FRONTIERS OF COMMODITY CHAIN RESEARCH

Edited by Jennifer Bair

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7 Global Commodity Chains, Market Makers, and the Rise of Demand-Responsive Economies

Gary C. Hamilton and Gary Gereffi¹

IN THIS CHAPTER, WE CALL ATTENTION TO THE DISJUNCTURE within economic sociology at the macro level of analysis and examine one aspect, namely the cleavage between the conventional approach, which emphasizes structures and institutions, and the global commodity chain (GCC) approach, which focuses on organizational processes.² We argue that it is possible to reconcile these approaches if, and only if, the historical dynamics of globalization are taken seriously and incorporated into economic sociology.

There is truth to the aphorism that you go where you look. Economic sociologists are a diverse group. They look in different directions and arrive at often contradictory conclusions. Some look at structure, particularly the structure of networks; others look at institutions, mainly political and social; and yet others look at organizational processes. Those adopting structuralist and institutional perspectives, the conventional core of economic sociology, find plenty of evidence supporting their claims that middle-level phenomena, such as social networks and economic policies of the state, are crucial factors shaping the organization of local and national economies. These same theorists often downplay or even ignore the effects of global economic processes on local and national levels of economic activity. As a consequence, concludes Richard Swedberg in his programmatic evaluation of the field, the conventional approaches in economic sociology have "shown little interest in connecting up to other research traditions that study the international economy. . . .

This trend represents a weakness in contemporary economic sociology, as does its absence from the debate on globalization" (2003: 69).

Those adopting the alternative GCC approach to economic sociology also have blinders. GCC theorists locate plenty of evidence supporting their claims that the dynamics of production and distribution underpin the organization of the global economy, or at least segments thereof. As a consequence of this focus, concludes Jennifer Bair in her evaluation of this literature, GCC theorists have "become increasingly oriented analytically towards the meso level of sectoral dynamics and/or the micro level of firm upgrading." She concludes 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 development dynamics of contemporary capitalism at the global-local nexus" (Bair 2005: 154).

Indeed, many theorists of both the conventional and GCC approaches underplay the historical dynamics of their respective topics. Although using different analytic lenses and arriving at very different conclusions, they focus primarily on some aspect of economic organization, particularly inter- or intra-firm relationships, and use "meso-level" variables as proximate causes for the nature of, or changes in, economic organization. For most conventional theorists, the proximate causes of economic organization are sociological variables, usually some combination of network structure, social relations, economic policies, and bureaucratic efficiencies. In the case of GCC theorists, the proximate causes are industry variables: product characteristics, technology levels, inter-firm linkages, barriers to entry, and governance structures. Despite a similar concern with inter-firm networks, the two perspectives differ in the proximate causes, which in turn creates an apparent divergence between the two perspectives. We contend, however, that the divergence disappears once a longer-term vantage point is adopted.

The Disjuncture Within Economic Sociology

In the past decade, most economic sociologists focused on the significance of inter-firm networks and their institutional environments in understanding the organization of economic activities, but in very different ways. In this section, we will outline the conventional approach in order to contrast this with the GCC approach, which we describe in the following section.

Network research in economic sociology grew out of an interest in trying to verify and work out the implications of C. Wright Mills's thesis in *The Power Elite* (1956), but efforts (for example, Dornhoff 1967, Mintz and Schwartz 1985) to develop a theory and methodology of networks languished until the early 1990s (Scott 1991). At that time, sociologists developed a number of approaches to renew sociological interest in the linkages between networks and economic organization. The most prominent reengagement with these ideas came from Mark Granovetter's work (1973, 1974), and especially from his influential article "Economic Action and Social Structure: The Problem of Embeddedness" (1985), in which he theorized the importance of social relationships in the formation of economic organization. Since its publication, Granovetter's theory of embeddedness has provided economic sociology with its most widely acclaimed programmatic statement.

The importance of this article is in Granovetter's contention that the embeddedness perspective offers an effective sociological counterpart to Oliver Williamson's microeconomic transaction cost theory. Williamson (1975, 1985) argues that economic organization (that is, intra-firm organization) grew out of efficient ways in which individual firms solve the transaction costs involved in doing business. Objecting to Williamson's economic individualism, Granovetter counters with the thesis that all economic actions are socially situated and grounded in ongoing networks of social relationships. "Social relations, rather than institutional arrangements or generalized morality," argues Granovetter, "are mainly responsible for the production of trust in economic life" (1985: 491). The networks of social relations constituted by trust, in turn, organize the economy.

In making this claim, Granovetter clearly recognizes the meso-level nature of his theory. "(T)he causal analysis adopted in the embeddedness argument is a rather proximate one. I have had little to say about what broad historical or macro-structural circumstances have led systems to display the social-structural circumstances they have, so I make no claims for this analysis to answer large-scale questions about the nature of modern society or the courses of economic and political change" (1985: 506). Granovetter, however, is not saying that embeddedness has nothing to do with the macro structures of economy and society. Quite the contrary, Granovetter is making a case for using the meso level as a way to create an "adequate link between macro- and micro-level theories." Therefore, he concludes, "The use of embeddedness analysis explicating

proximate causes of patterns of macro-level interest is well illustrated by the markets and hierarchies question. The extent of vertical integration and the reasons for the persistence of small firms operating through the market are not only narrow concerns of industrial organization; they are of interest to all students of the institutions of advanced capitalism" (1985: 507).

The Meso-Oriented Conventional Approaches

Understanding advanced modern economies through meso-level variables has been the hallmark of economic sociology. The most prominent theme running through much of this literature is an emphasis on the proximate causation between embeddedness and organizational outcomes. This theme is developed in two distinct ways, depending on the conceptualization of where economic activities are embedded: in network structure itself, or in social, economic, and political institutions culminating with the state.

