Development Trajectories in Global Value Chains

Global Value Chains and Development

Redefining the Contours of 21st Century Capitalism

Gary Gereffi

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Over the past half century globalization has transformed how nations, firms, and workers compete in the international economy. The chapters in this book, authored by one of the founders of the global value chains (GVC) approach, trace the emergence of the most influential paradigm used to analyze globalization and its impact by academics and policy makers alike. In the mid-1990s, Gary Gereffi introduced the notion that offshore production was fuelled by buyer-driven and producer-driven supply chains, which highlighted the role of giant retailers, global brands, and manufacturers to orchestrate complex networks of suppliers in low-cost developing economies around the world. The GVC framework was built around the twin pillars of 'governance' (how global supply chains are controlled and organized) and 'upgrading' (how countries and firms try to create, capture, and retain high-value niches in GVCs). This book contains the seminal writings used to launch the GVC framework, along with in-depth case studies that explain how Mexico, China, and other countries emerged as prominent exporters in the world economy. As the social dimension of globalization became more pronounced, Gereffi and colleagues elaborated the concept of 'social upgrading' and a new paradigm of 'synergistic governance' based on the coordinated efforts of private, civil society, and public-sector actors. During the 2000s, the rise of large emerging economies like China, India, Brazil, and South Africa transformed the structure and dynamics of GVCs in the direction of greater regionalization. Today new challenges are looming in resurgent economic nationalism and populism. Large international organizations such as the WTO, World Bank, and ILO, policymakers in national economies, development practitioners, and academics continue to be guided by insights from the GVC approach.

Gary Gereffi is Professor of Sociology and Director of the Global Value Chains Center at Duke University, Durham, USA. He has published numerous books and articles on globalization, industrial upgrading, and social and economic development, and is one of the originators of the GVC framework.

Development Trajectories in Global Value Chains

Globalization is characterized by the outsourcing of production tasks and services across borders, and the increasing organization of production and trade through global value chains (GVCs), global commodity chains (GCCs), and global production networks (GPNs). With a large and growing literature on GVCs, GCCs, and GPNs, this series is distinguished by its focus on the implications of these new production systems for economic, social, and regional development.

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'Gary Gereffi's work over the past 25 years has changed how we understand capitalism. This brilliant collection of essays shows that capitalism today can be understood in its global form by an array of production networks that generate profits, employment and wage income, and that economic development itself is deeply molded by these networks. Gereffi's analysis of global value changes has spearheaded a generation of scholars and has influenced policy makers from around the world. He effectively defined the field and then continued to move the thinking forward as the world evolved – with the growth of services trade and telecommunications, with economic booms in East Asia and busts in Latin America, and most recently with a riveting account of the shifting politics of industrial policy and protectionism. Gereffi is the gold standard: the writing is clear, data are illuminating and the analysis is sharp and relevant. This book is essential reading for anyone seeking to understand globalization and economic development.'

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'Global value chains are a key feature of the global economy in the 21st century. By providing the essentials of the GVC framework, unpacking the key concepts of governance and upgrading, and exploring the relevant policy implications – this collection of writings from the founder of this field is an essential companion to academics, policy makers, activists and business leaders interested in understanding present-day capitalism.'

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To Pela,
My inspiration, best friend,
and loving spouse for this entire journey

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Foreword

The themes covered in this book resonate with a distinction I made often between the old world of trade and the new world of trade when I was Director–General of the World Trade Organization. In the old world of trade, production was national, most trade occurred within countries, and the job of trade negotiators was to remove obstacles to trade that protected producers, such as tariffs and subsidies, so that international trade could flourish. In the new world of trade, production of both goods and services is transnational, organized in global supply chains where a product could be made in up to 10 to 12 countries, and trade increased greatly as intermediate inputs crossed borders many times in the process of making final products. This new world of trade involved value addition at every stage of the chain, and the obstacles to trade were increasingly about non-tariff barriers such as regulatory standards, consumer protection, intellectual property and data privacy, the purpose of which is to protect consumers.

A big part of my job at the WTO was to try to get people who negotiate trade agreements to make the transition from thinking about trade in traditional terms to the new realities of global supply chains. After lots of discussion with business people who were familiar with fully integrated systems of production where goods were largely produced in Asia and sold in the West, I launched the WTO's 'Made in the World' initiative, and shortly thereafter, we began to partner with the research unit at the OECD to elaborate ways to measure 'trade in value added'. This helped us drive home the point that it was no longer the volume of trade per se that mattered, but rather whether and how countries were connected to increasingly pervasive global value chains.

I first learned of Gary Gereffi's pioneering work on this topic in the context of these WTO efforts to create a new narrative on global trade and development. In a couple of international conferences organized by the WTO in Geneva, such as the Global Forum on Trade Statistics in February 2011 and the Fourth Global Review of Aid for Trade on 'Connecting to Value Chains' in July 2013, Professor Gereffi made key presentations that illustrated how the global economy was changing and why this was relevant to policy makers. Then in the fall of 2014, Gary and his colleague Frederick Mayer invited me to present a keynote address at the Global Value Chain Summit that they were organizing at Duke University as a forum to promote high-level dialogue between top international organizations who were using the value chain framework and leading academics also working on these issues.

The chapters in this book offer a panoramic perspective on the sweeping changes that have transformed the global economy in recent decades. I would summarize the import of this book in three overarching impressions. First is its historical sweep. The chapters chart in admirable detail the shift from a nation-state-centered global economy in the early postwar decades to the intricate division of labor and continuously evolving supply chains that we see today. Early chapters in the book dealing with the apparel industry in Asia and North America bring to life the old world of trade, in which production and trade networks were adjusting to continuously shifting tariffs and quota systems. Middle chapters of the book capture the impact of the rise of emerging economies as well as the 2008 economic crisis on the international trading system, while the final chapter on 'Protectionism and Global Value Chains' offers an up-to-date interpretation of what's old and what's new in US President Trump's trade disputes with his NAFTA neighbors and China.

A second takeaway from the book is the clarity of the analysis, couched in a language that is equally accessible to business leaders, development practitioners, policy makers, and scholars. Although the book covers a very broad spectrum of industries, countries and regions, its actor-centered approach provides a largely jargon-free discussion of national development models, technology trends, industrial transformation, and policy options for developing and developed economies. Multinational corporations and international business networks are center stage in the global value chains framework laid out in this book, but it is also clear that development goals encompass a much bigger agenda than just trade and investment. The theme of governance is a particularly rich concept in this book, since it embraces not just the organization of supply chains by lead firms and top suppliers, but also the role of public authorities and civil society groups in promoting various kinds of social, environmental, and economic upgrading at the country level.

A final reflection on this book stems from my conviction that we need a new narrative that not only brings together the old and new worlds of trade, but also helps to bridge the divides that threaten to fracture the international system of trade and development into completing blocs with no common agenda or goals. Change is inevitable, and this book analyzes dramatic shifts in the world economy that have altered the fortunes of large and small, and industrial and agrarian economies alike. An open question is how the international system that helped to establish and adjudicate the rules of the game in the late 20th century will respond to these shifts in the early 21st century. Countries are very heterogeneous in their collective preferences and development situations, but in the search for common ground, we need inclusive frameworks that address the interests of citizens, businesses and consumers, practitioners and policy makers, and other diverse constituencies. This book has the breadth, quality and analytical tools to contribute to this much-needed dialogue.

Pascal Lamy
Former Director-General of the World Trade Organization
June 6, 2018

Acknowledgments

This book brings together research that spans several decades and I have been fortunate to be at Duke University for this entire period. Duke has been an ideal intellectual and institutional base for my work because it embraced both international and interdisciplinary scholarship, and it encouraged entrepreneurial teaching and research programs. The Sociology Department was my faculty home, and it supported multiple conferences and workshops I organized at Duke. The Center for Latin American and Caribbean Studies and Duke's Asian/Pacific Studies Institute contributed in multiple ways to create a vibrant atmosphere for faculty and students alike who are working within and across both regions.

I am particularly proud of the innovative, dedicated and policy-relevant scholarship carried out at Duke's Center for Globalization, Governance and Competitiveness that I founded in 2005, which was renamed the Duke Global Value Chains Center in 2017. The researchers and doctoral students associated with the Center have been amazingly committed and talented development scholars, who applied and extended the ideas and frameworks discussed in this book in virtually all regions of the world. Special thanks go to Mike Hensen, the managing director of the Center since its early years, and Tom Nechyba, director of the Social Science Research Institute, the Center's main institutional sponsor at Duke.

