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PERSPECTIVE-REVIEW

Transnational Corporations, Global Production Networks, and Urban and Regional Development: A Geographer's Perspective on *Multinational Enterprises and the Global Economy*

HENRY WAI-CHUNG YEUNG

MULTINATIONAL ENTERPRISES AND THE GLOBAL ECONOMY, 2nd edition
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ABSTRACT This paper offers an economic-geographical interpretation of the role of transnational corporations (TNCs) in urban and regional development that is grounded in Dunning and Lundan's (2008) *Multinational Enterprises and the Global Economy*. I argue that TNCs and their activity are indisputably one of the keys to understanding urban and regional development in today's globalizing world economy. To support this perspective, I will deploy the recently developed analytical framework of global production networks (GPNs) to unpack the complex and mutually dependent relationships between TNCs and urban and regional development. The paper first provides a critique of several recent influential theories of urban and regional growth and identifies the omitted components in such important actors as TNCs. It then offers an analysis of TNCs as key agents of urban and regional development on the basis of ideas on TNC strategies, networks, and regional institutions expressed in *Multinational Enterprises*. Finally, I draw upon a relational view of TNCs in GPNs to illustrate how urban and regional development is increasingly a "globalizing" phenomenon. Situated in recent work in economic geography, I elaborate on the concept of strategic coupling as an interfacing mechanism bringing together TNCs and development at the urban and regional scales.

Henry Wai-chung Yeung is a professor of Economic Geography at the Department of Geography, National University of Singapore. He is an editor of Economic Geography, Environment and Planning A, *and* Review of International Political Economy*, and is a member of the editorial boards of numerous international journals, including* Growth and Change*. His e-mail address is: HenryYeung@nus.edu.sg.* *The author wishes to extend his thanks to Tom Leinbach for his kind invitation to contribute this paper. The usual disclaimer applies.*

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Introduction

On numerous occasions, I have wondered what the field of international business would be like without such intellectual giants as the late John H. Dunning.[1] His five-decade-long sustained contributions to the study of transnational corporations (TNCs)[2] have undoubtedly earned him a place as *the* most productive scholar in the field (see also Dunning 2008). This second edition of his 1993 text of the same title, *Multinational Enterprises and the Global Economy* (hereafter *Multinational Enterprises*), represents another milestone in the international business literature. When the first edition was published in the early 1990s (Dunning 1993), the literature on international business was quite well developed but remained marginalized in mainstream economics and management. At that time, international economics and strategic management dominated the understanding of TNC activities such as foreign direct investment (FDI), organizational behavior, human resource management, and technology management. However, by the current decade, the field of international business has not only gained substantial legitimacy in business schools throughout the world but also attracted a great deal of interest from scholars in adjacent social sciences, such as urban and regional studies, economic sociology, international political economy, and economic geography (see also Rugman and Brewer 2001). Coauthored with Sarianna Lundan, Dunning has put together a *tour de force* in this substantially revised and expanded edition of *Multinational Enterprises* that incorporates and reviews systematically the widest range and depth of theoretical and empirical studies I have ever read.

In reviewing this *magnum opus* by Dunning and Lundan (2008) for *Growth and Change*, I have chosen to focus on the journal's core mission of understanding all aspects of urban and regional development and policy making. My strategy is to develop a *geographical perspective* in relation to this authoritative guide to TNC activities in the global economy. Instead of taking on *Multinational Enterprises* on a chapter-by-chapter basis, this perspective paper seeks to identify the key findings in this 920-page text on the role of TNCs in urban and regional development. In doing so, I quickly came to the realization that Dunning and Lundan are relatively less preoccupied with this important issue of unpacking the relationships between TNC activity and urban and regional development. Indeed, *Multinational Enterprises* focuses a great deal on the facts, theory, and history of TNCs (Part I) and the internal organization of TNCs (Part II). Both parts take up almost half of the 21 chapters. In Part III, the authors examined the impact of TNC activity in all kinds of arenas ranging from economic growth and technology to employment, finance, trade, and market structures. In almost all of these chapters, the spatial scale of analysis is confined to the nation-state, i.e., national scale. The spatiality and impact of TNC activity on development in cities and/or regions receives explicit analytical attention only in Chapter 16.4 on the clustering of economic activity. This is a missed opportunity even though Dunning (1998:62) himself pointed out some time ago in an influential article that location is a neglected factor in the study of TNCs:

> The idea of a region as a spatial unit which internalizes distance-related transaction costs which otherwise would fall upon its constituent firms is an interesting notion worth pursuing by international business scholars. For, like a firm, the strategies pursued by a region to provide a set of unique, non-mobile and non-imitatable locational advantages for its firms may well determine its own competitive advantages relative to those of other regions. At the same time, regions, like firms, may decline as well as prosper; but our knowledge about the focus leading to the spatial dis-agglomeration of related activities is woefully inadequate.

In light of this unintended mismatch between the key issues examined in *Multinational Enterprises* and the primary concerns of readers of this journal, I have repositioned this perspective paper on the basis of two key arguments. First, my geographical perspective argues strongly that TNCs and their activity are indisputably one of the keys to understanding urban and regional development in today's globalizing world economy. To support this perspective, I will deploy the recently developed analytical framework of *global production networks* (GPNs) to unravel the complex and mutually dependent relationships between TNCs and urban and regional development. To begin, I problematize in the next section some influential recent theories of urban and regional growth and identify the missing components related to the role of TNCs in theorizing urban and regional development. The third section then offers an analysis of TNCs as key agents of development in cities and regions throughout the world. This refocused analysis points to my second argument that *Multinational Enterprises* is such a masterpiece on TNCs and their global activity that any analysis of TNCs in urban and regional development must necessarily draw upon it as a key resource reference. Not surprisingly, my analysis will tap heavily into the understanding of TNC strategies, networks, and regional institutions in *Multinational Enterprises*.

In the penultimate section of this perspective paper, I draw upon a relational view of TNCs in GPNs that enables us to understand better how urban and regional development is increasingly a "globalizing" phenomenon (see also Coe et al. 2004; Yeung 2005a, 2009a). Here, I examine the implications of changing strategies, motives, and organizational forms of TNCs for urban and regional development. More specifically, I elaborate on the concept of *strategic coupling* as an interfacing mechanism bringing together TNCs and development at the urban and regional scales. This theorization of TNCs in GPNs will be grounded in recent economic-geographical work on TNCs and urban and regional development.

