Chapter One

Globalization and Convergence? The Domestic Impact of Globalization

Globalization challenges a country's capacity to promote national wealth and power. For some, the appearance of a global economy, in which goods, services, and ideas move easily in and out of countries, shifts the balance of power from states to markets. Globalization then produces a "race to the bottom," in which states embrace the same strategy to attract internationally mobile capital and firms: reducing their financial and regulatory support for national economic activities and adopting liberal economic strategies more generally.

This view of the contemporary international system is widespread today. In the bestseller, *The Lexus and the Olive Tree* (1999), highly acclaimed journalist Thomas Friedman's discussions of the "Golden Straitjacket" and the "Electronic Herd" illustrate to a mass audience that states face limited options in a global economy. Mass protests by "antiglobalization" demonstrators outside meetings of the World Trade Organization (WTO), the Group of Eight (G-8) major industrial countries, and the International Monetary Fund (IMF) underscore the salience of the view that global forces, not states or domestic publics, determine national economic strategies. Scholars too have become attracted to the changes wrought by globalization. Indeed, concern with the effects of a global economy informs research across several disciplines in the social sciences and has given rise to an emerging "globalist" perspective.[1] Reflecting its recent origins and multidisciplinary character, the globalist perspective embodies a diverse set of viewpoints and arguments rather than a coherent set of hypotheses or an overarching theory.[2] Nevertheless, several prominent globalists develop similar themes regarding how globalization is thought to transform international relations (Strange 1996; Scholte 1997; 2000; Held and McGrew 1998; Held et al. 1999). One theme is most pertinent to the focus of this book: In an open, global economy, states choose their economic policies based on the predicted effects of those policies for mobile international firms and capital, and on the constraints imposed by international organizations' liberal prescriptions. Globalization, then, should make states less willing and capable to use interventionist strategies to promote their national wealth and power.

Before national governments become convinced that they are powerless to respond to the international economy, however, the globalist perspective's expectations need to be explored empirically and analytically. Such analyses are pivotal, since some globalists indicate that states may differ significantly in their responses to global economic forces. Philip Cerny (1997, 268) acknowledges, for example, that "[d]espite elements of convergence, significant divergences remain, for different states have different sets of advantages and disadvantages in the search for international competitiveness." This is an important qualification, since the onset of a borderless world is thought to have similar effects across all countries.[3] Not surprisingly, the globalist perspective generally has neglected to explore national-level factors and how they affect globalization's impact. This book explores these domestic factors, specifically the ways national institutions influence the range of policy choices available to states.[4] The book's central contention is that while globalization creates new incentives for state policy, its impact on a state's policy is mediated by domestic institutions, the rules, norms, and procedures that organize policymaking authority and establish relations between state and societal actors. These institutions create their own incentives for policymaking and, by doing so, lead states to engage globalization in differing ways and with differing degrees of success.

I examine the relationship between the state and economic globalization through a longitudinal analysis of two countries' relationships, the United States and Britain, with one of the most globalized sectors, the semiconductor industry, from the early 1970s through the mid-1990s. Throughout this period, both countries' commercial manufacturers encountered severe challenges from foreign competitors, triggering multiple debates regarding the merits of existing strategies, the need for new ones, and the nature of the global challenge facing the sector. This sectoral focus helps to shed light on a core implication of the globalist perspective: globalization limits a state's ability to adopt interventionist policies, or industrial policies, that seek to promote and retain high value-added activities within its territory. These policies seek to strengthen the position of specific firms or sectors through the use of such initiatives as research and development (R&D) subsidies, tax credits, or the regulation of markets; in doing so, the government assumes a direct role in guiding industrial activity within its borders (Hart and Prakash 1999, 245). I maintain that states still may possess the capacity to advance such strategies. Whether they have this capacity hinges on the structure of national institutions. Institutions influence the type of policies a government is likely to pursue by setting the parameters for both intragovernmental and state-societal relations. In particular, the roles and strategies of government officials and firms are mediated—shaped and hindered or empowered—by the institutions through which these actors must operate. In this regard, the book seeks to identify the domestic institutional conditions that create opportunities or set constraints for the development of more or less interventionist strategies in response to globalization. It indicates that domestic institutions frequently create conditions that can lead a country to adopt strategies that are inconsistent with globalist expectations.

