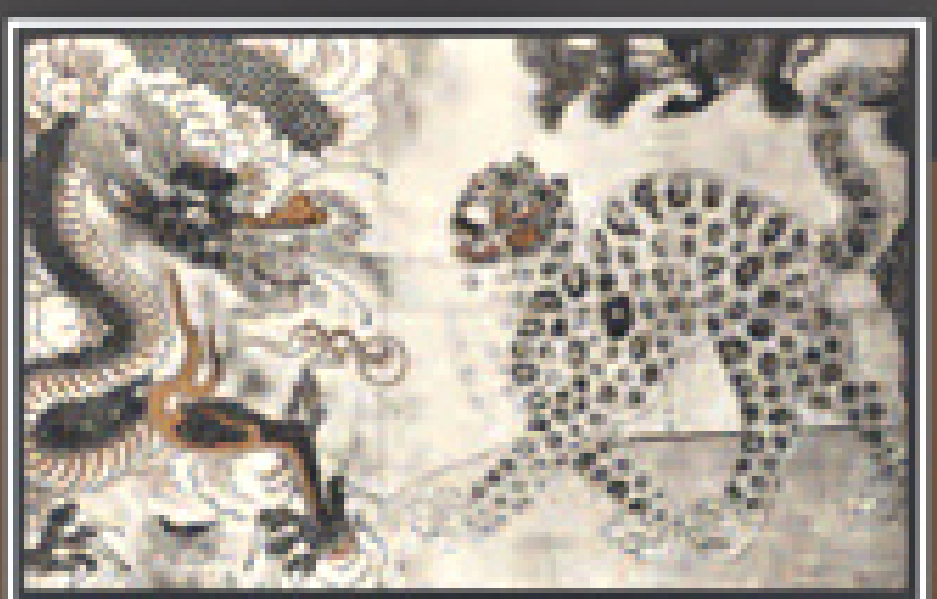
STRUCTURAL ANALYSIS IN THE SOCIAL SCIENCES 29

Emergent Economies, Divergent Paths

Economic Organization and International Trade in South Korea and Taiwan



Robert C. Feenstra
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Emergent Economies, Divergent Paths

The economies of South Korea and Taiwan in the second half of the twentieth century are to scholars of economic development what the economy of Britain in the late eighteenth and early nineteenth centuries is to economic historians. This book, a collaboration between a leading trade economist and a leading economic sociologist specializing in East Asia, offers a fresh, original explanation of the development paths of post–World War II Korea and Taiwan. The ambitions of the authors go beyond this, however. They use these cases to reshape the way economists, sociologists, and political scientists will think about economic organization in the future. They offer nothing less than a theory of, and extended evidence for, how capitalist economies become organized. One of the principal empirical findings is that a primary cause for the industrialization of East Asia is the retail revolution in the United States and the demand-responsiveness of Asian manufacturers.

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Structural Analysis in the Social Sciences

The series *Structural Analysis in the Social Sciences* presents approaches that explain social behavior and institutions by reference to relations among such concrete entities as persons and organizations. This contrasts with at least four other popular strategies: (a) reductionist attempts to explain by a focus on individuals alone; (b) explanations stressing the causal primacy of such abstract concepts as ideas, values, mental harmonies, and cognitive maps (thus, "structuralism" on the Continent should be distinguished from structural analysis in the present sense); (c) technological and material determination; (d) explanation using "variables" as the main analytic concepts (as in the "structural equation" models that dominated much of the sociology of the 1970s), where structure is that connecting variables rather that actual social entities.

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Mark Granovetter

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To Gail and Eleanor

Contents

Acknowledgments

This book began at the coffeehouse at the University of California, Davis, where we first met each other in the early 1990s. At that time, Feenstra was pondering the links between market structure and international trade patterns: a topic that was much in vogue in the economics literature, but for which empirical applications were hard to come by. Hamilton, meanwhile, had been active investigating the differing structures of business groups in Asia, much of this work in collaboration with Nicole Woolsey Biggart. In the process, he had accumulated a rich collection of firm-level data at the Institute of Governmental Affairs. Since, by market structure, economists mean the concentration and behavior of firms, then what better application than to contrast the radically different structures of business groups in South Korea and Taiwan? Thus, a collaboration was born that has lasted more than a decade and resulted in this book.

It would not have happened without the gracious assistance of many people. First, we wish to thank Alan Olmstead, Director, and Jean Stratford, Director of Research Services, at the Institute of Governmental Affairs, University of California, Davis, along with Shelagh Matthews Mackay and other staff at IGA. They have managed a countless number of grants, conferences, visiting scholars, research assistants, datasets, and other requests that have allowed us to continue our research across time, space, and disciplines. We can only hope that others will be able to enjoy the same benefits from affiliation with IGA that we have gained.

Intellectually, we owe a great debt to Nicole Woolsey Biggart and Cheng-shu Kao, who have contributed to this project from the start. Other coauthors, too, have been instrumental in carrying this work forward, and some of these began as graduate students and research assistants at Davis: from the economics department, William Zeile, Tzu-Han (Maria) Yang, Dorsati Madani, and Shunli Yao, all of whom have made significant contributions to the project, and from the sociology department the same is true for Yinhwa Chu, Holin Lin, and also Eun Mee Lim and

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Finally, we are grateful to James Rauch and Mark Granovetter for their unfailing support. Rauch organized several conferences bringing together sociologists and economists, where we could present our preliminary results, and he and Granovetter both provided detailed comments at various stages of the project. There is no question in our minds that the analysis in this book could not have been done by one of us acting alone: it represents a genuine collaboration across the two disciplines that is relatively rare, but very fruitful for us. We are indebted to Rauch, Granovetter, and other scholars who are encouraging of this type of collaboration, and trust that our research will find an interested readership in both disciplines.

We wish to recognize the support of the Ford Foundation and the National Science Foundation for grants that supported the research leading to this book. We began to write this book in earnest during the year (1999–2000) that Hamilton was a Fellow at the Center for Advanced Studies in the Behavioral Science. He gratefully acknowledges the opportunities provided by the Center.

An early version of Chapter 1 is "The Organization of Economies," pp. 153–80 in *The New Institutionalism in Sociology*, edited by Victor Nee and Mary Brinton, 2nd ed., Stanford: Stanford University Press, 2001. Early versions of Chapters 3 and 4 are found in "The Organization of the Taiwanese and South Korean Economies: A Comparative Equilibrium Analysis," pp. 86–142 in *Networks and Markets*, edited by James Rauch and Alessandra Casella, New York: Russell Sage, 2001. In addition, the full mathematical exposition of the model, "A Market-Power Based Model of Business Groups," appears in *Journal of Economic Behavior and Organization*, 51, pp. 459–85, 2003. That appears in the book as Appendix A. Material on the Korean financial crisis contained in Chapter 3 and Appendix D appeared as "*Chaebol* and Catastrophe: A New View of Korean Business Groups and Their Role in the Financial Crisis," *Asian Economic Papers*, 1(2), 2002, pp. 1–45.

Introduction

This book began as a study of the business groups in South Korea and Taiwan, but has grown into something much more. Business groups – affiliations of firms, usually with some degree of common ownership – have been a favorite topic of study among a number of economists (who have had a principal interest in the *keiretsu* in Japan, but also the groups found elsewhere in Asia) and economic sociologists (including one of the authors), as well as political scientists and area specialists. In economics, the traditional explanation for these groups has been that they are a response to *market failure*; because the market for capital or entrepreneurial skill or some other asset does not function well within the economy at large, business groups allocate this scarce resource among affiliated firms, thereby substituting managerial initiative for market mechanisms. In political science, rather than being a function of market processes, these groups are explained as being the creation of government mandates, expressed by preferential policies toward business groups and the entrepreneurs who establish them. In sociology, the explanations also downplay purely market processes, but make these groups the outcome of background institutional environments in which political and social institutions place parameters on how economies operate.

On the surface, these various explanations have little in common. Obviously, they are all shaped by the disciplinary gaze of the analysts and the countries they observe. Economists first noticed business groups in developing countries (for example, Leff, 1978), where market failures at an early stage of development are a standard diagnosis, and business groups conveniently fit into that framework. Political scientists, and political economists more generally, working especially on South Korea (for example, Woo, 1991, Evans, 1995), like to identify "historical moments" (such as General Park's meeting with Korean entrepreneurs in 1961) that define the relationship between the government and nascent groups, which then propel them onto the national stage. Meanwhile, sociologists have been

satisfied with showing that the network structure of the groups mirrors the broader social structure of the societies in which they are found (for example, Hamilton and Biggart, 1988). Having found a "fit" for their theories in one country or comparison group, each discipline has been more or less content to apply the same or similar explanations to all other cases, which treats them as extensions of the initial countries studied.

As we progressed in our research, however, we discovered that business groups are shaped in quite different ways both *within*, as well as *across* countries, and that these differences are more than just a matter of degree. Any explanation for business groups must recognize and be able to explain these differences. Although some analysts noted cross-country differences and variously attempted to explain them, none of the typical explanations predicted or even recognized intra-country differences.

Cross-country differences are especially apparent for South Korea and Taiwan. In Korea, these groups are called *chaebol*, a term represented by the same Chinese characters as the infamous pre–World War II business groups in Japan, the *zaibatsu*, which literally means "money clique." In Taiwan, the large groups are usually called *guanxi chiye*, which means "related industries." Both sets of business groups consist of separate and independently constituted firms that are linked together by individual and family ownership. The *chaebol* of South Korea, however, are much larger and more vertically integrated than the business groups in Taiwan. They are also differently integrated into the rest of the national economy. Business groups in Taiwan are located primarily in the upstream markets and the service sectors, and thus are dependent on and integrated with other firms of all sizes in the Taiwan's economy. In contrast, Korean *chaebol*, particularly the largest groups, form a more self-sufficient set of firms, integrating both upstream and downstream member firms into cohesive production sets. The differences in organization between these two very advanced capitalist economies are so pronounced and lead to such contrasting economic outcomes that they provide "natural" cases that can be used to test any theory of the business groups.

