

**Recent Titles in
Contributions in Economics and Economic History**

Technology and U.S. Competitiveness: An Institutional Focus
W. Henry Lambright and Dianne Rahm, editors

The Development of the Greek Economy, 1950–1991
George A. Jouganatos

Business Finance in Less Developed Capital Markets
Klaus P. Fischer and George J. Papaioannou, editors

Logs for Capital: The Timber Industry and Capitalist Enterprise in the Nineteenth
Century
Sing C. Chew

The American Pulp and Paper Industry, 1900–1940: Mill Survival, Firm Structure, and
Industry Relocation
Nancy Kane Ohanian

Aspirations and Realities: A Documentary History of Economic Development Policy in
Ireland since 1922
James L. Wiles and Richard B. Finnegan

Multinational Culture: Social Impacts of a Global Economy
Cheryl R. Lehman and Russell M. Moore, editors

The Age of Giant Corporations: A Microeconomic History of American Business,
1914–1992, A Third Edition
Robert Sobel

International Agriculture Trade and Market Development Policy in the 1990s
John W. Helmuth and Don F. Hadwiger, editors

Comparative Studies of Local Economic Development: Problems in Policy
Implementation
Peter B. Meyer, editor

United States–Japan Trade in Telecommunications: Conflict and Compromise
Meheroo Jussawalla, editor

Pacific-Asia and the Future of the World-System
Ravi Arvind Palat, editor

Development versus Stagnation: Technological Continuity and Agricultural Progress in
Pre-Modern China
Gang Deng

COMMODITY CHAINS AND GLOBAL CAPITALISM

EDITED BY
Gary Gereffi and
Miguel Korzeniewicz

PRAEGER

Westport, Connecticut
London

Library of Congress Cataloging-in-Publication Data

Commodity chains and global capitalism / edited by Gary Gereffi and Miguel Korzeniewicz.

p. cm.

Includes bibliographical references and index.

ISBN 0-275-94573-1 (alk. paper)

1. Commercial products. 2. International division of labor.
3. Manufactures. 4. Offshore assembly industry. 5. International
business enterprises—Management. 6. Competition, International.

I. Gereffi, Gary. II. Korzeniewicz, Miguel.

HF1040.7.C66 1994

338.4'767—dc20 93-7082

British Library Cataloguing in Publication Data is available.

Copyright © 1994 by Gary Gereffi and Miguel Korzeniewicz

All rights reserved. No portion of this book may be reproduced, by any process or technique, without the express written consent of the publisher.

A hardcover edition of *Commodity Chains and Global Capitalism* is available from the Greenwood Press imprint of Greenwood Publishing Group, Inc. (ISBN: 0-313-28914-X).

Library of Congress Catalog Card Number: 93-7082

ISBN: 0-275-94573-1

First published in 1994

Praeger Publishers, 88 Post Road West, Westport, CT 06881

An imprint of Greenwood Publishing Group, Inc.

Printed in the United States of America



The paper used in this book complies with the Permanent Paper Standard issued by the National Information Standards Organization (Z39.48-1984).

10 9 8 7 6 5

Contents

<i>Illustrations</i>	ix
<i>Acknowledgments</i>	xiii
1. Introduction: Global Commodity Chains <i>Gary Gereffi, Miguel Korzeniewicz, and Roberto P. Korzeniewicz</i>	1
PART I. Historical and Spatial Patterns of Commodity Chains in the World-System	15
2. Commodity Chains in the Capitalist World-Economy Prior to 1800	17
2.1 Commodity Chains: Construct and Research <i>Terence K. Hopkins and Immanuel Wallerstein</i>	17
2.2 The Shipbuilding Commodity Chain, 1590-1790 <i>Eyüp Özveren</i>	20
2.3 The Grain Flour Commodity Chain, 1590-1790 <i>Sheila Pelizzon</i>	34
2.4 Conclusions About Commodity Chains <i>Terence K. Hopkins and Immanuel Wallerstein</i>	48

