB context (Lazarova et al., 2017).

Digitalization provides a useful example here; the current literature frames it as largely beneficial—for example, it can enable interactions between different parties and geographically dispersed activities (Menz et al., 2021), and reduce monitoring and coordinating costs (Chen & Kamal, 2016). For those routine activities undertaken by either foreign subsidiaries or other collaborating firms within the MNE's GVC or global ecosystem, higher centralization and standardization may lead to even more efficiency. However, the bright side of digital globalization may be overestimated, such as the extent to which the FSAs based on digital assets and digital platforms are non-location-bound (Verbeke & Hutzschenreuter, 2020), thereby emphasizing centralization, standardization, and reduction of person-to-person socialization. The literature has paid scant attention to the backlash effects that digital centralization could trigger from domestic nonmarket actors. How institutional barriers, such as digital nationalism, influence digital centralization, standardization, and socialization is an area where IB scholars can contribute to the general management literature.

Outcome measurements at different levels—such as subsidiary, MNE network, GVC, platform, or ecosystem—are challenging, due to the complexity of a geographically dispersed network, as well as different perceptions of objectives and control over the various members. Foreign subsidiaries and various partners differ in terms of their activities and objectives, meaning that the outcome dimensions (and measures) most suitable for one type of subsidiary will not necessarily be equally suitable for another (Kano et al., 2020; Meyer et al., 2020). The gap between how HQs and subsidiaries perceive control by HQs has also been identified (Ngoasong, Wang, Amdam, & Bjarnar, 2021). Consequently, future research must ensure that chosen outcome measures have face validity vis-à-vis objectives pursued by organizations engaged in control and coordination efforts.

Insight #3: The Need to Capture Configurations and Interplay of Mechanisms

Recent reviews of organizational control research have pointed to the fact that many studies adopt a singular (narrow) approach to control or coordination (Cardinal et al., 2010; 2017). Similar critical comments have also been made by IB scholars (Stendahl et al., 2021). Most of the empirical studies we reviewed covered multiple organizational mechanisms that MNEs have at their disposal to control and

coordinate a network of geographically and culturally dispersed units (e.g., Ahlvik et al., 2016; Amann et al., 2021; Bjerregaard & Klitmøller, 2016). The problem of singularity is more prevalent in research on the outcomes of organizational mechanisms. When several organizational mechanisms are used simultaneously, their joint effect on the outcomes, or the complementarity versus substitution effect, is significant (Zeng et al., 2018). It is therefore important that further research captures the complexities of multiple organizational mechanism configurations by understanding the interplay of multiple mechanisms.

Exploring complementary or substitutive effects across outcomes is critical to ensure the design of future studies captures important complexities when using multiple organizational mechanisms in MNEs. Notably, MNE managers often have significant latitude in determining the use of organizational mechanisms (Gooderham et al., 2011). This is problematic in practice if they use multiple mechanisms without understanding how they interact with each other (Siggelkow, 2002). If two organizational mechanisms substitute for each other, bundling them together may diminish each one's individual benefit and thereby waste valuable firm resources.

Examining multiple dimensions helps us to gain more insights into the configuration of various types of control and coordination mechanisms. For instance, the mechanisms may be oriented towards either outcomes or processes. Standardization mechanisms are usually oriented to processes (Brenner & Ambos, 2013). Another nuance is transmission channels, which reflect the means through which mechanisms are transmitted in the organization and network—whether through administrative, personal, or electronic means. For instance, centralization and standardization could be transmitted through administrative means or personal means, such as expatriation. Socialization mechanisms can be either human-based or electronic-based.

Initiators of mechanisms will be another important dimension to consider. In most of the reviewed studies, corporate and regional HQs choose and configure organizational mechanisms. However, HQs sometimes co-create organizational mechanisms with their foreign subsidiaries and/or external partners (Crespo et al., 2020; Hong & Snell, 2013; Stendahl et al., 2021). Important subsidiaries may also initiate control over peer subsidiaries (Boussebaa, 2015). For digital cross-border ecosystems, control and

coordination may be carried out by foreign subsidiaries in different countries, as these have their own subsidiary-specific advantages and participate in the global ecosystem in various ways (Nambisan & Luo, 2021). In many MNEs, decision-making is also nested across several levels, such as corporate HQs, regional HQs, and local subsidiaries. The coarse concept of MNE characteristics does not yet capture such nuances. Existing research has not always acknowledged the implications of this complexity for control or coordination efforts in the MNE (Hoenen & Kostova, 2015).

To capture the complexity and different dimensions of various organizational mechanisms, we call for a configurational perspective on MNE control and coordination (Cardinal, Sitkin, & Long, 2010). Methodologically, using fuzzy-set qualitative comparative analysis (Andrews, Fainshmidt, Gaur, & Parente, 2021) can help in exploring different dimensions that contribute to the bundling and interplay of organizational mechanisms. The configurational approach could further our understanding of the relationships between organizational mechanisms, the actual levels of control and coordination, and their joint impact on outcomes, by identifying various configurations of mechanisms.