Developing an explanation for these cross-country differences was the initial goal of our research. Going into the research, we both felt that any valid explanation for business groups had to be sufficient at the economic level, but also take social and political factors seriously. We, therefore, avoided the temptation to appeal to existing theories, thereby pitting one discipline against another. Instead, we decided to start on the empirical end first. We were informed by detailed firm-level data on the business groups found in South Korea and Taiwan. Rather than analyzing their ownership structure or the purely financial linkages among firms, we instead focused on the *flow of intermediate and final goods among firms* within a group. For Korea, that information was available from a published source,

whereas for publicly listed firms in Taiwan, this information was included in reports filed with the stock exchange.[1] Using this as a starting point, we began to analyze the internal structure of the business groups: what goods were sold between affiliated firms and how much of each. A significant portion of internal sales often go to trading companies found within many groups, but even after correcting for this, there is still an extraordinary level of *internal sales* within the groups, which is especially so for Korea. These are not final goods being sold to consumers, but rather, are intermediate inputs being produced by one firm in a group and then sold to another for further processing.

These intra-group transactions led us to our first, and most obvious, hypothesis, namely that business groups benefit from preferential access to intermediate inputs produced by their member firms and sold internally within the group. But in order for the group alone to benefit from such trades, it must be the case that these intermediate inputs are not sold on the same terms to firms *outside* of the business group. In other words, the groups must be either withholding intermediate inputs from external sale, or alternatively, charging prices for external sale that exceed the price when the input is transferred within a group. So the converse hypothesis is that the business groups are exercising *market power* in their sale of intermediate inputs to other groups. We found that this hypothesis fits the anecdotal evidence for both Japan and Korea. For Japan, there were allegations from American firms in the 1980s that the business groups were more likely to purchase internally, from their own firms, than buy from the United States and that this was a form of trade barrier between the countries.[2] For South Korea in the 1990s, the Korean Fair Trade Commission actively investigated and fined business groups who were found to treat their member firms preferentially – buying and selling at prices different than those used for non-member firms – which was treated as an unfair business practice.[3] Without passing judgment on whether this practice is "fair" or not, it demonstrates the privileged status that group membership bestows on firms through the trade of goods between them.

[1] As explained in Chapter 4, the primary source for the 1989 Korean data is the volume *1990 Chaebol Analysis Report (Chaebol Boon Suk Bo Go Seo* in Korean) published by Korea Investors Service, Inc. The intra-group transactions for Taiwan were collected from company annual reports for 1994 filed with the Taiwan stock exchange, and when that information was incomplete, additional information was collected by contacting the groups. These data on the Korean and Taiwanese business groups are freely available from the Center for International Data at the University of California, Davis, www.internationaldata.org (choose "Asia").

[2] See the contrasting viewpoint of Bhagwati (1992), along with the empirical studies by Lawrence (1991) and Fung (1991).

[3] Some of these cases are described in Appendix B.

With this hypothesis – that group membership brings preferential access to goods produced by affiliated firms, and conversely, that sales outside the groups occur at higher prices – we had already veered far, far away from the conventional views of business groups in economics and elsewhere. While it is true that charging prices significantly above costs is sometimes considered a form of "market failure," which the business groups can avoid in their internal sales, this *market power* explanation for business groups is mentioned only rarely in the literature.[4] An example is Ghemawat and Khanna (1998), who include it as one of four reasons for business groups to occur, whereas Khanna (2000) concludes that evidence on this explanation is "lacking." It is perhaps understandable that for the "main bank" groups in Japan, the internal trade of *goods* would be treated as being of secondary importance to *financial flows* within the group. But that should not be true for the *vertical keiretsu* in Japan, such as Toyota and its suppliers, where the transfers of inputs within the group are of fundamental importance. Our theory is based on such internal trades of inputs within groups and is, therefore, particularly appropriate for vertically oriented business groups, but as will become apparent, our theory has a much broader applicability than vertical integration.

At a deeper level, the reason that our *market power* explanation for business groups has hardly been explored in economics is that current writing rejects the idea that businesses need to vertically integrate in order to obtain the gains from preferential trades between them. There is an old example (used by Stigler, 1951) of a coal mine charging monopoly prices to a downstream steel mill. Rather than paying monopoly prices, the steel mill would be more efficient if it purchased the coal at its true cost, which would automatically occur if the steel mill owned the coal mine, and then paid the mining costs. Therefore, a vertically integrated mill and mine would capture the gains from the internal sale of coal. But more recent scholarship (starting with Williamson, 1971, p. 115, for example) has questioned whether we really need *common ownership* of the mine and the mill to obtain the same result. Could not the steel company instead go to the mine owner and negotiate a contract whereby the true costs were paid per ton of coal and then some *additional* lump-sum payment is made to the mine owner reflecting the fact that the per-ton price is so low? By varying the prices and lump-sum payment in this contract, the two businesses ought to be able to obtain a result that mirrors the internal sale of coal under common ownership, but without the common

[4] Leff (1978, p. 667) concludes that "The institution of the group is thus an intrafirm mechanism for dealing with deficiencies in the markets for primary factors, risk, and intermediate products in the developing countries," and describes how vertical integration can be used to offset high input prices. He is therefore including a "market power" explanation for group within his general "market failure" argument.

ownership! In other words, the steel mill and coal mine do not need to merge; they can just write a contract to achieve the gains from the efficient trade of the coal between them.

If we apply this logic to business groups, it would suggest that they do not need to have common ownership in order to achieve the gains from efficient trade of inputs; some form of contract could be used instead. We have no argument with the idea that common ownership is not needed in business groups, and in fact, the degree of cross-ownership in some business groups is quite low. But, in this logic, the nature of the "contract" used between the firms is usually left unexplored, and it is unclear whether it is intended to be a written contract or just an understanding between firms. In either case, there must be a mechanism to *enforce* such a contract. This brings us to our second hypothesis: The crucial function of business groups is that they provide an *authority structure for enforcing efficient trades of intermediate inputs*. Again, this hypothesis has its converse. Efficient trades cannot be arranged between firms *outside* of the same business group; instead, these trades will occur at prices above costs, and will reflect the relative market power of the transacting firms. In a sense, we are fully agreeing with the aphorism of Adam Smith in the *Wealth of Nations* that "People of the same trade seldom meet together, even for merriment and diversion, but the conversation ends in a conspiracy against the public, or in some contrivance to raise prices,"[5] but are revising this to a context where *business groups* rather than handicraft trades provide the authority structure, as in the following: People of the same [business group] trade seldom meet together . . . but the conversation ends in a conspiracy against [other groups], or in some contrivance to raise prices.

With the twin hypotheses of market power and authority, we arrived at a working definition of business groups, but this working definition was still only a start. The next, and most important, question was to determine what the *organization* of these groups would be. If business groups provide member firms with preferential access to intermediate inputs, which are utilized in final goods that are sold to the public, then how large should such groups be, and what range of upstream and downstream products should they produce? These are difficult questions to address because the answer for one group *depends on what other groups are doing*. If it is the case that most business groups are charging very high prices for the external sale of their inputs, essentially relying on themselves for intermediate inputs in "one set" production systems, then that may well be the best strategy for any other group to take. But alternatively, if most groups are selling intermediate inputs at prices only slightly above costs,

[5] Adam Smith, 1776, *The Wealth of Nations*, Book 1, Chapter X (I.10.82).

then the best strategy for any other group would be to not only purchase these available inputs, but perhaps also sell its own intermediate inputs at moderate prices as well.

It takes a formal model to sort out what the best strategies for the business groups actually are, but the suggestions we are making turn out to be correct. There is a "reflexivity" in the structure of groups, whereby each group can only determine its prices for external sale of inputs by reference to what other groups are doing, and furthermore, the outcome of this reflexive process *need not be unique*. Rather, the formal model shows that there are a small number of alternative configurations of business groups that are stable and represent fully rational responses to all economic forces. In theoretical terms, this result means that capitalist economies do not necessarily converge toward one type of optimally efficient economic organization, but rather that a small number of differently organized economies are consistent with profit-maximizing theories of capitalism. The fact that there are only a few outcomes, each of which has a coherent structure, is an example of **emergence**: a well-ordered structure arising out of an interactive physical or social process.

Making this argument precise is the goal of the business group model we shall present in Part I. The model is both economic (each group pursues its best interests) and sociological (each group exercises authority over its members), but the finding that there are several, stable organizational outcomes goes beyond what either discipline has suggested. The "market failure" approach in economics and its more modern statement in transactions costs (Williamson, 1975, 1985) suggest that organizational outcomes are determined as an efficient response to the market failure. We make no such claim for the various outcomes from our model. Although one organizational outcome may be better than another, there is no reason to expect that it will be somehow "selected" because of its inherent efficiency. Sociologists following Granovetter's (1985) "embeddedness" thesis reject the transactions-cost explanation for organization as too functionalist and see the organization of firms as being determined by a host of external conditions and relationships impacting firms. As a consequence, the set of conceivable organizational outcomes is presumed to be large, with the actual outcome being historically contingent and subsequently path dependent. The embeddedness approach, therefore, contains no conception of economic organization that would limit the range of possibilities, so much so that every society might have its own unique configuration of successful business groups. In contrast, our theory suggests that there are only a small number of organizational outcomes for configurations of business groups that are consistent with our assumptions that business groups be economically viable, in the sense that they are acting in their self-interest and that all markets clear simultaneously.

