To the Graduate Council:

I am submitting herewith a dissertation written by Juscelino Filgueiras Colares entitled "Center-Center Dependency in the American and Japanese Automobile Industry: A New Political-Economic Approach to Dependency Theory." I have examined the final copy of this dissertation for form and content and recommend that it be accepted in partial fulfillment of the requirements for the degree of Doctor of Philosophy, with a major in Political Science.

Robert L. Peterson, Major Professor

We have read this dissertation
and recommend its acceptance:

Accepted for the Council:

Associate Vice Chancellor
and Dean of The Graduate School

CENTER–CENTER DEPENDENCY IN THE AMERICAN AND JAPANESE AUTOMOBILE INDUSTRY: A NEW POLITICAL–ECONOMIC APPROACH TO DEPENDENCY THEORY

A Dissertation Presented for the

Doctor of Philosophy Degree

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Juscelino Filgueiras Colares

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To My Parents, Vanderliza and José, And To My Wife Susana

Whose Love and Support Made This Project Possible

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ABSTRACT

This research is an attempt to study the relationship between the Japanese and the American automobile industries as an example of dependent dynamism between two developed capitalist countries. More specifically, I will attempt to legitimize the emerging research question by showing that whereas this line of work cannot be seen as deriving from a neo-Marxist perspective, it can be regarded as an evolution, and not misuse, of the concept of "dependent dynamism" provided one observes the history (especially the origins) of the dependency-related literature. This dissertation extends the usual dependency concern with multinational corporations and associated issues such as retention of control over technology, and relevant trade issues to within core relations. If a reciprocal trade relationship exists, does one nation maintain systematic supremacy over relevant technological and manufacturing skills? To provide a sound theoretical basis for an explanation of how a competitive lag has emerged in this industry and how it has come to configure a dependent dynamic situation is the intent of this project. The empirical impact of these changes will be partially assessed through the use of a pooled cross-sectional/time series model.

This study analyzes the history of the change in industrial leadership from the U.S.A. to Japan from the Postwar period to date, and demonstrates how the social basis of economic institutions has exerted a preponderant influence on this process of economic transformation. It is argued that the structure of the state and its relationship with business enterprises — what is referred to here as "state-societal arrangements" — are central to understanding the dynamics of this transition. The study then shows the economic advantages attained by the Japanese through the use of "calculated protectionism," a form of managed trade that makes the use of strategically aware administrative guidance designed to improve the competitiveness of national industries

which are characterized as being competitive followers. The strategic awareness revealed by this policy becomes then an essential requirement for the Import Management in support of Continuous Improvement Evolution (IMCIE) policy proposal earlier indicated in this dissertation.

Although ECLA's Import Substitution Industrialization (ISI) model is of considerable value in providing the theoretical and methodological framework used to understand the current nature of the competition between the U.S. and the Japanese auto industry, major modifications were made to accommodate the historical and geographical particularities of this new form of dependent dynamism. These included a reconceptualization of the production structures on both sides of the relationship, and a new assessment of the role that institutions have had on the history of industrial evolution in the past four decades. Thus, in *lieu* of proposing a mere ISI program — which would certainly prove to be inadequate in this new within center context — IMCIE becomes the "catching up" strategy suited to the new kind of competitive challenge advanced by continuous improvement production system.

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I. INTRODUCTION

At first sight, the use of dependency — a theory founded on the most severe possible criticism of what were perceived as unjust inequalities (political-economic) between the center and the periphery — to analyze American-Japanese trade/industrial relations appears unwarranted. After all are not these countries the two largest economies in the world? This economic strength evokes a clear image of power. Yet asymmetric relationships can still exist. In fact these images of power (or the increasing lack of it) seem to be at stake when we approach a trade (im)balance in the automotive vehicle trade and look to an expanded transnational hegemony over a wide range of products (from steel to home electronics) and services the United States had traditionally provided itself. The openness of the U.S. economy, its late awakening within the quality revolution (Cole, 1991) and an alignment of corporate and class interests have favored Japanese industry. With its clearly defined mode of operation that seeks a rule-based and stable economic environment, Japanese industry, and especially the automobile industry, has established a whole market niche. This has been made possible by the attainment of a mixed formula composed of: a) increasing consumer value by increasing product quality without increasing costs (the result of the quality control revolution propelled by American statistician W. Edwards Deming-unheard of in America until the late 70's and early 80's); b) the introduction of innovative design; and c) the implementation of careful organization and marketing. When Japanese automobile makers first seriously began to penetrate the U.S. market in the mid-1960's, it would have been unthinkable that a mere two decades later these companies would have established manufacturing facilities in seven states producing products that successfully compete with our own.

It is specifically the nature of this competition and the pattern that it has assumed that allows me to use the concept of dependency to depict the asymmetric

relationship between the American and the Japanese automobile industry. Because it has been said that quality products and quality processes are the key factors differentiating market leaders from market followers, if I am able to identify a consistent and definite pattern of quality supremacy at one of the poles of the relationship, then I may be justified in assuming that those who hold such position are the leaders. Furthermore, if such a relationship is reproduced[1] thanks to the concession (sale) of technology from one group of actors to another I can say that I have identified a dependence relationship that fits Dos Santos' definition:

> By dependence we mean a situation in which the economy of certain countries is conditioned by the development and expansion of another economy to which the former is subjected. The relation of interdependence between two or more economies, and between these and world trade, assumes the form of dependence when some countries (the dominant ones) can expand and can be self-sustaining, while other countries (the dependent ones) can do this only as a reflection of that expansion, which can have either a positive or a negative effect on their immediate development (Dos Santos, 1970: 231).

The purpose of this research is to study the relationship between the Japanese and the American automobile industries and to identify it as an example of a dependent relationship between two developed capitalist countries. I will attempt to provide a theoretical base for the emerging research question by showing that whereas this line of work cannot be seen as deriving from a Neo-Marxist perspective, it can be regarded as an evolution , and not misuse, of the concepts of "dependent development" and "dependent dynamism" (concepts inherent in the definition of dependency quoted above), provided one observes the history (especially its origins) of the dependency-related literature.

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[1]The term reproduction used here is a throw back to the Marxian notion which takes the same name, namely that reproduction involves both the production (of industrial goods) and the creation of the conditions necessary for the continuation of that relationship (*The Capital*, book I, chapter XXIII).

STATEMENT OF OBJECTIVES

This study has the following objectives:

1. to investigate whether and how dependent dynamism operates in the context of a particular industry;

2. to show that dependent relationships exist not only between core countries or industries and peripheral countries or industries, but also at times between two core countries or their industries, although it must be recognized that classical (structural) dependency has been characterized by the existence of many dependent relationships running in the same direction;

3. to expand and, therefore, transform dependency theory into a general political-economic theory that can shed light on the sort of relationships with which I am concerned; by investigating the existence of such dependent relationships elsewhere in the international system, and by making use of this facet of the concept of dependency (i.e., dependent dynamism);

4. to extend the usual dependency concern with multinational corporations and related issues such as retention of control over technology, and relevant trade issues to within core relations.

A SURVEY OF THE LITERATURE

To develop the arguments presented in this dissertation two preliminary tasks must be carried out. First, it is necessary to show how some basic concepts of dependency - namely dependent development and dependent dynamism - have been used in the theoretical and policy literature. And, because arguments about dependency have evolved over time, it is necessary to show how my use of these concepts fits into the historical development of the dependency tradition. What follows is an outline of the evolution of the dependency literature in the past three decades. Although the placing of my contribution as last in the historical development of this tradition may suggest an idea of natural theoretical evolution, my approach should be understood only as a consequence of the logic of presentation and is only one of several possible exploratory efforts that may be undertaken under the label of dependency studies.

One of the central dependency arguments, and common to all strands within the dependency tradition[2], is that more wealth flows from LDC's to the center than is invested in the periphery (Cardoso, 1979). This phenomenon — depending on where one is situated within the dependency tradition — may be studied as a consequence of, among other things, depreciating terms of trade (the view originally taken by Prebisch which is at the root of the whole dependency movement); as a concrete expression of the position some countries occupy in the international division of labor (the Neo-Marxist structural view); or even as part of a systematic purposeful effort undertaken by the richer countries to underdevelop the less developed nations (Frank, A. G., 1969); or even some combination of all these. As a starting point, this observation should suffice to warn any reader of the danger in engaging in selectively reading the dependency orientation as expression of only one of the more easily refuted dependency views[3].

Those theorists who identify with the dependent development school [4] (and not with the more radical dependency school [5]) share similar theoretical roots with those who first contributed to the ECLA (United Nations Economic Commission for Latin

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[2]By dependency tradition I mean all the schools that use the center/periphery dichotomy as a central point in their critical analyses of the inequalities existing in the international system, and of which dependency (*strictu sensu*), and dependent development theorists are examples.

[3]Dependency theory (*latu sensu*) and, curiously, Smithian Classical Economics are the two social science theories which perhaps have been the all-time greatest victims of selective reading. That has been done by both the left and the right of the academic community.

[4]Members of the dependent development school, though accepting some of the central points of dependency theory *per se*, maintain that development can occur under conditions of dependent capitalism and that it is accompanied by greater decision-making and financial participation by national elites (Dos Santos, 1970; and Cardoso, 1979).

[5]The more radical *dependencistas* referred to here under the label of dependency theorists reject the modernization notion that capitalist development is a way out of backwardness, arguing instead that the underdeveloped countries have been made "dependent" by colonialism, rendering them unable to reproduce the developmental path of the advanced countries (Bagu, 1960; Frank, A.G., 1966).

America) such as Prebisch and Sunkel. Cardoso, who may be considered the originator of this approach, paralleled ECLA in two ways:

a) his emphasis on a world economy; and

b) his emphasis on the role of the state in the development process.

The parallel with the early ECLA writings is an important one to draw because it was at that period that economic development theory became concerned with issues of trade between rich and poor countries. Moreover it is to this theoretical concern that we should return if we are to evoke the legacy of the dependency approach in postulating the existence of a within center dependency relationship because that is so intrinsically tied to the trade between the U.S. and Japan.[6] Finally this argument gains special relevance when I refer to what recent development literature has said about what appear to be 'structural' changes taking place in the periphery and within the center itself:

> 'Center' and 'Periphery' can, in certain instances, be helpful analytical constructs, but there are unanswered historical questions. What occurs when the dynamics of the center change; that is, what happens when the postwar hegemon, the United States, enters economic decline? What happens when the periphery fragments? These were not questions that structuralism [here referred to as classical dependency] anticipated because of the abstract and idealist constructs [Neo-Marxist normative bias] implicit in its methodology (Cypher, 1990: 42) [emphasis added].

By not placing my work within the structural (classical) dependency orientation - which has so statically addressed the qualitative changes occurring in the periphery as well as in the center [7]— I hope to escape the type of criticism Cypher is advancing.

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[6]Although here - and similarly to classical dependency theory - I am also concerned with the domestic production of foreign (Japanese) automobiles in a domestic (American) market.

[7]In this regard members of the dependent development school (Evans, 1979; Munck, 1984; Bornschier and Chase-Dunn, 1985) have launched a well established within dependency criticism of structural dependency's static analysis.

Change will be of special concern in my analysis because only by studying the dynamic process of trade between the two countries involved, can I identify where and how "the dynamics of the center" started to change. Thus, if structuralism and Neo-Marxism are not the chosen paths, I am left with basically two alternative dependency schools: ECLA's developmentalism (*desenvolvimentismo*[8]) or the Prebischian contribution; and the associated-dependent development school of Cardoso. First, let us examine just how Prebisch and his followers made the early *dependencista* arguments by focusing on the role of trade. Development theory's assessment that foreign trade could no longer to be relied upon as an engine of growth in the twentieth century derived from a host of historical-political-economic factors.[9] First, at least as far as the 1950's were concerned, there was a detectable slowdown in the growth of demand in developed countries for the exports of developing countries. Associated with this, there was a characteristic pattern to be identified in LDC's exports: they were essentially made up of primary products whose price-inelastic demand implied that LDC's were incapable of engaging in price competition because increases in demand for their exports could only be sensibly affected by factors outside of their control such as the level of expenditures in markets of developed countries. Second, the Prebischian refutation of the Ricardian law of comparative advantage, showed just how the price relation between LDC's exports and imports had turned against these countries.[10]

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[8]The term 'economic *desenvolvimentismo*' that I introduce here refers basically to the view commonly held by structural and dependent-development *dependencistas* that ECLA's analyses focused too much on the obstacles to capitalist development in Latin America — specially as far as market constrictions were concerned — leaving aside the more directly socio-political determinants of economic development.

[9]A detailed discussion and justification for this conclusion is outlined by Riedel (1988).

[10]See Prebisch (1962: 6)

The political implications of such findings were clear: there seemed to be political-economic forces operating to create a center/periphery dichotomy structurally organized along an international division of labor. The major policy recommendations that followed, import substitution industrialization (ISI), called for LDC's to engage in a new form of development strategy by developing industrial ties with the developed countries of the center. The argument ran as follows: because the structure of international markets was such that the local export sector responsible for the generation of resources to finance development was not able to do so due to deteriorating terms of trade, the alternative was to encourage direct foreign investment by creating a domestic atmosphere which could be perceived as "friendly" to investment.[11] This would be done through a shift in public policy which would center around market controlling measures, such as tariff protection, tax exemptions, etc. This had to be done, according to Prebisch and other ECLA intellectuals, to compensate domestic industries operating in those areas where they did not enjoy a comparative advantage. Moreover, protection for the domestic industry should be kept until 'learning by doing' would allow domestic industry a better chance to compete nationally with foreign rivals. It is from this theoretical development that dependent development theory later constructs the "associated-dependent development"arguments because intrinsic to this *desenvolvimentismo* (contained in the view that economic development can occur even if in a dependent way) is the combination of two notions that had until then been perceived as contradictory: dependency and development.

Though one can easily identify problems caused by the implementation of this approach — as with any kind of theory that makes its way into policy — the extent to

[11]Note that the idea of ISI or even dependency as antagonists to foreign investment and trade - an idea usually diffused as one of the main tenets of the dependency orientation - is here shown to be very questionable, perhaps even false.

which ISI altered the patterns of production of exports from LDC's is tremendous. Indeed much of the credit that 'liberalization' policies have gotten in the past decade can only be really understood once the positive effects of ISI implementation in LDC's is filtered, or at least accounted for.

This focus on industrialization, however, soon led to a breakdown in the apparent uniformity of discourse in the dependency tradition. By the mid-1960's the *desenvolvimentismo* of the Latin America elites had led to the establishment of military and civil dictatorships: the traditional case of favoring political stability with the intent of guaranteeing economic development (to some).[12] For some *dependencistas* the ECLA's focus on industrialization and economic growth had ignored certain vital socio-political problems then developing (e.g., income inequality and the political tendency to more arbitrary regimes), though it is fair to say that one cannot point fingers at the ECLA founders of dependency for not condemning such developments. It is at this period, that the 'break' between the more scientifically or pragmatically oriented (though ethically compromised in terms of democracy) ECLA writers and what then became the structural *dependencistas* occurred. It is back to this point in time, then, that I see my inquiry as grounded in the dependency tradition.

In the early ECLA writings one observes not only a pragmatic but also an ideological focus on trade issues as they are defined in terms of economic (commercial/industrial/technological relations between the center and the periphery) and political elements. To be sure, other parallel developments in the dependency literature were also interested in such relations. In fact, several authors that identify with the classical dependency tradition have identified many problems associated with

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[12]In this context the writings of Samuel Huntington provide the questionable academic justification for military and civilian *coups*.

industrial/technological issues involving multinational corporations in Less Developed Countries (Cardoso, 1966, 1972, 1973, 1979; Dos Santos, 1970; Hymer, 1972; Vaitsos, 1973, 1974; Petras, 1975; Papandreau, 1976; Evans, 1977, 1979; Amin, 1982; Bornschier and Chase-Dunn, 1985). They argue that the imperialism of the center has changed historically from outright colonialism to economic dominance by the multinational corporation. Their contention is that the center now maintains dominance over its colonies through techniques other than military coercion. The multinational corporation, the co-optation of the Third World states and the reinforcement of a privileged elite are the surrogate elements of dominance replacing the outdated military presence (Dos Santos, 1970). In these studies, much of the economic, political or sociological "analysis" that exists rested on a strong normative commitment to the views held previous to the research exercise. Though I do not assume the likelihood much less the desirability of a 'value-free' pursuit of science — the scientific effort itself being very much a product of social construction — much of these more radical dependency writings are characterized by the adoption of "defensive methodologies" (Blaug, 1975), namely the tendency to immunize theories against criticism by failing to adopt a commitment to falsifiable predictions in the Popperian sense. Nonetheless, within all that has been written in three decades of dependency studies, the writings of Prebisch and Cardoso remain among the most serious and careful methodological and theoretical efforts ever undertaken in the dependency tradition.

Prebischian analysis is specially suited to a more systematic theoretical and empirical analysis of phenomena associated with the concepts of dependent development and dependent dynamism in the more concrete realm of commercial,

industrial and technological relationships between center and periphery.[13] It started with a careful theoretical and empirical (relative to economic theory) concern (although ideology certainly surrounded the debate): to explain why the Ricardian law of comparative advantage did not materialize in the actual trade relationship between center and periphery because the gains in productivity attained by the more developed countries were — counter to the Ricardian theory of international trade — in no plausible way being transferred to all trade partners, especially those in the periphery. Therefore trade, at least for peripheral countries, could no longer be expected to operate as an engine of growth (see above). It comes as no surprise that the clear theoretical and empirical underpinnings of his research could so clearly make their way into public policy — in fact even more than this: a whole strategy of development for a whole continent.

Note, however, that the transfer of some of Prebisch's theoretical contributions into public policy does not coincide with the adoption of his recommendations in the shape and form they were originally elaborated. For example, Prebisch never expected that Latin American countries could reach the level of industrialization and general economic diversification achieved by core countries while relying only on import substitution. As Robert J. Alexander writes, by the mid to late 1960's "[Prebisch] recognized that further growth and development depended on adoption of a post-import substitution policy" (Alexander, 1991:18). And that was the case for a logical reason: because many of the manufacturing industries had developed as import substitutes, they acquired comparative advantage and thus were quite capable of competing on an international level. According to his theory, this development implied that ISI had

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[13]See Prebisch (1962).

fulfilled its mission, the next step being then the abolition of ISI for that particular industry.

The contributions of Cardoso[14]and other members of the associated-dependent development school — though very critical of the 'economic *desenvolvimentismo'* of the ECLA writings — bear great relevance to this analysis because they hold the view that dependency and development are not necessarily incompatible. The basic rationale used to explain why dependency and development were no longer incompatible comes largely from their new conceptualization of the role of the multinational corporation as an important structural actor. Unlike other dependency writers, Cardoso and Faletto perceived that multinational corporations (MNC's) were internationalizing the dynamic sector of Latin American economies. In contrast to the earlier forms of dependency, it was not trade (the exchange of raw materials for manufactured goods) but production for an internal market which characterized the "new dependency," a condition based on direct investment and increasing state management of the dependent economy.[15] Thus

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[14]See Cardoso, Fernando (1966, 1972, 1973, 1977, 1979) as well as Cardoso, Fernando and Faletto, Enzo (1979), and Evans (1979); Munck (1984); Bornschier and Chase-Dunn (1985).

[15]Though this move seems to parallel the pattern of Japanese trade, investment, and production in the United States, i.e., increasingly shifting from export trade to local production of Japanese products within the US, one important difference is latent here: the Japanese multinationals are not taking governments, nor local elites as partners in the capital constitution of their companies. This is obviously related with the Japanese strategy of seeking rule-based and stable economic environments (see introduction) which - by offering political and economic stability - remove the necessity of adopting risk reducing strategies such as making government and elites business partners. But let us not forget that this is even more beneficial to the Japanese since by not having to share any technology, they are able - if the pattern of dependency advocated here is sustained - more easily to reproduce the dependent relationship. Thus even when structural differences are accounted for the dependent development argument still holds. In fact, in this case it is the very different structural elements of this new setting (center-center) that further help reinforce the dependency argument. Also note that Japanese auto makers have - with only a few exceptions - gained fat state subsidies as incentive to install their plants in the Midwest, as state governments engage in fierce competition for their factories in a pattern much assimilated to what marked the introduction of the MNC's in LDC economies.

dependency and industrialization ceased to be contradictory, and for at least some parts of the periphery, a path of 'dependent development' seemed conceivable.

The other important contribution of this school came from their concern with issues associated with control over technology. According to Cardoso and Faletto (1979) and Bornschier (1981) the source of corporate power rests on the control over technology rather than finance. In order to gain access to modern technology, local industrialists link up with the transnational corporations to initiate a process of denationalization of Latin American capital and markets. This process, moreover, is not even based on foreign capital. Cardoso (1972: 92) uses data collected by ECLA to demonstrate the tendency for subsidiaries of multinational firms to rely increasingly on local capital for the financing of joint ventures. Local capital has in turn relied on borrowing from international lending institutions, which further accelerated a well-established tendency for capital to be exported from the periphery to the dominant economies, now also in the form of interest on loans[16]. As Vaitsos (1973, 1974) had earlier demonstrated, capital export by MNC's takes many forms: repatriation of profits, royalties, technology patents and other commissions, interest and payment of external debts, and transfer prices. Bornschier and Chase-Dunn (1985) argued that the

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[16]This is indeed one of the most serious reasons for the 'debt crisis' of the 1980's which was especially aggravated when international banks and local elites "pressured Latin American governments to 'consolidate the debt' by government absorption of what had been privately contracted external loans" (Pastor, 1989: 331).

transnational corporations have increasingly engaged in manufacturing in the periphery and that they operate to keep peripheral nations structurally dependent.[17]

Recent theorists (Munck, 1984; Evans, 1979; Bornschier & Chase-Dunn, 1985) argue that the periphery is being restructured by dependent development. For instance, Bornschier & Chase-Dunn (1985) describe two structural variations of dependency which are fostered by different types of transnational firms:

a) classical economic dependency: specialization of the core in industrial products and of the periphery in raw materials (involving extractive transnational corporations);

b) core/periphery distinction within industrial production: the core specializes in control over technology and the innovation process; the periphery is engaged in routinized industrial production (involving manufacturing in association with transnational firms)[18]. These authors argue that the periphery is structurally differentiated according to the type of manufacturing activity, that is, whether they produce for internal peripheral markets of the core industry (Bornschier & Chase-Dunn, 1985, p. 19).