Insight #4: Incorporating Multilevel Factors

Our review shows a relative paucity of multilevel studies. One of the central questions in IB research is how contextual and organizational factors influence MNE operations across regions and countries. However, in our sample, research on such antecedents of organizational mechanism choices is limited, especially multilevel studies that investigated individual factors, organizational factors and contextual factors.

Among the articles covering macro-level contextual factors, many of them measure institutional influences as distances between home and host countries. Institutional distances influence the level of uncertainty perceived by MNEs (Gooris & Peeters, 2014) and the cognitive limitations of MNEs' control or coordination efforts (Narula, 2014). However, distance measures suffer from unrealistic assumptions about symmetry and linearity (Shenkar, Tallman, Wang, & Wu, 2022). For example, when MNEs from countries with a high level of corruption operate in a less corrupt country, they tend to rely on centralization mechanisms. However, this is not the case if the host country is more corrupt than the home

country (Rabbiosi & Santangelo, 2019). Strategies employed by MNEs may also affect the impact of macro-level distances. Torres de Oliveira et al. (2020) found that the managers of acquired subsidiaries in Germany do not perceive themselves as being a formal subsidiary of the Chinese acquirer, and neither party suffered from a BRel challenge caused by divided engagement of the HQ and the acquired subsidiaries.

To capture the real effect of distances, methods to disentangle the confounding effect of directions are needed. Against the backdrop of increasing FDI from developing countries to developed countries, especially in the case of acquisitions, a comparative analysis of the configuration of mechanisms and the relationship between mechanisms and outcomes is urgently needed. This will require a more contextualized, “thick approach” to IB research, rather than an approach focusing strictly on measures such as distance (Aguilera & Grøgaard, 2019). At a minimum, when various distance measures are used in MNE control research, a direction dummy will be needed in the study’s design.

In addition to the macro-level contextual factors, organizational factors, strategy, and governance structure influence how organizational mechanisms are configured. Amid the rapidly changing environment in the 1980s, several studies pointed to new organizational forms such as transnational and differentiated networks (Ghoshal & Bartlett, 1998). Subsequent studies identified meta-nationals (Verbeke & Kenworthy, 2008) and meta-teams (Santistevan & Josserand, 2019) as MNE models that try to address changing external institutional and competitive pressures. The roles played by regional HQs have also undergone changes (Nell, Kappen, & Laamanen, 2017). These different MNE models rely on various strategies to develop and leverage FSAs across multiple geographical and organizational locations (Narula, 2019; Rugman, Verbeke, & Nguyen, 2011a), resulting in different control and coordination needs (Ambos, Fuchs, & Zimmermann, 2020; Stendahl et al., 2021).

New forms and structures to conduct global work are also emerging (Reiche, Lee, & Allen, 2019; Santistevan & Josserand, 2019). The classic, full-fledged national subsidiary has been replaced by other, often more fluid, international structures (Edwards et al., 2021). Hence, we encourage future research investigating how changing MNE structures affect which organizational mechanisms are chosen. Several

studies emphasized that MNEs' international strategies and embeddedness influence the choice and use of organizational mechanisms (e.g., Meyer, Mudambi, & Narula, 2011; Nell & Ambos, 2013; Rugman et al., 2011b), although this stream of research seems to have declined recently (Ambos et al., 2019; Kostova et al., 2016).

The changing nature of the contemporary MNE also requires a re-thinking of analytic levels (Edwards et al., 2021) and the need for multilevel studies. For instance, some scholars posit digital networks reflect a hybrid mode of markets and hierarchies, rather than a new choice of governance (Hennart, 2019). Thus, the level of analysis may need to shift from dyads, such as HQ–subsidiary and MNE–strategic alliance partners, to groups of actors or roles in digital networks (Banalieva & Dhanaraj, 2019).

We discovered that research on MNE control and coordination has also paid insufficient attention to microfoundations (Foss & Pedersen, 2019), and neglected individual reactions to organizational mechanisms (Decreton et al., 2019; Hong & Snell, 2013); however, we noted that several studies have explored individual-level components, such as expatriates, meta-teams, and other boundary spanners (e.g., Santistevan & Josserand, 2019). In the reviewed articles, the implications of microfoundational assumptions for MNE control and coordination are underrepresented and rarely examined empirically. Given future uncertainties, more attention must be paid to well-known microfoundational assumptions embedded in new internalization theory, particularly BRat and BRel (Kano et al., 2022; Vahlne & Johanson, 2021). BRat and Brel are extremely relevant to external networks, such as GVCs and ecosystems, due to the possible divide in engagement resulting from various actors pursuing conflicting practices, goals, and routines (Kano & Verbeke, 2015). To advance theory, empirical studies will need to test the impact of these behavioral assumptions (Tsang, 2006).

