LATIN AMERICA IN COMPARATIVE PERSPECTIVE

New Approaches to
Methods and Analysis

edited by

Peter H. Smith

University of California, San Diego

1995

Westview Press

BOULDER • SAN FRANCISCO • OXFORD

CHAPTER TWO

Contending Paradigms for Cross-Regional Comparison: Development Strategies and Commodity Chains in East Asia and Latin America

Gary Gereffi

DEVELOPMENT STUDIES HAVE BEEN at the forefront of comparative analysis in the social sciences. Initially, much of this research was carried out by scholars who were imbued with the tools of the area specialist: facility with the appropriate foreign languages, an in-depth knowledge of local history and customs, and good contacts with indigenous experts and institutions. In some regions, such as Latin America, the commonalities of language and historical background led people quite naturally to think in terms of intraregional comparisons. In East Asia, however, where there are numerous languages and local dialects and where the cultural legacy of societies such as China and Japan spans many centuries, experts rarely strayed from their designated niches defined by individual countries and, within these, by specific historical periods, geographic locales, and economic sectors.

This regional insularity among development scholars seems to be diminishing, as evidenced by the recent spate of cross-regional projects involving Latin America, East Asia, and Europe. The theme of development strategies in East Asia and Latin America has been especially popular, with several volumes published in the past five years.¹ These studies use the logic of comparative analysis to derive meaningful conclusions about countries located in two regions, whose differences, at

first glance, may appear to far outweigh their similarities. What does cross-regional research explain? What are the most appropriate comparative methods to use in this situation? How do these studies handle diversity within each region, as well as conspicuous contrasts between regions? Is it possible to make broad regional generalizations about development models? What are the limitations of this type of research? What new challenges lie ahead?

In this chapter I address these queries by focusing on two of my own cross-regional projects, which deal with development strategies and commodity chains. The arguments can be summarized as follows. First, diverse comparative research methods are appropriate, and indeed necessary, to improve the understanding of development strategies in East Asia and Latin America. Different disciplines feature variables that lead to generalizations of varying scope: commonalities across regions, contrasts between regions, and diversity within regions. Each type of generalization is associated with a distinct comparative method of analysis. These multiple approaches provide needed breadth and depth.

Second, studies of development strategies in Latin America and East Asia, though operating at different levels of analysis, nonetheless deal with the same unit: the nation-state. This becomes a problem when one tries to grapple with the multifaceted process of globalization, which has redefined the nature of development in the contemporary world. The most dynamic industries today are organized in production and trade systems that are transnational in scope. Therefore, one needs to find alternative development paradigms that systematically incorporate features of the international system into the analyses. One promising approach conceptualizes the organization of the world economy in terms of commodity chains, which are most simply defined as the links between successive phases of raw material supply, manufacturing, distribution, and retailing that result in a final product available for individual consumption. Instead of taking nation-states as the point of departure, as the development strategies literature does, the commodity chains framework focuses on firms and industries as the basic units of analysis and then asks how the position and mobility of countries within global commodity chains affect their development prospects.

Third, I address an issue, virtually ignored in discussions of comparative methods, that is an intrinsic feature of many of the best-known works on Latin America and East Asia, namely, the use of semistructured, in-depth interviews of political and economic actors in country and industry case studies. Unlike classic techniques of survey research or public opinion polling in which the respondents are selected with an emphasis on scientific sampling, standardized questionnaires, and the representativeness of their answers, most development studies in the

Third World rely on what I call "strategic interviews." This type of interviewing has very different objectives than survey research: Each respondent has a unique (not representative) stock of information that the researcher is trying to tap; access (not sampling) is the primary problem; and semistructured (rather than standardized) responses are the basis for conclusions. I briefly outline the utility of this research tool for cross-regional studies of development. □

DEVELOPMENT STRATEGIES IN EAST ASIA AND LATIN AMERICA

East Asia and Latin America have become the focal point of comparative thinking about development strategies in the Third World. Japan and the newly industrializing countries (NICs) of East Asia—South Korea, Taiwan, Hong Kong, and Singapore—were dubbed "miracle economies" because of their unparalleled accomplishments in the early decades of the postwar era. They not only registered record economic growth rates during the prosperous 1960s, when international trade and investment were expanding rapidly, but they also managed to sustain their dynamism through the 1970s and 1980s, in the face of several oil price hikes, a global recession, and rising protectionism in their major export markets. In addition, this rapid industrial growth was accompanied by a relatively egalitarian distribution of income.² By the mid-1970s, the four East Asian NICs had become the Third World's leading exporters of manufactured products, a status challenged in the 1980s only by the addition of another East Asian superexporter, the People's Republic of China.

Latin America seems to be a prime candidate for comparison with East Asia. These two regions are the most industrialized in the developing world. Extensive manufacturing in Latin America dates back to its first wave of import-substituting industries in the 1930s and 1940s, so the region has a relatively long record of industrial progress. By 1955, Brazil and Mexico were already entering a second dynamic phase of import substitution, a full decade before South Korea and Taiwan launched their initial export drives. By the mid-1970s, however, Latin America's growth rate had slowed, although East Asia's manufactured exports were thriving. The gap in economic performance between the two regions widened dramatically in the 1980s. Latin American nations found it difficult to maintain their previous levels of economic expansion as they confronted mountainous external debts, high rates of inflation, shortages of investment capital, and the social and economic marginalization of ever-larger segments of their population.³

The contrast in economic performance between Latin America and East Asia in the past two decades presents a challenge to academics and

policymakers alike. How can we explain these differences? And if the East Asian model of development is indeed superior, how transferable is it to other regions of the world? For many observers, the most striking difference between the two regions lies in the realm of their development strategies. On one hand, Latin American nations followed the path of import-substituting industrialization (ISI), which relied on protectionist policies and a heavy infusion of foreign capital to build modern industries to supply the needs of their sizable domestic markets. The East Asian NICs, on the other hand, in the mid-1960s turned to export-oriented industrialization (EOI), which depended on global markets to stoke demand for their labor-intensive manufactured exports. Neoclassical economists and prominent international financial institutions, such as the World Bank and the International Monetary Fund (IMF) touted EOI as a successful development paradigm to be emulated by the rest of the Third World. The explicit message directed at Latin America and the other countries pursuing ISI was that policy reforms aimed at a greater outward orientation would promote development by simultaneously increasing exports, employment, and economic growth.⁴

Many scholars remained skeptical, however, that development strategies were the predominant reason for the divergent growth patterns in the two regions. Three alternative interpretations were offered to explain East Asia's success and Latin America's decline:

- *the institutional configuration of societies*: the developmental state, the spread of education, industrial structures in which local rather than foreign capital is in a privileged position, dynamic export-oriented subcontracting networks, and entrepreneurial familism have all been cited as giving an edge to East Asia over other regions;⁵
- *linkages to the world-system*: the East Asian NICs benefited disproportionately from U.S. hegemony and the politics of the Cold War era, but Latin America's growth was hampered by its heavy reliance on transnational corporations and foreign debt;⁶ and
- *the role of culture*: East Asia's Confucian, group-centered tradition is claimed to be more compatible with high-growth economies than Latin America's Ibero-Catholic tradition.⁷

In general, the transferability of the East Asian development model is viewed as progressively more difficult as one's identification of its key features shifts from economic policies to local institutions to world-system linkages to culture.