A number of the chapters in this book are co-authored, and I appreciate and value the intellectual and collegial contributions of my co-authors, which in most cases go well beyond the particular chapters that appear in the book. Within Duke, I have worked especially closely with Fritz Mayer, a faculty colleague in the Sanford School of Public Policy, on multiple projects related to global value chains and international development. Fritz and Will Goldsmith, who completed his Ph.D in the History Department at Duke, helped me document the history of the GVC approach and the role of international organizations in promoting and disseminating the GVC framework. Some of these ideas appear in Chapter 1.

Finally, a very deep sense of gratitude goes to my family. International research is exceptionally demanding in terms of the amount of time required for traveling and working abroad, and this has been true in my case as well. Fortunately, my wife, Pela,

and my daughters, Emily and Karen, not only accepted these difficulties, but actually shared in many of the international travels and experiences that made my scholarly work around the world much more enjoyable and rewarding. For this reason and many others, this book is dedicated to Pela.

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1

The Emergence of Global Value Chains

Ideas, Institutions, and Research Communities

The chapters in this book were written during the past 25 years and the ideas in them evolved over a considerably longer period. This era spans dramatic changes in the global economy: the forging of the US-led Bretton Woods system to rebuild the postwar international economy in the 1950s and 1960s; the rise of offshore outsourcing and far-flung global supply chains in the 1970s and 1980s; the dismantling of the Soviet Union and the emergence of the BRICs[1] in the 1990s; the surge of China as an export power following its admission to the World Trade Organization (WTO) in 2001; the wrenching disruptions of the global recession of 2008–2009; the waning influence of the 'Washington Consensus' policy regime; and the surprising turn in the mid-2010s to a virulent economic nationalism and xenophobic populism in the United States and Europe that reject many of the principles of the post-World War II Pax Americana (Buruma, 2016). How can we make sense of such fundamental transformations in global capitalism? What are the determinants of this reorganization of the international economy, and how do we link these global shifts to their national and local consequences? Who are the winners and losers along the way? This book addresses these questions.

By nature, the analytical task at hand is international, interdisciplinary and also highly personal. Legions of scholars and pundits have addressed these topics from varied perspectives and geographic vantage points. Providing a coherent interpretation of the evolving events, however, reflects one's unique intellectual identity based on specific experiences and influences. In my case, I was trained in graduate school at Yale University as a development and economic sociologist, and I spent two years in Mexico doing interview-based field research for my doctoral dissertation on the Mexican pharmaceutical industry. Although my background at Yale was highly interdisciplinary involving coursework in sociology, political science and economics, I had an even more intense exposure to the interplay of academic and policy-engaged work during a three-and-a-half year stint at the Center for International Affairs at Harvard University in the late 1970s. During this period, I also did extensive consulting and contract research for the United Nations Centre on Transnational Corporations in New York and the Pan American Health Organization in Washington, DC. Through these and related institutional experiences after I joined the Sociology Department at Duke University in 1980, my worldview reflects the imprint of multiple professional and research communities. Thus, this introductory chapter includes elements of intellectual autobiography, sociology of knowledge, and the institutional underpinnings of the research communities that helped define the ideas and paradigms developed in this book.

The structure of the chapter is as follows. First, I highlight several contending perspectives on the international economy and development in the 1970s and 1980s that set the stage for the emergence of the global commodity chain (GCC) and global value chain (GVC) approaches. Modernization theory, dependency theory and world-systems theory were popular paradigms in academic circles that had dramatically different prescriptions for national development in general, and contrasting assessments of the role of multinational corporations (MNCs), the main agent for economic globalization, in particular. Second, I will discuss four building blocks that were instrumental to the emergence of the GVC framework in the 2000s: (1) the centrality of power and MNC lead firms in the GCC and GVC frameworks; (2) the analysis of 'global industries' as a complement to development research at the national and local levels; (3) the role of the state and contrasting regional development strategies in the global economy; and (4) the institutionalization of the GVC research community. Third, and finally, I will introduce each chapter of the book in terms of its core ideas and novel contributions to the emerging field of GVC studies.

Contending Perspectives on the International Economy and Development

In the early decades following the Second World War, modernization theory and dependency theory offered diametrically opposed proposals for developing economies and newly emergent post-colonial societies in the so-called Third World. Modernization theorists explicitly modeled their prescriptions for development on the historical legacy and institutional features of the advanced industrial democracies of the West. One of the best-known economic books in this genre was Walt W. Rostow's *The Stages of Economic Growth* (1960), which postulated that all countries pass through five stages of economic development[2] with identical content regardless of when these nations started out on the road to industrialization. Notwithstanding the widely criticized Eurocentric bias of the modernization approach (Bendix, 1967; Gusfield, 1967; Huntington, 1971; Portes, 1973), a key recommendation was close economic, political and social ties between developing economies and the Western capitalist democracies they were encouraged to emulate.

Dependency theory, by contrast, highlighted the exploitative potential of increased contact between the 'core' countries and the 'periphery' in the international capitalist system. Andre Gunder Frank, one of the most widely read Marxist dependency authors, claimed that asymmetric ties of economic and political dependency between core and peripheral economies promote 'the development of underdevelopment' (Frank, 1967), and citing evidence from Latin America and Africa, dependency writers argued that links to the center were the source of many of the Third World's problems, rather than a solution (see also Amin, 1973; Dos Santos, 1970). The dependency school, while unified in its critique of the ahistorical and apolitical assumptions of modernization theory, had significant internal differences in theoretical and research orientations with varying prognoses for capitalist development in the periphery (see Gereffi, 1983, chapter 1; Gereffi, 1994a).

Dependency theory altered its initial claims with a new wave of research in the 1970s and 1980s. Diverging sharply from the 'stagnationist' views of writers like Frank, Dos Santos and Amin, which declared that dependency could only lead to underdevelopment and socialist revolution, a number of authors promoted the notion of 'dependent development' (Cardoso and Faletto, 1979), which asserted that structural dependency on foreign capital and external markets might constrain and distort but is not necessarily incompatible with capitalist economic development in the more advanced countries of the Third World, such as Brazil (Evans, 1979), Chile (Moran, 1974), Nigeria (Biersteker, 1978), Taiwan (Gold, 1981), South Korea (Lim, 1985), India (Encarnation, 1989) and Kenya (Bradshaw, 1988).

A related and at the time novel research agenda was pursued by dependency scholars who focused on industries rather than countries. This approach often employed a 'bargaining perspective' that analyzed the interaction between the state, MNCs and national business elites in shaping local outcomes in relatively dynamic manufacturing industries. Sectors included in the initial set of studies were pharmaceuticals (Gereffi, 1978; 1983), automobiles (Bennett and Sharpe, 1979; 1985), computers (Grieco, 1984), and the electrical, tractor, tire, and food-processing industries (Newfarmer, 1985). This bargaining framework sparked a vigorous debate about the limits of dependency, hypothesis testing, counterfactual analysis and the possibilities for dependency reversal (Caporaso, 1978; Becker, 1983; Encarnation, 1989).

The research methodologies of these early country and especially industry case studies of dependency are a clear forerunner of the GCC studies that emerged in the mid-1990s (Gereffi and Korzeniewicz, 1994). Like the GCC and subsequent GVC approach, dependency analysis involved extensive and detailed field research, with the authors typically spending one to two years in their chosen countries gathering relevant secondary materials and meeting local informants. These studies relied heavily on in-depth or 'strategic' interviews[3] with government officials in charge of both macro and industry-specific policies, as well as firm-level managers and other stakeholders for the industries in question. Multinational corporations were a central actor in virtually all dependency research, whether of the case-study variety or in quantitative, cross-national studies intended to 'test dependency theory.'[4] The main issues analyzed in the country or industry studies of dependency revolved around the kinds of power being exercised by MNCs at the national level, the transnational structure and strategies of MNCs, and the roles played by national governments, local firms, workers and other industry actors in defending perceived national interests vis-à-vis the domestic and global goals of MNCs.