Finally, the concluding section offers some concrete implications for theory development in the field.

Problematizing Urban and Regional Development: The Missing Actors

Before we turn to the information in *Multinational Enterprises* to find out more about TNCs as movers and shapers of the global economy (see also Dicken 2007), it is useful to revisit our current understanding of urban and regional development, an important issue that has long occupied the research interests of urban and development economists. During the past two decades, several influential economic theories have been developed to explain economies of concentration at the urban and regional scales. On the one hand, groundbreaking work in urban economics shows that knowledge spillovers from technological change often occur between different industries, and this process is particularly effective in urban agglomerations (Glaeser et al. 1992; Storper and Venables 2004). As interpersonal communication and local competition tend to be stronger in cities, especially those with a greater degree of internal differentiation, industries in these cities and their associated employment will benefit from greater economies of scale and scope that contribute directly to urban growth and change. On the other hand, trade and growth theories developed in development economics by Krugman (1980, 1981, 1991) and Romer (1986, 1990, 1994) have consistently argued that greater economies of scale can be achieved via regional specialization in economic activity and interregional trade. More importantly, these theorists point to the dynamic condition that this return to scale can be increasing due to decreasing transport costs, continuous technological change, and the reuse, spillovers, and improvement of knowledge in different industries (Combes, Mayer, and Thisse 2008; Fujita and Krugman 2004; Fujita, Krugman, and Venables 1999). Other economic studies have found consistent empirical support for the localization of industries and knowledge spillovers in specific regions (Ellison and Glaeser 1997, 1999; Staber 1997; see also Leamer 2007).

These economic theories of urban and regional growth, however, are not unproblematic in their causal explanations and theoretical predispositions. In his recent paper, Storper (2009) argued that these economic theories of regional specialization and geographic concentration are inadequate in accounting for the important analytical nexus between the local and the global in today's globalizing world economy. As an economic geographer who has long argued for the importance of understanding regional economies as territorial ensembles in the global economy (Scott and Storper 2003; Storper 1992, 1997a, 2000; Storper and Salais 1997), he prefers a dynamic theorization of the complex relationship between geographic concentration and regional economic specialization through which local and global processes can be both separated and contextualized. Still, he raised a fundamental issue in theorizing regional difference and specificity. The above economic theories have not accounted well for the *sources* of economic-geographical specificity and difference, whether in technologies, knowledge, and institutions. They have mostly explained the existence of those agglomeration economies and positive externalities in places where knowledge has already been created.

So what accounts for the differences in the origin of knowledge in the first place? Storper (2009:8) lamented that "[e]ven when we take into account the enormous progress in economic geography and regional development studies of the past quarter century, we still have great difficulty analytically deciphering such differences [in origins and sources], much less instructing policy-makers in how to imitate them in practice. Something must be missing." He called this missing element in understanding differences in urban and regional economies as the "dark matter" (9) and went on to address the problem with a theory of context in the economy. Through his geographic theory of contexts, he sought to account for behavioral differences in actors whose interactions are contingent on the geographies of contexts (see also Gertler 2003; Sunley 1996). His theory therefore emphasizes significantly "the importance of the geographic scales of such interactions because the string of frames and cues and processes of emulation that emerge in specific geographic contexts (local and faraway) logically have an influence on the making of meaning and future choices" (Storper 2009:13).

This paper concurs with Storper's (2009) critical assessment that something is missing in the existing trade and growth theories and their causal explanations of urban and regional development (see also critiques in Fowler 2007; Martin 1999; Martin and Sunley 1996, 1998, 2006; Plummer and Sheppard 2006). But my quibble is not with the missing context, but rather with the *missing actors* in their analysis of urban and regional development. Storper (2009:8) was quite right that "[m]ainstream economics tends to claim that actors and decision-making processes are the same everywhere but that preferences, endowments, and factor costs are different." I believe we need to take much further this actor-centric view of urban and regional development. We not only need to identify the key actors involved in engendering the growth dynamics of cities and regions. More importantly, we must analyze and account for their highly differentiated power relations and collective action. In doing so, our analysis can go beyond the excessive theoretical focus on abstract mechanisms and economic effects so commonly found in the above trade and growth theories. It also helps us identify the key actors and their translocal role in connecting the growth dynamics in different cities and regions, a crucial dimension of regional development often underestimated in the existing "new regionalism" literature (see Harrison 2007; Howells 2005; Hudson 2007a,b; Lagendijk 2006, 2007; Scott and Storper 2003).

This reappraisal for giving greater analytical prominence to the Prince of Denmark in the discussion of *Hamlet* is critical to our understanding of why certain cities and regions are better positioned to take advantage of increasing returns of scale in today's globalizing knowledge economy. Following Markusen's (1994, 1999, 2004) argument for studying regions through firm activity, this perspective proposes that one of the key actors in urban and regional development is the TNC. This "Prince of Denmark," by virtue of its extensive transnational engagements, should not be conceived as merely a passive agent in economic change who is responding to the various economies of agglomeration prescribed in the concept of increasing returns to scale and regional equilibrium models. Instead, the TNC should be viewed as an *active* and *dynamic* agent creating and sustaining such agglomeration tendencies at all kinds of spatial scales, from the urban to the regional and the global. It is to this analytical challenge that Dunning and Lundan's (2008) *Multinational Enterprises* makes its most contributions (see also Buckley and Ghauri 2004; McCann and Mudambi 2004, 2005; Rugman 2005).

TNCs as Key Agents of Urban and Regional Development

To understand the role of TNCs in urban and regional development, it is clearly imperative for us to know a little more about TNC as a modern institution of capitalism. This necessarily brings us back to economic studies of the *raison d'être* of the firm. Since Coase's (1937) work, the theory of the firm has become the cornerstone of the new institutional economics that seeks to theorize the firm as a governance structure to overcome market failures (Williamson 1964, 1985, 2002). In *Multinational Enterprises*, Dunning and Lundan (2008) further described the internalization school of TNCs associated with such influential scholars as Peter Buckley, Mark Casson, Jean-Francois Hennart, Alan Rugman, and David Teece. In this transaction cost-inspired view, the TNC is "an organisational hierarchy which internalises the market for cross-border intermediate products" (81). What is missing in this economistic conception of the firm are the wider social and institutional contexts in which the firm is situated. To this effect, the economic sociologist Granovetter (1985, 1991, 1995) has mounted one of the most consistent and powerful critiques of the theory of the firm in transaction costs economics. He argued that the Coasian understanding of the firm has repeatedly undersocialized the firm that should be viewed as embedded in ongoing social relations. The firm should therefore be conceptualized as networks of embedded social relations (see also Dicken and Thrift 1992; Maskell 2001; Taylor and Asheim 2001; Yeung 2005b).

