Global Capitalism and Commodity Chains: Looking Back, Going Forward

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This paper assesses the achievements and limitations of commodity chain research as it has evolved over the last decade. The primary objectives are two-fold. First, I highlight an important but generally unacknowledged break between the original world-systems-inspired tradition of commodity chain research and two subsequent chain approaches, the global commodity chain (GCC) and global value chain (GVC) frameworks. Second, I argue that contra the macro and holistic perspective of the world-systems approach, much of the recent chains literature, and particularly the more economistic GVC variant, is increasingly oriented in its analytical approach towards the meso level of sectoral logics and the micro level objective of industrial upgrading. I conclude that closer attention to the larger institutional and structural environments in which commodity chains are embedded is needed in order to more fully inform our understanding of the uneven social and developmental dynamics of contemporary capitalism at the global-local nexus.

KEY WORDS Commodity chains, Global capitalism, Global value chains, Industrial upgrading, Inter-firm networks.

Introduction

During the 1980s, the dynamic trajectory of East Asia’s export-oriented economies was interpreted by many as evidence that integration into the global economy is the only option for developing countries to pursue. This conclusion seemed especially valid when the successes of Asia’s Newly Industrializing Countries (NICs) were contrasted with the disappointing developmental performances of countries pursuing state-led industrialization models, including several Latin American nations that were reeling from a debt crisis that would become synonymous with that region’s ‘lost decade’. While detractors of the neoliberal paradigm have argued that the state still has a role to play in facilitating development (Amsden 2001; Rodrik 2002), even critics of the market-radical versions of the prevailing orthodoxy nevertheless appear to take as self-evident the proposition that the goal for developing countries is increased competitiveness in world markets. In this context, it is not surprising that the global commodity chain construct has inspired and oriented a spate of recent scholarship attempting to incorporate analyses of globalization into the study of economic development.

This paper assesses the achievements and limitations of commodity chain research as it has evolved over the last decade. The primary objectives are two-fold. First, I want to emphasize the considerable diversity that exists within this literature by underscoring
an important but generally unacknowledged break between the original world-systems-inspired tradition of commodity chain research and two subsequent chain approaches, the global commodity chain (GCC) and global value chain (GVC) frameworks. I argue that the current state of the ‘chains literature’ permits this differentiation among three related but distinct paradigms, and I advance a classificatory schema aimed at highlighting the similarities and points of divergence between the contending chain frameworks. Second, I argue that contra the macro and holistic perspective of the world-systems approach, much of the recent chains literature, and particularly the GVC variant, has become increasingly oriented analytically towards the meso level of sectoral dynamics and/or the micro level of firm upgrading. I conclude that closer attention to the larger institutional and structural environments in which commodity chains are embedded is needed in order to more fully inform our understanding of the social and developmental dynamics of contemporary capitalism at the global-local nexus.

The analysis proceeds in four sections. First, I discuss the evolution of the commodity chain approach by way of highlighting the relationship between the two camps that employ the concept: the world-systems school (whose proponents coined the phrase) and the GCC camp that has developed around the work of Gary Gereffi and colleagues, and which has produced the most substantial body of chain scholarship to date. In the second part of the paper I focus on the latter camp in order to highlight the contributions of GCC research in the areas of methodology, theory and policy. Third, I note a recent shift in the chains literature occasioned by the rise of a third approach, called global value chains, which proponents argue represents a more inclusive approach to the study of international production networks than that afforded by the GCC framework. What distinguishes the GVC approach from the GCC paradigm to which it is closely related is the greater influence of the international business literature on its analysis of global production networks, as opposed to the more sociological orientation of the earlier GCC framework, and a more pronounced interest in the policy implications of chain research. To some extent, these differences are a matter of degree, however, as adherents of both the GCC and GVC approaches share an interest in understanding how the concept of a value-added chain can inform firm-level strategies of industrial upgrading. Despite the utility of the upgrading discourse for the kind of policy-oriented research to which the GCC and especially the GVC frameworks aspire, I conclude this section by arguing that because the upgrading concept is focused narrowly on the issue of firm-level competitiveness within the context of a particular industry, it sheds a very partial light on the critical question of winners and losers in today’s global economy. In the fourth and final section, I briefly outline fruitful directions for commodity chain research that can address some of the weaknesses inherent in the value chain turn for those interested in processes of uneven development under contemporary capitalism. I argue that we would benefit from research focusing on the broader political-economic environment in which chains operate, including the institutional and systemic factors that shape commodity chains and condition the outcomes associated with them. In laying out this agenda, I draw on a number of recent contributions that suggest that a second generation of commodity chain research can already be discerned.

From Commodity Chains to GCCS

The term ‘commodity chain’ dates from a 1977 article by Terrence Hopkins and Immanuel Wallerstein which appeared in Review, a journal published by the Fernand Braudel Center
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for the Study of Economies, Historical Systems, and Civilizations at the State University of New York-Binghamton. In this programmatic article, Hopkins and Wallerstein outline their vision of the research agenda that should orient the world-systems program. In so doing, the authors seek to differentiate their understanding of capitalism’s territorial scope from the orthodox way of thinking about globalization. Instead of seeing the global economy’s development as a sequential process whereby national markets evolve in the direction of expanded foreign trade geared to an international market, the authors start with a radically different presumption. Let us conceive of something we shall call, for want of a better conventional term, ‘commodity chains.’ What we mean by such chains is the following: take an ultimate consumable item and trace back the set of inputs that culminated in this item – the prior transformations, the raw materials, the transportation mechanisms, the labor input into each of the material processes, the food inputs into the labor. This linked set of processes we call a commodity chain. If the ultimate consumable were, say, clothing, the chain would include the manufacture of the cloth, the yarn, etc., the cultivation of the cotton, as well as the reproduction of the labor forces involved in these productive activities (Hopkins and Wallerstein 1977: 128).

Several subsequent usages of the commodity chain concept appear over the course of the 1980s in world-systems research. The term can be found in the opening pages of Wallerstein’s *Historical Capitalism*, in which the author summarizes the distinctiveness of capitalism as a historical social system characterized by the ‘widespread commodification of processes – not merely exchange processes, but production processes, distribution processes and investment processes – that had previously been conducted other than via a market’ (1983: 15). Hopkins and Wallerstein offered a more succinct definition in a 1986 *Review* article analyzing trade and capital flows in the global economy prior to 1800: a commodity chain refers to ‘a network of labor and production processes whose end result is a finished commodity’ (p. 159). In their contribution to the same 1986 issue of *Review*, Giovanni Arrighi and Jessica Drangel explain that the core-periphery distinction in world-systems theory ‘is meant to designate the unequal distributions of rewards among the various activities that constitute the single overarching division of labor defining and bounding the world economy. All these activities are assumed to be integrated in commodity chains’ (p. 16). The first manuscript-length treatment of commodity chains appeared in 1994, with the publication of *Commodity Chains and Global Capitalism*. Edited by Gary Gereffi and Miguel Korzeniewicz, this volume contained a number of papers that had been presented at the 16th annual conference on the Political Economy of the World-System, which took place at Duke University in April 1992. The most widely cited and influential of these chapters was Gary Gereffi’s, which laid out a framework for the study of what he called global commodity chains (GCCs).²

Although the intellectual lineage of the global commodity chain concept is thus easily traceable to the world-systems tradition, it is important to note the disjuncture between the line of commodity chain research deriving from Hopkins and Wallerstein’s formulation and what has been developed by Gary Gereffi and colleagues over the course of the last decade as the GCC paradigm.³ While the world-systems and GCC camps agree that the commodity chain concept is a useful construct for thinking about the international division of labor characteristic of capitalist production, there are significant differences between the two schools. World-systems theorists understand commodity chains as consisting not only of the steps involved in the transformation of raw materials into final goods, but also as webs connecting that set of productive activities with the social reproduction of human labor.
power as a critical input into this process. Additionally, world-systems theorists are most fundamentally interested in how commodity chains structure and reproduce a stratified and hierarchical world-system. As it has emerged over the past decade, the global commodity chain research agenda is motivated largely by different interests and concerns. GCC researchers understand commodity chains as sets of inter-firm networks which connect manufacturers, suppliers and subcontractors in global industries to each other, and ultimately to international markets, and they are principally concerned with the question of how participation in commodity chains can facilitate industrial upgrading for developing country exporters. Below I explicate further the differences between these camps by positioning them vis-à-vis two questions: (1) how should we understand the temporal and spatial scope of globalization? and (2) how should we understand the objective of commodity chain analysis?