The empirical chapters examine thirteen policy episodes occurring between the early 1970s and mid-1990s, and find that globalization did not lead the United States or Britain to adopt only liberal strategies or to assume a marginal role in industrial development. Until the mid-1980s, for example, the British government played an activist role in the development of the country's semiconductor industry, funneling considerable amounts of aid to national firms and foreign firms under specific conditions. Beginning in the mid-1980s, the U.S. government assumed a similarly interventionist role: it provided large-scale funding for an applied research and development consortium open only to national firms and subsequently managed the sector's trade with its primary rival, Japan. As the United States continued this interventionist strategy throughout the late 1980s and 1990s, British policies turned liberal, remaining so until the mid-1990s. Ironically, if there were evidence of convergence, it was in the period between 1992 and 1996, when both countries' governments actively sought to promote national capabilities in the sector. The empirical evidence, moreover, indicates that the two countries' strategies converged on similarly interventionist strategies as a consequence of similar domestic institutional incentives. The institutional context also shaped their use of liberal strategies, making it difficult to correlate these choices with the constraints identified to emerge from globalization.

This introductory chapter provides an overview of the book. It begins by delineating globalist expectations about how globalization constrains states' industrial strategies and discusses some of the significant logical problems in these arguments. Second, it previews the argument and the institutional perspective developed more fully in the second chapter.

Third, it identifies the reasons for selecting the semiconductor industry. The chapter concludes with an outline of the rest of the book.

The Globalist Perspective

Globalization has become a central focus of scholarship in international relations theory. While there is no consensus definition for the term, there is some agreement that globalization represents an increase in globalism, or interconnections across different regions. Robert Keohane and Joseph Nye (2000, 105) define globalism as "a state of the world involving networks of interdependence at multicontinental distances. The linkages occur through flows and influences of capital and goods, information and ideas, people and forces, as well as environmentally and biologically relevant substances. . . ." Economic globalization would represent an increase in one dimension of globalism. The following discussion largely focuses on this dimension.

The globalist perspective conceptualizes globalization, regardless of definition, as a significant determinant and constraint on state action. The mobility of capital, firms, and technology is seen to force states to adopt liberal or more market-oriented strategies, if they hope to benefit from these global entities. In effect, the advent of globalization has made it less likely that the state will play an activist role in national industrial development or its economy more generally.[5] This is thought to be the case for at least three reasons.

First, globalists expect liberal strategies due to "the multinationalization of production and the attendant credibility of firms' threats to move production from one country to another in search of higher rates of return" (Scholte 1997, 443). In effect, states' autonomy and independence are reduced thanks to the globalization of production. One factor likely to increase firms' mobility or reluctance to locate in a state is their unwillingness to pay the tax burdens necessary to fund an activist state. "Governments must thus embrace the free market if they are to compete for the investment and jobs provided by multinational firms" (Garrett 1998, 792; Friedman 1999; Clark 1999, 96-100). This perspective rests on the more basic globalist belief that mobile firms are now no longer national, but global in orientation, outlook, and organization (see Held et al. 1999, chap. 5). For example, Roger Tooze (1997, 221) explains that the global economy comprises

> a structure that is more than and additional to the 'international economy,' and is made up of firms and other entities that operate transnationally over the whole globe. The activities of

> these firms are based upon and geared towards global production and services for a global market, with much of their economic activity taking place outside of the market within their own global structures. . . . The strategies and purposes of these 'global' entities are not necessarily congruent with or supportive of the strategies and purposes of the separate national governments of the states within which they are located.[6]

As a consequence, the emergence of a global market is expected to produce "demands for the harmonization of national polices, or common rules that prohibit national state intervention" (Zürn 2002, 240).

Second, states are thought to have become less important and capable sites of economic policymaking. At one extreme are those globalists who see globalization as portending the end of the nation-state as a meaningful or significant entity in the international system (Strange 1996, 75).[7] Others, such as Tooze (1997, 221) and James Rosenau (2000, 186; 2003) for example, see global dynamics as "lessening the capacities for governance located at the level of sovereign states and national societies." Cerny (1997, 269-70) offers a similar assessment: "[T]he nation-state is not dead, but its role has changed. . . . The functions of the state, although central in structural terms, are increasingly residual in terms of the range of policy instruments and outcomes which they entail." This transformation emerges as a result of the state's effort to make itself attractive to global firms through deregulation and liberalization (e.g., Baker 2000). Although there may be some disagreement on the extent of change emerging, globalists generally maintain that globalization is "reconstituting or 're-engineering' the power, functions and authority of national governments" (Held et al. 1999, 8).