Many researchers, using advanced network methodologies, link the formal structural properties of networks to diverse sets of economic outcomes (for example, Burt 1992, 2004; Podolny 1993, 2005; Uzzi and Spiro 2005; Wasserman and Faust 1994). Most of these theorists assume that immediate structural properties of networks (and not the long-term causes of networks) produce observed outcomes, such as higher profits, greater upward mobility, and more power and influence.³ Despite their emphasis on outcomes for individual actors inside networks and not on the origins of the network themselves, there is also an assumption that activities of individual actors have effects on the macro level; namely, that the macro-level structures represent path-dependent accumulations of individual actions taken in the context of diverse structural configurations.

Another set of researchers focuses on the relational and institutional foundations in which economic networks are embedded. Some of these studies came before the publication of Granovetter's 1985 article, but they uniformly took on greater theoretical meaning after it appeared. These researchers examined business group networks (Hamilton and Biggart 1988; Gerlach 1992; Granovetter 1994, 2005; Stark 1996; Stark and Bruszt 1998; Biggart and Guillén 1999; Guillén 2001), ethnic business networks (Waldinger 1986; Waldinger, Aldrich, and Ward 1990; Light and Bonacich 1988; Light 2005), and gender networks (Biggart 1990; Brinton 2001). Unlike structuralist interpretations,

these network studies show that the embeddedness of economic networks in social institutions produces economic outcomes. However, as in structuralist accounts, the researchers typically do not analyze the long-term or underlying causes of the networks themselves, but rather the shorter-term institutional factors that shape them, in one form or another, without actually causing them in the first place. For example, a number of the theorists cited above examine the effects of social (national, ethnic, or gender) relations on economic activity, and thereby assume, implicitly, that these social relations produce the economic activity, instead of merely shaping what would have occurred in some guise even in the absence of those social relations.

Although many conventional theorists look at the link between social institutions and economic organization, the more common focus in the institutional approach is the state. This variant of the institutional approach is less inspired by Granovetter's sociological thesis than by a new interest in industrial organization, an interest spawned in part by a number of diverse publications in related fields, including those by Williamson (1975), Chandler (1977, 1990), Piore and Sabel (1984), Newfarmer (1985), Harvey (1989), Scott (1988b), and Porter (1990). Sociologists began to rework the conclusions of these studies. Reacting to Chandler's (1977) efficiency explanation for American corporate structure, a number of sociologists (Perrow 1981, 2002; Roy 1997; Fligstein 1985, 1990; and Prechel 1990, 2000) countered with their own interpretations. Although differing somewhat from one another, all of these sociologists argued against an efficiency explanation and for an institutional explanation that included the political power of the state to determine corporate outcomes.

This interpretation initially paralleled, and then later merged with, a concurrent theme that a number of sociologists began to promote regarding the relative autonomy and administrative capacity of the state (for example, Skocpol 1979; Evans, Rueschmeyer, and Skocpol 1985; Evans 1995). In this reworking of an older Marxian conception of the state (Poulantzas 1969; Jessop 1982; Block 1987), political institutions specifically relating to the bureaucratic apparatus of the state were different and partially autonomous from the interests of the "ruling class." This abstract and, within the neo-Marxian literature, rather erudite thesis was brought to earth by a number of scholars focusing on Asia, who borrowed these ideas and empirically applied them to explain East Asian industrialization.

The first Asianist to do so was Chalmers Johnson (1982). In his book on MITI, he posited the idea of the "developmental state" and argued that Japanese industrialization could be explained largely by the state's active intervention in the economy. According to Johnson, well-trained and well-disciplined bureaucratic officials developed and implemented a rational plan creating Japan's globally competitive industrialization. Many other Asian scholars (for example, Cummings 1984, Gold 1986; Amsden 1989; Wade 1990; Woo 1991) soon elaborated the causative formulations of Johnson's thesis for other rapidly industrializing Asian economies, especially South Korea and Taiwan. Peter Evans, who first put forward the importance of the state regime in Brazil's economic development (1979b), conceded that East Asian states were "stronger" than Latin American states, and thus could industrialize faster and more successfully than those in Latin America (1987). He further argued that the presence of a "Weberian bureaucracy" was instrumental in establishing the Asian states' "embedded autonomy" (Evans 1995; Evans and Rauch 1999).

This literature emphasizing the signal importance of political institutions in causing economic organization was further reinforced by a separate and diverse literature from scholars examining primarily European economies (Boyer 1990; Hollingsworth, Schmitter, and Streeck 1994; Hollingsworth and Boyer 1997; Dobbins 1994; Fligstein 1996; Berger and Dore 1996; Whitley 1999; Quack, Morgan, and Whitley 2000; Hall and Soskice 2001), but also those of Asia (Whitley 1992) and the United States (Nelson 1994). Strands of this literature are variously known as regulation theory (for example, Boyer 1990), business systems (such as Whitley 1992, 1999), and varieties of capitalism (Hollingsworth and Boyer 1997; Hall and Soskice 2001), but taken as a whole, the literature concludes that the intertwined nature of national and subnational political and social institutions inexorably localizes the conduct of capitalism. Most (but not all) of these theorists would agree with Block and Evans's most recent conclusion: "(S)tate and economy are not analytically autonomous realms but are mutually constituting spheres of activity. . . . Our argument is that *market economies are embedded within a civil society that is both structured by, and in turn helps to structure, the state* [our emphasis]" (2005: 505–506).

Conventional approaches typically treat institutions as prior, proximate, and exterior forces that, collectively or singly, shape economic organization. Extending this line of reasoning, many institutional theorists end up concluding that

the global economy is little more than an aggregation of national economies. For them, globalization mainly refers to processes encompassed by and contained within national economies. Some national economies are big and globally significant, such as that of the United States; others are small and relatively unimportant globally, such as Nepal's; but add them all up and you get the global economy.