To subject these contending explanations of East Asian and Latin American economic performance to comparative scrutiny, the late

Donald Wyman and I brought together economists, sociologists, political scientists, and historians who were experts in at least one of these two regions. The gatherings led to our coedited volume, *Manufacturing Miracles*, which, in several important respects, challenges the conventional wisdom that Latin America can and should emulate the East Asian model of development. First, we demonstrate that the contrast between the outward-oriented and inward-oriented development strategies is frequently overdrawn. Each of the leading economies in the two regions has pursued a combination of both ISI and EOI approaches. Thus the Latin American and East Asian NICs are not as different as one has been led to believe. Export promotion always starts from ISI, but many Latin American nations are now pursuing EOI quite aggressively. This mix of development strategies helps one understand how industrial diversification (secondary ISI) has led to enhanced export flexibility and competitiveness (secondary EOI) in the East Asian and Latin American NICs in the 1980s and 1990s, indicating notable areas of convergence in the two regions.⁸

Second, both inward and outward approaches have inherent vulnerabilities that prevent either strategy from being a long-term solution to development problems. For example, the benefits of ISI are limited by the following conditions: (1) the size of the domestic market (which in Latin America is skewed by severe income inequalities); (2) ISI's import-intensive nature (ISI focused on consumer goods and displaces imports toward intermediate and capital goods industries, rather than reducing imports in an absolute sense); (3) its tendency to aggravate sectoral imbalances in an economy (industry is preferred over agriculture); and (4) its foreign exchange vulnerability (the overvalued exchange rates associated with ISI discourage exports). Similarly, EOI has its own drawbacks: (1) It is constrained by the technical impossibility of serving certain domestic needs through traded goods industries; (2) EOI employment in labor-intensive industries is unstable due to competition from low-wage nations; and (3) EOI is threatened by protectionism and slow growth in key overseas markets.⁹ In addition, Albert Fishlow has cautioned against a "fallacy of composition"—namely, if all developing countries tried to pursue EOI at the same time, the ensuing competition would drive down the gains for all.¹⁰

Third, unique cultural and historical factors make it difficult to generalize from the East Asian experience. Various writers have argued that Confucianism confers certain advantages over other traditions, such as the Ibero-Catholic or Hispanic heritage in Latin America, in the quest for economic development. Because Confucian beliefs place a high value on hard work, loyalty, respect for authority, and education, these characteristics are thought to have facilitated the national consensus around high-

speed economic growth evident in Japan and the East Asian NICs since the 1950s and 1960s.¹¹ Simplistic cultural arguments yielded a variety of problems, however.¹² First, regions are not culturally homogeneous. Taoism, Buddhism, and Christianity, along with Confucianism, all have large followings in East Asia. Second, timing is a problem. Both Confucian and Ibero-Catholic traditions have existed for centuries, but the dynamic shifts in economic performance that gave rise to the NICs have occurred in recent decades. Third, discussions of culture have been inconsistent. The same Confucian beliefs that are now claimed to facilitate rapid industrialization in East Asia were criticized by several generations of Western scholars for inhibiting economic development.¹³ More sophisticated cultural representations are needed that see culture as historically situated and mediated through institutions.

Methods Used in the Cross-Regional Comparison of Development Strategies

Comparisons of East Asian and Latin American paths of industrialization reveal a wide array of similarities and differences. Although this dialogue is framed in terms of interregional and intraregional patterns, the basic unit of analysis is the nation-state. The concrete reference points for East Asian and Latin American development strategies actually are not "regions" at all, but only the most industrialized nations (the NICs) within these regions. Regional generalizations are usually achieved by aggregating the major conclusions drawn at the nation-state level. The focus on national cases from distinct regions of the world amplifies the theoretical and methodological complexity of the undertaking, however; scholars utilize an assortment of variables, multiple levels of analysis, and longitudinal as well as cross-sectional research designs to account for the determinants and consequences of East Asian and Latin American industrial trajectories. To interpret these findings, one needs to look more closely at the logic of comparative analysis employed in these studies.

The most useful typology of comparative methods was developed by Charles Tilly, who distinguishes four approaches: universalizing comparisons, variation-finding comparisons, individualizing comparisons, and encompassing comparisons.¹⁴ *Universalizing comparisons* employ a most-different-systems (MDS) design to reveal that all cases of a phenomenon follow essentially the same rules.¹⁵ As applied to the East Asian and Latin American NICs, a universalizing comparison shows that—despite their heterogeneity in terms of a wide variety of national and regional attributes (such as population size, land area, natural resources, cultural legacies, political regimes, social structures, per capita income, and economic policies)—South Korea, Taiwan, Brazil, and Mexico have several

dynamic features in common that lead them to be widely perceived as industrial "success stories." These characteristics are relatively rapid and sustained economic growth, increasing levels of industrial diversification, and prominence as exporters, especially of manufactured goods.

The most-similar-systems (MSS) method of comparative analysis, which holds constant as many factors as possible in order to isolate a critical independent variable and match it with the dependent variable, is the logical choice for analyzing the cross-regional as well as the intraregional differences between the East Asian and Latin American NICs. Both variation-finding and individualizing comparisons adopt an MSS design, but with different objectives. *Variation-finding comparisons* strive for theoretical parsimony by focusing on a few key variables that explain particular comparative outcomes, like policy reforms or social revolutions. This approach is preferred for elaborating and testing middle-range theories that apply to a relatively small number of complex cases.¹⁶ *Individualizing comparisons* contrast specific instances of a given phenomenon in order to grasp the peculiarities of each case. Theory is eschewed as a starting point, although individualizing comparisons may give rise to historically grounded concepts or typologies.¹⁷

Finally, Tilly's *encompassing comparisons* begin with a large structure or process. The practitioner then selects locations within the whole system and explains similarities or differences among those locations as a consequence of their relationship to the whole. According to Tilly, this approach is the most difficult for the comparativist to manage because he or she runs the risk of slipping into tautological functional explanations, in which a unit behaves in a certain way *because of* its consequences for the system as a whole.

The first three methods outlined by Tilly are utilized in *Manufacturing Miracles*, and each is linked to a particular type of comparative generalization: (1) universalizing comparisons help to establish the principal commonalities among the East Asian and Latin American NICs; (2) variation-finding comparisons emphasize the cross-regional differences between these NICs; and (3) individualizing comparisons stress the intraregional diversity of the NICs. Each of these generalizations, in turn, highlights specific variables: The common features of the NICs stem from their rapid economic growth and advanced levels of industrial development; the cross-regional differences between East Asia and Latin America reflect the predominance of EOI and ISI development strategies, respectively; and the main explanation for intraregional heterogeneity lies in distinctive institutional configurations at the national level (see Table 2.1). Since universalizing comparisons are used primarily to identify the NICs, my focus below is on the variation-finding and individualizing comparisons employed to explain cross-regional outcomes.

TABLE 2.1 Comparative Methods, Generalizations, and Variables

Comparative methods	Universalizing comparison	Variation-finding comparison	Individualizing comparison
Scope of generalizations	Commonalities across regions	Contrasts between regions	Diversity within regions
Key variables	Economic growth (the NICs)	Development strategies (ISI vs. EOI)	National institutional configurations
Representative authors in <i>Manufacturing Miracles</i>	Gereffi (chap. 1)	Bradford, Stallings, Fajnzylber, Dore, Ranis, Ellison, & Gereffi (chap. 4)	Kaufman, Cheng, Wade, Schive, Villarreal, Deyo, Gereffi (chap. 4)

Comparing Across Regions: Development Strategies as Cause and Effect

Variation-finding comparisons address a central issue in the field: How does one explain the contrasts between East Asia's and Latin America's development strategies? Here is a striking paradox: "Development strategies" are studied as both an independent and a dependent variable. As an independent variable, development strategies are linked to particular outcomes or patterns of development in each region.¹⁸ This concern with the *consequences* of development strategies commands the most attention in public policy debates. When development strategies are used as a dependent variable, by contrast, the task is to identify their *determinants*. This has been the bailiwick of academic discourse.