Others contend that international institutions, such as the WTO and IMF, have led to the development of extensive sets of international rules designed to institutionalize liberalism at the international and national levels.[8] In addition, nonstate actors, such as international financial markets, create a further set of tacit rules limiting government intervention. These supranational forms of governance have further constrained the policymaking autonomy of national governments (Cerny 1995, 625; Strange 1996; Held and McGrew 1998, 229–30; Rosenau 2003). For example, as Jan Aart Scholte (1997, 444) maintains, "[t]he recently created World Trade Organization marks another striking growth of suprastate governance. . . . [M]any decisions concerning the regulatory environment for capitalism now come to rather than from the state." As a consequence, according to Scholte (2000, 139), states "no longer always clearly promote 'domestic' interests against those of 'foreigners.'" Ian Clark (1999, 90) identifies the analytical foundation of this perspective when he writes, "[t]he rules of competition are imposed from the outside, and the economic state must conform to them if it is to succeed."

A third argument focuses on the efficacy of interventionist strategies in a global economy. Interventionist strategies are expected to be futile, when firms can form alliances with those located in other countries and, thus, share the benefits with them. Such alliances make it difficult for the intervening state to capture the benefits of doing so for its territory. Jonathan Perraton and his collaborators (2000, 297) maintain that "[m]ultinationals' ability to transfer technology abroad and the ability of foreign MNCs to tap into domestic innovation structures limit the effectiveness of national industry and technology strategies." Given the global economy, Cerny (1995, 611) writes, "the outer limits of effective action by the state . . . are usually seen to comprise its capacity to promote a relatively favorable investment climate for transnational capital—i.e., by providing an increasingly circumscribed range of goods that retain a national-scale (or subnational-scale) public character or of a particular type of still-specific assets described as immobile factors of capital." As a consequence, "multinationalization appears to have led to a shift in industrial policy away from national industrial development strategies and towards an emphasis on offering inducements for inward F[oreign] D[irect] I[nvestment]" (Perraton et al. 2000, 298).

The globalist perspective has come under fire for at least three reasons. First, a number of scholars have called into question the notion that economic factors have generally become transnational and, by implication, that national territories have become insignificant to firms (Wade 1996; Hirst and Thompson 1996; Doremus et al. 1998). These scholars often grant that firms exhibit tendencies consistent with globalization in terms of the interregionalization of production processes and interfirm networks, but point to a number of different statistics, including employment, ownership, and R&D, to note the continuing importance of firms' home locations. Chapters 3 through 7 indicate that U.S. and British semiconductor firms, albeit largely multinational in orientation, tended to identify with their national territories in the sense that they sought support from their national governments in an effort to cope with the challenges they associated with the globalization of production. In this sense, these firms' home bases remain salient to their identities and actions. That being said, I leave the debate regarding the extent of globalization to others and, instead, focus on the factors that affect whether and how these firms' governments respond to the emergence of global economic challenges. In doing so, I explore how domestic institutions influence a state's capacity to respond to increased global connections, whether hindering or facilitating its use of different types of strategies.

A related critique focuses on the nature of the challenges states are thought to confront from the globalization of production. Globalists are primarily interested in how globalization has empowered mobile capital and firms and decreased the significance of nationally defined borders, actors, and interests. As a consequence, globalists tend to explore the effects of globalization only on an aggregate level, in the process downplaying the implications of a global marketplace for states' longstanding concerns with their relative positions (see Tooze 1997; Held and McGrew 2000a; Scholte 2000, chap. 5). Those who do emphasize competitiveness issues tend to narrow their focus to a competition for mobile investors and the downward pressure this competition places on national regulations (Strange 1996; Cerny 1997; Scholte 1997; Baker 2000). Yet, the global economy enables the dispersion and diffusion of productive potential to new locations, thus producing gains for some states and losses for others, whether measured in terms of technological development, economic growth, jobs, or tax revenues. States then face incentives to reinforce the economic benefits or halt the losses associated with the globalization of production and competition (see Prakash and Hart 2000a; 2000b). Given the potentially differential impact of globalization, multiple strategies are possible, including more rather than less state intervention. Chapter 2 maintains that whether and how states respond to such incentives depends on the structure of national political institutions, which will amplify, suppress, or modify various state and societal actors' preferences for responding to global competitive challenges.