Chase-Dunn (1983: 84) argues that dependent development has resulted in a shrinking of the periphery, since between 1885 and 1980, he claims, some peripheral nation-states have become upwardly mobile. He maintains that, over the past century, the periphery has decreased from 88% to 66% of the world system. The semi-periphery has grown from 5% in 1885 to 21% in 1980, and the core has grown from

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[17]Note the pattern of dependent dynamism being established in the following passage: "The [Japanese] transplants ... import a large part of their auto components from Japan [where does technology transfer take place here?] or buy from nonunion [another institution eroded by the Japanese mode of dependency] from Japanese suppliers who have relocated in the US. They are thus able to control price and quality. As a result of these and other practices, the transplants enjoy a $ 700-per-vehicle cost advantage over Big Three plants, or about one-tenth the retail cost of a small car ..." (*Business Week*, August 14, 1989) [emphasis in brackets is mine].

[18]This is specifically the variation of dependency which is most relevant to my research hypothesis, although the alleged context comprises two "center" countries or industrial sectors and not one central and one peripheral country. As mentioned before, I argue that it is this latter form of dependency that is currently under way in the American and Japanese auto industry.

6% to 13%. Chase-Dunn concludes his argument by stating that "if the trend continues at approximately the present rate, all countries would be in the core and the semi-periphery in about 300 years" (Ibid: 88).

Cardoso then reminds us that "it is useful to remember that **forms of dependency** can change and [that it is also useful] to identify the structural possibilities for change" (Cardoso, 1979: ix; emphasis mine). A number of authors have explored these possibilities especially in the context of center-center dependency (Hechter, 1975; Ruffing, 1979; LaDuque, 1986, Gedicks, 1985, and Wilcox, 1985). Although my claims referring to center-center dependency are developed in an "inter" national context — being thereby different from the markedly "intra" national focus of these latter center dependency studies — the movement of dependency theory towards the center, or rather its application within the center, works as an stimulus for me to attempt to investigate dependency relations elsewhere in the center itself.

The literature above has shown the historical development of Dependency Theories. While rich in theoretical import, Dependency Theory and Dependent Development Theory have not, for obvious reasons, given explicit attention to the dynamics of dependent relations between center nations. However, it should be possible to utilize various notions within the above discussion to construct such a theory. For example, the notion of numerous dependent relations running in the same direction (from page 1) could usefully indicate similar dependencies between center-center countries. Similarly, most dependency theorists argue that dependencies exist because capital (in form of payments for licensed technology and royalties among other relevant capital transfers) flows from Third World nations to First World countries (from page 3). Again, if such capital flows exist between two center nations a similar dependency relationship may be inferred to exist. Dos Santos' arguments for the technological-industrial dependency relations are also relevant to a center-center

dependency model. In fact, one of the many possible ways of detecting such patterns is to look at the way sales and/or market share figures have behaved in the past decade.

The Prebischian analysis of trade — conducted to investigate just how LDC's should proceed in order to recover from increasingly deteriorating terms of trade by adopting commercial and industrial policies which contribute to technological learning by the domestic industry (that which was condensed under the label of ISI) — helps me construct an analysis of American and Japanese automobile industries by focusing not only on the US/Japan trade in automobiles but also on how technological issues are relevant to the relationship: if a reciprocal trade relationship exists, does one nation maintain control of relevant technological and manufacturing skills? To this concern with technology which helps me define and operationalize the follower/leader relationship, I add some recent theoretical developments in the literature on the economics of technology — so often assumed away by agency theory, and the theory of the firm, both constructs of neoclassical economics. Much of the argument developed by Michael Best (1990), Martin Kenney and Richard Florida (1993) and William E. Cole (1991) having to do with the continuous improvement firm (as the model adopted by our Japanese competitors) will be used here as evidence and theoretical base for the hypothesis that quality and competitiveness — the two most important concepts underlying my model — have shown the current follower/leader status of American auto makers and their Japanese counterparts. Directly from this new conceptualization of technology in economics, and combined with the insights that the dependency related literature has given on the effects of a dependent relationship on domestic national institutions (their decline, the change in local culture, etc.), I hope to derive a new, richer, more empirical, and more refined version of dependency theory.

CENTER-PERIPHERY AND CENTER-CENTER DEPENDENCY: AN OVERVIEW

Dependency theory as it derived from the early structuralist analysis of the ECLA was basically concerned with broad patterns of relationships involving the more developed capitalist countries (or center) and the less developed countries (or the periphery). Studies of these relationships attempted to identify the existence of asymmetries between these two sets of actors. On the more directly political side of these relationships issues such as control of access to international loans (later to be turned into attractive subsidies and infrastructure investment), and control of domestic politics by the co-optation of local elites (whose main goal was to provide protection to existing or future foreign investment by multinational corporations) were widely referred to as evidence of the dependency phenomenon. As far as economic issues were concerned, the existence of a wide technological gap between center and periphery was identified leading to the emergence of a vast literature which concentrated on the behavior of MNC's and particularly on their management and control of their technological dynamism.

The most salient policy implication of this theory called for the adoption of import substitution industrialization (ISI) schemes which — by creating favorable domestic conditions for foreign investment (such as the installation of MNC's) — should eventually lead to some technological 'learning by doing" by the emerging domestic industry. The political pessimism existing in Latin America deriving from the wave of dictatorial regimes which started on the mid 1960's, and also the fact that the technology acquired was perceived as a mere learning of routinized tasks caused the more radical dependency theorists at the time, and especially Dos Santos, to indicate that the ISI hopes of technological self-sufficiency were misplaced. For him (and for others) dependency had to go beyond ECLA's narrower economical analysis of market

constrictions and therefore had to arise as an instrument of ideological opposition to the political establishment of Latin America. Although the reaction of the Latin America *intelligentsia* was justified as far as it retained the noble democratic cause of opposition to authoritarian rule, this ideological focus did much harm to the initial analytical strength of dependency studies. It is to this earlier analytic and systematic version of dependency that I wish to return in this present center-center dependency study.

Although not concerned with the same two sets of actors, the type of dependency relationship which I am attempting to illustrate in this case study still keeps some of the main tenets of structural dependency. By looking at industrial relationships, by looking at the importance of technological issues, and further, by trying to identify the existence of a more empirically defined version of dependent dynamism I am in keeping with the dependency literature broadly defined. Moreover, not only the economic tone of the dependency concern is kept here. Attention will be paid to the political implications that the existence of a set of dependency-characterizing conditions may generate in the follower or dynamically dependent pole of the relationship.

The following outline sums up the characteristics of what I expect will help me identify and explain the current center-center dependency of the U.S. automobile industry on the Japanese automobile industry. It also contains indications of the kinds of evidence I shall be looking for in order to develop, clarify, and test (whenever possible) the existence of patterns of dependent dynamism.

In the past decade an identifiable Japanese leadership on the automobile industry has been reflected by their continuous increase in the American market share. This leadership position appears to take a pattern symptomatic of dependency because of the simultaneous and combined impact of the following phenomena:

1. The ability of the Japanese competitors to continuously increase consumer value — a measure of net value —which largely derives from their ability to increase product quality without increasing costs. This superiority is largely a function of the Japanese ability to systematically turn out products with superior design and quality; these automobiles resulting from a dynamically superior production process widely referred to as the "continuous improving firm." Evidence supporting the contention that Japanese competitors maintain their position by continuously increasing consumer value — and that this is in turn a function of their superior production system — will be provided by the existing literature on industrial production technology[19]. This literature has systematically identified the emergence of a Japanese competitive paradigm as superior to the declining mass production system. The effects of this improved manufacturing process on the development of new products will also be examined with the help of an automobile demand-estimating model that systematically focuses on arguments about the importance of quality;

2. It will be shown that the continuous improvement firm has become a successful paradigmatic alternative model to the mass production system — characteristic of the American industry— and, more important, is largely a function of socio-culturally rooted influences. This will be done by analyzing some of the more cultural as well as institutionally specific elements — such as close but nonetheless hierarchical labor/management relations, encouragment of active participation of all levels of the workforce in product development, the mutual as well as self perception of labor and management as assets rather than agents and the ensuing view that workers and management should invest time to acquire firm-specific information (self-investment), etc. — which are assumed by the general operating structure of the "continuous process improvement" system;

3. Because the system of production is culturally determined or at least culturally originated, its adaptability in another society becomes largely an issue of cultural compatibility which a) takes us outside the domain of a merely technical discussion of production technologies; b) leads us to question the likelihood of success of American auto industry's attempts to emulate and or purchase — whenever possible — portions of these engineering and managerial methods; and c) brings the whole question closer to the argument on peripheral countries as technologically dependent (i.e., lagging behind technologically) on core countries. Japanese firms have developed systems that internalize continuous improvement, thereby allowing for increases in productivity and quality without necessarily having to make specific investment outlays. This production system, by enabling continuous quality improvement without

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[19]Perhaps the best non-exclusively technical account of this production technology is given by Martin Kenney and Richard Florida in *Beyond Mass Production: The Japanese System and Its Transfer to the U.S.*.

implying increasing production costs, has in turn allowed them to increase consumer value and gain more and more market share. If this system — one which has emerged as a consequence of managed improvements upon what seem to be unintentional ("natural") socio-cultural-institutional developments — has brought about a competitive lag in their favor, I may then identify the current consumption of this production system in the U.S. — and more specifically in the American Auto industry — as a"catching up" effort which is somewhat similar to what dependency theory has historically argued in a different context. Thus, at this stage evidence will largely derive from a detailed study of the consumption of this system of production by the American auto industry and will focus on an evaluation of how successful or unsuccessful this transfer has been in terms of its assimilation and capability of diminishing the competitive lag. This will be done by writing a survey of GM and Ford plants which have attempted to implement this production system, by analyzing the degree to which there has been a transfer, and by investigating whether and how that transfer has attenuated the competitive lag between the Japanese and the American auto industry.

4. Thus if the whole pattern or parts of it are confirmed, it will certainly help me explain the success and prominent leadership of the Japanese manufacturing paradigm and the American position as a dynamically dependent follower in ways which parallel the dependency appraisal of the LDC's position.

If indeed I am able to verify this pattern of dependency on the trade/industrial relationship (i.e., on what I consider to be the economically relevant pole of the relationship) between the U.S. and Japan on this specific industry, I should observe the joint occurrence of some politically related phenomena alluded to by dependency theory:

1. The economic success of this improved manufacturing process on the development and marketing of new products will lead to an increase in government involvement in attracting foreign-based vehicle production in two ways: a) as a short term strategy to creating jobs — some of which may have been lost by the closure of inefficient nationally-based plants — and b) as an attempt to promote increased regional industrial development, though one dependent on the competitive requirements set by the industry leaders. This luring of foreign-owned manufacturing facilities is likely to be achieved by the use of a formula well known to ISI implementing countries in the past: the promise of low-cost, non-union labor and the granting of substantial economic incentives. More than a reflection of just how desperate states are for jobs, I anticipate that this practice — which historically had been supposed to be transitional — is likely

to become an entrenched and increasingly important part of regional economic development;

2. Because of the required profound changes in the structure of production called for by the dynamic dominance of the continuous improvement paradigm, the national producers, or followers, will intensify the use of the political process in an effort to protect their challenged position. Reflecting their deteriorating competitive position *vis-a-vis* the "transplants" (i.e. domestic Japanese manufacturers), the Big Three's demands are likely to evoke some sort of preferential treatment in domestic and regional (CAFTA, NAFTA) spheres, to the obvious detriment of the foreign, competitive dynamic manufacturers. This new situation appears to be somewhat similar to that occurring in ISI implementing countries, where national industry — itself a competitive follower — resisted trade liberalization and was clearly able to overextend industry protection earlier set — and planned to be removed — by ISI planning guidelines.

METHODOLOGY

Using the supporting literature (surveyed earlier) and the schematic dependency verifying guidelines contained in the previous section, my study of center-center dependency will attempt to investigate whether and how dependent dynamism operates in the context of a particular industry. In broad terms, if in the following analysis I am able to identify and explain a relationship between the United States and Japan such that one of them exercises dominance over the other, and if furthermore I am able to define that dominance as a relationship such that the growth in the industry of one implies the decline of the other, or the growth in the industry is such that the weaker state's industry even by growing cannot get a larger sector of the market, that is if all these conditions are verified, I will have made a solid argument for applying the idea of dependency in a qualitatively different context. However, such a task can only be accomplished if I am able to formally follow the dependency-symptomatic path identified and discussed above.

Having this specific map of action in mind, two methodological approaches will be used in this study. The first will consist of developing an econometric model to establish that a pattern of dominance exists with regard to the production and sale of automobiles in the relationship between Japan and America. In constructing this model I will concentrate on the qualitative differences between the industries in the two sides of the relationship. As the term "qualitative difference" suggests, and as far as methodology is concerned, part of the focus will be on the quality of what is produced. Although the pooled cross-section/time series econometric model to be developed will constitute only a basic exercise in putting to test the validity of my argument and analysis of the dependent dynamism relationship in terms of quality, it should allow me to test some important hypotheses. Assuming that dependent dynamism depicts the current stage of American and Japanese trade and competition in the automobile industry, the proposed econometric model will test the following hypotheses:

> H_1: More Japanese cars will be sold in the American market at an increasing rate because they are superior in quality;
>
> H_2: The better the performance of the American economy the more likely in percentage terms Japanese cars will sell in America, as arguments over quality — *qua* analytic criterion — gain precedence in the decision to buy an automobile when economic conditions improve.

Here a reminder is pertinent: although the corroboration of these hypotheses as a possible outcome of the testing of the proposed model will help me explain some of the reasons why the Japanese have been able to conquer larger and larger shares of the U.S. domestic market - thereby allowing me to advance theoretical arguments in more solid empirical ground - it does not *per se* imply that a pattern of dependency has been identified. Although modeling will greatly contribute toward that task, the characterization of dependency or dependent dynamism will only come as part of the

development of the theoretical framework which constitutes the second approach used in this dissertation.

In the model, the automobile industry will be represented on the American side by GM and Ford (and their subdivisions), while their Japanese counterparts will be Honda and Toyota. Only car models made by these four companies and which have been sold throughout the period between 1980 and 1993 (14 years) will be included. Yearly sales figures and prices will be obtained from Motor Vehicle Manufacturers Association (MVMA) Motor Vehicle Facts & Figures, MVMA Automotive News Data Book which provide such figures listed by model and make.

In order to tap into the concept of quality, two measures are used, namely a car's repair index - provided by Consumer Reports on a scale from 1 to 5 (ranging from "much worse than average" to "much better than average") - and a car's retention of value after three years of its original purchase - a figure compiled from Edmund's Used Car Buying Guide by subtracting the current price of a three-year old model from its "original list price." The intuitive or *a priori* expectation here is that a high number in a scale of 1 to 5 and/or a high value retention ratio would both be a good predictor of a specific model's sales performance by implying the higher or better quality embodied in the product.

In order to more directly address my second hypothesis — namely that a better performance of the American economy will help Japanese car sales in America as quality becomes a more relevant decision criterion — I will observe the relationship between 'disposable income'[20](in billions of constant 1987 dollars) and sales performance of both U.S. and Japanese cars. Because inflation in and of itself may at times cause apparent increases in nominal disposable income — which in fact may not

[20]Meaning basically income after tax and social security deductions.

necessarily mean that consumers as a whole have more buying power than before in absolute terms — constant 1987 dollars were used so that I have a more reliable and consistent measure of what actually takes place in the economy.

Once these first two preliminary hypotheses are put to test, and upon their corroboration, the second part of the argument in methodological terms will be made by investigating some of the possible underlying causal/structural factors involved in the follower/leader relationship. At this juncture, the introduction of the notion of the continuous improvement firm [21] originating in the recent contributions of a new literature which focuses on the economics of technology (Kenney & Florida, 1993; Cole, 1991) will lead me to a more precise and operationalizable definition of dependent dynamism as it applies to specific industrial sectors (instead of countries or whole sets of them as implied in the definition of Dos Santos quoted above):

> [T]he firms that have developed systems that internalize continuous improvement are often able to make advances in productivity and quality without having to make specific investment outlays. For them, the improvement is a normal outcome of the day-to-day method of operation. It is the follower firm, on the other hand, that *always* faces an investment cost in its efforts to internalize a system advance that was produced in evolutionary fashion by leader firms. This dilemma facing the follower firm might properly be termed a competitive lag (Cole, 1991: 24-25).

Although neither term — dependent dynamism within a specific industrial sector and the continuous improvement firm — was part of the many distinct conceptualizations of what originally characterized a dependency relationship, the originality of this form of dependency compels us to accept the introduction of some new terms that may enhance the ability to detect the relationships with which I am concerned. But even in these new terms one can trace elements of the most typical classical dependency. It has been observed that the techniques that the "follower"

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[21]See "Competitive Economies and the Economics of Competition," 1991.

firms are attempting to emulate are essentially "systemic elements that were developed within the institutional framework of the 'leader' firms" (Cole, 1991: 26). First, the fact that emulation (successful or not) of Japanese manufacturing and organizational technologies (the leaders) by the U.S. auto makers is taking place — a situation where one side (i.e., the follower) of the relationship by recognizing its productive inferiority attempts to "catch up" by imitation — is in and of itself revealing of at least a competitive gap if not evidence of fundamental structural differences. Second and more appealing, because the "soft" technologies[22] adopted by the continuous improvement firm are observed to derive from the institutions and attitudes of the society that contains the "leader" firms[23], am I not then simultaneously making the standard socio-cultural dependency argument that the social relationships of production explain the particular success that a society or a nation may or may not have with the development of its capitalist structure?

The primary method of research used in this second part of the study will be a qualitative political-economic and comparative case-study. Such a seemingly convoluted methodology needs further elaboration, to which I will turn briefly, before getting into the focal point of the project. Lijphart (1971), in an article examining the comparative approach in political science, formulates a typology of different methods available to comparativists. They are the experimental, statistical, comparative, and case study methods. His classification, still rooted in the empiricist tradition, offers a

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[22]The concept of soft technologies (such as organizational systems) pertaining to administrative and managerial systems has been developed by Cole and Sanders (1983) and Cole and Mogab (1987),

[23]The argument that technology as a whole is intimately associated with the type of social system within which it emerges is very well made by Goonatalake in *The Aborted Discovery: Science and Creativity in the Third World* (1984). His illustration that the assembly-line production system was produced by and in the context of the norms of a society which was divided between those who were the decision makers (or its managers), and its decision takers (labor in general) is very revealing of the linkages between the structure of organizations and the societies in which they come to exist.

starting point on the basis of which I can develop and explain the methodology utilized in this part of the investigation. Obviously, the subject matter and the kinds of data and other types of evidence available in the inquiry greatly influence the basic methodological orientation of this section of my study.

By qualitative, I am referring to an approach that could be contrasted with Lijphart's experimental and statistical methods (Lijphart, 1971: 683-684). It is my view that a study arguing the existence of relationship of dependency in a specific setting and within a specific industrial sector cannot be completely subsumed under the attempt to apply quantitative methods or modeling because what I am trying to achieve in this part of the investigation is exactly a new theoretical development. Also, because the logical structure of the scientific method implies that the empirical import of theories can only be assessed after theories — *qua* statements of logically and substantively connected generalizations and hypotheses — are themselves developed, it seems imperative that this part of the inquiry be limited to a qualitative endeavor.

Because the overall intention is to develop a new theoretical frontier — that is, examining center-center dependency — in a single case — the relationship between the American and the Japanese auto industry — it becomes imperative to also clarify what I mean by the case study method. In Lijphart's classificatory scheme this method is the last one presented; revealing perhaps the fact that social scientists have always been skeptical of the case study method as an approach for establishing general empirical relationships. The very nature of this method, scholars argue, provides us with no chance for generalization across cases, for the method operates on the basis of a sample of one. Thus Lijphart comments that the power of such method is very limited:

> The scientific status of the case study method is somehow ambiguous, however, because science is a generalizing activity. A single case can constitute neither the basis for a valid generalization nor the ground for disproving an established generalization (Lijphart, 1971: 691).

But Lijphart cannot fully dismiss the method because theoretical advances — exactly what I am arguing here — have indeed started with a case study. Tilly, himself a conscious admirer and practitioner of quantitative social history, reveals his distaste for the conventional comparative historical method on many occasions. He seems to express doubts about the usefulness of a large number of cases in grasping historical particularity, or constructing a basis for theoretical innovation. In a criticism which could be easily extended to much of the dependency tradition (and to which I add the brackets to make the following quotation more relevant to my case), Tilly indicates that:

> On the whole, comparative studies of the big structures [center/periphery] and large processes [dependency] yield more intellectual return when investigators examine relatively small numbers of instances [within center dependency in a specific industrial sector]. That is not because of the intrinsically greater value of small numbers, but because larger numbers give an illusory sense of security (Tilly, 1984: 77).

"It is clear," Bradshaw and Wallace argue, "that single case studies are deemed most valuable by scholars concerned with historical processes, case uniqueness, social complexity, and careful interpretation" (1991: 165). Moreover, every social scientific investigation is in one way or another comparative in nature.[24] That is to say whether dealing with one or a few cases, comparison is an integral part of the process.[25]

Lijphart provides an inventory of six types of case studies. These are: (1) **theoretical case studies**; (2) **interpretative case studies**, (3) **hypothesis-generating case studies**, (4) **theory-confirming case studies**, (5) **theory-infirming case studies**,

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[24]Note that both Gabriel Almond and Charles C. Ragin who come from different theoretical and methodological traditions agree on such similar broad conceptualization of the comparative method. I myself - coming from theoretical and methodological traditions distinct from both of these scholars - share their views on this point.

[25]See, for instance, the intrinsic comparative nature of the argument I made on the continuous improvement firm, and the follower/leader relationship.

and (6) **deviant case studies** (1991: 691). It seems quite clear that hypothesis-generating and deviant case studies are most helpful to the conventional social scientific enterprise, for they are methods of either establishing or refuting generalizations.