Against this backdrop, world-systems theory had a very different intellectual agenda. World-systems theory, which drew heavily on earlier critical perspectives of imperialism and capitalist exploitation, has been closely associated with the work of Immanuel Wallerstein (1974; 1979; 1980; 1989). This approach establishes a hierarchy of core, semiperipheral and peripheral zones in which upward or downward mobility is conditioned by the resources and obstacles associated with a country's mode of incorporation in the capitalist world-economy. Leaving one structural position implies taking on a new role in the international division of labor, rather than escaping from the system; thus, the possibilities for autonomous paths of development are quite limited.

The semiperiphery, a main category in world-systems theory, identifies an intermediate stratum between the core and peripheral zones that promotes the stability and legitimacy of the three-tiered world-economy. The diverse countries within the contemporary semiperipheral zone, such as South Korea and Taiwan in East Asia, Mexico and Brazil in Latin America, India in South Asia, and Nigeria and South Africa in Africa, purportedly have the capacity to resist peripheralization, but not to move into the upper tier (Wallerstein, 1974; Arrighi and Drangel, 1986). While world-systems theory takes a long-run historical view of cycles of change in the capitalist world-economy that cuts across all regions, it is not well suited to analyze the specific development trajectories of countries and regions that are similarly situated in the hierarchical structure, but respond differently to external economic challenges.[5]

For development scholars working on global industries, the general categories of core, semiperipheral and peripheral zones in world-systems theory were viewed as structural contexts in the world economy, shaped by both world-historic forces and the technological features of key industries (Henderson, 1989; Doner, 1991) as well as by the economic strategies of countries seeking to move toward higher-value-added activities in GCCs (Gereffi and Korzeniewicz, 1990; 1994). While the 'commodity chain' concept was originally introduced as part of the world-systems approach by Hopkins and Wallerstein (1977), and defined simply as 'a network of labor and production processes whose end result is a finished commodity' (Hopkins and Wallerstein, 1986: 159), it became the central theme of the co-edited volume by Gereffi and Korzeniewicz (1994), *Commodity Chains and Global Capitalism*. For reasons to be explored in greater detail below, this book actually marked a sharp break between world-systems theory and the GCC approach, which sought to link the macro-level issues related to the structure of the world-economy with the meso-level characteristics of national development strategies, and the micro-level emphasis on the inter-firm networks and related political and social consequences of local embeddedness (Gereffi, 1994a: 214).

Building Blocks in the Emergence of the GVC Paradigm

Given this brief overview of the contending theoretical perspectives on the international economy and development in the 1970s and 1980s, we turn to several cross-cutting themes that cumulatively began to distinguish the GCC and GVC research communities from their peers: (1) the centrality of MNCs and power dynamics in development studies; (2) the analysis of 'global industries' as a complement to national case studies of dependency and the parallel work on local industrial clusters; (3) reconceptualizing the role of the state and regional development strategies in East Asia and Latin America; and (4) institutionalizing the GVC research agenda through the support of foundations and university-affiliated research centers.

MNCs and Power in the Global Economy

While there was a great deal of popular interest in the power and global reach of MNCs in the 1970s (e.g., Barnet and Müller, 1974; Sampson, 1973; 1975), the study of multinational enterprises was still a neophyte field from an academic point of view. To the neoclassical economists of the 1950s and 1960s, the postwar world economy was defined by international capital flows, which were viewed at the country level as foreign direct investment (FDI). The United States was the main source of outward FDI, and the first national studies of US FDI were carried out by Dunning (1958) on the United Kingdom and Safarian (1966) on Canada. Both of these authors were interested in the public policy question of the contributions that US FDI had for a host economy (Rugman 1999), and thus they did not really think about MNCs as an institutional actor.

The Multinational Enterprise Project at Harvard Business School, which began in 1965 under the direction of Raymond Vernon and lasted for 12 years, tried to remedy the relative neglect of MNCs. In his most popular book, *Sovereignty at Bay*, Vernon (1971) posed the question: To what extent have MNCs supplanted the national autonomy of governments? Despite being out of step with his academic brethren in economics departments and business schools who were using general equilibrium models and rational choice to study the properties of efficient markets, Vernon's approach emphasized the strategies and activities of MNCs as both a political and economic force, rather than just another form of international capital movement (Vernon, 1999). Furthermore, empirical studies of MNCs underscored their large size, whether measured in sales or by more sophisticated calculations of value added, which showcased the concentrated power of vertically integrated MNCs that were bigger in economic terms than many countries.[6]

In applying to graduate programs in sociology, I was interested in international development and preferred programs that encouraged interdisciplinary scholarship. Yale fit the bill on both counts. I received a fellowship in a comparative sociology project that focused on inequality systems in five nations, and Yale had strong area studies programs in multiple regions with particular strengths in Latin America, Africa and Europe.[7] Among my sociology mentors, Louis Wolf Goodman worked on MNCs in Chile and political scientist Alfred Stepan was a noted Brazilianist who had close personal ties with Fernando Henrique Cardoso, one of the early pioneers of dependency theory.[8] In economics, there was also a very strong group of Latin American scholars, including Carlos Diaz-Alejandro, Gus Ranis, and Jorge Katz, among others. My exposure to dependency theory came largely through courses with Stepan and Goodman, who co-chaired my dissertation committee. I developed a proposal to work on MNCs in Mexico, and I received funding for a two-year Foreign Area Fellowship from the Social Science Research Council (SSRC) in New York.

While MNCs and dependency theory were both popular topics, there was considerable controversy about how to combine them in a dissertation project. In my case, I was fortunate that the SSRC took a pro-active stance in fostering a research community to help address a number of theoretical and operational challenges in this emergent field. In 1976, the SSRC created the 'Continuing Working Group on Multinational Corporations in Latin America' that brought junior and senior researchers together for periodic meetings in New York in the late 1970s and early 1980s to discuss their projects, methods and preliminary findings.[9] All members of the working group were studying MNCs in different countries and industries across Latin America, and exploring how dependency on MNCs in particular sectors shaped national development outcomes. In the early 1980s, Richard Newfarmer joined the working group. Trained as an industrial organization economist at the University of Wisconsin, Newfarmer helped to create a much-needed structural perspective on how global industries were organized. Using the tools of conventional industrial organization theory (such as Bain, 1968; Scherer, 1980), Newfarmer edited a book with chapters from all members of the working group that related the market power of MNCs in each industry to the conduct and performance of overseas affiliates and domestic firms (Newfarmer, 1985).[10] This model was a precursor to the governance structure dimension that later appeared in GCC and GVC studies.

My own dissertation project focused on MNCs in the pharmaceutical industry in Mexico (Gereffi, 1980). After two years of field research in Mexico (1975–1976), Raymond Vernon invited me to write my dissertation at Harvard, where I could interact with members of his Multinational Enterprise Project team as well as scholars at Harvard's Center for International Affairs, which Vernon was directing. My stay at Harvard extended from January 1977 through June 1980, and my work on MNCs evolved in several directions. In terms of my dissertation research on Mexico, I developed my central arguments in an article (Gereffi, 1978) for a special issue of the journal *International Organization* on 'Dependence and Dependency in the Global System,' (Caporaso, 1978). Although my analysis was a single-country case study, I was pushed by Vernon and others to develop falsifiable hypotheses related to dependency reversal, including a 'counterfactual analysis' that extrapolated from the experience of relevant comparative cases how national firms in Mexico might have performed better than MNCs in terms of national welfare (defined as local industry growth) and global consumer welfare (defined as identical products at lower prices).

Beyond my dissertation, I had the opportunity to initiate different kinds of policy-related studies of MNCs in the global pharmaceutical industry: one project involved the UN Centre on Transnational Corporations in New York, and a second looked at the viability of 'essential drugs' programs in Latin America for the Pan-American Health Organization (PAHO) in Washington, DC. In both cases, I was asked to analyze the structure and strategies of top MNCs in the global pharmaceutical industry, which was a key (and missing) complement to the bottom-up perspective of my Mexican case study on the steroid hormone industry. In retrospect, learning how to study a global industry from the perspective of MNCs and link it to the experience of national economies was critical to framing the governance structure and industrial upgrading pillars of the GCC and GVC paradigms in subsequent decades. However, in the late 1970s and 1980s these were uncharted waters.