Interestingly, this effort in situating the firm and, by inference, the TNC in wider networks and institutions, has been strongly advocated in *Multinational Enterprises*. In fact, Dunning and Lundan (2008) argued for the importance of bringing in networks and institutions in the revised eclectic framework of TNC activity. To them, “the impact of institutions on the determinants and effects of MNE activity is a recurring theme in the new edition” (xxiii). And yet they eschewed Williamson’s (1985, 2000) version of the new institutional economics because it “primarily takes on an organisational/economic view on institutions which, we believe, is narrower, and does not deal with motivational and belief system issues” (129). What became incorporated in their eclectic framework was the kind of institutional economics advanced by North (1990, 2005). In doing so, they explicitly acknowledged the importance of institutions and their enforcement mechanisms as setting the “rules of the game” that such economic organizations as the TNC must follow “in pursuit of their own learning and resource allocative goals” (129). This analytical emphasis on institutions brings us back to the earlier discussion of the “dark matter” in economic geography and regional development studies. It opens up a new horizon for understanding TNCs not only as a governance structure constituted by a “nexus of treaties” (Aoki, Gustafsson, and Williamson 1990) but also as a capitalist agent firmly embedded in different institutional configurations.

The most significant issue in this institutionalist view of the TNC is that these institutional configurations vary dramatically in different temporal and geographic contexts. And if we extrapolate further on the basis of Storper’s (2009) argument, then differentiated contexts can (re)shape the origin of institutional configurations that in turn influence the determinants and impacts of TNC activity on urban and regional development. In other words, my argument for viewing TNCs as a key agent in urban and regional development should not be conflated with the narrower and economistic conception of TNCs in transaction costs economics as stand-alone and autonomous economic agents whose decision-making and corporate behavior are the same everywhere. Rather, as strongly evident in arguments well elaborated in *Multinational Enterprises*, institutional reasoning can help us understand why and how the TNC, by virtue of its embeddedness in highly differentiated institutional configurations, can play a crucial role in mediating urban and regional development. To Dunning and Lundan (2008:131), “[t]his kind of reasoning would embrace the rules and norms that govern relationships within the MNE, and those between the MNE and its external stakeholders, including its suppliers, customers and community groups.” They therefore innovatively incorporated this institutionalist reasoning in accounting for the ownership-specific advantages (Oi) of the TNC.

How then do we take this institutionalist view of the TNC in *Multinational Enterprises* further in the analysis of urban and regional development? This project, I believe, requires us to go beyond the book's twin interest in differentiating the motives of TNCs in FDI and in analyzing their impact on home and host countries. On the first issue, let us examine a passage from *Multinational Enterprises*.

> [T]he nature of FDI undertaken by MNEs is extremely varied. Because of this, both the motives for and the determinants of international production will differ. The parameters influencing a Finnish pulp and paper company investing in a mill in Indonesia are unlikely to be the same as those influencing the purchase of a French food processing company by a Canadian MNE. Similarly, those determining the pattern of rationalised production in the EU by a large and geographically diversified US motor vehicle MNE will be quite different from an investment by a Korean construction management company in Saudi Arabia, a Chinese state-owned oil company seeking new reserves in the [*sic*] Sudan, or a UK bank [opening] a call centre facility in India. (81)

There is no doubt that the above-nuanced understanding of differentiated TNC motives is important, particularly in light of the undifferentiated treatment of the firm as an actor in mainstream economics (see also Yeung 2005b). Still, there is a missed opportunity to bring this actor-specific differentiation to bear on the dynamic processes of urban and regional development. To put it more bluntly, why do TNC motives matter if we are not yet told their connections with the origin and host cities and/or regions? Are there specific contexts, institutional or otherwise, in these cities and/or regions that compel TNCs to act in particular ways and manners? How might these different contexts interact with TNC behavior to (re)constitute new opportunities and threats to sustainable development in these cities and regions? To answer satisfactorily these questions, we need a grounded perspective that puts squarely TNCs in their urban and regional contexts—an analytical challenge less well taken up in *Multinational Enterprises* (see the next section).

Second, the primary focus on the *national* scale in *Multinational Enterprises* further exacerbates the problem of missing geographies at the urban and regional scales. This problem of *methodological nationalism* is common in most economic writings when economic processes and institutional structures are assumed to be homogenous and stable within national territories. While geography has recently received accentuated attention in international business studies, most of these studies remain firmly locked into the quest for understanding the *location choice* of TNCs at the national scale and the *macro-economic* dimensions of the changing international allocation of economic activity (e.g., Brush, Maritan, and Karnani

1999; Buckley, Devinney, and Louviere 2007; Buckley and Ghauri 2004; Chen and Chen 1998; Dunning 1998, 2009; Dunning and Gugler 2008; McCann and Mudambi 2004, 2005; Mucchielli and Mayer 2004; Mudambi 1995, 2008; Nachum 2000; Pantzalis 2001; Pontes and Parr 2005; Zaheer and Manrakhan 2001).[3] Even the latest thinking by Dunning (2009:30; emphasis omitted), shortly before his death, continues to perpetuate this view of "the dynamics of the locational decisions of MNEs, which, to my mind, remains the central core of IB theory and that of the eclectic paradigm." Not surprisingly, this location-centric view of TNC behavior and institutional embeddedness at the national scale is strongly featured in *Multinational Enterprises*.

> The institutional elements brought along by the MNE may affect the host country in ways that can be beneficial or detrimental, but without explicitly identifying and evaluating this component of the bundle transferred by the MNE, it is unlikely that much attention would be paid to such effects. Consequently, we believe that gaining an understanding of the institutional dimension of MNE activity will not only lead to an improved analysis of the MNE *qua* MNE, but it will also better enable us to understand how MNE activity influences national-level institutions, and by doing so, the economic and social goals of countries. (124)

This form of methodological nationalism not only leads to a fixed and uncritical notion of the national scale as the primary and *natural* unit of investigating into TNC activity but also underestimates seriously the substantial heterogeneity of cities and regions within specific countries. Put simply, cities and regions differ significantly even within the *same* country; TNC activity in these cities and regions is also necessarily different. This intercity and interregional pattern of TNC activity and FDI behavior poses as one of the most significant lacunae in *Multinational Enterprises* and the existing research in international business studies. Throughout *Multinational Enterprises*, there is an occasional discussion of other spatial units such as the impact of TNCs on employment in export processing zones (456–458; cf. Lee 1999) and the clustering of economic activity (593–603). Even though Dunning (1998:58) noted over a decade ago that "[t]he extent to which MNEs promote, or gravitate to, spatial clusters within a country or region is an under-researched area," this kind of spatially differentiated discussion is mostly limited and modest.