Following this logic, such a leading economic sociologist as Neil Fligstein finds the literature on globalization unconvincing and suggests that the expansion in world trade "has neither created widespread changes in the organization of production nor undermined the power of governments" (2001: 222). Big governments and big firms, he argues, stabilize national economies and create international agreements that stabilize the global economy (Fligstein 2001, 2005). Not citing the GCC literature, Fligstein pays little attention to specific industries in his analysis of twenty-first-century capitalism and seems oblivious to what has occurred in Asia in the last half of the twentieth century, all of which, we believe, are crucial to global capitalism today.

Another indication of the divergence between economic sociology and globalization studies comes from none other than Richard Swedberg himself. As quoted earlier, Swedberg (2003) observes that the new economic sociology pays very little attention to globalization. Yet in the same book, despite his call for more attention to globalization in economic sociology, Swedberg's (2003) programmatic statement on the "principles of economic sociology" contains neither a chapter on globalization nor even a reference to global commodity chains—this despite the fact that Gereffi's work is well-known to him and is included in both editions of *The Handbook of Economic Sociology*, books co-edited by Swedberg.

In fact, so silent are most conventional theorists about global commodity chains that one might argue that their very silence is a choice to support explanations centered on the state or other institutions, and to deny that global processes matter in explaining economic organization. Victor Nee, a China specialist and prominent economic sociologist, is very explicit about his aversion to considering the impact of exogenous forces on the contemporary Chinese economy and society: "I have not put as much emphasis as others have on the international activities of Chinese firms. The focus has been on domestic market activities rather than on globalization per se. . . . my emphasis has been to develop an endogenous explanation for the rise of capitalism in China. . . . So if I slight the exogenous forces, it's intentional" (Nee 2007: 5). According

to Nee, the fundamental challenge for economic sociologists is "to develop a theory of endogenous institutional change" (2007: 6), which leads him to ignore the role of global or transnational factors in explaining the extremely rapid growth occurring not only in China but in a multitude of developing economies.

In claiming that the state and economy are "mutually constituting spheres of activity" (Block and Evans 2005), state-centered economic sociologists are, in reality, only interested in one half of the dialectic they posit. In trying to provide a distinctly sociological explanation for economic organization, they have lost sight of all economic activities except for those reinforcing their theories. This stance amounts to a form of sociological imperialism, a stance used perhaps to counterbalance the imperialist attitude that they attribute to economists. However, in so doing, they also ignore a world of economic activities in which profits, prices, and efficiencies do matter to the businesspeople actually involved, a world of activity that is globally oriented and that has greatly changed in the course of the past half century.

Using Global Commodity Chain Analysis to Move Beyond Conventional Economic Sociology

As Jennifer Bair's introduction to this book demonstrates, a substantial and diverse group of interdisciplinary scholars have used the GCC approach to analyze the globalization of economic activity that has occurred in the past fifty years. Many of these researchers focus on inter-firm linkages in global production networks and the implications and effects of these networks on local, national, and regional economies in which the networks are located. As Bair correctly notes in the introduction and elsewhere (Bair 2005), most of this research is "oriented towards the micro- (individual firm) or meso- (sector) level, as opposed to the macro and holistic (levels)."

These previous GCC studies reach several general conclusions: first, that national economies are interconnected through firms doing business with one another, and that the spread of these interconnections is global; second, that whatever social or political relations might shape these interconnections, firms are also linked through economic processes, which include manufacturing, distribution, merchandising, and retailing; and third, these interconnections among firms are organized and controlled, not directly by governments or ethnic groups, but rather by firms occupying points of leverage in the chain.

In this chapter, we go beyond these conclusions to demonstrate macro-level consequences of the spread of GCCs. In particular we will show the connection between the global spread of GCCs and the development of what Feenstra and Hamilton (2006) call “demand-responsive economies.”

Tracking Global Commodity Chains: International Trade and the Organization of Industries

Empirical GCC analysis is focused on industries and products. A good first step to demonstrate the global significance of commodity chains is through an analysis of international trade. The growth of world trade has received considerable attention in the globalization literature because of its direct relevance to employment, wages, and the expansion of free trade agreements around the world. However, a number of economists, especially in the trade field, argue that international trade reflects key new features in the global economy that underscore the salience of a GCC approach. For example, Paul Krugman (1995) has argued, like Sachs (1998) and Rodrik (1997), that the rapid growth of large volumes of manufactured exports from low-wage to high-wage nations is something new and important. The biggest change at the structural level is the rise of intra-industry trade in parts and components, especially those that are used as inputs for final assembly in other countries.

What has made the international trade of inputs possible is the “ability of producers to *slice up the value chain*, breaking a production process into many geographically separated steps” (Krugman 1995: 332). Feenstra (1998) takes this idea one step further, and explicitly connects the “integration of trade” with the “disintegration of production” in the global economy. The rising integration of world markets through trade has brought with it a disintegration of the production process of multinational firms because companies are finding it profitable to “outsource” (domestically or abroad) an increasing share of their non-core manufacturing and service activities.

The importance of looking at international trade from an “organization of industries” point of view can be seen in terms of contemporary U.S.-China relations. In 2007, the United States had a record bilateral trade deficit with China of \$256.3 billion, which comprised \$321.5 billion in imports and \$65.3 billion in exports (U.S. Bureau of the Census, Foreign Trade Statistics). However, these figures are deceptive because China’s exports of consumer products rely heavily on imported inputs from the United States and especially from other East Asian countries. Up to two-thirds of China’s manufactured exports come from foreign-invested firms (Gereffi 2007), and four Asian economies

(Japan, South Korea, Taiwan, and Hong Kong) account for 70 percent of the total direct foreign investment in China (Lardy 2003).