Studying Global Industries

One of the major limitations of dependency theory was the absence of an integrated global perspective on MNCs. Most of the historical-structural authors in the dependency tradition assessed the development implications of peripheral capitalism by focusing on the class structure in the peripheral country, the alliances formed by local business and political elites with international capital, and the role of the state in shaping and managing the national, foreign and class forces that propel or constrain development within countries (Cardoso and Faletto, 1979; Evans, 1979). For dependency theorists, not the whole country but only a selected portion of it is integrated into the international economy (Sunkel, 1973), which does not fit classic power-dependence models that view dependence as a dyadic asymmetrical relationship between pairs of nation-states or other unitary actors (Emerson, 1962; Duvall, 1978).

For those dependency scholars who focused on industries rather than countries or regions, MNCs became a logical focal point for research because these companies embodied the power asymmetries entailed by a peripheral economy's integration into the international capitalist system. However, in US academic circles, there was a great deal of pressure to develop methodological strategies that would treat dependency not merely as a holistic structural 'situation' but rather as a relational 'variable' that could be measured and tested in falsifiable propositions about MNCs and other key actors (Caporaso, 1978; Gereffi, 1978; Moran, 1978; Bennett and Sharpe, 1979).[11] Notwithstanding this uptick of interest in analyzing MNCs through an industry lens, dependency theory still looked at the world from the bottom up, i.e., from the perspective of peripheral economies. There was little systematic empirical information about international industries viewed from the top down.

World-systems theory had the advantage of a more intrinsically global perspective on the historical evolution of the capitalist system, but the broad tripartite classification of core, semiperipheral and peripheral zones used in this approach created an agency problem in terms of not clearly specifying the concrete actors and mechanism of change in the system. In their influential study of the semiperipheral zone in the world-economy, Arrighi and Drangel (1986: 11) critiqued the dependent development literature for acknowledging 'the possibility that development in general and industrialization in particular might occur within states while still reproducing a structure of dependence.' Among the weaknesses of dependent development from a world-systems stance is that national or regional economies do not simply occupy an intermediate position between 'center' and 'periphery' in the world-economy; rather, a systemic view emphasizes the structural significance of each stratum or group of states (core, semiperipheral, peripheral), and not the rise or fall of individual economies. This three-tiered structure of the world-economy is assumed to be 'more or less constant throughout the history of the capitalist world-economy' and 'to play a key role in promoting the legitimacy and stability of the system' (Arrighi and Drangel, 1986: 12–13).[12]

In world-systems theory, commodity-chain dynamics are closely linked to world-system position. Core-periphery relations comprise 'economic activities structured in commodity chains that cut across state boundaries': 'core' countries are countries where 'core' activities are located, and 'core activities are those that command a larger share of the total surplus produced within a commodity chain and peripheral activities are those that command little or no such surplus' (Arrighi and Drangel, 1986: 11–12).[13] In other words, there is something about core status that enables firms (called 'core capital') to generate the highest returns or secure the most rent. But world-systems theory does not specify what those mechanisms are in any detail, so the formulation ends up being tautological.[14] If indeed commodity chains link all three tiers of the world-economy and are a key to reproducing this hierarchical system, we need to know more about the kinds of firms (state-owned, foreign and domestic) and industries that make up these chains, and how state policy can shape their contribution to surplus generation in zones like the semiperiphery (Gereffi and Evans, 1981).

These theoretical debates among dependency and world-systems scholars reaffirmed the importance of a core-periphery system, but did little to address the empirical question of how to analyze the global industries that actually make up the world economy. This became a practical mandate for the newly formed UN Centre on Transnational Corporations (UNCTC) in the late 1970s. Although UNCTC is probably best known for its unfilled quest to draft a code of conduct to govern the activities of transnational companies[15] in the wake of political scandals in the early 1970s,[16] it also did important work in commissioning comprehensive empirical studies of MNCs.

One of the initial priorities was a study of the global pharmaceutical industry, which had received a lot of attention because of controversial practices related to transfer pricing, differential drug labeling across countries, and the role of essential drugs programs in the developing world (Lall, 1973; 1975; 1978). Given my ongoing dissertation research on the pharmaceutical industry in Mexico (Gereffi, 1978; 1980), I was commissioned by UNCTC in 1977 to write a report on the structure and strategies of the top 50 pharmaceutical MNCs worldwide. This was followed by a second report on how the structure, conduct and performance of these pharmaceutical MNCs was good or bad for economic and health outcomes in developing countries, including various industry stakeholders such as consumers, domestic drug firms and local innovation systems (UNCTC, 1979; 1981).

The scale of this project was unlike anything I had undertaken before. Even more daunting, there were no guidelines offered by UNCTC staff because there were no research models of what a report on MNCs in a global industry should look like. Drawing on a wide variety of industry-specific source materials and numerous consultations with academic and business experts on the sector, I drafted the initial report focusing on the 50 largest pharmaceutical MNCs in the world. After listing the biggest companies in terms of their annual sales, the MNCs were classified by nationality and information was gathered on their position in distinct 'therapeutic markets' within the pharmaceutical sector (e.g., antibiotics and vaccines, cardiovascular, respiratory, autoimmune diseases, pain, etc.) in order to establish the main competitors in each market segment. The global reach of the top pharmaceutical firms was estimated by their sales distribution across major geographic regions. While the methodological and empirical difficulties in compiling such a report were formidable, the toughest hurdle was handling the intense political scrutiny and stakeholder interests attached to a UN study of pharmaceutical MNCs.[17] The official report (UNCTC, 1979) was widely circulated in UN circles and it became a reference point for how subsequent global industry studies could be carried out.[18]

The UNCTC report on MNCs in the global pharmaceutical industry complemented the national focus in my dissertation on the Mexican steroid hormone industry (Gereffi, 1980). In my book on *The Pharmaceutical Industry and Dependency in the Third World* (Gereffi, 1983), I added a couple of chapters that used the UNCTC studies to put the Mexican case in a broader international perspective. In the early 1980s, the Pan American Health Organization, the regional arm of the World Health Organization, commissioned me to prepare a policy paper and several national case studies evaluating the scope and effectiveness of 'essential drags' programs in various Latin American countries, including Mexico, Brazil and Peru (PAHO, 1984; Gereffi, 1988).

These early studies of global industries foreshadow several important themes in the subsequent GCC and GVC literature. First, a focus on specific industries has obvious policy relevance. Often, the demand for industry studies comes from those most interested in designing or implementing effective regulation.[19] Second, the organization of global industries reflects the power dynamics of their leading firms. This insight led directly to the concept of 'governance structures,' which is a mainstay in the GCC and GVC frameworks.[20] Third, the organization of global industries shapes the potential 'upgrading' pathways available to developing economies. The structures and strategies of MNCs present both opportunities and obstacles for how countries can link up with the international economy and build domestic industries.[21] Fourth, a detailed understanding of the role of MNCs in global industries allows us to 'map the activities' associated with efforts to create, capture and retain value, which are essential to economic growth and development.[22]

Development Strategies in Latin America and East Asia

East Asia has been the most dynamic region in the world since the 1990s and it played a major role in the emergence of the GCC and GVC paradigms. Dependency theory dealt primarily with developing economies in Latin America and Africa, and neither it nor world-systems theory had the analytical tools nor temporal focus to explain the impact of the rapid ascent of East Asia in the post-World War II era. Scholars who worked on East Asia believed that dependency theory had little, if any, relevance to their part of the world, where dynamic economic growth and social progress occurred without a number of the drawbacks typical of the Latin American experience (Amsden, 1979; Barrett and Whyte, 1982; Berger, 1986). Instead, East Asian political and economic elites managed to use external economic linkages effectively and selectively to promote domestic development.[23]

The import-substituting industrialization (ISI) model of growth had been well established in Latin America, Eastern Europe and a few other areas since the 1950s, and indeed, it was the preferred national development strategy recommended by the UN Economic Commission for Latin America, directed by Raúl Prebisch. It argued that industrialization could be the solution to Latin America's economic problems, which were rooted in both limited export markets due to the Great Depression and declining terms of trade (whereby the prices of the region's agricultural goods exports fell more rapidly than manufactured imports). However, this would require an active industrial policy by Latin American governments willing to entice foreign investors to produce major consumer goods locally in return for protected domestic markets (Love, 1980). Although the accuracy of Prebisch's empirical claims of declining terms of trade was challenged, the ISI policy became widely adopted throughout most of Latin America from the 1950s through the 1970s.