Various studies have called for multilevel methods to capture the efforts and effects of control and coordination across contexts, firms, subsidiaries, functions, activities, and individuals (e.g., Brenner & Ambos, 2013; Lazarova et al., 2017; Lunnan & McGaughey, 2019; Schmid, Grosche, & Mayrhofer, 2016). Our augmented conceptual framework reflects the need for multilevel studies, illustrating that the

influences from macro, firm, and micro-level factors affect the choice of organizational mechanisms directly and indirectly. Capturing multilevel effects can be done in various ways. The individual-level and macro-level domains can, for example, be bridged through studies of multilevel phenomena like international knowledge transfer (Santangelo & Phene, 2021). Collecting multilevel data allows researchers to adopt multilevel frameworks (e.g., Ambos et al., 2020; Stendahl et al., 2021).

We suggest that future studies critically consider the need for multilevel frameworks to capture dynamics and interdependencies between macro-level contexts, firms, organizational units, teams, and microfoundations. Further, a practice theory perspective (Bjerregaard & Klitmøller, 2016; Stendahl et al., 2021) or knowledge governance approach (Gooderham et al., 2011) could be helpful to focus on the interactions between individuals, processes, and mechanisms; such theoretical perspectives could help capture the impact of contextual factors. BRat and Brel could also complement other theories, and point to specific mechanisms as solutions by aligning “individual-level behavior, firm-level strategy, and country-level institutional environment” (Kano & Verbeke, 2019: 141).

Insight #5: Temporal Factors and the Dynamics of Mechanisms

Given the dynamic changes in external environments, researchers have called for an examination of how these changes affect the choice and use of organizational mechanisms, in particular their impact on timing and scale issues (Mees-Buss et al., 2019; Verbeke & Fariborzi, 2019). However, little research analyzes timing and scale adaptation issues in the areas of MNE control and coordination (Verbeke & Fariborzi, 2019). The temporal dimension is a central question when it comes to both the use of different organizational mechanisms and their outcomes, since the MNE needs to control and coordinate activities over time (Mees-Buss et al., 2019). It is natural that efforts to increase control or coordination will have different effects over time, with some taking less time to materialize than others. Some mechanisms are also likely to have more long-term effects than others. This issue is particularly pertinent in highly dynamic environments.

We uncovered examples of researchers investigating how MNEs adjust their control or coordination efforts over time, in part in response to changes in the environment. For instance, Stendahl et al. (2021)

tracked practices adopted by an MNE that enabled a change of control. Brenner and Ambos (2013) investigated the sequence of different mechanisms and their impacts. Translating their findings into the terminology proposed in our review framework, Brenner and Ambos (2013) found that socialization mechanisms were used to legitimize the use of output-oriented, as well as centralization and standardization mechanisms. However, longitudinal studies of change processes both within MNEs and GVCs are scarce (Ryan, Buciuni, Giblin, & Andersson, 2020). We see the need for more research on how organizational mechanisms are sequenced to achieve proximal outcomes, such as alignment of goals and behavior, and more distant goals, such as FSA transfer and performance goals, similar to Brenner and Ambos (2013).

Adopting a static approach carries the risk of both scholars and MNE practitioners drawing misleading conclusions regarding the overall effects of control and coordination efforts. The timing and adjustments may also influence how the interaction of various mechanisms affects certain organizational outcomes. For example, Tsui-auch and Möllering (2010) showed that when trust increases, MNEs relax their overall formal controls; however, they still maintain formal controls over access to critical resources. This safeguards against appropriation risks in inland regions, as the mechanisms evolved differently in coastal regions in China. Gammelgaard et al. (2012) analyzed the impact of changes in centralization mechanisms, as well as the increases in the interactions on subsidiary performance, allowing for a more dynamic analysis of the effect. In particular, MNEs need to adopt a dynamic perspective in managing complex interactions with diverse external partners in GVCs and ecosystems (Nambisan & Luo, 2021). Lunnan and McGaughey (2019) not only showed how the control of internalized activities differed from control over externalized activities, but also looked at how the coordination by lead MNEs in GVCs changed over time.

Moving forward, we recommend an even greater emphasis on temporal dynamics and the interplay of mechanisms to better understand how control and coordination needs evolve over time. This will also enable researchers to capture the complexities of interactions between mechanisms and the performance effects of such dynamic adjustment of control mechanisms in both internalized and externalized activities

(Ambos et al., 2020). As an initial step in this direction, we added arrows to our augmented conceptual framework (see Figure 2) to illustrate how proximal outcomes can lead to adjustments in the choice and use of organizational mechanisms.

New internalization theory (Narula & Verbeke, 2015; Verbeke & Kano, 2016), evolution theory (Kogut & Zander, 1993), and a practice perspective (Peng, 2012; Stendahl et al., 2021) may be particularly helpful to inform these research questions and facilitate investigations of MNE control and coordination processes over time. New internalization theory focuses mainly on resource recombination to augment the current FSAs, either by MNEs or partners, based on a richer set of behavioral assumptions (Narula & Verbeke, 2015; Verbeke & Kano, 2016). This approach could describe the complexities in adapting control and coordination, especially when change leads to new resource combinations (Kano & Verbeke, 2015; Verbeke & Fariborzi, 2019). The evolutionary theory of the MNE (Kogut & Zander, 1993) is appropriate to explore this research stream: it explains why each configuration of certain tools is only temporary and may evolve when faced with different internal and external dynamics (Mees-Buss et al., 2019; Ryan et al., 2020).