China is the world’s factory and the United States is its supermarket. China’s role in many of these export-oriented industries has mainly been to assemble products of components made elsewhere. In the case of Apple’s enormously popular iPod, researchers at the University of California, Irvine, calculated how the \$299 retail value of the 30-gigabyte video iPod is distributed between Apple and all the companies that make the 450 parts that go into the iPod, which is assembled in China. The findings provide a rather startling insight into who captures most of the value from global production. Apple was the biggest winner (\$80 of the retail value, for the conception, design, and branding of the product), and a Japanese manufacturer’s (Toshiba’s) hard drive was the most expensive component (\$63). American companies and workers captured a total of \$163 (about 55 percent of the retail value), whereas the cost of the final assembly done in China was just \$4 per unit. Thus, “even though Chinese workers contribute only about 1% of the value of the iPod, the export of a finished iPod to the United States directly contributes about \$150 to our bilateral trade deficit with the Chinese” (Varian 2007).

One of the major strengths of the GCC framework for examining contemporary issues such as U.S.-China trade is that it ties the concept of the value-added chain directly to the global organization of industries (see Gereffi and Korzeniewicz 1994; Gereffi 1999, 2005). This insight led to identification of global buyers (mainly retailers and brand marketers, or “manufacturers without factories”) as key drivers in the formation of globally dispersed production and distribution networks, known as “buyer-driven” chains (Gereffi 1994). However, this same approach can be used to track the emergence of GCCs over time, as we will see in the following section.

Global Historical Trajectories and National Economic Organization

Many international trade economists analyze factors influencing the balance of trade throughout the world. However, they typically use a level of aggregation that makes detailed descriptions and causal attributions impossible. Indeed, they use trade data only as aggregate measures of rapid growth or as loose indications of outcomes produced by state planners.

In an innovative break with this tradition, Feenstra and Hamilton (2006) developed ways to use trade data as historical records to chart the formation and spread of GCCs from the 1970s on. The trade data they used was compiled by Feenstra for the International Trade and Investment Program at

the National Bureau of Economic Research from a comprehensive database of all U.S. imports from 1972 to 2001. This is the most disaggregated trade data available anywhere.⁴ What this database shows are “the footprints left behind on the path to [East Asian] industrialization” (Feenstra and Hamilton 2006: 239). The data represent a product-level record of growth and economic transformation, and are the best remaining evidence of the actual items that both led to the formation of GCCs and fueled Third-World industrialization. These data not only give analysts an ability to track the changes in the products being produced for export but also permit them to make inferences about the economies producing those products.

To illustrate how these data can be used, let us first establish two trends for consumer goods. We emphasize consumer nondurables for the simple reason that, aside from petroleum products, the largest categories of U.S. imports are consumer goods. Figure 7.1 displays imports as a percentage of total U.S. consumption in major categories of consumer goods (except for

FIGURE 7.1. Import penetration in consumer goods

SOURCE: Robert C. Feenstra, 2001, “U.S. Imports and Exports: Data and Concordances,” NBER Working Paper #9387, available online at <http://www.internationaldata.org>.

FIGURE 7.2. Imports of general merchandise from Asia

SOURCE: Robert C. Feenstra, 2001, “U.S. Imports and Exports: Data and Concordances,” NBER Working Paper #9387, available online at <http://www.internationaldata.org>.

automobiles) at ten-year intervals from 1965 through 1995. In 1965, no consumer good import contributed 10 percent of total U.S. consumption in that category. In fact, the only U.S. import above 10 percent of total consumption in 1965 was an intermediate good, steel from Japan, most of which went into the booming U.S. automobile business in a period of labor unrest in U.S. steel mills. From this low point, consumption of imported goods in all the major categories of consumer goods rose rapidly. Now for the second trend: Figure 7.2 shows that the vast majority of these imported goods came from just a handful of East Asian countries: Japan, South Korea, Taiwan, Hong Kong, and after 1985, China.

These two trends suggest that the spread of GCCs rapidly increased after 1965 and that the largest density of GCCs developed in East Asia. These two implications, of course, have to be qualified, because they derive from a database that contains only U.S. imports. Nonetheless, this gives us access to GCCs in the world’s largest market for consumer goods over multiple decades.

Using the database derived from records of the U.S. Customs Service, Feenstra and Hamilton (2006) examine in detail the development of GCCs in two prominent East Asian economies, South Korea and Taiwan. They show that during the initial period of industrialization, from 1965 to 1985, the primary goods exported from these two countries were mostly the result of buyer-driven commodity chains and contract manufacturing.

In summarizing these findings, it is well to keep two facts in mind. First, in the initial decade of rapid economic growth, roughly from 1965 to 1975, most of the growth in both economies was accounted for by the export sector. This is particularly true for Taiwan, whose population and total economy were roughly half the size of South Korea's, but whose export totals to the United States exceeded Korea's every year from 1965 to 2000. Second, in the late 1960s, exports to the United States suddenly leaped forward, making the United States by far the largest single market for exports from South Korea and Taiwan. Moreover, unlike South Korea's and Taiwan's exports to other countries such as Japan, which included many agricultural products, the exports to the United States overwhelmingly consisted of diverse manufactured goods. In fact, in the twenty years from 1965 to 1985, nearly 50 percent of the value for all manufactured goods exported from Taiwan and 40 percent from Korea went to the United States. In a nutshell, the growth of the South Korean and Taiwanese economies during this period primarily resulted from their manufactured exports to the United States.

Feenstra and Hamilton (2006) use the U.S. import database to examine the economic organization of both the exporting and the importing countries. For the United States, the main importing country, they ask, "How does one explain, in organizational terms, the rapid growth of imports of consumer goods?" For South Korea and Taiwan, two of the main exporting countries, they ask, "How does one explain, in organizational terms, the rapid growth of exported consumer goods?"

In answer to the first question, they demonstrate that the rapid growth in imports arose as a consequence of an economic transformation in the U.S. economy, a transformation they call, following Bluestone and his colleagues (1981), a "retail revolution." The full scope of this retail revolution is only now being examined in detail (Petrovic 2005; Hamilton, Petrovic, and Feenstra 2006; Hamilton, Senauer, and Petrovic forthcoming), but the broad outlines are clear enough. In the last half of the twentieth century, driven by the sud-

den spurt of shopping malls across the United States, the retail sector of the American economy greatly expanded and changed form. Chain stores came to dominate most sectors of retailing. These sectors also became highly concentrated, with a handful of the largest chains having a huge market share in each sector. An indication of these changes is that in 1955 there were only about five hundred shopping centers in the United States, most of which were quite modest in size. By the year 2000, that number had grown to fifty thousand, many of which were gargantuan. Before the 1970s, shopping centers and malls were largely American, with a few exclusive European exceptions. By the year 2000, shopping centers and malls had become a global phenomenon.

