



An integrative typology of global strategy and global value chains: The management and organization of cross-border activities

Pavida Pananond¹ | Gary Gereffi² | Torben Pedersen³

¹Department of International Business, Logistics and Transport, Thammasat Business School, Thammasat University, Bangkok, Thailand

²Department of Sociology & Center on Global Value Chains, Duke University, Durham, North Carolina

³Department of Management & Technology, Bocconi University, Milan, Italy

Correspondence

Torben Pedersen, Department of Management & Technology, Bocconi University, Milan, Italy.
Email: torben.pedersen@unibocconi.it

Abstract

Research summary: We contend that a synthesis between the literatures on global strategy and global value chains (GVCs) is mutually beneficial. A typology of four themes—managed cross-border activities, network optimization, bottom-up upgrading, and strategic coevolution—illustrates the underlying concepts and mechanisms that these two approaches share in common. Our integrative typology provides an analytical framework to understand the interplay between the statics of GVC governance and the dynamics of firm strategy. Firm-level actions are a key factor in effective GVC-level policy making, and our framework provides a roadmap to analyze how major disruptions, such as digitalization and pandemics, affect the symbiotic relationships between GVCs and firm strategy.

Managerial summary: While the global strategy literature has underplayed the interdependence among firms and other actors in global value chains (GVCs) and highlighted the scope for firm agency, the GVC literature limits the attention to firm strategies per se but puts more emphasis on the governance structure of

Introductory Editorial to *Global Strategy Journal* Special Issue: “Global Value Chains, Governance, and Globalization Strategy”.

global industries. In their strategic decision making, managers must take into consideration how firms are positioned along the value chain in terms of four themes: managed cross-border activities; network optimization; bottom-up upgrading; and strategic coevolution. Integrating the GVC view adds a further impetus to global strategy beyond the analysis of intra-firm determinants. Conversely, integrating global strategy into GVC analysis entails a more dynamic view on behaviors of different actors in the value chain. Understanding these interactions enable managers and policy makers to better incorporate how changes and disruptions affect firm strategies within the governance of GVCs.

KEYWORDS

global value chains, cross-border activities, network optimization, bottom-up upgrading, strategic coevolution

1 | INTRODUCTION

The global economic slowdown following the 2008–2009 crisis and shifting political sentiments toward economic nationalism in Europe and the United States have sent shock waves through the global economic system. The 2020 global outbreak of COVID-19 adds further to these growing uncertainties around the world. As globalization is increasingly challenged and tested through crises and pandemics, there is an urgent call for ways to make the integration of global activities more resilient and sustainable. Globalization can no longer be perceived as a process of coordinated disaggregation of economic activities whose benefits are unevenly distributed across geographical space, but a more strategic coexistence of value-adding activities whose resilience depends on mutual interests of various stakeholders across the value chain and across countries. This phenomenon underlines the need in academia to broaden how different streams of literature view the changes and challenges in globalization.

We contend that a synthesis between the literatures on global strategy and global value chains (GVCs) will be mutually beneficial. While the global strategy literature has underplayed the interdependence among firms and other actors in the GVC and highlighted the scope for firm agency, the literature on GVCs has left limited discretion to firms' choice of strategy while putting more emphasis on the governance structure of global industries. By understanding how firms are embedded in a broader value chain network, managers have to take into consideration the firm's positioning along the value chain in their strategic decision making. Integrating the GVC view adds a further impetus to global strategy beyond the analysis of intra-firm determinants. Conversely, integrating the global strategy view in GVC analysis entails a more dynamic view on different behaviors of actors in the value chain.

We present a typology of four themes—managed cross-border activities, network optimization, bottom-up upgrading, and strategic coevolution—to illustrate the underlying concepts and mechanisms that these two approaches share in common. We assert that the interdisciplinary synthesis of the two literatures provides an analytical framework to understand the interplay between the statics of GVC governance and the dynamics of firm strategy. Moreover, we also emphasize how firm-level actions need to be taken into consideration for effective GVC-level policy making. Such an outlook creates a rich intellectual synthesis that provides a roadmap to analyze how major disruptions, like digitalization and pandemics, affect the symbiotic interactions between GVCs and firm strategy.

This paper comprises five parts. Following this introduction, we discuss the changing nature of globalization and the strategies and production networks of global firms to outline the main features and building blocks of the global strategy and GVC literatures in an historical context. Next, we present a typology of four themes that is based on our interdisciplinary synthesis of the GVC and global strategy literatures. The fourth section illustrates how this synthesis is especially needed during the current global challenges of digitalization and pandemics. We conclude in the fifth part by discussing what can be learned from the synthesis of the two literature and future areas of research.

2 | STRATEGIES, PRODUCTION NETWORKS AND THE CHANGING NATURE OF GLOBALIZATION

In this part, we outline the main features of the two strands of literature: global strategy and GVCs. We present them in the historical contexts that have formed their basic building blocks and development paths since both are a response to different manifestations of globalization. As such, this part provides a broad overview of where the two streams of literature are coming from and their paths of development, while the subsequent sections outline how the two literatures can supplement and reinforce each other.

Table 1 lists some of the basic features that distinguish the global strategy and GVC literatures, which respond to two distinct but related questions. The global strategy literature takes the perspective of the firm and centers on the question of how multinational enterprises

TABLE 1 Contrasting dimensions of the global strategy and GVC perspectives

	Global strategy	Global value chains
Underlying theoretical foundation	Economics, management	Industrial organization, networks, policy
Main question	How to optimize operations across borders	How to upgrade firms in the value chain
Key issues	Competitive advantage, firm performance, value appropriation	Societal impact, bargaining power, GVC governance
Main unit of analysis	Multinational corporations, value chain of firms	Industry niches, value chain activities
Important contextual factors	Culture, institutions, customer preferences	Power relations, technology dynamics, industry standards

(MNEs) can optimize their global activities, while the GVC literature highlights the industry or industry niches and focuses on the question of upgrading by firms in the value chain. In this sense global strategy is more management and action-oriented, while the GVC approach is more descriptive and holistic with its emphasis on linkages rather than individual actors. Similarly, McWilliam, Kim, Mudambi, and Nielsen (2020) have highlighted that global strategy offers an “inside-out” or firm-to-network perspective on MNEs, while GVC offers more of a “outside-in” or network-to-firm perspective on the role of MNEs.

We argue that the literature on global strategy has underplayed the interdependence with other actors in the GVC and exaggerated the scope for firm agency, while the literature on the GVCs has left limited discretion to firms in their choice of strategy by putting emphasis on structure and constraints on action.

2.1 | Global strategy research

Global strategy research can trace its history back to the 1960's and a time when foreign direct investment (FDI) was accelerating. More and more of the cross-border activities in the world were taking place as internal transactions in large multinational firms (Hymer, 1976). As these MNEs expanded their network of subsidiaries around the globe, their organizational structure served as platforms for the transfer of goods, services, knowledge and human capital (see Bartlett & Ghoshal, 1991 for a comprehensive review of the early literature on global strategy).

Global strategy as a field addressed the key question of how MNEs can organize and manage these cross-border activities most efficiently. As such, the early strategy literature focused on company performance, but with added attention to the international context (Tallman & Pedersen, 2015). This international orientation recognizes the importance of place, of boundaries, and of distance as complements to the process of seeking competitive advantage (Buckley & Casson, 1976).

Global strategy involves thinking in an integrated way about all aspects of a business—its suppliers, production sites, markets, and competition. It means meeting world standards even before seeking world markets and being world class even in local markets. It implies deepening the company's understanding of local and cultural differences in order to become truly global (Ghoshal, 1987).

From the very outset, global strategy has centered on managing the interaction between internal firm capabilities and the external contextual factors. The internal focus encompasses studies on ownership advantages, control mechanism, human resource management, and knowledge management, while the external aspects include entry-modes, local adaptation, and legitimacy, among others. Global strategy comprehends this duality of internally building capabilities and firm-specific advantages to deliver excellent value, while sourcing externally from the most productive locations, and selling to customers in the most rewarding markets, wherever they might be (Tallman, 1991). Given the emphasis on the interaction of internal capabilities to external conditionalities, global strategy often looks at the MNE as a focal unit of analysis (Cuervo-Cazurra, Mudambi, & Pedersen, 2018; Tallman & Pedersen, 2011).

Global strategy has developed together with the challenges of MNEs over the years. The title of the *World Investment Report* published by UNCTAD in 1992 was “Transnational Corporations as Engines of Growth” and in 1993 it was “Transnational Corporations and Integrated International Production”. This is a good illustration of the prevailing view of MNEs as efficient facilitators of the flow of cross-border activities.