The strength of development strategies as an *independent variable* is directly related to the role of the state in the economy. Development strategies are state-centered, that is, they are policies designed and executed primarily by national governments.¹⁹ Although different groups in a society can and do influence economic issues, the formulation of a development strategy implies at least some degree of state leadership.²⁰ In contrast to the neoclassical interpretation of East Asia's success, which emphasizes the magic of the marketplace and accords governments a minor role, advocates of the "developmental state" perspective have argued convincingly that government policy has indeed been a key force in the postwar development of Japan and the East Asian NICs (with the exception of Hong Kong).²¹ Robert Wade has documented that the governments of Taiwan, South Korea, and Singapore all exerted a significant degree of state leadership in promoting industrial growth.²² Alice

Amsden shares Wade's skepticism about the neoclassical stance.²³ They both see market failures as pervasive, which offers a justification for governments to foster growth by "governing markets" (Wade) and "getting prices wrong" (Amsden) in order to accelerate industrial catch-up.

In Latin America, the developmental state argument was prefigured by the analysis of bureaucratic-authoritarian regimes, which emerged in the 1960s and 1970s to promote advanced ISI in much the same way as strong, centralized, and authoritarian governments in several of the East Asian NICs pushed EOI in the 1960s and ISI deepening in the 1970s.²⁴ However, development strategies in Latin America have not been as influential as in East Asia for at least two reasons. First, East Asia's authoritarian governments had far greater autonomy from local social groups and oppositional classes than their Latin American counterparts.²⁵ Second, foreign capital plays a more dominant role in Latin America than it does in East Asia, where it is a minor actor. This has limited the ability of Latin American states to formulate and implement national industrial policies.²⁶ Attention in Latin America has now shifted to whether the region's ballyhooed processes of redemocratization and structural adjustment in the 1980s can generate a new development model, combining economic growth with equity.²⁷

Treating development strategies as a *dependent variable* means one must explain historical transitions or turning points in the East Asian and Latin American NICs. The transitions between development strategies involve policy reforms that raise three distinct questions: (1) Why does a given phase of ISI or EOI development come to an end? (2) What determines the choice of a particular development strategy from the array of available options? (3) How are new development strategies implemented and sustained? A detailed discussion of the substantive answers to each of these questions is beyond the scope of this chapter. However, in line with the logic of variation-finding comparisons, findings from the Gereffi-Wyman volume indicate that distinct levels of analysis are best suited for each of these questions.

Pressures emanating from the international system, such as economic shocks (the Great Depression of the 1930s and the oil price shocks of the 1970s), wars (World War II, the Chinese Revolution, the Korean War), and geopolitical realities (the hegemonic role of the United States during the 1950s and 1960s), are most important in discerning why given development strategies come to an end. The initial conditions of countries (such as natural resource endowments and domestic market size), the role of the state in responding to international opportunities and constraints, domestic political coalitions, and prevailing economic and political ideologies are critical factors in determining the choice of new strategies. Finally, the institutional and cultural levels of analysis are particularly

significant in understanding how development strategies are implemented and sustained. Sociocultural factors are embedded in decision-making and change at the local level because they include the most proximate determinants of human behavior—ideas, incentives, and values.

Diversity Within Regions

Individualizing comparisons abound in *Manufacturing Miracles*. They tend to focus on closely matched intraregional pairs of NICs, which, despite their regional proximity, follow distinct industrial paths. Tun-jen Cheng, for example, found that South Korea and Taiwan exhibit systematic differences in how they implemented a common set of development strategies (ISI, EOI, and EOI deepening): South Korea's approach was hierarchical, unbalanced, and command-oriented while Taiwan's was horizontal, balanced, and incentive-oriented. This contrast was elaborated by a closer examination of each development strategy. South Korea followed a "rent-seeking" approach to ISI, while Taiwan utilized a "surplus-generating" model; EOI was "centralized" in South Korea and "decentralized" in Taiwan; and with regard to EOI deepening, South Korea pursued a "big push" approach, as opposed to Taiwan's "gradualist" orientation.²⁸ Having examined the same two cases, Chi Schive indicated that Taiwan and South Korea built their very-large-scale integrated circuits (VLSI) industries in contrasting ways: Taiwan developed the technology first and then moved into manufacturing; South Korea inverted this sequence by initially forging its mass production capacity, then acquiring the needed technology.²⁹

Individualizing comparisons also apply to Brazil and Mexico. René Villarreal has shown that Brazil, with the strongest capital goods industry in Latin America, has advanced further down the path of secondary ISI than has Mexico. Furthermore, the energy crisis of the 1970s affected the two Latin American NICs in opposite ways: Brazil gave top priority to ISI deepening; Mexico became a prominent oil exporter, but in the process the structural integration of its economy took several steps backward.³⁰ Individualizing comparisons within regions can even be used to generate novel insights about cross-regional similarities. In my own chapter on big business and the state, I show that the role of state enterprises is greater in Mexico and Taiwan than in their regional counterparts. Furthermore, there are sharp contrasts in how these cross-regional pairs have internationalized their automobile industries. South Korea and Brazil both stressed exports of finished vehicles, although via different kinds of corporate strategies and structures. Korea's auto exports were produced by its domestically owned *chaebol*, but Brazilian-made

vehicles came from American, Japanese, and European transnational corporations. Taiwan and Mexico, alternatively, adopted component-supplier roles in the global auto industry, with their parts exports destined almost exclusively for the U.S. market. Whereas Mexico implemented this strategy through the intrafirm supply networks of the transnationals, Taiwan relied on its many small domestic auto parts companies.³¹

In summary, the development strategies literature is not primarily concerned with accounting for economic growth in the NICs. Both inward-oriented and outward-oriented development strategies have proven capable of spawning high-growth economies in distinct regions of the world. Rather, the literature's main emphasis has been twofold: (1) to explain the determinants of policy choice that have led the East Asian and Latin American NICs to adopt differing sequences of ISI and EOI development strategies; and (2) to demonstrate that similar development strategies have diverse institutional bases across societies, which shape the implementation, sustainability, and local consequences of these policies. This cross-regional agenda has diverted our attention, however, from a universal phenomenon, the globalization of production, which has redefined the roles of all nations in the world economy. The theoretical suppositions and comparative methods of this approach are fundamentally different from those used in studies of development strategies. □

GLOBAL COMMODITY CHAINS AND REGIONAL DEVELOPMENT

Industrialization on a world scale has undergone significant shifts during past decades. In the 1950s and early 1960s, the world economy was an aggregation of distinct domestic economies, with production mainly organized within national boundaries. Since the 1960s, however, open international trade and an explosion of new products and new technologies have created a "global manufacturing system" in which production and export capabilities are dispersed to an unprecedented number of developing as well as advanced countries. Major breakthroughs in communication and transportation technologies have shrunk the world dramatically in terms of time and space, permitting manufacturers and retailers alike to establish transnational production and trade networks that cover vast geographical distances. The fragmentation and geographical relocation of manufacturing has resulted in novel patterns of specialization in the world economy. Organizationally, economic activities within nations are being reaggregated in global commodity chains (GCCs) and complex regional divisions of labor that alter the logic of comparative development research.