Our theory, however, does not specify the reasons that one outcome is found in one society and not in another.

We are certainly not the first to argue that organizational processes may lead to multiple outcomes. A number of prominent economists (Anderson, Arrow, and Pines, 1988, Arthur, 1994, Arthur, Durlauf, and Lane, 1997, Greif, Milgrom, and Weingast, 1994, Greif, 1994, Krugman, 1996, Luhmann, 1995, McLaren, 2000, Rauch and Casella, 2001, Rosser, 1999), as well as a few sociologists (White, 2002) have theorized emergent organizational features in economies. We are among the first, however, to demonstrate that organizational features are central to an adequate understanding of the Asian economies and that the predictions of a relatively simple model can mirror the actual organization of groups in South Korea and Taiwan.

Arguing that economic organization is not fully determined by market forces begs the question of what factors do most contribute to outcomes. Marx's phrase about history applies here: People make history, but not as they please. Why do some sets of choices have large cumulative effects for economic development and other choices seem not to matter as much? As Arthur (1994, p. xiii) notes, "the key obstacle to an increasing returns economics has been the 'selection problem' – determining how an equilibrium comes to be selected over time when there are multiple equilibria to choose from." That is the question we address in Part II of the book.

In effect, we ask in Part II: Why does the model, outlined and tested in Part I, work so well? We begin by examining the initial decades after World War II and the Korean War. It was during these years that the economic organization of these countries formed into separate capitalist trajectories. The reasons for the divergence, however, are not apparent from a simple recounting of historical events. Indeed, feeling they know the development story, a generation of scholars has told the recent histories of these countries by privileging certain political and economic factors, and ignoring almost everything else. Our task, however, is to account for the development of organizational configuration of firms, and for this it is important to disentangle proximate events and unchanging conditions from underlying causes. We show from a comparative examination that the trajectories are not the inevitable outcome of cultural and social institutions, that, in other words, the Koreans and Taiwanese do not just act that way. Alternative outcomes are not only conceivable, but also actually exist in the form of economies of Mainland China and North Korea, as well as overseas economies in which Chinese and Korean operate as minorities. We also demonstrate from a historical comparison that these organizational outcomes cannot be accounted for strictly in terms of so-called "historical moments," decisive events that change all subsequent history. Rather, we show that the small differences existing between Taiwan and Korea in the

initial stages of development emerged, under *the influence of a globalizing world economy*, into progressively larger differences as development progressed.

The key point in the analysis in Part II is what caused these small differences to become large differences as time and development progressed. Continuing our empirical focus on the economic activity of business groups, rather than on existing theories of development, we closely examined what these two economies, and respective business groups, actually produced. This focus led us to a detailed analysis of exports, what we call "trade data archeology," from 1972 until 1985. We show that in the earliest period of import data, from 1972 to 1975, South Korea and Taiwan exported similar and often identical products (as defined by the 7-digit product codes) to the United States, but after 1975, the two exports from the two countries began to diverge. South Korean exports are increasingly concentrated in categories consisting of products that could be mass-produced (for example, in garments: men's shirts, as opposed to women's fashion), and often, but not always, were final products ready for consumer use, such as microwave ovens, video machines (VCRs), tires, and automobiles. In contrast, within the same product categories, Taiwanese exports tended to be component parts, goods having short product cycles (for example, in garments: women's clothes), and some fairly complex final products that can be assembled from standardized components (for example, computers, TVs, and bicycles), this in addition to a considerable range of relatively inexpensive, simply made consumer products.

This analysis of trade data reveals a sudden and accelerating expansion of U.S.-bound exports from South Korea and Taiwan that began in the late 1960s and that does not level off until the mid- to late 1980s, twenty years of extraordinary growth. The rapid emergence of these exports was highly concentrated in only a few product categories, and within these categories during this twenty-year period export products began clearly to diverge, as each economy began to specialize in particular types of production capabilities and the products compatible with those capabilities.

Our conclusion from this analysis of the export patterns is that, in contrast to the "supply side" narratives, it must be *increasing demand* that drove economic growth in South Korea and Taiwan. But what explains this rising demand? There is considerable, but very scattered material suggesting that the driving factors for Asian growth are to be located in the reorganization of the retail sectors in the United States, which resulted in an increasingly concentrated retail sector consisting of mainly new types of brand-name merchandisers (for example, Nike, The Gap) and discount retailers (Wal-Mart, Home Depot). In the literature, this trend is known as lean retailing, in which the merchandisers and retailers make direct

(non-market) connections with manufacturing firms over which they can exert some control and pricing power. The important technological underpinnings of this "retail revolution" were inventory management systems based on computerization, scanning, and uniform product codes, and alongside these technological changes there was the establishment of major buyers for products from Asia, or "intermediary demand." Our third hypothesis is that the emergent, and yet divergent economic organization in these two economies was due not to "market failures" or to government policies, but rather to the differential impact of increasing global demand, expressed by intermediaries.

To demonstrate these divergent patterns of growth, we examine the "global matching" between such retailers in the United States and firms in South Korea and Taiwan. In the initial years of growth, foreign contract buyers sought out, ordered, sometimes assisted, and often supervised the Asian manufacture of differentiated goods later sold in the United States. Rapidly expanding demand encouraged Asian entrepreneurs to use available resources to construct production networks that would satisfy and even increase demand for their products and that, through the use of authority and market power, would assure some measure of predictable continuity in the future. Their early successes in responding to big buyers, in turn, created additional demand for wider ranges and greater quantities of products. This self-reinforcing cycle of selective matching in the context of increasing demand for exports led very quickly to the development of divergent economic trajectories. Once economic players (for example, entrepreneurs as well as government officials) saw themselves as participants in a common economic arena, the economic organization of both countries became increasingly rationalized both organizationally and economically.

In the context of a rapidly emerging economic organization, we further argue that state officials unwittingly became a primary force behind rationalizing the *status quo* and fixing the economy in a trajectory of growth. They fashioned economic policies that sometimes succeeded and sometimes failed. The policies that worked to reinforce and rationalize the existing trajectory of growth usually succeeded, and the policies attempting to change the existing organization in substantial ways usually failed, sometimes disastrously. Most policies made no difference one way or another. As a consequence, the sum total of the governments' efforts tended to encompass, encourage, and stabilize the existing patterns of organization and growth.

In summary, the business group model we present in Part I is substantiated by our analysis of trade flows in Part II. Linking these trade flows to the actions of retailers and other big buyers in the United States is needed to explain how the divergent economic organizations came to be

established in South Korea and Taiwan. Our approach in Part II is heavily empirical, relying on the most disaggregate trade statistics collected by the U.S. Customs Service, which have proven to be useful to a recent generation of trade economists and can hopefully be utilized by other analysts as well.[6] A specific hypothesis we can test using these data is that Korea has *less product variety in exports* than Taiwan. This hypothesis is implied by our theoretical model of business groups, and finds strong support when tested using the disaggregate U.S. import data from both countries. In many markets, Korea is exporting fewer products than Taiwan, but in larger volume. This hypothesis is consistent with the observation that the very large *chaebol* found in Korea have sought to be "world leaders" in particular products and dominate in those export markets, but that resource constraints in the economy put limits on the *overall number of products* that can be produced and exported. By devoting enormous resources to products such as microwaves, cars, and semiconductors, it is impossible that Korea can also fill all the smaller "niche" markets that are served so effectively by the Taiwanese firms.

In Part II we also draw on descriptions of the regulatory changes in the United States and evidence of network linkages between big buyers and exporters in Asia, and future research may be able to further quantify and document these linkages. This material all goes beyond the strict confines of our business group model, with its narrow focus on internal transactions within the groups, and it can be expected that future scholarship will formalize the influence of global demand on economic organization, using the hypotheses that we suggest. As we say in the concluding chapter, our research findings should lead to a reevaluation of the connection between local economies and global capitalism, in particular the developmental state theories of economic development.

We started our research with a goal to better understand Asian business groups. We ended with a desire to better understand how all economies, local and global, come to be organized and how they change over time. This is an elusive, difficult goal, for which this book is merely a first step. We believe, however, that it is an important step because it changes the focus of analysis away from separate and often contradictory disciplinary views to a more integrated perspective in which economics and sociology work hand in glove to create an informed interpretation of economic organization. In the next chapter, we outline the theoretical foundations for this integrated perspective.

[6] The U.S. trade data we utilize can be downloaded from the Center for International Data at the University of California, Davis, www.internationaldata.org (choose "Data"). See also the documentation in Feenstra (1996) and Feenstra, Romalis, and Schott (2002).

Part I

Business Groups and Economic Organization

1

The Problem of Economic Organization

Most theories of economic organization, regardless of discipline, involve a sleight of hand. Theorists begin by assuming the existence of decision-making individuals. They then provide these actors with inner motivations: desire for gain, for power, or for social honor and reputation. Driven by these motivations, economic actors are then set in motion. They plot strategy; they use guile. They act on their interests; they interact in trusting ways. Seeking to maximize, they also respond to incentives and constraints put in place by powerful people, such as state planners or heads of state banking systems or the CEOs of the largest firms. Whatever these actors do and however they respond shape the calculations and subsequent actions of others. Assuming all similarly motivated individuals act more or less alike, economic theorists then posit an orderly, organized economy, conceived, for example, as a capitalist economy composed of independent and competitive firms. When theorized in this fashion, economic organization is pulled, like a rabbit from a hat, out of aggregated individual decisions.