As global activities became more sophisticated with joint-ventures, strategic alliances, network relations and offshoring, new research questions emerged. Rather than centering on the internalization of activities, MNEs became orchestrators of a global network in which fine-sliced value chain activities were pursued in the most efficient locations and governance form (e.g., Dhanajan & Parkhe, 2006). Basically, the focus switched to more network-based thinking in global strategy, which again can be illustrated by the titles of the *World Investment Reports*, which in 2011 had the title “Non-equity Modes of International Production and Development” (UNCTAD, 2011) and in 2013 “Global Value Chains: Investment and Trade for Development” (UNCTAD, 2013).

The field of global strategy has advanced to the stage where textbooks have been published to encompass the whole field. However, some of the foundational ideas remain an important part of the field’s intellectual building blocks, particularly the strong firm perspective and emphasis on firm agency as well as addressing cultural, political and social differences across borders as the key contextual factors.

2.2 | Global value chain research

The GVC approach also focused on the internationalization of production in the 1960s and 1970s, but its starting point was different from the intra-firm subsidiaries established by the postwar MNEs. GVCs involve cross-border production networks that include MNEs as “lead firms” that orchestrate suppliers they typically do not own. Among the earliest GVCs were assembly programs, like the *maquiladora* sector in Mexico, where US MNE manufacturers supplied the components to independent assemblers located in Mexico where labor costs were much lower, which exported the finished product back to the United States for sale. Similar programs were set up in Europe between German or other West European manufacturers, using low-wage assemblers in Central and Eastern Europe (Fröbel, Heinrichs, & Kreye, 1980; Grunwald & Flamm, 1985).

In the 1980s and 1990s, the GVC phenomenon extended from assembly operations to “full-package” production or original equipment manufacturers (OEMs), with an emphasis on the East Asian newly industrializing economies of Hong Kong, Taiwan, South Korea and Singapore (Gereffi, 1999). In the OEM model of international contracting, supplier firms in developing economies received orders for final products from MNE manufacturers, retailers and global brands in advanced industrial economies, and the overseas suppliers were responsible for making the final product according to the price, quality, and delivery specifications of the buyers.

The global commodity chain (GCC) literature introduced the concept of “governance structures” in global industries, and distinguished between “producer-driven” and “buyer-driven” chains (Gereffi & Korzeniewicz, 1994; Gereffi, 2018, Chapters 1–3). The governance structure of a global industry reflected the fact that virtually all industries have sets of lead firms whose market power, technology and other assets allow them to orchestrate tiers of suppliers (whether subsidiaries or more typically unrelated firms) to produce and market goods and services for international clients according to the price, quality, technical standards and delivery schedules set by global industry leaders. A core insight of the early GVC literature was the contrast between “producer-driven” chains, whose lead firms were multinational manufacturers in relatively technology- and capital-intensive industries, such as automobiles, computers and pharmaceuticals, and “buyer-driven” chains, whose lead firms were retailers (such as JC Penney, Walmart and Carrefour), branded merchandisers (e.g., Nike, Adidas, Liz Claiborne, or Disney),

and supermarkets (e.g., Tesco in the United Kingdom). The buyer-driven chains were characterized by labor-intensive and fragmented production operations distributed across global regions, which were coordinated by global buyers who provided access to developed-country markets and effectively fueled the developing-country strategy of export-oriented industrialization (Gereffi, 1994, 1999, 2014).

In the early 2000s, the Global Value Chains Initiative, established by the Rockefeller Foundation, sought to integrate research on global industries and local industrial clusters to create a multiscalar perspective that explicitly links the macro (global economy and international system), meso (nation-states and industries) and micro (workers, jobs and communities) levels of analysis. In addition, the GVC research agenda conceptualized development in terms of various types of economic, social and environmental upgrading (or downgrading) that affect diverse units of analysis, including firms, workers and communities (Bair, 2009; Gereffi, 2019b; Gereffi & Kaplinsky, 2001).

As the GVC framework evolved, it focused increasingly on the role of emerging economies, with a particular emphasis on China and other large industrial powers such as India, Brazil, Mexico, Indonesia, Turkey, and South Africa. Especially after the 2008–2009 financial crisis, when export growth slowed and many of the emerging economies began to turn inward and focus on domestic capabilities, the regionalization of value chains became a more significant trend and there was a weakening of the Washington Consensus development orthodoxy (Gereffi, 2014). International business scholars began to call for stronger linkages between the GVC paradigm and the literature on MNEs in relation to the grand development challenges of the contemporary era (Buckley & Strange, 2015; Gereffi, 2019a). In the next section, we discuss how these perspectives can be integrated.

3 | GLOBAL STRATEGY AND GLOBAL VALUE CHAINS: AN INTEGRATIVE TYPOLOGY OF THE LITERATURES

As shown in the previous section, both the GVC and the global strategy approaches have shared interests in similar phenomena. Yet, they have co-existed side by side without much interaction. Given the importance of how GVCs link economic activities across borders through trade and investment, stronger efforts are being made to integrate the two areas, resulting in an increasing number of review articles that highlight the complementary nature of scholarship in GVC, global strategy, and international business (De Marchi, Di Maria, Golini, & Perri, 2020; Hernandez & Pedersen, 2017; Kano, Tsang, & Yeung, 2020; McWilliam et al., 2020; Sinkovics, Sinkovics, Hoque, & Alford, 2018).

In this part, we present an integrative typology of themes that bring together the GVC and the global strategy literatures. Our main objective is to highlight where these two bodies of knowledge share common interests and to illustrate how combining their views can be mutually beneficial. Note that we refer to our framework as “interdisciplinary”, not “multidisciplinary”, to stress the integrative nature of our framework. “Multidisciplinarity” implies the juxtaposition of sub-topics that are linked to a broader focus without much interaction between different fields. In contrast, “interdisciplinarity” involves merging separate bodies of knowledge in order to create a common understanding of a complex issue. Interdisciplinarity is most influential when it can link issues and questions that are not specific to individual disciplines and bridge or confront the prevailing disciplinary approaches in each field (Huutoniemi, Klein, Bruun, & Hukkinen, 2010).

To do that, we provide a synthesis of the fundamental question addressed by both fields of research—how cross-border economic activities in global industries are organized and managed. Based on each approach's prevailing view on the configuration and management of cross-border activities, we present a typology of four themes that bridge the two literatures: managed cross-border activities; network optimization; bottom-up upgrading; and strategic coevolution.

Our analytical framework, shown in Table 2, features interdisciplinary synthesis. First, we use each axis to present the central frame of reference on global strategy and GVCs. We undertake this interdisciplinary framing to create a theoretical union between the two areas. On the vertical axis, we classify global strategy in view of the actor, resulting in lead firm-centric and supplier firm-centric strategy. GVC governance is classified in reference to MNE boundaries on the horizontal axis, leading to intra-MNE—rooted within the MNE's internal boundaries and extra-MNE—covering networks and alliance beyond the focal MNE's internal boundaries.

Synthesizing these concepts along these two dimensions gives us an integrative typology of the four themes that explain how cross-border economic activities are managed and organized according to these two literatures. We then discuss the main mechanism that underlies and integrates each theme at the firm and the GVC levels. To conclude this section, we reiterate how this interdisciplinary analysis enriches our understanding of each theme.

3.1 | Theme 1: Managed cross-border activities

This first theme is the outcome of the interaction of two dimensions—lead firm-centric view of strategy and intra-MNE GVC governance. Depicting how MNE lead firms organize and manage GVC activities through their subsidiaries, the central mechanism underscoring this process is operational efficiency. At the firm-level, efficiency is interpreted as how MNE lead firms can best exert control over their subsidiaries in order to organize the disaggregated and dispersed activities across borders. At the GVC level, efficiency is reflected in the decisions of lead firms.

The notion of efficiency at the firm level is based on the theoretical concept of internalization, upon which the lead firm's choice of governance structure between “make or buy” is made. When the costs of “make” (undertaking an activity within a firm's internal hierarchy) are lower than those of “buy” (doing the same thing through market mechanisms), MNE lead firms choose internalization as the governance mechanism to control and coordinate different stages of their production activities (Buckley & Casson, 1976; Hennart, 1982). MNE lead firms can optimize their resources and capabilities through decisions on the degree of integration or fragmentation of their activities via the intra-MNE structure of headquarters and subsidiaries (Bartlett & Ghoshal, 1986).