How can one study these processes of change? What conceptual and

methodological tools can one use? What are the appropriate units and levels of analysis? How does globalization impinge on national development? To address these questions, I focus on a newly emerging framework for analyzing development issues in the world economy: the study of GCCs. As with my discussion of development strategies, I use my recent coedited book, *Commodity Chains and Global Capitalism*, to provide empirical backing for general points.³²

The commodity chains perspective entails a fundamental departure from the development strategies approach in terms of its units and levels of analysis, its chief substantive concerns, and its principal research methods. Economic globalization has reduced the theoretical centrality of nation-states, which was the key unit of analysis in the development strategies literature. The global integration of goods, services, capital, and labor markets is eroding the power of states to set economic rules within their borders. Although protectionist policies still shape the international flows of investment and trade, national regulatory regimes are giving way to international agreements that cede sovereignty to broad regional trading blocs and transnational economic actors. As a result, crucial concepts in the social science lexicon, such as national development and domestic industries, are now rendered problematic.

The commodity chains framework targets the study of global capitalism, not national development. Industries and firms, not nation-states, constitute its primary analytical units. Different patterns of national development are an outcome, not the starting point, of this research. From a GCC perspective, diverse global industries, in which the dynamics of capitalist competition are played out, are taken as microcosms of the world economy. Firms and the economic networks that connect them are the essential building blocks of transnational production systems in which countries play a variety of specialized and shifting roles. Of course, firms do not exist in a vacuum. Their behavior is conditioned by factors operating at various levels: global economic and geopolitical conditions; regional integration schemes (*de jure* and *de facto*); the economic policies of national governments; the impact of domestic institutions and cultural norms on economic activity; and the wage rates, skills, productivity, and degree of organization of local labor forces. But nation-states are not free-floating actors either. The GCC approach argues that the development prospects of countries are conditioned, in large part, by how they are incorporated into global industries.

There are similarities as well as differences between the GCC perspective and world-systems theory.³³ Both approaches are global and encompass nations at all levels of development within their overarching conceptual frameworks; both assert that the world economy is organized in an international division of labor made up of vertical as well as hori-

zontal linkages, whose geographical scope and modes of integration vary over time; both argue that global capitalism generates an unequal division of wealth between and within societies; and finally, both approaches try to explain the mechanisms of uneven development and its societal consequences.

Notwithstanding these affinities, there also are significant contrasts between the GCC and world-systems perspectives. First, the starting points of GCC studies are products, firms, and industries, rather than broad zones of development (core, semiperiphery, and periphery) in the world economy. Although firms are the main units of analysis in GCCs, world-systems theory is predominantly state-centric. Empirical explorations of world-systems theory often rely on measures of national wealth to define a state's position in the world economy.³⁴ Almost no attention is given to the structure of global industries, corporate strategies and rivalries, and economic and social networks. Second, world-systems theory favors a long view of history in which change usually is measured in centuries. The GCC framework, however, employs the tools of industry studies to focus on patterns of international competition that are contemporary and of much shorter duration. Third, GCC studies try to bridge the macro-micro gap in comparative research by highlighting the local social context of global production. Commodity chains "touch down" in communities and industrial districts where one can examine households, their connections to enterprises and states, and related issues of gender segmentation and racial and ethnic conflict in the workforce. From a GCC perspective, economic globalization actually strengthens, rather than weakens, the forces of localization in the world economy.

What does GCC analysis explain? How are regions dealt with in this approach? Commodity chains research, first and foremost, is concerned with explaining the governance structures of coordination and control in global industries. There exist two broad types of GCCs: "producer-driven" and "buyer-driven."³⁵ In producer-driven commodity chains, large transnational manufacturers play the central roles in coordinating production networks (including their backward and forward linkages). This is characteristic of capital- and technology-intensive industries such as automobiles, aircraft, computers, semiconductors, and heavy machinery. In buyer-driven commodity chains, large retailers, brandname marketers, and trading companies play a pivotal role in setting up decentralized production networks in exporting countries, frequently located in the Third World. This pattern of trade-led industrialization is common in labor-intensive consumer goods industries such as garments, footwear, toys, housewares, and consumer electronics. Although producer-driven chains controlled by giant industrial firms have been well established in the world economy for a long time, the emergence of

buyer-driven chains dominated by commercial capital is newer and less well understood.

Second, instead of defining regions as the sum of geographically proximate nation-states, the GCC perspective allows one to document empirically the emergence and transformation of regional divisions of labor that vary by industry.³⁶ The linkages between countries within a region are the flows of investment capital, technology, goods, services, and people that make up commodity chains. Regional divisions of labor tend to be internally structured in similar ways: Core countries supply much of the technology, capital, and high-end services (communications, transportation, and banking); semiperipheral nations handle relatively advanced manufacturing and low-end services (e.g., quality control, component sourcing); and the periphery carries out low-wage, routinized production. In East Asia's division of labor, Japan is the core, the East Asian NICs are the semiperiphery, and Southeast Asian nations and the People's Republic of China constitute the periphery.³⁷ An analogous regional division of labor exists in North America, with the United States as the core, Canada and parts of northern and central Mexico as a semiperiphery (making a range of capital-intensive and high-technology products such as automobiles and their engines, computers, and electrical machinery), and southern Mexico, plus a number of Central American and Caribbean nations as the periphery.³⁸ A key conclusion that emerges from GCC research is that economic growth is not blocked by these regional divisions of labor; to the contrary, development can be fostered even within peripheral areas of the world economy under appropriate local conditions and linkage patterns.

Third, the GCC perspective explores many of the institutional mechanisms by which countries learn how to compete in world markets. Nations progress through fairly predictable industrial cycles in which organizational learning is continuous. At an early stage of an industry's development, people learn how to make and export products according to the price, quality, and delivery specifications of local and foreign buyers. Later, when initial exports are threatened by low-wage competitors or by protected or saturated overseas markets, local producers typically pursue several options to maintain a significant role in these industries. One option is domestic upgrading to improve the kinds of products a firm makes. Another option is direct foreign investment in low-wage countries to duplicate the products that no longer are competitive at home. A third mechanism is triangle manufacturing, whereby the erstwhile exporters become intermediaries to channel orders from established foreign buyers to new production sites in less-developed countries.³⁹ These patterns of adjustment to industrial decline reveal surprising regularities in the kinds of institutions and information that must be generated if sustained eco-

nomic growth is to take place. This melding of development and organizational insights is facilitated by the GCC perspective.

Mapping Global Commodity Chains

One constructs global commodity chains by mapping economic networks along three related dimensions: products, countries, and organizations. At the *product level*, chains encompass the full production-consumption cycle: raw material supply, the design and manufacture of components and finished goods, exporting, distribution, and retailing. These products and services are connected in a sequence of value-adding economic activities. A distinctive feature of this product mapping is that it includes both backward and forward linkages from the production stage rather than focusing on manufacturing alone, as do many studies of industrialization. This broad scope allows one to show the relationship between industries ordinarily thought to be discrete. In apparel manufacturing, for example, one examines agriculture, petrochemicals, textiles, garments, shipping, wholesaling, and retailing.