Second, some scholars have focused on the globalists' expectation of a liberal convergence. These scholars have noted that the meanings of liberalism and convergence are many and murky (Berger 1996; Hay 2000; Drezner 2001). Others note that those states experiencing the most globalization of their economies, the advanced industrial countries, do not demonstrate a liberal convergence (Garrett 1998). This book reinforces these findings; the globalist expectation of liberal policy convergence is not borne out by British and U.S. strategies toward their semiconductor industries from the early 1970s through the mid-1990s. Throughout this period, the two countries opted for strategies that varied most significantly along two indicators: first, whether the strategy required the government to disengage from or intervene in the sector; and second, whether the strategy targeted the economic environment in which all industries operated or the sector. And even when the two countries pursued liberal strategies, considerable divergence remained in the initiatives used, especially with regard to the extent to which the state sought to extricate itself from the economy or sector. Perhaps more problematic for the globalist perspective is that by the 1980s, a period of heightened globalization, the two countries' strategies diverged sharply. Whereas beginning in the mid-1980s Britain adopted a liberal strategy, the United States developed interventionist approaches to regenerate the industry in light of the acceleration in the sector's globalization.

Third, others have taken issue with the determinism of the globalist position. They have done so in several respects, calling into question the globalist expectation that states will respond similarly to a common external pressure, globalization. Helen Milner and Robert Keohane (1996, 20) write that "observations of past political change should make us wary about expecting . . . one-sided effects. Political leaders have a degree of latitude in how they respond to internationalization. In large part, this range of choice is a function of the domestic institutional framework in which they must operate." Some have noted that globalists tend to equate globalization only with the decreasing capacity of the state and, thereby, exclude the possibility that globalization may be empowering for some states. Linda Weiss, for example, maintains that globalization has the potential also to be "enabling," since "intensified competitive pressures . . . urge governments to devise new policy responses, new regulatory regimes, and similar restructuring reforms" (Weiss 2003a, 17; 1998, 208). Summarizing the findings of a collective research project, Weiss (2003b, 298) explains that "[e]nablement implies that in the face of relatively similar globalization pressures, there are countervailing pressures on governments and, often, political incentives, to intervene."

In addition, similar critiques can be lodged against the notion that globalization leads to state restructuring that only decreases state powers. The transformation of the state apparatus may be unlikely to head in a single direction, since it is fundamentally affected by the relationship between agents and institutions operating in specific national contexts, the starting point for any transformation process (Gourevitch 1996; Cortell and Peterson 2002). Domestic groups' desire for national institutional change and the types of change demanded then are likely to be significantly shaped by distinctive domestic-level dynamics, making it possible for the restructuring of the state to head in multiple directions.

Others have taken aim at the limited role for agency in the globalist perspective (Guillén 2001a). It generally expects that the states themselves, whether their structures or officials, will play little role in mediating the effects of globalizing pressures. Even if states find themselves forced to respond to events emanating from outside their borders, domestic actors still must decide that doing so is necessary. In this regard, the globalist perspective suffers from a problem common to systemic-level theories in the international relations literature more generally; it leaves underdeveloped the process by which purported systemic-level effects are translated into national-level policies. Moreover, it is possible then that convergence may have nothing to do with the systemic pressures identified and more to do with domestic-level characteristics. As Clark (1998, 497) writes, "only by a consideration of the state caught between the competing pressures emanating from both [the international and domestic] fields can the impact of globalization, and its likely future development, be understood."

Some might contend that globalists implicitly see firms as the central agents driving national policies (e.g., Strange 1996). If so, this argument rests on at least three assumptions, none of which is unproblematic on either empirical or theoretical grounds. First, it presumes that all globalized firms want liberal strategies and that their national institutional and cultural contexts play no role in influencing their preferences. Second, it presumes that firms enjoy access and influence to policymaking processes across all states and that government officials and government structures play no role in mediating their impact. Third, it presumes that the domestic context exerts no significant effect on how a state responds to the international economy.