3. Competition, Time, and Space in Industrial Change <i>Erica Schoenberger</i>	51	14. Commodity Chains and the Korean Automobile Industry <i>Hyung Kook Kim and Su-Hoon Lee</i>	281
4. The Global Distribution of Commodity Chains <i>Roberto P. Korzeniewicz and William Martin</i>	67	15. Cocaine, Commodity Chains, and Drug Politics: A Transnational Approach <i>Suzanne Wilson and Marta Zambrano</i>	297
Part II. The Organization of Commodity Chains	93	<i>Bibliography</i>	317
5. The Organization of Buyer-Driven Global Commodity Chains: How U.S. Retailers Shape Overseas Production Networks <i>Gary Gereffi</i>	95	<i>Index</i>	321
6. Where Is the Chain in Commodity Chains? The Service Sector Nexus <i>Eileen Rabach and Eun Mee Kim</i>	123	<i>About the Contributors</i>	331
7. Institutionalizing Flexibility: A Comparative Analysis of Fordist and Post-Fordist Models of Third World Agro-Export Production <i>Laura T. Reynolds</i>	143		
Part III. The Geography of Commodity Chains	163		
8. The New Spatial Division of Labor and Commodity Chains in the Greater South China Economic Region <i>Xiangming Chen</i>	165		
9. Commodity Chains and Industrial Restructuring in the Pacific Rim: Garment Trade and Manufacturing <i>Richard P. Appelbaum, David Smith, and Brad Christerson</i>	187		
10. Strategic Reorientations of U.S. Apparel Firms <i>Ian M. Taplin</i>	205		
11. Automobile Commodity Chains in the NICs: A Comparison of South Korea, Mexico, and Brazil <i>Naeyoung Lee and Jeffrey Cason</i>	223		
Part IV. Consumption and Commodity Chains	245		
12. Commodity Chains and Marketing Strategies: Nike and the Global Athletic Footwear Industry <i>Miguel Korzeniewicz</i>	247		
13. Fresh Demand: The Consumption of Chilean Produce in the United States <i>Walter L. Goldfrank</i>	267		

Rice, working at Duke University, has greatly improved the look of this volume by designing many of the figures and tables used in various chapters. Martha Dimes Toher has our thanks for the often underappreciated task (except by scholars) of preparing the index.

1

Introduction: Global Commodity Chains

*Gary Gereffi, Miguel Korzeniewicz,
and Roberto P. Korzeniewicz*

Industrialization on a world scale has undergone significant shifts during the past two decades. The capacity to produce and export manufactured goods is being dispersed to an ever expanding network of peripheral and core nations alike. Economic globalization has been accompanied by flexible specialization, or the appearance of new, technologically dynamic forms of organization that usually are characterized by low equipment dedication, high product differentiation, and short production runs. In today's global factory, the production of a single commodity often spans many countries, with each nation performing tasks in which it has a cost advantage. The components of the Ford Escort, for example, are made and assembled in fifteen countries across three continents. Capitalism today thus entails the detailed disaggregation of stages of production and consumption across national boundaries, under the organizational structure of densely networked firms or enterprises (see Dicken, 1992; Porter, 1990; Reich, 1991). Crucial concepts in comparative sociology, such as national development and industrialization, are increasingly perceived as problematic in facilitating an understanding of these emerging patterns of social and economic organization.

But how novel are these emerging phenomena and world-economic patterns? Do they indeed signal the emergence of a new international division of labor? In order to successfully address these questions, we must find a theoretical approach that is analytically sensitive to historical change in order to evaluate and distinguish cyclical patterns from new trends. This framework must capture both the spatial features of these transformations across the world-economy, and the relationships that link these processes together. To contribute to such a theory,

and as a means of understanding the changing spatial organization of production and consumption in the contemporary world-economy, the articles in this book critically explore and elaborate the global commodity chains (GCCs) approach, which reformulates the basic conceptual categories needed to analyze new patterns of global organization and change.

A commodity chain has been defined by Hopkins and Wallerstein (1986: 159) as “a network of labor and production processes whose end result is a finished commodity.” A GCC consists of sets of interorganizational networks clustered around one commodity or product, linking households, enterprises, and states to one another within the world-economy. These networks are situationally specific, socially constructed, and locally integrated, underscoring the social embeddedness of economic organization. As indicated by Hopkins and Wallerstein (chapter 2 in this volume), “the greatest virtue of a commodity chain is its emphasis on process” (p.50).

Specific processes or segments within a commodity chain can be represented as boxes or nodes, linked together in networks. Each successive node within a commodity chain involves the acquisition and/or organization of inputs (e.g., raw materials or semifinished products), labor power (and its provisioning), transportation, distribution (via markets or transfers), and consumption. The analysis of a commodity chain shows how production, distribution, and consumption are shaped by the social relations (including organizations) that characterize the sequential stages of input acquisition, manufacturing, distribution, marketing, and consumption.

The GCCs approach promotes a nuanced analysis of world-economic spatial inequalities in terms of differential access to markets and resources. Our GCC framework allows us to pose questions about contemporary development issues that are not easily handled by previous paradigms, and permits us to more adequately forge the macro-micro links between processes that are generally assumed to be discretely contained within global, national, and local units of analysis. The paradigm that GCCs embody is a network-centered and historical approach that probes above and below the level of the nation-state to better analyze structure and change in the world-economy.