In response to the initial growth of these shopping centers, new breeds of chain stores emerged, namely specialty retailers, such as The Limited and Gap, and discount retailers, such as Wal-Mart and Target. It is no coincidence, in fact, that Wal-Mart, Kmart, Target, and Kohl's all started discount retailing in the same year, 1962. It was also no coincidence that all the leading specialty retailers, including Home Depot, Office Max, Best Buy, Circuit City, The Limited, and Gap, started their current businesses in the 1960s and 1970s. Another equally important part of the retail revolution was the rise of brand-name merchandisers, such as Nike, Dell, and a host of others—merchandisers that marketed brand-name goods, but owned few if any retail outlets or factories.⁵ By the 1980s, brand-name merchandisers and specialty retailers dominated an increasing range of consumer goods, including footwear, garments, toys, bicycles, and non-Japanese consumer electronics.

In answer to the second question, Feenstra and Hamilton show that the retail revolution resulted not only from the rapid proliferation of organizational buyers but also from the emergence of new forms of offshore manufacturing—in other words, buyer-driven commodity chains (see Gereffi 1994). The new types of retailing and the new sources for manufacturing are two aspects of the same phenomenon. A third and related element is the comprehensive transformation in global logistics, which facilitated the linkages between U.S. and European retailers and Asian manufacturers (Bonacich and Wilson 2007). Trade data show that, in a matter of just a few years, these buyer-driven chains had become a key force that created both the emergence and the divergence of Asian economies, and whose underlying economic processes produced what Feenstra and Hamilton (2006) call "demand-responsive economies."

The Rise of Demand-Responsive Economies⁶

A demand-responsive economy is one that develops and becomes economically organized in direct response to the demand from intermediary actors in global commodity chains. This demand is created by orders from retailers and brand-name merchandisers—that is, the “big buyers,” to use Gereffi’s term (1994). Analysts conceptualize most economies as producer-driven. From this perspective, manufacturers secure the primary and intermediate inputs they need in production, and organize their distribution channels. Retailers and final consumers are the last steps in these commodity chains.

By contrast, demand-responsive economies are organized “backward” from final demand, which is estimated by retailers and merchandisers through point-of-sales information or other means, such as focus groups. Retailers and merchandisers use that information to design products and to locate manufacturers that can produce the goods at the quantity and quality levels required by the big buyers. The manufacturers, in turn, secure the inputs needed to produce the ordered goods. In the case of a long-term relationship between big buyers and Asian manufacturers, a market for intermediate parts and services also develops, which leads to an economy organized around contract manufacturing.

The conventional narrative about East Asian industrialization that virtually all analysts give is a supply-side story. We know that big buyers have been active in Asia since the late 1960s, but there has been very little research linking this fact with East Asian industrialization. Quite the contrary, the studies of capitalist development in Asia continue to debate the same three sets of supply-side causes that first appeared in the late 1970s and 1980s: (1) the macro-economic environment (market fundamentalism, “getting the prices right”); (2) the developmental state (“getting the prices wrong”); and (3) non-state institutions, such as the family and authority systems, and related cultural factors. The pros and cons of this debate about the origins of East Asian industrialization remain important even today because analysts seek a balanced assessment of causes in order to formulate policies that would ostensibly allow developing countries to “achieve sustainable high growth rates” (Ito 2001: 91) without repeating previous mistakes, such as occurred in the Asian financial crisis.

Throughout this debate, there is an unexamined article of faith that the causes for the Asian Miracle, as well as the causes for continuing changes in

the Asian economies, are to be found solely in Asia, and that the story of Asian industrialization is strictly a supply-side narrative (World Bank 1993). The underlying assumption, shared by nearly all participants in the debate, is that the Asian Miracle is an Asian product. Their theories are country-centered, producer-driven accounts of how this Asian product was created in situ.

In each interpretation, the presumed set of causes (such as market failure, macro-economic management, state policy, institutional environment) forms a structure of constraints, incentives, and “organizing logics” (Biggart and Guillén 1999) that are external and temporally prior to economic activity and that, in turn, produce a specific set of organizational and performance outcomes within the economy. Although many of these standard explanations acknowledge the importance of what is ambiguously described as “globalization” or “global capitalism” or the “world economy,” very few theorists of whatever bent incorporate globally significant economic or organizational factors in their causal explanations of local and national economic development.

The extraordinary thing about all of these interpretative accounts is how rarely any of them ever mention the demand-side of Asia’s export orientation. Of course, theorists frequently cite export trade as “the engine of growth in East Asia” and emphasize the bilateral trade with the United States as being particularly significant for Asian economic growth (for example, Chow and Kellman 1993). But then, when they give causal explanations for these observations, they examine the producers of goods and, more frequently, the circumstances of production, rather than the buyers of goods and the circumstances relating to consumption. Even those strong-state theorists, such as Amsden (1989, 2001), Wade (1990), Evans (1995), and Kohli (2004), who are most critical of market explanations simply assume that market processes prevail at the demand end: somehow all those manufactured and exported products find overseas buyers. Robert Wade (1990: 148), who discusses the Taiwanese government’s economic policies in meticulous detail, seems to speak for most theorists when he writes that the “marketing side of Taiwan’s export growth... remains a mystery” (1990: 148).