Methodologically, we call for more empirical studies that use longitudinal or process-based analysis (e.g., Ambos et al., 2020; Lunnan & McGaughey, 2019; Stendahl et al., 2021), as these studies may capture the nuances over time, as well as adaptation and adjustment dynamics. Studies employing natural experiments (e.g., de la Torre & Chacar, 2012) and the IB historical literature approach (Verbeke & Fariborzi, 2019; Verbeke & Kano, 2015) will also support researchers in capturing dynamic adjustment processes.

Insight #6: Nuancing Similarities and Difference between MNE-internal and -external Control and Coordination

Our review suggests that the organizational mechanisms and outcomes included in our analytical framework are relevant for studies on control and coordination—both internally in the MNE and in external relationships. Most of the reviewed articles focus on either intra-MNE control and coordination or inter-firm control and coordination, although most take an intra-MNE focus. The coding results revealed

that more coordination-focused articles addressed external relationships, which may indicate that researchers were sensitive to coordination being particularly important in inter-firm relationships. However, this focus may also be explained by the traditional notion in the IB literature—that of control being associated with equity ownership (Forsgren & Holm, 2022).

Only 12% of the reviewed articles include both internal and external control and coordination. This focus has increased somewhat within the last decade, but, generally, few concerted efforts exist that empirically examine the complex relationships between the two (for exceptions, see Gammelgaard et al. [2012]; Srikanth and Puranam [2014]). However, with the rise of digitalization and the increasingly fuzzy boundaries of MNEs (Narula et al., 2019), the role and influence of the MNE in external non-equity relationships are also changing (Forsgren & Holm, 2022). This makes it increasingly difficult to isolate MNE-internal control and coordination from -external control and coordination. We therefore encourage future research to include both internal and external control, and coordination efforts, as well as the effects of their interactions.

The increasing importance of the MNE's external relationships, such as GVCs, make it critical to understand how efforts at controlling and coordinating internal activities relate to the efforts to control and coordinate external partners. For example, it has been argued that the style of control required for GVC network orchestration differs from the traditional “command and control” approach, and the complex skills in managing both internalized and externalized activities (Buckley, 2009; Lunnan & McGaughey, 2019). A few studies have uncovered differences in the uses and outcomes of organizational mechanisms in both intra- and inter-firm relationships (Gammelgaard et al., 2012; Srikanth & Puranam, 2014). More comparative research is needed to reveal the differential effects of the same mechanisms, as well as the circumstances under which differences and similarities can be found between intra-MNE versus externally oriented control or coordination efforts. Specifically, future research could use comparative studies to illuminate important questions like the following:

- To what extent do internal and external control and coordination efforts rely on different organizational mechanisms? BRat and Brel challenges from divided engagements are more observable

in these settings due to the conflicting practices, goals, and routines of various actors (Kano & Verbeke, 2015).

- Do lead MNEs need to rely more on socialization mechanisms as a precondition for other types of mechanisms when controlling and coordinating external partners?
- How do MNEs' internal control and coordination efforts affect external efforts, and vice versa?
- Does the relationship between organizational mechanisms and outcome variables differ across internalized and externalized activities? The interaction between external efforts and internal efforts has been unclear (Santistevan, 2022).

Theoretically, new internalization theory and network theory may complement each other, to inform these research questions (Nambisan & Luo, 2021). Network-based theory can spotlight the interdependencies between various internal and external units. By having the entire value chain or ecosystem as the unit of analysis, new internalization theory could highlight both internal and external efforts to economize on BRat and Brel as a result of the complex relationships between internal and external units (Benito et al., 2019). Examining internal and external networks necessitates empirical approaches that capture complexities, interdependencies, and temporal and scale dimensions in IB research (Verbeke & Fariborzi, 2019).

Insight #7: MNE Control and Coordination—Disruptive Trend: The Digitalization Example

Major trends, such as advancements in technology, the backlash against globalization, nationalism, and pandemics, change how MNEs operate and will definitely change the design of MNE control and coordination as time goes on. All the possible implications are certainly worthy of investigation, but our space is limited. We therefore focus our discussion on the influence of digitalization, to exemplify research questions raised by disruptive trends. Digitalization has received a lot of attention in the IB literature, especially related to its effect on MNE governance modes and strategy (Autio et al., 2021; Verbeke & Hutzschenreuter, 2020). Surprisingly, in studies on MNE control and coordination, attention to the effects of digitalization is scarce.

It is well-established that digitalization, enabled by ICT developments, significantly informs how MNEs operate and their need for control and coordination (Autio et al., 2021). For example, digitalization offers a new way to orchestrate international independent ecosystem actors (Wareham et al., 2014). Furthermore, ICT has been central to storing standardized rules, procedures, and contracts for decades. However, few studies investigated the impact of digitalization on specific types of organizational mechanisms. Similarly, little research has explored the impact of important external dynamics and challenges rooted in ICT developments and events, such as artificial intelligence (AI) or blockchain.