COMPETITION, INNOVATION AND COMMODITY CHAINS

Bringing a new focus to world-systems theory, the articles in this book share an emphasis on competition and innovation as crucial world-economic components of historical shifts in the organization of global commodity chains. For example, Hopkins and Wallerstein (chapter 2) tell us that monopoly and competition are key to understanding the distribution of wealth among the nodes in a commodity chain. Within a commodity chain, a relatively greater share of wealth generally accrues to core-like nodes than to peripheral ones. This is because competitive pressures are less pronounced in core-like nodes than in peripheral ones. Enterprises and states in the core, according to this argument,

gain a competitive edge through innovations that transfer competitive pressures to peripheral areas of the world-economy.

To provide historical evidence for these propositions, Özveren and Pelizzon contribute to chapter 2 by analyzing (respectively) the organization of shipbuilding and wheat production. In shipbuilding, the type of networks linking labor, enterprises, and states were crucial in shaping competition. Dutch shipyards initially gained a competitive edge by exploiting lower costs (e.g., in raw materials and labor). Likewise, in the semiperipheral colonies of North America the availability of land acted as a magnet for labor, enhancing the competitive position of shipbuilders. Spain underwent an economic decline, but England remained an important competitor, partly because of navy orders. Later, the Dutch shipyards lost ground to their rivals in the Thames and colonial America. For the English shipyards, access to colonial raw materials lowered costs, while the growing importance of oceanic trade for the country increased demand. For the American shipyards, easy access to raw materials (timber) allowed them to overcome the constraint of higher labor costs. As a result of effective competition, shipbuilders in the core constantly faced the peripheralization of certain production processes, and responded by generating innovations designed to provide a new competitive edge (e.g., the introduction of steamships in the nineteenth century).

Innovation was not limited to manufacturing processes. Pelizzon (chapter 2) analyzes the characteristics of the wheat commodity chain to show that marketing emerged as a distinct set of activities only in core areas. In the periphery, landlords and merchants tended to be the same individuals. Core and peripheral areas were also distinct in their infrastructure, with the core being characterized by faster and more effective transportation. Finally, consumption showed distinct patterns in core and peripheral areas: wheat bread, for example, tended to be consumed only by the wealthy in core zones and the highest magnates of the periphery, while the poor in core zones and the well-off in the periphery consumed rye bread.

Differences between nodes located in core and peripheral areas also are explored by Appelbaum, Smith, and Christerson (chapter 9), who argue that the crucial distinction between poor and rich countries is in the relative value of the commodities produced in each area—rather than a simple expression of varying degrees of processing (for a similar point, see chapter 4 by R. P. Korzeniewicz and Martin; chapter 7 by Reynolds; and chapter 15 by Wilson and Zambrano). The authors examine whether high-value products (e.g., wool suits) tend to be characterized by greater spatial concentration than low-value goods (e.g., synthetic blouses). Their results show that high-value commodities indeed exhibit a greater degree of clustering in fewer nations. This research suggests that the growth of manufacturing in peripheral and semiperipheral areas has been fueled not only by high labor costs in the core, but as part of an entrepreneurial strategy designed to enhance industrial flexibility and overcome protectionist barriers preventing the free flow of commodities. Access to GCCs, the timing and place

of entry, and upgrading are sources of power for firms that hope to be internationally competitive. Constant upgrading becomes a driving objective in the organizational strategy of enterprises.

Patterns of competition and innovation are crucial to understanding the organization and transformation of GCCs. The relative distribution of wealth within a commodity chain often has been portrayed in the social sciences as reflective of levels in a hierarchy of production. Within this hierarchy, less wealth was assumed to accrue to nodes involving the production of raw materials, and to increase proportionally as movement proceeded to manufacturing, distribution, and so forth. But traditional “extractive” activities such as agriculture and mining are giving rise to new export-oriented and technology-intensive forms of production with considerable industrial value-added at the local level (see Raynolds, chapter 7; Wilson and Zambrano, chapter 15). Similarly, many of today’s most profitable “service” industries are intimately tied to manufacturing activities that demolish the myth of a postindustrial society (Cohen and Zysman, 1987). In many developing nations, relatively labor-intensive services (like software programming, bank and airline data processing, and inexpensive medical services) may become a more important growth area than manufacturing. These cross-sectoral linkages can best be seen and appreciated using a GCC framework that does not limit itself to conventional “industry” boundaries. In fact, Hopkins and Wallerstein (chapter 2) indicate that the concept of GCCs ultimately challenges the hierarchical distinction between raw material production, industry, and services. All activities transform, all involve “human skilled judgment.” Within a commodity chain, profitability shifts from node to node according to competitive pressures, and “industry” is not always a motor of development. The GCCs approach explains the distribution of wealth within a chain as an outcome of the relative intensity of competition within different nodes.