In East Asia, Japan and the newly industrializing economies of South Korea, Taiwan, Hong Kong and Singapore were dubbed 'miracle economies' because of their unparalleled accomplishments in the latter half of the twentieth century (World Bank, 1993). They registered record economic growth rates not only during the prosperous 1960s when international trade and investment were expanding rapidly, but they sustained 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 contrast to Latin America's inward-oriented ISI policies, the East Asian economies pursued a very different outward model known as export-oriented industrialization (EOI). When one examines the details of East Asia's EOI, though, there is considerable disagreement over its generalizability as a development model to other parts of the world.

The World Bank (1993) adopted a 'market friendly' view of East Asian success that attributed its economic growth in large measure to functional intervention in market 'fundamentals' such as stable macroeconomic policies, high investments in human capital (especially education), secure financial systems, limited price distortions, and openness to foreign technology and trade. A widely held alternative 'statist' interpretation, however, criticized the World Bank's adherence to doctrinaire market fundamentalism, and emphasized instead pervasive state intervention and the critical role played by selective industrial policies in promoting the sustained and diversified patterns of export growth exhibited by these high-performing Asian economies (Johnson, 1982; Amsden, 1989; Wade, 1990).

To better understand the relevance of the Latin American and East Asian experiences to other newly industrializing countries, scholars elaborated cross-regional comparisons of their development strategies (Gereffi and Wyman, 1990; Haggard, 1990; Deyo, 1987). One of the earliest studies in this vein was *Manufacturing Miracles: Paths of Industrialization in Latin America and East Asia* (Gereffi and Wyman, 1990), which compared the development strategies of four of the most successful newly industrializing economies: Mexico, Brazil, South Korea and Taiwan. The core concept of *Manufacturing Miracles* was 'development strategies,' defined as 'sets of 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 and Wyman, 1990: 23). This meso-level approach, in contrast to the macro focus of world-systems theory or the micro analysis of industrial clusters, highlighted the role of state policies in promoting desired local development outcomes, and it made the inward- or outward-oriented nature of industrial production a subject of both comparative and historical interest.

A central finding of *Manufacturing Miracles* was that, contrary to prevailing stereotypes, the distinction typically made between Latin America and East Asia as representing inward- and outward-oriented development models, respectively, was oversimplified. Each of the regional pairs pursued both inward and outward strategies of industrialization, although their timing and duration varied by region. In the early phases of development, all four economies adopted commodity export and 'primary' ISI strategies. The main divergence occurred after the initial ISI phase: Mexico and Brazil followed a strategy of ISI deepening or 'secondary' ISI (mid-1950s through the early 1980s), while Taiwan and South Korea shifted to 'primary' EOI (1960–1972) and then pursued 'secondary' ISI[24] (1973–1979) and 'secondary' EOI[25] (1980s onward) (Gereffi, 1989: 515–519).

One of the key messages from the cross-regional analysis of development strategies was that regions like Latin America could not simply emulate the East Asian experience, given significant differences in both historical patterns of international economic and geopolitical engagement as well as domestic institutions. East Asia, in particular, had unique circumstances associated with regional conflicts (the Communist Chinese Revolution and the Korean War) and subsequent Cold War tensions that led to very distinct patterns of international economic engagement than found in Latin America. These differences sparked a new view of global commodity chains and their governance structures in the 1990s.

The Emergence of the GCC and GVC Paradigms

To challenge widely held but misleading stereotypes of development patterns in Latin America and East Asia, a new knowledge network willing to rethink the commonalities and differences within and between the two regions was needed. Often this is most readily carried out in a university context. The institutional setting for the discussions and workshops that led to *Manufacturing Miracles* was the University of California at San Diego (UCSD), which had strong programs in both Latin America and Asia–Pacific Studies. I spent a one-year sabbatical at UCSD's Center for US–Mexican Studies in 1983–1984, and worked closely with my colleague Donald L. Wyman[26] to organize two workshops on Latin America and East Asia that led to our co-edited volume. The initial workshop brought together experts on each region to define themes of greatest relevance for the volume, and the second workshop discussed draft chapters where individual authors or pairs of authors addressed the same topic in both regions to make the bases for the comparative analysis more explicit and realistic.

Global Commodity Chains

The origins of the GCC framework are also linked to university-based research communities, conferences and subsequent publications that reframed and expanded earlier world-systems work on commodity chains. Immanuel Wallerstein founded the Fernand Braudel Center at Binghamton, State University of New York in 1976, which became the intellectual hub for the development of world-systems theory in the United States. Wallerstein sponsored an annual Political Economy of the World-System (PEWS) conference series, which brought together scholars around world-systems topics to present papers subsequently published in conference volumes.[27] The concept of commodity chains was first introduced by Hopkins and Wallerstein (1977; 1986) as a heuristic to study the operation of global capitalism and the reproduction of a stratified and hierarchical world-system beyond the territorial confines of the nation-state. By contrast, the introduction of the 'global' commodity chain[28] perspective in the early 1990s focused on the organization of contemporary global industries and how power asymmetries of MNC lead firms affected the prospects for national development. This led to a split with traditional world-systems theory (Bair, 2005; 2009).

The first publication that explicitly utilized the GCC framework was a study of the footwear industry by Gereffi and Korzeniewicz (1990). The paper was presented at one of the annual PEWS conferences on 'Semiperipheral States in the World-Economy,'[29] and my co-author was Miguel Korzeniewicz,[30] a doctoral student in the Sociology Department at Duke University. The research question that motived our study was why Argentina, Miguel's home country, had very high-quality leather exports but lacked a strong footwear industry, while neighboring Brazil had extensive shoe exports but limited leather inputs. Since Brazil and Argentina were both in the semiperiphery of the current world-system, the paper examined how export niches were created in the footwear commodity chain during the initial phases of economic globalization (1967–1987). The rapid growth of exports from the semiperiphery in footwear involved high levels of specialization, which shaped patterns of upward and downward mobility among the main footwear-exporting countries.[31] Creating export niches in the footwear commodity chain was partly a story of how and why the previous industry leaders allowed new capabilities for the emergent exporters,[32] and how intermediaries (like trading agents) linked small producers to global markets.[33]

The analysis of a contemporary global industry using the commodity chain concept generated spirited controversy[34] and a lot of interest among participants at the 1989 PEWS conference. Wallerstein suggested to Miguel and me that Duke University might like to host a subsequent PEWS conference on commodity chains, looking at both historical and contemporary cases. We accepted the invitation. The 16th annual PEWS conference on 'Commodity Chains and Global Capitalism' was held at Duke in April 1992, and it resulted in our edited volume on this topic[35] (Gereffi and Korzeniewicz, 1994).

While building on the original definition provided by Hopkins and Wallerstein (1986: 159), which views a commodity chain as 'a network of labor and production processes whose end result is a finished commodity,' the *Commodity Chains and Global Capitalism* book broke with several core precepts of world-systems analysis.

Whereas research on commodity chains from a world-systems perspective focused on the reconstruction of industries during the long sixteenth century, most chapters in our volume used the GCC concept to analyze contemporary industries.[36] The introductory chapter to the *Commodity Chains* volume describes the GCC framework as 'a nuanced analysis of world-economic spatial inequalities in terms of differential access to markets and resources' (Gereffi et al., 1994: 2). In addition, a critical contention of the GCC approach was that the internationalization of production in contemporary globalization reflected a novel process of economic organization – i.e., 'governance structures' that could be characterized as 'producer-driven' and 'buyer-driven' commodity chains (Gereffi, 1994b; 1996). This fueled a debate about 'whether globalization is better understood as a contemporary phenomenon enabled by increasingly integrated production systems, or as a process beginning with the emergence of capitalism in the long sixteenth century' (Bair, 2005: 157).

This 'developmentalist turn' in commodity chain research shared with the world-systems framework the notion that mobility is possible as individual countries move up or down between different tiers of the world-economy. For world-systems theorists, however, this is a zero-sum process; what is relevant is the reproduction of a hierarchically structured global capitalist economy (Wallerstein, 1974; Arrighi and Drangel, 1986). Hence, national development as a generalized goal is not deemed possible; it is simply a 'developmentalist illusion' (Arrighi, 1990).[37] Actually, the GCC approach was open to the option that commodity chains do not necessarily reproduce hierarchy and inequality in every case, and it assumed power asymmetries are rooted in the organization of global industries. Thus, commodity chain dynamics indeed are essential to the prospects for upgrading or downgrading in the global economy.[38] Notwithstanding these controversies, the GCC approach gained considerable popularity because of the detailed insights it provided in the analysis of contemporary industries and upgrading/downgrading trajectories of countries and firms within them, and it became a foundation for the elaboration of the closely related GVC framework.