Research on commodity chains from a world-systems perspective has focused on the historical reconstruction of industries during the long sixteenth century, whereas scholars identifying with the GCC approach analyze how goods such as cars, clothing and computers are made in today’s global economy. This difference in temporal orientation, between the historical approach of the world-systems camp on the one hand and the more contemporary flavor of GCC research on the other, reflects, in part, a disagreement between the two schools regarding the novelty and salience of ‘globalization’. World-systems scholars contend that ‘transstate, geographically extensive, commodity chains are not a recent phenomenon, dating from say the 1970s or even 1945, . . . they have been an integral part . . . of the functioning of the capitalist world-economy since it came into existence in the long sixteenth century’ (Wallerstein 2000: 2). Indeed, the insistence on analyzing social action and social change within the holistic context of a European-centered world-economy which emerged during the ‘long sixteenth century’ is the sine qua non of the world-systems perspective.

In addition to understanding the world-system as a spatio-temporal whole which both reflects and constrains social action, world-systems theory also underscores a contradiction that exists between the forces of the world-economy to integrate production on an international scale and the division of the system into discrete, political units called (nation-)states. This antinomy – between the centripetal forces of the world capitalist economy on the one hand, and the organization of the geopolitical order into individual countries on the other – is identified as a foundational concern of the world-systems perspective (Hopkins and Wallerstein 1977). It follows that the statist orientation of much social science literature is a particular problem for world-systems research, as it both reflects and reproduces a bias towards the production and analysis of data at the level of the national polity/economy that cannot capture processes that exist above and across these discrete units of analysis. The commodity chain construct is a proposed solution to this methodological dilemma. Insofar as they provide a way to map and analyze the international division of labor, commodity chains are tools that enable one to study the operation of global capitalism beyond the territorial confines of the national economy.

The GCC orientation is similarly interested in the commodity chain as a construct that can move between and across different levels of analysis. In the introductory essay of Commodity Chains and Global Capitalism, the editors explain that ‘[o]ur GCC framework allows us to pose questions about contemporary development issues that are not easily handled by previous paradigms, and permits us to more adequately forge the macro-micro links between processes that are generally assumed to be discretely contained within global,
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national, and local units of analysis’ (Gereffi et al. 1994: 2). However, the GCC camp departs from the world-systems perspective insofar as global commodity chains are viewed as an emergent organizational form associated with a more recent and qualitatively novel process of economic integration: ‘One of the central contentions of the GCC approach is that the internationalization of production is becoming increasingly integrated in globalized coordination systems that can be characterized as producer-driven and buyer-driven commodity chains’ (Gereffi 1996: 429). A key difference then between the world-systems and GCC camps of commodity chain research is rooted in this debate regarding whether globalization is better understood as a contemporary phenomenon enabled by increasingly integrated production systems, or as a process beginning with the emergence of capitalism in the long sixteenth century.

The second difference between these camps reflects a disagreement concerning the purpose of commodity chain research. GCC analysis is principally concerned with understanding how global industries are organized. It consists of identifying the full set of actors (i.e. firms) that are involved in the production and distribution of a particular good or service and mapping the kinds of relationships that exist among them. The goal is to understand where, how and by whom value is created and distributed along a commodity chain (Appelbaum and Gereffi 1994). Special attention is paid to the most powerful or lead firms in an industry, which are also known as chain drivers, because of their influence over other chain participants and their presumed importance as potential agents of upgrading and development: ‘One of the major hypotheses of the global commodity chain approach is that development requires linking up with the most significant lead firms in the industry’ (Gereffi 2001a: 1622).

GCC researchers claim that focusing on the organizational power dynamics that exist along a chain allows one to look at how a country’s developmental prospects are shaped by its participation in international production networks understood as global commodity chains. Its substantive interest in, and analytical emphasis on, national development represents a further break between the GCC framework and the world-systems tradition, as the latter inveighs against the myopia of this ‘developmentalist illusion’ (Arrighi 1990; Wallerstein 1994). World-systems theorists recognize that mobility between the different tiers of the world-system is possible, as individual countries move up or down, but what is relevant from their perspective is the reproduction of a hierarchically-structured global capitalist economy (Arrighi and Drangel 1986; Wallerstein 1974): ‘[w]hat is central . . . is the fact of unequal exchange operating through a set of mechanisms . . . that continually reproduces the basic core-periphery division of labor itself – despite massive changes over the centuries in the actual organization of production processes and continual shifts in the areas and processes constituting the core, semiperiphery and periphery’ (Hopkins and Wallerstein 1977: 117).

Because from this perspective ‘there is no such thing as national development’, the proper entity of comparison or unit of analysis is the world-system (Wallerstein 1974), not the individual countries that make up the collective whole, and surely less the networks of particular firms that are the primary object of GCC inquiry. Accordingly, the world-systems camp considers the commodity chain a vital research location for the study of the capitalist world economy in its totality (Wallerstein 2000). From this perspective, the chain construct is useful insofar as it illuminates the dynamics of capital accumulation at a particular point in the evolution of the world-system, and one of the major objectives of world-systems
research on commodity chains is to develop ways of calculating the total surplus value of a chain and tracing the distribution of that surplus between the various links (or boxes, in Wallerstein’s terminology) that comprise it.

Although most reviews of the GCC literature locate its intellectual origins in the world-systems orientation (Dicken et al. 2001; Leslie and Reimer 1999; Phyne and Mansilla 2003; Smith et al. 2002) or identify its roots in ‘radical development theory’ (Whitley 1996: 404), ‘structuralist development economics’ (Cramer 1999) or ‘the dependency tradition of analysis’ (Henderson et al. 2002), the GCC camp has moved research on commodity chains away from the type of long-range historical and holistic analysis characteristic of the world-systems school. Rather, the GCC framework has evolved as a network-based, organizational approach to studying the dynamics of global industries (Raikes et al. 2000).

One of the main strengths of the GCC framework is that the clear research agenda that proceeds from it has engendered a coherent body of literature on global industries. Since the mid-1990s, an international community of scholars has been studying a wide variety of commodity chains that range across Asia, Africa and Latin America, as well as North America and Europe. Among the industries included in this research are tourism, apparel and textiles, footwear, automobiles, electronics, plastics and a variety of agricultural commodities including fruits, vegetables, coffee and cocoa. The next section offers some reflections on this past decade of research.

What Have We Learned From GCC Research?

In the ten years since the publication of Gereffi and Korzeniewicz’s edited volume, a substantial body of work on GCCs has accumulated. I argued in the previous section that the GCC framework has diverged in significant ways from the world-systems perspective that inspired the development of the commodity chain concept; this break has several implications for research on global commodity chains. First, it has enabled this literature to move in the direction of empirically rich case studies of international production networks in different sectors of today’s global economy. Second, most GCC research, either explicitly or implicitly, rejects what world-systems orthodoxy terms the ‘developmentalist illusion’ insofar as a significant thrust of this work has been to analyze how commodity chains shape a country’s development prospects. This has increased the relevance of chain research to policy-makers keen on mining its insights for recommendations with regard to the objectives of promoting competitiveness and industrial upgrading. The policy implications of chain research are being more fully elaborated in the newest variant of chain research, the global value chain approach, which is discussed in the third section of this article.

Without providing a comprehensive review of the last ten years of GCC research, I want briefly to underscore significant contributions that the global commodity chain literature has made in three areas: methodology, theory and policy. First, the development and application of the GCC framework is a methodological advance because it provides a way for researchers interested in global industries to map and analyze the spatially dispersed and organizationally complex production networks that are an important part of economic globalization. Tracing the path of a commodity – be it a pair of blue jeans sewn in China from Indian-made denim, a cocoa bean grown in Ghana and processed into a chocolate bar in the Netherlands, or the assembly of a laptop computer in Mexico from components
produced in East Asia – provides a grounded way to study and operationalize the global-local nexus. The GCC method permits one to analyze globalization in situ, directing our attention to the specific locations where particular production processes occur, while simultaneously illuminating how these discrete locations and activities are connected to each other as constituent links that collectively comprise the commodity chain. In its attention to the specificity of locality and place, the GCC perspective departs from much of the research in the world-systems tradition, as the macro-orientation of the latter tends to efface difference within macro-regions (i.e. the periphery), let alone the increasing diversity that exists within national economies. Furthermore, insofar as GCC research analyzes the activities of particular firms, and especially the chain drivers that play the pivotal role in managing international production networks, it gives far greater weight than a more orthodox world-systems approach would to the role of firms as capitalism’s organizing agents.