This is particularly surprising given the increasingly important role that digitalization has for standardization. The digitalization of firms improves efficiency and reliability across GVC partners and provides transparency on task performance. In our sample, only a handful of articles explicitly focus on digitalization when operationalizing organizational mechanisms. Manolopoulos et al. (2011) categorized ICT infrastructure as a separate mechanism, but digitalization was primarily treated as a communication channel for written rules and procedures. These enable firms to implement standardized rules and procedures to manage key customers and employees in overseas units (e.g., Gibson, Dunlop, & Cordery, 2019). The increased transparency brought by digitalization has also triggered observations of peer pressure, or “peer control” to conform to standardized processes and behaviors (De Jong et al., 2014; Stendahl et al., 2021). This may also explain the frequent use of standardization mechanisms in studies that focus only on coordination and emphasize linkages and alignment of behaviors.

However, despite the enormous focus on digitalization, the definitions and operationalization of standardization mechanisms have remained similar over the past decades. Interestingly, few studies in our sample incorporate digitalization into the operationalization of socialization mechanisms. In the context of digital globalization, the strategies and structure adopted by born digitals may be quite different from those who migrate to digital tools and contexts; these actors may attempt to infuse digital technologies into their more traditional businesses, where FSAs are largely not based on digital assets (Verbeke & Hutzschenreuter, 2020). Hence, the implications of digitalization for control and coordination of these two types of MNEs may be distinct as well.

In our sample, we failed to locate studies that investigated organizational mechanisms in MNEs that are “born digital” or “going digital” (with the exception of Wareham et al. [2014]). However, MNEs that shift to using AI or blockchain technology rely less on subjective judgment (Menz et al., 2021), which suggests a need for mechanisms emphasizing centralization, standardization, and routine output. Further, technology use may erode the development of trust between different units in the MNE network and different partners in the GVC or ecosystem network (Gligor, Pillai, & Golgeci, 2021). Future studies should thus explore the complexities of AI and blockchain technology—in that these technologies may eliminate the need for trust while simultaneously eroding trust.

We also see how important it is to consider digitalization when studying the interplay and dynamics of organizational mechanisms. On the one hand, digitalization can reduce costly investments in interpersonal exchanges across geographical regions, with lateral collaboration enabled by digital platforms, which benefits lateral knowledge development (Stendahl, Tippmann, & Yakhlef, 2022). On the other hand, despite the increased use of technology and social media, the reviewed articles show limited attention to ICT tools in socialization mechanisms (Srikanth & Puranam, 2014). This deficit may be influenced by the perception that “ICT tools are not as effective as face-to-face communication” (Srikanth & Puranam, 2014: 1261), since some important aspects of feeling, tone, and nuance could be lost in technology-enabled channels. We expect this to change in the future, given that the global pandemic has forced firms to quickly and unexpectedly change their communication and interaction strategies and practices in the workplace.

Future research should pay more attention to the broader question of how digitalization has transformed the configuration of organizational mechanisms in MNEs. It would be interesting to explore whether and how the adoption of digital technologies affects the configuration of mechanisms and changes the link between mechanisms and outcomes. We have limited insights into if and how mechanisms in MNEs that are becoming digital have evolved—that is, whether the mechanisms are sustained, adapted, or revolutionized (Verbeke & Hutzschenreuter, 2020). If they are revolutionized, are the relationships empirically more aligned with optimistic or pessimistic predictions? What are the

contingencies of these different predictions—such as types of activities, tangibility of the main FSAs, institutional factors, governance mode, and entry mode? We expect that digitalization generates more causal ambiguity (Nambisan & Luo, 2021), resulting in the need for face-to-face socialization mechanisms (Belderbos, Leten, & Suzuki, 2013) but less need for centralization mechanisms.

As for theoretical perspectives, new internalization theory can elucidate GVC-based or ecosystem-based analysis by engaging with the entire GVC, ecosystem, or digital platform as the unit of analysis (Benito et al., 2019; Chen, Li, Wei, & Yang, 2022). Network analysis, rather than traditional dyadic or multilateral analysis, may offer new insights into the mechanisms that link independent platform actors not directly controlled by the platform MNE (Li et al., 2019). We recommend using longitudinal cases (e.g., Wareham et al., 2014), business case history analysis (e.g., Kano & Verbeke, 2015; Verbeke & Fariborzi, 2019), and comparative analysis as effective methodologies to capture the complex and dynamic management of various units and diverse partners in foreign markets (Nambisan & Luo, 2021). They may highlight how MNEs continuously upgrade through FSA recombination (Lee et al., 2021).

While this section has focused on digitalization as an example of disruptive trends, our discussion is transferrable to other contexts. Other exogenous shocks, sometimes intertwined with digitalization, affect how MNEs operate, and how they then engage in control and coordination. The exogenous shocks brought about by unexpected events such as Brexit, deregulation, anti-globalization, and pandemics provide opportunities to study changes in MNE control and coordination as a response to discontinuities in their competitive environment. Institutional shifts and changes in the competitive environment influence the need and pressures for MNE control and coordination, as illustrated in studies about changes in mechanisms used during reforms in Latin America in the 1990s (de la Torre & Chacar, 2012; de la Torre, Esperança, & Martínez, 2011).