The Global Value Chains Initiative

In September 1999, the Institute of Development Studies (IDS) at the University of Sussex in Brighton, UK hosted a workshop on 'Spreading the Gains from Globalization.'[39] Two broad research communities were invited. One set of scholars focused primarily on the local dynamics of industrial clusters to understand how small firms in both developed[40] and developing[41] economies could improve their export competitiveness in the global economy. A second set of researchers emphasized the changing organizational features of global industries,[42] and how new strategies by powerful lead firms were altering international and domestic production networks and opportunities for upgrading by developing economies.[43] The workshop's goals were threefold: (1) to bring these disparate research communities together for fruitful dialogue; (2) to establish direct communication between the researchers and the policy-making and policy-implementing communities; and (3) to promote a new research agenda that could identify implementable policies to help reduce growing inequality within and between countries and the impoverishing aspects of globalization.[44]

These two communities saw the challenges of economic globalization from opposite vantage points. Industrial cluster researchers had a bottom-up, country-level perspective, built around numerous small exporters that sought to leverage local advantages to enter global markets. Global industry researchers, by contrast, tended to adopt a top-down international perspective, where the drivers of change were multinational manufacturers and global buyers (retailers and brands) whose international production and sourcing networks imposed new rules of the game that determined winners and losers in the globalization era. The core challenge posed at the IDS workshop was to forge an integrated research framework that could link the macro (global), meso (industry and country) and micro (firm and community) levels of analysis, and generate novel findings and evidence-based policy proposals. To achieve these goals, a new type of policy-oriented, multidisciplinary and international research initiative was necessary, and it required an institutional backer with a long-term vision and a shared agenda.

The Rockefeller Foundation, one of the participants at the IDS meeting, met all these criteria. Rockefeller supported a five-year Global Value Chains Initiative (2000–2005),[45] which provided funding for a committed network of scholars to create an integrated research paradigm to address both the knowledge gaps and the policy gaps created by globalization. At the initial meeting in Bellagio in September 2000,[46] discussion centered around what to call the new framework. This decision was complicated because a variety of overlapping terms had been used to describe the network relationships that made up the global economy (Gereffi et al., 2001: 3; Sturgeon, 2001). The GVC Initiative adopted the term 'global value chains'[47] for various reasons, including: the association of 'commodity' with undifferentiated primary products (such as agricultural commodities, crude oil or unprocessed minerals), leaving out manufactured goods and services; potential confusion with the world-systems theory usage of commodity chain; and the term 'value' aligned closely with the concept of 'value-added,' which focused attention on the process of creating, capturing and sustaining value in global supply chains (Sturgeon, 2009: 117).[48]

The proceedings of the first Bellagio meeting appeared in a special issue of the *IDS Bulletin* on 'The Value of Value Chains' (Gereffi and Kaplinsky, 2001).

Core areas of concern like governance (Humphrey and Schmitz, 2001), upgrading (Dolan and Tewari, 2001; Fleury and Fleury, 2001), gender (Barrientos, 2001) and rents (Fitter and Kaplinsky, 2001) were introduced, and agriculture and apparel were among the industry cases studied.[49] In subsequent contributions, Humphrey and Schmitz (2002) elaborated the contrast between cluster and GVC approaches to governance and upgrading. Also, Gereffi, Humphrey and Sturgeon (2005) expanded the initial governance structure of producer-driven and buyer-driven chains used in the GCC approach (Gereffi, 1994b) into a fivefold typology that included three forms of network governance (captive, relational and modular) between the more conventional modes of markets and hierarchies (vertically integrated firms).[50] Along with annual meetings,[51] which brought together researchers, practitioners, members of the business community and policy makers, and support for academic publications, another contribution of the GVC Initiative was the creation of a public website to maintain an inventory of GVC-related publications and researchers.[52]

The evolution of ideas and research communities that contributed to the GCC and GVC paradigms provides a useful backdrop for the chapters that make up this book. There is a continuity of concern with the changing contours of globalization and the dynamic yet uneven nature of economic development in contemporary capitalism. Various theoretical traditions have grappled with these questions, including the modernization, dependency and world-systems authors and critics discussed in this chapter. However, a history of ideas alone is not enough to understand the communities of practice that underlie the conceptual advances and novel findings needed to challenge extant paradigms.

Thus, I have also emphasized the institutional underpinnings of the research communities that shaped and sustained the GCC and GVC frameworks. Universities and foundations provide relatively stable and tangible sources of support for these initiatives. Equally consequential are the more transitory knowledge communities forged by edited volumes and special issues of academic journals, as well as the conferences and workshops that often precede these publications.

The Chapters in This Volume: Context and Content

There are three sections of this book: Part I – Chapters 2–4 provide the foundations of the GVC framework; Part II – Chapters 5–10 examine the governance and upgrading dimensions of GVC analysis; and Part III – Chapters 11–15 explore specific policy issues associated with the GVC approach. For each chapter, I will provide contextual background and then briefly note its main substantive contributions.

Part I: Foundations of the Global Value Chain Framework

The three chapters in this section of the book are the most highly cited contributions in the GCC/GVC literature.[53] They introduce key concepts, typologies and empirical findings that will be building blocks for later chapters in the book.

Chapter 2: The Organization of Buyer-Driven Global Commodity Chains: How US Retailers Shape Overseas Production Networks

The book on *Commodity Chains and Global Capitalism* (Gereffi and Korzeniewicz, 1994) launched the GCC paradigm, and this chapter introduced the notion of governance structures into the GCC literature with the distinction between producer-driven and buyer-driven commodity chains. Governance structures are defined in terms of the power exercised by different types of lead firms (manufacturers, retailers and brands), and the apparel commodity chain is used to illustrate the dynamics of buyer-driven chains. The concept of buyer-driven chains has been extended to cover a wide range of labor-intensive, consumer-goods industries linking developing country exporters and advanced industrial end markets in the GVC literature. This chapter also discusses the role of state policies in GCCs, and stresses the affinity between the ISI development strategy and producer-driven chains, and the EOI development strategy and buyer-driven chains.

Chapter 3: International Trade and Industrial Upgrading in the Apparel Commodity Chain

This chapter was included in a special issue of the *Journal of International Economics* on 'Business and Social Networks in International Trade' co-edited by Robert C. Feenstra and James E. Rauch, both prominent trade economists. The chapter establishes a network-based concept of industrial upgrading that has become widely used in the GCC and GVC literatures. Focusing on the apparel industry in the newly industrializing economies of East Asia (Hong Kong, Taiwan and South Korea), industrial upgrading is defined in terms of several sequential stages: assembly; original equipment manufacturing (OEM); original brand manufacturing (OBM); and original design manufacturing (ODM). Organizational learning and triangle manufacturing are identified as key mechanisms in the evolution of East Asia's export roles.

Chapter 4: The Governance of Global Value Chains (co-authored with John Humphrey and Timothy J. Sturgeon)

This has become the classic theoretical formulation of the GVC governance paradigm, and it poses an alternative to the producer-driven and buyer-driven governance typology introduced in Chapter 2.[54] The chapter draws on three streams of literature – transaction cost economics, production networks, and technological capability and firm-level learning – to generate a theory of five types of GVC governance: hierarchy, captive, relational, modular and market. It highlights the dynamic nature of GVC governance with four brief industry case studies, and indicates how changes in any of the three key variables in the theory (complexity of information, codifiability of transactions, and capabilities in the supply base) would alter GVC governance structures.

Part II: Expanding the Governance and Upgrading Dimensions in Global Value Chains

Governance and upgrading are the two main analytical pillars of the GVC framework: governance structures and the organization of global industries look at the global economy from the top down (with a focus on international industries and MNCs), while industrial upgrading looks at the global economy from the bottom up (with a focus on countries, industrial clusters and local suppliers). The chapters in Part II of the book differentiate and unpack these master concepts.