This emphasis on the important role of competition and innovation in shaping the distribution of wealth within global commodity chains brings a new focus to world-systems theory. To some extent, this is part of an interdisciplinary phenomenon in the social sciences. Recent changes in world markets and political structures have made international competitiveness a fashionable buzzword as well as a burgeoning topic in comparative research. But within world-systems theory, this new concern does not merely follow intellectual fashion: it is a consequence of ongoing debates about the role of entrepreneurial strategies, Schumpeterian innovations, and patterns of competition in shaping the global division of labor.¹

COMMODITY CHAINS AS COMPETITION EMBEDDED IN TIME AND SPACE

Is the world-economy characterized by a new division of labor? Focusing primarily on the twentieth century, Schoenberger (chapter 3) tends to answer yes. Her contribution tells us that competition, time, and space are closely

interrelated. Competition is geographically embedded, and commodity chains highlight this dimension. Earlier in the twentieth century, product stability (or stable markets) provided spatial freedom to enterprises by allowing the development of mass production methods. With stable product configuration and consistent flow, internationalized production was facilitated: “in short, control over time allows an unusual form of control over space.” Batch production, on the other hand, emphasizes the constant development of products, and over recent decades this has entailed a new organization of time and space built around product differentiation. In this sense, “time has become part of the firm’s competitive strategy in the market.” Thus, “standardized mass production . . . allowed a truly extraordinary and extensive spatial division of labor. The development process was wholly divorced from actual production, and discrete elements of the manufacturing system could be hived off and settled in far-flung corners of the globe, the whole knit together by the steady flow of slowly changing, standardized product through the pipeline. Flexible mass production is less likely to assume this spatial form.” The new system that characterizes the global division of labor, because of the very organization of markets and consumption in the contemporary world, “is much less flexible spatially.”

Whereas Schoenberger emphasizes the qualitative nature of these transformations, Hopkins and Wallerstein (chapter 2) suggest that concentration and decentralization, or shifts in the zonal location of nodes (e.g., from core to periphery), are associated with cyclical rhythms of the world-economy. Already in the seventeenth and eighteenth centuries, as Hopkins and Wallerstein tell us, commodity chains “traversed many frontiers and tended to reach throughout most areas within the effective boundaries of the capitalist world-economy in that era.” During periods of world-economic contraction, or B-phases, falling demand leads to a narrowing of the number of production units and product specialization lessens. Periods of expansion, or A-phases, are characterized by growing vertical integration, for enterprises seek to reduce the number of market transactions to lower costs. In other words, A-phases provide incentives to lower transaction costs (and hence lead to growing vertical integration), while B-phases provide incentives to reduce labor costs (leading to declining vertical integration and an increase of subcontracting). Current transformations in the world-economy, we may assume, are rooted in these historical cycles.

These arguments on cyclical rhythms suggest that organizational strategies are shaped by patterns of competition that vary across chains and within nodes. Fitting well with this overall proposition, most contributions to this volume emphasize the heterogeneity of organizational arrangements characterizing nodes and networks within commodity chains. For example, Özveren (chapter 2) suggests that technological innovation in shipbuilding was concentrated in the larger shipyards, but these latter units were often shifting production to smaller enterprises characterized by more intense competition and greater capital risks. For a much later period, Taplin (chapter 10) highlights the heterogeneity of entrepreneurial strategies in the apparel commodity chain in the United States. In an

effort to enhance profits, enterprises must seek an effective balance between domestic subcontracting, overseas production, and rationalized manufacturing. Competitiveness is based (for some firms more than others) not only on cost but speed of delivery, availability of an infrastructure, control, and risk. In the United States, production for fashion-oriented enterprises tends to be small-batch and centered in New York City and Los Angeles; for enterprises engaged in standardized production, the area of choice for U.S. manufacturing is the Southeast region of the country.² Given this emphasis on heterogeneity, most authors in this volume seek to identify patterns of competition and organization within GCCs.

THE ORGANIZATION OF COMMODITY CHAINS AND INTERNATIONAL COMPETITIVENESS

The GCCs approach has significant links to the broader literature on international competitiveness. For example, there are a number of similarities between GCCs and Michael Porter's value chain approach: "a firm's value chain is an interdependent system or network of activities, connected by linkages. Linkages occur when the way in which one activity is performed affects the cost or effectiveness of other activities" (Porter, 1990: 41). As in our GCCs, Porter's value chains show the benefits that firms derive in breaking the production process into discrete segments to help them look for innovative organizational and managerial practices to improve their productivity and profit. Porter (1987: 29) argues that the appropriate focus in studying competitiveness is the industry (or, in our terms, the commodity chain) because this is "the arena in which competitive advantage is won or lost." And perhaps the most important aspect of this perspective for our purposes is Porter's (1987: 30) assertion that competitive success in a global industry requires a firm to manage the linkages in a GCC in an integrated or systemic fashion.