To recapitulate, there is a strong case for us to put TNCs in their *urban and regional* contexts. Three conceptual possibilities have already been raised in *Multinational Enterprises*, even though they have not been thoroughly explored. One such possibility is related to the nature and organization of *TNC networks* (see also Ghoshal and Bartlett 1990; Gulati 2007; Yeung 2005b, 2008a). As international production is becoming increasingly more prevalent in the global economy, TNC activity is organized on the basis of networks rather than arm's-length transactions. Through such a heterarchical form of economic organization, the organizational boundary of each TNC continues to expand and more firms and other institutions are enrolled into TNC networks.

> Much of economic value today is a return to the way in which O-specific advantages of firms are created and deployed, rather than a return to capital in the sense of a return to the owners of capital equipment and property. The downsizing of the physical assets owned by firms, including productive assets and real estate, and the corresponding increase in contractual outsourcing have changed the boundaries of the firm. Only those activities in which the firm possesses unique skills and capabilities are likely to be internalised. For other value-added and transactional activities, the increasing modularisation of design, and the commoditisation of the modular components, have led, and are leading, to a dramatic increase in the number of firms capable of providing such intermediate inputs at low cost and according to high specifications. (125–126)

Mediated by firm activity, this enrolment process inadvertently involves the cities and regions in which these other firms and institutions are grounded. As such, the globalization of TNC networks represents a powerful impetus to the kind of economic specialization in cities and regions described in the earlier review of existing trade and growth theories.

A second and related possibility raised in *Multinational Enterprises* points to the role of *regional institutions* and their interaction with TNCs. As noted earlier, the book offers a North-inspired discussion of institutions as Oi in the eclectic framework. Dunning and Lundan (2008) argued that institutional foundations of TNC behavior could be found in its country of origin and/or region of origin. They asserted that "a firm with strong institutional assets (Oi) is likely to have a better sense of what is and what is not consistent with its own resources, capabilities and social objectives" (133). More importantly, they gave serious consideration to the role of (regional) context in influencing a TNC's Oi.

> The composition and strength of the Oi advantages of firms is likely to be strongly contextual. In particular, it is likely to reflect the character of the macro-institutional infrastructure of the country of countries in which they operate. The extent and ways in which the internal incentive structure of MNEs, or potential MNEs, of a particular nationality take on board these institutions, and adapt them to their own particular requirements, is likely to be an important ingredient of the content and quality of former's resources and capabilities. (134)

In other words, certain FDI activity is driven by access to firm- and/or country-specific institutions defined as different economic structures, business, and social cultures. This analytical task is critical in an era of accelerated globalization. Like Storper (2009), Dunning and Lundan (2008) believed in the powerful influence of globalization in reshaping the context of institutional change and TNC evolution. To them, "globalisation is compelling a re-examination of both the formal and informal institutional infrastructure of different home and host economies not least because its form and content is becoming an L advantage (or disadvantage) in its own right" (138). These theoretical pointers in *Multinational Enterprises* illustrate the mutually constitutive relationships between urban and regional institutions and TNC activity.

A third possibility for conceptual development draws our attention to the rise of *global production systems*. While the above two possibilities point to the rise of the network form of organizing international production and the role of regional institutions in embedding these networks, the emergence of GPNs opens up new and substantial challenges to urban and regional development. In fact, growth is no longer restricted to endogenous sources as previously stipulated in trade and growth theories. Cities and regions can plug into these global production systems that in turn sustain their growth efforts. As Dunning and Lundan (2008:490) noted, "[s]uch systems enable firms to structure and locate each part of their value chains more closely in line with the existing comparative resource and institution advantages of countries (e.g., in Asia and Latin America), while also allowing for the dynamic reconfiguration of these assets, depending on the role assigned to the affiliates, and their degree of integration with local firms."

One particularly well-known spatial formation facilitated by such global production systems is the emergence of new spaces of production. East Asia, for example, is one of the most obvious beneficiaries in this changing international division of labor spearheaded by TNCs. Despite the tendency toward economic specialization in cities argued by Glaeser et al. (1992), this dynamic reconfiguration of value-chain activity led by TNCs has enabled new cities and regions to emerge. Dunning and Lundan (2008:498) therefore postulated that "[g]eographically, the importance of clustering in knowledge-intensive activities is offset by a trend towards increasing outsourcing and the breaking up of the value chain, which has increased the options of firms to relocate specific manufacturing and service activities." Still, this process of spatial restructuring of economic activity does not necessarily lead to the demise of dominant clusters in different industries. As TNCs are becoming much more global in their outlook and organization, certain clusters seem to gain disproportionately more from economies of specialization on a *global* scale. To Dunning and Lundan (2008:538), "the increasing pattern of global specialisation implies that particular value-added activities may be highly concentrated or cluster on a national or regional level, while competition in final goods markets is being conducted by a relatively small number of large MNEs on a global level. This is particularly the case for R&D- and capital (scale)-intensive MNE activity, where the benefits from localised clustering are likely to be the most pronounced." Despite Martin and Sunley's (2003) critique of the literature on clusters as a chaotic concept, the clustering of economic activity in an age of TNCs seems to be more, not less, likely. Indeed, TNCs are found to be playing a highly positive role in engendering knowledge diffusion and circulation among different clusters at the urban and regional scales (Bathelt, Malmberg, and Maskell 2004; Birkinshaw 2000; Enright 2000; McCann and Mudambi 2005; Malmberg and Maskell 2006; Yeung, Liu, and Dicken 2006; cf. Phelps 2008).