A similar criticism can be raised regarding the globalists' expectation that interventionist strategies are unlikely to be effective. The perspective asserts that all states will find such strategies to be ineffective and that this outcome will hinder them from adopting such strategies. This expectation overlooks the role of domestic politics and the differing preferences of national actors in driving policy choice. Much literature shows that domestic-level factors can block or refract systemically derived pressures (e.g., Katzenstein ed. 1978; Katzenstein 1985; Gourevitch 1986). As a consequence, it is possible that the determinations of effectiveness derived from the international environment may be pushed aside due to domestic factors that block, overcome, or compensate for these constraints. Moreover, these same domestic factors may help to explain why several of the industrial policies advanced by the United States and Britain explored in subsequent chapters achieved their objectives.

This last critique suggests that the globalist perspective "offer[s] what might be termed an 'input' model of convergence since the institutional and cultural factors which might translate common inputs into divergent outcomes generally remain underspecified or wholly unspecified" (Hay 2000, 512). As Weiss (1999, 81) explains,

> whatever pressures are 'out there' (whether coming from above or below and whether we agree to label them internationalization or globalization), states are responding from very different institutional and ideational bases and are therefore most unlikely to be moving in a single (regulatory) direction. This is because, in an internationalized economy, path-dependency (historical linkages between institutions which create interlocked systems) still carries weight: the weight of both historically formed regime

> orientations (e.g., fundamental norms about the state's role in economic and social relations) and institutional configurations (e.g., the availability of cooperative mechanisms for public-private governance).

Or as John L. Campbell (2003, 249) writes, institutions are "the mechanisms that determine how national actors respond to the pressures of globalization when they arise or are otherwise invoked."

An Alternative Approach: Domestic Institutions Matter

This final critique serves as the starting point for the historical institutionalist explanation advanced in chapter 2 to account for the types of strategies a country is likely to adopt in response to globalization. Peter Hall and Rosemary Taylor (1996, 938) note that historical institutionalists conceive the institutional context to encompass "the formal or informal procedures, routines, norms, and conventions embedded in the organizational structure of the polity or political economy. They can range from the rules of a constitutional order or the standard operating procedures of a bureaucracy to the conventions governing trade union behavior or bank-firm relations. In general, historical institutionalists associate institutions with organizations and the rules or conventions promulgated by formal organization."[9] These institutions influence policy by affecting the ability of state and societal actors to achieve their interests, by shaping the formation of actors' interests, and by the path-dependent quality of their evolution. The approach is historical in two respects. First, institutional creation and change reflects "the contingent nature of political and economic development, and especially the role of political agency, conflict, and choice in that development" (Thelen and Steinmo 1992, 12). Second, the approach conceptualizes institutions as being path dependent; that is, the composition of new institutions tends to interact with and carry forward key elements of existing institutions, including their incongruities and asymmetries. Moreover, some of the more significant institutional effects involve unintended consequences, which can be understood only over time (Pierson 1996). Taken together, these points indicate that a historical institutionalist approach expects cross-national institutional variations and that these are likely to be maintained over time (Katzenstein 1978).

Political scientists, among others, have long recognized that a country's institutions play a significant role in influencing its policies. While there are numerous ways to conceptualize institutions (see Hall and Taylor 1996), one of the more widely applied arguments in the international relations literature focuses on a state's domestic structure. Domestic structural approaches explore the institutions affecting the relationship between state and society in national policymaking processes. There is growing evidence to suggest that the basic premises associated with the conventional wisdom regarding these institutions are open to challenge in four respects.[10] First, many studies call into question the assumption that an undifferentiated institutional structure affects a country across all issue areas. Much research has shown, instead, that the state's organization and its relationship with societal and other nonstate actors vary across different issue areas (Krasner 1978; Ikenberry, Lake, and Mastanduno eds. 1988; Smith 1993; Weaver and Rockman eds. 1993a). Second, a number of scholars recently have found that centralized decision-making structures may be more favorable to societal influence than decentralized structures (Suleiman 1987; Evangelista 1995; Risse-Kappen 1995a). Whereas previous arguments maintained that decentralized structures were more conducive to societal influence due to the greater number of access points they offered, research indicates that this access comes at a cost not found in centralization: multiple incompatible institutionally derived positions. Policy impact then is likely to be more difficult, since societal actors must build "winning coalitions with like-minded" officials "who constantly face countervailing forces" (Risse-Kappen 1995b, 290). Third, recent work suggests that societal access to the policy process emerges not simply from the structure of decision-making authority as traditionally argued, but more significantly from the presence of formal and conventional linkages that connect private and public sector representatives (Hall 1986; Weiss 1998, 34–36). A similar conclusion applies to the role of societal structure in determining groups' role in policymaking, since institutional linkages can substitute for weak organizational forms (see Goldstein 1988; Evangelista 1995). Fourth, existing work has generally portrayed institutions as a static constraint, subject to change only during periods of crisis, such as depressions or wars. Recent research suggests that institutional change instead may be frequent and incremental, as institutions are adapted in response to domestic or international events that call into question existing patterns of behavior or strategies (North 1990; Cortell and Peterson 1999).