Second, studies of GCCs have contributed theoretically to our understanding of how the global economy works, and in particular how power is exercised in global industries. Further elaboration of this point calls for a brief review of the GCC framework. Gereffi identifies four dimensions with respect to which every commodity chain can be analyzed: (1) an input-output structure (the process of transforming raw materials into final products), (2) a territorialisity (or geographical scope), (3) a governance structure, and (4) an institutional context. As has been noted (Henderson et al. 2002; Raikes et al. 2000), studies of existing GCCs have focused primarily on the governance dimension – that is, the question of which firms in the chain are most able to control various aspects of the production process and how they appropriate and/or distribute the value that is created. Thus, to describe a chain’s governance structure is to illuminate the nature of power relations that exist along a chain.

The concept of governance as it is understood in the GCC framework, and as it has been elaborated in numerous case studies of particular commodity chains, recognizes what much of the literature on flexible specialization or post-Fordism has contended – namely, that in the contemporary international economy, dynamics of power and control are not necessarily correlated with traditional patterns of ownership. The empirical insights afforded by research on the governance dimension of GCCs have helped flush out the meaning of the inter-firm network as an organizational form that is neither market nor hierarchy (though it may exhibit characteristics of each).

Perhaps the best-known distinction in the GCC literature is the one Gereffi draws between producer-driven (PDCC) and buyer-driven (BDCC) commodity chains. The former are characteristic of more capital-intensive industries (e.g. motor vehicles) in which powerful manufacturers control and often own several tiers of vertically-organized suppliers, as opposed to light manufacturing industries (apparel being the classic case), where far-flung subcontracting networks are managed with varying degrees of closeness by designers, retailers and other brand-name firms that market, but do not necessarily make, the products that are sold under their label (Gereffi 2001a).

While the applicability and utility of the PDCC/BDCC distinction has been disputed (Clancy 1998; Gellert 2003; Henderson et al. 2002), what is most significant about the dichotomy between these ideal types is the theorization of commercial capital (what are often called ‘big buyers’ in the GCC literature) as the power brokers that call the shots for the many firms involved in the buyer-driven commodity chains they control, although they may have no equity relation to the firms actually producing the goods made on their behalf.
While the apparel industry is the most extensively studied case of a buyer-driven commodity chain (Bair and Gereffi 2002; Gereffi 1999), a similar governance structure has been identified in the commodity chain of some agricultural products, which reflects the power of supermarkets as ‘big buyers’ exercising increased control over growers (Dolan and Humphrey 2000). Research on the governance structure of BDCCs is particularly salient today, given the widespread disavowal of import-substituting industrialization strategies in the global South in favor of export-oriented initiatives that frequently encourage specialization in the kind of labor-intensive, light manufacturing industries associated with buyer-driven commodity chains.

Third, I want to highlight the policy implications of GCC research. As will be discussed in greater detail in the next section, recent work from the so-called global value chains perspective, which is closely related to the GCC tradition and which is identified below in Table 1 as the third chain framework under consideration here, has focused on finding ways to leverage the insights afforded by the GCC approach into effective policy interventions that can enable local firms to improve their positions in particular value chains – a process the value chain literature identifies as upgrading: ‘Understanding how . . . value chains

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operate is very important for developing-country firms and policy-makers because the way chains are structured has implications for newcomers. How can economic actors gain access to the skills, competencies and supporting services required to participate in global value chains? What potential is there for firms, industries, and societies from the developing world to “upgrade” by actively changing the way they are linked to global value chains?” (Gereffi et al. 2001b: 2). Local and national governments, as well as international institutions such as the International Labour Organization, have expressed interest in the answers to these questions, viewing the GCC framework as a paradigm that can usefully orient and inform policy (Gereffi forthcoming; Henderson et al. 2002).

There is another way in which GCC research is being applied in the strategies of very different constituencies – NGOs, such as anti-sweatshop groups that promote ‘clean clothes’ campaigns, and organizations supporting other forms of consumer activism such as fair trade coffee (Gereffi et al. 2001a). Following several well-publicized cases of labor abuses in US, Latin American and Asian garment factories producing for well-known clothing brands, student and consumer groups across North America and Europe have focused on the problem of how to promote labor rights, safe working conditions and a living wage in global industries dominated by powerful and footloose big buyers on the one hand, and characterized by a workforce that is largely powerless and often invisible to the consumer on the other (Bonacich and Appelbaum 2000). One significant thrust of this effort has been to create accountability in global industries by demanding that lead firms take responsibility for what happens in the factories of their suppliers and subcontractors around the world, even when, as is typically the case in this industry, the lead firms have no equity relation to the companies filling their orders. Among other demands, anti-sweatshop activists have called on retailers and designers to implement and enforce codes of conduct designed to insure that their products are made in a sweat-free environment. To be effective, this kind of approach requires unraveling inter-firm networks connecting buyers and suppliers, and the GCC framework has proven a useful template in this regard. Such ‘real world’ applications of the commodity chain concept are among the most fruitful implications of GCC research to date.

Despite these achievements, important work on commodity chains remains to be done. In the next section, I discuss one direction in which chain research is moving, as suggested by the development of a third chain framework, the global value chains approach. By summarizing the primary characteristics of the three chain frameworks in Table 1, I hope to underscore the differences that exist between the world-systems, GCC and GVC camps, while also pointing to a number of limitations arising from the shift towards a more micro orientation in the most recent of the three chain approaches, as suggested by the GVC paradigm’s greater emphasis on sectoral logics and firm-level upgrading.

From GCCS to Value Chains?

Over the course of the 1980s and 1990s the shift from what Philip McMichael (1996) has called ‘the development project’ to ‘the globalization project’ was manifest in the changing policy orientations of countries across the global South, as many abandoned import-substituting, state-led industrialization schemes in favor of an export-oriented development strategy. As the quest for competitiveness in global markets assumed paramount importance for business leaders and policy-makers alike, both groups invested in learning more about the workings of international trade and production networks. Because the global
commodity chain framework seemed particularly well-suited to inform policy debates about the best way for developing countries to access, and benefit from, their participation in foreign markets, it was featured prominently in an International Labour Office research program on globalization and employment in the mid-1990s and has influenced the ‘cluster strategy’ being promoted by the United Nations Economic Commission for Latin America and the Caribbean.

However, as a paradigm for thinking about how global industries work, the GCC paradigm is only one among several network- or chain-based approaches to the study of economic globalization popular today. Other constructs that have oriented research programs include international production networks (Borrus et al. 2000), global production networks, (Ernst 1999; Henderson et al. 2002), global production systems (Milberg 2003) and the French filière concept (Raikes et al. 2000). Given this variety of approaches, some have argued that it would be useful to agree upon a common terminology of ‘value chain analysis’ as a way of promoting a research community comprised of scholars studying production networks in the global economy. In fact, such a community already exists in the form of a ‘global value chain’ research network (see www.globalvaluechain.org).