At the GVC level, operational efficiency is considered in a broader and more systemic manner. Viewed in relation to other chain participants, lead-firm efficiency lies not only in the “make or buy” decision, but also in how lead firms can organize and drive the value chain of the entire industry. The key determinant of efficiency is the nature of lead firms in different types of industries. In “buyer-driven” chains, characterized by labor-intensive and fragmented production across geographical space, lead firms are large retailers, brand-named merchandisers, or trading companies. Their efficiency derives from superior resources and capabilities that enable them to organize activities of tiers of suppliers in different countries to produce and deliver goods and services to end consumers. On the other hand, in “producer-driven” chains, characterized by intricate forward and backward linkages such as those in automobiles or

TABLE 2 Integrative typology of global strategy and global value chains

GVC governance	
GVC as intra-MNE	
Global strategy	Lead firm-centric strategy
	<p>Theme 1: Managed cross-border activities</p> <ul style="list-style-type: none"> • Key issues: Vertical MNEs; outsourcing; organizational structure of MNE; GVC governance structure • Mechanism: Operational efficiency • Theoretical frameworks: Transaction costs; internalization
	Supplier firm-centric strategy
	<p>Theme 3: Bottom-up upgrading</p> <ul style="list-style-type: none"> • Key issues: Technological innovation; upgrading; subsidiary evolution • Mechanism: Upgrading; organizational learning • Theoretical frameworks: Resource-based view; dynamic capabilities
GVC as extra-MNE	
	<p>Theme 2: Network optimization</p> <ul style="list-style-type: none"> • Key issues: Networks; global factory; orchestration; global production networks; platform economy • Mechanism: Value optimization • Theoretical frameworks: Power dynamics; network theory
	Supplier firm-centric strategy
	<p>Theme 4: Strategic coevolution</p> <ul style="list-style-type: none"> • Key issues: EMNE's; multipolar GVCs; regional value chains; GVC relocation; agility; alliances and joint ventures; partnership models • Mechanism: Collaboration • Theoretical frameworks: Institution-based view; legitimacy

electronics, large integrated industrial enterprises endowed with superior knowledge and technology are more efficient at driving these chains forward (Gereffi, 1994, 1999).

Viewed through these rubrics, operation efficiency is the mechanism that underscores the synthesis of GVCs and global strategy under the “managed cross-border activities” theme. One key insight that can be drawn is how intra-MNE mechanisms may be influenced by factors beyond those controlled by MNE lead firms. Lee, Jimenez, Yang, and Song (2020) confirm this point by showing how relationships with external suppliers can affect MNEs’ decisions on the GVC governance structure. In an empirical paper based on 5,600 observations of 487 Korean MNEs (1995–2013), the authors explore the different external contexts under which MNEs would choose to serve foreign markets through the intra-firm mechanism and when to do so through external value chain partners. While previous research (Feinberg & Gupta, 2009) has shown that MNEs prefer the option of intra-firm trade in markets with institutional hazards and high political risks, this paper shows that knowledge gained from external suppliers can moderate this relationship. Gaining both the institution-specific knowledge on the workings of the local market and the broader internationalization knowledge on managing global activities, MNEs can loosen the strong relationship between external political risks and the firm’s preference for the intrafirm mechanism.

3.2 | Theme 2: Network optimization

Characterized by the interactions of lead firm-centric strategy and extra-MNE governance, the “network optimization” theme views GVCs through the lens of lead firms but extends GVC boundaries to include linkages with a broader network of chain participants. Central to this theme is how value can be optimized given the more extensive range of relationships among network participants. At the firm level, value optimization is considered as a network of internalized and externalized relationships that lead firms adopt in organizing their cross-border activities. At the broader GVC level, value optimization is conditional upon the interactive power dynamics among different stakeholders across the value chain, not just as a unilaterally exerted process directed by MNE lead firms through its intra-firm layers of subsidiaries.

The increased complexity of MNE networks stretches the central analytical concept of firm governance from cost minimization to value optimization, especially when transactions involve knowledge exchanges (Mudambi & Tallman, 2010). Viewed at the firm level, value optimization is extended to cover not only relationships that are internalized within the MNE hierarchy, but also those that are externalized through other forms of non-equity measures, such as contracts, leases, license agreements, and alliances. Including these varieties of network relationships transforms the view of GVC from a unilateral governance in which a centralized headquarter of a focal MNE lead firm exerts control over others, to more multilateral, web-networked MNEs with the lead firm taking the “orchestrator” role at the center of a complex global factory system (Buckley, 2009, 2011; Buckley & Ghauri, 2004; Buckley & Strange, 2015; Kano, 2018). This system describes how MNEs orchestrate networks of relationships that they control but do not necessarily own.

Given the variety of actors taking part in these GVC networks, power dynamics lies at the center of value optimization at the GVC level. Power dynamics in GVC governance reflects different sets of links between GVC members, from lead firms to their tiers of suppliers. Power is a relative term and the power of a focal firm reflects its possession of resources and capabilities in relation to others. Value optimization within GVCs is an interactive process that includes the

complexity of transactions, the codifiability of knowledge, and the capabilities of suppliers (Gereffi, Humphrey, & Sturgeon, 2005). While power dynamics viewed at the firm level may concentrate on intra-MNE links between headquarters and their internalized and externalized subsidiaries (Mudambi & Navarra, 2004; Mudambi, Pedersen, & Andersson, 2014), at the GVC level, such dynamics extend to cover networks between firms that are not directly under the MNE's direct supervision.

Power dynamics at the GVC level therefore are contingent on the level of control and power lead firms wield over other participants in GVC networks (Ponte, Sturgeon, & Dallas, 2019). Between the highest level of control exerted through the internalized intra-MNE hierarchy to the lowest form of control exercised through externalized market transactions are three types of GVC governance—modular, relational, and captive—that differentiate lead firms' power in global industries (Gereffi et al., 2005). Additionally, the role of extra-MNE actors that are non-firm institutions like state agencies and non-governmental organizations, is also instrumental in shaping GVC relationships and power dynamics (see Coe & Yeung, 2015, 2019; Hendersen, Dicken, Hess, Coe, & Yeung, 2002; Yeung, 2016).

In sum, the network optimization theme brings to light not only the relationships organized through a combination of internalized and externalized linkages, but also the power exercised between lead firms and a plethora of extra-MNE participants in GVCs. This theme is clearly evident in Dindial, Clegg, and Voss (2020). Presented as a conceptual paper, the authors add the dynamics of bargaining power to the discussion of upgrading and distribution of value between the MNE and the suppliers. They highlight that supplier upgrading in terms of conducting more activities like research and development (R&D), marketing, etc. is not the same as the supplier becoming more powerful and appropriating a large share of the created value. Building on the power-dependency theory (Emerson, 1962), they show how the appropriation of value by firms forming the GVC ultimately is shaped by the interdependence among the firms. Suppliers will only be able to appropriate more value if other firms (including the lead firm) becomes dependent on them or the resources they provide, irrespective of the scope of their activities.

3.3 | Theme 3: Bottom-up upgrading

The “bottom-up upgrading” theme results from an interaction between the supplier-centric strategy and intra-MNE governance of the value chain. Central to this theme is the notion that upgrading is a bottom-up process undertaken by supplier firms within the boundaries of the MNE governance structure. Different from the former two themes that are viewed through the lens of lead firms, bottom-up upgrading highlights the role of suppliers in GVC activities. This theme features upgrading and organizational learning as the key mechanisms for GVC configuration (Gereffi, 1999).

At the firm level, this theme features studies of subsidiary evolution. Ironically, few studies in global strategy focus on the foreign subsidiary as the unit of analysis. Most studies view subsidiaries from the MNE's perspective, considering them as passive foreign units undertaking the tasks directed by MNE headquarters (Meyer, Li, & Schotter, 2020). This view is changing, however. While the conventional perception of a subsidiary's role may assume that subsidiary mandates are assigned by MNE headquarters (Bartlett & Ghoshal, 1986), later works have stressed the strategic importance of subsidiary evolution (see Birkinshaw, 1997; Birkinshaw & Hood, 1998). A central argument for this theme is that subsidiaries can enhance their position

vis-à-vis headquarters by increasing their knowledge creation and becoming centers of excellence among an MNE's network of subsidiaries (Holm & Pedersen, 2000).

Upgrading is similarly reflected as the main mechanism at the broader GVC level. Viewed through an economic development lens, upgrading through value chain integration has often been prescribed as a catch-up strategy for supplier firms in developing economies to move to higher activities along GVCs (Gereffi, 2019b). Suppliers firms can capture higher benefits from their GVC participation through four different paths—product, process, functional and chain upgrading (Humphrey & Schmitz, 2002). *Product upgrading* takes place when firms move into more sophisticated product lines with increased unit values. Firms achieve *process upgrading* when they can transform inputs into outputs more efficiently through superior technology or reorganized production systems. When firms can acquire new functions in the chain or increase the overall skill content of activities, they have achieved *functional upgrading*. The fourth type, *intersectoral upgrading*, takes place when firms can apply the competence acquired from a particular function of an industry and move horizontally to a new industry.