Attempts to induce societal level organization from individual actions are common enough in every social science. In sociology, anthropology, and political science, theorists often, in a single bound, make the same leap from individual behavior to social and political structure. In these disciplines, however, the reverse trick is equally widespread: The inner motivations and actions of individuals are produced, as if by magic, from descriptions of the whole. Remember Karl Marx's famous line in the Preface to *Das Kapital*: "Here individuals are dealt with only in so far as they are the personifications of economic categories, embodiments of particular class relations and class interests."

Although common in other social sciences, in economics the efforts to deduce individual actions from descriptions of collective wholes are less prevalent because of the influence of classical and neoclassical paradigms, which are wedded to economic individualism. Indeed, the famous invisible

hand of Adam Smith shows us that the outcomes of a perfectly competitive economy with millions of firms will be the same, theoretically, as one arising from a benevolent planner seeking to maximize the public interests. In this way, the outcomes of an entire economy are reduced to that of a single agent maximizing the appropriate measure of social welfare. This commonplace mental experiment explains why economic theorists are often satisfied with modeling the structure of entire economies by the stereotyped calculations of individual agents.[1] Without questioning the usefulness of these simplifying assumptions for modeling purposes, they certainly do not do justice to the wide variation in the ways that firms, business groups, and entire economies are organized (Granovetter, 1994, Crouch and Streeck, 1997, Hollingsworth and Boyer, 1997, Whitley, 1999, Quack, et al., 2000).

In this book, we argue that the many and diverse ways economies are organized cannot be properly understood by using theories that generate economic organization either from bottom-up aggregations of individual behavior or from a characterization of collective wholes. Instead, we show that economic organization represents the interconnectedness and dynamic interplay of markets within and across economies that arises from the competitive struggles among firms. We show that such a cross-market interplay of people and firms produces emergent effects that cannot be easily captured with stylized agents representing entire economies or in simple bottom-up aggregations, both conceptions of which assume that every player is like every other player. To paraphrase Friedrich Hayek (1967, pp. 96–105), we conclude, therefore, that economic organization **emerges** as part of a "spontaneous order" that is "the results of human action but not of human design."

In this chapter, we summarize theories of economic organization that assume individual aggregation, particularly those developed by the new institutionalist economists and by their counterparts in economic sociology. Contributions in both these disciplines arose from dissatisfaction

[1] As Granovetter (1985) notes, there is "an irony of great theoretical importance" that both inductive approaches based on methodological individualism ("undersocialized conception" of human nature) and deductive approaches based a priori conceptions of unified wholes ("oversocialized conception" of human nature) produce similar results:

> Both have in common a conception of action and decision carried out by atomized actors. In the undersocialized account, atomization results from narrow utilitarian pursuit of self-interest; in the oversocialized one, from the fact that behavioral patterns have been internalized and ongoing social relations thus have only peripheral effects on behavior . . . Under- and oversocialized resolutions of the problem of order thus merge in their atomization of actors from the immediate social context.

Granovetter further adds that this allows economic theorists to "lurch directly from an undersocialized to an oversocialized state."

with the minimalist conception of economic organization found in the economic paradigm that posits perfect competition. However, the enthusiasm of these theorists for their respective explanations led them away from a central feature of capitalist economies that the competitive paradigm sought to explain, namely the interconnectedness of markets, as conceived in economics conventionally through the price system.

Our own approach, the theoretical justification of which we introduce in this chapter and then describe more fully in later chapters, incorporates many of the key insights from institutional and sociological theories into an alternative explanation for the organization of economic activity. Economically active people, ranging from businesspeople to state officials, are embedded in ongoing organized environments in which economic processes and competitive struggles are as important as social and political institutions. In such settings, economic calculability, as introduced and generalized across firms and markets through a variety of means, including complex price systems (for example, the price of capital, of ownership as represented by equity markets, of labor, as well as of goods themselves), plays an important role as a force shaping an economy's existing or emerging economic organization. To the extent that people and firms are connected within and across markets through such calculations, we can talk about an "economically organized economy" or, more simply, "economic organization," as we use that term in this book. We suggest that routine economic calculations in such organized settings involve a reflexive process in which participants are constantly objectifying their own position relative to others in that setting and taking actions based on those comparisons. Such reflexive actions are self-reinforcing in the sense that they are jointly constructed and mutually maintained. An organized economy grows from the self-fulfilling anticipations of interacting participants who are both competing and doing business with one another. If people want to succeed in such a rationalized economic environment, for whatever reasons, they are drawn into playing by the rules and standards of the activities in which they are engaged, necessarily taking those rules and standards for granted as a part of their decision-making environment. To the extent that they do so, economic organization emerges through competitive interaction and takes on a momentum that no individual or set of individuals can necessarily control or easily predict.

Bottom-up Theories of Economic Organization: The Marshallian Frame

Not that long ago, many economists would have agreed with George Stigler's aphorism (1968, p. 1), "there is no such subject as industrial

organization." Stigler thought industrial organization is not a viable subject because the content of this particular area is entirely subsumed in standard microeconomic theory. Like most economists of his day, Stigler based his theoretical assumptions on a view of perfect competition most closely associated with Alfred Marshall. In contrast to Léon Walras' theory of general equilibrium, in which all markets in an economy are interrelated, Marshallian economics is founded on theories of partial equilibrium.[2] Marshallian economists examine an economy market by market, industrial sector by industrial sector, and for each market or sector, they conceptualize equilibrium models in which "the ensemble of all buyers and all sellers [in that market] determine price" (Stigler, 1968, p. 9). For the purpose of equilibrium analysis, they view each market as being independent of all other markets. Hence, Marshallian economics is a theory of economies based on partial equilibria.

Given this narrowed focus, a Marshallian competitive market economy has three characteristics: large numbers of buyers and sellers for the same product, an independence of action for all parties, and complete participant knowledge of all market activity. In the ideal market situation that meets these criteria, firms have an optimum size, which is a function of two factors: the demand for a product and the economies of scale needed to produce it (Stigler, 1968, p. 69). When markets are not fully competitive, for any reason, then firm size is also influenced by additional constraints being placed upon market interaction that go beyond the demand factors of production. Such constraints typically come from factors relating to the product, such as technological or capital barriers to entry, product differentiation, and advertising, and from non-economic factors corrupting market competition, such as market collusions in the form of cartels and political intervention (Chamberlin, 1962 [1933], Robinson, 1969 [1933], Scherer and Ross, 1990). When such constraints exist, conditions of imperfect competition, sometimes referred to as "market failures," give rise to specific industrial organizations (for example, monopoly or oligopoly), which in turn influences market performance (for example, the price and quality of goods). However, when markets are perfectly competitive, then Marshallian economics predicts that firms are essentially "price-takers"; that is, they are passive reflections of market forces.

[2] Marshall's view of economics was, of course, quite broad, and he clearly acknowledged that the economy as a whole was best conceived through general equilibrium theory. As Niehans (1990, pp. 240–1) reminds us, however, "The important point is that Marshall, though starting from a general equilibrium framework, did not bother to work this out in detail, as Walras did, but rather used the beam of partial analysis to shed concentrated light on different areas of the economic system."

The New Institutional Economics

In the past several decades, economists have greatly revised the foundations of Marshallian economics. The economists most responsible for this revision have styled themselves as the "new institutionalists." Although not a cohesive theoretical group, these economists, in general, no longer see firms as passive receivers of economic signals. Instead, drawing their theoretical spirit from an early article by Ronald Coase (1937), they see firms as agents actively setting prices, making markets for their products, and also creating optimal organizations for non-market transactions. In his original article (1937, p. 388), Coase triangulates Alfred Marshall's initial concern with organization as a factor of production, Joan Robinson's work on markets characterized by imperfect competition in a Marshallian sense, and Frank Knight's insights on market uncertainty and entrepreneurial risk-taking. Focusing on the costs of inter-firm transactions, Coase makes firms the primary agents in establishing the boundary between market and non-market transactions and makes factors external to "normal" market activity (for example, the non-market cost of engaging in market activity) the primary focus of the firms' decision making.

Coase's 1937 article stirred little interest until the early 1970s, when a number of economists began to question the neoclassical assumptions about competitive firms as simple price takers. In raising these questions, they did not abandon a Marshallian partial equilibrium framework, but rather reworked this framework, correcting what they considered to be faulty assumptions and expanding the theoretical scope to take in topics that economists had never before addressed. Most theorists initially concentrated on the nature of firms in relation to markets (see, for example, Williamson 1975).

Agency theory and transaction cost theory were the two principal institutional perspectives that took shape in the 1970s and 1980s. Agency theorists reconceptualized the main actors in the economy: firms and their decision-making parts, the shareholders, the boards of directors, the salaried managers, and labor (Jensen and Meckling, 1976, Alchian and Demsetz, 1972). These theorists typically examined incentives that induce actors to behave in predictable ways, and they concluded that organizations are, in reality, incentive structures that various sets of actors have knowingly created and to which the same or other sets of actors knowingly respond. Transaction cost theorists reconceptualized the dyadic interactions among firms in a market. These theorists primarily specified the conditions under which firms would prefer organizational to market solutions to their economic problems, and they concluded that economic organizations and societal institutions (for example, legal and

regulatory frameworks) represent solutions to transaction cost inefficiencies (Williamson, 1975, North, 1990, North and Thomas, 1973).