COVID-19 has also caused many firms to temporarily, or even permanently, adopt work-from-home arrangements and restrict travel. This implies big changes to controlling and coordinating internal and external relationships, in addition to the fundamental changes enabled by digitalization. As MNEs search for innovative approaches that are less space-time sensitive, they are challenged to facilitate lateral

coordination across subsidiaries (Stendahl et al., 2022) and inter-firm, boundary-spanning coordination between external partners (Santistevan, 2022). Event analysis and extended case studies will generate further insights into the direct impact of MNEs processes aimed at responding to environmental shocks and trends. In sum, IB research must address these various major trends to provide empirical value.

CONCLUSION

Throughout history, a central question facing MNEs has been how to control and coordinate their far-flung operations. Our review of the current state of the field shows a large and growing body of research that provides numerous insights regarding MNEs' attempts to control and coordinate their internal activities and those of their partners. However, we observe that the field still suffers from a lack of conceptual clarity that has hampered progress in our knowledge of the efforts made by MNEs to control and coordinate international operations and our understanding of how these efforts influence organizational outcomes.

The literature on MNE control and coordination has not sufficiently incorporated the impact of evolving MNEs and their external environments into the design of control and coordination tools, nor considered its effect on the link between organizational mechanisms and outcomes. In addition, it is not always apparent how microfoundational assumptions contribute to designs and outcomes. We see a need to further explore the similarities and differences between control and coordination, and to revisit and ensure that the operationalizations of organizational mechanisms are up-to-date and validated. We also need to fine-tune the relevant outcomes from the use of such mechanisms. Further, more could be done to incorporate insights from recent developments in the organizational control literature (Cardinal et al., 2017; Sihag & Rijdsdijk, 2019) into the IB literature by incorporating relevant dimensions into the configuration such as transmission channels and the initiator of efforts.

In this review, we have defined control and coordination to help distinguish these key concepts, adding conceptual clarity to central topic areas in the IB literature that have been prominent for many decades. We have also proposed several proximal outcomes, such as the level of coordination. Our augmented conceptual framework, based on insights from our review, is intended to guide future research

aiming to develop the field further. We also offer key insights into how to advance our understanding of MNE control and coordination. It is our belief that MNE control and coordination will remain a central topic in IB research for many years to come, and much research is needed to advance the field.

NOTES

ⁱ While an extended discussion of related concepts is beyond the scope of this review paper, given our focus on MNE control versus MNE coordination, we suggest that *integration* be viewed as a broader concept than control and coordination. Please see Aguilera et al. (2019) for an in-depth review of corporate governance in the context of the MNE, and Kano (2018) in the context of value chains.

ⁱⁱ Control and coordination mechanisms are frequently included in the term governance in new internalization theory. However, the term governance also had a broader meaning in Aguilera et al. (2019). We therefore prefer using control and coordination to avoid unintentional conceptual confusion.

ⁱⁱⁱ For example, Brenner and Ambos (2013) clustered standardization and output-oriented mechanisms.

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Figure 1 The Review Framework