My study of dependency will fall into a combination of three or possibly four of these categories; after all in the real world no single case fits completely in one category. This dissertation is an attempt to theoretically innovate on a pre-existing body of literature by arguing that if structural dependency can be identified as a number of asymmetric relations going in one direction, a new form of dependency can be identified by isolating one specific asymmetric relationship occurring in one industry with macroeconomic dimensions (a notion which later can also be used to make an empirically stronger case for center/periphery dependency). And secondly, because of its innovative character, it is a hypothesis-generating case study. Thirdly, because some socio-institutional as well as some trade-related arguments - both having been similarly made by traditional dependency - are going to be brought into the analysis, this also seems to be identifiable as a theory-confirming case study. I am, therefore, hypothesizing that it is plausible to demonstrate a reasonable degree of "goodness of fit" between my theory and the case of my choice. And, finally, it is my overriding concern to raise some of the problems associated with this particular theoretical scheme. Thus, it is arguably a theory-infirming case study as well.

The case study method, by its very logic, sheds light on the unknowns of a case through in-depth analysis of available data and, quite often, contradictory interpretations. As Bradshaw and Wallace argue:

> Case studies are useful when (1) researchers do not have sufficient knowledge to place it in a theoretical perspective or a case does not fit any extant theory (a more frequent occurrence than often admitted); (2) a case partially supports (or deviates from) existing theories; (3) a case represents a special (perhaps unique) set of circumstances or phenomena that warrant intensive study, even if theoretical discovery is not their primary objective (1991: 154-155).

I will try to examine the case in its entirety and look at long-term historical, political, and economic processes in the hope of arriving at a systematic explanation of the current stage of development of the American and the Japanese auto industry in a relational way. This will require the development of a historical background chapter which by capturing the relevant processes that longitudinally have taken place in that relationship, may afford a more solid ground for the intended theoretical generalizations.

In longitudinally tracing the historical trajectory of this relationship, *the passing of time will help us to compare different segments or stages of this historical process*. The comparative logic of this effort is specially relevant in the fact that as we move across time, the dynamics of variables at work are expected to present us with various configurations of historical entities which will be continuously compared with each other on their respective time frames.[26] In performing such historical-stages comparisons it will be necessary to find the kinds of evidence that will point in the direction of an evolutionary pattern of dependence becoming established. If, for instance, I observe that not only hard technology but also engineering and managerial methods seem to flow systematically from one pole to the other, and if that flow is continuously reproduced and becomes the competitive paradigm to be emulated by the follower pole with the passing of time — although development takes place in the follower side as a function of that emulation — then I may say that kind of evidence characterizes dependent dynamism. Moreover, if cultural and other institutional elements are involved — and become even essential — to the "successful" adaptive mutation to the new competitive paradigm, an even broader set of phenomena will be

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[26]Moreover, since I will be operating across national units, the driving logic is even more comparative in nature.

observed to be taking place which greatly resembles what has been traditionally argued as dependency pure and simple.[27]

Finally, the data for this part of the investigation will come from two types of sources, namely field investigation or interviews and library research. Field investigation will comprise visits to both American and Japanese automobile plants in America. The basic focus of such visits and interviews will be to identify the degree to which production technologies of one set of actors have been adopted by the other. Of specific concern for me here will be the attempt to identify a pattern of technological adaptation (emulation) occurring within one set of actors with respect to others in areas as diverse as design, labor relations, and hard and soft technologies as well.

The second strategy of inquiry used at this stage will be to research documentary sources from the specialized literature in the auto industry as well as to search for historic accounts of the US/Japan trade relationship in that industrial sector. This will include the use of newspaper reporting, congressional hearings, changes made to federal and state legislation (in order to attract, accommodate and attempt to control Japanese competitors) and reports on policy initiatives (such as the Structural Impediments Initiative). The focus here will be centered on an attempt to identify the changes in that relationship as the Japanese have changed their condition from follower — having to import and/or copy technology and designs from American and European auto manufacturers — to their present industrially and economically dynamic leading position. Attention to what possible causal factors may be attributed to that change within the industry — and its repercussions on the trade relationship between the two countries — will help me clarify whether the dependency argument I am making is

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[27]Although the automobile industry is the more immediate focus, reference to what may be perceived as overarching parallel events taking place in other but related industrial sectors (e.g.: the steel, the consumer electronics, and other technologically related industries) will also be made.

justified or not. In doing this I will examine how Japanese practices may have had an impact on the U.S. domestic market and society on the following issues: changes in labor relations, relations between auto parts suppliers and manufacturers, and the correlation between the imposition of trade barriers (e.g.: quotas, tariffs, etc.), Japanese investment and state-level changes in fiscal incentives.

CHAPTER OUTLINE

This chapter examined the nature and scope of the study, indicating also the theoretical framework to be adopted. It legitimized center-center dependency — and its focus on specific industry relations — as a justifiable research question within the labeling of dependency studies. In recognition of and in order to compensate for the dependency orientation's lack of a clear and systematic conceptualization of the question of technology, and also in order to describe and highlight the failure of the competitive model of economics (derived from neoclassical economics' theory of the firm and agency theory) to explain the evolution and success of the new Japanese competitive paradigm, I suplemented the original dependency theoretical framework with some relevant recent contributions of the literature on the economics of technology as well as the earlier insights on technology offered by institutionalist school in economic thought. From the political science standpoint of this investigation, a clear methodological discussion of what will constitute evidence of the type of relationship I am trying to explain as well as how I am going to go about actually getting that evidence was provided.

The core of the theoretical discussion of the dissertation will be contained in chapter 2. In this chapter there will be a thorough assessment of the relevance of dependence theory for the study of industrial/technological asymmetries in settings (within center instead of center/periphery) containing qualitatively different actors.

Considerations about the potential theoretical compromises involved in undertaking such different kind of analysis — while staying within the bounds of the dependency orientation — will be weighed against the theoretical and methodological gains that such expansion of the original dependency argument involves. Lastly and in connection with this, there will be an appraisal of the fundamental but supplementary role of the literature on the economics of technology — both institutional and non-institutional — which I added to my analysis. Thorstein Veblen's statement that nations could "borrow" technology, managerial styles, and machinery "only to the degree that the borrowing nation was able culturally to assimilate the advances of the industrial arts" (1934: 252) is a crucial example. Although it reveals one of the most conspicuous deficiencies of the dependency argument, namely that social and cultural changes regarding the use and understanding of technology must be made if ISI policies were to work, it can indeed be used to reinforce the standard dependency argument that "the relation of interdependence between two or more countries assumes the form of dependence when some countries (the dominant ones) can expand and can be self-sustaining, while other countries (the dependent ones) can do this only as a reflection of that expansion," or in other words, dependent dynamism.

Chapter 3 is dedicated to the construction and testing of the econometric model referred to above. A clear explanation of how the model is constructed — its basic assumptions, its simplifications, and its variables, especially the concepts they are attempting to measure, will be linked to a discussion of the significance — statistical and theoretical — of these variables to the kind of phenomena (dependent dynamism) I am trying to explain. One appendix is added to this chapter. It consists of a variable code book, a systematic listing of each of the variables included in the model with a list of every car model used as a unit of analysis and a clear statement of the data sources used.

Chapter 4 gives a historical background of the whole relationship between the United States and Japan in the more relevant postwar period. It begins with the period immediately following World War II which marked the triumph of "Yankee industrial genius" and the rebuilding efforts of European and Japanese industry. As the Japanese "miracle" unfolds and the short lived American dominance begins to erode — especially first in the steel industry — I expect explanations for ostensibly inferior U.S. production methods to change in nature. That is, they will move from "cheap labor," government subsidies, and "dumping" to more closely focus on technology and methods used to manage and motivate the labor force; all of which simultaneously reveal the Japanese ascendance as "leader" in the automobile industry. A crucial parallel and associated development is the Japanese strategy to move into areas of higher value-added production especially in the past two decades. This is of special importance because it is not just the quantity of the trade deficit that today causes diplomatic frictions and misunderstandings between the two trading partners but the very composition of that deficit as well.

Trade talks — often unanalytically publicized by the press — and other kinds of diplomatic negotiations and policy initiatives reveal the imminently political character of the trade disputes between the U.S. and Japan. In Chapter 5 I shall cover the potential political and strategic implications that the perception of the current state of the relationship between the two trading partners — in the automobile industry as well as in the all the more sensitive "high-tech" areas — may have if indeed the U.S. has assumed the position typically identified as the follower. And in this respect, what are the consequences of such perceptions for the future of not only trade but overall relations? If Japan needs U.S. markets just as the United States depends on Japanese capital to finance both national debt and industrial investment, that is, if at present they are so essential to each other, are we more justified in expecting further deterioration in

their relations or rather in expecting the emergence of some cooperative "third way" which may preserve the unequaled postwar experience of political and economic stability we have witnessed in East-West relations?

In the same chapter I attempt to describe and evaluate the economic policy of the Clinton Administration with respect to Japan during the period January 1993 to April 1994. This will occur as part of an effort to indicate whether the trade aggressiveness apparently adopted by the Clinton administration represents a departure from the succession of merely incrementalistic trade/industrial policies of the past which proved to be unsuccessful in reducing the huge trade deficit the U.S. has with Japan. The next question then will be to determine the extent to which this new resolve is part of an altogether new vision of the trade problem — a vision constructed in terms of the micro foundations of the kind suggested in the second chapter of this dissertation — and whether its conception of the problem, right or wrong, is likely to produce concrete results in favor of the American national interest however loosely defined.

Chapter 6 concludes this dissertation. A summarized version of all that has been found in support of the center/center dependency argument is provided in the context of a comparisson between the new dependency model developed in the second chapter and that earlier elaborated by the ECLAistas, or the ISI model. This assessment will also lead me back to the beginnings of the dependency school. The rationale is simple. If a pattern of dependent dynamism can be identified between the United States and Japan in the automobile sector, the next and imminently normative question to be asked is whether quotas, tariffs or other domestic industry protective

measures — elements that convey the very logic of ISI strategies — should be raised.[28] And this gets us back to the basic question about comparative advantage that inspired the now thirty-year long debate between the Prebischian and the Ricardian analysis of trade. Unfortunately this debate far transcends all theoretical considerations, taking the shape of a formidably important social question. And only the Prebischian contribution offers us a survival guide, imperfect but still operative. That is so because if in the end we conclude that new production methods are not appropriate to the United States resource base — the link between technology and the socio-cultural system in which it emerges is explored here — the neoclassical exponents of the Ricardian view will teach us that perhaps this country should no longer engage in that kind of productive activity, or as Cole concludes "economic theory teaches us an optimism whose "flip side" is fatalism: Free all relevant markets from artificial fetters and 'que sera, sera!' But whatever is will [always] be assumed to be for the best" (1991: 21). Although the circumstances and the actual qualitative nature of the players are quite different from those that encircled Latin America in the 1950's, perhaps we should at least ask ourselves a question that then very well might have been posed by Prebisch: can we afford to make such an assumption?

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[28]Observe that whether that occurs or not, there is still another component that introduces further complexity to this complicated equation: the installation of Japanese auto manufacturing plants in the United States which can be seen as a Japanese preemptive move.

2. THE CENTER-CENTER DEPENDENCY MODEL

This chapter addresses implications of the proposed center-center dependency focus for the theoretical framework and analysis of what has been traditionally known as the dependency school. Going beyond the merely descriptive review of the literature (undertaken in the previous chapter), it evaluates some basic premises of the original ECLA dependency contribution and the relation that these may or may not have with the question raised in this dissertation.

Although the many strands of dependency theory that later emerged went beyond the study of industrial, trade and technological relationships, focusing on these relationships permits an economical and yet meaningful approach to the similarities and discrepancies between the traditional version of dependency and the more generalizable interpretation of dependency or dependent dynamism presented here.[1] The key question becomes whether what I am saying about dependency — especially about its concepts as they pertain to industrial/technological issues— fits what I am doing with dependency theory. This analysis involves the following basic elements:

I. Discussing whether the dependency-related concepts I am using (e.g.: dependent dynamism, comparative advantage, etc.) are useful for an analysis of the phenomena of interest here (i.e. trade, industrial and technological relations between two developed capitalist countries in which one seems to be setting the pace of competition); and,

II. examining whether these concepts can be used without producing a set of ideological assumptions on the part of the reader; and, in relation to that,

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[1]As stated in the first chapter, I believe that by focusing my analysis on the notion of asymmetric relations — occurring in the industrial and trade relations between two specific industries of two given countries and formalized here in my interpretative definition of dependent dynamism — I am opening the possibility for a more objective, concrete, and thus more generalizable dependency study.

III. examining whether one can separate the structure of dependency theory from its socio-political context and maintain that if several asymmetric relations are found to occur systematically in one direction — whether we are talking about Latin American countries and the center or the declining hegemonic power of the center and another rising power within the center — then dependency has been demonstrated regardless of the context.[2]

Much of the above discussion concerns what I designate here as the internal (or within dependency) boundary considerations of this work. The reflection on these issues has to do with whether focusing on center-center dependency is a further development of the possibilities of dependency analysis or a distortion of some of these original concepts. Because the content of the following sections the chapter deals with dependency theory's concepts and methodology, they can be characterized as a discussion of internal boundary issues.

INTERNAL BOUNDARY CONSIDERATIONS

What follows is a presentation of the pattern of center-periphery dependency as articulated by the early ECLAistas who first conceived of an analytical dichotomy between the center and the periphery. In elaborating their position, I shall concentrate on the trade, industrial and technological differences between these two poles as they contributed to the formation of a pattern of dependency. Ideally, from this exposition I shall extract the elements which, in a different logical arrangement, combine to form the proposed center-center dependency analysis. This analysis will evolve out of my presentation of center-periphery dependency, an analysis, which accounting for the qualitative differences in the actors and in the new kind of dependency involved, will

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[2]Assuming, to be consistent, in the case of traditional (center-periphery) dependency that a single test (i.e. dependency identified in a single industry) cannot disconfirm the existence of a whole pattern of dependency.

be essential to a discussion of the merits of this new approach contained in a latter section of the chapter.

The Theoretical Roots of the Center-Periphery Paradigm:

According to the center-periphery concept, the world economy comprises two poles, the center and the periphery, whose production structures are markedly distinct. Production structures in the periphery are seen as "heterogeneous," in the sense that sectors characterized by backward production techniques and low productivity (e.g. subsistence agriculture) coexist with sectors that use modern techniques thereby having high productivity levels. The structures of production in the periphery are also conceived as "specialized," both in the sense that exports are limited to a few primary products and in the sense that there is little horizontal diversification, vertical integration or inter-sectoral complementarity of local production.[3] Further, this specialization aspect of peripheral production structures also seems to reflect the considerable extent to which the growth of local demand — particularly for manufactures — is most often met with imports.

Production structures in the center, by contrast, are seen as essentially "homogenous," in the sense that modern production techniques are used virtually throughout the economy of those countries. These production structures are also seen as "diversified" because productive activities cover a relatively broad range of goods — consumer, intermediate, and capital goods.

The importance of this classificatory scheme for the ECLA dependency analysis was that it allowed them to link these differences in production structures to different roles which were then being played by each pole in the "traditional" international

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[3]See Rodriguez (1977).

division of labor. These different roles or functions, according to ECLA scholars, are best reflected in the pattern of international trade in which raw materials are traded for manufactured products. The periphery or *the followers*, which exported primary products and imported manufactures, *comprised countries where the penetration of modern capitalist production techniques lagged behind* not only because they had a late start but, more fundamentally, *because technical progress "usually only penetrated where it was needed to produce foodstuffs and raw materials [and less technologically intense/lower value-added manufactures] at low[er] cost to the great industrial centers"* (ECLA, 1951:3) [emphasis and comments added].[4]

So far I have only discussed the characteristics of production structures — heterogenity and specialization of (primary) production — existing in the periphery during the period of outward-oriented growth. Nonetheless, with the spontaneous or market-driven shift to inward-oriented growth and ISI, heterogeneity and specialization hardly disappear at all. Rather, according to the ECLA scholars, these production structures tend to reproduce themselves, appearing, however, in new forms. In fact, two specific tendencies that have often characterized ISI can be seen as resulting from heterogeneity and specialization: a) recurring *external deficits*, and b) *deteriorating terms of trade* with the center.

External Deficits

The major cause of recurring external deficits seems to be a disparity between income-elasticities of demand in each of the poles of the center-periphery trade

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[4]Although this is a purely theoretical and not an applied discussion, it is important to note at this stage that the current pattern of Japanese manufacturing within the U.S., especially in the automobile industry, seems to be developing in a similar form to that which was previously conceived by the ECLA as the pattern adopted by the periphery. Hence the importance of the emphasized text as well as the comments made along with this quotation.

relation.[5] Because the elasticity of demand for manufactured imports in the periphery tends to be greater than unity while the income-elasticity of demand in the center for primary imports from the periphery tends to be lower, "natural" or market forces are necessarily working against LDC's abilities to avoid generating external deficits. Moreover, this problem tends to be further amplified by the technical advances generated in the center which lead to the substitution of imported raw materials by synthetic inputs.

Also, as far as financial matters are concerned, foreign capital is seen as useful, both because it is a source of foreign exchange, and as a complement to the domestic pool of savings. But even this otherwise apparently positive contribution may turn out to be only limited and transitory, as growing service obligations and payments for royalties end up absorbing an excessive proportion of export earnings.

Deteriorating Terms of Trade

The other secular tendency which further emphasizes heterogeneity and specialization of the production structures of LDC's is the deteriorating nature of the terms of trade with the center. Its main cause seems to be the previously discussed disparity between the income-elasticities of import demands between center and

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[5]Generally speaking in microeconomics the term "elasticity" is used as a measure of responsiveness of either demand or supply to given "small" changes in an economic variable such as income, price, etc. For instance, when one says that agricultural products have income-inelastic demands, one is alluding to the fact that a small change in their price, upward or downward, will minimally affect the overall demand for goods of that kind.

periphery.[6] This trend, however, is further compounded by two parallel trade characteristics of peripheral countries: the limited number of primary products exported to the center; and the much greater degree of monopoly power[7] possessed by the firms and the trade unions within the center involved in industrial exports to the periphery relative to the almost non-existing bargaining leverage retained by suppliers of primary products in the periphery.

Consequently, induced by the recurring trade deficit problem, periodical currency devaluations are adopted only as a partial solution. This increases the domestic prices of both exports and imports in the periphery and thus stimulates local production both of primary exports — primary products are now cheaper in the international market — and of import-substituting manufactures — because equipment and other capital inputs, as well as consumer goods have now become dearer for the domestic buyer. These indirect incentives for import-substituting manufacturing or what Prebisch called "spontaneous" ISI should not, however, be confused with what he and other ECLAistas later proposed as a set of directives concerning industrial programming and import protection — i.e. what is commonly understood today by ISI.

Thus, the historically grounded dynamics of the center-periphery system as first presented by Prebisch and the ECLA in the early 1950's painted a rather pessimistic

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[6]This is an interesting evidence in point for the inapplicability of Say's Law of Markets to the LDC's and an example of how "free trade" as an ideal consideration has to be qualified. For if LDC's cannot supply as much as they may be willing to — their limitations being exogenously set by the logic of international trade — how can they be criticized in the name of sound economics for demanding more than they can supply?

[7]The notion of monopoly power is evoked here to allude to the fact that in world trade there is a much smaller number of industrial producers compared to that of primary commodities. Because of the relatively greater economic dynamism in industrial production, this situation contributes to what amounts to a favorable position in the bargaining table in trade talks for those countries typically involved in industrial production, hence the idea of monopoly power.

view of the past and present trends in the development of LDC's. If left unchecked, these trends would be very likely reflected in the future development of Latin American and other LDC's.

Industrial Planning and Import Protection:

In addition to rejecting the "natural" outward-oriented growth strategies based on the "traditional" international division of labor — which, in any case, they saw as having been superseded in the leading Latin American countries by the emergence of the "spontaneous" version of ISI — Prebisch and the ECLA also came to reject a continuation of spontaneous ISI. Neither a laissez-faire strategy based solely on comparative advantage nor one of spontaneous, purely market-led industrialization were viewed as providing a viable and reliable path to development. This was much more evident especially when one pointed to the fact that neither was likely to present the alternative to overcome the structural — and not conjunctural— problems of heterogeneity and specialization. Neither could help Latin American countries to break free from the secular tendencies toward deteriorating terms of international trade and external balance of trade deficits. In this sense, by calling for a deliberate, policy-supported industrialization as the necessary route to development of Latin American countries, the structuralists broke away radically from the major tenets of the neoclassical tradition.

Contrary to the Heckscher-Ohlin-Samuelson model[8] — which, in a Ricardian tone, emphasized the economic gains to all countries participating in trade — the

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[8]Although usually referred to as the Hecksher-Ohlin, or the H–O model, the Hecksher-Ohlin-Samuelson model, as an evolution of the classical theory of comparative advantage, was actually developed in piecemeal fashion by different contributions of these authors. See Hecksher (1919), Ohlin (1933), and Samuelson (1948, 1949).

center-periphery dichotomy pointed to a distribution of economic benefits from trade that was systematically biased against the periphery. Trade until then had been contributing to a long-term transfer of income from the periphery to the center, because of the secular trend towards deteriorating terms of trade explained above, such that the fruits of technical progress tended to concentrate in the industrial centers. This view, which became known as the "Prebischian thesis," led the ECLA to take a stance in favor of state intervention — through investment planning and import protection — as a necessary complement to private enterprise.

However, the criteria proposed for allocating investment between the primary-export sector and ISI sectors were quite neoclassical in inspiration. Using international relative prices as a measure of marginal social returns, investment should not go to the primary-export sector beyond the point where its marginal revenue product equaled the marginal social return on investment in production for the internal market. In less technical language this meant that no extra dollar should be invested on the primary-export sector if the benefits derived from production and commercialization of agricultural products were exceeded by the costs involved in their production — benefits and costs here calculated as socially aggregated measures.[9] Most important the same criterion, or the principle of equalizing marginal returns on investment, was also recommended for allocating new investments among branches in import-substituting industry.