Whatever their particular emphases, the new institutional economists concentrated their efforts on explaining the nature and economic roles of maximizing firms as well as of decision-making, risk-taking entrepreneurs in creating and making markets work. As interest grew in institutional arguments, these theorists flipped the Marshallian paradigm. They increasingly theorized the nature of organization and downplayed the role of price systems in equilibrating markets (Putterman, 1986, Williamson and Winter, 1993). As Harold Demsetz (1993, p. 159), one of the first of the new institutional economists, put it, "the preoccupation of economists with the price system . . . undermines serious consideration of the firm as a problem solving institution."

Downplaying the assumption that markets represent price-setting equilibria, the new institutionalists began to expand their definition of markets beyond anything that Marshall would recognize as a competitive market. Reducing equilibrium to metaphor, they discovered maximizing, market-like behavior in households and family planning (Becker, 1981, 1988), in public agencies, in race relations, in foreign relations (Olson, 1982), in gift exchanges (Akerlof, 1984), and in winner-take-all contests (Frank and Cook, 1995). Without the discipline of a price structure, markets could be portrayed as any means–end rationality, so much so that game playing became the analog for market behavior. Most aspects of society were viewed as game-theoretic terrains where firms, entrepreneurs, and individuals of all types served as the principal players on that terrain, the *deus ex machina*, moving societal institutions to and fro, and thus creating the organizational structures that maximize individual goals and constrain individual cupidity. In this rather grand vision of the world, the Marshallian partial equilibrium frame served, and continues to serve metaphorically, as the institutionalist vehicle to generate interpretations of large-scale economic and social organizations of entire economies and even of global configurations.

A few examples of this line of thinking will help illustrate the leap that the new institutional economists, as well as the rational choice advocates, take in jumping from a level of analysis that, as Williamson (1994, p. 92) notes, deals predominantly with "dyadic contractual relations" all the way to the organization of entire economies.[3] As we will discuss in

[3] As Williamson (1994, pp. 92–3) states, "Transaction cost economies deals predominantly with dyadic contractual relations. Viewing the firms as a nexus of contracts, the object is to prescribe the best transaction/governance structure between the firm and its intermediate product market suppliers, between the firms and its workers, between the firm and finance, etc. Japanese economic organization appears to be more complicated." But, Williamson continues, "transaction cost economics can help to explicate the complementaries [between Japanese and U.S. economic organization.]"

Chapter 2, it is widely known that large business networks provide the organizational structure of many Asian economies, the Japanese economy included. Among the many explanations for these business networks, the new institutional economists offer a typical bottom-up explanation that starts by stereotyping firms and interfirm behavior, and then aggregating the results to produce an overall economic structure. First, they argue that business groups are outcomes of market imperfections (Leff, 1978, Chandler, 1984, Jorgensen, et al., 1986, Khanna and Palepu, 1999, 2000a, 2000b). This classification allows them to treat business groups as the functional equivalents of Western corporations (Chandler, 1984, p. 22) and as organizations that reflect imperfections in emerging markets. The usual explanation infers a causal link between the transactional problems that exist among firms and the organization of the entire economy. Akira Goto (1982, p. 69), one of the first to make this causal connection, argues that "the (Japanese) group is an institutional device designed to cope with market failure as well as internal organizational failure. Under certain circumstances, transactions within a group of firms are more efficient than transactions through the market or transactions through the internal organization of the firm." Accordingly, Goto maintains that the post-war Japanese economy and its principal engines, the business groups, have performed more efficiently than economies organized through "the market mode or internal organization mode of the carrying out of transactions." Imai (1992), Aoki (1984, 1988, 1990, 1992), and Williamson (1991 and 1994) have developed somewhat different versions of firm-centered explanations of Japanese business organization, each starting with assertions about the "nature" of the Japanese firm or interfirm network and then generating a rationale for the organization of the entire economy.

Similar transaction cost and agency-centered explanations of societal-level economic organization have been offered for the industrial structures of Chile and India (Khanna and Palepu, 1999, 2000a), for differences in industrial organization between countries (Caves, 1989, Levy, 1991), for global networks of multinational firms (Caves, 1995), for the organizations structuring international trade regimes (Yarbrough and Yarbrough, 1987), for the organization of trade in the Middle Ages (Greif, Milgrom, and Weingast, 1994, Greif, 1994, Greif, forthcoming), for "the rise of the Western world" (North and Thomas, 1973), and for "the economic institutions of capitalism" (Williamson, 1985). As the focus of analysis moves from actual or metaphorical (for example, ruler and subjects) dyadic interactions between agents to the organization of entire economies and societies, most theorists begin to posit the independent effects of institutions and cultures, making the organization of the whole arise from the aggregated effects of institutions on actors.

Economic Sociology

Economic sociology, particularly those works based on the theoretical premises of Mark Granovetter's (1985) embeddedness perspective, presents a sociological version of the bottom-up theories of economic organization. As economists broadened the definition of market behavior to include all behavior, they ventured into intellectual territory that other social sciences had already claimed. This encroachment inspired a spirited reaction, some in favor, but others very much against economic theorizing. Those in favor formed a rather substantial group of interdisciplinary scholars (Hechter, 1987, Kiser and Hechter, 1991, 1998, Elster, 1986, Coleman, 1990, Cook and Levi, 1990, Brinton and Nee, 2001) who promoted rational-choice theory as the intellectual extension of institutional economics outside of economics. Those against this form of theorizing, however, were less unified, except in their response to treat economists and rational choice theorists as intruders and economic models as totally inadequate (see, for example, Hirsch, Michaels, and Friedman, 1990, Somers, 1998). One group of opponents working on economic development went to great lengths to argue that the state (via its functionaries), and not the market, was the principal actor creating capitalist development (Evans, Rueschemeyer, and Skocpol, 1985, Amsden, 1989, Wade, 1990, Haggard, 1990, Evans, 1995). Another group gathered around Amitai Etzioni's Durkheimian vision of a new economics based on "the moral dimension" (1988). Yet another group sided with the Karl Polanyi's critique of economic universalism (Dalton, 1969, Block and Somers, 1984, Block, 1990, Baum, 1996, Blyth, 2002). However, the largest and, arguably, the most influential group of scholars (see Friedland and Robertson, 1988, Swedberg, 1993, Smelser and Swedberg, 1994) aligned themselves theoretically with Mark Granovetter's (1985) work on embeddedness.

In the two decades since its publication, Granovetter's seminal article, "Economic Action and Social Structure: The Problem of Embeddedness" (1985) has become the core theoretical statement of economic sociology.[4] In this article, Granovetter's target of attack is the institutional economists' notion of actor agency. Granovetter maintains that economic theories, epitomized by Oliver Williamson's transaction cost theory, rest on false assumptions that each actor is independent from all others and that each attempts to maximize his or her gains often at the expense of

[4] This sub-field has developed so quickly that a compendium, *The Handbook of Economic Sociology*, was published less than ten years after the publication of Granovetter's seminal article. The editors felt *The Handbook* was needed in order to summarize recent advances and to advertise the promise of economic sociology in the future, and thus giving legitimacy to economic sociology as coherent, delineated field of study. A second edition of *The Handbook* (2005) has recently appeared.

others. Such a Hobbesian view of the economy, according to Granovetter, is simply wrong. He argues that the opposite point of view, that of societal roles determining individual actions, is also incorrect.

The most accurate conception, he says, lies between these two extremes. In this "middle-of the road" conception, people's real-life activities provide a sociological foundation for economic action. To Granovetter, that is what embeddedness means. Out of people's real-life activities, consisting of "concrete personal relations and structure (or 'networks') of such relations," comes the "production of trust in economic life" (1985, pp. 400–1). These social relations, "rather than institutional arrangements or generalized morality" (1985, p. 401; see also Granovetter, 1994), generate order in the economy, and this order represents patterns of small firms, vertical integration of big firms, and the structure of business groups. In other words, the order represents macro-level economic organization.

Although Granovetter inveighs against Williamson's economistic conception of agency, it is important to note that both Williamson and Granovetter generate economic organization from the bottom-up interaction of economic participants in the economy. The crucial difference between the two points of view rests on the nature of the interactions between economic actors. On the one hand, Williamson argues that the nature of the transaction itself suggests a course of action that "rational" participants should follow. In this regard, transaction cost theory employs game theoretic or rational choice models. The exchange situation generates its own logic, which induces participants to respond to the situation and to the possible actions of others. In calculating how to respond to exchange situations, entrepreneurs continually adjust the transactional context, including changing the organization of their firms, in order to maximize their economic advantages and minimize their disadvantages. As Williamson (1981, p. 568) stated, "There are so many kinds of organization because transactions differ so greatly and efficiency is realized only if governance structures are tailored to the specific needs of each type of transaction."

Firm-level economic organization, therefore, represents the rational responses of transacting actors at any one point in time. The organization of transacting firms generated at this point in time will, in turn, have effects on actor calculation at a later point in time. According to the transaction cost perspective, therefore, industrial organization (for example, the organization of a sector or an entire economy) is rational economic decisions aggregated and re-aggregated over time. Characterized in this way, industrial organization serves as a set of constraints that influences but does not determine each subsequent transaction decision. Because each transaction represents a move or a countermove in a fluid economic context, each transactional set has the potential for altering the organization of

the economic sector. For transaction cost theory, the transaction remains the key focus of analysis, and aggregation from the micro- to the macro-level of analysis remains the presumed causal path by which sectors and economies become organized.

On the other hand, in the 1985 article, Granovetter argues that the organization of an industry or an economy reflects the social organization of its participants. In making this claim for social embeddedness, Granovetter is very careful to focus on the ongoing interaction among economic participants. He wants to portray economic actors as being neither mindless game players who only respond to a narrow economic frame (which he calls an "under-socialized conception of human action") nor equally mindless social actors who represent only social roles (which he call an "over-socialized conception of human action"). Arguing for the realism of the middle way, Granovetter wants his economic actors to be rationally acting individuals whose objective thinking is socially and historically bounded.