This research network was formed in September 2000 at a meeting held in Bellagio, Italy as part of a Rockefeller Foundation-sponsored initiative on global value chain research intended to bring together scholars pursuing different aspects of research on global networks. Several of the participants went on to edit a special issue of the journal IDS Bulletin, which contained a number of the papers given at the Bellagio workshop. Entitled ‘The Value of Value Chains: Spreading the Gains from Globalization’, the special issue appeared in July 2001. In their introduction, the editors explain that although the participants in the Bellagio meeting ‘had employed several distinct terminologies in their work on value chains in the global economy’, they agreed on the need to develop a common language to describe their collective analytical project. The value chain rubric was favored over alternative concepts, such as commodity chains or supply chains, ‘because it was perceived as being the most inclusive of the full range of possible chain activities and end products’; although the editors also point out that ‘each of the contending concepts . . . has particular emphases that are important to recognize for a chain analysis of the global economy’ (Gereffi et al. 2001b).14

In addition to reviewing the existing value chain literature, the special issue of IDS Bulletin referred to above seeks to lay out an agenda for future value chain research. Among the tasks that proceed from such an agenda is the development of ‘common parameters for defining different types of value chains and a taxonomy of value chains that can be operationalised through a robust set of indicators’ (Gereffi et al. 2001b: 3). As the editors note, systematic comparison of value chain studies can allow one to identify similarities in the structure and governance of chains across different industries, and some progress on this front has already been made. For example, value chain researchers have noted the rise of a particular type of subcontracting network whereby highly competent suppliers assume responsibility for a full range of activities beyond ‘basic’ production (such as design and inventory/logistics management). Although the terminology varies between industries (from turn-key supply in the electronics industry to full-package supply in the apparel industry), a common value chain orientation makes it possible to identify a similar organizational form across sectors (Sturgeon 2001). Thus, as the proponents of the global value chain project argue, establishing a shared language among researchers working on global industries allows one to recognize analogous developments across distinct sectors that may be obscured by nominal differences in terminology.
However, should one interpret the shift in language from ‘commodity chain’ to ‘value chain’ as more than a matter of mere nomenclature? Is the concept of value chain different from commodity chain, or is it merely a more catholic terminology to describe the latter, one that is free from a potentially misleading, restrictively narrow association with primary products that the term commodity might erroneously be thought to denote (Gereffi forthcoming)? In other words, does the value chain orientation merit being considered a third contending chain framework, distinct from the world-systems tradition of commodity chain research and the GCC approach discussed above?

A recent paper by Gereffi et al. (2005), in which the authors attempt to develop a more formal theory of value chain governance, suggests that this is the case. In this article, the authors develop a typology of five governance structures that describe the network relationships linking suppliers in global industries to lead firms. This typology is based on the possible combinations resulting from variations (measured as ‘low’ or ‘high’) in three independent variables: the complexity of transactions, the codifiability of information and the capability of suppliers. The value chain theory of governance suggests that relationships between lead firms and suppliers differ across sectors due to the particular characteristics of the production process and the organization of the sector, such as the sophistication and availability of the technology involved, the existence or absence of (technical and process) standards, and the extent to which rapid turnaround time or speed to market is essential to competitiveness. The goal is to explain variation across sectors in terms of how global production is organized and managed, focusing on the key role of transaction costs, including so-called ‘mundane’ transaction costs that arise from coordinating activities along the chain (Baldwin and Clark 2000).

Although the earlier discussion (Gereffi et al. 2001b) of the value chain framework referred to above (in the 2001 special issue of *IDS Bulletin*) specifically noted the close relationship between the global commodity chain and value chain concepts, Gereffi et al. (2005) describe the intellectual influences shaping their project differently in this more recent contribution: ‘For us, the starting point for understanding the changing nature of international trade and industrial organization is contained in the notion of a value-added chain, as developed by international business scholars who have focused on the strategies of both firms and countries in the global economy’ (2005: 79). Indeed the rather abbreviated discussion of the global commodity chain literature that appears in the 2005 paper concludes that, while the GCC framework ‘drew attention to the role of networks in driving the co-evolution of cross-border industrial organization’, it ‘did not adequately specify the variety of network forms that more recent field research has uncovered’. Gereffi et al. (2005) attempt to address this weakness by developing an ambitious theory of value chain governance that not only acknowledges this variation, but attempts to explain it by identifying its key determinants. In so doing, they advance the agenda of value chain research and suggest how it might be extended in the future, such as developing ways to operationalize and measure the key independent variables that shape governance structures across sectors, and eventually formulating and testing hypotheses derived from a more fully elaborated theory of value chain governance.

Having introduced what I am arguing can be classified as three traditions of chain research – the world-system, GCC and GVC approaches – I summarize the primary characteristics of the three contending chain frameworks in Table 1 in order to allow a more systematic comparison of the similarities and differences between them. To some extent, one might see these approaches representing three *generations* of chain research insofar as they
roughly succeed each other in a temporal ordering, with the original commodity chain concept dating from the 1980s, the GCC framework being elaborated in the 1990s, and the global value chain variant becoming more popular in recent years. However, a generational schema of this sort is somewhat misleading since these literatures overlap, and work in all three traditions of chain research continues, including some by scholars who have been influenced by, and whose present research references, more than one of these frameworks. What Table 1 underscores is that while these chain frameworks share substantive concerns and, to some extent, intellectual and theoretical foundations, they are nevertheless oriented towards different levels of analysis, and each tradition of chain research differs with regard to what is understood as its primary objective. The two latter chain variants – the GCC and GVC approaches – are analytically oriented towards the micro (individual firm) or meso (sector) level as opposed to the macro and holistic perspective characteristic of the world-system conceptualization of commodity chains. Also in contrast to the earlier world-systems tradition of chain research, the GCC and GVC frameworks share a policy orientation (especially strong in the case of the latter) insofar as the audience for this scholarship is understood to include policy-makers and private sector actors seeking to maximize the potential benefits derived from participation in international trade and production networks.

While the extent to which a clear differentiation between the GVC and GCC frameworks can and should be made is open to dispute, and the similarities between them are pronounced at any rate, the strong emphasis that the former places on the question of sector-specific governance appears to be something of a departure from the GCC literature. Insofar as the recent theory of value chain governance elaborated by Gereffi et al. (2005) represents the research program of the value chain approach, it focuses more on the question of how inter-firm relations are shaped by the internal logics of sectors, such as industry structure and production-process characteristics that are more technical or organizational in nature, with lesser attention devoted in the value chain scheme to the external factors which shape chain dynamics and the distribution of value-added along the chain, such as the broader institutional environments in which chains operate. As the authors suggest, this may represent the greater influence of the international business literature on the development of the value chain approach, as compared with the more sociological perspective of the global commodity chain framework.

However, one can also identify an important continuity between the GCC tradition of research and the recent value chain variant – an interest in firm-level industrial upgrading. Specifically, the central question that appears to motivate many GCC and value chain researchers is how (especially developing-country) firms can improve their position within these chains so as to generate and retain more value. In order to achieve this objective, firms need to understand where they fit into the chains in which they participate. It is here that the close relationship between the GCC and value chain approaches is apparent, since many of the insights generated by earlier GCC research on governance have shaped the development of value chain analysis. In elaborating the concept of chain governance, Humphrey and Schmitz (2001) suggest that one way the power dynamics of a chain are manifest is through the setting of various kinds of parameters that suppliers must follow. These include not just the specification of what products are to be produced, but often how they are to be produced. Governance structures, particularly in buyer-driven commodity chains, increasingly include parameters that extend to aspects of the production process such as working conditions, quality control and environmental standards.
Gereffi argues that access to the lead firms which set the parameters for value chain participation is a necessary, if not sufficient, condition for successful participation in global markets: ‘The emergence of new forms of value-chain governance is driven by the evolution of organisational capabilities by leading firms in the global economy . . . . In order for countries to succeed in today’s international economy, they need to position themselves strategically within . . . global networks and develop strategies for gaining access to the lead firms in order to improve their position’ (2001b: 32). In their 2005 article, Gereffi et al. extend this observation in the direction of policy intervention, expressing their hope that ‘the theory of global value chain governance that we develop here will be useful for the crafting of effective policy tools related to industrial upgrading, economic development, employment creation, and poverty alleviation.’ Given the centrality of upgrading as an orienting concept that both the commodity chain and value chain literatures share, it is worth considering how upgrading is understood in these approaches; thus, the remainder of this section offers a discussion and critique of the upgrading discourse that figures so prominently in current research on global chains.

At the most basic level, the value chain literature defines upgrading as improving a firm’s position within the chain, and this is generally associated with increased competitiveness that allows for the capture of greater value-added through the production process. But how is this objective achieved, and how are upgrading efforts evaluated? One possible avenue for upgrading that value chain research has identified is for a firm to move up the same value chain from a more marginal to more secure position by increasing the range of functions performed. For example, as noted earlier, a turn-key or full-package manufacturer is often responsible for additional functions beyond basic production, such as design or logistics management; this is called intra-chain or functional upgrading. Additional types of upgrading include product upgrading (producing more sophisticated goods with higher unit prices) and process upgrading (improving technology and/or production systems). Inter-chain upgrading (moving from one industry to another) is a fourth type of upgrading that has been identified (Gereffi et al. 2001b; Humphrey and Schmitz 2001).