From this point of view, there are two primary factors that explain shifts in the geographical location and organization of manufacturing in GCCs. One is the search for low-wage labor, and the other is the pursuit of organizational flexibility. These two factors alone cannot account, however, for dynamic trends in international competitiveness. Cheap labor is what Porter calls a "lower-order" competitive advantage, since it is an inherently unstable basis on which to build a global strategy. More significant factors driving the international competitiveness of firms are the "higher-order" advantages such as proprietary technology, product differentiation, brand reputation, customer relationships, and constant industrial upgrading (Porter, 1990: 49–51). These assets allow enterprises to exercise a greater degree of organizational flexibility and thus to create as well as respond to new opportunities in the global economy.

While Porter's approach helps pinpoint the mechanisms that generate dynamic competitive advantages, the GCC framework allows us to specify more precisely, both in space and across time, the organizational features and changes in the

transnational production systems undergirding the competitive strategies of firms and states. Gereffi (chapter 5) argues that commodity chains have three main dimensions: an input-output structure (a set of products and services linked together in a sequence of value-adding economic activities); a territoriality (spatial dispersion or concentration of enterprises in production and distribution networks); and a governance structure (authority and power relationships). As Chandler (1977) has described for the United States in the late nineteenth and early twentieth centuries, commodity chains were internalized within the organizational boundaries of vertically integrated corporations. In such cases, the governance structure became the "visible hand" of corporate management. However, as commodity chains have become more globalized in the second half of the twentieth century, some links that were internal to the modern corporation are being externalized, thereby becoming the tasks of a network of independent firms. Under these circumstances, the governance structure, which is essential to the coordination of transnational production systems, is no longer synonymous with a corporate hierarchy.

Gereffi (chapter 5) argues that governance structures for the networked GCCs that have emerged in the last two decades can usefully be conceptualized as falling into two types: producer-driven and buyer-driven commodity chains. The difference between these two types of commodity chains resides in the location of their key barriers to entry. Producer-driven commodity chains are those in which large, usually transnational, corporations play the central roles in coordinating production networks (including backward and forward linkages). This is most characteristic of capital- and technology-intensive commodities such as automobiles, aircraft, semiconductors, and electrical machinery.

Buyer-driven commodity chains, on the other hand, are those in which large retailers, brand-named merchandisers, and trading companies play the central role in shaping decentralized production networks in a variety of exporting countries, frequently located in the periphery. This pattern of industrialization is typical in relatively labor-intensive consumer goods such as garments, footwear, toys, and housewares. The main functions of the core enterprises in these networks are to undertake the high-value activities, such as design and marketing, and to coordinate the other relationships, thus assuring that all the network transactions mesh smoothly. An important trend in global manufacturing appears to be a movement from producer-driven to buyer-driven commodity chains.

The GCC approach thus is linked to the concerns raised by network analysis in sociology. The relational terminology and methodology used by network analysts are highly appropriate for our GCC framework. In general, the term "network" may be defined as "a set of units (or nodes) of some kind and the relations of specific types that occur among them" (Alba, 1982: 42). The form of the network refers to the overall configuration of relations in the network or its parts. These properties, applied to the analysis of commodity chains, include the "length" of a chain, the "density" of interactions in a particular segment, and the "depth" or number of levels that occur at different stages of a GCC.

An example of a “dense” production network is found in the garment industry, where large numbers of local subcontractors often supply a single manufacturer (Rothstein, 1989). The Japanese automobile industry and the U.S. defense industry are examples of “deep” production networks, with each final assembly firm cultivating ties with numerous layers of component suppliers in a pyramidal fashion (Hill, 1989). The power of network analysis lies in the potential explanatory contribution of the various structural properties of a network.³

We can draw on the rich vocabulary of network analysis to compare GCCs diachronically as well as synchronically. If we are correct in asserting, for example, that recent changes in the world-economy involve the development of longer, more decentralized, and more flexible commodity chains (in contrast to commodity chains that tended to be internalized within large corporations located primarily in core countries), then the formal properties of GCCs such as length, centrality, density, depth, and size should be measured with some degree of precision. Similarly, it is important to study changes in the organization of the same GCC over time. There has been a tendency for the GCCs in most industries to become internationally more dispersed during the past two decades, with increased production in low-wage areas. However, this “new international division of labor” hides increased levels of product specialization within individual nations, and tends to minimize the extent of industrial upgrading that is occurring within the NICs that are moving to high-value-added, more profitable products within specific industries. Further development of the tools of network analysis will be essential to map these diachronic changes, including the growth and contraction of particular GCCs. The contribution by R. P. Korzeniewicz and Martin (chapter 4) suggests concrete methodological procedures that can be undertaken to advance in this direction.

But how do we know where GCCs start and where they end? What criteria should we use in determining which GCCs to study? For instance, a manufacturing plant might be a central unit in the production network of a GCC, but this node may also serve as the end-point of the raw material supply network and as the starting point for the export network. Pushed to an extreme, we would need a Leontieff-type input-output matrix of the entire world-economy just to do a totally comprehensive GCC analysis of an automobile with its 15,000 individual parts. We are thus best advised to design categories in which GCCs can be appropriately grouped or clustered to meaningfully test specific hypotheses, and draw boundaries that capture those segments of GCCs that are functionally linked, not well understood, and for which good data can be obtained.