The institutional approach developed in chapter 2 builds on these recent conceptual developments. My central claim is that institutions influence a state's response to globalization by affecting its capacity to advance different types of strategies, whether these are liberal or interventionist. In particular, institutions, by delimiting the roles of state and societal groups in policymaking, can foreclose some options while making others more likely. In this way, institutions mediate whether and how demands for new responses to the effects of global markets are transmitted into policy outcomes. In developing this argument, I focus on two aspects of the institutional context: the degree to which decision-making authority over a particular issue area is centralized in one or more state units; and whether decision-making bodies and administrative, legal, or customary procedures, referred to here as institutional networks, provide industry representatives with a channel through which to access government officials during policymaking. On the basis of the interaction between the two institutions, I identify six different institutional contexts within which policymaking can transpire. Each context differently affects the distribution of authority within the governmental apparatus and the flow of information between government officials and private commercial interests. I explain how each institutional context affects the ability of government officials and firms to access and influence policymaking and, by doing so, also helps to make some strategies more or less difficult to develop. In this way, institutions create their own set of opportunities and constraints, thereby influencing the ways globalization affects state policy. Chapter 2 develops this argument in detail, linking specific types of institutional contexts to different types of responses to globalization. For example, it posits that the institutional context is most conducive to interventionist strategies when this context enables an ongoing interaction pattern between firms and government officials who can operate relatively autonomously of other state units. Such policies become more difficult as the number of state units involved in policymaking increases or when institutions do not foster an interactive pattern of policymaking between firms and officials. In this regard, some states will find their policy options constrained when responding to international economic forces and this lack of policy discretion will reflect dynamics associated with their institutional contexts rather than globalization. Moreover, so long as the two institutions vary across states, we should expect states to pursue divergent paths in response to globalization.

Since institutions are unlikely to be static over time, the roles state and nonstate actors play in the policy process also are not fixed. This point is significant in at least two respects. First, since the institutional parameters affecting policymaking are mutable, a state's response to the international environment is unlikely to be fixed over time. A wide-ranging literature suggests that a host of domestic and international pressures over time can produce changes in domestic institutions, in the process producing new national capacities and policies.[11] Second, globalization may serve as one source of institutional change, transforming a state's capacity to respond to the very consequences globalization portends for states. In this regard, if there is one point of consensus in the literature, it is that globalization creates pressures that are likely to reconfigure the state. What is less clear, however, is the uniformity, direction, pace, and implications of the potential transformation across national contexts. Using the empirical chapters as my foundation, I return to issues related to the sources and consequences of institutional change in the concluding chapter, suggesting several reasons why it is difficult to pinpoint the direction or type of institutional reform arising from globalization and why we should expect cross-national divergence in the link between globalization and state transformation.

Globalization and the Semiconductor Industry

The semiconductor industry, which topped $200 billion in sales in 2001, is often identified as the quintessential globalized industry given the organization and diffusion of its production networks (Cerny 1995, 621; Held and McGrew 2000b, 249). Firms sell their products, source their inputs, partner with foreign firms, and do research and development in many different countries and regions across the globe. One implication of these dynamics has been the rise of new sites of national competency and, thus, the entrance of new firms in the industry. Thanks to a global economy, technological know-how has diffused to new competitors, thereby intensifying competition among firms for market share and technological advantage.