As studies of various value chains suggest, firms attempting to upgrade via one of these paths often have considerable difficulty in doing so. In large part, this is due to the increasing barriers to entry that exist as one moves along the chain. Central to the power of lead firms, and particularly those that control buyer-driven chains, are activities related to marketing, design and brand development. Value chain research tells us that firms can upgrade by capturing more of the value created in these links, while also underscoring the significant, and some would argue increasing, obstacles that they face: ‘As “intangible” aspects of production (i.e. marketing, brand development, design) become increasingly important for the profitability and power of lead firms, “tangibles” [production and manufacturing] have become increasingly commodified, leading to new divisions of labor and new hurdles for developing-country producers to overcome if they wish to enter these chains. It is almost certainly a pervasive trend . . . that the barriers to entry in intangibles are growing faster than those in tangible activities’ (Gereffi et al. 2001b). Chains research of both the GCC and value chain variety have documented the efforts of firms in various industries to upgrade through one or more of these strategies, documenting their successes as well as their failures (Bair and Gereffi 2001; Fitter and Kaplinsky 2001; Talbot 1997). The result of these efforts is a significant contribution to our understanding of the relationship between chain governance and firm-level upgrading prospects, which value chain scholars argue is, in turn, ‘critical to the debate on whether there is a spreading of the gains from globalization’ (Humphrey and Schmitz 2001: 21).
The contribution of value chain research to the debate about globalization’s winners and losers should be obvious from the discussion above. However, there are several distinct, though related, limitations with the extant formulation of upgrading that the chains literature offers. First, much GCC and GVC research focuses on upgrading primarily at the level of the individual firm in the context of a particular value chain. As noted earlier, when analyzed in comparative perspective, this approach yields evidence of similar organizational forms characterizing global production networks across different industries (such as the rise of turn-key contract manufacturing in the apparel, auto and electronics industries, as well as some agro-commodities such as cocoa and coffee). As one value chain scholar has noted, recognizing these similarities requires one to look closely at the micro level in order to identify ‘the specific bundles of activities that firms are engaged in’ (Sturgeon 2001: 15).

But this firm-level orientation poses a unit of analysis dilemma. How does one translate the process of upgrading at the level of the firm into its implications for the larger units that are traditionally regarded as the spaces or containers of development, such as the national or regional economy? Put differently, how do we aggregate up and out from the firm level? While Gereffi (1995) has argued that a country’s development prospects are conditioned by how they are incorporated into global industries, how does the nature of a firm’s insertion into a particular commodity chain map on to a country’s incorporation into the global economy?21 The problem is particularly vexing since, just as virtually every nation is linked to the global economy via more than one export role (Gereffi and Wyman 1990), so too are many firms connected to commodity chains via more than one type of linkage (i.e. as a subcontractor for some clients, a full-package supplier for others, and as a producer of own-brand products for the domestic market (Bair 2001).

Second, we need to be more careful in specifying who the process of upgrading benefits. For example, what is identified as functional or intra-chain upgrading often describes situations in which suppliers take on additional responsibilities (such as design, logistics management or distribution) at the behest of the lead firm. While these suppliers thereby ‘add value’ from the vantage point of the chain driver, another way to interpret this process is the off-loading of less profitable activities onto more vulnerable firms.22 The ability of a supplier to add greater value to the lead firm may increase its competitiveness vis-à-vis its rivals (until they develop analogous capabilities), but a number of studies suggest that firms which ‘succeed’ in intra-chain or process upgrading do not necessarily reap the rewards, including increased security and profitability, with which upgrading is ostensibly associated (Fitter and Kaplinsky 2001; Gibbon 2001; Schrank 2004; Schurman 2001).

Research on the changing position of firms within value chains further suggests that upgrading is often a process of exclusion, particularly in developing countries (Dolan and Humphrey 2000; Gibbon 2001). A comparative study of Kenyan horticulture and Indian textile value chains lead Dolan and Tewari to conclude that, although a number of local firms in each sector had been able to upgrade successfully, changes in both value chains associated with process upgrading on the part of the largest firms severely circumscribe the future upgrading prospects of smaller producers and pose the ‘danger of excluding a large swathe of low-performing domestic firms from the circles where new skills and learning are being generated’ (2001: 101).

Finally, more careful specification of who benefits from the process of upgrading requires closer attention to the role of workers as chain participants.23 As we know from a vast and growing literature, firms that successfully participate in global value chains may not deliver benefits to workers in the form of higher wages, greater job security or improved
working conditions (Ponte 2002; Schurman 2001; Talbot 1997; Wood 2001). Paying more serious attention to labor than it has received in this research to date is necessary to fulfill what the proponents of value chain analysis suggest is one of its primary objectives: to map the distributional incomes resulting from participation in international production networks (Fitter and Kaplinsky 2001). However, beyond looking at the extent to which workers benefit from processes of upgrading in terms of how value is distributed along the chain, discussions of upgrading also need to examine how workers contribute to the creation of value in terms of the labor process (Bair and Ramsay 2001; Smith et al. 2002). In this context, it is worth noting that in its original conception, the commodity chain construct recognized the importance of labor, both in terms of labor power as an input of the production process and as a link in the chain which has to be reproduced and is therefore linked to other commodity chains (for example, industrial workers are linked to agricultural commodity chains as consumers of food) (Wallerstein 2000).

The critiques of the upgrading discourse enumerated above point to the need to consider the broader implications of upgrading: ‘From the perspective of socially embedding the commodity chain, the question is what are the social implications of upgrading? How does upgrading translate into the lives of peripheral workers? . . . What are its implications for the gender-based division of labor? . . . The emphasis on the “economic” has often led the upgrading theorists to discount these crucial questions relating to the implications of upgrading for labor and the labor process’ (Rammohan and Sundaresan 2003: 906).

As Rammohan and Sundaresan suggest, while the upgrading construct is attractive as a heuristic for talking about mobility along the value chain, it is too narrow a concept to answer the range of questions the value chain perspective claims to address regarding ‘the winners and losers in the globalisation process, how and why the gains from globalisation are spread, and how the numbers of gainers can be increased’ (Gereffi et al. 2001b: 2). The framework’s proponents recognize ‘the numerous downsides to globalisation, including falling prices for producers and cases where upgrading of products or processes does not necessarily lead to increased profits and sustainable incomes’ (ibid: 2). But in order to understand these downsides we need to expand the scope of inquiry beyond the level of the firm, the value chain, or even the sector. In the fourth and final section of this paper, I outline several ways in which commodity chain research might be advanced along these lines.

**Beyond Value Chains: An Agenda for the Second Generation of Commodity Chain Research**

The next generation of commodity chain research should focus on complementing the strengths of the chain framework as an approach that allows us to conceptualize and study global capitalism as it is manifest in particular inter-firm networks that link economic actors across space. As noted above, the extant research has advanced significantly our understanding of the governance structure of commodity chains, specifying the various ways power is exercised by lead firms, and the implications of different governance structures for the upgrading prospects of actors in the chain. While the sectoral logics and inter-organizational dynamics of different kinds of commodity chain are increasingly clear, what we need to study more closely are the factors external to chains that shape their geography and configuration, and strongly affect the extent to which different actors benefit from participation in them. In using the term ‘external’, I mean to differentiate these contextual factors from the ‘internal’ variables privileged in Gereffi et al.’s. (2005) theory of value chain
governance – i.e. those describing characteristics of the production process and transaction costs along the chain, and the way that these produce particular governance structures. However, this terminology is misleading since I believe that these factors are not exterior to, but rather constitutive of, these chains in ways that are critical for understanding their social and developmental consequences.24

In the remainder of this section, I note a number of recent studies that underscore the need for studying how chains are articulated within and through the larger social, cultural and political-economic environments in which they operate. Expanding the scope of GCC inquiry in this direction will enable a better understanding of how outcomes of interest to chain researchers, including firm-level competitiveness, upgrading prospects and distributional issues are affected by factors such as regulatory mechanisms and market institutions.25

*Regulatory mechanisms*, particularly trade policy, shape the geography and configuration of many commodity chains in the global economy. The regulatory context in which international production networks are established and operate is an important element affecting the extent to which developing country exporters in particular benefit from their participation in commodity chains. For example, while Gereffi *et al.* emphasize the modular governance structure of the fresh vegetable value chain in explaining the relationship between African exporters and British importers (2005: 92–94), Chris Stevens argues that ‘the past success of . . . African horticultural producers may not be only the consequences of having met the demanding technical standards of the UK supermarkets that are the dominant force in the buyer-driven value chain . . . . Meeting technical requirements may be a necessary but not sufficient condition. Trade analysis suggests that past European Union (EU) trade policy has effectively excluded many of the most important global suppliers from the UK market’ (2001: 46). Stevens’ analysis of the EU market for agricultural products shows that trade policy rents in this sector influence the value chains linking suppliers to European markets, and concludes that this is likely to remain the case in the future, despite the trend (albeit ambivalent) towards liberalization of this sector under the WTO and the reforms of the EU’s Common Agricultural Policy.26

Stefano Ponte’s study of the coffee chain similarly underscores the importance of regulatory factors, in this case the existence and then demise of the international coffee agreements (ICA) which governed trade in this commodity and which influenced the distribution of profits along the coffee chain. Ponte documents how changes in the ICA regime have negatively affected developing country exporters: ‘From a balanced contest between producing and consuming countries within the politics of international coffee agreements, power relations shifted to the advantage of transnational corporations. A relatively stable institutional environment where proportions of generated income were fairly distributed between producing and consuming countries turned into one that is more informal, unstable, and unequal’ (2002: 1099; also see Talbot 1997).