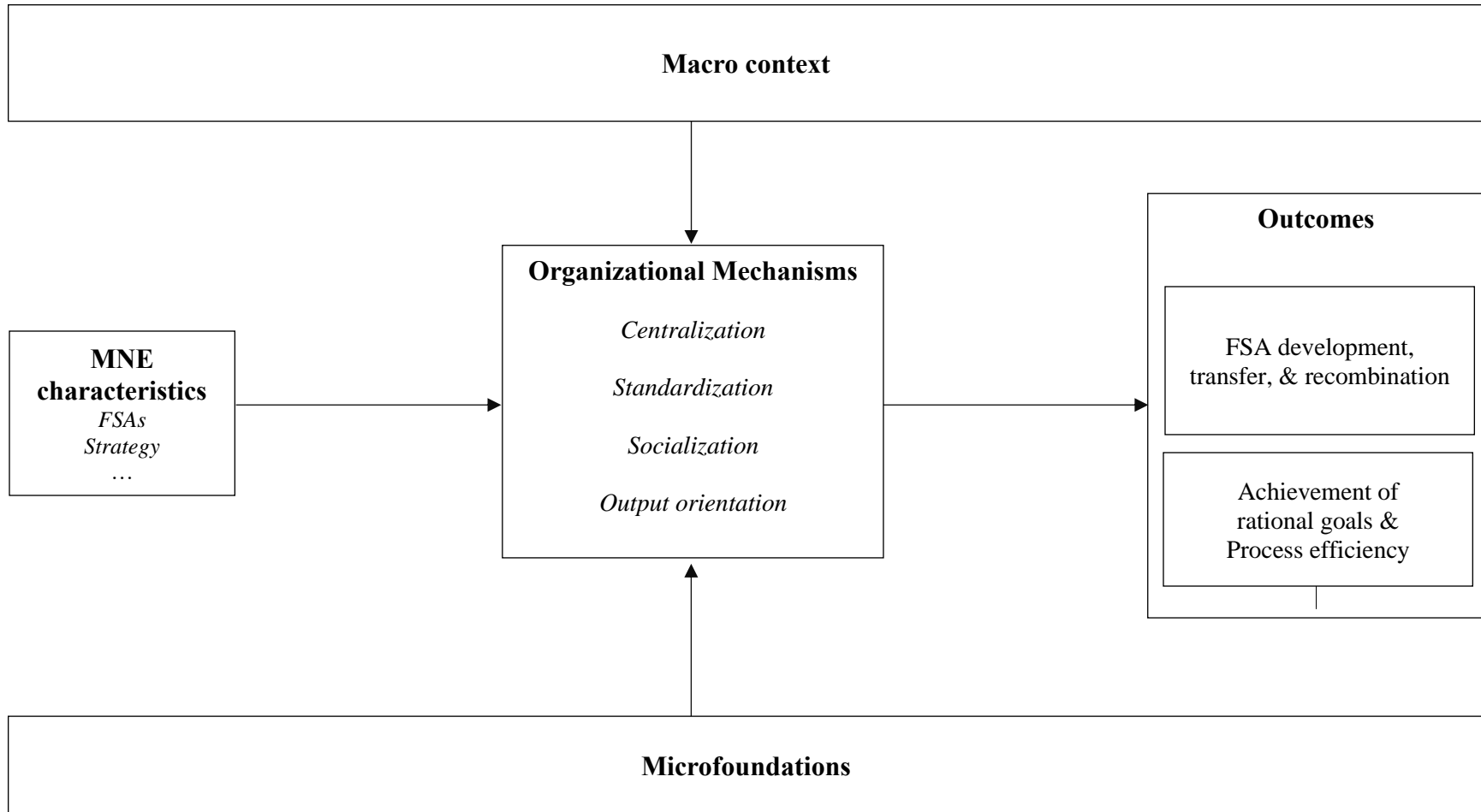


Figure 2 The Augmented Conceptual Framework

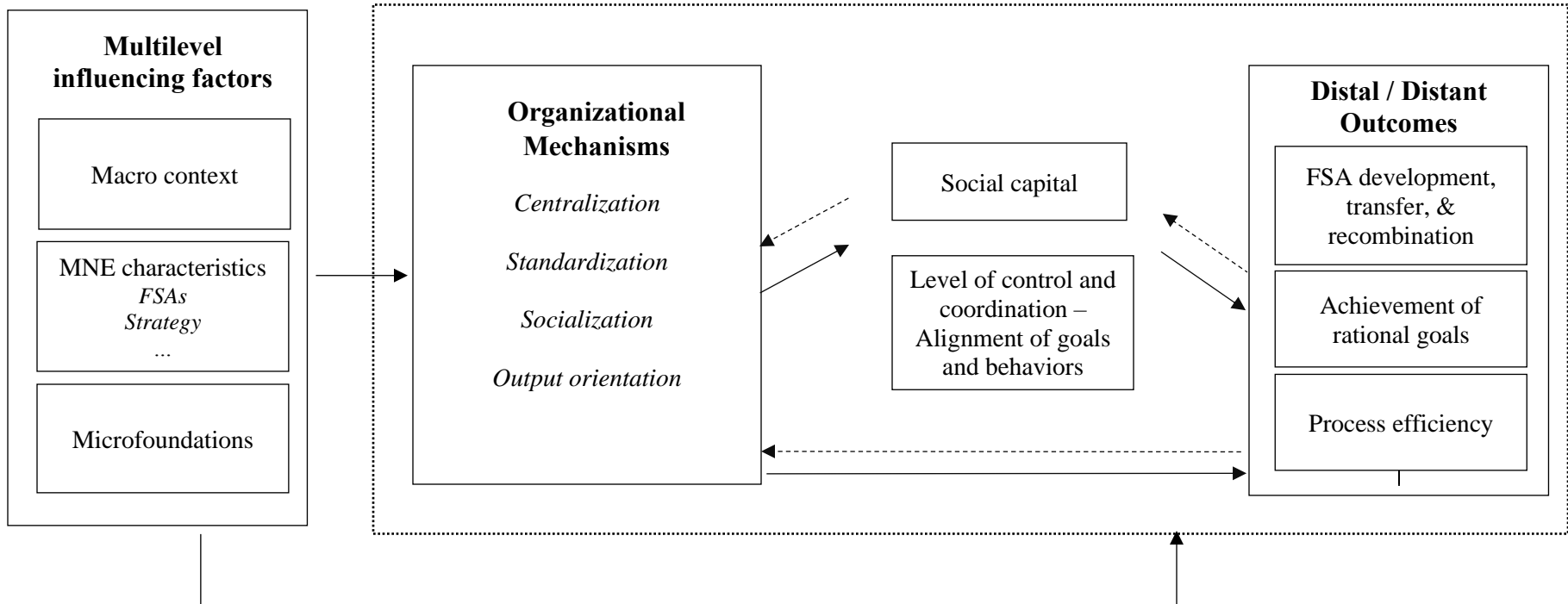


Table 1 Definitions of MNE control and coordination offered in coded papers

Study	Definition
Ambos et al. (2019)	“Means through which an HQ can align its subs’ behaviors with the interests of the overall firm and the need to select an adequate control strategy”; “control mechanisms that the HQ (i.e., the principal) can use to align the subsidiaries’ (i.e., the agents) behaviors with the firm’s overall goals.” pp. 67–68 [control mechanisms]
Amann et al. (2021)	“Control pertains to the process by which one entity influences, to varying degrees, the behavior and output of another entity through the use of power, authority and a wide range of bureaucratic, cultural and informal mechanisms.” p. 2 [control]
Brenner and Ambos (2013)	“Control is usually defined as any process (mechanism, instrument, or strategy) applied by an organization to ensure the execution of organizational goals and plans.” p. 774 [control]
Chen et al. (2010)	“Management control in IJVs refers to the influences exerted by partners over joint venture operations.” p. 527 [management control]
Crespo et al. (2014)	“Any process implemented by the organization to guarantee the execution of organizational objectives.” p. 996 [control]
Hsieh et al. (2010)	“The process of control over and within the firm ... that aims to reduce risk to its owners and to ensure that its activities bring a stream of acceptable returns to those owners in the long term.”; “Control is usually seen as a set of formal and informal influences exercised by partners.” p. 289 [governance; control]
Johnson et al. (2013)	“Rationalization that may entail standardization of product, centralization of technological development, or the vertical or horizontal integration of manufacturing.” “The centralized management of geographically dispersed activities on an ongoing basis.” p. 47 [global integration]
Sartor and Beamish (2014)	“We define <i>organizational control</i> as the degree to which an MNE integrates an offshore subsidiary through its equity investment and partnering decisions.” p. 1073 [control]
Jean et al. (2010)	“Monitoring and control are used interchangeably in the literature...Categorized as a hierarchical type of governance without ownership, monitoring refers to one party using its power to control another party’s performance or behavior.” p. 1221 [control]
McWilliam, et al. (2020)	“We propose an integrated definition of GVC governance as the organization and control of GVC.”; “Organization refers to the structure and characteristics of inter-firm relationships across value chain nodes; while control derives from the power dynamics between firms as well as from institutional and market forces.” p. 1 [GVC governance]