Chapter 5: The Global Economy: Organization, Governance, and Development

This chapter appeared in *The Handbook of Economic Sociology*, 2nd edition (Smelser and Swedberg, 2005), and it is one of the very few chapters dealing with global topics in that influential volume.[55] It offers a comprehensive review of the conceptual frameworks used by scholars to analyze changes in the global economy over the past several decades. Particular emphasis is given to the role of transnational corporations and the emergence of global production networks and GVCs in the reorganization of production and trade in the global economy. Various governance perspectives are covered as well, including a comparison of the varieties of capitalism and global production network paradigms. The concept of industrial upgrading is defined and illustrated empirically.

Chapter 6: Local Clusters in Global Chains: The Causes and Consequences of Export Dynamism in Torreon's Blue Jeans Industry (co-authored with Jennifer Bair)

This chapter was one of the first to explicitly link the GCC framework with the study of local industrial clusters. It highlights how the establishment of the North American Free Trade Agreement (NAFTA) in 1994 allowed Torreon's blue jeans export industry to shift from a producer-driven chain led by US blue jeans manufacturers to a buyer-driven chain supplying US retailers and brand marketers.

Thus, a policy variable (the initiation of NAFTA) prompted the change in GCC governance structures, which in turn sparked an export surge in blue jeans from Mexico to the United States. Cluster networks in Torreon tended to be hierarchical and involved low trust, in contrast to the horizontal and cooperative networks typical in much of the cluster literature. Nonetheless, Torreon's boom cycle became a bust with the slowdown in the US economy after 2000. This highlights the likelihood of both downgrading and' upgrading outcomes when cluster dynamics are linked to the behavior of foreign buyers and external markets.[56]

Chapter 7: Development Models and Industrial Upgrading in China and Mexico

This chapter compares and contrasts the export-oriented economic development strategies pursued by China and Mexico in the global economy. While Mexico has been the paradigm for the neoliberal ('Washington Consensus') development model associated with foreign direct investment, extensive privatization and open markets, China has attained record levels of foreign capital inflows and export growth utilizing a more strategic, statist approach to its development. One of the keys to China's success has been a unique form of industrial organization called supply-chain cities, which has permitted it to achieve both economies of scale and scope in GVCs. Because China and Mexico depend heavily on the US market for their export growth, their development models are very susceptible to disruptions caused by US economic downturns as well as rising protectionism.

Chapter 8: Economic and Social Upgrading in Global Production Networks: A New Paradigm for a Changing World (co-authored with Stephanie Barrientos and Arianna Rossi)

This chapter was part of a special feature on 'Decent Work in Global Production Networks' in the International Labor Organization's journal, *International Labour Review*. A key challenge in promoting decent work worldwide is how to improve the position of both firms and workers in value chains and global production networks driven by lead firms. This chapter analyzes the linkages between the economic upgrading of firms and the social upgrading of workers. Drawing on studies that indicate firm upgrading does not necessarily lead to improvements for workers, with a particular focus on the Moroccan garment industry, it outlines different trajectories and scenarios of the tradeoffs involving economic and social upgrading. The framework outlined in this chapter was the basis for a multiyear international research program called 'Capturing the Gains,' which has been one of the most productive collaborations emanating from the GVC approach.[57]

Chapter 9: Regulation and Economic Globalization: Prospects and Limits of Private Governance (co-authored with Frederick Mayer)

Appearing in a special issue of *Business and Politics* on 'Private Regulation in the Global Economy' edited by Tim Büthe, this chapter focuses on the corporate codes of conduct, product certifications, process standards, and other voluntary, non-governmental forms of private governance that have proliferated in recent decades. Private governance has notable successes, but there are clear limits to what it alone can accomplish. This chapter hypothesizes that the effectiveness of private governance depends on four main factors: (1) the structure of the particular GVC in which production takes place; (2) the extent to which demand for a firm's products relies on its brand identity; (3) the possibilities for collective action by consumers, workers, or other activists to exert pressure on producers; and 4) the extent to which commercial interests of lead firms align with social and environmental concerns. Taken together, these hypotheses suggest that private governance will flourish in only a limited set of circumstances.

Chapter 10: Economic and Social Upgrading in Global Value Chains: Why Governance Matters (co-authored with Joonkoo Lee)

This chapter appeared in a special section of *Journal of Business Ethics* on 'Industrial Clusters and Corporate Social Responsibility in Developing Countries,' co-edited by Peter Lund-Thomsen, Adam Lindgreen, and Joelle Vanhamme. It examines the role played by corporate social responsibility (CSR) in both industrial clusters and GVCs. With geographic production and trade patterns in many industries becoming concentrated in the global South, lead firms in GVCs have been under growing pressure to link economic and social upgrading in more integrated forms of CSR. A new paradigm of 'synergistic governance' is outlined based on a confluence of private governance (corporate codes of conduct and monitoring), social governance (civil society pressure on business from labor organizations and non-governmental organizations), and public governance (governmental policies to support gains by labor groups and environmental activists).

Part III: Policy Issues and Challenges

The GVC community has elaborated the policy implications of its work since its inception, which reflects in part the role played by IDS researchers in the Global Value Chains Initiative. In addition, the Duke University Global Value Chains Center was created in 2005 to help institutionalize and extend the GVC perspective as an outgrowth of the GVC Initiative. The chapters in this section highlight the ongoing policy relevance of the GVC framework.

Chapter 11: Global Value Chain Analysis: A Primer (Second Edition) (co-authored with Karina Fernandez-Stark)

This is the second edition of the popular GVC Primer, which was created at the Duke GVC Center to introduce a range of policy actors (national governments, non-governmental organizations, development banks, bilateral and multilateral donors, etc.) to the key features of the GVC framework. This chapter provides a conceptual and methodological primer for practitioners and policy makers, defining and illustrating the core concepts in the GVC toolkit. It offers up-to-date examples of how the GVC framework is being utilized, especially in studies carried out by Duke University's Global Value Chains Center, a premier university-based research unit for GVC analysis.

Chapter 12: Global Value Chains, Development, and Emerging Economies

This chapter was a background paper for the United Nations Industrial Development Organization's *Industrial Development Report 2016* (UNIDO, 2015). It highlights the significant and diverse roles that emerging economies are playing in GVCs. During the 2000s, they were simultaneously major exporters of intermediate and final manufactured goods (China, South Korea, and Mexico) and primary products (Brazil, Russia, and South Africa). However, market growth in emerging economies has also led to shifting end markets in GVCs (Staritz et al., 2011) as more trade has occurred between developing economies (often referred to as South–South trade in the literature), especially since the 2008–09 economic recession (Cattaneo et al., 2010). China has been the focal point of both trends: it is the world's leading exporter of manufactured goods and the world's largest importer of many raw materials, thereby contributing to the primary product export boom for selected commodities and regions. Emerging economies are at the forefront of efforts to redefine their development models to incorporate their large domestic economies more fully in their upgrading strategies (Gereffi and Sturgeon, 2013).

Chapter 13: Risks and Opportunities of Participation in Global Value Chains (co-authored with Xubei Luo)

The chapter highlights the risks and opportunities that firms and their workers face in GVCs. It examines the risk-sharing mechanisms that firms provide from the national and global perspectives; it assesses the new opportunities and challenges both firms and individuals confront in the global arena; it discusses the role of economic and social upgrading, and it evaluates how governments can help people manage risks and reap the benefits of participating in GVCs.

Chapter 14: Global Value Chains in a Post-Washington Consensus World

This chapter appeared in a special issue of *Review of International Political Economy* on 'Global Value Chains and Global Production Networks in the Changing International Political Economy,' co-edited by Jeffrey Neilson, Bill Pritchard and Henry Wai-chung Yeung. The chapter looks at GVCs in the current post-Washington Consensus era, with an emphasis on several new trends: the organizational streamlining of GVCs; the geographic consolidation of GVCs, with particular attention to the emerging economies; new patterns of strategic coordination among value chain actors; the rise of South–South trade and the growing importance of new end markets; and the rapid uptake of the GVC framework by international organizations. All of these trends are pushing toward a reformulation of established development paradigms. The chapter also highlights the key role played by international organizations in the diffusion of the GVC paradigm.[58]

Chapter 15: Protectionism and Global Value Chains

This chapter is an original contribution to this volume. It provides an historical perspective to analyze recent manifestations of economic nationalism and calls for protectionism to curb the trade and investment imbalances associated with GVCs. One instance of the current protectionist threat is President Trump's statements that he may install a border tax on US imports from Mexico and substantially renegotiate or dismantle the North American Free Trade Agreement between the United States, Mexico, and Canada. Evidence is presented to show that since NAFTA went into effect in 1994, it has promoted a complex ecosystem of regional trade and cross-border investment that significantly benefits manufacturers, jobs and value-added trade on both sides of the US–Mexico border. In terms of the even larger US trade dispute with China, the chapter argues that this reflects a much deeper strategic competition between these two economic superpowers linked to the rise of the digital economy and a technological revolution that will deeply affect the future of manufacturing, jobs and innovation in the 21st century.