Gereffi and Bair’s (1998) research on the North American apparel commodity chain suggests how changes in regulatory context can reshape global commodity chains. They have shown that the dramatic increase in apparel exports from Mexico after 1994 reflected the response of leading US textile and clothing companies to the new trade regime of the North American Free Trade Agreement (NAFTA).27 Lead firms controlling the apparel commodity chain reconfigured their international sourcing and production networks to take advantage of NAFTA’s new rules of origin affecting trade in textile products in North America. The initial post-NAFTA boom in apparel exports from Mexico and, to a lesser
extent, the expansion of local textile production signaled the rise of full-package production in Mexico, as US buyers sought to decrease their dependence on Asian manufacturers in favor of near-by producers south of the border whose fabrics and garments receive preferential access to the US market (Bair and Gereffi 2002).28

Bair and Gereffi’s research on the North American textile-apparel complex further underscores the influence of market institutions on the outcomes associated with reconfigured commodity chains, specifically the question of whether (or which) local firms and workers benefit from their participation in commodity chains. Having identified the emergence of full-package networks as a post-NAFTA organizational form linking Mexican exporters and US buyers, Bair and Gereffi analyzed data from fieldwork conducted in Mexico in order to see if the process of industrial upgrading at the firm level that they identified (as implied by the shift from the maquila to full-package production model) generated positive development outcomes in the various apparel-manufacturing centers that are home to most of Mexico’s garment exporters (Bair and Gereffi 2001). As the most recent addition to this body of work has emphasized, the spatial unevenness of Mexico’s export boom, and the devastating implications of the US economic downturn for Mexican exporters, underscore the precariousness and contingency of the positive developmental outcomes this export dynamism generated (Bair and Gereffi 2003).

In the apparel industry, as well as in Mexico’s other leading export industries, the institutional environment of Mexico’s contemporary political economy strongly affects the extent to which capital and labor benefit from their participation in post-NAFTA commodity chains, as suggested by Plankey Videla’s case study of a large Mexican apparel firm, ‘Moctezuma’, which successfully upgraded in the sense that it adopted ‘organizational, technological, and product innovations with the objective of capturing higher value-added activities’ (2003: 1).29 However, Plankey Videla concludes that the firm’s inability to translate this process into a foundation for sustainable competitiveness capable of generating benefits for the firm’s owners and workers has more to do with the characteristics of Mexico’s contemporary business environment (such as a banking system that fails to make affordable credit available to domestic firms) than with the organizational dynamics of the particular commodity chains in which this firm was participating.

The importance of the social and institutional contexts in which global commodity chains ‘touch down’ locally is hardly confined to the Mexican apparel industry. In their study of the Chilean salmon farming industry, Phyne and Mansilla demonstrate that the relationship between the different links in this commodity chain, and in particular the organization of work in Chile’s salmon farms, reflect in large measure the ‘historically-derived social relations in the Chilean countryside’ (2003: 113). Phyne and Mansilla’s analysis highlights the importance of Chile’s class structure and local power relations in explaining both the organization of the export-oriented aquaculture industry and the extent to which domestic capital and labor have benefited from the expansion of salmon farming in particular communities. Their work reminds us that ‘[e]conomic actors . . . are always embedded in dense social and institutional networks of relations (including labour relations and state regulations) at both national and local levels, and these relations impinge in important ways upon the variability of economic development outcomes across space’ (Smith et al. 2002).

In a very different geographic and industry setting, Gellert’s analysis of Indonesia’s participation in the timber commodity chain makes a similar point. Gellert shows how an oligopoly of timber-producing firms that forged an alliance with the state created an industrial association that effectively ‘upgraded’ Indonesian firms along the chain from
exporting timber to manufacturing plywood. The key figure in Gellert’s story is a politically well-connected industrialist, Mohammad ‘Bob’ Hassan, who parlayed his long-standing personal and business ties to President Suharto into an effective institutional promotion of the Indonesian industry and an alliance with a Japanese trading company. Gellert argues that the ability of Indonesia to become a major exporter in the global (particularly Japanese) timber market reflects the patron-client relationship between Hasan and President Suharto (2003).31

While most GCC research has focused on developing countries in Asia, Latin America and, to a lesser extent, Africa, the economies of the post-Soviet space may provide particularly fertile empirical ground for understanding how institutional contexts and their transformation shape and reshape commodity chains. The processes of restructuring and reform in Eastern and Central Europe over the course of the 1990s incorporated firms in the post-Soviet space into commodity chains in new ways. GCC analysis can help shed light on this process of incorporation and its possible consequences, but such research needs to be attentive as well to the particular ways in which ‘new’ organizational forms are shaped by pre-existing institutional configurations or business systems (Czaban and Henderson 1998; Hall and Soskice 2001; Stark 1992; Whitley 1999). If commodity chains are understood as ‘situationally specific and socially constructed’ (Gereffi et al. 1994: 2), then how is the embeddedness of these networks in the larger political and institutional environments demonstrated? To what extent do commodity chains exhibit features of path dependency, and with what implications for the various actors involved?

Finally, insofar as the GCC framework is understood as a methodology for studying the dynamics and consequences of a capitalist world economy, research in this vein will do well to devote more attention to the structural properties of contemporary capitalism. Can we explain similarities in the development of different commodity chains across industries in terms of systemic processes? For example, can we articulate the increasing salience of buyer-driven commodity chains with an analysis of structural transformation in the global economy?

As the literature on globalization has proliferated in recent years, many commentators have offered their interpretations of what has emerged as the dominant political-economic form following the crisis of US hegemony in the late 1970s, be it ‘the network society’, a post-modern capitalism characterized by ‘time-space compression’ or ‘empire’ (Castells 2000; Hardt and Negri 2000; Harvey 1989). One set of analyses has focused on the ‘financialization’ of global capitalism under US auspices as the key to understanding numerous phenomenon associated with the contemporary period: deindustrialization in the core economies, the East Asian ‘miracle’ on the one hand and Latin America’s ‘lost decade’ on the other, and the rise of the Washington Consensus (Arrighi 1994; Arrighi and Silver 1999). Arrighi et al. (2003) offer this argument in explaining why the rapid and widespread diffusion of manufacturing in the developing world over the last 20 years has resulted in industrial convergence between the global North and South (as measured by manufacturing as a percentage of GDP) without a corresponding process of convergence in the income gap separating the former from the latter. These findings lead to the conclusion that widespread industrialization in the semi-periphery and even much of the periphery means that the links in commodity chains consisting of production or manufacturing activities are characterized by increasing competition, leading to the observed outcome that ‘the industrialization of the semiperiphery and periphery has ultimately been a channel, not of subversion, but of reproduction of the hierarchy of the world-economy’ (Arrighi and Drangel 1990: 56).32
A commodity chain approach can contribute to this line of inquiry by allowing us to study how patterns of inequality between the global North and South are reproduced, in part, by the organization of international production networks and the relationships between firms located at different points in global commodity chains. Existing research on the competitive dynamics of chains, such as the various types of rents generated through the process of upgrading, which serve as barriers to entry for potential competitors can inform this research agenda (Kaplinsky 2000; Schmitz and Knorringa 1999). While GCC and value chain analysis provide a way to investigate empirically what high value-added and low value-added activities are in global industries, and where they are located spatially, we need to be wary of interpreting the transition from low value-added to high value-added activities as prima facie evidence of upgrading (especially since this is mere tautology when upgrading is defined as such a shift), let alone development.