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[9]See Rodriguez (1980).

The Relevance of the Economic Analysis of Dependency Theory for the study of industrial/technological asymmetries:

Although specifically concerned with countries in Latin America, the analysis of the secular tendencies which hindered sustained economic development does indeed give dependency the status of a sound theory of the political-economy of LDC's in general. Because these countries commonly share the characteristic of late industrialization, dependency theory's analysis of overall trade and industrial relations between center and periphery can also be said to be a theory of comparative industrial development and competition. And because dependency was initially concerned with industries in different sectors of the economies of LDC's, its first fundamental objective was to determine whether these industries — which until then had emerged as a mere reflection of market-driven outward-oriented growth or "spontaneous" ISI — were at a position of comparative disadvantage relative to core countries' industries.

What motivated this inter-industry comparative analysis was the idea that domestic production(whether nationally owned or not) should benefit from a system of selective protection by the use of tariffs, which — being kept at a level considered to be the minimum required to compensate for the disparity between marginal labor productivity levels in the center and the periphery — should be maintained until that competitive gap was overcome. If this is the case, one can also interpret the center-periphery paradigm — and the ensuing dependency analysis — in terms of a follower-leader dichotomy based on an analysis of the stages of development of given industrial sectors belonging to the two poles of the dichotomy.[10]

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[10]As I noted in the first chapter, it is to this selective, but nonetheless faithful interpretation of dependency that I wish to return in order to construct the basis of a center-center dependency analysis. The subsequent focus on political, social and other more ideologically charged issues (that is more macro-oriented phenomena) which the literature on dependency was to take later is usually what the

This characterizes the much ignored focus on "micro" level phenomena that the literature on economic dependency had in its earlier stages. Going back to a micro level of analysis — rather than returning to the more holistic methodologies later developed under the label of dependency — is how I link the methodological claims of a within center dependency analysis to the label of dependency.

But reference to this earlier methodological approach leads me to ask whether the tools used for such an analysis were suitable. This discussion assumes crucial importance because knowing whether these tools helped the dependency analysis to determine the dependent dynamic status of LDC's —relative to core nations — may suggest whether I can apply some of its strictly analytical constructs to a new environment, namely my evaluation of putative center-center dependency patterns. This methodological borrowing should not come without a critical review of some of the weaknesses of the early dependency's micro-level analysis. For while ECLA's new analytical categories such as the "center" and the "periphery," which affirmed that "a 'diversified' (heterogeneous) production base existed in Latin America — resting on the divergence between the advanced agromineral export sector and the local production base of native cultivators and artisan manufacturers"[11]— provided a useful starting point for an dynamic assessment of Latin American economic backwardness, why then was the ensuing analysis elaborated in terms of timeless constructs? If the ECLA center-periphery analysis were to retain the positive qualities associated with its accurate depiction of the underlying processes at work throughout the nineteenth and

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political science consumption of this literature refers to when it uses the label "dependency theory." This questionably puts in the same category of authors with such diverse if not opposed views as Prebisch, Cardoso, Dos Santos and Frank, and gives rise to a lot of confusion about the term "dependency."

[11]See Cypher (1990: 44).

twenty century economic history of Latin American countries — it was a very accurate descriptive analysis because of its dynamism — why did it have to choose static analysis to carry out its reform plan?

Implicit in this question is the suggestion that the break with the neoclassical tradition — represented by dependency's dispensing with the theory of comparative advantage and a few other elements of the neoclassical paradigm (e.g. the concept of the international division of labor that flowed from the Ricardian doctrine) — was not as profound as it should be. In fact, because dependency theory retained static analysis — where the absence of historical time is illustrated by the timelessness of the Prebisch-Singer terms of trade construct — it established its own limitations for assessing long term phenomena, such as those following the implementation of ISI which culminated in the evolution of Latin American economies into a semi-periphery status.

Therefore, while acknowledging the merits of ECLA's micro-level analysis in the successful articulation and policy recommendations designed to counter the center-periphery industrial gap , and, although I shall resort to the same strategy of engaging in more micro-based level of analysis, I shall not make use of the very same analytical tools to investigate and later make recommendations concerning the reversal of patterns of center-center dependency. Rather, I shall investigate alleged patterns of center-center dependency by looking at certain socially and institutionally dynamic factors which have characterized the different behavior and attitudes toward industrial innovation in the two poles of the relationship. More specifically, I shall compare and contrast how the different organizations of production in the U.S. and Japan have affected the quality of what is produced by their differential impact on the way technological innovations are introduced in these two countries. In doing so, I will attempt to link these different behaviors and attitudes toward technological innovation

to culturally-based explanations. Further, I intend to show that even the analysis and perception of this industrial gap by academe has, at least on the North American side, been similarly conditioned by having its roots in a society which has historically been associated with the mass production system.

Center-Center Dependency, the continuous improvement/mass production firm dichotomy and the study of industrial/technological/trade asymmetries:

The emergence of an alternative production paradigm (i.e. continuous improvement production) — a method of production not necessarily based on the main tenets of the mass production system — and the argument that it has assumed the role of leadership in industrial innovation, have profoundly changed the dynamics the U.S.and Japanese trade. The new paradigm has been responsible for the success achieved by Japanese car makers in the U.S.market in more ways than can be revealed by mere reference to aggregate market share figures.[12] In suggesting and analyzing a linkage between these developments in industrial performance — which are associated with the emergence of the continuous improvement firm — and the coming to existence of an asymmetric relation[13] between the U.S.and Japan (in favor of the latter), I am attempting to define the logic associated with this new mode of dependency. However, prior to identifying the main determinants of a new kind of dependency, I first need to fully characterize the structure behind this new mode of production — in a manner similar to what the ECLA did in its analysis of the structures of production of Latin American countries (presented earlier in the chapter) — and, secondly, I need to

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[12]See the following chapter.

[13]This topic will be given full treatment in the historical background account contained in the fourth chapter.

be able to identify a new causality structure which not only addresses the competitive gap between the two but also explains how a dependency pattern is established in the form of a follower/leader relationship.

Why is it important to speak of American and Japanese employers, workers and enterprises in order to make the center-center dependency argument? Because, simply put, producing goods and services requires knowledge. And to acquire knowledge requires learning. Given a society's endowment of physical resources, the more it learns, the more it creates and the greater its productive potential. Therefore, by looking at these different sets of nationals and how they have organized themselves in the activity of automobile manufacturing, the "dependent-dynamism" argument developed here assumes that the learning process is a "national" phenomenon. In my view, cognitive development has a wider social dimension that is distinctive to the particular nation in which learning — as well as creation of new ideas and things — occurs. And because the learning and creative processes came to differ significantly even across advanced capitalist nations of the world it is of fundamental importance to analyze the production structures of some of these countries if I am to identify an asymmetric relation such as the one under study. The differences in the structures of production are those that exist between the continuous improvement firm and the mass production firm. I shall indicate that because these differences have socio-cultural roots, the relationship — especially as far as the follower is concerned — assumes a certain rigidity. The follower cannot simply catch up on the different dimensions of the economy of net customer value by trying to graft the elements of the new manufacturing system onto the existing system, because more is at stake than simply "learning" new technologies or emulating methods of production. Thus, there is an aspect of vulnerability, if not impotence on the part of the follower — a situation

similar to that of ISI implementing countries in the past as they learned that industrialization involved not just transfer of technology, but a whole package.[14]

The continuous improvement firm and its Western alternative, the mass production system, can be contrasted as two basic Weberian ideal types.[15] The discussion will not focus solely on micro-economic analysis, but rather will examine causal linkages between micro-phenomena (within industry developments) and the socio-cultural context where they take place. Such an approach will clearly illustrate the analytical value of the dependency orientation (ECLA version) for the study of industrial and trade relations between nations — which I am attempting to extend to a different context in this dissertation.

First I need to show how the continuous improvement firm differs from the mass production firm. I will begin by examining the characteristics of the mass production firm.[16] As I examine both types I will explain how those differences are grounded in socio-cultural differences. In the final section, I shall suggest the implications of my analysis of the role of social institutions in the learning and creating processes for the changes in international economic leadership as well as for the ability of once-dominant nations, such as the USA in the mid-twentieth century, to respond to the challenge of new international competitors.

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[14]For a good sociological treatment of the many complexities involved in importing the whole or parts of a manufacturing system, part of what has been termed as "modernization" (in this case the mass production system), see Peter Berger's *The Homeless Mind: Modernization and Consciousness* (1973).

[15]See Cole (1992).

[16]Note that not all Japanese firms fulfill the characteristics of the continuous improvement firm nor are all American firms ideal examples of the mass production system. In fact some of the Japanese firms seem to be good examples of the mass production system. The identification of Japanese and American firms as ideal types of continuous improvement and mass production firms respectively should be interpreted merely as representations of "central tendencies." Cole et. al (1992) have all conceived these ideal types in a similar manner.

The Mass Production Firm:

In all areas of production, we now take for granted that manufactured goods are made from interchangeable parts. But 150 years ago people reacted with astonishment and disbelief to the suggestion that goods could be made this way. British gunsmiths claimed that it was impossible to make a piece of equipment that was as precise as a gun from interchangeable parts. A parliamentary commission sent to investigate the claim that guns were already being made this way in America described production there in the following terms:

> [T]he workman whose business is to 'assemble', or set up the arms, takes the different parts promiscuously from a row of boxes, and uses nothing but the turnscrew to put the musket together ... He receives four cents per musket, and has put together as many as 100 in a day ... The time is three and one half minutes (Rosenberg, 1969: 142-3).

Throughout their report, the commissioners enclosed the word "assemble" in between quotes because in their experience "assembly" referred to an entirely different process. It was a time-consuming task performed by skilled fitters whose most important tool was the file which was used to adjust the shape of the parts that needed to be assembled. Thus one can easily perceive why the key elements in mass production — precise, uniform systems measures, accurate special purpose machines that operate within precise tolerances, and a fine division of work into simple tasks that do not require specialized skills — all had the effect of making it possible for a design and process for manufacturing developed by one skilled person to be used all over the world.[17]

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[17]In fact it is perhaps safe to say that this inherent uniformity in the manufacturing process led the early ECLA scholars to extrapolate the mechanistic side of industrial activity *per se* into their unjustified conceptualization of the Latin American industrialist as a historical agent analogous to that found earlier in the advanced nations. However, history has shown that "when members of the elite shifted their capital from old-line agroexport pursuits to industry, they took with them the social mores of

For innovators like Samuel Colt — who first came up with a valuable design for his famous revolver and a precise method for manufacturing it in the United States — and Henry Ford — who added the principle of flow in manufacturing "to exploit the economies of time" (Best, 1990: 51 ff) — mass production created the same possibilities that the printing press created for an author. If someone came up with a better process for making an existing good, the good and the process could then be replicated many times over. The potential for inexpensive replication meant that early "knowledge workers" (in Peter Drucker's phrase) like Colt or Ford could earn far more from the ideas that they created than even the best craftsmen could.

But this revolution in production was soon matched by a revolution in managerial structures. Accompanying the change in industrial leadership from Great Britain to the United States was a dramatic transformation in the institutional structure of the leading capitalist economies. The central transformation was the rise of managerial structures that, through the planned coordination of specialized divisions of labor, could generate economies internal to the enterprise. Along with these developments came the separation of ownership from control, as the knowledge critical to running the enterprise increasingly came to reside in the heads of professional managers rather than legal owners. Apparently this piecemeal evolutionary process toward the division of the manufacturing process into more and more specific stages (i.e. Taylorism) had great repercussions on the way in which managerial tasks became

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their former culture" (Cypher, 1990: 50). This naive assumption present throughout ECLA's theory of ISI is conspicuous for its lack of institutional basis. It is in order to circumvent this deficiency in the dependency orientation that I will include some insights originating in the institutional tradition of Veblen (see latter part of the chapter).

more and more specifically oriented. Interpreting these developments in a more graphic manner Cole writes:

> Viewing the organizational structure as a pyramid, one sees that as the base of manufacturing operations grows in size, the peak of the structure tends to move upward proportionately, with the intervening distance being filled with increasing layers of management. Business firms were organized hierarchically and divided into functional specializations such as purchasing, marketing, logistics, manufacturing, accounting, finance, and design. This organizational specialization by functional units was thought to improve productivity no less than the division of the tasks among workers within each of those functions (Cole, 1992: 5).

When the original owner-entrepreneur exited from the enterprise, the way was opened for those career managers most capable of providing leadership in charting innovative investment strategies to rise to positions of strategic decision-making. Thus the separation of ownership from control provided career managers with greater incentives to commit themselves to the goals of the enterprise. The new learning that now was relevant for industrial innovation was increasingly science-based. In the most dynamic industries, in-house development of the capabilities of scientists and engineers became central to the success of enterprises (see Chandler, 1990, Ch. 5). Also by the 1920's the North American system of higher education had taken its present form, providing the pre-employment foundation for managerial development within the enterprise.

However, not all corporate employees benefited from such education and internal training. In the late nineteenth century the managerial drive to use mass production technologies to achieve high levels of throughput and low unit costs confronted the attempts by workers to exercise craft control over the workplace. The result was a growing conflict between management and labor. Soon the North American corporations were engaged in attempts to contain the organized labor movement in the early decades of the twentieth century (see Brody, 1980, Ch. 1). One of the several adaptive responses — other than efforts to maintain their

enterprises union-free — was the attempt to transform key craft workers, generally paid by the piece, into salaried members of managerial stature, thus securing their commitment to the goals of the enterprise (Montgomery, 1987). But the most innovative way was to do away with the need for craft labor by adopting skill-displacing technologies (i.e. more capital intensive technologies) (see Lazonick, 1989).

In so doing, North American corporations continued a trend that had begun in the first half of the nineteenth century. The national environment of the U.S.was one in which skilled labor was highly mobile between enterprises and industries. Because highly mobile skilled labor could command high wages and could not be compelled to deliver high levels of effort, the adoption of skill displacing technologies freed management from reliance on this expensive and unreliable 'variable' factor of production. In its place management now had a fixed factor over which it could exercise more control. Thus, it is interesting to note that as workers gained more collective power — with the advent of mass production unionism — American managers became all the more determined to take, and keep skills off the plant floor. Therefore, highly skilled workers who — by virtue of being directly engaged in the process of assembly — may have been the best positioned to experiment and ask questions were gradually and systematically removed from the plant floor and replaced by less skilled labor. Yet in recent decades this very strategy of investing in technologies (i.e. hard technologies) and organizations that permit the utilization of less skilled plant-floor labor has proved to be the Achilles heel of North American industry in international competition. The Japanese competitors, in particular, have been able to gain not only competitive advantage but also establish a clearly defined position of dynamic leadership — the very basis of my dependent-dynamism argument — by developing skills not only of white-collar employees but also of blue-collar employees on the plant floor (Best, 1990, Ch. 5).

It is in this cultural and institutional non-cooperative environment that the branch of economics known as agency theory emerged. As a group of insights deriving from Arrow's development of the theory of risk bearing, agency theory is founded on the hypothesis that each organization (e.g. a firm, a political organization, etc.) in all its possible levels of hierarchy is continuously facing problems resulting from information asymmetries. Within the organization the general problem of information asymmetry develops as different groups of individuals — having specific roles, functions and different spheres of expertise — engage in efforts toward maximizing their own goals (represented as utility functions) which often times are not coincident with those of the organization (Arrow, 1974: 274). Incomplete information leading to the development information asymmetries is noted as a problem to be circumvented by the design of an overall profit-maximizing incentive structure within the organization. The dominant analytical framework for this problem has been the principal-agent model (Moe, 1984: 756). Although critically elaborating on the insufficiency of this framework to explain the developments in the new economics of net customer value, Cole indicates nonetheless how this framework depicts the non-cooperative tendencies of the society which became most clearly identified with the mass production system, and synthetically describes the logic of the principal-agent model:

> Stockholders, as principals, are said to hire management as their agents to supervise the operation of the firm. As principals, the stockholders desire to maximize the present value of the firm, but management, as agents, have additional, sometimes contradictory objectives. Top management, in turn hires others to assist it. These others, at all levels of the firm, are also seen as agents who have individual goals somewhat inconsistent with the interests of both top management and the stockholders. The focus of agency theory had been the identification of contract alternatives and the stipulation of conditions under which alternative contract forms are most effective for monitoring the agents to ensure that the instructions of the principals are carried out (Cole, 1992: 6).

Looking at the much different scene presented by labor/management relations in Japan one indeed has to be skeptical of the applicability of this culturally-determined analytical framework to provide a clear understanding of today's competitive global markets.

The Continuous Improvement Firm:

In the past two decades, the self-assurance that North Americans once had about their economic supremacy has been stripped away. After a period of denial — a period which saw the decline of the USA in the steel, home-electronic and other industries — they have at last recognized that in areas of traditional strength such as car making, the Japanese are now the world leaders. Japanese firms have developed new, flexible systems of manufacturing that have important advantages over mass production.

Unfortunately much of the contemporary debate about developments in Japan turns on narrow issues such as whether lifetime employment, restrictions on corporate takeovers, or a government planning bureaucracy have helped or hurt the Japanese economy. Rather, as the above description of the evolution of the mass production system suggests, we should focus first on deeper questions about the nature of production.

The essence of flexible production or continuous improvement is a set of arrangements and physical imperatives that push everyone in an organization to look for small improvements in how things are done. The salient features of this

phenomenon are now visible across the landscape of the world economy.[18] The dimensions where it has impacted within the sphere of production have been well summarized as (1) a transition from physical skill and manual labor to intellectual capabilities or mental labor; (2) the increasing importance of social or collective intelligence as opposed to individual knowledge and skill; (3) an acceleration of the pace of technological innovation; (4) the increasing importance of continuous process improvement on the factory floor and constant revolutions in production techniques; and (5) the blurring of the lines between the R&D lab and the factory.[19] These are the main tenets of the "new competition" (Best, 1990).

But just how are the features incorporated by this new production system combined to generate more customer value — a measure involving quality (as measured by conformity to standards and reliability), functional design, prompt delivery (the "just-in-time" or JIT system), and pricing?[20] It has been said that "the ability of the continuous improvement firm to simultaneously succeed in each of these four arenas of customer value is intimately related to organizational characteristics and management systems". Therefore the beginning of an answer is to be found in the ability that this specific form of organization offers to firms so organized to "produce a

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[18]Suggesting the close connection that historically emerges between a whole production system and the name of the specific firm that — by virtue of its success — makes it famous, the term continuous improvement is often associated with the Toyota production system. Curiously enough, Fordism or the concept long used to describe the mass production system (the declining paradigm) derived its name from another automobile manufacturer, The Ford Motor Company.

[19]See Kenney and Florida (1993).

[20]The concept of customer value used in this analysis is taken from Carothers and Adams (1991) who first gave the original account of the relationship between customer value and the dynamics of the organization. The authors have defined it as "that value realized by a customer which justifies the sacrifice made to acquire, use, and dispose of a product/service, in comparison to available alternatives" (1991: 34). The intrinsically comparative nature of this concept fits very well with the intrinsic comparative methodology applied in this dissertation.

seemingly unending stream of internally generated technological change as a normal part of day-to-day operations" (Cole, 1992: 2).[21] This model of production is essentially associated with a number of specific attitudinal and behavioral pre-requirements — which translate into the motivation and commitment required to carry more than the basic everyday tasks of the enterprise — and that only in those organizational settings in which such conditions exist one will be able to reap the advantages of this manufacturing system.[22]

If the argument is that the essence of continuous improvement is a set of arrangements and physical imperatives that pushes everyone in the organization to look for new and better ways of doing things, and if motivation is what seems crucial to the implementation of such system, what then explains the occurrence of such basic motivational requirements within the Japanese corporation? To us, the existing social-cultural environment of Japan seems to have been uniquely conditioned by historical developments which contributed to the emergence of the perception that management

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[21]In "The Continuous Improvement Firm: Implications for Economic Analysis, International Competition, and Technology Transfer" Cole and his co-authors have provided more than a useful framework for a comparative analysis between the two types of firms. They have elaborated an enlightening criticism of the traditional approach that mainstream economics (agency theory, transaction cost approach and theory of the firm) takes when it assumes that each firm's management will be led in its attempts to maximize profits to choose the most efficient technology as though technology were always available "off the shelf." Referring to the collection of assumptions involved in these approaches as a black box approach, they conclude that:

> If the organizational features and management systems of Japanese firms, for example, provide cost, quality, production flexibility, and production development advantages over the mass production-scientific management firm, and if these features are to a significant degree culture specific, then the black-box approach will not suffice (Cole 1992: 2).

This position — namely the linking of production and its organization with the cultural context in which it emerges — goes hand in hand with the type of dependency argument I am trying to make in this dissertation.

[22]Please note that the continuous improvement system is not concerned only with manufacturing *per se*. It deals with the design, commercializing, and marketing stages as well.

and workers were mutually interdependent[23]. Thus, within the enterprise it is this mutual perception of interdependence that has ultimately led workers and managers to be considered as assets "in the same vein as capital" (Cole, 1991: 27). But just what were these historical developments?

The distinguishing feature of the history of Japanese labor-management relations was the absence in Japan of a significant supply of craft (skilled) workers during the period in which industrial capitalism emerged as a viable economic system (Lazonick, 1990: Ch. 9). When Japan began its process of rapid industrial development in the last decades of the nineteenth century, enterprises could not draw on already developed supply of industrial skills as was the case in nineteenth century for the USA. Japanese employers did not confront the problem of introducing high-throughput technologies in opposition to groups of craft workers intent on maintaining their traditional craft prerogatives.[24] Instead the plant-floor problem for Japanese enterprises was one of developing industrial skills, and then maintaining access to them. Therefore, because the Japanese enterprises were willing to make investment in plant-floor workers, the relationship between managers and workers developed in a context in which they "come to be viewed and view themselves as assets rather than agents."