At the *country level*, the geography of the GCC is superimposed on this production system. One needs to identify where each of the products in the commodity chain is made. An interesting finding here is that virtually all GCCs include countries at every level of economic development. For example, despite the fact that the apparel, automobile, and aircraft commodity chains represent widely varying levels of industrial sophistication, each of these chains involves core, semiperipheral, and peripheral nations in the world-system. Thus international divisions of labor are built into the very structure of GCCs.

Finally, at the *organizational level*, the focus shifts to the kinds of firms that make, distribute, and market the products. To what degree are these companies specialized or vertically integrated, large or small, transnational or domestic? Do they participate in interfirm networks across industry and country boundaries? The organizations that populate GCCs also mold the chain's governance structure—that is, the authority and power relationships that define how financial, material, and human resources are allocated and flow within a chain.

Varied data are used to construct GCCs. The raw materials, assorted components, and finished products in a GCC frequently are cataloged in textbooks or case studies of an industry, as well as in tomes on the global economy that contain sectoral profiles.⁴⁰ Once the products are known, the countries involved in GCCs can be identified via international production and trade statistics. Unfortunately, there are disparities in the classification systems for internationally traded goods over time. Supplementary trade figures often are available from national industry associa-

tions. The major firms in different segments of GCCs are mentioned in industry reports, investment surveys (like those provided by Standard and Poor's, Moody's, and Value Line), specialized trade journals, and numerous listings of the largest corporations around the world (such as those published annually by *Fortune* magazine).⁴¹ In industry research, as in country studies, personal interviews remain one of the richest sources of information, for general and specific questions alike.

Export Roles and Their Impact on Regional Development

Countries are connected to GCCs through the goods and services they supply to world markets. These linkages can be conceptualized as export roles. This fits Tilly's notion of encompassing comparisons because one subsumes the cases (countries) in a conceptual map that outlines the entire system (a commodity chain), plus a mode of incorporation (export roles). One seeks to avoid the functionalist pitfalls of this method by recognizing that countries do not fill roles solely to meet the abstract needs of the international economy. To the contrary, choice, mobility, and the creation and restructuring of export niches are essential aspects of this model. Furthermore, the geography of GCCs is constantly shifting, which has important implications for national development.

There are five major export roles in the world economy: (1) primary commodity exports; (2) export-processing (or *maquiladora*) assembly operations; (3) component-supply subcontracting; (4) specification contracting of finished goods (also known as original equipment manufacturing or OEM); and (5) original brandname manufacturing (OBM).⁴² These export roles are not mutually exclusive. Actually, most nations are tied to the world economy in multiple ways. The East Asian NICs have filled all five export roles between the 1950s and the early 1990s, although they currently are emphasizing the last three types of exporting. Most of the countries in Southeast Asia and Latin America are involved in the first three roles. The bulk of exports in South Asia and sub-Saharan Africa fit the first two roles, with many African countries limited only to mineral and agricultural exports. Each type of manufactured exporting (roles two through five) is progressively more difficult to establish because it implies a higher degree of domestic integration and local entrepreneurship; nonetheless, industrial development is enhanced as countries move from the second to the fifth option.

Burgeoning investments from Japan and the East Asian NICs in North America are leading to a deepening of multilateral ties between the two regions. In anticipation of the North American Free Trade Agree-

ment (NAFTA), which took effect on January 1, 1994, Asian investors were eager to set up factories in Mexico and the Caribbean Basin in order to have preferential access to the U.S. market. NAFTA extends the regional division of labor to the poorest countries in the hemisphere, and it leads to a reevaluation of the impact of low-wage EOI strategies on Mexico and the Caribbean. Serious questions have been raised about the inadequate contributions made by these export industries to broader development objectives in the region, such as upgraded skills, technology transfer, backward linkages to local suppliers, and improved living conditions.

Until the last decade, Mexico's *maquiladora* plants were relegated to a low-wage, export-processing role in the world economy. A major concern for Mexico was how to push beyond the enclave model of EOI represented by its traditional, labor-intensive *maquiladora* plants in order to adopt a more dynamic, industrially upgraded development strategy. This strategy would generate higher incomes and better skills for Mexico's workers, and, at the same time, would allow Mexican exports to be internationally competitive in technologically advanced sectors. In the 1980s, a new wave of *maquiladora* plants began to push beyond this enclave model to a more sophisticated type of component-supplier production, making parts for capital- and technology-intensive consumer durables like automobiles and computers.⁴³

In order to successfully carry out this shift from the "old" to the "new" *maquiladoras*, however, Mexico needs to move from its wage-depressing export strategy to more productivity-enhancing strategies. So far, it has taken the "easy road" to export expansion, since the sharp devaluations of the Mexican peso in the 1980s depressed real wages in the manufacturing sector by over 50 percent. The East Asian NICs, however, are moving in the opposite direction. They have diversified their exports in the face of a substantial appreciation (rather than devaluation) of their currencies, rising (not declining) real wages, and labor scarcity (rather than labor surpluses).

Today, many of Mexico's traditional *maquiladora* exports are shifting to Caribbean venues, which may become the favored locale for these low-wage activities. By the early 1990s, export-processing zones (EPZs) had become a leading source of exports and manufacturing employment in various Caribbean nations. In the Dominican Republic, for example, EPZs employed 142,300 Dominicans (primarily in garment assembly) in 1992 and generated \$1 billion in trade, netting \$300 million toward the balance of payments. In terms of employment, the Dominican Republic was the fourth largest EPZ economy in the world (the fifth if China's Special Economic Zones are included), and 11 percent of the more than

300 EPZ firms in the Dominican Republic were Asian.⁴⁴ Furthermore, East Asian projects were found to contribute more jobs, bigger investments, higher levels of local value added, and a greater utilization of skilled labor than the assembly oriented sewing operations by other foreign firms.⁴⁵

Despite these gains, one should be skeptical of the role that labor-intensive EOI can play over time in the development of Caribbean nations. Export-processing activities, such as those that have grown so rapidly in Mexico and the Caribbean Basin in recent years, have undeniable benefits in job creation, foreign exchange earnings, and the fostering of industrial experience. They do not by themselves, however, constitute a sufficient basis for a long-term development strategy. Export-processing industries are best seen as a transitional phenomenon: the first stage in a process of moving to a higher level of industrial development, in which domestic inputs and diverse services also are required.

Although many Caribbean nations are just now making the basic transition from farm to factory, Mexico is moving further up the industrial export ladder from clothes to complex components to computers. But these countries have a long way to go before matching the success of the East Asian NICs. The latter nations are shifting from their role as the principal suppliers of OEM merchandise sold under the foreign buyers' labels in American and European department stores to making goods for export under their own brand names (the OBM role) with a growing emphasis on booming Asian markets. Hong Kong, Taiwanese, and Korean manufacturers thus are closing the commodity chains for consumer items, like apparel, by moving all the way from raw material supply through retailing within the Asian region. The North American consumer goods commodity chains, however, are still stymied by their weakest link—production. It is an open question whether Mexican or Caribbean manufacturers, or their U.S. or Asian counterparts, will step forward to fill this regional gap. □

DATA GATHERING IN CROSS-REGIONAL RESEARCH

Data gathering for the cross-regional development strategies and commodity chains projects described above is a daunting task. At an individual level, my own work was facilitated because I was able to conduct interviews in both English and Spanish. For the Latin Americanist, Spanish allows one to do comparative research in most countries of the region. Though East Asia has a multitude of difficult languages and dialects, English is widely understood in business and academic circles. I also was fortunate to have local research assistants to help me in Hong

Kong, Taiwan, the People's Republic of China, and South Korea, where I do not speak the native languages. However, most of the nonwritten information I gathered in Asia was in English-language interviews that I conducted myself.