To sum up, the above critical review of theories of urban and regional growth and theories of TNCs has established a *prima facie* case for bringing the two hitherto unrelated economic phenomena together in a common analytical framework. While the pages of *Multinational Enterprises* have given us many clues into the histories, strategies, and organization of TNCs as the central economic actor in the contemporary global economy, our understanding remains firmly locked into the national scale of analysis and therefore suffers from a form of methodological nationalism. To transcend this nation-centric understanding, we need to move our analytical lenses simultaneously up to the global scale and down to the regional and urban scales. As argued in Dicken et al. (2001), this scale-transcending approach to the global economy can be best accomplished through the concept of networks. This network-inspired approach, however, goes far beyond the focus on TNCs as intra- and interorganizational networks in *Multinational Enterprises* (see also Ghoshal and Bartlett 1990; Gulati 2007; McCann and Mudambi 2005). More broadly, this network approach calls for the reconceptualization of global production systems in their entirety, thereby bringing in a whole array of actors in urban and regional development to constitute what might be termed "GPNs." In the next section, I will elaborate on this GPN approach to urban and regional development.

TNCs in GPNs: "Globalizing" Urban and Regional Development

Reading *Multinational Enterprises*, we learn that firms have increasingly been taking production activity across borders. Through this process of internationalization, they have become TNCs. These TNCs are not autonomous and vertically integrated organizations; rather, they resemble a form of intrafirm and interfirm networks comprising a large assortment of other actors and organizations (Ghoshal and Bartlett 1990; Gulati 2007; Yeung 2005b, 2008a). As TNCs become much more global in their scale and scope of operations, their networks are also concomitantly global in nature, leading to the emergence of GPNs. One tangible evidence for this emergence is the rapid growth of intra-TNC trade well documented in *Multinational Enterprises*. Since the 1960s, Dunning and Lundan (2008:190; original italics) noted, "the predominant form of MNE involvement has shifted from market-seeking and resource-seeking to efficiency-seeking and, more recently, to strategic asset-acquiring investment. At the same time, the first two kinds of investment have been increasingly viewed from a global perspective and as part of a geocentric or transnational organisational strategy by MNEs. *Inter alia* this is shown by the very considerable growth in all forms of *intra-firm* trade—both between foreign affiliates and parent companies, and between affiliates within developed countries—especially in such integrated regions as the EU and North America." They further argued that this accelerated growth in intrafirm and interfirm networks is related to the greater initiatives taken by TNC subsidiaries and/or their cross-border alliances.

> In particular, subsidiarity in decision making is now part and parcel of the global strategy of many MNEs. As fast as new cross-border alliances are formed, old ones break up. Increasingly the MNE is coming to resemble a controller of a system of interlocking value-added activities, the composition and organisation of which is constantly adjusting both to exogeneously determined events and the priorities and strategies of the MNEs themselves. (190)

This spatial extension and (re)configuration of TNC networks on a global scale has opened up a very challenging analytical frontier. Its implications for home and host locations are also highly variegated, depending very much on the strategic intent and organizational capabilities of TNCs and their network partners. Dunning and Lundan (2008:244) explained further that "[t]he more specialised the output and the greater the multinationality of the company, the more likely it is that the organisational structure will be geographically based. The greater the role played by foreign affiliates in the global success of an MNE, the more likely that intra-firm decision making will become lateral and multidimensional."

Given this emergent and highly complex network organization of TNC activity, I find it rather curious that few pages of *Multinational Enterprises* are explicitly devoted to explaining the nature and organization of these GPNs orchestrated by TNCs. In the broader social science literature, particularly those variants associated with economic sociology and development studies, there are several approaches to this phenomenon of TNC networks going global such as the global commodity chain (GCC) approach and the global value chain (GVC) approach (see Gereffi 1996; Gereffi, Humphrey, and Sturgeon 2005; Gereffi and Korzeniewicz 1994; Gibbon, Bair, and Ponte 2008). These two broadly similar and yet influential approaches, however, have been mentioned only twice in *Multinational Enterprises*. The first occurrence is related to how increasing specialization fashioned by globally integrated production networks has intensified the impact of TNC activity on the trading patterns of home and host countries. Drawing upon Gereffi (1999), Dunning and Lundan (2008:492) noted that "access to global markets, whether through participation in integrated MNE networks, or as part of buyer-driven global commodity chains such as in the food, footwear and apparel sectors, or in sectors such as business services, is increasingly difficult for producers in developing countries to achieve on their own." Another instance of GCCs is found in the section on the impact of TNCs on local linkages and spillover effects. Here, Dunning and Lundan made an effort to distinguish the different extent and kind of local linkages fostered in buyer-driven or producer-driven GCCs.

In this perspective, I will augment further the above evocation of globalizing TNC networks in *Multinational Enterprises*. Instead of rehashing the work of scholars championing the GCC and GVC approaches (see Gereffi, Humphrey, and Sturgeon 2005; Gibbon, Bair, and Ponte 2008), I have chosen to focus on a particular incarnation in economic geography—GPNs—in this section for two reasons.[4] First, I have the personal fortune to be closely associated with its intellectual development in economic geography (Coe, Dicken, and Hess 2008a; Dicken et al. 2001; Henderson et al. 2002; Hess and Yeung 2006a; Yeung 2009a). I am therefore somehow more familiar with its analytical specificities. Second, I believe that the GPN approach offers a more suitable framework for analyzing the complex interrelationships between TNC activity and urban and regional development. The network metaphor in the GPN approach nicely captures both the structural and relational dimensions of global production. Coe, Dicken, and Hess (2008a:272; italics in original) recently argued that networks "reflect the fundamental *structural* and *relational* nature of how production, distribution and consumption of goods and services are—indeed always have been—organized. Although they have undoubtedly become far more complex organizationally, as well as far more extensive geographically, production networks are a *generic* form of economic organization." They further clarified:

> The GPN approach is a broad relational framework, which attempts to go beyond the very valuable but, in practice, more restricted, global commodity chain (GCC) and global value chain (GVC) formulations. Although the core of all three conceptualizations is similar—the nexus of interconnected functions, operations and transactions through which a specific product or service is produced, distributed and consumed—there are two crucial differences, in practice, between GCCs/GVCs on the one hand and GPNs on the other. First, GCCs/GVCs are essentially linear structures, whereas GPNs strive to go beyond such linearity to incorporate all kinds of network configuration. Second, GCCs/GVCs focus narrowly on the governance of inter-firm transactions while GPNs attempt to encompass all relevant sets of actors and relationships. (Coe, Dicken, and Hess 2008a:272)

Before I go further, it is useful for me to clarify the nature and organization of GPNs. According to Henderson et al. (2002:445–446), a GPN involves both business firms and economies in organizationally complex and geographically extensive ways:

> Production networks—the nexus of interconnected functions and operations through which goods and services are produced, distributed and consumed—have become both organizationally more complex and also increasingly global in their geographic extent. Such networks not only integrate firms (and parts of firms) into structures which blur traditional organizational boundaries—through the development of diverse forms of equity and non-equity relationships—but also integrate national economies (or parts of such economies) in ways which have enormous implications for their well-being. At the same time, the precise nature and articulation of firm-centred production networks are deeply influenced by the concrete socio-political contexts within which they are embedded.