World-system scholars do not view commodity chains as a set of sequential value-adding activities that are best understood as the opportunity set confronting firms pursuing the objectives of competitiveness and upgrading. Instead, this tradition of commodity chain research seeks to understand how the totality of relationships that constitute overlapping and interlocking commodity chains reflect ‘core-periphery relations [which] are determined not by particular mixes of activities, but the systemic outcome of the perennial gale of creative and not-so-creative destruction engendered by the struggle over the benefits of the world division of labor’ (ibid: 15). As Giovanni Arrighi has argued, a ‘particular mix of activities (e.g. specialization in manufacturing; export of commodities embodying high-wage labor and import of commodities embodying low-wage labor; export of capital and import of labor) may enable a particular state at a given time to appropriate a disproportionately large share of the benefits of the world division of labor, but other states may not be able to do so at the same time, nor may the same state be able to do so at another time’ (1990: 15).

The insistence of world-systems theorists that the ‘capability of a state to appropriate the benefits of the world-division of labor is determined primarily by its position, not in a network of exchanges, but in a hierarchy of wealth’ (Arrighi 1990: 15) underscores yet again the disjuncture between this holistic perspective, on the one hand, and the GCC and GVC approaches as network-oriented frameworks focused on firm-level industrial upgrading, on the other. Despite the important differences between the world-systems and GCC camps that I outlined earlier in this paper, one could argue that asking how commodity chains contribute to the reproduction of inequality in the global economy is the obverse but apposite question of the one that orients current value chain research: how can developing countries leverage participation in these chains to benefit various constituencies, including firms, workers and communities? Regardless of which way we ask the question, I have argued in this paper that the next generation of commodity chain research should expand the scope of analysis to encompass the regulatory mechanisms, market institutions and structural properties of contemporary capitalism that affect the configuration and operation of these chains as well as the developmental outcomes associated with them. While future research should build on the impressive achievements of the extant commodity chain tradition, the value of the commodity chain approach can be strengthened by paying greater attention to these factors, and the way in which they mediate the implications of participation in commodity chains for firms and workers in the global economy. This will advance our understanding not only of how commodity chain dynamics might be leveraged to advance the goal of firm-level industrial upgrading, but also how these chains, and the political and
social relations in which they are embedded, contribute to the process of uneven development characterizing global capitalism.

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Notes

1 A lively debate continues about the lessons to be drawn from the ‘East Asian miracle’ however. As has been widely noted (Amsden 1994; Berger and Beeson 1998; Wade 1996), the World Bank’s well-known assessment of the region’s success (1993) emphasized the soundness of the region’s macroeconomic fundamentals and downplayed the prevalence of factors, such as industrial policy, that departed from neoliberal orthodoxy.

2 In GCC terminology, the term ‘global’ is not meant to designate the geographical scope of the commodity chain, but refers instead to the distinction that Gereffi makes, following Dicken (1992), between internationalization and globalization. While the former ‘refers simply to the geographic spread of economic activities across national boundaries, “globalization” implies a degree of functional integration between these internationally dispersed activities’ (Gereffi 1994: 96). It is a premise of the GCC framework that contemporary globalization is characterized by transnational production systems that are increasingly integrated across space and coordinated through a variety of market and non-market forms, but it contains no specific definition of how ‘global’ such systems must be to qualify as global commodity chains. In fact, many studies of GCCs describe chains that are, at best, regional in scope – i.e. ‘North American’ chains with links in the United States and Mexico, or ‘European’ chains connecting activities in Germany and Romania. However, a GCC perspective would encourage analysis of how chains that are not necessarily global in scope are nevertheless configured by the dynamics of the larger global industries of which they are a part – for example, how regional production systems can be seen as a response to competitive pressures in the wider organizational field of a particular industry (Bair and Gereffi 2002). See Dicken et al. (2001) for a relevant discussion of spatial and scalar issues in the study of economic globalization.

3 Gereffi’s earlier work, and especially his dissertation on the pharmaceutical industry in Mexico, represents a link between the world-systems tradition of critical political-economy and the GCC approach. This point has been made by David Levy, who evokes the tradition of Stephen Hymer’s work (1976) on multinationals in describing Gereffi’s (1983) analysis of ‘the role played by MNCs in perpetuating dependent forms of development, on account of the market power they wielded over host country governments due to their possession of valuable technologies, brand names, and global distribution systems’ (2005: 8).

4 According to Hopkins and Wallerstein (1977: 112), the world-system has ‘operated “spatially” as an ever-present division of centers and hinterlands, or as we shall say “cores” and “peripheries,” united and reproduced through processes of capital accumulation and unequal exchange, and “temporally” in a fundamentally cyclical fashion, such that its “growth” . . . has occurred and continues to occur in “waves” . . . . The phases of its cycles, then, like the zones of its division of labor are not only the continuous consequences of social action, but also very real conditions of such action and very real constraints on their outcomes.’

5 ‘Opportunities for economic advance, as they present themselves serially to one state after another, do not constitute equivalent opportunities for economic advance by all states . . .
development in this sense is an illusion . . . . It cannot be generalized because it is based on relational processes of exploitation and relational processes of exclusion that presuppose the continually reproduced poverty of the majority of the world population’ (Arrighi 1990: 16).

Christopher Cramer’s critique of the global commodity chains literature is typical in this regard. In contrast to the growing disjuncture between the world-systems tradition of commodity chains research and the GCC tradition that I am emphasizing here, Cramer faults the global commodity chain literature for being ‘short on policy recommendations’ and fatalistic in its conclusions regarding developing-country upgrading. He argues that these limitations reflect the approach’s ‘intellectual roots in structuralist development economics’ and its inordinate emphasis on how firms in the core (i.e. the lead firms or chain drivers) constrain ‘the possibilities of economic activity and change in developing countries’ (1999: 1248). While I disagree with Cramer’s claim that the weaknesses of global commodity chains analysis stems from allegiance to a narrow structuralist or overly orthodox world-systems orientation, I agree with his conclusion that upgrading prospects in developing countries are not determined solely by the organizational dynamics of global industries, but are also shaped by internal political-economic factors, including the institutional capacity of peripheral states. In fact, in the final section of this paper I argue that commodity chain research should recognize the way in which the configuration and dynamics of chains, including the upgrading prospects they afford developing-country firms, are shaped by factors such as those underscored by Cramer’s study.

As Andrew Schrank has noted (2004), the disjuncture between the world-systems and GCC schools was evident as early as 1995, in a review of Commodity Chains and Global Capitalism by Wilma Dunaway and Donald Clelland in the Journal of World-Systems Research. Dunaway and Clelland criticize the volume for its developmentalist tone, lamenting that ‘[w]hat never appears in this book is the key idea that lies at the heart of understanding the international division of labor: unequal exchange. There is little or no attention to the central world-system thesis that exploitation and domination are structured at multiple levels of the commodity chains that are so painstakingly depicted’ (cf. McMichael 1995; see also the reply by Korzeniewicz et al. in the subsequent volume (vol. 2) of the Journal of World-Systems Research.


In his original elaboration of the GCC framework, Gereffi (1994) identified only the first three dimensions. Institutional context was added later (Gereffi 1995), and remains the least developed dimension. While it is true, as critics have pointed out, that the other aspects of the framework have received less empirical and theoretical attention than the governance dimension, the emphasis on governance in Gereffi’s work is intended to show that contemporary globalization entails new forms of coordination and control, which in turn affect the composition, organization and geography of various economic (and particularly industrial) activities. In this way, the elaboration of chain governance in the GCC literature has laid the foundation for more detailed investigations of the other dimensions of global commodity chains that the framework identifies.

Gereffi later suggested that the development of the internet’s commercial potential was leading to the emergence of a third governance structure: the internet-driven commodity chain (2001b). Seán O’Riain (2004) argues that research-intensive industries, such as software, are better described as having a technology-driven governance structure.

Henderson et al. (2002) criticize the PDCC/BDCC dichotomy, concluding that because this distinction is intended to refer to sectorally and organizationally specific empirical realities’, it is not ‘an ideal-typical construction’. However, this reading is inconsistent with descriptions of the governance forms found in the GCC literature (e.g. Gereffi 1994: 96–99).