In fact as a response to the investments in human capital that have been made, Japanese labor and management share a motivation that naturally emerges in a

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[23]Grace Goodell in "From Status to Contract: the significance of agrarian relations of production in the West, Japan, and in 'Asiatic' Persia" though referring to an entirely different set of events — namely the importance of the emergence of the idea of contract as the basis for capitalism and democratic government in the West (which in turn resulted from the perception of mutual interdependence between serf and the Lord of the manor) first developed the logic of the argument raised here: because in Japan workers and managers came to perceive each other as crucially important for the realization of their economic goals, this critical element of inderterpendence allowed for both to cooperate and to build the industrial enterprise in a completely different non-conflictual basis.

[24]See Gordon (1985).

cooperative-oriented environment. This is why they are more likely to expand the time and effort necessary to master activities related to functions other than those more directly corresponding to their job titles. That motivation is at the base of their readiness to uncover the weakest links in the productive chain and show where experiment and improvement would be most valuable. Consequently, in response to the problems that are uncovered, the layout of the assembly line, the allocation of tasks between workers, or the design of the good being manufactured may be changed. Thus, while the organization is strictly adhering to one overall design for its product — as well as its manufacturing process — it is constantly searching through countless, slightly different sequences for doing things and slightly different specifications for a good.

I have just exposed the major characteristics that permeate the mass production and the continuous improvement firm — the production systems which I have identified as corresponding to the structures of production of the United States and Japan. Implicit in this discussion is the assumption that each of these structures of production is respectively represented in the automobile industry of each country.

However, a discussion of the advantages of the continuous improvement firm over the mass production firm — and the ultimate support for the existence of a pattern of dependency between the two — requires an explanation of how in the day-to-day operation of these enterprises their differences produce gains that are asymmetrically distributed between these two types of enterprises. Perhaps the best way carry out this task is to analyze how the more evident differences between the mass production and the continuous improvement firm — good labor-management relations, motivation and commitment to the goals of the enterprise, willingness to think creatively and do more than execute regular tasks related to the job title on the part of the continuous

improvement firm managers and employees— distinctively impact on the way decisions are made in the enterprise.

A Comparative Look at Decision-making in the Mass production and in the Continuous Improvement Firms And the Emergence of Dependent Dynamism:

Differences in the decision-making process in both types of enterprise can be seen by looking first at how the typical mass production firm decides between different technologies. Decisions concerning which technological path to follow are often the most crucial choices to be made. In fact, these assume even greater relevance in those industries where competition is so intense. Because the whole idea of dependent dynamism — defined by Dos Santos and refined here — is concerned with new developments implemented by the follower within the context of an asymmetric relationship, looking at how choices about technologies are made permits one to observe in a dynamic fashion how this relationship is produced and reproduced.

Thus, the first step involves a critical analysis of the static way choices between new and old technologies are made in mass production firms. Next, I will attempt to show a) why a static approach does not fit the operation of a continuous improvement firm, and b) how dynamic elements specific to the continuous improvement firm work together to generate what seems to be a continuous stream of innovations achieved often without specific investment outlays on the part of the firm. If these firms are indeed able to produce goods which are being systematically improved without necessarily incurring further costs, then it is reasonable to say that they have an advantage over their competitors. The important thing to determine, then, is whether this advantage can be correctly seen as representative of dependent dynamism.

In a mass production firm, managers are often faced with decisions regarding the economic feasibility of using the existing technology — which involves some

known costs — compared to the long-run gains involved in the implementation of some new technology available on the market but which may be associated with a higher cost in the short-run. When faced with decisions of this kind, managers often trained in management science or business administration usually resort to a specific type microeconomic analysis: the theory of the firm.

But formal economic theory does not say much about technology *per se*. The usual assumption is that if a new technology is available, managers will incorporate that technology "when and if doing so will result in maximizing profits on investment" (Cole, 1991: 18). Technology is then assigned the role of a "black box," something exogenous to the considerations of such analysis. This aspect is also clearly present in analyses based on the theory of the firm, of which the following is an example.

Assume that, to compete in a particular product market, an investment strategy involving a new technology entails fixed costs which are higher than an investment strategy that simply makes use of 'ready made' technologies available on the market. In figure 1, *HH* depicts the cost structure that can potentially be generated by the high fixed cost (HFC) strategy if the new technology in which the enterprise has invested is indeed effectively developed and utilized. In contrast, *LL* depicts the cost structure of an enterprise that is competing on the basis of a low fixed cost (LFC) strategy associated with one of the existing technologies which requires little or no new investments by the enterprise.

If both *LL* and *HH* in figure 1 were known cost structures, it would be rational to choose the HFC strategy that generates *HH* as long as the enterprise could supply a market demand as great as q_C. Except for the case in which industry demand is simply not large enough to enable an HFC enterprise to supply output at least equal to q_C, *HH* will displace *LL* as the best cost structure, hence the new technology would be purchased and implemented. The enterprises that make the HFC investments and bring

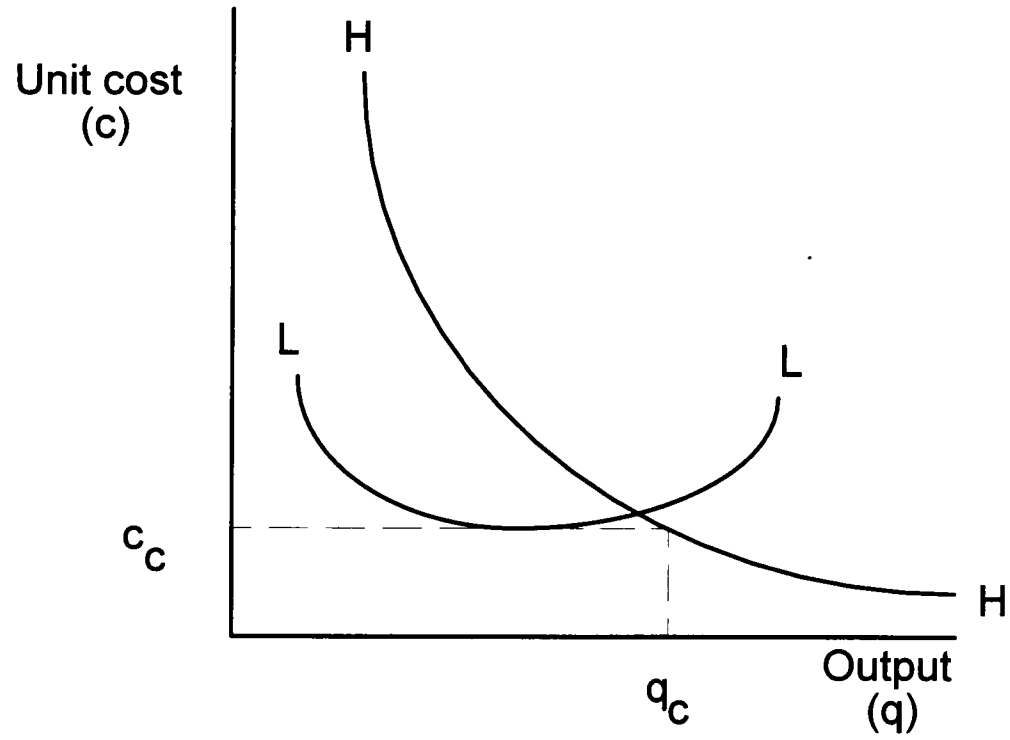

FIGURE 1: Fixed Cost Strategies and Competition under the Mass production System

HH into existence will gain competitive advantage over enterprises that continue to use traditional productive capabilities which generate *LL*.

By definition, the process of bringing *HH* into existence involves what is known in mainstream literature as *innovation*. Innovation generally entails higher fixed costs than existing methods of production not only because of the size but also the duration of the developmental investments that the innovative strategy requires. The size of the developmental investment makes fixed costs (necessarily) larger than is the case with *LL* because the innovative enterprise must plan (R&D) and coordinate its implementation with the development of a more complex specialized division of labor.

The above analysis clearly shows how the mass production firm gives meaning to the concept of innovation. Indeed, innovation takes the form of a rather crucial set of decisions to be taken by management on behalf of the firm. However, the apparent clarity and objectivity of this analysis of innovation conceals more than it reveals. The nature of technological change and technological options, which form a vital part of the life of the enterprise, are subtly left outside (i.e. held constant) of the static analysis as considerations of profit-maximizing give the illusion that technology is ready, available, just waiting to be purchased. That new alternative technologies are perceived as existing "on the shelf," available for purchase by any firm; that firms will purchase the combinations of technology if they are appropriate to the resource base; and that such strategy will maximize profits both in the short run and in the long run, all combined, seem to be the most damaging assumptions of this model. A crucial fallacy is the implicit assumption that new technologies — hard (machines and capital) and soft (investments in human capital, techniques, and managerial methods) — are easily adaptable, that they are available "off the shelf" in the sense that money can buy them and make them operational. But in the spirit of what I stated earlier in the discussion of learning (i.e. concerning the socio-institutional basis of learning), for

technologies to be in any way adaptable, changes in the firms' cultures and in the broader society are required — rendering, therefore, an analysis based on such a simplistic assumption very misleading.

However, for purposes of my study of the relationship between the mass production and the continuous improvement firm, the most telling lesson that can be extracted from the above decision-making process is that, as far as the mass production firm is concerned, innovation is seen to occur only when new investments are made by the firm. In fact, by further nurturing a predisposition of managers in mass production firms to attempt to 'innovate' according to a fixed top-to-bottom approach, this way of thinking ultimately hinders these firms in their ability to stay in the competitive race for increasing customer value because eventual improvements in quality and productivity are necessarily associated with incurring additional costs. This argument gains considerable strength when we see that on their competitors' side "technological change emerges from the production process itself, occurring day-to-day as a normal part of the operations of the firm" (Cole 1992: 7).

The continuous improvement firm, by successfully pushing everyone to look for small improvements in all activities performed within the enterprise, renders the above static analysis useless. It also shows how advances in productivity and quality can be made by the enterprise without it necessarily having to make specific investment outlays. But most important of all, the continuous improvement firm best exemplifies how a position of competitive leadership emerges. The innovative differences between it and the mass production firm show a pattern of dependent dynamism. Because improvement is not a normal outcome of the day-to-day method of operation of the mass production firm, it always has to face an investment cost in its attempts to either a) appropriate a new advance made as a result of an evolutionary process by the continuous improvement firm; and/or b) incorporate different facets of the continuous

improvement system in hopes that it will eventually internally generate these advances. Thus, if, by virtue of becoming the follower in such a competitive relationship, the mass production firm engages in a series of efforts to close a gap being continuously defined outside of its own sphere of action, and where the defining logic of the developments generated is peculiar to the very method of operation of the leader, then I will be justified in identifying such asymmetric relationship as one where dependent dynamism occurs. This is precisely what seems to be occurring in the automobile industry.

Although the different reasons why dependent dynamism has developed within the automobile industry will be examined further in the fourth chapter, the very logic of the above analysis provides partial support for the dependent dynamism thesis as it explains how a lag emerges between the mass production firm and its competitor, the continuous improvement firm. This is especially the case because there seems to be no other industry that can better illustrate the main tenets of each of these two production systems and that at the same time has so clearly reflected the effects of their differences than North American and the Japanese auto industries. Indeed, in order to remain competitive in its own domestic market, North American auto makers have systematically incurred in heavy investment costs designed to either a) adopt advances achieved often at no cost by their Japanese competitors, and/or b) adopt, in part or in entirety, systems that internalize continuous improvement on top of their own mass production tendencies. In the increasingly popular literature on the economics of technology, one finds various specific references to the automobile industries of these two countries as ideal examples of the 'current competitive lag' existing between these two modes of production. Perhaps one of the best illustrations of how this competitive lag translates itself into a new type of dependent dynamism has been given by Cole when he asserts that

> *[a]s American and European firms struggle to improve* product quality through such investments as the introduction and implementation of SPC [statistical process control] and the development of close relationships with suppliers [basic features of the continuous improvement system], *very large financial outlays are required.* Meanwhile, the competitive leaders move up to new plateaus of net customer value. *Custom design* for almost immediate delivery is one of the latest benefits of continuous improvement systems. The reduction of variation and manageable predictability allows JIT [just-in-time] to be refined to the point that, for example, each car coming through the process can differ from all the others produced the same day. This breakthrough [...] *is not associated with higher costs.* It is simply the latest advance in the evolution of organizations that feature systems for continuous improvement. *In fact, it is not inconceivable that this latest competitive leap would mean reductions in cost, just as did earlier stages in the evolution of those systems* (Cole, 1991: 25) [emphasis added].

Note that for the followers, this new kind of dependent dynamism poses a challenge similar to that it first presented in its earlier center-periphery conceptualization. For unless the current follower firm develops itself into a continuous improvement firm — i.e., adopts and develops the features of the leader, much as was expected of the peripheral industries under ISI in the ECLA conception — it will not be able to survive in the long run, especially because of the costs associated with trying to catch up.[25] That will be the case because the process of catching up (i.e.. continuing to be a follower) on today's economics of net customer value will "continually add costs because the follower will always be in the position of trying to adopt through a formal educational process the new organizational innovations that have naturally evolved within the institutional structure of the market leader."[26]

However, if some of those desirable features of the leader (that allow for the economic gains inherent to continuous improvement) are successfully incorporated by

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[25]This seems to take an aspect of added importance because in the U.S. of today, unlike the way it was under ISI, there seems to be no political support for the implementation of program of temporary tariff protection of the kind that in theory should exist while the catching up is to occur.

[26]See Cole (1991: 25).

the follower, the idea contained in the notion of dependent dynamism will have virtually lost its application in this new context simply because the definition of inside and outside systemic barriers will have become at least partially blurred. In other words, if this turns out to be the case of the North American and the Japanese automobile industry, one should be prepared to state that although in the period ranging from the late 70's to the early 90's a relationship between the North American and the Japanese automobile industries seems to have developed according to the basic tenets of dependent dynamism, the fact that in the mid 1990's there seems to be a general perception of a final closing of the gap should not logically and nor empirically prevent me from observing that it was only by developing organizations that feature some aspects of continuous improvement that dependent dynamism may have been attenuated.

Moreover, if that is so, the intra-industry analysis of dependency within the center will have given the dependency approach the dynamism that a sound political-economic theory needs to have — and, therefore, only in this sense could traditional dependency escape from the almost futile fatalistic perception of development as necessarily a dependency-creating process; a fatalism that, for instance, kept it from perceiving the development of some peripheral countries into a semi-peripheral stage.

The question that remains to be answered is whether the institutional changes required to remove the pattern of dependent dynamism have indeed occurred in the context of the automobile industry or whether the appearance of a closing of the gap is only due to enormous investments by the follower firms, which depleted assets previously accumulated in their past. If that is the case, the within center form of dependent dynamism presents not only a facet exclusive to center-center relations — namely the ability to survive adverse competition by the disbursement of large available sums (a characteristic unfortunately not shared by LDC industries) — but also, and

more important, it causes the effects of dependent dynamism to be only temporarily circumvented. For liquidity, like all other forms of material wealth, is necessarily scarce and, as such, parting with it will only delay what may be the inevitable: that is, the recurrance of dependent dynamism.

Because the institutional changes that are needed for the necessary transformation of the follower firms into continuous improvement firms, thereby eliminating the pattern of dependent dynamism, require broad social changes — as shown in my discussion of the importance of social organization to the development and utilization of productive resources — and since the timing of these changes, if indeed they are possible, is likely to extend over more than a decade, we have to be prepared to first consider the idea that dependent dynamism, though possibly attenuated, may still be occurring. Therefore, three scenarios will be examined in this dissertation (see especially the fourth chapter):

a) whether the catching up effort and the subsequent closing of the gap, if it occurs, is due to the disbursement of large sums of money, which only temporarily removes the threat of dependent dynamism; or

b) whether the closing of the gap is occurring as follower firms (i.e. the North American automobile industry) gradually develop themselves into continuous improvement firms, thereby producing their own innovations (not necessarily associated with specific investment outlays), as well as gradually removing the threat of dependency dynamism for the long haul; or

c) a combination of a) and b) in which a possible new form of continuous improvement corporation "American-style" is being formed thanks to a successful combination of costly investments and the implementation of a piecemeal process of learning and innovating occurring through the incorporation of those 'quality and productivity enhancing' characteristics normally associated with the new competition.

Dependent Dynamism within the Center: Similarities and Differences with the Center-Periphery model and Some Policy Recommendations:

In keeping with the method earlier applied in ECLA studies (i.e., that of engaging in a micro-level based analysis), I have above defined and analyzed the differences between these two production systems. The difference here is that, as previously indicated, I did not ground my analysis on the use static constructs. In fact, as it was shown, using such tools would actually hinder a full comprehension of the intrinsically dynamic aspects of the new production paradigm.

As a pattern of dependent dynamism appears to exist between these two production structures within the center, I now propose a path diagram — having some similarities to that which the ECLA composed in its comparative analysis of the industry of the center (leader) and the periphery (follower) (see fig. 2) — that may help me better synthesize what possible policy recommendations are implied by this investigation. Obviously no longer concerned with ISI policy directives, this new remedial path (see fig. 3) is designed to handle this new kind of dependent dynamism in its own particular way, that is by emphasizing the importance of mutual cooperation between government and private enterprises, and by focusing on the institutional changes necessary to take place if this kind of dependent dynamism is to be successfully reversed.

The differences between the ISI diagram (fig. 2) and that applied to the new center-center dichotomy (fig. 3) will be mostly associated with that fact that the production pattern now to be "emulated" by the follower is one derived from the continuous improvement system of production and no longer the mass production system. This new situation will imply that the general character of the remedial

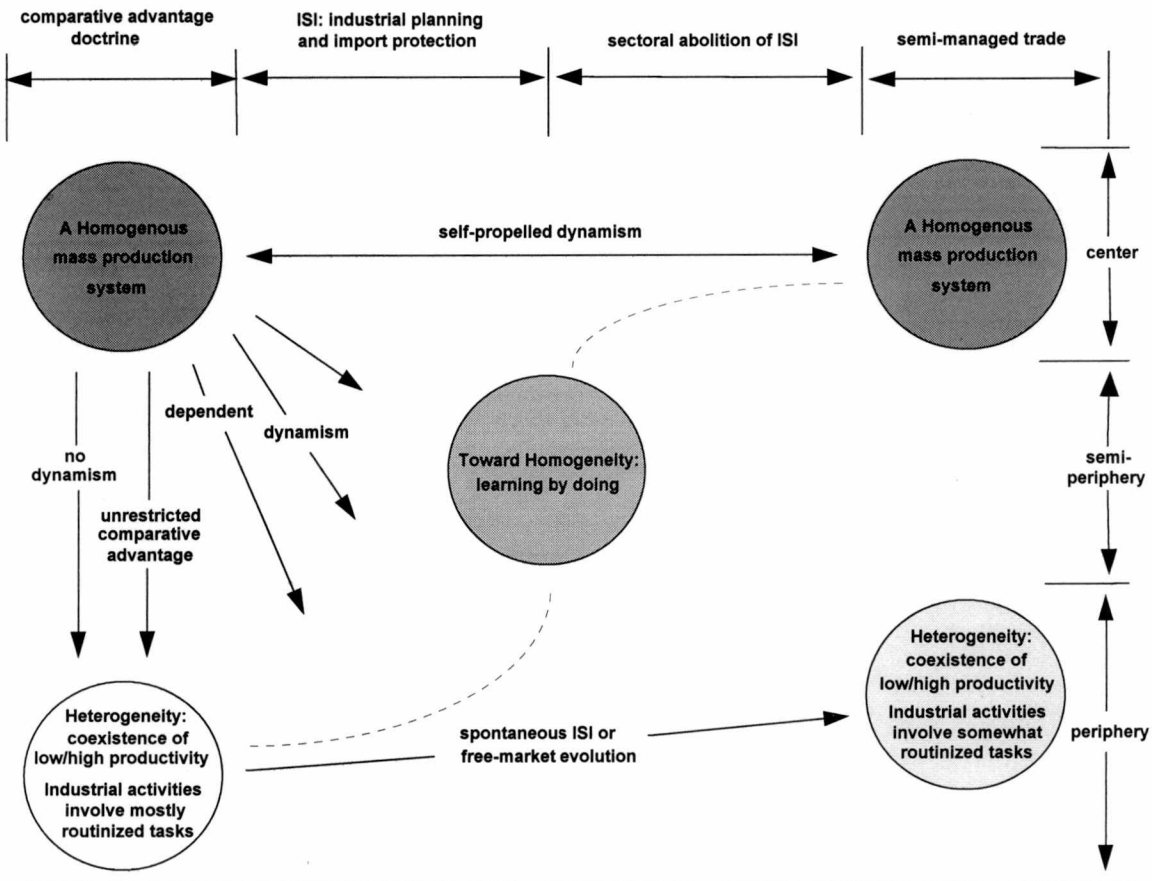

FIGURE 2: The Center-Periphery Model

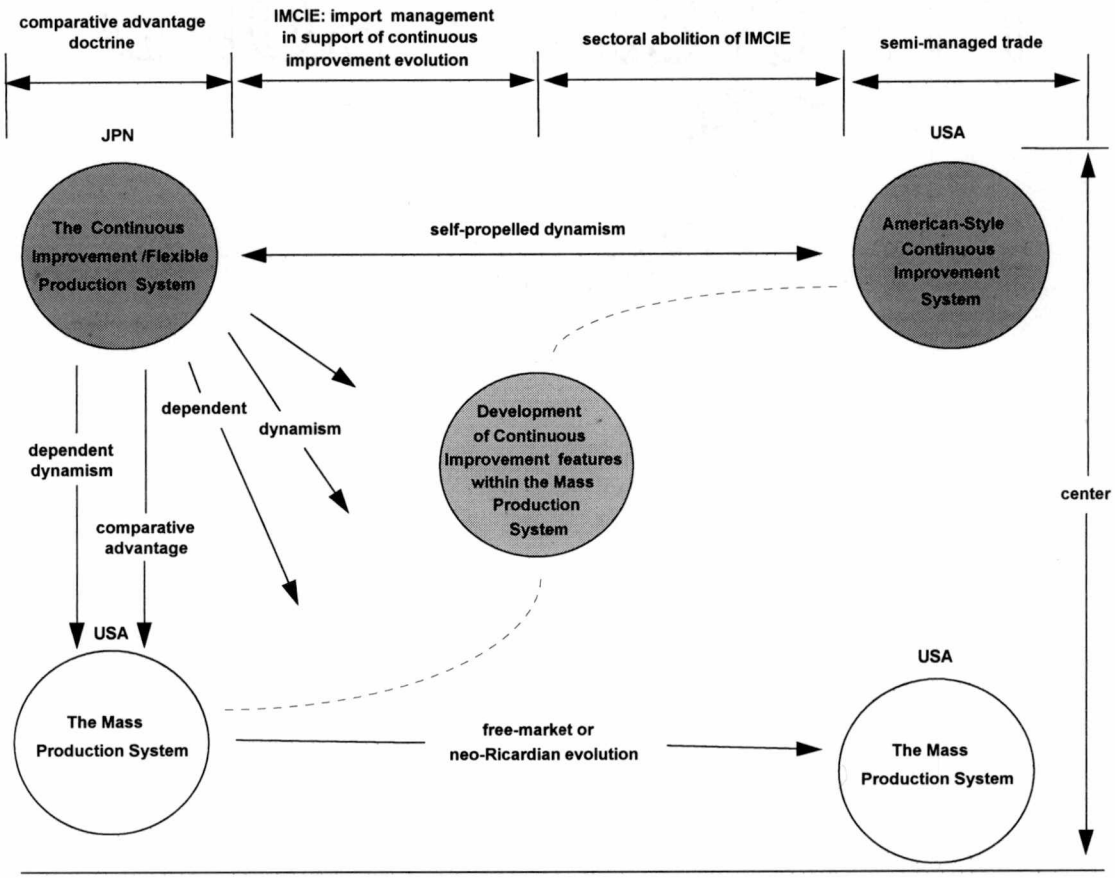

FIGURE 3: The Center-Center Model

measures to be adopted will follow a logic of its own.[27] The most salient feature of these suggestions is that in trying to implement this jointly elaborated set of trade/industrial policies, the North American authorities should focus, among other things, on trade management while the North American auto manufacturers should be focusing mostly on developing themselves into possible 'American-style' versions of the continuous improvement firm.[28]

Furthermore, this necessary attention to soft technologies should go beyond announcements that superficially state that "workers are important and will be listened to" to a serious committment in creating an atmosphere which fosters cooperation among all groups of people related to that industry. However, as the historic evolution of the continuous improvement firm has shown, this new mentality would require a broader set of institutional changes. Because of their fundamental character, these changes would require a necessary revolution in attitutes which should be felt well beyond the firm, throughout the society.