In our view, the core theoretical issue concerning local- and national-level economic development in the contemporary world is not merely whether a supply-side or a demand-side perspective leads to a more accurate explanation. Instead, it is that producer-driven, supply-side narratives cannot account for the emergence and operation of global markets. These narratives remain

rooted in the local and national economic, political, and social institutions, with each economy being conceptually isolated from every other economy as well as from global capitalism. By contrast, adding a demand-side perspective not only makes global markets a core topic needing explanation but also allows analysts to hypothesize that "market-making" processes, which include global retailers, play a causative role in Asia's industrialization (Petrovic and Hamilton 2006; Gereffi 1999).

The GCC approach helps to conceptualize these market-making processes. In ideal-typical producer-driven commodity chains, manufacturers not only control the process of production but also "make the consumer markets" for the products that they produce. Empirical examples of this market-making ability of producers are the automobile dealerships and credit facilities affiliated with specific manufacturers, both of which aim to make consumer buying easier and more appealing. In the heyday of American manufacturing, many industrial companies actively marketed their own products to final consumers through retailers directly affiliated with them (such as authorized dealerships) (Petrovic 2005).

In ideal-typical buyer-driven commodity chains, market-making processes are organized in a very different way from those in producer-driven chains. With buyer-driven chains, the retailers and merchandisers have increased leverage to organize both consumer markets and supplier markets. Moreover, they have incentives to keep both types of markets separate and distinct from each other. On the consumer side, retailers in the same sector compete with each other to win and maintain customers. To compete effectively, retailers and merchandisers need to locate their stores (even their virtual stores on the Web) for customers' convenience, to develop or otherwise obtain attractive products, to advertise and display their merchandise well, to establish a price structure that enhances sales and profit, and to provide product warranties and guarantees.

On the supplier side, retailers and merchandisers need to locate or develop one or, more likely, a set of manufacturers that can deliver the goods ordered in the quality, quantity, and price points required. Retailers and merchandisers are usually actively involved in developing new products and production specifications. Because retailers and merchandisers sell a range of goods, they typically deal with a significant number of suppliers, in effect creating markets, complete with price structures, for specified final products as well as

component parts of those products. GCC researchers (Gereffi, Humphrey, and Sturgeon 2005) have shown that over time these supplier markets have evolved from loosely organized relational networks to globally organized firms engaging exclusively in contract manufacturing and actively bidding on big-buyer contracts.

U.S., European, and Japanese buyers played a fundamental role in creating supplier markets for differentiated consumer goods in South Korea and Taiwan (Feenstra and Hamilton 2006; Hamilton and Kao 2007). Developed in response to the intermediary demand created by big buyers, these supplier markets were a large enough component of the respective economies that they shaped the organization of the entire economy. The emergence and simultaneous organizational divergence of both economies can be charted directly by using a combination of primary data from each government's manufacturing census and highly disaggregated U.S. import data.

Figure 7.3 illustrates the emergence of suppliers in South Korea and Taiwan. In the early years of industrialization, until 1985, there was in both countries a rapid proliferation of the types of goods (at a seven-digit level) exported to the United States, and a less spectacular but still substantial growth in the number of categories of garments and footwear in that total. This figure reveals the rapid diversification of production that occurred in both countries. Although the total number of products exported to the United States dramatically increased in subsequent years, Feenstra and Hamilton (2006: 241–243) discovered that the total value of the U.S.-bound exports was highly concentrated in only a handful of products.

As shown in Figure 7.4, the highest concentration for both countries occurs in the earliest period, with nearly 50 percent of the value of Korea's exports to the United States and 25 percent of the value of Taiwan's exports contained in only ten products. As the number of different types of products increased rapidly in the late 1970s and early 1980s, the concentration lessened, but then increased again in the late 1980s and throughout the 1990s, as firms began to move labor-intensive production to China, Southeast Asia, and other locations.

The trade data also show that at the same time both economies were rapidly growing, the organization of the two economies was also diverging (Feenstra and Hamilton 2006: 245–251). Divergence begins at the outset of industrialization and becomes more articulated and dramatic as industrialization proceeds, and this divergence occurred across all product categories.

FIGURE 7.3. Number of seven-digit tariff categories of imports: Total, and footwear plus garment combined, 1972–1988

SOURCE: Robert C. Feenstra, 2001, "U.S. Imports and Exports: Data and Concordances," NBER Working Paper #9387, available online at <http://www.internationaldata.org>.

For instance, South Korea and Taiwan each produced footwear, but disaggregated trade data show that both countries specialized in very different types of shoes. Whereas Korean firms mass-produced a very limited range of leather athletic shoes for men and boys, Taiwanese firms batch-produced a wide range of rubber and plastic shoes, mainly for women and girls. With this division of labor, the two countries produced over 50 percent of all shoes imported into the United States in 1985.

The same pattern recurs in every other industrial sector. Both countries produced rubber and plastic (nonfootwear) products, but Korea quickly began to specialize in the mass production of tires for cars and trucks, whereas Taiwan produced an exceedingly wide range of miscellaneous products: toys, kitchen products, pipes, knobs, household furnishings, even Christmas tree ornaments. Both countries exported large amounts of household appliances, but Korean firms specialized in microwave ovens, whereas Taiwanese manufacturers exported a wide variety of products, including vacuum cleaners, hair dryers and curlers, and irons. After 1985, both countries exported products classified under the major heading "transportation equipment."

Whereas South Korea mass-produced automobiles, Taiwan became a major parts supplier, specializing in automobile part replacements. Also, after 1985, both countries produced large quantities of high-technology products. Most of the value of Korean exports, however, came from only a few products, primarily from a special category of mass-produced Dynamic Random Access Memory (DRAM) chips. Taiwan's high-technology firms produced a vast variety of products; the semiconductor segment of the high-technology industry specialized in batches of made-to-order foundry chips, specifically designed by big buyers.