By embedding his economic actors in previously existing social networks, thus fulfilling his requirement for trust among actors, Granovetter makes economic organization independent of the economic activity in which actors are engaged. Economic activity is simply assumed to occur, but does not have a constituting role in how the activities are organized.[5] Like Williamson's transaction cost theory, economic organization becomes an artifact of prior institutional and social conditions, an outcome of the paraphernalia of capitalism rather than of the capitalist activities themselves.

As long as Granovetter remains locked in debate with Williamson, who serves as a proxy for other economists as well, Granovetter's embeddedness theory constitutes a sociological version of a bottom-up theory: Interaction among "properly" socialized individuals creates the social organization that defines trust in an economy and that, in turn, leads to macro-level economic organization. Thus, Granovetter, like Williamson, views economic organization as an outcome produced by interactions among economic actors, with the crucial difference between the two theories being the nature of human nature. Williamson, in fact, has recognized

[5] One of the pillars on which Granovetter (Granovetter and Swedberg, 1992, p. 6) builds his economic sociology is the assertion that "economic action is a form of social action." Although we certainly agree with this assertion, and although he incorporates some elements of the Weberian analysis that we also employ, Granovetter in his more recent writings (for example, 2002) moves the focus of his analysis from networks per se to the social and institutional foundations of the relationships embodied in the networks. The institutions constitute the relationships that in turn become the working elements of the networks in which the economic activity becomes embedded.

the similarities between the embeddedness approach and transaction cost theory and has incorporated elements of the embeddedness approach into his own work. Granovetter's "entire argument," says Williamson (1994, p. 85) "is consistent with, and much of it has been anticipated by, transaction cost reasoning. Transaction cost economics and embeddedness reasoning are evidently complementary in many respects."

In his recent writings, Granovetter (1990, 2002) has expressed increasing discomfort with the concept of embeddedness and especially with the way the embeddedness perspective has developed, in the past fifteen years or so, into more formal network analyses. He remarked that had he known he was writing such a seminal piece as the 1985 article has turned out to be, he would have written it quite differently.[6] His discomfort arises from the ambiguous relationship between networks and institutions. In the original article, he implied that the gap between the two was substantial and significant, but in the most recent writings, he has worked to close this gap in two ways.

First, he argues that the appropriate location for network analysis is at the meso-level. Specific historical outcomes often result from particular arrangements of network ties (Burt, 1992, Granovetter and McGuire, 1998) or of the historical actors' positions in a series of networks (Padgett and Ansell, 1993). Granovetter's own work on how people locate jobs (1995a) and on the historical causes for public utilities (Granovetter and McGuire, 1998), as well as his endorsement (Granovetter, 2002) of Burt's theory of structural holes (Burt, 1992), suggest that network relationships and the particular structural arrangement of ties represent proximate causes of events that may have very long-term and path dependent consequences.[7] At this level of analysis, Granovetter (1990, 2002) has warned repeatedly that simply evoking network structure (that is, centrality or structural holes) is causally insufficient without a more developed sociological understanding of the historical context. Instead, he argues that network analysis should be less formal and methodological and more linked to standard sociological concerns with power, social structure, and institutions than is now the case.

Second, in calling for a sociological understanding of context, Granovetter wants to move an embeddedness perspective away from the structural arrangement of networks to the institutional foundations of

[6] Personal communication. A similar comment is found in his unpublished reply to Greta Krippner (2001), which was delivered in a workshop on "The Next Great Transformation? Karl Polanyi and the Critique of Globalization" held at The Center for History, Society, and Culture, University of California, Davis on April 12–13, 2002.

[7] Granovetter, in fact, makes this point in the 1985 article (p. 506) and then reiterates it in later works (2002).

economic action. An example of this emphasis is his analysis of business groups (1994, 1995, forthcoming), which we will discuss more fully in the next chapter. Granovetter, however, is not alone in this quest. Indeed, quite a number of other theorists have taken the lead in formulating institutional foundations for economic sociology. For example, Richard Whitley (1992, 1999) contends that a society's "dominant institutions develop interdependently with particular business-system characteristics to generate and reproduce distinctive forms of economic organization" (1999, p. 54), resulting in, for instance, the formation of three distinct business systems in Asia (Japanese, Korean, and Chinese) (1992) and a number of distinctive systems in Europe and the United States (1999). Nicole Biggart and Mauro Guillen (1999, p. 235, our emphasis; also Guillen, 2001) claim that "institutional arenas – whether the firm, the industry, or the society – are internally coherent and are based on **organizing logics** that inform action and meaning." Within developing economies, these organizing logics lead to more or less consistent patterns of firm and inter-firm organizations and to "societal competitive advantages" (or disadvantages) vis-à-vis patterns of economic organization based on other organizing logics. Arguing for a view of institutions that is based on incentive and control structures, Neil Fligstein (2001) proposes that the state and leading firms impose stability and organizational order on individual markets, as well as entire economies. He (Fligstein, 2001, p. 40) states, "Initial formation of policy domains and the rules they create affecting property rights, governance structures, and rules of exchange shape the development of new markets because they produce cultural templates that determine how to organize a given society."[8]

[8] Fligstein's book, *The Architecture of Markets: An Economic Sociology of Twenty-First-Century Capitalist Societies* (2001), is one of the most recent and best-developed treatises reiterating the role of institutions in competitive economies. It is also one of the clearest articulations of a sociological argument developed within a Marshallian framework that is then generalized to the economy as a whole. Fligstein (2001) develops what he says is a "new view" arising from a "basic insight" that a market in which "structured exchange" occurs should be considered as an "organizational field." A market, as an organizational field, is one that has a "self-reproducing role structure." Stated in its most concise form (Fligstein, 2002, p. 67, 2001, pp. 67–98), this role structure is "a status hierarchy of producers. In this hierarchy, large and dominant firms control the market by engaging in forms of competition that preserve their position and allow smaller firms to find niches. The hierarchy is based on a set of understandings held by all market actors about what their possible moves 'mean' and about the purpose of these moves: to reproduce the positions of firms." Fields are structured politically through actions of the state and economically and culturally through the actions of dominant firms, so that within any one field competition and price are stabilized and controlled. The partial equilibrium framework of Fligstein's theory is clear from his field-by-field analysis of markets, his notion of self-reproducing (that is, equilibriating) role structures, and his belief that markets have an inherent tendency towards stability, in this case a kind of coerced equilibrium created by the state and dominant firms in each market. Also see Chapter 2 for an additional discussion of Fligstein's conception of the impact of exterior institutions on economic organization.

These and other theorists arguing for an institutional theory of entire economies (for example, Hollingsworth and Boyer, 1997, Berger and Dore, 1996, and Quack, Morgan, and Whitley, 2000) uniformly draw a distinction between an economic or neoliberal view and their own institutional perspective. Paralleling Granovetter's critique of Williamson, these theorists criticize economists for failing to incorporate social, political, and cultural institutions into an interpretation of capitalist economies. The underlying assumptions in all these various institutional theories are that different societal institutions create different forms of capitalism, that these differences among societal institutions are essentially national differences, and that the differences in capitalist economic organization are present at outset of capitalist development and persist overtime. These assumptions lead theorists to proclaim that "comparative advantages" of businesses are "generated by a firm's societal and institutional environment at the national level" (Quack and Morgan, 2000, p. 3) and that "(t)he initial configuration of institutions and the balance of power between government officials, capitalists, and workers at (the outset of capitalist development) account for the persistence of, and differences between, national capitalisms" (Fligstein, 2001, p. 40).

In making these arguments, the macro-institutional theorists are to Douglass North (1990) what Granovetter is to Williamson: They generate a theory of entire economies from a more or less static view of institutions and institutional arrangements. What Williamson noted about Granovetter's interpretation can also be said for the macro-level interpretations as well: In many respects, they are complementary interpretations, both sets relying heavily on the assumption that the institutional "rules of the game" shape the organization of economies (North, 1990). **Insofar as they are used to interpret macro-level economic organization**, transaction cost and embeddedness theories are indeed two sides of the same coin. They both commit the same errors: First, they presuppose prior conditions (for example, incentive structures, social networks, overarching institutions, organizational logics) to get the economic process underway. For transaction cost theory, an institutional environment in which costs are calculated precedes the transactions, and for the embeddedness perspective, social networks in which trust can be calculated (or an institutional environment creating an organizing logic) precede and structure subsequent economic activity. Second, even after the action is underway, neither transaction cost nor embeddedness theories isolate the mechanisms involved whereby a given incentive or transaction cost or a particular kind of social network creates ongoing complexly organized and ever-changing economies. The sleight of hand that we mentioned at the first of this chapter comes in the announcement that the trick could be done without ever revealing how the two are actually connected. The partial equilibrium frame in which

they both operate obscures the gap between relatively static theoretical formulations and ever-changing and often rapidly emergent capitalist economies in which nothing is ever static.

This problem of conceptualizing economic organization is exactly the problem of using a Marshallian frame to induce, by analogy, a characterization of the whole. The organizational whole is conceptualized as being separate from the antecedent and continuing processes of organizing, and is used, *ex post facto*, to explain how the economy became organized. From this point of view, therefore, an organized economic order is more concrete than and prior to the process by which it came to be an organized whole. Moreover, this manner of conceptualizing economic organization has the consequence of viewing ongoing economic organization, at any one point in time, as an organized whole that can be described as a static object without regard to the processes of organization that give it the appearance of an organized order.