Thus, the social complexities involved in this new approach to the problems currently faced by the automobile industry — or by any other mass production industry facing a competitive lag imposed by continuous improvement competition — reveal

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[27]The graphical depiction of Japan on the top part along different segments of the policy continuum (i.e. along the policy axis in fig. 3), however, should not lead one to assume that Japanese competitive leadership will remain in place as a static target. Far from that, the competitive dynamism of the kind the *continuous* improvement firm presents us is intrinsically dynamic since it derives from an organization where the day-to-day stream of improvements occurs as a result of an overall cumulative process. Therefore, if there is some possibility of catching up for the Americans, it should be noted that it will only occur as a function of a dynamic process demanding more from American competitors than the mere pursuit of fixed or past achievements by the leader. For American firms this involves more than catching up in a static sense. In fact, only by developing themselves into American versions of continuous improvement firms (i.e. implied by the "learning by becoming" transitional position in the graph) will they be able to reap the results of the new competitive form, thereby eliminating the basic sources of dependent dynamism.

[28]Note that in figures 2 and 3 the upper, intermediate, and lower sections along the vertical axis indicate the following positions: competitive dynamic, transitional, and dependent dynamic.

that the suggestion of a government policy largely circumscribed to merely raising trade protection would be doomed from the outset. As a remedial policy it would fail to meet its goals because it would only target the consequences, rather that the very causes of the competitive lag and dependent dynamism. Surely, "in order to devise policies that effectively meet the competitive challenge, the analysis must be based on theory that recognizes the role of endogenized and costless technical change on the part of the leader firms in the global economy."[29] And when, as the above analysis demonstrated, the ultimate source of these technical advances seems to be related to aspects of the societal framework which contains these firms, it is essential to elaborate policy recommendations that — by capturing that causal linkage — push for a plan that promotes competitiveness through the implementation of important institutional changes in education, in the legal framework, and in government-private enterprise relations. Only upon elaboration and careful execution of such broad-based reforms, all in mutual exchange with the government, can the U.S.auto manufacturers find the proper environment and timing to march systematically in the direction of self-propelled dynamism.

Some Final Internal Boundary Considerations: Assessing the relevance of dependency theory (broadly defined) for the study of industrial/technological relations within the center:

Can the automobile industry, as a single industry case, indeed be used as a *locus* for a dependency analysis? As the discussion of the center-periphery model demonstrated, the founders of dependency analysis actually looked at different industries separately in order to stipulate the necessity of protection given the

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[29]Ibid (1991: 29).

technological, productive and commercial development of the domestic industry relative to its international competitors. In this sense, it appears that an industry specific dependency study seems justified. On the other hand, if one follows the evolution of the dependency literature one can observe a tendency to argue about center-periphery relations in terms of broad patterns — involving almost no mention of a specific country, much less a specific industry — which then leads one to question the inclusiveness of this industry-specific case study as representative of dependency. In order to avoid appealing to only one type of dependency, perhaps it would be fair to consider the macroeconomic and political relevance of the automobile industry as an indirect form of assuring the dependency status of this analysis in the second or more "macro"-oriented version of dependency theory — while still retaining compatibility with the earlier version.

In consideration of the various innovative dimensions of this new approach to dependency studies, it is surely fair to ponder what just may be the trade-offs involved in applying dependency theory to a structurally differentiated context. Some possible comments involve what may be perceived as threats to the integrity of the dependency approach, while other arguments would actually suggest positive advantages or contributions of this investigation to the overall dependency approach. Thus, what follows is a list of some of the "trade-offs" involved in using dependency theory — or at least a version of it — in a different context. Let us first consider some possible theoretical advantages.

a) A more analytical and objectively oriented dependency theory has re-emerged in this study. The integrity of the dependency approach will not be compromised because — by using similar methodological and theoretical schemes to the ones used here — one will still be able to identify "dependent dynamism" of the kind Dos Santos defined. For instance, if several asymmetric relations are found to occur systematically

in one direction, a fact clearly verifiable in the past economic history of Latin American countries, one's task in demonstrating such pattern will be more easily completed by following a more aggressive research methodology and hence increasing the objectivity of the dependency argument.[30] Thus, the immediate and most important consequence of this analysis is that it will provide empirical "ammunition" to dependency scholars who — by focusing on narrower patterns of relations between two specific countries — will be able to demonstrate with greater exactness the kinds of phenomena that they are interested in capturing (i.e. phenomena symptomatic of dependency), which in the end may be more revealing than just an ideological challenge to the intellectual establishment;

b) This study has also allowed a critical review of the causality structure of the dependency orientation.[31] In the present study, dependency abandons the traditional external to internal flow of causality by also looking at domestic complexities (such as political, social, institutional and economic phenomena and their interactions) and incorporating their contribution to the formation and reproduction of patterns of dependency. By reassessing the direction of causality, this study suggests different strands of dependency theory to rethink the soundness of some exclusively unidirectional dependency arguments. For instance, when the dependency orientation

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[30]I further amend this point by referring to an argument made earlier. When I say that the adoption of this new methodology would work in harmony with Dos Santos' broader formalization of dependent dynamism (in the context of Latin American countries), I mean that this would be the case so long as it is not assumed that a single test (i.e. a single industry) could be used as disconfirming evidence of a whole pattern of dependency. Proceeding otherwise would constitute what philosophers of science and statisticians would consider as unfairly biasing the test toward the acceptance of the null hypotheses of no relationship — meaning in this case the impossibility of empirically detecting a dependency pattern based solely on a single disconfirming event. My aggressive attitude toward falsificationism, if taken to such an extreme would lead to what Lakatos considered to be "naive falsificationism."

[31]Although more remains to be said about the exact nature of this causality flow.

first emerged (as part of the ECLA analysis of Latin American economies) it seemed to have the potential to become one of the most analytically and theoretically powerful development theories because it revealed the ethnocentric character of the assumptions made by the modernization and/or neo-classical school. However, the dependency theory of the mid 1960's on revealed a tendency to subsume all causality under the ultimate logic of "the international distribution of labor." Although the consideration of externally-induced barriers to development is indeed a problem to be considered by any decent development theory, the strong, almost completely ideological attachment to this argument really took from dependency the chance of achieving its original potential. Indeed, and as the ECLA analysis hinted, beyond the consideration of externally imposed limitations to development there is much to be said about internally-originated market and political constrictions. This is indeed why, in performing the task of reformulating the causality structure of dependency, I have been aided by referring to some insights of the institutionalist school which since its foundation has been concerned with how the social, cultural and institutional elements condition or shape the way a society carries out its productive tasks. This addition is of great importance because it will provide methe tools to turn dependency into a more balanced political-economic theory, a theory where domestic phenomena are given a more concrete and detailed treatment.

The above positive aspects of this analysis, however, reveal possible threats to the integrity of the dependency approach:

a) The general shift in focus proposed by the study of center-center instead of center-periphery relationships — by stretching the usual dependency boundaries — may go well beyond what dependency theory, in the broad sense, lends itself to. Indeed I want to make it clear that this dissertation is not at all about structural dependency. Structural dependency would be completely inapplicable here because the

structures as well as the dynamics of the standard dependency situation do not apply either to the context nor to the environment-based dynamics that systematically give shape to this new type of dependency. Thus, the crucial question to be asked here is whether my success in conceptualizing and then demonstrating this new type of dependency did necessarily take a form which bears resemblance to issues of competitive lags by exposing the inability of the follower to bridge the technological gap without necessarily engaging in some sort of "catching up" effort whose path to recovery has been previously determined by the leader. This is certainly what appeared to have taken place in this chapter. In other words, I seemed to be successful in developing this new kind of dependency and, more important, I do so by asking questions similar to those earlier addressed by traditional dependency. Because that appeared to be the case, I have indeed broadened the focus of dependency theory without necessarily breaking the integrity of the historical dependency edifice. And because this chapter has developed an intensive economic analysis in order to illustrated the occurance of dependent dynamism, this has occured basically as a partial fulfillement of the investigative and analytical exercise outlined in the previous chapter. More remains to be verified about the possible political dimension of this relationship.

b) If method necessarily follows theory, the use of distinctive methods of investigation — to ask what is understood as a set of theoretically relevant questions of a similar nature — can be seen as an indication that the original dependency contribution (in its various strands) and mine are not that similar after all. This distinction between methodologies may logically derive from differences existing among the very theoretical and conceptual constructs upon which my investigation rests and those theories and concepts which directly refer back to the original center-periphery dependency analyses. This difference in turn, may occur as a reflection of the fact that center-center dependency is not really part of a broader dependency theory

— which could include both center-periphery dependency, and center-center dependency — as I argue. Rather, it could be said that center-center periphery is something else that — by virtue of being interested in a set of qualitatively different actors, and in consequence of having a different theoretical focus , it has its own set of methodologies — only scarcely resembles *dependencia*.

This question, like other more general questions referring to the degree that this study resembles dependency theory, does necessarily lead us again toward the greater debate over what is to be understood by dependency theory. Underlying much of this debate is the question of what kind of dependency theory one is referring to when one alludes to the already familiar label "dependency." This constitutes perhaps the greatest challenge to be overcome in this dissertation. It seems to be so because in this kind of discussion one has to go beyond the content of a particular study usually identified as being part of dependency theory and ask himself why some other study that is interested in phenomena of virtually the same nature (such as dependent dynamism, elite co-optation, etc.) cannot be considered as an equally legitimate dependency study. Although it cannot be reasonably denied that ideology in center-center dependency no longer plays the role it once came to play in center-periphery dependency, is this in and of itself a sufficient criterion to disqualify the dependency logic from being used to analyze different players in a different environment, but which are, nonetheless, constrained by similar (though structurally not quite the same) environmental limitations?

There is a tendency in the discipline to identify much of the whole dependency argument with a particular ideological commitment which was to a great extent attributed to the characteristic Marxist leanings of the Latin American *intelligentsia* of the postwar period. False or true, this close identification of the dependency orientation with at times different "breeds" of Marxism has had a profound impact in

the consumption of the dependency literature among North American political scientists. Most political science textbooks that elaborate on dependency theory trace its origins to "Marxisms" in one way or the other. So pervasive has been this tendency that it became the theme to one of the most enlightening articles ever published on dependency by Cardoso.[32] In an exercise of critically evaluating "The consumption of Dependency Theory in the United States," Cardoso attributes one of the major interpretative distortions ever suffered by dependency to American social scientists.[33] Comparing the reading of dependency by the North American audience (and its quick characterization as a paradigm) with the formation of a myth, Cardoso writes,

> Every myth requires a simple structure and a moment of revelation. The first, drastic simplification carried out by some popularizers of these studies was to treat them as a sort of mental thunderclap that occurred at a given time and place. Now the discussion revolves around the question of in whose head the thunderclap was produced; with that kind of beginning, the celebratory aspect is inevitable. However, anyone who is aware of the social nature of thought knows that every new paradigm results from a complex discussion among persons, institutions, and groups, which in the moderns world are located in different countries. With time, the discussion is enriched and provokes internal controversies (Cardoso, 1977: 8).

He explicitly places the locus of this "drastic simplification" in the discussion of the sources of the "dependency paradigm." Although Cardoso seems to deny the label of dependency to the earlier writings of the ECLA — thereby in opposition to one of my core arguments — he does indeed stress the point I am trying to make here, i.e., that

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[32]See Cardoso (1977).

[33]An interesting historical note is needed here. This paper was presented at the 1977 meeting of the Latin American Studies Association (LASA), home at the time of possibly the friendliest audience of dependency in the US. This sort of intellectual warmth, however, did not influence in attenuating the tone of Cardoso's harsh criticisms toward the misreading of dependency by either that academic body nor the broader overall American social science academe.

the reading of dependency by the North American academe — even by its favorable audience — unfairly confused it with one of several possible Marxisms:

> However, after establishing the immediate origins of the "dependency paradigm" popularizers who are not aware of the process of intellectual production attempt to describe its prehistory. Here, two currents are generally cited: ECLA, and the Marxian and neo-Marxian North American current (Baran, Sweezy, Gunder Frank). At times, some spice is added to the debate by saying that the *dependentistas* are of distinct ideological hues: there are those who are closer to ECLA (and to the "petty-bourgeois nationalism" that is supposed to have been derived from ECLA's research work), and there are those who adopt a position of more authentic opposition to capitalism and are thus more influenced by the above-mentioned Marxian economists prior to the dependentistas. These assertions are plausible — indeed, perhaps they are typologically correct — but they do not correspond to the intellectual history of these ideas as it really happened (Cardoso, 1977: 9).

Thus, Cardoso seems to indirectly lend support to my argument for a uniform dependency label to different traditions of dependency. In a fashion similar to that in which I argued in chapter 1, he does it by acknowledging the differences inherent in the initial stages of the formation of dependency theory and — in recognizing them — he approaches with criticism the unidimensional reading of dependency theory in the United States. The only basic epistemological difference, however, occurs at which point — or at which of the different stages of the development of dependency theory — Cardoso and I seem to be willing to grant a particular contribution full dependency status.[34]

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[34]However, another difference emerges when a paragraph later Cardoso suggests that "[t]he analyses of dependency situations in Latin America done in the second half of the sixties did not represent new methodological propositions." This statement seems to be unjustified in view of the striking methodological differences implied by the distinctive use of analytical instruments on the part of the earlier ECLA-Keynesian analyses and those later used by what became the structural dependency. In fact Cardoso later points to the works of economists Armando Cordoba, Antonio Garcia, and Alonso Aguilar as "examples of efforts to present alternatives to both orthodox analyses and to what we might call the ECLA-Keynesian analyses." The alternativeness of these views as suggested by Cardoso should lead one to question the soundness of his first statement.

Out of this discussion of Cardoso's epistemological reading of dependency the most important point to be retained is that because dependency has been too readily associated with one form or the other of Marxism the general perception of what dependency studies should look like should itself be reassessed. Moreover, this may be why only in appearance the sight of a non-Marxist version of dependency seems so outlandish.

Economics textbooks however, have presented the dependency tradition in quite a different manner. There dependency theory is presented as part of an effort guided towards providing a political-economic analysis of Latin American economies and societies . This, however, is not to say that dependency is undeserving of any association of its name with Marxist inspired theories. Far from that, dependency emerged as a reaction to a purely Western-based economic analysis whose conceptualized reality reflected the economic development of the Western "advanced" societies rather than the complexities and dilemmas of LDC's. But it did not emerge solely as an advocacy for communism as an alternative to capitalism as political science texts would have us believe.

It is true, however, that some Latin American intellectuals turned to Marxism only as part of a broader reaction against the intellectual colonization and evident ethnocentrism contained in modernization theory (in political science) and in the economic analysis deriving from neoclassical synthesis of Keynes.[35] On this issue Myrdal (1968) and Todaro (1977) recognize that the stream of interest taken by Western economists after World War II in the problems faced by underdeveloped nations was caused by reasons that ranged from the cold war (recognition of the geo-

[35]In choosing Marxism, however, not much careful consideration was given to the inherent Western-centered reality of the Marxian critique of Western capitalism and society.

political importance of underdeveloped countries) to the break down of the colonial system. But nonetheless; although specific motivations did reveal biases in the research that was done in underdeveloped countries by Western economists,[36] the basic source of distortion was the use of a theoretical and analytical economic apparatus that had scarcely any connection with the reality prevailing in those societies. It is perhaps due to this intellectual subversivism — characterized basically by the refusal to adopt Western political-economic constructs to societies characterized by the virtual absence of modern economic institutions, conditions of production, different attitudes toward life and work, to name a few — that dependency was so quickly read by the North American political science establishment (e.g. Samuel Huntington and other advocates of the "strong government approach") as a purely ideological revolt against the established sciences of politics and of economics.

Perhaps an allusion to some historical events that were taking place at the time dependency theory started being consumed in this country might help mefurther clarify why dependency theory was perceived as part of the Marxist *weltanshtung*. The 1960's marked a period when Latin American countries commonly faced political turmoil fueled by outstanding economic success which was not being matched by an improvement on the living conditions of the urban working poor and middle-class. Latin American populist and fragile democracies had not yet developed levels of political institutionalization that were compatible with the enormous pressure toward increased political participation. The economic success, much a consequence of ISI schemes, exerted further pressure on the politically backward elites of the continent to consistently turn toward authoritarian rule — civilian or military — as shelter from

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[36]See Myrdal (1968: 10-16).

political and economic liberalization.[37] The threat of communism — manageable by the application of minor adjustments to the political system in and of themselves — offered the right opportunity for destroying democracies. The strategy was twofold: a) inflating the military sentiment and perception by appealing to its aversion to communism — not to be confused with attachment to real capitalism — and by suggesting that capitalist survivability was at stake; and b) appealing to the U.S. — itself engaged in the apex of a cold war at a time when attachment to the domino effect doctrine was strongest — to support the "developments" about to come.

This historical sketch can now help us better understand how a combination of historical events and academic myopia on the part of North American political scientists — itself a combination of academic isolationism (i.e. a strong focus on Western Europe), and ethnocentrism — have conditioned the reading of dependency theory in the United States. This, however, constitutes by no means an attempt to deny the fact that dependency theory later became associated with a Marxist critique of the political and economic "developments" that took place in Latin America. It is to the more analytically, empirically rigorous and earlier version of dependency that the label "communist"— usually meant in a derogatory way — does injustice. This is why the new epistemological reading of dependency theory — proposed in the first chapter — is of such crucial importance. As the above discussion suggests, it helps us filter through issues much deeper than it can be originally perceived. Most important, it allows meto make the case for a center-center analysis which applies the main concepts and logic of the original dependency orientation.

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[37]The liberalization of Latin American markets marked as indicated by Prebisch (and as explained before) the culmination of ISI policies. Once a sector of domestic industry could compete with foreign industry at virtually no comparative disadvantage, the next step should be to eliminate trade barriers so that efficiency could benefit the domestic market, specially domestic consumers.

Conclusion

The history of the change in industrial leadership from the USA to Japan over the past few decades does demonstrate that the social structure of economic institutions exerts a preponderant influence on the rate and direction of learning. In this discussion I have attempted to show that over time and across leading capitalist economies the learning that lays the foundation for industrial leadership is increasingly continuous, cumulative and collective. For such learning to occur it is *not necessary* for the institutions which develop and utilize productive resources, and hence generate economic development, to plan and coordinate specialized divisions of labor that are increasingly complex and costly. However, these institutions, as the case of the continuous improvement firm well illustrates, must ensure not only the appropriate collective cognitive development of human resources but also appropriate behavioral responses on the part of the participants in the specialized division of labor on whom so much of the enterprise's learning and creating new ideas is dependent. This is especially important because it is only through the appropriate behavioral responses that the investments in cognitive development are utilized sufficiently to transform what at times (but not necessarily for the continuous improvement firm) may be high fixed costs of investments in innovation-inducing techniques into low unit costs.

In capitalist economies, the central institutions for developing and utilizing productive resources are business enterprises: enterprises which must capture sufficient market shares to lower unit costs, generate the revenues necessary for their continued existence, and especially, given today's global markets, innovate in order to keep in pace with the economies of net customer value. Yet, as has been argued in this chapter, the strategies and structures of these business enterprises are influenced by the social environments in which they acquire productive resources and in which they seek to generate revenues. Among other things, this social environment — which has a

national dimension — determines the quality of human resources available to business enterprises to develop as well as the financial expenditures necessary to make the different kinds of productive resources as productive as possible.

The relation between business enterprises and their national environment can, however, be reciprocal. By the very development and utilization of productive resources, the strategies and structures of business enterprises can also shape elements of the national environment such as the educational system, the financial system, and even the class structure (Lazonick, 1993). Indeed — as my discussion of the mass production firm and the continuous improvement firm illustrated — it is when business enterprises are most successful in developing and utilizing the productive resources available to them that the strategies and structures internal to these enterprises have the greatest influence on the transformation of the social system as a whole.