The semiconductor industry exhibited characteristics associated with globalization beginning in the 1960s. Globalization can be equated with transcontinental or interregional networks of interaction. David Held and Anthony McGrew (1998, 228) maintain that economic globalization exists when "[n]ational markets are increasingly enmeshed with one another as intra-industry trade has expanded and global competition transcends national borders, impacting directly on local economies. In these respects, individual firms are confronted by a potential global marketplace whilst they simultaneously face direct competition from foreign firms in their own domestic markets." Globalists often point to the dispersion of production, foreign direct investment, strategic alliances, subcontracting, joint ventures, and other forms of interfirm relationships to demonstrate the existence of interregional production networks.[12]

Beginning in the 1960s, the geographic structure of the semiconductor market became globalized.[13] In 1960, for example, the United States accounted for 75%, Europe 12%, Japan 10%, and other Asian countries—including Korea, Taiwan, Singapore, and Hong Kong—3% of the world semiconductor market (OECD 1992, 138). Over the next thirty years, the world market gradually became less concentrated, with the U.S. share dropping to just 30% and Japan's rising to 40%, Europe's to 17%, and other Asian countries' to 13%. This change reflects consumption and production patterns for semiconductor devices: relatively stronger consumption growth in the newly industrializing Asian economies, particularly Korea, Taiwan, Singapore, Hong Kong, the Philippines and Thailand, and the emergence of Japan as the largest consumer and producer of semiconductor devices

(Ibid., 138–39). Trade in semiconductor devices has long been a component of the industry given the significance of offshore manufacturing facilities and intrafirm trade. By the 1980s "[m]any firms from each of the core countries [were] investing in R&D and design centers in other advanced countries, in order to tap local software skills and provide facilities for customers to design ASICs [application-specific integrated circuits]" (Morgan and Sayer 1998, 61). More specifically, the Organisation for Economic Co-operation and Development (OECD 1992, 40) reports that "[i]n the case of both the United States and Japan, about half of total imports and exports are generated by offshore manufacturing: parts of semiconductors are exported to non-OECD or other OECD countries where they are assembled and reexported often back to the source country. The European trade data also includes a substantial share of intrafirm trade, including imports and reexports of semiconductor parts by foreign manufacturers."

Both the U.S. and British industries globalized early. With regard to production networks, U.S. firms first began using offshore assembly operations in 1961, when Fairchild began manufacturing in Hong Kong (Flamm 1985, 69). U.S. firms soon set up facilities across Europe and Asia, and the percentage of U.S. shipments involving processing abroad reached 82% by 1978 (Ibid., 83). As early as 1970, exports constituted a 26% share of U.S. domestic production and imports 9% of supplies. By 1975 these figures had grown to 34% and 19%.[14] Simultaneously, the level of foreign investment in the U.S. semiconductor market rose sharply, as European companies acquired smaller U.S. semiconductor firms (Milner 1988, 122). Thanks to an acceleration of Japanese FDI in the 1980s, by 1990 14.9% of workers in the semiconductor industry in the United States were employed by foreign-owned affiliates (U.S. OTA 1993, 55, fig. 3.2).[15] By the mid-1980s, the number of U.S.-Japan strategic alliances increased markedly, reaching nearly 100 (NRC 1992).

Since the early 1960s, the British semiconductor market has been dominated by foreign multinationals. These were initially U.S. and European firms and since the 1980s have included Japanese firms. As early as the late 1970s, some foreign subsidiaries exported from Britain to other regions of the world (McCalman 1988, 63, table 3.9). By 1983 nearly 41% of those employed in the electronics industry in Scotland's Silicon Glen were working for U.S.-based multinationals (Ibid., 61). Although British manufacturers largely produce specialized circuits for the British market, these firms have not been immune or opposed to global connections (Sciberras 1980, 284, 289; Hobday 1989, 171, 177; Hart 1992, 169–78). Foremost, these firms are largely reliant on technological developments taking place in the United States, Europe, and Japan, with some producing devices under license from foreign firms. Second, many of their personnel were trained and employed by U.S. MNCs, and U.S. personnel have been recruited to lead British firms. Third, the larger indigenous firms are themselves multinationals, manufacturing other products, and marketing and selling semiconductors abroad. Finally, they have engaged in multiple types of interfirm arrangements with U.S., Japanese, European, and Canadian firms. These agreements have included purchasing, production, and ownership arrangements. More recently, British firms have become the subject of acquisition by foreign firms.