Feenstra and Hamilton (2006: 253–298) argue that both the emergence and divergence of these two East Asian economies can be explained by *iterated* processes associated with GCCs. How do retailers and merchandisers develop a systematic approach to ordering products? How do they match the product they want with the firm that they contract to make it? It is important to emphasize here that these processes of matching products with manufacturers are core activities in export-oriented economies dominated by contract manufacturing. As all veteran observers of these economies know, these activities are ubiquitous (but largely ignored by researchers), in the form of world trade centers, trade fairs, business associations, advertisements in every hotel

FIGURE 7.4. Share of top-ten and top-one-hundred categories of goods in total export value, South Korea and Taiwan, 1972–2001

NOTE: 1972–1988 based on the seven-digit TSUSA; 1989–2001 based on the ten-digit HS.
SOURCE: Robert C. Feenstra, 2001, "U.S. Imports and Exports: Data and Concordances," NBER Working Paper #9387, available online at <http://www.internationaldata.org>.

room, and showrooms in every factory. The processes involve the actual and repeated nature of matching intermediary buyers to Asian manufacturers: order by order, year by year.

As discussed theoretically by Schelling (1978), Mortensen (1988), and Krugman (1996), iterated matching at the individual level can lead to emergence outcomes at the macro level, outcomes that cannot be predicted in advance. Feenstra and Hamilton hypothesize that, in a competitive environment, iterated matching between intermediary buyers and manufacturers creates a feedback loop that reinforces the characteristics of the production system by rewarding successful competitors and the governance structure of successful firms and networks. The matching also drives a number of emergent background processes, most important being geographical agglomerations and the opening of economic niches that entrepreneurs can fill, thus creating a more systemically organized economy.

A full description of these demand-responsive processes is not possible within the space limitations of this chapter, but in a simplified form the logic is as follows. Both intermediary buyers and Asian manufacturers quickly become sophisticated players in the market-making game. Retailers and merchandisers learn of and increasingly go to those manufacturers capable of making particular kinds of products. Manufacturers known for certain kinds of products develop their production networks so that they can fulfill or exceed the buyers' expectations. For institutional reasons at the outset of rapid industrialization, Korea began with larger and more vertically integrated firms than those in Taiwan (Feenstra and Hamilton 2006: 169–211). Therefore, when buyers wanted a long run of a single product, the large Korean firms would be more likely to get the order, but for more fashion-oriented products for which only a limited number or an indefinite batch was needed, the manufacturing networks of small and medium-size firms in Taiwan would be more likely to get the order.

For example, when Nike ordered footwear from both Taiwan and South Korean manufacturers, they ordered small batches of high-quality and relatively expensive shoes from Taiwan and large runs of lower-quality shoes for mass distributors from South Korea (Levy 1991). Needing a rapid turnaround time, specialty retailers, such as The Limited, ordered 100 percent of their products from Taiwan (Gereffi and Pan 1994). Wanting to stock their shelves with inexpensive mass-produced microwave ovens, Kmart and Wal-Mart contracted South Korean manufacturers to produce high volumes of the same

product. The initial competitive characteristics of each economy became amplified through the iterated orders, which in turn led local manufacturers to build production networks to fill existing orders and to obtain orders for new products that corresponded to that particular type of production network.

Our research over the past two decades has convinced us that rapidly increasing contract manufacturing is the primary driver of East Asia's economic transformation. This demand, however, led to the distinctive trajectories of growth that East Asian economies experienced. The exact mechanism for creating these divergent trajectories, as Feenstra and Hamilton (2006) show, grew out of the competitive struggle among local Asian manufacturers to respond to rapid increases in intermediary demand. The iterated and emergent process of matching buyers to manufacturers corresponds to the equally emergent patterns seen in the export trade statistics.

The actual process of matching buyers to manufacturers involved not only the products being purchased but also the system by which the products were made. Big orders of the same product were more likely to go to those locations specializing in volume production, regardless of the exact item being ordered. Likewise, smaller batch orders were more likely to end up with firms that did not need large orders to survive and that were flexible enough to produce many different small lots effectively and efficiently. This iterated matching process led to economies that became more specialized in their style of production and, accordingly, in the products they produced.

Moreover, under conditions of rapidly increasing demand, the activity of responding to orders (keeping orders coming in from previous buyers and finding new buyers, and possibly obtaining orders for new types of products) meant that owners needed constantly to enlarge, upgrade, or otherwise enhance their production capacity. For *chaebol* owners in South Korea, this necessity, brought on by the intense competition from only a few other *chaebol*, led to aggressive internalization strategies: strategies to enlarge production in existing firms, to establish new firms, to create a mechanism for internal financing, and to develop greater internal self-sufficiencies, all of which denied competitors any access to internal resources. These internalization strategies began very early in the period of rapid growth and encouraged owners to follow a "path of least resistance" in creating inter-firm networks over which they would have control, namely networks of firms personally owned by *chaebol* heads and their families, and managed by people personally dependent on, and loyal to, these owners.

Through such patrimonial systems of control (Feenstra and Hamilton 2006, Biggart 1990), a few owners and their personal staffs were able to control vast resources within their respective groups and to chart the direction of group expansion. In a relatively short period of time, this centralized control of *chaebol* owners and the competition among these relatively few large players pushed the entire South Korean economy along a trajectory of development toward oligopoly. By the early 1980s, this trajectory of development was in place and, for all practical purposes, could not be changed, short of a total catastrophe, which to some extent occurred during the 1997 Asian financial crisis, when about half of the fifty largest *chaebol* went into bankruptcy or otherwise dissolved, including one of the top four, Daewoo.

In Taiwan, the activity of responding to orders led to an equally rapid buildup of production networks. Even in the early days of growth, these networks were widely dispersed in rural as well as urban areas, and involved many relatively small and medium-size firms. In enlarging their production capacity, firm owners here too followed the path of least resistance. Instead of trying to expand the size of their firms, they expanded their subcontracting networks. That path was much easier than trying to obtain large amounts of capital needed for large firms from recalcitrant state-owned banks, or to fight the competition from others that would surely have arisen if individual entrepreneurs tried to go it alone. Building cooperative *guanxi* networks was a tried-and-true method to accomplish risky tasks and a method that could also be highly predictable. Once these production networks turned out to be successful in getting and keeping orders, they quickly proliferated. Joining such production networks became a clear strategy to get rich, and an astounding percentage of Taiwanese households pooled their resources, started their own firms, and, through their connections, joined one and sometimes several production networks.