Conclusion

This chapter addresses the question: Where does the idea of global value chains come from? As we have seen, it is not a simple or a linear story. In part, it has roots in debates over development theory stretching back to the early formulations of center and periphery in the modernization and dependency paradigms of the 1960s and 1970s. It also reflects the controversy over the nature of globalization, and whether it should be traced back to the origins of capitalism in the long sixteenth century, as world-systems theorists claim, or whether we should focus on the novel features of contemporary globalization in the postwar era, especially the genesis of international production networks in the 1970s and 1980s and their rapid acceleration in the 1990s and beyond. Ideas about the global economy struggled to keep pace with the startling changes facilitated by the ever greater connectedness of the world and the geopolitical realignments brought by the end of the Cold War.

Another vantage point is how the GVC framework has been shaped by the many knowledge and research communities traced in this chapter. While ideas tend to flow easily once established, paradigm shifts are much harder to explain. Based on my own experience, the evolution of the GVC approach has drawn upon diverse groups of scholars with institutional support from numerous universities, foundations and professional associations. The account provided in this chapter is far from exhaustive; it identifies multiple strands in the story and it suggests how my views were influenced by the knowledge networks and research communities I participated in. Often these communities were purposive and oriented to a collective goal, such as the Global Value Chains Initiative supported by the Rockefeller Foundation or SSRC's Continuing Working Group on Multinational Corporations in Latin America. In other instances, the supporting institutions had more specific and instrumental objectives, such as the UNCTC's commissioned study on the top 50 pharmaceutical MNCs or the 'Capturing the Gains' research network funded by DFID.

A final point worth highlighting is the role played by temporary research communities, such as edited volumes and special issues of academic journals to promote innovative and interdisciplinary scholarship. Financial support from foundations and universities is a tangible and much appreciated contribution to research communities. Even more pervasive are the opportunities provided by collective publications to bring together scholars from diverse disciplinary backgrounds and settings to generate knowledge around a particular theme, and frequently for audiences that have not been exposed to these ideas before.[59] Together, all the influences outlined in this chapter contributed in significant ways to the emergence and dissemination of the GVC framework.

Notes

1. Brazil, Russia, India, and China.
2. Rostow's five basic stages were: traditional society; transitional society; take-off; drive to technological maturity; and high mass consumption.
3. For a brief description of strategic interviews in GCC studies, see Gereffi (1995: 51–53) and Bair and Gereffi (2001), Appendix A.
4. These quantitative studies generally related indicators of dependency (operationalized as foreign direct investment, foreign aid, and/or foreign trade) to separate indicators of national development or well-being (usually measured by the rate of economic growth per capita and/or the degree of inequality within countries). The measures of dependency are treated as the independent variables in regression models, and development or national welfare is the dependent variable (e.g., Chase-Dunn, 1975; Rubinson, 1976; Bornschier et al., 1978). For a critique of this approach, see Cardoso (1977).
5. For other evaluations and critical discussions of Wallerstein and world-systems theory, see Brenner (1977), Skocpol (1977), Chirot and Hall (1982) and Ragin and Chirot (1984).
6. UNCTAD's *World Investment Report, 2002* contained a table of the 100 largest 'economies' in the world in 2000, using a value-added measure for firms deemed comparable to the gross domestic product (GDP) calculation used for countries. There were 29 MNCs in the top 100 entries on the combined list of countries and nonfinancial corporations. The largest MNC was ExxonMobil, whose $63 billion of value added in 2000 ranked 45th on the country-company list, similar to the GDP of Chile or Pakistan (UNCTAD, 2002: 90–91).
7. My personal experience resonated with many of these topics. Prior to graduate school, I spent a year traveling with one of my college roommates (John C. Rudolf) through Mexico, Central America, Switzerland, Spain and Africa. The highlight of our trip was hitchhiking across the Sahara Desert from Algiers to Niamey, Niger. From Niger, I made my way to Lagos, Nigeria, where I taught high school, and John ventured to Kenya. In the fall of 1971, we both entered graduate programs in sociology; I went to Yale and John to Columbia University.
8. Of course, Cardoso also had a notable political career, serving as president of Brazil from 1995 to 2003.
9. The SSRC working group was co-chaired by Lou Goodman and Al Stepan from Yale and Peter Evans at Brown University, whose Ph.D. thesis at Harvard had analyzed Brazil from a dependency perspective (Evans, 1979). Regular members of the SSRC working group included: Douglas C. Bennett, Gary Gereffi, Rhys Jenkins, David Martin, David Moore, Richard Newfarmer, Kenneth Sharpe, Phillip Shepherd, Peter West, and Van Whiting, Jr.
10. The industries covered in the book included: automobiles, tires, cigarettes, food-processing, pharmaceuticals, iron and steel, tractors, and electric power.
11. The special issue of *International Organization* on 'Dependence and Dependency in the Global System' (Caporaso, 1978) was a breakthrough publication because it contained a number of articles that addressed both the theoretical and methodological challenges

highlighted by this debate. Albert Hirschman (1978) offered a broader historical reflection based on his 1945 book, *National Power and the Structure of Foreign Trade*, which he portrays as an intellectual harbinger of dependency theory and some of its shortcomings. For a more detailed review of variations in dependency theory and their empirical implications, see Gereffi (1980, chapters 2 and 3).

12. In Wallerstein's own words: 'Over time the loci of economic activities keep changing… Hence some areas "progress" and others "regress." But the fact that particular states change their position in the world-economy, from semiperiphery to core say, or vice versa, does not in itself change the nature of the system. These shifts will be registered for individual states as "development" or "regression." The key factor to note is that within a capitalist world-economy, all states cannot "develop" simultaneously *by definition*, since the system functions by virtue of having unequal core and peripheral regions' (Wallerstein, 1979: 60–61; emphasis in the original).
13. Activities in commodity chains are defined in an abstract and functional way, with little attention to the nature and strategies of firms that carry out these activities: 'All states enclose within their boundaries both core and peripheral activities. Some (core states) enclose predominantly core activities and some (peripheral states) enclose predominantly peripheral activities. As a consequence, the former tend to be the locus of world accumulation and power and the latter the locus of exploitation and powerlessness. The legitimacy and stability of this highly unequal and polarizing system are buttressed by the existence of semiperipheral states defined as those that enclose within their boundaries a more or less even mix of core-peripheral activities. Precisely because of the relatively even mix of core-peripheral activities that fall within their boundaries, semiperipheral states are assumed to have the power to resist peripheralization, although not sufficient power to overcome it altogether and move into the core' (Arrighi and Drangel, 1986: 12).
14. I am indebted to Jennifer Bair for this insight.
15. In this chapter, transnational corporations and MNCs are treated as synonyms.
16. UNCTC was created in New York in 1974 amidst rampant criticism in the wake of the 1972 revelations that the International Telephone and Telegraph Company (ITT) plotted with the US Central Intelligence Agency in 1970 to block the presidential election of Salvador Allende in Chile (Sampson, 1973). For nearly two decades, from 1975 to 1992, the UNCTC struggled to fashion a code of conduct to govern MNC activities and it ultimately failed to achieve consensus (Moran, 2009: 92–93; Bair, 2015). UN Secretary General Boutros-Boutros Ghali dismantled UNCTC, and in 1993 shifted the United Nations' work on MNCs to the UN Conference on Trade and Development (UNCTAD) in Geneva. Renamed the Division of Investment, Technology and Enterprise Development, the unit was assigned responsibility for producing what would become UNCTAD's flagship publication, *The World Investment Report*.
17. Every three months, I went to New York for meetings with UNCTC staff and representatives of the Pharmaceutical Manufacturers Association and the International Federation of Pharmaceutical Manufacturers and Associations, where I was grilled on all aspects of my research methodology and provisional findings. Drafts of the report were reviewed, critiqued and defended line by line.