For example, if we wish to explore the hypothesis that the spatial dispersion of GCCs to peripheral nations in the world-system is directly related to the labor-intensity of the commodities being produced, then we might group GCCs into the categories of labor-intensive consumer nondurable goods (e.g., garments and footwear), versus the more capital- and technology-intensive consumer durable products (e.g., automobiles and computers) and capital goods (e.g., machinery).

Or alternatively, we might want to show from a world-systems perspective that the degree of value-added in a GCC declines as we move from core to semi-peripheral to peripheral production sites (controlling for the possible effects of different technologies). Again, the contribution by R. P. Korzeniewicz and Martin (chapter 4) provides useful methodological guidelines for designing studies along these lines. Ultimately, the choice of which GCCs to study is a theoretical matter.

LINKING THE MICRO AND MACRO DIMENSIONS OF COMMODITY CHAINS

A GCC approach can both draw upon and contribute to the literature that focuses on development issues by analyzing the trajectory of individual enterprises and commodities. In fact, several of the contributions to this volume emphasize the importance of looking at organizational strategies and competitive relations between firms to understand the dynamics of commodity chains (see, for example, chapter 5 by Gereffi, chapter 7 by Reynolds, chapter 12 by M. Korzeniewicz, and chapter 14 by Kim and Lee). To the extent that it allows a focus on enterprises (either individually or within the production network of particular commodities), the analysis of GCCs provides a bridge between the macro-historical concerns that have usually characterized the world-systems literature, and the micro-organizational and state-centered issues that have stimulated recent studies in international political economy.

By analyzing patterns of competition among specific enterprises, the GCC approach can explore issues such as the role of ethnicity as a variable shaping the structure of commodity chains. For example, Chen (chapter 8) suggests that the structure of investments in Mainland China by enterprises in Hong Kong and Taiwan was significantly shaped by preexisting ties based on kinship. Likewise, Reynolds (chapter 7) argues that ethnic identification between Asian producers in the Dominican Republic and Asian wholesalers in the United States allowed for the creation and maintenance of trade networks that were essential to exports of fresh vegetables. Within global commodity chains, kinship and ethnic identity appear as crucial social resources that can be deployed by enterprises in their efforts to gain or sustain a competitive edge.

Several of the articles emphasize the importance of state action as a variable shaping the organization of enterprises within commodity chains. Chen (chapter 8) indicates that state policies were central to the development and growing integration of the commodity chain networks linking Mainland China, Taiwan, and Hong Kong in a new spatial division of labor. Foreign investments in China’s labor-intensive industries can be explained in part by the role of rising labor costs and growing competitive pressures in core and semiperipheral areas, as well as an entrepreneurial effort to penetrate the Mainland market. To explain the *timing* of these transformations, however, Chen emphasizes a state-centered argument that focuses on China’s policies. Likewise, Lee and Cason (chapter

11) suggest that variation and heterogeneity in industrial upgrading in the semi-periphery are explained by state policy, business strategy, and geographical variables. Eschewing simple generalizations about patterns of development in Asia and Latin America, Lee and Cason argue that there are greater similarities between Mexico and South Korea than between Mexico and Brazil. Finally, Wilson and Zambrano (chapter 15) show that crack cocaine has involved the development of flexible production systems linked to new markets. In a sense, according to the authors, Colombian drug organizations can be understood as multinational corporations geared toward the U.S. market. Less state regulation is to be found within this commodity chain, but the authors suggest that state policies nevertheless significantly affect the organization of this commodity chain at each of its networks and nodes.

LINKING PERIPHERAL AND CORE NODES: SERVICES, DISTRIBUTION, AND CONSUMPTION

The chapters in this volume indicate that to analyze processes of competition and innovation within a commodity chain, it is often necessary to focus on activities other than production. Gereffi (chapter 5) suggests that globalization involves functional integration, and this requires administrative coordination or governance. Governance structures can be either centralized or decentralized. Centralized coordination tends to be producer-driven (e.g., coordination by a transnational auto company of its many subsidiaries and subcontractors), while decentralized coordination prevails in buyer-driven commodity chains (e.g., those organized by retailers or brand-name companies). In this particular case, overseas sourcing became an innovation that allowed some retailing firms to gain a competitive edge in an increasingly complex consumer market. As in other cases, innovation itself increased the share of wealth captured by certain nodes (marketing) within a commodity chain, while decreasing the share of the “peripheralized” nodes (manufacturing). Hence Gereffi suggests that GCCs are characterized by change over time in the type of agents that characterize different nodes. An understanding of these agents can ultimately be produced only by a historical and comparative analysis.