Building on the dynamic technological accumulation perspective (Lall, 1992, 2001), the main mechanism for upgrading lies in the ability of local supplier firms to enhance their innovation and technological capabilities through learning by doing (see, for example, Kaplinsky, Morris, & Readman, 2002; Giuliani, Pietrobelli, & Rabellotti, 2005; Pietrobelli & Rabellotti, 2011; Pietrobelli & Saliola, 2008; Morrison, Pietrobelli, & Rabellotti, 2008; Ivarsson & Alvstam, 2005, 2011). Because technology is usually under the control of global lead firms, implicit in the upgrading-through-technological-accumulation argument is that the upgrading of local firms is not an entirely independent process but subject to inputs from MNE lead firms. While this theme shines more light on the role of supplier firms in taking control of cross-border activities through upgrading, it nonetheless insinuates how this process is bounded within the intra-MNE governance.

Two papers in this issue address the theme of bottom-up upgrading. Ryan, Buciuni, Andersson, and Giblin (2020) is an in-depth longitudinal case study in the medical devices industry that illustrates how a subsidiary can upgrade in an intra-MNE GVC. Extending the earlier work of Pananond (2013), the authors show how a global subsidiary can continue its upgrading process through innovation development. More specifically, by extending its upgrading trajectory beyond the status of “competence creator,” the global subsidiary can initiate a new phase of innovation and become a GVC “joint coordinator” within the multidivisional, multi-business, high-tech MNE corporate structure. Even though the medical devices GVC is mostly managed through the “hierarchy” coordination model, the competence-exploiting subsidiary can evolve into a GVC joint coordination role in part through its semi-autonomous capacity for careful selection and orchestration of external partners for innovation development, which places the subsidiary in a controlling position vis-à-vis its sister subsidiaries in the MNE's corporate network.

Lechner, Lorenzoni, Guercini, and Gueguen (2020) analyze changes in the GVC of the sports shoe industry that is dominated by brand-holding lead firms like Adidas, Nike, etc. They show how continuous outsourcing and hollowing out of the lead firm's asset base, together with an emerging market for brands, create the scope for “rising power suppliers”. The rising power suppliers are taking over more and more activities from the lead firms like R&D, part of the distribution function and they even become brand-holders themselves as they are acquiring brands. The attention-based view (Ocasio, 1997) is applied in order to explain why lead firms have all their attention and focus on the upstream part of the value chain, and thus create an

opportunity for the rising power suppliers to take over a larger part of the value chain. The myopic attention of the lead firms is backed up by quotes from top-mangers in the lead firms.

3.4 | Theme 4: Strategic coevolution

Characterized by supplier-centric strategy with extra-MNE governance, the strategic coevolution theme deems suppliers as the focal agent of GVC strategy, but breaks away from the intra-MNE narrative and considers GVC governance as covering other stakeholders beyond networks of MNE subsidiaries. The main mechanism underlying this theme is how collaboration among different chain participants could bring about GVC configurations that better align the interests of different stakeholders. Central to this strategic coevolution theme is the view of GVCs as an ecosystem of different players, from individuals to firm and non-firm actors. Their diverse interests and interpretation of value creation have increasingly become strong drivers of GVC governance. At the firm level, this issue zooms in on how suppliers and other GVC participants can generate more independence vis-à-vis multinational lead firms, in order to create a more level-playing field. At the GVC level, the concept of collaboration is extended to consider broader social legitimacy issues beyond the economic interests of firms.

Building on the premise that GVC participation may not always bring equal prosperity and value to all stakeholders (see, among others, Kaplinsky, 2000; Ponte & Ewert, 2009; Werner & Bair, 2019), this theme examines strategies and factors that can redress such imbalances in order to make GVC participation fairer and more sustainable in the longer run. At the firm level, this theme acknowledges how other GVC actors interact and coevolve with lead firms. Not all suppliers wish to remain forever subject to MNE lead firms' directions and initiatives (McDermott & Corredoira, 2010). Pananond (2016) illustrated how domestic firms that were once suppliers in global industries can use an international expansion strategy to shift the GVC power dynamics in their favor. Similarly, Alvstam, Ivarsson, and Petersen (2020) argued that the rise of multinationals from emerging economies was a new force in configuring GVC governance beyond the direction of lead firms. Due to their stronger political embeddedness in the home economy, the operations of these emerging market multinational enterprises (EMNEs) may sometimes reflect strategies that are driven by factors beyond firm-specific interests. Strategic coevolution at the firm-level therefore needs to address objectives of other stakeholders in GVCs to ensure collaboration is achieved.

At the broader GVC level, the strategic coevolution theme under the GVC approach emphasizes not only the economic interests of firms, but also their social and overall legitimacy (Lee & Gereffi, 2015; Yamin & Sinkovics, 2015). Such an approach broadens the scope of the unit of analysis to include intra-firm issues like workers (Barrientos, Gereffi, & Rossi, 2011) and extra-firm measures such as industry and environmental standards (Havice & Campling, 2017; Mayer & Gereffi, 2010). With GVCs being considered as the "the world economy's backbone and central nervous system" (Cattaneo, Gereffi, & Staritz, 2010, p. 7), the role of other stakeholders, such as the state, non-state, and inter-state agencies, needs to be brought into consideration in the coevolution of GVC governance and dynamics (Coe & Yeung, 2015, 2019; Taglioni & Winkler, 2016; Yeung, 2016). The notion of collaboration is increasingly and deservedly extended to examine legitimacy issues like social justice and the sustainability of GVCs (Campling & Havice, 2019; De Marchi, Di Maria, Krishnan, & Ponte, 2019; Ponte, 2019).

In sum, the strategic coevolution theme emphasizes how collaboration should be interpreted in a broader and more institutionally legitimate basis. This point is highlighted in Murphree and Breznitz (2020). Based on a detailed historically oriented analysis, their paper identifies a critical

mechanism for local upgrading by MNE subsidiaries that confront initial political and social liabilities in the host country context. Drawing on 100 semi-structured interviews of Taiwanese MNE subsidiaries in Dongguan, China from 2008 to 2017, the authors show how Taiwanese firms handled a series of political and institutional obstacles involving property rights, regulation, taxation, and legal enforcement in establishing export-oriented factories in Dongguan. Although they had strong technological advantages to promote upgrading in Dongguan, the Taiwanese MNE subsidiaries were at a disadvantage compared to Hong Kong–invested enterprises in using direct political or social ties to address various institutional challenges. The authors argue that establishing a collaborative public space based on trust that enables different and divided actors to engage in sharing concerns and information was a critical mechanism used by Taiwanese firms to link up with local Dongguan government officials and to facilitate sustained local economic upgrading.

The synthesis between the global strategy and GVC literatures provided in Table 2 leads not only to a more comprehensive and holistic view of how cross-border economic activities are managed and organized through GVCs, but also to the fundamental mechanisms that characterize how these themes can be understood. The four mechanisms discussed above—operation efficiency, value optimization, upgrading, and collaboration—are not new theoretical concepts and have long been analyzed in both GVC and global strategy research. Nonetheless, presenting them as the synthesizing and integrative tools for interdisciplinary analysis creates generic links between the two literatures that could lead to new fields of inquiry. Insights that can be drawn from each of the themes, as well as from the dynamics and fluidity how each may transform the others. The next part illustrates how this synthesis is especially needed in times of current global disruptions.

4 | DISRUPTIONS AND THE NEED FOR INTERDISCIPLINARY SYNTHESIS

Major disruptions in global industries can take multiple forms, including natural disasters or climate-related shocks, technological transformations, major international regulatory shifts or disjunctures, global financial crises, and sharp economic downturns or recessions. Any of these disruptions will bring about pressures for strategy change in the lead firms of affected industries as well as geographic reorganizations of supply and demand. In this section, we discuss why an interdisciplinary synthesis of the global strategy and GVC approaches is particularly needed in the case of two current disruptions: the emergence of the digital economy during the past decade (UNCTAD, 2017) and the impact of the global coronavirus pandemic of 2020, which has resulted in unprecedented health and economic impacts from the disease known as COVID-19 (Medical News Today, 2020). While these two current disruptive developments differ in nature, they nonetheless nicely highlight the interplay between MNEs, suppliers, government bodies and all other legitimate actors in GVCs. We argue that the dynamics of these interruptions cannot be understood only from the vantage point of either global strategy or GVCs. Rather, both perspectives need to be combined to better explain the actions and strategies of the MNEs in relation to those of other actors in their industrial and institutional contexts.

4.1 | The digital economy and global value chains

The rise of the Internet has radically transformed the operation of MNEs and GVCs in the global economy (Brun, Gereffi, & Zahn, 2019; UNCTAD, 2017). Linked to terms like the Fourth

Industrial Revolution or Industry 4.0, the digital economy has not only transformed the role of traditional lead firms in GVCs, and how and where value is created in the global economy, but it has also generated a new set of lead firms connected to e-commerce, internet searches, social media and entertainment, and a wide range of digital services. Companies located in the United States and China are key drivers in the digital economy: Amazon and Alibaba are the world's largest internet retailers; Google and Baidu are the world's biggest online search companies; and Facebook and Tencent are the world's most popular social network providers. Together, these digital firms have generated the rise of *the platform economy* where the application of big data, powerful algorithms, and cloud computing change the nature of work and basic supply-chain relationships in the economy (Stallkamp & Schotter, 2020; Sturgeon, 2020). Controlling the platform offers a new way of governing the value chain and appropriate superior value.