In this perspective, a GPN is defined as one that is coordinated and controlled by a globally significant TNC and involves a vast network of their overseas affiliates, strategic partners, key customers, and nonfirm institutions that are well described in *Multinational Enterprises*. Take the computer industry as an example (Yeung 2007, 2009a). A brand name TNC such as Dell or Hewlett Packard is likely to be a *global lead firm*, coordinating its own R&D and manufacturing affiliates worldwide and its less than a dozen strategic partners such as electronic manufacturing service providers. It also has to coordinate marketing activities with its key customers worldwide and to deal with nonfirm institutions such as labor organizations and civil society organizations in different host cities and regions. This diversity of firms and institutions in different spatial formations explains why a GPN is organizationally complex and geographically extensive. It also points to a diversity of modes through which any particular GPN can be governed (see Coe, Hess, and Dicken 2008b; Gereffi, Humphrey, and Sturgeon 2005; Hess and Yeung 2006b). Reflecting on this political contestation in GPNs, Levy (2008:944) argued that the GPN approach "pays attention to the agency of actors in mobilizing and deploying resources, forging alliances, shaping regulatory structures, and framing issues. From this perspective, GPNs resemble contested organizational fields in which actors struggle over the construction of economic relationships, governance structures, institutional rules and norms, and discursive frames."

When we map this GPN understanding of TNC activity onto different networks of cities and regions at the national and international scales, we will arrive at a highly complex and yet interesting landscape of GPNs interwoven with these urban and regional networks. In this globalizing landscape, we see diverse forms of interorganizational relations, whether at the firm level or at the institutional level, spreading across and co-constituting with the evolving morphology of urban and regional economies. It is in this sense that the argument for "globalizing" urban and regional development should be understood. By unpacking the power relations and competitive dynamics in these networks, we can arrive at a better understanding of why certain cities and regions grow while others falter over a period of time. More importantly, we can reinstate the role of firms as key economic agents in this landscape of network relations. And yet, we do not have to remain trapped in the form of methodological nationalism depicted in *Multinational Enterprises*. This analytical focus on the interplays and interrelationships between firms, nonfirm institutions, and networks in their urban and regional contexts enables us to probe into the causal mechanisms and processes of growth and development in cities and regions throughout the world. It constitutes a form of *relational thinking* that comes to prevail in the social sciences during the past 10 years (see Bradbury and Lichtenstein 2000; Cropper et al. 2008; Dyer and Singh 1998; Emirbayer 1997; Gulati 2007; Kyriakidou and Özbilgin 2006; Yeung 2005a,c). Embracing such a relational view to regional development, Amin (1999:375; emphasis added) argued some 10 years ago that "the critical factor for economic success is not the presence of local relations of association and institutional advancement but the ability of places to anticipate and respond to changing external circumstances. Thus, it is the management of the region's *wider connectivity* that is of prime importance, rather than its intrinsic supply-side qualities."

This relational approach to urban and regional development, however, requires one critical key to unlock its full potential (cf. Amin 1998; Bathelt and Glückler 2003; Dicken and Malmberg 2001; Lagendijk 2007; Storper 1997b; Sunley 2008). It needs to demonstrate both analytically and empirically how TNCs can actually mediate and interface with cities and regions. In other words, we need a theory of the interfacing mechanism between TNCs and urban and regional development. Again, I look to *Multinational Enterprises* for such clues but with no success for reasons suggested in the earlier section. In my recent work with colleagues at the University of Manchester (see Coe et al. 2004), however, I have attempted to theorize such an interfacing mechanism through the concept of *strategic coupling* (Yeung 2009a). This concept enables us to situate cities and regions in GPNs through a relational perspective. In this perspective, both cities/regions and GPNs are relational constructions and social formations that are constituted through ongoing actor-specific practices and processes; they are not some kind of autonomous actors capable of effecting spatial change. Instead, the analytical focus should be placed on *business firms*—both global lead firms and their strategic partners—and *institutions* in the political, economic, and social arenas as key actors that bring together cities/regions and GPNs through their mutually constitutive relational processes. This is where the concept "strategic coupling" becomes important.[5]

Elsewhere in Yeung (2009a), I have defined strategic coupling as a mutually dependent and constitutive process involving shared interests and cooperation between two or more groups of actors who otherwise might not act in tandem for a common strategic objective. In the context of urban and regional development, strategic coupling refers to the dynamic processes through which actors in cities and/or regions coordinate, mediate, and arbitrage strategic interests between local actors and their counterparts in the global economy. These transurban and transregional processes involve both material flows in transactional terms and nonmaterial flows (e.g., information, intelligence, and practices). In the literature on urban development, there is a long-standing debate on the role of global cities as *the* center for control and coordination of the global networks of TNCs (Sassen 1991, 2002; Taylor et al. 2007). The location of TNCs' corporate headquarters in global cities and regional headquarters in world cities has also received some research attention (Birkinshaw et al. 2006; Enright 2000; Perry, Yeung, and Poon 1998; Yeung, Poon, and Perry 2001) and mentioning in *Multinational Enterprises*. Other empirical studies have examined the location choice of global cities by TNCs in different industries (Nachum and Keeble 2003; Nachum and Wymbs 2005). Despite the recent attempt to integrate the literature on world city networks and global commodity chains (see Brown et al. 2007; Neal 2008), there remains a curious lack of any serious attempt to examine the role of TNCs as key agents in interfacing these urban networks and production networks.