In the same way that partial equilibrium theories can be used to explain prices in specific markets, the new institutional theories, whether economic or sociological, are best used to interpret proximate causes of interactional outcomes in a small space – the dyadic transaction, a structural hole in a single network – all in a historical setting. Specific outcomes can be causally explained in terms of perceived cost savings or trust or friendship ties or sets of laws. However, when these same sets of causes are aggregated over the entire population of actors, then organization is produced without the process of organizing.

In contrast to these institutional views, the goal in this book is to understand the organizing process. As we will show, competitive struggles among firms and interconnections across markets and across economies are central aspects of the process by which economies become organized. A part of our task is to understand how institutions, market efficiencies, and embeddedness are crucial and integral to the organizing process. Our position, then, is not to abandon institutional theories, but rather to make them part of the action, and thereby to collapse the artificial dichotomy between economy and society. As Granovetter (2002) himself recognizes, this position is implicit in the embeddedness perspective. Insofar as "rational" decisions of economic actors are socially, historically, and situationally constructed, then the interaction among actors in the economy involves not merely exchange situations and their aggregated effects or social interactions and their reproduction at the macro-level. Rather, organizationally conceived, interactions (for example, competition among firms) also involve reflexive interpretations of the exchange, of the exchange process, of the subjects involved in the exchange, and of the economic context in which the exchange takes place. In other words, economic activities always involve economically as well as socially

defined participants acting in organizational environments in which their own actions, as well as those of others, can be meaningfully and self-consciously objectified and interpreted. We argue in the following chapters that the actual process of organizing, given some economic content to the interaction (in addition to whatever social or political content may also exist), has independent and emergent effects on individual and firm-level actions. Because this level of organization constitutes both intra- and inter-firm interactions, it needs to be theorized and conceptually distinguished from both bottom-up and top-down theories of economic organization.

Economic Organization as the Integration of Markets: The Walrasian Frame

In 1954, Kenneth Arrow and Gerard Debreu presented a formal theory proving the "existence of an equilibrium for a competitive economy" (1954, p. 265). Many regard this proof as the culmination of general equilibrium theories that were initially formulated by Léon Walras in the 1870s. A few years ago, in an interview with Richard Swedberg, Arrow (1990, p. 149) said he believed that "general equilibrium theory will not be the site of a cooperation between economics and sociology; rather microscopic analysis, or game theory, provides a better avenue." To date, this prediction has proven true, largely because at the microscopic level economists and sociologists can bracket the phenomena they wish to study, invoke the *ceteris paribus* clause, and then analyze and argue about the effects of firms, entrepreneurs, and networks on outcomes in restricted fields. In this kind of analysis, questions about agency, particularly questions about the nature of human nature and the rationality of the economic actor, become very important aspects of the explanations.

Although useful within narrow Marshallian frames, such bottom-up theories of economic organization offer distorted views of the ways economies actually work. One of the problems of the new institutional economics is that theorists equate economic organization with a theory of the firm. This equation makes the theory of the firm into a theory of agency without a corresponding theory of the economic environment in which agency occurs, an environment that is, in conceptual terms, analytically independent of agents but is empirically constituted by them.[9] Economic organization disappears into the firm; outside the firm

[9] We should note that the new institutional economists typically locate institutions outside of the economic playing field. Established as constraints or incentives, such institutions are presumed exogenously to shape the internal behavior of players within each sector of economic activity. Assuming a Marshallian frame, the institutional theorists then proceed

is the world of impersonal market transactions. As Samuel Bowles (1986, p. 352) describes, this view of economic organization, what he calls the Coasian view, depicts "the capitalist economy as a multiplicity of mini-command economies operating in a sea of market exchanges." This view, he continues, is "radically different from the Walrasian [view]."

It is our opinion that a very important site for economists and sociologists to meet and work together is precisely in the analysis of entire economies, which is what we call the "Walrasian frame." The Walrasian view conceptualizes an economy as a set of interconnected markets that has systemic dimensions. To describe our use of this perspective, we need first to outline the Walrasian view as it is represented in general equilibrium theory. We will then suggest that if the formal assumptions imposed by general equilibrium theory are loosened, making it more amenable to empirical applications in the real world, then a Walrasian view of how economies work also contains a useful characterization of societal-level economic organization. Within the Walrasian view, economic organization becomes the process-driven, price-sensitive integration of firms across markets and sectors that internally arise from the participants' engagement in ongoing competitive economic activity.

General Equilibrium Theory

General equilibrium theory assumes that the analyst must step outside the narrow frame of self-interested actors and their intentions. This necessity can be described mathematically as an "over-determined set of simultaneous equations," in the sense that "the existence of n partial equilibria does not in any way guarantee general equilibrium for the whole economy made up of n markets" (Blaug, 1985, p. 571). In other words, the assumption that equilibrium exists in each of n markets (an assumption of Marshallian economics) neither acknowledges nor works out the consequences of the interconnectedness of all markets. Thus, as Arrow (1968, p. 376) notes, underlying general equilibrium theory is the "notion that

narrowly to examine the interaction between incentive structure (external environment) and agency (conceptualized typically as the firm) within the scope of the sector. In this characterization, economic players or even networks of players are not oriented to other players or other networks of players in this or in other sector. Rather, their presumed focus is on the incentive structure, which is external and imposed on them.

A Walrasian frame, however, presumes that the main economic environment is established by the economic players themselves through their intra-market and cross-market connections. Were externally imposed incentives imposed in one sector of activity, the Walrasian analysis would then concern how those incentives changed the economic environment across sectors, that is, how a change in one area would affect all other areas. In the Walrasian conception, then, the economic environment is seen to be the multiple activities in which the economic players are engaged.

through the workings of an entire system effects may be very different from, and even opposed to, [human] intentions."[10]

Walrasian economics is, therefore, the attempt to specify how buyers and sellers in all markets simultaneously affect each other. Walras (1977) believed that such simultaneity, when one conceives of the economy as a closed system, would move towards, but not instantly result in, a general equilibrium. Markets in an economy are composed of overlapping sets of buyers and sellers. People are simultaneously producers of goods (for example, through their wage labor) and consumers of goods. Markets must continuously adjust price and wage structures according to what is happening in other markets. A change in the price of raw commodities will change the price of final goods. A change in the cost of labor will change the demand for goods, which will also change their price. This process of mutual adjustment across markets, believed Walras, pushes the entire economy, by gradual steps, towards an equilibrated price structure. Walras called this step-wise movement toward equilibrium "***tâtonnement***" or "groping." Walras' theory of ***tâtonnement*** was his way to describe the process of trial and error by which buyers and sellers across all markets groped their way towards a price structure without anyone knowing in advance what the final outcome would be. Early on, Walras realized that there was no one equilibrium solution, but rather multiple equilibria were possible. The final equilibrium solution would always be contingent on earlier conditions.

The assumptions underlying Walrasian economics led economists towards an increasingly mathematical conception of general equilibrium theory and away from Walras' original desire to explain how economies actually worked.[11] Walras' theory of ***tâtonnement*** was especially ridiculed

[10] For some recent and particularly revealing research on the topic that "aggregate market behavior (does) not mirror the characteristics of the individual transactions" (Casella, 2001, p. 196), see Rauch and Casella, 2001.

[11] Walras' goal of using general equilibrium theory to approximate real-world economics is evident in the following passage from his *Elements of Pure Economics or The Theory of Social Wealth* (1977, p. 380):

"Finally, in order to come still more closely to reality, we must . . . adopt . . . the hypothesis of a continuous market. Thus, we pass from the static to the dynamic state. For this purpose we shall now suppose that the annual production and consumption . . . change from instant to instant along with the basic data of the problem. . . . Every hour, nay, every minute, portions of these different classes of circulating capital are disappearing and reappearing. Personal capital, capital goods proper and money also disappear and reappear, in a similar manner, but much more slowly. . . . Such is the continuous market, which is perpetually tending towards equilibrium without ever actually attaining it, because the market has no other way of approaching equilibrium except by groping, and, before the goal is reached, it has to renew its efforts and start over again, all the basic data of the problem, e.g., the initial quantities possessed, the utilities of goods and services, the technical coefficients, the excess of income over consumption, the working capital requirements, etc., having changed in the meantime. Viewed in this way, the market is

on the grounds that the process of mutual adjustment seemed more metaphysical than scientific; some likened Walras' idea of groping to an economy's having a fictitious auctioneer who mysteriously adjudicated prices for sellers in response to the calls from buyers.[12] As we will argue below, this intermediation between buyers and sellers is a lot less mysterious than critics suggest and is, in fact, a fundamental aspect of modern capitalist economies. The proponents of general equilibrium theory, however, were more interested in mathematical solutions than real-world processes, and so moved away from intermediation and abandoned the gradualism of ***tâtonnement***, by assuming perfect knowledge in the present of one's future production and consumption possibilities (Debreu, 1959, p. xi). Such an assumption allowed a mathematical solution to the simultaneous equations (Arrow and Debreu, 1954, Debreu, 1959), but further removed the idea of the interconnectedness of all markets, as embodied in general equilibrium theory, from being useful in empirical assessments of economies, except in the most general ways. Equally important, this formalized version of general equilibrium theory has only a rudimentary theory of the firm.