There are several implications of the digital economy and MNE strategies in GVCs. First, e-commerce giants like Amazon and Alibaba have fundamentally restructured both the demand and the supply sides of traditional value chains through their "two-sided markets": (a) in terms of demand, they have disintermediated standard bricks-and-mortar retailers not only because of the convenience, speed and geographic reach of their operations, but also because they have unlimited economies of scope in the range of goods they can sell; and (b) in terms of supply, they reduced barriers to entry for very small firms to access global markets and also serve niche domestic markets (Li, Frederick, & Gereffi, 2019). Second, the business model of Amazon and Alibaba has evolved over time, and they are able to create value in multiple ways. Besides being network orchestrators in linking supply and demand for the goods they sell, they also are asset builders (their logistics infrastructure of warehouses and service centers), service providers (cloud computing is a major source of profits), and technology creator (e.g., Amazon is the apps developer for Amazon Prime and Alibaba has launched Alipay as a third-party online payment platform) (Wu & Gereffi, 2018).

Alongside the technological enablers of the digital transformation, there are also government and institutional drivers. Many states are actively supporting their technology-oriented companies, so we have reached what some researchers denote as a stage of techno-nationalism (Ostry & Nelson, 2000), where states promote their own firms as market leaders in high-technology sectors. The states are standing behind their firms in the race for the new technology in order to appropriate the value of future technologies. One far-reaching interpretation is that as more states compete against each other in the technological race, firms are drawn into this means of competition. An example of this is the US ban on using Huawei networking equipment in order to block their development of the new 5G telecom technology (Davis & FitzGerald, 2020). Another example are the antitrust battles that some of the world's largest tech companies like Google, Amazon and Facebook confront with United States and European Union regulators (Nicas, Weise, & Isaac, 2019).

The bottom-line is that the emerging digital economy and new platform-oriented GVCs are formed by an interplay between many legitimate actors from lead firms and their top suppliers to states and government bodies. One needs to understand the actions and strategies of each individual actor as well as the overall context in which they operate.

4.2 | The COVID-19 pandemic and global value chains

The global system has rarely experienced a crisis as profound and far-reaching as we are witnessing in 2020 with the COVID-19 global pandemic. Similar to digitization, this disruption is

best understood as the interplay between many legitimate actors and a dramatically transformed overall context. In just a few months since international recognition of the novel coronavirus outbreak in Wuhan, China in late January, 2020, the COVID-19 pandemic has already caused the most devastating, rapid and widespread public health crisis in memory, and the international economic disruptions across the globe are unprecedented (Medical News Today, 2020). As the viral pandemic swept across Asia to Europe and to the Americas in a matter of months, entire national economies were shut down virtually overnight and both supply and demand collapsed. This highlights the distinction between the local disconnections that occur when MNEs use GVCs to replace local value chains versus the far more extensive disruptive effects of a global pandemic like COVID-19 (Lorenzen, Mudambi, & Schotter, 2020). By late May, 2020, some of the earliest hit regions were trying to re-open their economies, but fears of a resurgence of the virus have stymied recovery efforts, and export controls for personal protective equipment (PPE) and needed medical supplies remain in place for 80 countries (WTO, 2020).

The current COVID-19 pandemic has brought home the urgent reality of shortages and bottlenecks in global supply chains for personal protective equipment (PPE) and medical devices like ventilators needed in the fight against the marauding virus, but it raises bigger theoretical and research questions as well. Some claim the pandemic will end globalization as we know it; others predict it will usher in a new world order led by China; and still others call for a return to economic nationalism and the reshoring of supply chains for critical goods and services (Campbell & Doshi, 2020; Farrell & Newman, 2020; Lighthizer, 2020). It is too soon to know how and when the crisis will end, but for GVC scholars, “the coronavirus pandemic has illuminated the risks that global supply chains pose to people, economies and the security of nations” (O’Neil, 2020), and the fragility of international multistage production networks has led to various proposals for making them more resilient in the face of intensified global political and economic pressures (Shih, 2020).

A series of major questions are being raised in terms of value chain theory, especially concerning the extent to which the COVID-19 pandemic has revealed a fatal flaw in the fragility of global supply chains (O’Leary, 2020), and how to increase the resilience of global supply chains in the face of the current and possible future pandemics (O’Neil, 2020). Among the measures suggested for increasing the resilience of supply chains in the face of a pandemic are strengthening regional production networks, making and holding more inventory and safety stocks, multiple sourcing, and perhaps the most potent option in the current climate of protectionism, reshoring production to the domestic economy (Shih, 2020). A key question is which alternatives provide a response that is both effective in the short term, but also sustainable in the longer-run after the COVID-19 pandemic abates.

The COVID-19 pandemic also had a devastating impact on workers and businesses at the bottom of global supply chains, as revealed in a new study of Bangladesh, one of the top three suppliers in the global apparel industry (Anner, 2020). In response to the sudden collapse in demand for garments caused by widespread store closures in Europe and the United States occasioned by COVID-19, many of the top European and US apparel brands and retailers canceled or postponed all planned, in-process and already completed production orders with suppliers in Bangladesh, leading to the partial or complete shutdown of a large portion of the 4,000 factories in the country. More than one million factory workers have already been fired or furloughed (temporarily suspended from work) as a result of order cancellations. Similar situations are likely to unfold across numerous producing countries and labor-intensive manufacturing industries around the world.

Understanding how to anticipate and adapt to the disruptions caused by both predictable and unexpected crises in the global economy is one of the critical current concerns for GVC and kindred scholars. An intellectual roadmap that is based on interdisciplinary syntheses like what we propose in this paper is needed to allow analysts to incorporate how these major changes and disruptions will affect our fields. An even larger issue is whether the institutional underpinnings of the global economy can survive the slide into protectionism, virulent economic nationalism and a possible de-globalization, whose effects would likely be far more long-lasting and disruptive than even the COVID-19 pandemic (Project Syndicate, 2020).

5 | IMPLICATIONS OF OUR INTERDISCIPLINARY SYNTHESIS

In this article we present an integrative and interdisciplinary typology of how cross-border economic activities are organized and managed. Based on the four themes discussed in the third section, we illustrated the common areas where GVCs and global strategy research cross paths. To further discuss the contribution of our interdisciplinary synthesis, we examine two fundamental insights that are derived from the cross-fertilization between the two literatures. We argue that the integrative analysis shines more light on the interplay between the static and dynamic rubrics of GVC and global strategy, as well as the interplay between firm actions and macro-level policy directions. As we show below, these understandings can be used as guidelines for new inquiries within and between the two streams of literature.

5.1 | Interplay between statics and dynamics

The first insight we derive from the synthesis of the GVC and global strategy literatures is the interplay between the statics of GVC governance and the dynamics of firm strategy. Given its systemic view, GVC research has traditionally focused more on explaining the static aspects of global industry governance (Barrientos, 2019; Palpacuer, 2019; Ponte et al., 2019). The GVC literature offers a multiscale perspective that identified and linked different levels and units of analysis. Yet, not much has been said on the interactions among these stakeholders that are driven by their different strategies. While the knowledge gained from learning about the statics of various global industries enrich our understanding of cross-border economic activities, it does little to clarify why there are differences in behavior among lead firms and their suppliers.

In contrast, global strategy has centered more on how firms make decisions based on the interaction of firm capabilities and external contextual factors. It can bring to light how decisions of those GVC agents are made and how they interact to create the dynamics of relationships and power within GVCs. Additionally, the interplay between statics and dynamics can also occur as firms' actions may be shaped and constrained by the broader context of GVC governance structure (Hernandez & Pedersen, 2017). Global strategy and international business scholars often find that they have had little influence on decision makers in business and public policy as their work tend not to appeal to broader societal concerns (Gereffi, 2019a). GVC scholarship can contribute to this shortcoming by identifying the range of social and political economic issues that surround how firms make decisions related to governance, enhanced firm capabilities and innovation (Lema, Pietrobelli, & Rabellotti, 2019; Sako & Zylberberg, 2019; Staritz & Whitfield, 2019).

Our typology offers an analytical framework to better understand this interplay between the statics of GVC governance and the dynamics of firm behaviors. By highlighting how principal agents in GVCs can choose between a variety of mechanism, from efficiency to value optimization, upgrading, and collaboration, we illustrate under each theme how lead firms or suppliers make their strategic decisions. These choices are not simply conditional on their positioning within the GVC governance, but they also reflect individual firm strategies that can be made in the context of external GVC structures.