The perspective outlined here has important implications for understanding why the postwar change in industrial leadership has occurred, as well as for explaining why the former leader (now follower) has faced difficulties in responding to the new competitive challenge. With institutions in place that were appropriate for the development and utilization of what by now have become typical follower-rooted technologies, the former technological leader may be incapable of increasing customer value and rates of productivity growth by simply borrowing back technologies (hard and soft) from the rising competitors. They may also lack the organizational as well as other structural capabilities to develop and utilize superior technologies, although adaptive strategies such as the implementation of SPC and JIT appear to have helped reduce the existing gap. Yet, by not developing a system of mutual support between business and government — where, in coordination with government's social and trade policies, both government and the follower enterprises could innitiate efforts to make

structural changes in "education, antitrust, and other aspects of the legal framework"[38] — the present adaptive strategies may augment rates of productivity growth in the short run while making it impossible to sustain these rates of growth in the long run. This is why the focus on the long run is present throughout this analysis, for it is the dynamic interaction between organization, technology, and the social structure that determines whether the long run results in competitive success or relative decline with the strengthening of dependent dynamism.

Finally, beyond simply helping me explain the emergence of dependent dynamism within the center, this focus on the long run — bringing together the past, present and future trends of the automobile industry — allows me to point out the central problem in the answer of standard economics to the competitive dilemma now faced by the U.S., i.e., dropping protection and other barriers so that perfectly free functioning markets may achieve their highest efficiencies. In drawing an imperfect though useful parallel, it is best to first look at the situation in which LDC's found themselves in the 1940's and 1950's. Had they not tried to escape the logic of the natural trend of deteriorationg terms of trade by adopting ISI policies, their economies would still be too dependent on the primary sector, and with much stronger balance of trade problems. But it is perhaps the historical decline other U.S.domestic industries that best illustrates the fallacy of standard economic analysis:

> When economists thirty years ago were telling policy-makers that international competition would force American steel to adopt competitive techniques, it was genuinely believed that all that could keep our steel industry from matching that of Germany or Japan would be some form of misguided protection that would shield it from the discipline of the market. A decade later, that same sentiment was expressed relative to the American automobile industry. By now, however, the argument of the economist has changed. Facing a reality of industrial decline over what must surely be considered a period of sufficient length to qualify as the long

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[38]Ibid.

> run, a standard economic answer now says that perhaps the US economy was not destined to remain in those lines of production. Our comparative advantage is now said to lie elsewhere: maybe in services, maybe in agriculture, or possibly a combination of the two (Cole, 1991: 28).

This perception, though changed with time, is a restatement of the belief in the doctrine of comparative advantage. It would have us believe that — because the U.S. comparative advantage is now found in the service and telecommunications industries and/or agriculture — the North American standard of living will be better in the long run if the U.S. concentrates on those areas, while steel and automobile production should be left to those countries where higher productivity had been attained. It is interesting to note that this directly reflects Ricardo's thought, although two centuries ago he was dealing with a much simplified system of foreign trade:

> Under a system of perfectly free commerce, each country naturally devotes its capital and labor to such employments as are most beneficial to each ... It is this principle which determines that wine shall be made in France and Portugal, that corn shall be grown in America and Poland, and that hardware and other goods shall be manufactured in England ... (Ricardo, 1886: pp. 72-86).

Although from the point of view of comparative advantage theory, it may make perfect sense for the U.S.economy to have traveled from being an essentially agricultural nation to becoming the world's industrial leader and then back again to its agrarian roots, it is very doubtful that the social and political forces — if indeed the economical forces did not come to think similarly — inside the United States would allow free trade to provide that round trip ticket. From Adam Smith's time up to now it has been said that the role of government should be limited to that of a watchdog over competition. Today's highly integrated global markets and dynamic competition gave birth to number of complexities that render this conception of the state as merely a regulatory agent no longer tenable. A particular point made by the above analysis suggests that the current dependent dynamism existing between the North American and Japanese automobile industries is only likely to be reversed if both government and

enterprises jointly devise a working plan for the period while the catching up is taking effect. A plan directed to broad social and institutional changes. This necessary implies an invitation for the government to assume the role of a partner rather than limiting itself to being a regulator. In fact, "it is instructive that firms rated as competitive leaders appear to consider themselves to be partners with their governments rather than adversaries."[39]

In this chapter I have argued that the relationship between the North American and the Japanese automobile industry can be described as part of an emerging dependent dynamism. This relationship between the mass production and the continuous improvement firms features a structurally differentiated dependent dynamism in the sense that it is now seen to exist between two countries within the center. Next, to support that argument, I will look at:

a) Whether this new dependent dynamism is supported by industry specific empirical data having to do with the production and sale of automobiles in the United States domestic market. First, I will attempt to explain whether the argument I made about superior quality of the Japanese auto indeed has any empirical basis and whether it is positively related to their increase in sales relative to American cars. And second, I will attempt to determine how economic conditions in the U.S.may affect the decision to buy a Japanese made car because arguments about quality are assumed to gain precedence in the decision to buy a car when economic conditions improve. As previously discussed this will be done by the use of a pooled time series demand estimating model which I will present in the next chapter.

b) What can be said about the historical evolution of this pattern, from the period immediately after World War II to the early 1990's? I will investigate how the

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[39]See Cole (1991: 29).

Japanese infant industry protection policies have helped it to eliminate the competitive gap then existing in several industries, and even assume leadership in some others. The trade and industrial policies of the United States will also be studied. In the fourth chapter I will see changing justifications as the American side attempts to explain the continued Japanese leadership in the automobile manufacturing sector.

c) Finally chapter 5 will present a concise analysis of the change in US-Japan relations as a pattern of relations of the kind I am studying here emerges between them. Has the perception of an industry-specific dependent dynamism altered the rhetoric about free trade in the U.S.side or has that perception only further supported the abstract logic of free trade because — as mainstream economics suggests — both sides could gain more from trade if only the Japanese market were more open? If the latter turns out to be the case what can be said about the future of the U.S.automobile industry in view of the policies recommended in this study? More than an interesting question, the analysis of this relationship might allow us to observe an entirely different set of behaviors on the part of the dependent-dynamic follower because of the qualitative difference implicit in the structure of the center-center model.

3. MODELING DEPENDENT DYNAMISM

Chapter 2 examined a relationship of dependent dynamism that seems to have emerged between the North American and the Japanese automobile industries which exemplify the differences inherent in mass production and the continuous improvement system of production. Much of the argument was focused on what appears to be the supply-side of this dynamically dependent relationship. Dependent dynamism was said to exist because of the existence of a stream of internally generated small technological innovations which are often not necessarily associated with investment outlays on the part of the continuous improvement firm (leader), but which always seem to involve an opportunity cost for the mass production firm (follower) since it lacks the ability to generate innovation and improvements through an ongoing internal evolutionary process. Because of that particular capability, the continuous improvement firm is able to establish the path on which the new developments will take place in the industry — hence the dependent dynamism — which further motivates the follower or mass production firms to catch up.

The above analysis contained another set of arguments focusing on supply-side factors that also served to further substantiate the proposition that a new kind of dependent dynamism exists within the center. It was observed, for instance, that the new genre of firm created by the system of continuous improvement and flexible production seemed to be especially positioned to compete in today's economics of customer value. Although not elaborated in detail here — because it concerns more directly the literature in business management — the relationship between customer value, broadly defined, and organizational dynamics clearly underlies much of the characterization of the American and the Japanese automobile industries as followers and leaders. To be specific, the dependent dynamism between the continuous improvement and the mass production firms appears to be further intensified by the

fact that continuous improvement firms seem to systematically focus competition on such product attributes as quality, functional design features, prompt delivery, and price, while mass production firms base much of their competitive strategies around price and cost cutting decisions — decisions which are themselves founded in the neo-classical paradigm.

These different value dimensions are at the basis of a subjectively determined measure such as that of customer value. Carothers and Adams were perhaps the first to make this point clear by indicating that buying decisions are made on the basis of net comparative customer value, a term which they defined as "that value realized by a customer which justifies the sacrifice made to acquire, use, and dispose of a product/service, in comparison to available alternatives" (1991: 34). It is therefore, the continuous improvement firm's systematic concern with these dimensions of customer value linked to their ability to manufacture a product that successfully addresses these concerns — because of the way in which improvements seem to continuously take place — that further assure their status as leaders in this relationship. Indeed this focus on customer value on the part of firms engaged in flexible production and continuous improvement seems to transcend the "regular" consumer product industry and to extend even to the capital goods industry. As Cole indicates "even in such industries as steel and paper, where output has heretofore been considered homogenous, quality and timely delivery are becoming important competitive factors" (Cole, 1992: 2).

These arguments in support of the existence of dependent dynamism in this relationship assume much about the demand-side dimension of this relationship. Most important, it is generally assumed that the playing field where this competitive relation takes place — the market — has a specific set of appraising criteria in mind. For instance, it will generally favor the more technologically sophisticated final product, as

well as value other of its dimensions such as quality (defined as conformance to standards and reliability), speed of delivery, wide availability of a gamut of possible different models for the same auto, etc. This focus on product evaluation and appraisal by the market is nowhere else more evident that in my repeated allusions to the concept of customer value.

It would make little sense to talk about a pattern of industrial/trade relationships occurring in a given market if I was not operating with a specific historical period in mind. Because the literature studying the competition between the continuous improvement firms and mass production firms cited here implicitly points to the period going between the late 1970's to the early 1990's, it is within this time framework in mind that one needs to establish whether these demand-side patterns have occurred in the U.S. market. For that purpose, annual data concerning the U.S. market was collected from 1980 to 1993.

Choice of Methodology:

To further determine whether the pattern of dependent dynamism shown in the previous chapter is grounded on realistic assumptions, I have to verify whether such demand-side inferences really hold empirically. The general logic and empirical soundness of such claims will be verified by the use of an econometric model. Basically stated, it is a time series demand estimating model that looks at quality and the economic performance of the American economy as the central variables. Because so much of the logic of my dependent dynamism argument is grounded on assumptions about the superior quality of the product turned out by the continuous improvement firm relative to that of the mass production firm, it only seems to be fair to see whether my assumptions are indeed supported by the available data on this issue.

The Model:

The model used to test whether arguments based on the qualitative differences between the industries in the two sides of the relationship are empirically sound will focus on the quality of the automobile manufactured by the industry in the two countries, especially in the sense that such an evaluative criterion seems to be adopted in the U.S. market. In using the time series econometric model developed here to examine the validity of some of my assumptions, I will test the following hypotheses:

> H_1: More Japanese cars will be sold in the American market at an increasing rate because they are superior in quality;
>
> H_2: The better the performance of the American economy the more likely, in percentage terms, Japanese cars will sell in America, as arguments over quality — *qua* analytic criterion — gain precedence in the decision to buy an automobile when economic conditions improve.

In this modeling exercise the American automobile industry was represented by the General Motors Corporation and the Ford Motor Company (and their subdivisions[1]), while their Japanese counterparts were Honda and Toyota (both their American and Japanese plants). Only car models made by these four companies and which have been sold throughout the period between 1980 and 1993 (14 years) were included. Yearly sales figures and prices were obtained from MVMA Motor Vehicle Facts & Figures, MVMA Automotive News Data Book which provide such figures listed by model and make.

In order to tap on the concept of quality addressed by the first hypothesis, two measures have been used, namely a car's repair index — provided by Consumer

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[1]Note that because of the necessity of having a consistent sample, the Saturn division of the General Motors Corporation is not included in the sample tested by the model.

Reports on a scale from 1 to 5 (ranging from "much worse than average" to "much better than average") — and a car's retention of value after three years of its original purchase — a figure compiled from Edmund's Used Car Buying Guide by subtracting the current price of a three-year old model from its "original list price." The intuitive or *a priori* expectation here is that a high number in a scale of 1 to 5 and/or a high value retention ratio would both be good predictors of a specific model's sales performance by implying the higher or better quality embodied in the product.

In order to more directly address the second hypothesis — namely that a better performance of the American economy will help Japanese car sales in America as quality becomes a more relevant decision criterion — I have attempted to observe the relationship between 'disposable income'[2] (in billions of constant 1987 dollars) and sales performance of both U.S. and Japanese cars. Because inflation in and of itself may at times cause apparent increases in nominal disposable income — which in fact may not necessarily mean that consumers as a whole have more buying power than before in absolute terms — constant 1987 dollars were used to provide a more reliable and consistent measure of what actually takes place in the economy.

Thus the model with which I wish to test the above hypotheses is[3]:

$$\ln \hat{Y}_t = \beta_1 + \beta_2 \ln X_{2t} + \beta_3 X_{3t} + \beta_4 X_{4t} + \beta_5 X_{5t} + \beta_6 X_{6t} + \beta_7 X_{7t} + \beta_8 X_{8t} \quad ,$$

where $\ln \hat{Y}$ = the natural logarithm of sales (SALESLN);

X_{2t} = the natural log of the "lagged" sales (SALLNLAG);

X_{3t} = value retention (VALRETEN);

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[2]Meaning basically income after tax and social security deductions.

[3]From the equation-form statement of this model it should be evident that I will be trying to explain change in sales, since a "log" transform operator is being used.

X_{4t} = repair index (REPAIRIN);

X_{5t} = relative price (RELPR);

X_{6t} = disposable income in billions of US$, set @ 1987 constant dollars CDISPIN);

X_{7t} = a binary variable for country (COUNTRY); and

X_{8t} = an interaction qualitative variable for country and disposable income (CNTRYDIS);

The three additional variables in this model not yet discussed are relative price, the country qualitative or "dummy" variable and the interaction variable for country and disposable income. Relative price, expressed by the difference between a model's retail price and the average price for models in that same category, was put into the model as a strategy of evaluating just how price considerations are important to the buying decision. The country variable is included here basically as a way of statistically finding out whether it matters for the American consumer that car "X" is American or Japanese. By identifying statistical biases in one direction or another and then by comparing this bias to what actually takes place (i.e. which car gets purchased) I hope to identify whether the country of origin remains as an important consideration for the American consumer rather than other more quality-related criteria. Finally the interactive variable "country 'given' disposable income" serves as a means to detect whether the purchase of a model from a given country of origin (US or Japan) may be related to a given domestic economic scenario. Obviously this variable has a strong relevance to my second hypothesis.

In terms of theoretical *a priori* considerations, it is expected that the explanatory variables will behave in the following manner:

A. The lagged log of sales will be strongly and positively related to the dependent variable because people do not frequently change their consumption habits;

B. Since the more of its original value a car holds the more people are inclined to buy it, one would expect the coefficient of the VALRETEN to be positive;

C. Because REPAIRIN is coded in an increasing scale (from 1 to 5), and also because the more trouble-free a car is the more one would expect consumers to choose it, REPAIRIN is expected to positively contribute to a change in sales;

D. Since relative price or RELPR is measured as the difference between a car's retail price and the average price of all cars in its same size class, i.e., RELPR = RETAILPR - AVGPR, one expects that those cars whose RELPR is negative will tend to sell more. Hence, the coefficient of RELPR is expected to be negative.

E. As an aggregate measure, disposable income, CDISPIN, is expected to carry a positive sign because with an increase in overall income one expects sales, in general, to go up.

F. Since for the country qualitative variable, COUNTRY, I coded American as 0 and Japanese as a 1, all other things being equal, one would expect American cars to sell more than their Japanese competitors due to all the affective and psychological elements that may come into play in such circumstances in favor of the national commodity. Thus, COUNTRY is expected to have a negative slope coefficient, since Japan was coded as a 1.

G. Regarding the interactive variable CNTRYDIS, and because Japanese cars were coded as 1, if the theoretical argument I make is correct, i.e., that Japanese autos are not only superior but will sell proportionally much more than American ones, the better the American economy does, as expressed by disposable income, the more Japanese cars will sell relative to American cars . Hence one should expect the slope coefficient of CNTRYDIS to be positive.

Results:

One of the critical assumptions of the classic regression model is that the disturbances u_i all have the same variance, i.e., be homoskedastic.[4] Although highly impressive, the results obtained from this first model (see table 1) do not provide me good grounds for establishing conclusions due to the fact that the assumption of homoskedasticity was violated[5]. The reason for such conclusion is simple: in OLS regression we are interested in determining both the total impact that a group of variables has on a dependent variable as well as (and most important) discriminating their specific (partial) impact within that model. If homoskedasticity is violated the obvious consequence is that with the given model we are no longer able to use the same standard to assess the differential impact of each explanatory variable because the degree of variability for each of these variables is no longer the same. In simpler terms: we are less confident about the quality of the parameter estimates generated by that model because they were obtained in violation of a crucial assumption.

Thus, in a situation where observations on different variables are coming from different populations — as it is often the case with cross-sectional analysis (e.g. household spending per income bracket on a single time period) where σ_i^2 tends to increase as income levels increase — the OLS method by assigning equal weight or importance to each of these variables will not be making use of all this information and hence will yield less than ideal results (see table 1). In the proposed model a similar mathematical structure — has a different variability compared to others. Because VALRETEN is a ratio (indicating value retention or the ratio of retail price in a three

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[4]In more mathematical terms heteroskedasticity expressed as $E(u_i^2) = \sigma_i^2$ implies that the conditional variances of u_i are no longer constant. For a good theoretical discussion of this topic see Damodar Gujarati's *Basic Econometrics* (1988: 316-342).

[5]This was detected by running the Parks and Glejser tests.

Table 1

Regression Results
Dependent Variable: SALESLN

Variable	Parameter Estimates	Standard Error	Significance	Standardized Estimates
INTERCEP	2.1615	.4991	(.0001)*	.
SALLNLAG	.8096	.0298	(.0001)*	.7935
VALRETEN	.8055	.2999	(.0076)*	.0891
REPAIRIN	.0539	.0255	(.0353)*	.0912
RELPR	-.00003	.00001	(.0067)*	-.0769
CDISPIN	-.00002	.00009	(.0284)*	-.0714
COUNTRY	-1.1890	.6555	(.0705)**	-.5694
CNTRYDIS	.00035	.0002	(.0860)**	.5421

** Significant at the .05 level*
*** Significant only at the .10 level*

R^2: .7295 Adj R^2: .7243 F: 142.522 (@.0001)

year old car over its original list price as a percentage) there is — by construction — a tendency for that variable to have a much lower variability than the other variables because instead of dealing, for instance, with differences in thousands of cars, this variable's range of possible changes is much smaller.

Thus the next step was to choose VALRETEN to transform the data. The form in which this variable was used to transform the data was largely a consequence of the quadratic form assumed by the regression residuals in a graphical plot. Thus it seems reasonable to assume that the variance of the disturbances u_i is proportional to the square of the explanatory variable VALRETEN.[6] The results (see table 2) obtained from this transformation were the best results this model had yielded. This corroborates my belief that weighting all variables by the square of VALRETEN allowed the model to take all information available into account, thereby helping it to give its best fit yet.[7]

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[6]Note that in undertaking this transformation what we are basically doing is weighting the whole model by VALRETEN so that all variances become the same (i.e. homoskedastic) so that we may then compare each of the regression coefficients. Mathematically this step corresponds to: assuming that

$$E(u_i^2) = \sigma_i^2 = \sigma^2 X_i^2 \quad \text{, then } \frac{Y_i}{X_i} = \frac{\beta_1}{X_i} + \beta_2 + \frac{u_i}{X_i}$$

$$= \beta_1 \frac{1}{X_i} + \beta_2 + w_i \ ,$$

where w_i is the transformed disturbance term and is equal to u_i / X_i . This in turn makes it easy to verify that

$$E(w_i^2) = E(u_i / X_i)^2 = \frac{1}{X_i^2} E(u_i^2)$$

$$= \sigma^2 \text{ by using the assumption made earlier.}$$

[7]Because this is a transformed model all variables are expressed as some function of VALRETEN. In order to understand what these "new" variables mean (in table 2), please observe that:

YSALES = SALESLN/VALRETEN; YSALL = SALLNLAG/VALRETEN;
YVAL = 1/VALRETEN; YREPAIR = REPAIRIN/VALRETEN;
YRELP = RELPR/VALRETEN; YCDIS = CDISPIN/VALRETEN;
YCOUNTRY = COUNTRY/VALRETEN; YCNTRYDI = CNTRYDIS/VALRETEN.

Because this is an autoregressive model, Durbin's d-statistic is not appropriate as a detector of autocorrelation, the correct one being Durbin's h-test. This model's Durbin's h calculated value was -1.11.[8] Because the computed "h" value lies in the bounds of the interval -1.96 and 1.96 ("h" is an assymptotically normally distributed random variable with mean equals zero and unit variance), I failed to reject the null hypothesis (at the 5 percent level) that there is no positive first-order autocorrelation. Thus, the chosen model did not violate the classical linear regression assumption of no autocorrelation, i.e., that there is no relationship between u_i and u_j (they are independent).

Before I actually engage in interpreting the results, two aspects of this kind of transformation are worthy of mention. First, it should be understood that in the transformed regression the "true" intercept term becomes in fact what is expressed as the slope coefficient of the variable used in transforming the model. Conversely, the "true" slope coefficient of the variable used in the transformation will actually be what appears as the intercept coefficient. In other words, the intercept obtained from this model is actually the slope coefficient of YVAL, while the apparent slope coefficient of YVAL is the actual intercept of the model.

With this in mind I now proceed to interpret these results (refer to table 2):

a) because I am modeling the natural log of sales, the Neperian algorithm "e" (also known as the anti-log of the natural log) raised to 2.1332 (the value of the slope coefficient of YVAL) will give the mean prediction (or intercept) of YSALES when everything else is held constant. In other words, if all the other coefficients were zero, the increase (change) in sales of cars for that year would be of about 8.44 percent (i.e., $e^{2.1332} = 8.44$).

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[8]This result was based on a "d" of 2.114; the variance of the lagged variable (sallnlag) being equal to 0.03152, and an N of 377. See formula in Gujarati (1988: 526).