Although individual researchers can do cross-regional comparisons, they require substantial amounts of time and money to visit the countries included in their projects. A more feasible alternative for many scholars is to participate in collaborative research teams. The collaborative approach has two main advantages. One is the opportunity to find people with expertise in the different countries and areas of the world included in the research design. The second advantage of teams is the ability to bring together scholars trained in different academic disciplines. Today, many funding agencies have a preference for problem-oriented research. When one starts with an important problem or question, one generally discovers that the answers do not come in neat disciplinary packages. It often is necessary to find a diverse group of scholars with similar substantive interests to tackle the project.

Despite a personal preference for doing my own cross-regional fieldwork, the collaborative approach has been useful to me in a couple of ways. First, the pair of coedited books highlighted in this chapter are interdisciplinary volumes that allowed my coeditors and me to select scholars who were experts in particular regions (*Manufacturing Miracles*) or specific industries (*Commodity Chains and Global Capitalism*). The collective format of the edited book works best if you establish a common analytical framework at the outset and if you are able to bring together the participants for at least one joint meeting to present and discuss drafts of their chapters. Second, I also have found coauthors for articles who are knowledgeable about the industries or countries involved in my project.⁴⁶ Both forms of collaborative research—edited books and coauthored papers—tap the knowledge of experts. They are far less expensive and administratively cumbersome than a third option, which is to secure funds for a new research project by a group of collaborating scholars.

Secondary data analysis of written documents and statistics generally is an important part of any comparative study on industries or countries. Nonetheless, I also have relied heavily on in-depth interviews in all my research. Unlike surveys, which are instruments that require standardized questionnaires, fixed-choice response categories, careful sampling, pretests, statistical measures of reliability, and so on, the in-depth interview is often less systematic but equally valuable as a research tool. I employ two kinds of in-depth interviews in my research: the data probe and the strategic interview. The "data probe" is an open-ended interview, which I mainly use at the beginning of a project to orient myself to the issues, to refine my topic with academics and other local experts, and,

above all, to develop personal contacts for subsequent interviews. I use a snowball technique with both types of interviews to elicit the names of additional respondents.

The "strategic interview" is an indispensable tool for contemporary, actor-oriented comparative and case-based research. In strategic interviews, the value of a respondent's information is determined by his or her position in an organization, network, or historical process. These interviews are "semistructured": There are some central questions asked of all respondents and a number of other queries that are tailored to the unique position or experience of the respondent. Strategic interviews are frequently the only way to reconstruct complex decisionmaking processes, and they can be used to give a good first approximation of the actions of key groups and individuals in understanding historical events. For dependency studies, strategic interviews were used to uncover the bargaining that goes on between the state, transnational corporations, and domestic capital, in what Peter Evans calls the "triple alliance."⁴⁷ In the development strategies literature, this research method was employed in discussions with political and economic elites to determine why particular development strategies were pursued or abandoned and the problems encountered in implementing these policies.⁴⁸ Finally, strategic interviews are one of the best ways to trace corporate and social networks that connect the diverse organizations stretched across the world in global commodity chains.⁴⁹

As with all research techniques, there are ways to augment the reliability of strategic interviews. First, it is important, whenever possible, to supplement oral accounts of events with written materials. Often one's respondents in strategic interviews are in a good position to provide this documentation or to tell you where it can be found. Second, when dealing with events about which there is no written record, such as closed-door negotiations or decisionmaking, one should try to triangulate sources in order to neutralize or reduce bias.⁵⁰ Third, when respondents are reluctant to reveal details about themselves or their organization, I ask them to tell me about other major individuals or groups who may be perceived as rivals. After an initial round of interviews, I will often return to the original respondents to get a fuller account of their side of the story. The more the interviewer knows about a situation, the more those involved feel a need to explain their actions. Finally, strategic interviews are an excellent way of getting feedback on one's interpretation of events while still in the field. The respondents in one's study often turn out to be astute problem-solvers.

Qualitative research methods such as strategic interviews are an essential feature of many cross-regional studies of development. Although the hypothesis-generating or inductive value of interviews is

widely recognized, my research on development strategies and commodity chains suggests that strategic interviews, if designed and done carefully, can also be used for hypothesis testing. Open-ended interviews are frequently the only means to identify and assess the importance of historical contingencies, technological options, state policies, social networks, and particular economic conditions in shaping the choices made by firms, governments, and other organizational decisionmakers. Information on key issues, such as the degree to which dynamic East Asian forms of specification contracting can be transferred to such Latin American nations as Mexico or the Dominican Republic, is virtually impossible to find in secondary sources or surveys. Strategic interviews, using a sample of relevant firms, or well-crafted case studies, can help generate data to test clearly specified causal connections about this kind of organizational learning. Multiple methods are recommended for complex research projects, and interviews certainly belong in this mix. □

NOTES

I would like to thank Stephan Haggard, Lawrence Krause, and Peter H. Smith for their detailed comments on an earlier version of this chapter, and Lisa Peloquin at Duke University for her research assistance.

1. See Gary Gereffi and Donald L. Wyman, eds., *Manufacturing Miracles: Paths of Industrialization in Latin America and East Asia* (Princeton: Princeton University Press, 1990); Stephan Haggard, *Pathways from the Periphery: The Politics of Growth in the Newly Industrializing Countries* (Ithaca: Cornell University Press, 1990); and the essays by Albert Fishlow, Gary Gereffi, and Laurence Whitehead in "The Pacific Region: Challenges to Policy and Theory," a special issue of *The Annals of the American Academy of Political and Social Science* 505 (September 1989), edited by Peter A. Gourevitch. A precursor of these recent comparative studies of East Asia and Latin America is Fernando Fajnzylber, *La industrialización trunca en América Latina* (Mexico City: Nuevo Imagen, 1983), followed by Fajnzylber's even broader comparative study, *Unavoidable Industrial Restructuring in Latin America* (Durham, NC: Duke University Press, 1990).

2. The disparities in income distribution between the Latin American and East Asian NICs are dramatic. Brazil and Mexico have among the most inequitable distributions of income in the world, but Taiwan and South Korea display relatively egalitarian patterns. Data from the 1970s show that the ratio between the top and bottom quintiles of household income was 33:1 in Brazil, 20:1 in Mexico, 8:1 in South Korea, 5:1 in Taiwan, and 4.3:1 in Japan. See Gary Gereffi, "Paths of Industrialization: An Overview," in Gereffi and Wyman, *Manufacturing Miracles*, p. 16.

3. For a summary of these cross-regional trends, see Gereffi, "Paths of Industrialization," and Gary Gereffi and Stephanie Fonda, "Regional Paths of Development," *Annual Review of Sociology* 18 (1992): 419-448.

4. In its *World Development Report* for 1987, the World Bank claimed that "the economic performance of the outward-oriented economies has been broadly superior to that of the inward-oriented economies in almost all respects" (World Bank, *World Development Report 1987* [New York: Oxford University Press, 1987], p. 85). Also see Bela Balassa, *The Newly Industrializing Countries in the World Economy* (Elmsford, NY: Pergamon Press, 1981), pp. 1-26; and Bela Balassa, Gerardo M. Bueno, Pedro-Pablo Kuczynski, and Mario Henrique Simonsen, *Toward Renewed Economic Growth in Latin America* (Washington, DC: Institute of International Economics, 1986).