5.2 | Interplay between firm-level actions and macro-level GVC policy

The second insight arising from our interdisciplinary synthesis is the interplay between firm-level actions and macro-level GVC policy directions. The complexity of cross-border activities has been instrumental in making the GVC concept a focal point in economic and social development policy agendas (Mayer & Gereffi, 2019). Nonetheless, GVC participation does not automatically generate development benefits for all countries alike. A country's success (or failure) in GVC participation depends on a range of factors, from macro-economic foundations of the country to the micro-level of firm resources and capabilities in each industry (Stolzenberg, Taglioni, & Winker, 2019). Yet, GVC policy often overlooks these differences in firm dynamics and approach decision making on GVC policy as if it was a one-size-fits-all panacea. For example, Taglioni and Winkler (2016) classified a country's position in GVCs based on the macro-level trade data and the stage of GVC participation.

Our typology has already indicated how differences in firm strategy and actions may shape its participation in GVCs. Effective policy decisions should therefore take into consideration how the diverse range of firm-level actions bears consequences on other stakeholders in the value chain of global industries. In addition, the four themes discussed in this paper can be used as guidelines for policy making under different scenarios. Policies that are geared toward MNEs looking for production cost minimization may not be the same for policies to promote economic and social upgrading. Being aware of firm actions that are driven by different mechanisms of GVC participation could add nuances to macro-level policy decisions.

5.3 | The way forward

The framework we have outlined, and the articles contained in this special issue, highlight fruitful research themes at the intersection of the global strategy and GVC literatures. It is worth noting that discussions within the international business literature of the links between the global strategies of MNEs and the supply chains associated with GVCs go back at least 25 years. Levy (1995) analyzed the management implications of the distinction between demand-driven disruptions and production-driven disruptions on supply-chains, arguing that the former were more important long-term sources of supply-chain instability, whose costs took the form of expedited shipping, higher inventories and lower demand fulfillment.

The research issues and challenges of the current era are quite different than those of the mid-1990s. First, the acceleration of the globalization of production has moved the study of MNEs from company-specific decisions about the location and control of their international operations (Mudambi, 2008) to a situation where GVCs have become solidly entrenched as the backbone and nerve center of the global economy (Cattaneo et al., 2010; UNCTAD, 2013). In

the context of COVID-19, the main debate has shifted from *whether* to have GVCs to *how* they should be organized to prepare for inevitable future shocks—that is, whether the global optimization strategy of MNEs to minimize costs, reduce inventory, and boost asset utilization has made today's supply chains more vulnerable to disruptions from events like the coronavirus pandemic or the probable longer-term disruptions of climate change. Even within establishment business publications like the *Financial Times*, there is spirited controversy about the merits of shifting from just-in-time to just-in-case business models, and whether “antifragile” supply chains can be created that go “beyond resilience and robustness” so they can adapt to, or even thrive on, disorder (Financial Times, 2020; Powell, 2020).

However, the political setting for these debates reflects broad anti-globalization sentiments and the surge of populist economic nationalism not just in the United States and Europe, but increasingly in Asia and other developing regions of the world. In the US context, the rhetoric has clearly swung in a strongly protectionist and anti-China direction. The US Trade Representative Robert Lighthizer (2020) claims “the era of offshoring U.S. jobs is over” and declared the US decision in 2001 to allow China to join the WTO and establish normal trading relations with the rest of the world as an egregious error.

These recent events do not provide definitive answers to the emerging research agenda confronted by international business, globalization and development scholars. However, they help to illustrate how current research questions ought to be framed. The global strategies of MNEs should be situated within the evolving structure of GVCs and the supply chains that many MNEs lead and orchestrate. In the current era of economic nationalism, trade wars and protectionism, the role of national states in leading economies like the United States and China is increasingly assertive, and it is appropriate to assess whether supply-chain bottlenecks and shortages are created by market failures or policy failures.

We must be aware, however, that business-government relationships and agreements forged in moments of crisis, like the COVID-19 pandemic, are not necessarily sustainable or stable solutions in a post-crisis environment. As always, we need to combine good theory, probing and thorough empirical analysis, and a comparative research orientation to generate findings relevant to academic, policy-oriented and practitioner audiences alike. We hope that the interdisciplinary synthesis presented in this paper can provide an analytical roadmap for future studies to incorporate how changes and disruptions in the global economy affect the symbiotic relationships between GVC and firm strategy.

REFERENCES

- Alvstam, C. G., Ivarsson, I., & Petersen, B. (2020). Are multinationals and governments from emerging economies configuring global value chains in new ways? *International Journal of Emerging Markets*, 15(1), 111–130.
- Anner, M. (2020). Abandoned? The impact of COVID-19 on workers and businesses at the bottom of global garment supply chains. March 27. Penn State Center for Global Workers' Rights, in association with the Worker Rights Consortium. Retrieved from: <https://www.workersrights.org/wp-content/uploads/2020/03/Abandoned-Penn-State-WRC-Report-March-27-2020.pdf>.
- Bair, J. (Ed.). (2009). *Frontiers of commodity chain research*. Stanford, CA: Stanford University Press.
- Barrientos, S. (2019). *Gender and work in global value chains: Capturing the gains?* Cambridge, UK: Cambridge University Press.
- Barrientos, S., Gereffi, G., & Rossi, A. (2011). Economic and social upgrading in global production networks: A new paradigm for a changing world. *International Labour Review*, 150(3–4), 319–340.
- Bartlett, C. A., & Ghoshal, S. (1986). Tap your subsidiaries for global reach. *Harvard Business Review*, 14(6), 87–94.

- Bartlett, C. A., & Ghoshal, S. (1991). Global strategic management: Impact on the new frontiers of strategy research. *Strategic Management Journal*, 12(Summer), 5–16.
- Birkinshaw, J. (1997). Entrepreneurship in multinational corporations: The characteristics of subsidiary initiatives. *Strategic Management Journal*, 18(3), 207–229.
- Birkinshaw, J., & Hood, N. (1998). Multinational subsidiary evolution: Capability and charter change in foreign-owned subsidiary companies. *Academy of Management Review*, 23(4), 773–795.
- Brun, L., Gereffi, G., & Zahn, J. (2019). The 'lightness' of industry 4.0 lead firms: Implications for global value chains. In P. Bianchi, C. Ruiz Durán, & S. Labory (Eds.), *Transforming industrial policy for the digital age: Production, territories and structural change* (pp. 37–67). Cheltenham, UK: Edward Elgar.
- Buckley, P. J. (2009). The impact of the global factory on economic development. *Journal of World Business*, 44(2), 131–143.
- Buckley, P. J. (2011). International integration and coordination in the global factory. *Management International Review*, 22(3), 227–245.
- Buckley, P. J., & Casson, M. C. (1976). *The future of the multinational Enterprise*. London: MacMillan.
- Buckley, P. J., & Ghauri, P. N. (2004). Globalisation, economic geography and the strategy of multinational enterprises. *Journal of International Business Studies*, 35(3), 81–98.
- Buckley, P. J., & Strange, R. (2015). The governance of the global factory: Location and control of world economic activity. *Academy of Management Perspectives*, 29(2), 237–249.
- Campbell, K. M., & Doshi, R. (2020). The coronavirus could reshape global order: China is maneuvering for international leadership as the United States falters. *Foreign Affairs*. <https://www.foreignaffairs.com/articles/china/2020-03-18/coronavirus-could-reshape-global-order>
- Campling, L., & Havice, E. (2019). Bringing the environment into GVC analysis: Antecedents and advances. In S. Ponte, G. Gereffi, & G. Raj-Reichert (Eds.), *Handbook on global value chains* (pp. 214–227). Cheltenham, UK: Edward Elgar Publishing.
- Cattaneo, O., Gereffi, G., & Staritz, C. (Eds.). (2010). *Global value chains in a post-crisis world: A development perspective*. Washington, DC: The World Bank.
- Coe, N., & Yeung, H. W.-C. (2015). *Global production networks: Theorizing economic development in an interconnected world*. Oxford, UK: Oxford University Press.
- Coe, N., & Yeung, H. W.-C. (2019). Global production networks: Mapping recent conceptual developments. *Journal of Economic Geography*, 19(4), 775–801.
- Cuervo-Cazurra, A., Mudambi, R., & Pedersen, T. (2018). The boundaries of the firm in global strategy. *Global Strategy Journal*, 8, 211–219.
- Davis, B., & FitzGerald, D. (2020). U.S. pushing effort to develop 5G alternative to Huawei. *Wall Street Journal*.
- De Marchi, V., Di Maria, E., Golini, R., & Perri, A. (2020). Nurturing international business research through global value chains literature: A review and discussion of future research opportunities. *International Business Review*. In press. <https://doi.org/10.1016/j.ibusrev.2020.101708>
- De Marchi, V., Di Maria, E., Krishnan, A., & Ponte, S. (2019). Environmental upgrading in global value chains. In S. Ponte, G. Gereffi, & G. Raj-Reichert (Eds.), *Handbook on global value chains* (pp. 310–323). Cheltenham, UK: Edward Elgar Publishing.
- Dhanajan, C., & Parkhe, A. (2006). Orchestrating innovation networks. *Academy of Management Review*, 31(3), 659–669.
- Dindial, M., Clegg, J., & Voss, H. (2020). Between a rock and a hard place: A critique of economic upgrading in global value chains. *Global Strategy Journal* this issue.
- Emerson, R. M. (1962). Power-dependence relations. *American Sociological Review*, 27(1), 31–41.
- Farrell, H., & Newman, A. (2020). Will the coronavirus end globalization as we know it? *Foreign Affairs*. <https://www.foreignaffairs.com/articles/2020-03-16/will-coronavirus-end-globalization-we-know-it>
- Feinberg, S. E., & Gupta, A. K. (2009). MNC subsidiaries and country risk: Internalization as a safeguard against weak external institutions. *Academy of Management Journal*, 52(2), 381–399.
- Financial Times. (2020). Companies should shift from 'just in time' to 'just in case.' The Editorial Board, April 22. Retrieved from: <https://www.ft.com/content/606d1460-83c6-11ea-b555-37a289098206>.
- Fröbel, F., Heinrichs, J., & Kreye, O. (1980). *The new international division of labor*. Cambridge: Cambridge University Press.