The outcome of these activities was for entrepreneurs to search frantically for production and service niches in which they might have some relative advantage over others and, finding such a location, then to organize networks of colleagues to create a position of economic power that would discourage others from entering the same pursuit. In this competitive environment, almost any attempt to upgrade a family-owned business, however large, into a self-sufficient production system manufacturing goods for export would be doomed. Such an export strategy, if momentarily successful, would be quickly

undermined by the aggressiveness and cheaper cost structures of satellite assembly systems.

This evidence, based as it is on new data, permits us to conclude that the Asian Miracle is not simply about Asia and its catching up with the West, but rather about the emergence of global markets for consumer products and global supply chains for those products. Demand-side factors need to be incorporated in order to have a balanced explanation of Asian industrialization, but it is equally certain that, when these factors are incorporated, the explanation substantially changes.

Conclusion

In this chapter, we seek to bridge the gap between the institutional, endogenous, and meso-level orientation in much of mainstream economic sociology, and the macro-level research tradition that focuses on the organization of economic activity in the global economy and its impact on the institutional features of both developed and developing societies. We draw heavily on research linking the United States and East Asia to illustrate key theoretical and empirical aspects of this new paradigm. Our main thesis is as follows. First, the so-called Asian Miracle is an aspect of the globalization of markets for differentiated consumer products that has been fueled by the retail revolution, initially in the United States and later in Europe and elsewhere. Second, the emergence of these global markets was made possible by the formation of demand-driven "backward linkages" that made manufacturing into organizational extensions of retailing and merchandising, that is, into buyer-driven commodity chains. Third, these backward connections between global intermediaries and local manufacturers became organized and institutionalized in very different ways in different places, leading to radically different outcomes in all of the first-mover Asian economies.

We believe that this type of market-making explanation for the emergence and divergence of Asian economies is a paradigm-changing theory. It is a theory that encompasses not only individual Asian economies but also the global integration and change in economies over time. If these hypotheses are correct, then economic organization, in general, and in South Korea and Taiwan, in particular, is best explained by the organizational dynamics of "doing things together" (Becker 1995). In this explanation, neither the state

nor macro-economic conditions nor transaction costs play fully independent causal roles.

The perspective developed here encourages us to ask for a reassessment of the answers given by most students of Asian economic development. We cannot provide a full account here. However, we can offer a preliminary reassessment on which future research might be based.

In our view, state officials always look at economies for which they are trying to develop and implement policies as going concerns. For the most part, they tacitly accept and take for granted the cultural milieu as well as the organizational features of the societies and economies of which they are a part. Perceiving economies as complex objects in motion, state planners spend most of their time trying to figure out what is going on. They collect statistics, they consult experts, they read world economic trends to see which industrial sectors are worthy of support and which ones are not. They also listen to local businessmen, some in official gatherings and others in private within their circle of families, friends, and colleagues. Although their world of activity is as complex and as confusing as any other in the society, state planners also have an added dimension of needing to plan and to take some sort of action. They need to do what is possible, and if politics is the art of the possible, this means to refine what is already present and to cultivate what is already growing.

Much of the literature on the developmental state overstates the rationality and expertise of these government officials and exaggerates the accuracy and impact of their policies. Although state policies and programs may enhance an economy's ability to grow and change, the effects of state actions are often much more limited than is represented in the literature on the developmental state. In terms of Asian industrialization, it is clear that decisions made in reference to the economy were, in fact, often solutions to noneconomic problems (such as nationalism in times of martial law) that were made after it was apparent that the intended goals of the policies would be reached without the actual policies being implemented. The five-year plans developed in both South Korea and Taiwan are cases in point.

This is not to say that the state has no role in economic development. Quite the contrary, even if state actions are often lagging effects (as opposed to a leading cause) of economic growth, they can help to sustain or rationalize existing trends. Capitalist economic organization involves complex, interdependent, cross-market activities that generate an internal momentum that

is difficult for any single actor to alter, however well placed. Howard Becker (1995) calls this momentum the "power of inertia." The details of the activity are means of integration and interdependency: the product standards, the requirements of importing and exporting, the rules for accounting, the sizes of containers for container ships, the barcodes on nearly every component, the modes of communication—all these and ten thousand other trivial and non-trivial details combine to interlink economic activities and make any attempt to change the direction of the whole a difficult, if not impossible, thing to do.

Insofar as politicians and state planners develop policies that complement the existing organization of the economy, such as industrial targeting in South Korea, then the role of the government will be to push the economy in the direction that it is already going. Such policies often have strong effects. In Korea's case, state policies undoubtedly favored some *chaebol* over others, which hastened the dominance of the top four or five *chaebol* over other business groups. In Taiwan's case, the development of government-sponsored initiatives in the computer industry to finance factories, such as Taiwan Semiconductor Manufacturing, to supply intermediate inputs for smaller firms downstream not only was tremendously successful in helping Taiwan build a viable high technology sector, but also purposefully built on existing patterns of allowing the exports manufactured by smaller firms to drive the demand for the intermediate inputs manufactured by larger upstream firms.

State policy often falls short of its objectives, in part because of the sheer complexity of all the activities involved in any large-scale institutional setting. For export-oriented economies like those of East Asia, and in an era when global intermediaries play a key role in the process of iterative matching of buyers and suppliers described in this chapter, we need to move beyond the simplified models of market-driven or state-centered outcomes. Once the emergent global economic organization becomes a going concern, the viable options for the state's economic policies become progressively narrowed. For state officials and entrepreneurs alike, when economic organization develops its own internal momentum, it is like the proverbial tiger: once you begin riding it, you cannot get off.