5. See Gereffi and Wyman, *Manufacturing Miracles*; Haggard, *Pathways from the Periphery*; and Peter L. Berger and Hsin-Huang Michael Hsiao, eds., *In Search of an East Asian Development Model* (New Brunswick: Transaction Books, 1988).

6. See Frederic C. Deyo, ed., *The Political Economy of the New Asian Industrialism* (Ithaca: Cornell University Press, 1987), and Gereffi and Wyman, *Manufacturing Miracles*.

7. See Roy Hofheinz, Jr., and Kent E. Calder, *The Eastasia Edge* (New York: Basic Books, 1982); and Berger and Hsiao, *In Search of an East Asian Development Model*.

8. There are five subtypes of outward and inward development strategies identified in *Manufacturing Miracles*: commodity exports, primary and secondary ISI, and primary and secondary EOI. Primary phases of ISI and EOI focus on consumer nondurable products, and secondary ISI and EOI include consumer durables, plus intermediate and capital goods. For evidence regarding convergence, see Gereffi, "Paths of Industrialization," and Colin I. Bradford, Jr., "Policy Interventions and Markets: Development Strategy Typologies and Policy Options," in Gereffi and Wyman, *Manufacturing Miracles*.

9. A fuller discussion of the natural limits of ISI and EOI development strategies can be found in Gary Gereffi, "International Economics and Domestic Policies," in Alberto Martinelli and Neil J. Smelser, eds., *Economy and Society: Overviews in Economic Sociology* (Newbury Park, CA: Sage Publications, 1990), pp. 242-246.

10. Albert Fishlow, "The State of Latin American Economics," in Inter-American Development Bank (IDB), *Economic and Social Progress in Latin America—External Debt: Crisis and Adjustment* (Washington, DC: IDB, 1985), p. 138.

11. See Lucian Pye, *Asian Power and Politics* (Cambridge, MA: Harvard University Press, 1985); and Berger and Hsiao, *In Search of an East Asian Development Model*.

12. See Christopher Ellison and Gary Gereffi, "Explaining Strategies and Patterns of Industrial Development," in Gereffi and Wyman, *Manufacturing Miracles*, pp. 394-397.

13. See Gary G. Hamilton and Cheng-shu Kao, "Max Weber and the Analysis of East Asian Industrialization," *International Sociology*, no. 2 (1987): 289-300.

14. Charles Tilly, *Big Structures, Large Processes, Huge Comparisons* (New York: Russell Sage Foundation, 1984).

15. Most-different-systems and most-similar-systems research designs are discussed in Adam Przeworski and Henry Teune, *The Logic of Comparative Social Inquiry* (New York: Wiley, 1970). Also see Chapter 1 in this volume. In their typology of methods used in comparative history, Skocpol and Somers refer to this

approach as the parallel demonstration of theory. This is the method utilized by most stage theories of social change as well as by standardized "natural histories" of different social phenomena such as civilizations, revolutions, and social movements. See Theda Skocpol and Margaret Somers, "The Uses of Comparative History in Macrosocial Inquiry," *Comparative Studies in Society and History* 22, no. 2 (1980): 174-197.

16. Classic exemplars of this approach are Barrington Moore, Jr., *Social Origins of Dictatorship and Democracy* (Boston: Beacon Press, 1966), and Theda Skocpol, *State and Social Revolutions* (New York: Cambridge University Press, 1979).

17. In Skocpol and Somers's tripartite framework, variation-finding comparisons are called "macro-causal analysis" and individualizing comparisons are referred to as "contrast of contexts" ("The Uses of Comparative History").

18. Fajnzylber shows how the reindustrialization debates in Japan and the United States highlight contrasting patterns of development in these two societies, which in turn serve as alternative industrial models for East Asia and Latin America, respectively. See Fernando Fajnzylber, "The United States and Japan as Models of Industrialization," in Gereffi and Wyman, *Manufacturing Miracles*.

19. Development strategies are defined as "government policies that shape a country's relationship to the global economy and that affect the domestic allocation of resources among industries and major social groups" (Gereffi, "Paths of Industrialization," p. 23). These policy choices may be open and negotiated (such as explicit tax and expenditure measures) or clandestine and imposed (such as inflation and overvalued exchange rates). See Gustav Ranis, "Contrasts in the Political Economy of Development Policy Change," in Gereffi and Wyman, *Manufacturing Miracles*.

20. Ronald Dore and Robert Kaufman remind us that development strategies do not necessarily mean comprehensive economic blueprints or grand designs of industrial transformation. Government decisionmaking in capitalist societies tends to be pragmatic and incremental, rather than strategic, responding to immediate crises and short-term dilemmas. Development strategies often gain coherence in a retrospective diagnosis of what, in fact, occurred incrementally. See Ronald Dore, "Reflections on Culture and Social Change," in Gereffi and Wyman, *Manufacturing Miracles*; and Robert R. Kaufman, "How Societies Change Developmental Models or Keep Them: Reflections on the Latin American Experience in the 1930s and the Postwar World," in Gereffi and Wyman, *Manufacturing Miracles*.

21. For a recent review of this debate in which the World Bank stakes out a moderate "market-friendly" position, see World Bank, *The East Asian Miracle: Economic Growth and Public Policy* (New York: Oxford University Press, 1993).

22. Robert Wade, "Industrial Policy in East Asia: Does It Lead or Follow the Market?" in Gereffi and Wyman, *Manufacturing Miracles*; and Robert Wade, *Governing the Market: Economic Theory and the Role of Government in East Asian Industrialization* (Princeton: Princeton University Press, 1990).

23. Alice H. Amsden, *Asia's Next Giant: South Korea and Late Industrialization* (New York: Oxford University Press, 1989).

24. See David Collier, ed., *The New Authoritarianism in Latin America* (Princeton: Princeton University Press, 1979).

25. On one hand, exclusionary bureaucratic-authoritarian regimes in Latin America emerged from the crises produced by periods of populist rule, when organized labor was one of the important bases of social support for the state. Authoritarian regimes in South Korea, Taiwan, and Singapore, on the other hand, never confronted an activated popular sector and were exclusionary from the outset. Furthermore, extensive postwar land reforms in South Korea and Taiwan, as well as in Japan, blunted the impact of large landowners, who were among the groups most likely to be affected by rapid industrialization. See Gary Gereffi and Donald Wyman, "Determinants of Development Strategies in Latin America and East Asia," *Pacific Focus* 2, no. 1 (Spring 1987): 25-28; and Frederic C. Deyo, "Economic Policy and the Popular Sector," in Gereffi and Wyman, *Manufacturing Miracles*.

26. The dominance of transnational corporations is a central theme of much of the dependency literature in Latin America. See Barbara Stallings, "The Role of Foreign Capital in Economic Development," in Gereffi and Wyman, *Manufacturing Miracles*.

27. This new development model is outlined in United Nations, Economic Commission for Latin America and the Caribbean (ECLAC), *Changing Production Patterns with Social Equity: The Prime Task of Latin American and Caribbean Development in the 1990s* (Santiago, Chile: ECLAC, 1990).

28. Tun-jen Cheng, "Political Regimes and Development Strategies: South Korea and Taiwan," in Gereffi and Wyman, *Manufacturing Miracles*.