- Gereffi, G. (1994). The organization of buyer-driven global commodity chains: How U.S. retailers shape overseas production networks. In G. Gereffi & M. Korzeniewicz (Eds.), *Commodity chains and global capitalism* (pp. 95–122). Westport, CT: Praeger.
- Gereffi, G. (1999). International trade and industrial upgrading in the apparel commodity chain. *Journal of International Economics*, 48(1), 37–70.
- Gereffi, G. (2014). Global value chains in a post-Washington consensus world. *Review of International Political Economy*, 21(1), 9–37.
- Gereffi, G. (2018). *Global value chains and development: Redefining the contours of 21st century capitalism*. Cambridge: Cambridge University Press.
- Gereffi, G. (2019a). Global value chains and international development policy: Bringing firms, networks and policy-engaged scholarship back in. *Journal of International Business Policy*, 2(3), 195–210.
- Gereffi, G. (2019b). Economic upgrading in global value chains. In S. Ponte, G. Gereffi, & G. Raj-Reichert (Eds.), *Handbook on global value chains* (pp. 240–254). Cheltenham, UK: Edward Elgar Publishing.
- Gereffi, G., Humphrey, J., & Sturgeon, T. (2005). The governance of global value chains. *Review of International Political Economy*, 12(1), 78–104.
- Gereffi, G., & Kaplinsky, R. (2001). Special issue on the value of value chains: Spreading the gains from globalisation. *IDS Bulletin*, (3), 32.
- Gereffi, G., & Korzeniewicz, M. (Eds.). (1994). *Commodity chains and global capitalism*. Westport, CT: Praeger.
- Ghoshal, S. (1987). Global strategy: An organizing framework. *Strategic Management Review*, 8, 425–440.
- Giuliani, E., Pietrobelli, C., & Rabelotti, R. (2005). Upgrading in global value chains: Lessons from Latin American clusters. *World Development*, 33(4), 549–573.
- Grunwald, J., & Flamm, K. (1985). *The global factory: Foreign assembly in international trade*. Washington, DC: Brookings Institution.
- Havice, E., & Campling, L. (2017). Where chain governance and environmental governance meet: Interfirm strategies in the canned tuna global value chains. *Economic Geography*, 93(3), 292–313.
- Hendersen, J., Dicken, P., Hess, M., Coe, N., & Yeung, H. W.-C. (2002). Global production networks and the analysis of economic development. *Review of International Political Economy*, 9(3), 436–464.
- Hennart, J. F. (1982). *A theory of multinational Enterprise*. Ann Arbor, MI: University of Michigan Press.
- Hernandez, V., & Pedersen, T. (2017). Global value chain configuration: A review and research agenda. *Business Research Quarterly*, 20, 137–150.
- Holm, U., & Pedersen, T. (Eds.). (2000). *The emergence and impact of MNC Centres of excellence*. London, UK: Palgrave Macmillan.
- Humphrey, J., & Schmitz, H. (2002). How does insertion in global value chains affect upgrading in industrial clusters? *Regional Studies*, 36(9), 1017–1027.
- Huutoniemi, K., Klein, J. T., Bruun, H., & Hukkinen, J. (2010). Analyzing interdisciplinarity: Typology and indicators. *Research Policy*, 39(1), 79–88.
- Hymer, S. H. (1976). *The international operations of National Firms: A study of direct foreign investment*. Cambridge, MA: MIT Press.
- Ivarsson, I., & Alvstam, C. G. (2005). The effect of spatial proximity on technology transfer from TNCs to local suppliers in developing countries: The case of AB Volvo in Asia and Latin America. *Economic Geography*, 81(1), 83–111.
- Ivarsson, I., & Alvstam, C. G. (2011). Upgrading in global value chains: A case study of technology-learning among IKEA suppliers in China and Southeast Asia. *Journal of Economic Geography*, 11(4), 731–752.
- Kano, L. (2018). Global value chain governance: A relational perspective. *Journal of International Business Studies*, 49(6), 684–705.
- Kano, L., Tsang, E. W. K., & Yeung, H. W.-C. (2020). Global value chains: A review of the multidisciplinary literature. *Journal of International Business Studies*, 51(1), 577–622.
- Kaplinsky, R. (2000). Globalisation and unequalisation: What can be learned from value chain analysis? *Journal of Development Studies*, 37(2), 117–146.
- Kaplinsky, R., Morris, M., & Readman, J. (2002). Understanding upgrading using value chain analysis. In *BAM 2002*. London, UK: BAM.
- Lall, S. (1992). Technological capabilities and industrialization. *World Development*, 20(2), 165–186.

- Lall, S. (2001). Competitiveness indices and developing countries: An economic evaluation of the global competitiveness report. *World Development*, 29(9), 1501–1525.
- Lechner, C., Lorenzoni, G., Guercini, S., & Gueguen, G. (2020). Supplier evolution in global value chains and the new brand game from an attention-based view. *Global Strategy Journal* this issue.
- Lee, J., & Gereffi, G. (2015). Global value chains, rising power firms, and economic and social upgrading. *Critical Perspectives on International Business*, 11(3/4), 319–339.
- Lee, J. Y., Jimenez, A., Yang, Y. S., & Song, Y. (2020). Political risk, internal versus global value chain knowledge, and subsidiary operational integration. *Global Strategy Journal* this issue.
- Lema, R., Pietrobelli, C., & Rabellotti, R. (2019). Innovation in global value chains. In S. Ponte, G. Gereffi, & G. Raj-Reichert (Eds.), *Handbook on global value chains* (pp. 370–384). Cheltenham, UK: Edward Elgar Publishing.
- Levy, D. L. (1995). International sourcing and supply chain stability. *Journal of International Business Studies*, 26(2), 343–360.
- Li, F., Frederick, S., & Gereffi, G. (2019). E-commerce and industrial upgrading in the Chinese apparel value chain. *Journal of Contemporary Asia*, 49(1), 24–53.
- Lighthizer, R. E. (2020). *The era of offshoring U.S. jobs is over*. New York Times, May 11.
- Lorezen, M., Mudambi, R., & Schotter, A. P. J. (2020). International connectedness and local disconnectedness: MNE strategy, city regions and disruption. *Journal of International Business Studies* forthcoming.
- Mayer, F., & Gereffi, G. (2010). Regulation and economic globalization: Prospects and limits of private governance. *Business and Politics*, 12(3), 1–25.
- Mayer, F., & Gereffi, G. (2019). International development organizations and global value chains. In S. Ponte, G. Gereffi, & G. Raj-Reichert (Eds.), *Handbook on global value chains* (pp. 570–584). Cheltenham, UK: Edward Elgar Publishing.
- McDermott, G. A., & Corredoir, R. A. (2010). Network composition, collaborative ties, and upgrading in emerging-market firms: Lessons from the Argentine autoparts sector. *Journal of International Business Studies*, 41, 308–329.
- McWilliam, S. E., Kim, J. E., Mudambi, R., & Nielsen, B. B. (2020). Global value chain governance: Intersections with international business. *Journal of World Business*, 55(4), 1–18.
- Medical News Today. (2020). *COVID-19 global impact: How the coronavirus is affecting the world*, Brighton, East Sussex: Healthline Media. <https://www.medicalnewstoday.com/articles/covid-19-global-impact-how-the-coronavirus-is-affecting-the-world>.
- Meyer, K. E., Li, C., & Schotter, A. P. J. (2020). Managing the MNE subsidiary: Advancing a multi-level and dynamic research agenda. *Journal of International Business Studies*, 51, 538–576.
- Morrison, A., Pietrobelli, C., & Rabellotti, R. (2008). Global value chains and technological capabilities: A framework to study learning and innovation in developing countries. *Oxford Development Studies*, 36(1), 39–58.
- Mudambi, R. (2008). Location, control and innovation in knowledge-intensive industries. *Journal of Economic Geography*, 8(5), 699–725.
- Mudambi, R., & Navarra, P. (2004). Is knowledge power? Knowledge flows, subsidiary power, and rent-seeking within MNCs. *Journal of International Business Studies*, 35, 385–406.
- Mudambi, R., Pedersen, T., & Andersson, U. (2014). How subsidiaries gain power in multinational corporations. *Journal of World Business*, 49, 101–113.
- Mudambi, S. M., & Tallman, S. (2010). Make, buy or ally? Theoretical perspectives on knowledge process outsourcing through alliances. *Journal of Management Studies*, 47(s2), 1434–1456.
- Murphree, M., & Breznitz, D. (2020). Collaborative public spaces and upgrading through global value chains: The case of Dongguan, China. *Global Strategy Journal* this issue.
- Nicas, J., Weise, K., & Isaac, M. (2019). *How each big tech company may be targeted by regulators*. New York Times, September 8.
- O'Leary, L. (2020). *The modern supply chain is snapping*. The Atlantic, March 26.
- O'Neil, S. K. (2020). How to pandemic-proof globalization: Redundancy, not re-shoring, is the key to supply-chain security. *Foreign Affairs*. <https://www.foreignaffairs.com/articles/2020-04-01/how-pandemic-proof-globalization>
- Ocasio, W. (1997). Towards an attention-based view of the firm. *Strategic Management Journal*, 18(S1), 187–206.