The reason that Walrasian general equilibrium theory lacks a theory of the firm is that it dispenses with one of the key assumptions used in the Marshallian frame – economies of scale. As we discussed earlier, the optimum size of the firm under the partial equilibrium approach is established by balancing economies of scale with demand for a product: if economies of scale are strong relative to the potential market size, then a natural monopoly prevails; whereas if economies of scale are weak, then many firms can enter, approximating a competitive outcome. The former outcome – natural monopoly – is incompatible with Walrasian general equilibrium, however, for two reasons. First, a monopoly is obviously not a price taker, so the whole idea of having equilibrium prices established

like a lake agitated by the wind, where the water is incessantly seeking its level without ever reaching it."

[12] Critics of Walras' concept of groping locate the fictitious auctioneer in Walras' idealized notion of tickets (1977, p. 242).

"In order to work out [a] rigorous a description of the process of groping [toward equilibrium], . . . we have only to imagine, on the one hand, that entrepreneurs use *tickets* ['*bons*'] to represent the successive quantities of products which are first determined at random and then increased or decreased according as there is an excess of selling price over cost of productions or vice versa until selling price and cost are equal; and, on the other hand, that landowners, workers and capitalists also use tickets to represent the successive quantities of services [which they offer] at prices first cried at random and then raised or lowered according as there is an excess of demand over offer or vice versa, until the two become equal."

We should note in passing that Walras' idealized ticketed price calls makes intuitively more sense as a model of the real world than Arrow and Debreu's assumption (Debreu, 1959) that all actors have perfect knowledge in the present of their future production and consumption possibilities.

by a ***tâtonnement*** process would need to be rethought. Second, and even more serious, a strong economy of scale introduces certain mathematical difficulties that make it impossible to prove in formal terms the existence of equilibrium. So the whole construction of equilibrium across many markets simultaneously comes crashing down like a house of cards when economies of scale are strong. How, then, are we to make progress in understanding the organization of firms, and of economies, in general equilibrium?

Reintroducing Firms: Monopolistic Competition

The answer that has developed over the past twenty-five years is to consider a weaker version of economies of scale: large enough so that each firm must achieve some minimum size to be viable, but small enough so that it is easy for additional firms to enter the market. Theorists assume that the new firms entering the market can sell products that are differentiated in some dimension from other products sold in that market. This means that the various firms have some ability to set their own prices. These twin assumptions of product differentiation and the free entry of firms are the hallmark of "monopolistic competition," due to Chamberlin, 1962 [1933] and Robinson, 1969 [1933]. As its name suggests, this framework combines features of perfect competition, through the free entry of firms, and monopoly, through economies of scale, product differentiation and price setting. Economists of the early Chicago School were not particularly impressed with this synthesis, however, and believed that the polar opposites of perfect competition and monopoly (or with several firms, oligopoly) were good enough to understand most real-world markets. This may be true in a Marshallian, partial equilibrium frame, but is most certainly *not true* in a Walrasian, general equilibrium frame. What was not realized for some years was that the monopolistically competitive framework would allow for the proof of equilibrium over many markets simultaneously (Hart, 1985) and moreover, could be adapted to introduce certain organizational issues, as we discuss below.

The usefulness of the monopolistic competition model was not fully recognized until a mathematical version of that model was developed by Spence (1976), Dixit and Stiglitz (1977) and Lancaster (1979), two of whom later won the Nobel Prize in economics. These writings were still in a partial equilibrium frame, but due to their clear mathematical formulation, allowed for an extension to general equilibrium in the years that followed. That extension has been applied to a number of fields in economics, of which we briefly discuss three: international trade, growth, and economic geography.

Before turning to these applications of the monopolistic competition model, we note that there is an alternative to its use: to derive implications of increasing returns to scale, we might instead abandon a general equilibrium framework, and replace it with some other criterion for the survival of firms. That is the approach taken by Brian Arthur (1989, 1994) and work in evolutionary economics (for example, Nelson and Winters, 1982). These models are dynamic in nature, but only rarely include price competition between firms. Instead, the entry and exit of firms are modeled by some specified process, and the goal of these analyses is to see where this dynamic process converges. We can call this convergence (if it exists) an "equilibrium," but not in the Walrasian sense. This class of models has been very effective at demonstrating the idea of *path dependence*, whereby initial conditions in the dynamic system have a lasting effect on the eventual equilibrium. This means that the equilibrium cannot be unique: even slight differences in initial conditions can have large effects on the final outcomes. But it turns out that these features of multiple equilibria and path dependence can also be derived from models that respect price competition and Walrasian equilibrium, once that framework is extended to allow for monopolistic competition.

International Trade

Up until the early 1980s, George Stigler's (1968, p. 1) observation that "there is no such subject as industrial organization," could equally well be applied to the field of international trade: there was no such thing as *traders* in the theory. Despite the deep insights of the theories, such as comparative advantage and mutual gains from trade, there was no role for firms, let alone economic organization more generally, to have any effect at all on trade patterns between countries. This limitation was recognized by at least some, but advances in the theory had to wait for the corresponding advances in industrial organization. These came with the development of analytical models of monopolistic competition, which were quickly imported into the field of international trade (Krugman, 1979, 1980, 1981, Helpman and Krugman, 1985). These models explored the general equilibrium implications of product differentiation, which for the first time allowed firms to have an impact on trade patterns.

A second-generation of models followed quickly, which abandoned the large-numbers assumption of monopolistic competition, and instead supposed that the number of firms competing in an international market might be rather small (Boeing versus Airbus is a favorite example). While it was initially thought that these models would hold insights for "strategic" trade policy, so that competitive advantage could be created by government support of firms, the lessons for trade policy proved to be

complex and often contradictory (Grossman, 1992, Krugman, 1994a). Accordingly, interest has returned to the earlier, monopolistic competition models with large numbers of firms.[13]

The model that we develop in this book is a natural extension of the large-numbers monopolistic competition models. However, in contrast to these models, we allow groups of firms – what we call "business groups" – to *jointly maximize profits* over all intermediate inputs and final goods produced by the group. Helpman and Krugman (1985, pp. 220–2) recognized that these models had the potential to include economic organization in their discussion of "industrial complexes," but this idea was not pursued further in the trade context; instead, the upstream and downstream linkages between firms became a building block of the new models in economic geography. We are, therefore, returning to large-numbers monopolistic competition model, and introducing the ability of firms to align themselves with others when this is desirable. The equilibrium concept we use is closest in spirit to the work in industrial organization by Perry (1988, pp. 229–35), though also anticipated by the early work of Caves (1974). Introducing cross-firm relations into the monopolistic competition model is the natural vehicle to include economic organization, and, as we shall find, has a solid empirical basis in the economies of Korea and Taiwan.

Very recently, trade economists have gone beyond the monopolistic competition model and begun to merge modern variants of transactions cost theories into Walrasian, general equilibrium models (McLaren, 2000, Grossman and Helpman, 2002, 2004, 2005a,b, Marin and Verdier, 2002, 2003, Antràs, 2003, 2005, Puga and Trefler, 2002). To give an idea of the results in this evolving area, consider first the modern version of transactions costs known as the "property rights" model (Grossman and Hart, 1986, Hart and Moore, 1990, 1999). In this model, parties make some investment of time and effort into a project and then bargain over the returns available from it. For example, it might be a manager bargaining with the headquarters of a firm over the profits available. In this dyadic setting, if the bargaining breaks down, the manager can seek employment elsewhere, and the returns from this *outside option* most certainly affect the investment of time and effort that the manager is willing to make initially: if the returns from the outside option reward prior investments, then the manager will be more willing to make these investments, which is regarded as a more efficient outcome. In the partial equilibrium setting used in industrial organization, the returns to the outside option

[13] The most recent work has moved beyond the firm as the organizational unit, to consider genuine traders and the networks created by their interaction (Casella and Rauch, 1997, 2000, Rauch, 1999, Rauch and Casella, 1998, Rauch and Trindade, 2002).

are treated as determined outside of the model. But in the recent general equilibrium versions, the returns to the outside option can be determined within the model: when there are *many parties willing to hire the manager*, then his or her outside options are better, leading to a more efficient outcome. In other words, *thick markets* with many participants lead to more desirable outcomes in the general equilibrium model (McLaren, 2000, Grossman and Helpman, 2002).

The finding that market thickness has an impact on efficiency illustrates how a rudimentary aspect of economic organization enters into these recent models. Obviously, there is much more work to be done. If more participants in a market lead to better outcomes, then institutions or social groups that allow for the collection and sharing of information between their members must also make a difference; in other words, networks must matter. These have also been introduced into simple trade models (Casella and Rauch, 2002, Rauch, 1999, Rauch and Casella, 2001, 2003, Rauch and Trindade, 2002, 2003). Furthermore, since firms will want to be linked with good partners abroad, we can expect that agents will find it profitable to undertake this matching activity. A model along these lines is developed by Rauch and Watson (2004), where individuals with expertise choose to become "international trade intermediaries." This also creates a role for governments to support such intermediation activities through trade fairs and associations, for example. Evidently, these ideas are bringing the *trader* back into international trade, where he or she should have been all along! We will build on these ideas in Chapter 7.

Economic Growth

The revolution of theories used within international trade has its counterpart in those used to explain economic growth. The dominant growth model for many years, due to Solow (1956), had the same emphasis on resource allocation, with no role for individual firms, as those used in international trade. A re-examination of that framework was prompted by the extraordinary growth of the Asian economies, which appeared to rely on an alternative paradigm. The models that were developed again drew upon the monopolistic competition framework, and turned these firms into dynamic entities, constantly striving to develop new products through research and development (Romer, 1990, Grossman and Helpman, 1991). Although the mathematical details were new, the motivation for the models was as old as the ideas of Adam Smith, who argued that the specialization of products was limited by the extent of the market: remove this limitation, and further specialization could occur, which could therefore expand productivity and income, leading to even further innovation,