29. Chi Schive, "The Next Stage of Industrialization in Taiwan and South Korea," in Gereffi and Wyman, *Manufacturing Miracles*.

30. René Villarreal, "The Latin American Strategy of Import Substitution: Failure or Paradigm for the Region?" in Gereffi and Wyman, *Manufacturing Miracles*.

31. Gary Gereffi, "Big Business and the State," in Gereffi and Wyman, *Manufacturing Miracles*.

32. Gary Gereffi and Miguel Korzeniewicz, eds., *Commodity Chains and Global Capitalism* (Westport, CT: Praeger, 1994). This interdisciplinary volume illustrates the structure and dynamics of GCCs in diverse industries, including steel, shipbuilding, automobiles, agriculture, apparel, footwear, cocaine, and services.

33. World-systems theory is most closely identified with Immanuel Wallerstein, who provided one of the earliest definitions of commodity chains: "A commodity chain is a network of labor and production processes whose end result is a finished commodity." See Terence K. Hopkins and Immanuel Wallerstein, "Commodity Chains in the World-Economy Prior to 1800," *Review* 10, no. 1 (Summer 1986): 159.

34. In Arrighi and Drangel's detailed study of stratification patterns between core, semiperipheral, and peripheral zones in the world economy, the indicator used to determine the zonal location of countries is GNP per capita (a distinctly national, rather than relational, measure of world-system position). See Giovanni Arrighi and Jessica Drangel, "The Stratification of the World-Economy: An Exploration of the Semiperipheral Zone," *Review* 10, no. 1 (Summer 1986): 9-74. For a relational assessment of world-system structure based on global "blockmodeling," which identifies trade patterns among nations for five major groups (blocks)

of commodities, see David A. Smith and Douglas R. White, "Structure and Dynamics of the Global Economy: Network Analysis of International Trade, 1965-1980," *Social Forces* 70, no. 4 (June 1992): 857-893. Another slant on zonal boundaries from a commodity chains perspective is offered by Roberto Korzeniewicz and William Martin, "The Global Distribution of Commodity Chains," in Gereffi and Korzeniewicz, *Commodity Chains and Global Capitalism*.

35. For a fuller discussion of this topic, see Gary Gereffi, "The Organization of Buyer-Driven Global Commodity Chains: How U.S. Retailers Shape Overseas Production Networks," in Gereffi and Korzeniewicz, *Commodity Chains and Global Capitalism*.

36. Jeffrey Henderson and Richard Doner conducted exhaustive firm-level research that identified the structure and dynamics of regional divisions of labor in the East Asian semiconductor industry and the Southeast Asian automobile industry, respectively. See Jeffrey Henderson, *The Globalisation of High Technology Production: Society, Space and Semiconductors in the Restructuring of the Modern World* (London: Routledge, 1989), and Richard F. Doner, *Driving a Bargain: Automobile Industrialization and Japanese Firms in Southeast Asia* (Berkeley: University of California Press, 1991).

37. The Greater South China Economic Region is a more specific subregional "growth triangle," which includes southern China's Guangdong and Fujian provinces, Taiwan, and Hong Kong. See Xiangming Chen, "The New Spatial Division of Labor and Commodity Chains in the Greater South China Economic Region," in Gereffi and Korzeniewicz, *Commodity Chains and Global Capitalism*.

38. See Gary Gereffi, "Global Sourcing and Regional Divisions of Labor in the Pacific Rim," in Arif Dirlik, ed., *What Is in a Rim? Critical Perspectives on the Pacific Region Idea* (Boulder: Westview, 1993).

39. Triangle manufacturing in the East Asian apparel commodity chain is discussed in Gereffi, "The Organization of Buyer-Driven Global Commodity Chains," and Gary Gereffi and Mei-Lin Pan, "The Globalization of Taiwan's Garment Industry," in Edna Bonacich, Lucie Cheng, Norma Chinchilla, Nora Hamilton, and Paul Ong, eds., *Global Production: The Apparel Industry in the Pacific Rim* (Philadelphia: Temple University Press, 1994).

40. An excellent volume with detailed chapters on the global textile, clothing, automobile, electronics, and service industries is Peter Dicken, *Global Shift: The Internationalization of Economic Activity*, 2d. ed. (New York: Guilford Press, 1992).

41. One of the best sources of information on the structure of global industries and the activities of the large transnational firms that operate within them has been the United Nations Centre on Transnational Corporations (UNCTC). The UNCTC was located in New York from 1975 to 1992, but in 1993 the work of this unit was transferred to the United Nations Conference on Trade and Development in Geneva as the Programme on Transnational Corporations, which now publishes an annual *World Investment Report*.

42. These export roles are discussed in Gary Gereffi, "Global Production Systems and Third World Development," in Barbara Stallings, ed., *Global Change, Regional Response: The New International Context of Development* (New York: Cambridge University Press, 1995).

43. See Gary Gereffi, "Mexico's Maquiladora Industries and North American Integration," in Stephen J. Randall, ed., *North America Without Borders?* (Calgary, Alberta, Canada: University of Calgary Press, 1992).

44. See Economist Intelligence Unit (EIU), *Dominican Republic, Haiti, Puerto Rico: Country Profile* (London: EIU, 1993/94), p. 20; Raphael Kaplinsky, "Export Processing Zones in the Dominican Republic: Transforming Manufactures into Commodities," *World Development* 21, no. 11 (1993): 1851-1865; and Alejandro Portes, José Itzigsohn, and Carlos Dore-Cabral, "Urbanization in the Caribbean Basin: Social Change During the Years of the Crisis," *Latin American Research Review* 29, no. 2 (1994): 3-37.

45. United States International Trade Commission (USITC), *Production Sharing: U.S. Imports Under Harmonized Tariff Schedule Subheadings 9802.00.60 and 9802.00.80, 1985-1988*, USITC Publication 2243 (Washington, DC: USITC, 1989), pp. 6-5.

46. Recent collaborative industry papers include Gary Gereffi and Miguel Korzeniewicz, "Commodity Chains and Footwear Exports in the Semiperiphery," in William Martin, ed., *Semiperipheral States in the World-Economy* (Westport, CT: Greenwood Press, 1990), and Gereffi and Pan, "The Globalization of Taiwan's Garment Industry." The value of collaboration for added country expertise is evident in Lu-Lin Cheng and Gary Gereffi, "The Informal Economy in East Asian Development," *International Journal of Urban and Regional Research* 18, no. 2 (June 1994): 194-219.

47. See Peter Evans, *Dependent Development: The Alliance of Multinationals, State and Local Capital in Brazil* (Princeton: Princeton University Press, 1979); Gary Gereffi, *The Pharmaceutical Industry and Dependency in Latin America* (Princeton: Princeton University Press, 1983); and Douglas C. Bennett and Kenneth E. Sharpe, *Transnational Corporations Versus the State: The Political Economy of the Mexican Auto Industry* (Princeton: Princeton University Press, 1985).

48. See Gereffi and Wyman, *Manufacturing Miracles*; and Haggard, *Pathways from the Periphery*.

49. See Gereffi and Korzeniewicz, *Commodity Chains and Global Capitalism*.

50. Numerous insights on the use of open-ended interviews as an indispensable tool in investigating corporate decisionmaking can be found in Erica Schoenberger, "The Corporate Interview as a Research Method in Economic Geography," *Professional Geographer* 43, no. 2 (1991): 180-189.