The semiconductor industry provides a useful vantage point to examine the relationship between states and globalization. Semiconductor technology is integral to many of the industries that underpin crucial defense systems and helps to determine the pace and level of innovation in a wide range of industries in the contemporary national economy. A country's productive potential, which derives in large part from its capabilities to produce and to master leading-edge technologies such as the semiconductor, has long been thought to be an important determinant of a country's standing in international relations (Kennedy 1987; Thurow 1992; Samuels 1994). As such, some would consider the semiconductor industry to be a strategic industry (NRC 1992, 85).[16] Thanks to the dispersion of production and the emergence of new sites of competence in the sector, globalization brings unequal benefits and costs for various states and substate actors.[17] The possibility for winners and losers is likely to lead state and nonstate actors to try to shape the terms on which globalization affects them. A cross-national, longitudinal study of the sector then provides an opportunity to explore the conditions affecting the outcomes of these struggles, thereby shedding light on the relationship between globalization and state policy. That being said, I do not claim to offer a complete investigation of this relationship. That may not be possible given the multifaceted nature of globalization and its purported effects (Held et al. 1999). This book explores the relationship between the state and economic globalization through the lens of global competition in the semiconductor industry and U.S. and British strategies for coping with that competition.

Overview of the Book

Chapter 2 develops the book's institutional explanation. It begins by explaining how a country's strategy to promote national competitiveness can vary and identifies two potential responses to pressures associated with globalization. The second part of the chapter develops the book's institutional argument. It does so in two parts. It starts by delineating the two institutions at the core of the argument, the organization of decision-making authority and those institutions structuring government-industry relations during policymaking. It then explains how these two institutions affect government officials' and firms' access, influence, and strategies in the policy process. After doing so, the chapter explains how different combinations of these two institutions create opportunities and constraints for a state's response to globalization, linking the various institutional combinations to the two potential strategies identified in the first part of the chapter. The chapter concludes with an overview of the case selection strategy, particularly the focus on the United States and Britain.

Chapters 3 through 7 provide an empirical investigation of U.S. and British strategies to confront the globalization of the semiconductor industry from the early 1970s through the mid-1990s. The chapters recreate thirteen policy episodes to examine the role the institutional context plays in mediating the domestic impact of the pressures associated with globalization. Chapters 3, 4, and 5 examine six U.S. policy episodes, beginning with the Carter administration's innovation initiatives and ending with the Bush administration's renewal of the Sematech initiative in 1992. The chapters explore the impact of different institutional contexts, showing how variations in these contexts contributed to the administrations' decisions to adopt more or less interventionist strategies in response to pressures associated with globalization. These chapters also analyze several instances of the link between globalization and institutional transformation. These examples often involved a deliberate attempt to increase rather than decrease the state's capacity to advance interventionist strategies. Whether such innovations brought about these strategies hinged on the type of institutional context that subsequently emerged.

Chapters 6 and 7 explore seven policy episodes involving British governments' efforts to deal with the effects of the globalization of the semiconductor industry. The case studies begin with initiatives advanced by Edward Heath's government in the early 1970s and conclude with those developed in the mid-1990s by John Major's government. The cases show that institutional variations influenced whether the governments advanced liberal or interventionist strategies in response to pressures associated with the globalization of the semiconductor industry. These chapters also investigate several institutional reforms that both increased and decreased the capacity of the state apparatus to assume a role in the economy. These institutional variations highlight the role of several factors that can produce institutional reforms and indicate that globalization's impact on state transformation is unlikely to be unidirectional.

Chapter 8 identifies the book's central empirical and theoretical findings. The chapter begins by highlighting how the findings raise several key problems for globalists' expectations. It then considers the plausibility and explanatory strengths of several factors identified by other theoretical approaches. A third section explores the relationship between globalization and institutional transformation, identifying several sources of the institutional changes found to emerge in the United States and Britain. The chapter concludes with an analysis of the effectiveness of several of the more recent U.S. and British industrial strategies examined in previous chapters. It finds that interventionist strategies advanced by both countries were successful along several indicators. This final section suggests that given certain conditions, states may retain the capacity to use industrial policies to promote national competitiveness.