For a particularly clear example of this influence, see the 2003 publication ‘Tehuacan: blue jeans, blue waters, and workers rights’ by the Maquila Solidarity Network, which employs a
general commodity chain orientation, and also draws substantially and fruitfully (though not uncritically) on GCC studies (particularly Bair and Gereffi 2001).

In this context, it is worth noting the elective affinity between neoliberal conceptions of development (i.e. growth via market-driven global integration as opposed to statist strategies) and the global value chain perspective, which examines the ‘possibilities for firms in developing countries to enhance their position in global markets’ (Gereffi et al. 2005). While the global value chain literature does not necessarily express skepticism or hostility towards the state, the role of governments as potential facilitators (or inhibitors) of development receives scant attention as compared with the emphasis placed on lead firms as agents of upgrading in most of the GCC and GVC literature.

These distinct emphases may be ignored by other observers who take the ‘contending concepts’ as synonymous or interchangeable, however. For example, Ponte (2002) refers to ‘global commodity chain analysis (also known as “value chain analysis”)’.

Although the authors acknowledge that ‘history, institutions, geographic and social contexts matter’ (82), they conclude that ‘the variables internal to our model influence the shape and governance of global value chains in important ways, regardless of the institutional context within which they are situated’ (99). Thus while they acknowledge the importance of these factors, the authors’ pursuit of parsimony result in their bracketing them as external to their explanatory framework, which focuses instead on industry structure and characteristics of the production process.

While both the GCC and GVC frameworks take the organizational field of the industry as their analytical domain, insofar as the Gereffi et al. article (2005) is taken as representative of the GVC approach, the latter appears to make stronger claims about the sectoral logics of value chains at the industry-level to explain variation across industries, whereas research in the GCC tradition has also looked to the different business strategies of lead firms as a way to explain variation in commodity chain organization within an industry (cf. Bair and Gereffi 2002).

In his recent contribution to the new edition of the Handbook of Economic Sociology, Gereffi places greater emphasis on the similarities between GCC and GVC analysis, noting that the shift to the latter language was essentially a tactical decision designed to avoid two problems with the earlier vocabulary. Value chain is preferred to commodity chain because it ‘focuses on value creation and value capture across the full range of possible chain activities and products (goods and services), and because it avoids the limiting connotations of the word “commodity”’ (2005). In their discussion of the commodity chain concept, which they reject in favor of a ‘global production networks’ framework, Henderson et al. (2002) also note the limitations of the extant terminology, deciding that the chain metaphor is too linear to convey the complex and interactive nature of networks, and the term commodity too contaminated by ‘orthodox economics’ to capture the social processes involved in the production of goods and services and the reproduction of knowledge, capital and labour power (pp. 444–445).

David Levy takes the chain literature to task for operating with a narrow view of governance as processes of coordination and control that are internal to the production network itself. In this context he notes that the more elaborate discussion of governance offered by Gereffi et al. (2005) is ‘still economistic in orientation, drawing from transaction cost economics and addressing the nature of ownership and forms of coordination. The discussion of power is mostly limited to considerations of monopolistic possession of technologies, brands, and management skills that enable the extraction of economic rent’ (2005: 15).

Humphrey and Schmitz (2001: 22) define governance as ‘the inter-firm relationships and institutional mechanisms through which non-market coordination of activities in the chain is achieved’. It is interesting to note their reference to institutional mechanisms as a critical component of governance which usefully supplements what at times appears to be an exclusive emphasis on the market power of lead firms in some GCC and GVC discussions of governance. A fruitful avenue for future GCC and GVC research would be to consider how chain governance is impacted by the growth in global business regulation, evident in the rise of various institutional arrangements,
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some of which have emerged at a supranational level such as the so-called TRIPS (trade-related intellectual property rights) (Braithwaite and Drahos 2000).

In their discussion of industrial upgrading, Fleury and Fleury (2001: 117) ‘start from Gereffi’s (1999) definition: “Industrial upgrading involves organisational learning to improve the position of firms or nations in international trade networks.” Thus, upgrading is at the same time a process (organisational learning) and an aim in itself (becoming more competitive in trade networks.’

The Gereffi et al. (2005) contains a similar slippage between the industry, firm and country levels of analysis, without explicating the causal relationships or mechanisms between these levels: ‘The evolution of global-scale industrial organization affects not only the fortunes of firms and the structure of industries, but also how and why countries advance – or fail to advance – in the global economy.’

This interpretation was proffered in a 1986 article by Arrighi and Drangel. They argue that firms within commodity chains are constantly struggling to insulate themselves from competitive pressures by transferring less profitable activities on to other participants: ‘. . . economic actors (irrespective of whether they seek a remuneration for labor-power, assets, or entrepreneurial energies), far from accepting competition as a datum, continuously endeavor to shift, and some succeed in shifting, the pressure of competition from themselves onto other actors. As a result, the nodes or economic activities of each and every commodity chain tend to become polarized into positions from which the pressure of competition has been transferred elsewhere (core-like activities) and positions to which such pressure has been transferred (peripheral activities)’ (p. 17). Interestingly, in the introduction to Commodity Chains and Global Capitalism, Gereffi et al. cite Arrighi and Drangel’s discussion and contend that the ‘GCCs approach explains the distribution of wealth within a chain as an outcome of the relative intensity of competition within different nodes’ (1994: 4).

Although it is beyond the scope of this paper, the importance of gender as a social category implicated in the geography and configuration of global commodity chains, and the gendered implications of commodity chain dynamics, including industrial upgrading, has been largely ignored in chain research of all varieties (though see Yeates (2004) for an exception).

I am indebted to Rachel Schurman for suggesting this terminology of ‘contextual’ as opposed to ‘external’ factors, and for reminding me of the constitutive role they play in shaping the development and evolution of commodity chains over time.

By market institutions, I refer to the set of institutions ‘that enable actors in markets to organize themselves, to compete and cooperate, and to exchange’ (Fligstein 1996: 658). Among those identified by Fligstein in his ‘markets as politics’ framework are property rights, governance structures, conceptions of control and rules of exchange.

Susanne Friedberg’s (2004) work underscores the way in which commodity chains and their contemporary governance structures are shaped by historical factors, in this case the legacy of European colonialism in Africa, as manifest in the very different kinds of networks linking Zambian and Zimbabwean farmers and green bean exporters to buyers in France and the UK, respectively.

The research also drew on earlier work analyzing the dynamics of the apparel commodity chain and its relevance for upgrading and development trajectories in East Asia (Appelbaum and Gereffi 1994).

However, Mexico’s competitive position in the US apparel market has been substantially eroded by China’s entrance into the World Trade Organization and the phase-out of the Multifibre Arrangement (MFA) under the Agreement on Textiles and Clothing. See Begg et al. (2003) for a comparable discussion of how changes in the prevailing trade regime have affected the organization of apparel production in East-Central Europe.

In explaining why ‘Moctezuma’ attempted such an ambitious upgrading program when it did not appear to need it, Plankey Videla notes the importance of isomorphic pressures created by
private consulting firms, international financial institutions and state or local development agencies that encourage firms to undertake the type of restructuring that occurred at ‘Moctezuma’. Research on GCCs in developing countries (or the transition economies) should pay particular attention to the mimetic and normative force that the upgrading discourse can assume, especially when that discourse derives as much from the dissemination of ‘applied’ value chain analysis as from popular management philosophies.

A similar point is made by scholars working in the field of economic sociology (Smelser and Swedberg 1994). In a now classic paper that galvanized research in what has become known as the new economic sociology, Mark Granovetter (1985) directed our attention to the way in which economic activity is embedded in networks of social relations. Given the interests that the GCC and new economic sociology literatures share with regard to the network as an organizational form, it is somewhat surprising that these literatures have evolved, for the most part, in isolation from each other. The only references to commodity chains found in the Handbook of Economic Sociology appear in Gereffi’s contribution to the volume, and a recent text by Swedberg (2003) that provides a comprehensive introduction to the field of economic sociology contains no references to commodity chains.

Gellert (2003: 55) underscores the implications of his analysis for the upgrading construct when he argues that although one might interpret Indonesia’s shift from timber exporter to plywood producer as a move up the commodity chain, ‘moving “up” involves neither real movement nor, especially, national movement (as the image implies) as much as the capture of value-added or surplus value by particular actors as a result of political struggle along the chain’.

For a debate regarding the interpretation of Arrighi et al.’s findings, see Alice Amsden’s response in the same issue of Studies in Contemporary International Development, as well as the authors’ reply.

References