- Ostry, S., & Nelson, R. R. (2000). *Techno-nationalism and techno-globalism: Conflict and cooperation*. Washington, DC: Brookings Institution Press.
- Palpacuer, F. (2019). Contestation and activism in global value chains. In S. Ponte, G. Gereffi, & G. Raj-Reichert (Eds.), *Handbook on global value chains* (pp. 199–213). Cheltenham, UK: Edward Elgar Publishing.
- Pananond, P. (2013). Where do we go from here? Globalizing subsidiaries moving up the value chain. *Journal of International Management*, 19, 207–219.
- Pananond, P. (2016). From servant to master: Power repositioning of emerging-market companies in global value chains. *Asian Business & Management*, 15(4), 292–316.
- Pietrobelli, C., & Rabellotti, R. (2011). Global value chains meet innovation systems: Are there learning opportunities for developing countries. *World Development*, 39(7), 1261–1269.
- Pietrobelli, C., & Saliola, F. (2008). Power relationships along the value chain: Multinational firms, global buyers, and local suppliers' performance. *Cambridge Journal of Economics*, 32(6), 1–16.
- Ponte, S. (2019). Sustainability, global value chains and green capital accumulation. In S. Ponte, G. Gereffi, & G. Raj-Reichert (Eds.), *Handbook on global value chains* (pp. 228–239). Cheltenham, UK: Edward Elgar Publishing.
- Ponte, S., & Ewert, J. (2009). Which way is “up” in upgrading? Trajectories of change in the value chain for south African wine. *World Development*, 37(10), 1637–1650.
- Ponte, S., Sturgeon, T. J., & Dallas, M. P. (2019). Governance and power in global value chains. In S. Ponte, G. Gereffi, & G. Raj-Reichert (Eds.), *Handbook on global value chains* (pp. 120–137). Cheltenham, UK: Edward Elgar Publishing.
- Powell, J. (2020). *Pandemics and the question of resilience*. Financial Times, April 23. Retrieved from: <https://ftalphaville.ft.com/2020/04/22/1587560215000/Pandemics-and-the-question-of-resilience/>.
- Project Syndicate. (2020). *De-globalization's dangers*. May 24. Retrieved from: <https://www.project-syndicate.org/bigpicture/deglobalization-s-dangers>.
- Ryan, P., Buciuni, G., Andersson, U., & Giblin, M. (2020). Subsidiary upgrading and global value chain governance in the multinational enterprise. *Global Strategy Journal* this issue.
- Sako, M., & Zylberberg, E. (2019). Firm-level strategy and global value chains. In S. Ponte, G. Gereffi, & G. Raj-Reichert (Eds.), *Handbook on global value chains* (pp. 340–353). Cheltenham, UK: Edward Elgar Publishing.
- Shih, W. (2020). Is it time to rethink globalized supply chains? MIT Sloan Management Review, March 19. Retrieved from: <https://sloanreview.mit.edu/article/is-it-time-to-rethink-globalized-supply-chains/>.
- Sinkovics, N., Sinkovics, R. R., Hoque, S. F., & Alford, M. (2018). The use of global value chain/global production network related literature in international business research: Investigating the nature and degree of integration. In G. Cook, J. Johns, F. McDonald, J. Beaverstock, & N. Pandit (Eds.), *The Routledge companion to the geography of international business* (pp. 258–296). London: Routledge.
- Stallkamp, M., & Schotter, A. P. J. (2020). Platforms without borders: The international strategies of digital platform firms. *Global Strategy Journal*. <https://doi.org/10.1002/gsj.1336>
- Staritz, C., & Whitfield, L. (2019). Local firm-level learning and capability building in global value chains. In S. Ponte, G. Gereffi, & G. Raj-Reichert (Eds.), *Handbook on global value chains* (pp. 385–402). Cheltenham, UK: Edward Elgar Publishing.
- Stolzenberg, V., Taglioni, D., & Winker, D. (2019). Economic upgrading through global value chain participation: Which policies increase the value-added gain? In S. Ponte, G. Gereffi, & G. Raj-Reichert (Eds.), *Handbook on global value chains* (pp. 483–505). Cheltenham, UK: Edward Elgar Publishing.
- Sturgeon, T. J. (2020). Upgrading strategies for the digital economy. *Global Strategy Journal*. <https://doi.org/10.1002/gsj.1364>
- Taglioni, D., & Winkler, D. (2016). *Making global value chains work for development*. Washington, DC: World Bank.
- Tallman, S. (1991). Strategic management and resource-based strategies among MNEs in a host market. *Strategic Management Journal*, 12(Summer), 69–82.
- Tallman, S., & Pedersen, T. (2011). The launch of global strategy journal: Comments from the co-editors. *Global Strategy Journal*, 1(1), 1–5.
- Tallman, S., & Pedersen, T. (2015). What is international strategy research and what is not? *Global Strategy Journal*, 5(4), 273–277.

- UNCTAD. (1993). *World investment report, 1993—Transnational corporations and integrated international production*. Geneva: UNCTAD.
- UNCTAD. (2011). *World investment report, 2011—Non-equity modes of international production and development*. Geneva: UNCTAD.
- UNCTAD. (2013). *World investment report, 2013—Global value chains: Investment and trade for development*. Geneva: UNCTAD.
- UNCTAD. (2017). *World investment report, 2017—Investment and the digital economy*. Geneva: UNCTAD.
- UNCTAD (United Nations Conference for Trade and Development). (1992). *World investment report, 1992—Transnational corporations as Engines of Growth*. Geneva: UNCTAD.
- Werner, M., & Bair, J. (2019). Global value chains and uneven development: A disarticulation perspective. In S. Ponte, G. Gereffi, & G. Raj-Reichert (Eds.), *Handbook on global value chains* (pp. 183–198). Cheltenham, UK: Edward Elgar Publishing.
- WTO (World Trade Organization). (2020). *Export prohibitions and restrictions*. April 23. Retrieved from: https://www.wto.org/english/tratop_e/covid19_e/export_prohibitions_report_e.pdf
- Wu, X., & Gereffi, G. (2018). *Amazon and Alibaba: Internet governance, business models, and internationalization strategies*. In R. Van Tulder, A. Verbeke, & L. Piscitello (Eds.), *International business in the information and digital age* (Vol. 13, pp. 327–356). Progress in international business research). Bingley, UK: Emerald Publishing.
- Yamin, M., & Sinkovics, R. R. (2015). Rising power firms: The developmental promises and challenges—An introduction. *Critical Perspectives on International Business*, 11(3/4), 210–215.
- Yeung, H. W.-C. (2016). *Strategic coupling: East Asian industrial transformation in the new global economy*. Ithaca: Cornell University Press.

How to cite this article: Pananond P, Gereffi G, Pedersen T. An integrative typology of global strategy and global value chains: The management and organization of cross-border activities. *Global Strategy Journal*. 2020;10:421–443. <https://doi.org/10.1002/gsj.1388>