Services are a frequently neglected component in the analysis of economic globalization. Rabach and Kim (chapter 6) indicate that services are crucial in linking the nodes of a commodity chain together. Drawing on Gereffi’s analytical distinction between producer-driven and buyer-driven types of commodity chains, the authors suggest that producer-driven chains contain both systemic and subsystemic niches. The systemic niches tend to be closely integrated with established markets and are characterized by high capital investments. Although these niches have initial periods of strong competition, they can develop into a “winner takes all” type of situation (e.g., VHS versus Beta in the market for video players) that is followed by limited competitive challenges. The subsystemic core niches, on the other hand, are flexible but dependent on the tech-

nological and marketing paradigms generated by the systemic niches. In buyer-driven chains, on the other hand, “the ‘state of the art’ remains subsystemic,” and there are no qualitative or paradigmatic technological shifts of the type that prevail in the systemic niches of producer-driven chains.

Rabach and Kim suggest that the organization of services is crucial to GCCs because “they *integrate* and *coordinate* the atomized and globalized production processes.” Services shape what is produced (e.g., design, research and development), how it is produced (e.g., choice of technology, organization of production), spatial coordination (e.g., production transfers, or what Gereffi in chapter 5 refers to as “triangular manufacturing”), other facilitating activities (e.g., insurance, finance), and the distribution of commodities. Services involve the organization of information, and control over this information generally entails a commanding position over the wealth produced within a commodity chain. The competitive edge here is provided by the rate of increase of knowledge rather than the total stock of knowledge.

Discussion of recent transformations in the organization of production and consumption is often carried out as if the emerging changes are simply functional requirements or outcomes of postindustrial or post-Fordist social arrangements. By emphasizing the multiplicity of organizational arrangements, however, the GCC approach identifies these transformations as an outcome of the complex and diverse strategic choices pursued by households, states, and enterprises. Wilson and Zambrano (chapter 15), for example, suggest that coca cultivation is one mechanism through which peasant households have responded to falling commodity prices in Latin America, while selling drugs constitutes in part a response of the urban poor in the United States to the prevalence of low-paid jobs. Distribution networks are also diversified, as Wilson and Zambrano show in the cocaine commodity chain.

Raynolds (chapter 7) challenges the concepts of Fordism and post-Fordism as analytical categories. Although agriculture was characterized by mass production during the 1950s and 1960s, flexible production has become more pronounced over the last two decades. As a result, agriculture involves a heterogeneous combination of firms, types of ownership, size, and relative access to markets. Large enterprises tend to gain a competitive advantage because of their market power, but small enterprises retain a competitive edge from their greater flexibility in organizing production. Large enterprises are less rigid than generally assumed: size enables them to implement large-scale innovations. On the other hand, small firms are less flexible than usually assumed: restricted assets and markets make them particularly vulnerable to cycles. Raynolds convincingly suggests that a commodity-based approach can provide a more nuanced analysis of organizational structures and strategies in agriculture. Similar to other contributions to this volume, she emphasizes the active relationships (e.g., competition, innovation) through which agents (e.g., enterprises, states) generate new patterns of organization.

Finally, the contributions by M. Korzeniewicz (chapter 12) and Goldfrank

(chapter 13) emphasize the importance of consumption patterns to understanding the basic dynamics of a commodity chain. In the case of athletic footwear, as indicated by M. Korzeniewicz, the success of the Nike Corporation can be largely traced to the firm's success in extending effective control to the distribution, marketing, and advertising nodes of this commodity chain. An important corollary of the transfer of manufacturing to peripheral nations is that the distribution and marketing segments of GCCs have become increasingly profitable. The wealth that accrues to brand-name companies and retailers in core countries generally is much higher when production is done overseas rather than domestically, because of savings in labor costs and the greater flexibility of sellers in filling specialized niches of consumer demand.

Goldfrank's contribution analyzes the hitherto neglected portions of the commodity chain in Chilean fruit. Focusing on distribution, promotion, and particularly final consumption, he argues that a new "produce-stand ethic" of health and fitness consciousness among affluent consumers in North America is joined with wholesalers' and produce multinationals' efforts to provide year-round supplies of formerly seasonal fresh fruits and vegetables to drive an expanding set of commodity chains involving counterseasonal production in the southern hemisphere. Like M. Korzeniewicz in his treatment of athletic shoes, Goldfrank places great emphasis on the changing culture of the core.

These arguments suggest that one theoretically relevant category is largely implicit but not sufficiently developed in this volume: households. Low labor costs in peripheral nations, and the development of new consumer markets in core nations, are discussed as important variables shaping ongoing transformations in GCCs. But neither of these variables can be fully addressed without a more substantial discussion of the organization and composition of households, and the changing relationship of households to enterprises and states. At stake is not merely the issue of households as a source of labor (waged or unwaged, expensive or cheap). In the modern world-economy the organization and composition of households embodies the construction of consumption as well as processes of status group formation (constructed around dimensions such as gender stereotypes, age, and female and male participation in the labor force). Households are a principal site in the construction of identities (e.g., gender, race, class, ethnicity, sexuality), and a GCCs approach must further elaborate this category to avoid missing a crucial analytical link.