Soundararajan et al. (2021)	“Within the context of global supply chains, governance refers to “the organization and control of” global supply chains by global lead firms...and control is often derived “from the power dynamics between firms as well as from institutional and market forces.” p. 101149 [governance]
Friesl and Silberzahn (2017)	“Coordination mechanisms are the practices or tools used to achieve coordination, and are an important factor influencing organizational flexibility.” p. 1712 [coordination]
Anand (2011)	“Coordination within the firm is supported by procedural knowledge and routines ..., whereas coordination across firms is supported by focal rules and somewhat arbitrary conventions.” p. 286 [coordination]
Srikanth and Puranam (2014)	“Coordination as outcome is achieved when independent individuals are able to act as if they can predict each other’s actions; coordination failures occur when interacting individuals are unable to anticipate each others's actions and adjust their own accordingly.” p. 1253. “Since all coordination ultimately takes place between individuals..., we use the term between-firm coordination to denote interactions involving employees from multiple firms and within-firm coordination to denote interactions between employees of a single firm.” p. 1255 [coordination]

Table 2 Number of studies under different research methods

	Conceptual	Empirical			Total number (%)
		Quantitative	Qualitative	Mixed	
<i>Organizational Mechanisms</i>					
Antecedents	1	20	2	1	24 (19.0)
Outcomes	15	54	29	4	102 (81.0)
<i>Research Focus</i>					
Control	8	48	13	3	72 (57.1)
Coordination	3	10	10	1	24 (19.0)
Both Control and Coordination	5	16	8	1	30 (23.8)
Total number (%)	16 (12.7)	74 (58.7)	31 (24.6)	5 (4.0)	126 (100)

Table 3 Number of studies under different research foci

	<i>Research Focus</i>			Total number & (%)
	Control	Coordination	Both Control and Coordination	
<i>Relationships</i>				
MNE-Internal	59	13	16	88 (69.8%)
MNE-External	10	8	5	23 (18.3%)
Both MNE-internal &-external	3	3	9	15 (11.9%)
Total number (%)	72 (70%)	24 (18%)	30 (12%)	126 (100%)
<i>Organizational Mechanisms*</i>				
Centralization	41	8	23	72 (57.1%)
Standardization	32	15	18	65 (51.6%)
Socialization	37	20	25	82 (65.1%)
Output orientation	14	3	5	22(17.5%)
<i>Outcomes*</i>				
Proximal Outcomes	14	11	11	36 (28.6%)
Distant Outcomes	35	16	21	72 (57.1%)
FSA Transfer & Recombination	17	12	17	46 (36.5%)
Efficiency-related Outcomes	21	8	11	40 (31.7%)

*Some studies fit within multiple categories.