More specifically, this strategic coupling process exhibits several distinctive attributes. First, it is strategic because the process does not happen without active intervention and intentional action on the part of the participants. As argued by Mathews (2006), Mathews and Zander (2007), and Yeung (2002, 2009b), strategizing is most useful/profitable in a market condition of disequilibrium because such condition allows for arbitraging of different opportunities. This view of strategizing concurs with the Schumpeterian concept of entrepreneurship that postulates the function of the entrepreneur as someone serving as a disruptive and dynamic force in an economy that has reached a static equilibrium. Through carrying out "new combinations" (Schumpeter 1934:66), the entrepreneur disturbs the existing static equilibrium of an economy and forces it into disequilibrium. This process, widely known as creative destruction, is central to the Schumpeterian entrepreneur who brings about economic change and regional development.[6] It also disrupts the static equilibrium approach in both trade and growth theories of urban and regional development reviewed in the earlier section. In these theories, the existence of economic specialization in urban and regional clusters is deemed a plausible and stable geographical outcome within the analytical rubric of the general equilibrium model exhibiting monopolistic competition (see a critique in Fowler 2007; Martin and Sunley 1996, 1998).

Second, I argue that the strategic coupling between GPNs and cities/regions is time-space contingent as the coupling process is not permanent and is subject to change. Indeed, a typical strategic coupling resembles a form of temporary coalition of different actors and institutions (Taylor 1999; Taylor and Asheim 2001). Third, the convergence process transcends territorial boundaries and geographical scales, as actors from different spatial sites (firms, states, regions, and localities) converge and their practices radiate out to diverse geographical scales—some global and some highly local. Overall, the concept "strategic coupling" explains how key actors in specific cities and regions become articulated into the imperatives of lead firms in GPNs; it is about dynamic relational processes that mediate their collective action and common interests.

What then are these relational processes that facilitate the strategic coupling of local and regional actors with lead firms in GPNs? In Yeung (2009a), I have elaborated on three such processes: 1) the emergence of transnational communities, 2) changes in industrial organization, and 3) initiatives by states and institutions. To recap briefly, the critical role of communities and social capital in regional development is now well recognized in regional studies (Phelps and Wood 2006; Rodríguez-Pose and Storper 2006; Storper 2009). One such community refers to the transnational elite professionals and businesspersons who shuttle constantly around the globe (Saxenian 2006; Saxenian and Sabel 2008; Yeung 2009b). This transnational elite community has rewritten the concept of international knowledge formation from one of brain drain to a two-way process of brain circulation. Through their constant movements between different regions of the world, these technologists and entrepreneurs have formed a transnational community of informal brain networks characterized by certain common social identity and, sometimes, nationalistic sentiments. To Levy (2008:953), GPNs "exist within the 'transnational space' that is constituted and structured by transnational elites, institutions, and ideologies. . . . Within this space, transnational communities emerge with economic systems, relations of power, and institutional forms that are distinct from, though interacting with, national or region-bound forms." Yet, the business practices of these transnational communities have contributed to the formal coupling of firms and institutions in different cities and regions with lead firms in GPNs through a variety of organizational arrangements. Saxenian (2002:183, 186; 2006) thus argued that:

> these communities have the potential to play an increasingly important role in the evolution of global production networks. Transnational entrepreneurs and their communities provide a significant mechanism for the international diffusion of knowledge and the creation and upgrading of local capabilities. . . . [They] provide a direct mechanism for transferring the skill and tacit knowledge that can dramatically accelerate industrial upgrading in their developing countries. In addition they frequently

coordinate relationships between the network flagships and suppliers, particularly when they are based in regions with differing languages and business cultures. This role ranges from helping to identify appropriate original equipment manufacturer (OEM) suppliers to facilitating the ongoing (and often face-to-face) inter-firm communications required by the rapid pace of change in the industry.

Another critical coupling process refers to changing industrial organization. As explained in Yeung (2007, 2009a), lead firms in GPNs are compelled to adopt organizational and technological innovations in order to fix their competitive problems. These fixes in turn create a new form of industrial organization that provides a window of opportunity for local and regional actors to plug themselves into GPNs. Saxenian (2002:184–185) observed that "[t]he deepening social division of labor in the industry creates opportunities for innovation in formerly peripheral regions—opportunities that did not exist in an era of highly integrated producers." In particular, the rise of vertical specialization by brand name firms and/or OEMs in many industries is linked to the vertical disintegration of value-chain activity within individual lead firms and the subsequent vertical reintegration of this activity in geographically dispersed locations (see also *Multinational Enterprises*). In the global electronics and information and communication technologies (ICT) industry, for example, this process of vertical disintegration/reintegration provides a strategic coupling platform for local and regional firms in Asia to connect with lead firms in GPNs (see also Bowen and Leinbach 2006; Leinbach and Bowen 2004; Yeung 2007, 2008b). This process of changing industrial organization is also greatly facilitated by technological changes. Primarily because of the capability, flexibility, response time, and cost competitiveness of domestic firms in particular industrial districts and high-growth regions throughout the world, this strategic coupling process operates to the benefits of both lead firms in GPNs and their local and regional partners such as electronic manufacturing services providers and dedicated service providers. Lüthje (2002:228) noted that "[t]hrough their continuing acquisitions CM [contract manufacturing] companies act as transnational network builders, assembling a variety of plants with different manufacturing practices in specific national and global markets. Contract manufacturing, therefore, can be characterized as a mode of integrating, coordinating, and regulating diverging economic, social, and cultural conditions in global production systems." These changing organizational-technological capabilities of urban and regional actors thus facilitate their coupling with the strategic imperatives of lead firms in GPNs.

Finally, the availability of the above transnational communities and organizational-technological capabilities of local actors can be partially explained by the relentless efforts of state and other institutions in paving the way for this strategic coupling to take place. Amin (1999:375) thus further argued that "the responsibility for the management of this wider connectivity [trans-regional links] lies in the hands of non-regional actors, notably government. No amount of imaginative region-building will be able to sustain a spiral of endogenous economic growth in the absence of a conducive macro-economic framework." The developmental state literature has already explained exactly what the East Asian states did in terms of industrial policies and fiscal incentives that helped groom the first-generation Asian firms up until the late 1980s. There is no doubt that the rise of Taiwan, Singapore, and South Korea as the world's major exporters of IT-related producers is an intended outcome of strategic industrial policy actively pursued by the respective governments (Amsden 1989, 2001, 2007; Feenstra and Hamilton 2006; Mathews and Cho 1998). The role of these state institutions during the past 15 years has been particularly important in enhancing human resources and physical infrastructure in respective industrial districts and growth regions. Another role of state institutions in the strategic coupling between local firms and lead firms in GPNs has to do with the rapid growth of public–private R&D consortiums. These consortiums are strategically located in high-growth regions in Triad (North America, Western Europe, and East Asia) countries, and they serve as a direct conduit to couple the strategic interests of both local high-tech firms and global lead firms. They also represent a form of state-sponsored collective action to reduce excessive competition among participating firms and to develop path-breaking technologies.