CONCLUSION

A GCCs approach ultimately allows us to critically evaluate theoretical concepts that have hitherto prevailed in the comparative study of development, and that are deeply embedded in conventional analyses and vocabulary. Two such concepts, national development and industrialization, have become increasingly problematic in facilitating an understanding of emerging patterns of social and economic organization. Conventional approaches within the sociology of de-

velopment tend to assume that development and industrialization are positively linked. Furthermore, although they differ in many of their main tenets and hypotheses, modernization and dependency theorists have shared the assumption that nation-states constitute the primary locus of capital accumulation, industrial growth, and state policies fostering integrated national development. All these assumptions are debatable, and some have suggested that any study of the distribution of wealth in the world-economy must necessarily avoid treating industrialization as synonymous with development (Arrighi and Drangel, 1986; see also Block, 1990). Global commodity chains allow us to focus on the creation and distribution of global wealth as embodied in a multidimensional, multistage sequence of activities, rather than as an outcome of industrialization alone. In this sense a GCCs approach provides the theoretical and methodological basis needed for a more systematic analysis of micro and macro processes within a new political economy of the world-system.

NOTES

The authors would like to thank Ann E. Forsythe and Thomas Janoski for their helpful comments. Some of the arguments in this introduction were originally contained in a paper presented by Gary Gereffi and Miguel Korzeniewicz at a conference on "The New Compass of the Comparativist: Methodological Advances in Comparative Political Economy," April 26–27, 1991, Duke University, Durham, NC.

1. Within world-systems theory, the contributions of Giovanni Arrighi were particularly important in promoting this analytical shift. See, for example, Arrighi and Drangel (1986) and Arrighi (1990).

2. Perhaps the differences between New York, Los Angeles, and the U.S. Southeast are related to the possibility of adapting different-sized business to regulated and unregulated labor markets and their environments.

3. Alba (1982) outlines two broad approaches to network analysis: "relational methods are based on the direct and indirect connections that exist between units in a network, while positional methods are based on similarities in their patterns of relations to others" (Alba, 1982: 52). While relational methods typically identify networks in terms of their internal structure and focus on the "pathways" in networks, the positional method identifies nodes that are defined in terms of their structural equivalence or similarity.

REFERENCES

- Alba, Richard D. 1982. "Taking Stock of Network Analysis: A Decade's Results." *Research in the Sociology of Organizations* 1: 39–74.
- Arrighi, Giovanni. 1990. "The Developmentalist Illusion: A Reconceptualization of the Semiperiphery." In *Semiperipheral States in the World Economy*, edited by William G. Martin, pp. 11–12. Westport, CT: Greenwood Press.
- Arrighi, Giovanni, and Drangel, Jessica. 1986. "The Stratification of the World-Economy: An Exploration of the Semiperipheral Zone." *Review* 10, 1 (Summer): 9–74.
- Block, Fred. 1990. *Postindustrial Possibilities: A Critique of Economic Discourse*. Berkeley: University of California Press.
- Chandler, Alfred D., Jr. 1977. *The Visible Hand*. Cambridge, MA: Harvard University Press.

- Cohen, Stephen S., and Zysman, John. 1987. *Manufacturing Matters: The Myth of the Post-Industrial Economy*. New York: Basic Books.
- Dicken, Peter. 1992. *Global Shift: The Internationalization of Economic Activity*. 2d ed. New York: Guilford Publications.
- Hill, Richard C. 1989. "Comparing Transnational Production Systems: The Automobile Industry in the USA and Japan." *International Journal of Urban and Regional Research* 13, 3 (Sept.): 462–80.
- Hopkins, Terence K., and Wallerstein, Immanuel. 1986. "Commodity Chains in the World-Economy Prior to 1800." *Review* 10, 1: 157–70.
- Porter, Michael E. 1987. "Changing Patterns of International Competition." In *The Competitive Challenge: Strategies for Industrial Innovation and Renewal*, edited by David J. Teece, pp. 27–57. Cambridge, MA: Ballinger.
- . 1990. *The Competitive Advantage of Nations*. New York: Free Press.
- Reich, Robert B. 1991. *The Work of Nations: Preparing Ourselves for 21st-Century Capitalism*. New York: Alfred A. Knopf.
- Rothstein, Richard. 1989. *Keeping Jobs in Fashion: Alternatives to the Euthanasia of the U.S. Apparel Industry*. Washington, D.C.: Economic Policy Institute.

PART I

Historical and Spatial Patterns of Commodity Chains in the World-System