To sum up this section briefly, I have examined how urban and regional development should be viewed as a translocal dynamic process of growth and change, where multiple actors operate at a variety of geographical scales. The strategic coupling processes of these actors in different cities and regions constitute the central dynamic of TNCs' activity, as they bring together urban and regional assets and GPN dynamics in a recursive and cumulative process of growth and development. The particularity of these coupling forms is shaped by the complex interaction of different fixes in GPN dynamics and territorial-specific coupling processes. The urban and regional outcomes of this interaction are likely to be diverse and variable.

Conclusion

Dunning and Lundan's (2008) *Multinational Enterprises and the Global Economy* has comprehensively explained the nature and organization of TNCs in today's globalizing world economy. It has placed the TNC squarely at the forefront of our understanding of economic change and development. This perspective paper has provided a snapshot view of the enormous range of theoretical and empirical materials presented in this masterpiece. Yet, I have argued that the issue of urban and regional development is relatively underdeveloped in *Multinational Enterprises*. This underdevelopment is particularly engendered by the methodological nationalism and location-centric view of TNC activity often found in international economics and international business studies. While geography is now an important variable in these studies of TNCs and their FDI activity, it is often "operationalized" as nothing more than a locational coordinate in space. As such, geography (and location) is just the backcloth through which TNC activity is configured and governed. This narrow view of geography has unfortunately misunderstood the significance of space, place, and spatial scale in (re)shaping our understanding of TNCs and their globalizing activity (see Yeung 1998, 2005c). More importantly, it has not afforded the dynamic role of geography as an organizing principle in TNC activity and international business. Geography is therefore not an add-on variable in the analysis of TNCs; it is rather the *raison d'être* of the TNC whose existence depends on spatial differentiation and place-based advantages.

One particular dimension of such co-constitutive interaction between TNCs and geography is their involvement in urban and regional development. In this paper, I have shown how we might rethink the role of TNCs in urban and regional development through the analytical lenses of the GPN approach. Like Dunning's well-known eclectic framework of international production further illustrated in *Multinational Enterprises*, the GPN approach seeks to provide a meso-level theorization of the geographical and organizational configuration of TNC activity. It does so, however, not by treating geography and location as an *exogenous* variable in the constitution of TNC activity. The GPN approach takes on board the TNC as the central orchestrator of GPNs and, yet, grounds it in complex geographies of cities, regions, and territories in today's global economy. By developing the concept *strategic coupling* as the interface mechanism between TNCs and cities/regions, this approach has endogenized space, place, and scale in understanding the coevolution of TNC networks and networks of cities and regions. It has eschewed the discrete individualistic and structural functionalist approaches in favor of a relational view of firms and territories.

This renewed examination of geography in the study of TNCs and urban and regional development has several important implications for theory. First, we need to integrate our theories of firms/TNCs with theories of urban and regional growth. My brief review of theories of urban and regional growth in the second section shows that most of them have taken the firm and, by the same token, the TNC as undifferentiated economic units behaving the same everywhere as conceived in neoclassical economics. As explained in *Multinational Enterprises*, the TNC should really be conceptualized as a network of alliances across borders (see also Yeung 2005b). However, the theories of firms/TNCs espoused in

Multinational Enterprises pay virtually no attention to urban and regional growth. Integrating these two bodies of theories require substantial new research effort, but it is imperative for us to theorize further these TNC-territory dynamics. Second and closer to the analytical ambit of this journal, most existing urban and regional theories remain devoid of actors and agency. This may not pose a problem if they are direct offshoots of parsimonious economic models. But beyond this modeling approach, there is surely a need to understand much better the institutional contexts in which urban and regional growth is made possible. While institutional economics has greatly stimulated Dunning's rethinking in the second edition of *Multinational Enterprises*, we are still quite far from having a complete *institutional theory* of urban and regional development that takes into serious account of firms as economic actors and institutions as embedded contexts (cf. Amin 1999). Finally, the GPN approach seems to open up a new horizon in theorizing the translocal dimension of urban and regional development. An urgent theoretical task is to conceptualize further the various other possible interfacing mechanisms beyond strategic coupling to account for the variegated interaction between TNCs and city-regions throughout the world.

NOTES

1. The very unfortunate demise of John Dunning at 82 years old on January 29, 2009, just a few weeks before I started writing this perspective on his latest work, adds a great deal of soberness to this undertaking. Still, I hope this review serves as my personal tribute to his 50 years of devoted scholarship in the study of multinational enterprises. While I did not have the fortune of studying with him, I did work with him on two occasions as a conference speaker and as an invited reviewer of the 2001 *World Investment Report*. His intellectual openness and generosity made distinct impressions in my thought.
2. John Dunning has consistently used the term "multinational enterprises" throughout his career. However, this paper follows the terminological convention adopted by the United Nations Conference on Trade and Development and uses the term "transnational corporations" (TNCs). The term TNCs is also widely used in the field of urban and regional development.
3. A separate but distinct strand of literature in regional studies has focused on the impact of foreign direct investment (FDI) on regional development (e.g., Driffield and Hughes 2003; Driffield, Munday, and Roberts 2004; Gripaios, Gripaios, and Munday 1997; Hill and Munday 1994; Munday, Morris, and Wilkinson 1995; Turok 1993, 1997). Nevertheless, this literature has not paid much attention to the complex interaction between TNC organization, particularly in the form of global production networks (GPNs), and regional development. Moreover, most studies in this genre have held the TNC variable constant by examining its FDI activity; the TNC thus remains largely as a "black box."
4. An earlier strand of literature in economic geography is related to the geography of enterprise approach (Hayter and Watts 1983). Some of these studies are explicitly concerned with the role of TNCs in the external control and spatial organization of production in different regions (see Clark and Massey 1982; Dicken 1976, 1990; Pellenbarg and Wever 2007; Taylor and Thrift 1982).

5. It is important to note that this concept, despite its potential misinterpretation as a structuralist or functionalist take, is a heuristic device for understanding the interconnections of TNCs with regions and GPNs (see Coe et al. 2004: Note 1).
6. See Aoyama (2009) and Wei, Lu, and Chen (2009) on how entrepreneurial culture shapes regional development trajectories in Japan and China.

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