Table 2

Regression Results
Dependent Variable: YSALES

Variable	Parameter Estimates	Standard Error	Significance	Standardized Estimates
INTERCEP	1.1614	.3176	(.0003)*	.
YSALL	.7874	.0315	(.0001)*	.8077
YVAL	2.1332	.4916	(.0001)*	.1945
YREPAIR	.0556	.0276	(.0446)*	.0431
YRELP	.00003	.00001	(.0022)*	-.0441
YCDIS	-.00002	.00009	(.0536)*	-.0617
YCOUNTRY	-1.7481	.7997	(.0294)*	-.3448
YCNTRYDI	.0005	.0002	(.0367)*	.3317

** Significant at the .05 level*

R^2: .9300	Adj R^2: .9287	F: 702.672 (@ .0001)

b) conversely, the intercept estimate (1.1614) will help me get at the correct interpretation of VALRETEN (actually YVAL in table 2). For each one percent change (VALRETEN is a ratio, therefore a relative measure) in VALRETEN, sales are expected to increase by 3.194 percent.

c) Also, *ceteris paribus*, for each one percent change in YSALL, or the log of the lag of sales, total sales for the current year are going to increase by about 2.2 percent. In other words, this means that if the sales of last year went up by about one percent, that increase alone is going to cause, holding all other factors constant, an increase in this year's sales of about 2.2 percent.

d) for each unit change in the 1-5 scale for repair index, there will an increase of 1.057 percent in sales of a particular car, i.e. more cars of that model will be sold in that current year;

e) for each unit decrease in relative price, the number of cars sold of that model will increase by 1 percent, therefore conforming my a priori expectations that RELPR would take on negative values;

f) CDISPIN (actually YCDIS in table 2) or disposable income was the only variable which contradicted my *a priori* expectations (see p. 22). For each billion dollar unit increase in disposable income, there will actually be a 1 percent decrease in overall sales for that year. However, this finding pushed me to other very interesting findings One has to remember that one is basically studying patterns of association. I know that disposable income is correlated with time. But it is also known from general data plots that sales of American cars are indeed decreasing overtime. I also know that out of the thirty-three car models analyzed, only six were Japanese. Therefore, just by this simple fact there has to be a negative coefficient to disposable income because, though disposable income increases with time, sales of cars have proportionally fallen (and here we know that the majority of the sample is of American cars). Thus although

counter-intuitive, one sees that in a way disposable income should after all be expected to carry a negative sign.

g) another interesting fact is that COUNTRY confirmed prior expectations by taking on a negative sign. This indicates that if every thing else were the same the fact that a car was Japanese would mean that its sales would decrease by 5.74 percent. This points to the direction that Japanese cars must of necessity be much better than their American counterparts if they are to be successful in sales.

h) finally, a positive slope coefficient for the interaction variable CNTRYDIS indicates that in fact the better the American economy does, the more Japanese cars will be bought (relative to total market share), implying that Americans are going to sell relatively less. This also has another interesting interpretation. Basic microeconomic theory tells us that those goods of which people buy less as income goes up are called inferior goods. Is it not reasonable then to draw the conclusion that American cars are inferior goods, because as the results show, as disposable income increases people tend to systematically demand them less and more from the Japanese? As far as interpretation goes, we should expect that, ceteris paribus, if the American economy performs well and if a car is Japanese, there will be an increase in sales of about 1 percent.

Do the results obtained from this model afford the corroboration of the two hypotheses advanced by this study? The answer is affirmative in both cases. Indeed the model showed a significant strong and positive correlation between the overall number of cars sold in year "t" and past year (t-1) figures. The fact that the impact of time was not so overwhelming[9] as to annul that of all the other variables showed how

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[9]Its standardized estimate accounted for about 80% of the variation in the dependent variable (see table 2), which — for a time-series AR(1) model — is a rather clear sign that there are factors other than time impacting on "Y."

quality and the economic performance of the American economy are significant elements in explaining why the Japanese have consistently increased their market share, despite "natural" country biases.

Addressing the first hypothesis more specifically, because value retention and the repair index were positively connected with changes in sales, I can directly conclude that Japanese autos — by systematically having the highest scores — have gotten ever increasing shares of the American market. This is a clear empirical verification of the Japanese quality supremacy. To associate this quality supremacy with their ability to systematically turn out products which increase consumer value (page 1), thereby establishing a leader/follower relationship does not require an econometric model, but rather further qualitative investigation and theorizing on what I identified as the continuous improvement firm. The challenges (surmountable or not) that this alternative production system presents to the traditional American mass production system, may or may not be considered to fit with the dependency argument I wish to make here. But as far as quality is concerned, it still seems to point in that direction.

The second hypothesis, namely that the better the American economy performs the more likely will Japanese cars sell in America (because quality as a decision criterion gains precedence), was strongly corroborated by this model. In fact, the association of better economic performance and better Japanese sales performance is very telling because — as suggested by the model (actually by the interaction variable CNTRYDIS) — along with a better economic outlook there is an identifiable trend in consumer behavior toward purchasing Japanese autos. Although I am aware that disposable income constitutes macroeconomic data, I did not commit an ecological fallacy when I referred to this simultaneous shifting away from American-made

(GM/Ford) automobiles — as income increases — with a term suggested by microeconomic theory: American cars as inferior goods.

Conclusion:

Realizing that both center-periphery and center-center models are concerned with analyzing phenomena relating to a number of asymmetric relations going from one pole to the other, I suggest that a further step in this process of empirical verification would be to look at several core-core industrial relations, thereby developing — if a pattern is identified — a general theory of core-core dependent relations. Another step — more germane to my industry-specific approach — is to develop a complete analysis containing the political elements I suggested earlier at the end chapter 1. When that is done, and if a dependency pattern of the type I articulated and partially verified in the previous chapter and here is still present, I will be finally in a good position to make center-center dependency into a more general political-economic theory.

In 1980, over 80 percent of U.S. auto imports, or 23 percent of the market came from Japan. That same year, Japanese motor-vehicle production exceeded that of the United States — the first time U.S. production had ever been exceeded by another national industry. Both the results yielded from the above model and these two statistics suggest the increasing importance of the Japanese industry for developments in the United States. Although the increased penetration of Japanese imports and, more recently, the successful transfer of Japanese plants to the U.S. has been ascribed to changes in factor costs that exposed U.S. producers to risks they were unprepared to meet, this reason does not explain why, for example, the Japanese have been enjoying similar import success in Europe, where small, fuel efficient cars have always predominated. As table 3 clearly indicates, the competitive success of the Japanese —

and, more specifically, their status of leaders in a dependent dynamic relationship — involves more than merely the timely production of small cars. The supply-side analysis of the Japanese competitive advantage contained in the previous chapter as well as the strong empirical support for the proposition of a dependent dynamism at the market level seem to provide valuable insights on the industrial and trade dimensions of this relationship.

Table 3: Japanese Export Shares by Region

Year	*North America*	*Europe*	*Latin America*[10]
1970	45.6	11.6	7.3
1971	53.2	12.1	6.5
1972	51.2	18.7	6.1
1973	44.1	19.6	5.9
1974	43.4	14.9	5.9
1975	43.5	15.0	5.9
1976	40.4	19.1	5.0
1977	42.6	17.5	6.3
1978	44.1	16.2	5.1
1979	47.1	21.6	4.5

Source: Author's calculations based on data from Toyota Motor Sales Company, *The Motor Industry of Japan* (annual).

Although so far the concern has been with the domestic market, the importance of the international developments in this investigation means that both the domestic market and international dimensions should be studied. This task will be carried out in the next chapter where the impacts of alternative trade and industrial strategies, public

[10]Note that the Japanese share of exports for Latin America shows a decrease for the same time period. The author infers this is partially due to the closedness of those markets for imports since these countries were still strongly committed to import substitution through the 1970's. However, the main thrust of the argument is maintained here since in the same time period Japan succeeded in increasing their export shares to the more open and competitive markets of North America and Europe. This is largely a reflection of the fact that by the 1970's the Japanese had already ceased to be followers and started to became leaders in the auto industry.

policies, and external developments (e.g. the oil crisis, globalization of markets, etc.) will be examined in detail.

While political issues are certainly an important dimension of the questions examined here, it is crucial to note that so far this analysis has not stressed the institutional dimensions of political behavior in the two countries. There is an important distinction between understanding a process and influencing it. The issues just presented are not only areas of action for specific decision makers but, as suggested in chapter 2, also problems that demand new analytical methods and greater understanding. There is need for analytical methods to accommodate political factors in a rigorous framework of competitive behavior. It is this latter concern that chapter 5 shall address in its discussion of the political import of this relationship.

4. HISTORICAL BACKGROUND

As demonstrated in the previous chapter, the successful penetration of Japanese auto exports in the U.S. market leaves no question as to Japanese competitiveness. The sources of this competitive advantage are important to identify because the entire argument about dependent dynamism is based on the nature of the differences between Japanese and North American producers.[1] Chapter 3 verified that the position of leader in this relationship appears to be heavily based on the superior quality of Japanese made cars. This quality advantage is linked to the organizational structure from which it derives, as was argued earlier in the second chapter.

Although competitive advantage is often linked to individual firm strategy, the extent that certain elements of competitive advantage are country-wide rather than firm-specific further justifies my view that it is useful to generalize about the entire industry in a country[2]. The intent of this chapter, then is to examine what have been the socio-economic conditions prevailing in both countries and how they have impacted — and been impacted upon by — differing government trade and industrial policies in the postwar period. The main argument is that variations in state-societal arrangements help explain the current pattern of dependent dynamism between the automobile industries of these two countries.

As suggested in the second chapter, the change in postwar industrial leadership — especially in the automobile industry — is very much linked to the influence that governments have had upon business enterprises as both of them have reacted to and tried to change their national environments. In that discussion it was observed that the

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[1]See chapter 2.

[2]This nationally focused approach has been adopted by other industry-specific studies (e.g. Hunker 1983, Hart 1990).

strategies and structures of enterprises seem to both shape and be shaped by a number of different socio-economic factors of the national environment such as the financial system, the educational system, labor and capital relations, and the government's trade and industrial policies. But although government policies obviously have indeed affected international competitiveness, they cannot explain why Japanese firms do so well in areas lacking government input or why German firms do so well in spite of the fact that Germany has nothing vaguely resembling government guidance. Thus, to build a credible historical explanation of the dependent dynamism currently in existence between the North American and the Japanese automobile industries it is necessary to know how government, business, and labor are organized in each country. The emergence of the mass production firm in North America and the continuous improvement firm in Japan illustrates the profound differences in such state-societal arrangements.

This chapter is divided into sections on Japan and the United States. Both sections will include a summary of the main issues, an outline of the institutional arrangements that underlie overall industrial policy and a description of the specific government policies toward the automobile industry in the postwar period. In the case of Japan the evolution of industrial policymaking can be divided into stages. Genuine Japanese government policy — not to be confused with policies handed down during allied occupation — began with an attempt to break away from the follower status of Japanese industry in the competition of the first two decades following World War II. A second stage seems to have been established in the mid 1960's when there was a noticeable policy-based strategic movement toward growth of exports as Japanese industry began to escape its status as a follower. Finally, the period starting in the 1980's introduced the third and present stage of this closer government/enterprise historical evolution — a stage in which the threat is no longer presented by direct

foreign competition but by the protectionism of foreign governments having structurally depressed regions that historically relied on mass production (now follower) industries.

This close relationship between the economy and the government has some crucial practical and theoretical consequences. It has fundamentally altered the way in which scholars have perceived the importance of industrial policy. Best (1990) suggests that in both free-market and Keynesian frameworks the concept of industrial policy derives from a dichotomous perception of the capitalist economy in terms of public planning versus the market — the basic difference being that in one view government intervention is opposed while in the other it is favored. None of these perspectives captures the role of industrial policy in postwar Japan where "the purpose [has been] to promote internationally competitive business enterprises in markets that are continuously being reconstituted by strategically aware competitors" (1990: 168). On the Japanese reinvention of the concept of "industrial policy," he further adds:

> [F]or Japan, the criterion of enterprise success is not allocative or productive efficiency but strategic advantage, and the criterion of economic success is not optimal resource allocation but a continuous reallocation towards higher value added production processes and sectoral compositions. The term "industrial policy" in this context presupposes that government economic policymaking is guided by a Schumpeterian accumulation (which presumes markets are instruments of growth) and not an allocative efficiency orientation (Best, 1991: 169).

This presents a much differentiated picture from that of the United States where government economic policymaking has been historically perceived as market "interference." Consequently, one should expect to observe — especially in the case of the U.S. automobile industry — that this antagonism between private enterprise and government is an important factor behind an apparently constant approach to issues of industrial competitiveness on the part of the U.S. government. The nature and content of this approach remained consistent until the early 1980's when — led by a new

perception of Japan as the nation which had achieved industrial leadership in a number of highly visible and economically strategic areas (e.g. steel, consumer electronics, semiconductors, etc.) — a new vision began to develop. However, it is only with the Clinton administration that really concrete outcomes came to be pursued. Thus, perhaps the best illustration of this almost continuous historical evolution of industrial policy on the part of the United States is the skepticism of some experts in economic policymaking who seldom admit that the country even has an industrial policy[3].

State-Societal Arrangements and the emergence of Japanese leadership:

Definitions of what constitutes "industrial policy" are bound to be controversial. In the Western world supporters of the free-market position see industrial policy as government subsidization of inefficient enterprises, while the orthodox Keynesian perspective sees industrial policy as one of several stabilization tools the government can resort to curb market failures. Thus, the concept of industrial policy seems to take its meaning from the theoretical framework that informs it (Best, 1990). In Postwar Japan — where a process much similar to Schumpeterian accumulation seems to have taken place — "industrial policy" has taken a quite different new meaning. As Best (1990: 168) suggests, in Japan the term industrial policy can be reasonably equated with the "promotion of internationally competitive business enterprises in markets that are continuously being reconstituted by strategically aware competitors." This promotion of strategically aware competition — made possible by the existence of an almost symbiotic relationship between government and private enterprises — can be largely attributed to a set of historical, institutional, and cultural circumstances that were in place notably early in the Postwar years.

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[3]See Best (1990), and Hart (1990).

The discussion of the evolution of Japanese industrial policy that follows begins with a quick reference to the economic policy institutions created during the American occupation — themselves heavily based on ideals of "perfect competition" — followed by a presentation of how formal and informal state-societal arrangements shaped the evolution of Japanese industrial policy in the post-occupation period. In this evolutionary history, three stages will be characterized:

a) 1949–63 which marked the resurgence of the *zaibatsu*, the birth of MITI, the institution of cartel formation for rationalization of production, the institution of market access controls for protection of national follower industries, and the emergence of strategic sectoral planning;

b) 1963–80 characterized by overall tariff reductions, the furthering of market access, promotion of technology transfer and difusion, strong export-oriented growth, the strengthening and consolidation of strategic sectoral planning which at first reestablished MITI's influence on national industry and then paradoxically reduced it, and industrial production of more technologically intensive products geared to high-volume markets;

c) 1980–present where foreign direct competition is no longer perceived as a threat due to increasing competitive dynamism of Japanese enterprises, and the resurgence of MITI's influence as the agent for implementation of voluntary restraint export quotas as Japanese industries anticipating protectionist legislation in the United States turn to MITI to defend them against the passage of protectionist trade legislation by the U.S. Congress.

This section concludes with a description of how specific government policies toward the automobile industry can both explain and be explained by the Japanese auto industry's transition from follower to leader.

Throughout this section special attention will be given two general trends underlying Japanese industrial policy in the post-occupation period. The first has to do with the tendency to formulate and implement — through the use of different incentive schemes — industrial policies which are actively concerned with orchestrating a gradual shift into higher and higher value-added production inside Japan. The other is

the strategic coordination of production efforts initially geared to export to high-volume/lower-end segments of foreign markets in order to attain economies of scale that will eventually enable Japanese competitors to gradually move up to higher segments of those markets. These trends as well as other aspects behind the evolution of Japanese competitive dynamism that I have indicated above will help me illustrate not only how government and enterprises have historically been able to define shared interests but also they also help me characterize the crucial importance of strategic awareness in a competitive context. The implication is that "strategic planning is too important, and its effects too pervasive, for its formulation to be left to the private sector" (Best, 1990: 184).

The American Legacy: A First Meeting with Antitrust

Following Japanese defeat in World War II, the General Headquaters of the Supreme Commander for Allied Powers (SCAP) became the institution specifically commissioned to formulate the general guidelines of industrial policy in then occupied Japan. Being part of an American occupation apparatus, as well as being culturally and intellectually indebted to antitrust, SCAP saw fit to push for legislation which was heavily antitrust-based.

It should be no surprise that its first major industrial policy act marked the dissolution of that piece of Japanese society perhaps most incompatible with antitrust: the *zaibatsu*.[4] Because of they were organized as holding companies, over 80 *zaibatsu* were broken up during 1946 and 1947; Mitsui, the largest, was divided into about 200 companies and Mitsubishi into 139 companies. Following that breakup, the Japanese Antitrust Act of 1947 — which was modelled after U.S. antitrust law — was enacted.

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[4]See Aida (1979).

Private monopolies, cartel formation, holding companies, over 5 percent cross-company share ownership, and any type of inter-firm price agreements are among a long detailed list of institutional arrangements which then became illegal. A Fair Trade Commission (FTC) — modelled after the U.S. Federal Trade Commission — was created, to administer such antitrust laws. These decisions reflected the intention of SCAP to decentralize the Japanese economy and to reconstruct it based on the theoretical vision of perfect competition that had historically guided American antitrust policy.[5]

However, unlike Yankee antitrust, Japanese antimonopoly laws were never used to block efforts by the Ministry of Munitions (MITI's predecessor) to establish in 1948 the Medium and Smaller Enterprises Agency. This institution was created in effect to function as a cartel headquaters for small business within the ministry. Not only symbolic of the leniancy in implementing antitrust policy — which should be expected from a society not culturally ready to see inter-firm arrangements (price-fixing or not) as a detrimental to the public good — this act of the Ministry of Munitions is also illustrative of the tension that has historically characterized the relations between the FTC, the enforcement agency for antitrust legislation, and the Ministry, the administrator of industrial policy in Japan.

Aside from an apparent intra bureaucratic power imbalance, the occurance of an important historical development led SCAP itself to reverse its 'perfect competition' policies towards the industrial structure of the Japanese economy. As political turmoil took hold of China, SCAP's concern with the power of the prewar *zaibatsu* was

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[5]The following section provides a more thorough discussion of the historical developments which led antitrust to become equalled with US's industrial policy, and also how this new assumed purpose can be associated with the historical distance that underlies much of the relationship between government and business enterprises.

reversed once Japan's role as an ally in a possible war against China was considered.[6] Knowledgeable about Pentagon procurement methods, SCAP knew that such a task is greatly simplified by simply contracting with large rather than small companies. A revised Antitrust Act was abruptly enacted in 1949. As it relaxed each of the anti-holding company provisions of the 1947 act, the 1949 act "paved the way for the eventual re-establishment of *zaibatsu*-type enterprise groups organized around banks and holding companies" (Best, 1990: 175). Furthermore, the "flexible administration" of the other types of antitrust laws that followed the passage of such act, made the illegality of cartel formation an irrelevant issue.

The strengthening of the Ministry of Munitions, and the ressurgence of the *zaibatsu* also mark a radical alteration in the distribution of power between state and business with the FTC appearing as the clear loser. In May 1949, the war time Ministry of Munitions, which had replaced the prewar Ministry of Commerce and Industry, was reconstituted by SCAP as the Ministry of International Trade and Industry (MITI). With its autonomy and its own vision for reconstructing business and industrial organization in Japan, MITI's creation marks the beginings of Japanese industrial policy.[7]

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[6]The logic of this argument should be originally attributed to Best (1990).

[7]Best provides an enlightening assessment on the uniqueness of the successful American (in the person of the SCAP) contribution to Japanese institution building:

> Japan was perhaps fortunate that the ideology of free markets was not imposed. Instead, after a brief period of promoting free markets, SCAP turned to the creation of a series of political and economic institutions that were designed to mobilize resources under the tutelage of a visible hand — MITI. In this, U.S. economic policymakers were remarkably successful in overseeing the development of a governmental agency for economic restructuring and enterprise rationalization. It has never been so successful in Third World countries when the same role has been assigned to the invisible hand of the free market. (Best, 1990: 177)

The 1949–65 Period: The Birth of Sector Strategies

The powers the General Headquarters of SCAP granted MITI far exceeded those possessed by its historical predecessors. With controls over foreign exchange and capital flows — previously held by the Ministry of Finance — obtained with the passage of the Foreign Exchange and Foreign Trade Control Law of 1949 MITI gained descretionary power to control imports and foreign exchange. This meant that business enterprises needed MITI's approval for import licenses and access to foreign exchange. Although this amounted to unprecedented levels of power being given to one single government agency, MITI was not granted statutory or legal enforcement powers. This usually meant that MITI was unable to control entry of companies in many crucial sectors. The lack of statutory power, however, turned out to be more of a blessing than a curse because it led MITI — being forced to rely on non-statutory informal processes in order to achieve its goals — to strive to develop joint private-public consensus for each of its strategic sectoral development plans.

With the ending of foreign occupation and the dimished war activity in the Korean peninsula in 1952 (the Korean war only ending in 1953), a recession followed. In order to deal with the drop of North American investment, and excess production capacity, MITI created a series of cartels in order to prevent "overcompetition." The passage of the Act of Provisional Measures for Stabilizing Selected Small and Medium Enterprises (August, 1952), a necessarily pro-cartel act, allowed small and medium

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I would only confirm this insightful comment by suggesting that attachment to this same free market logic explains the cold reception that the developmentalism of Brazil's Juscelino Kubistchek and Argentina's Frondizi —themselves confessed Prebischians — received in the U.S. in 1960.

sized firms — which were hurt by the formation of big business coalitions — to form cartels provided that "more than half of the qualified enterprises in an area agree[d] to be members and two-thirds of the members [were] small and medium sized enterprises." The justification for exemption was cutthroat competition, a concept that although does not have any theoretical content in free-market theory, the imported theoretical underpinning of Japanese antitrust legislation, is full of meaning in the Schumpeterian world of economic development — the implicit theory suggested as the basis of Japanese industrial policy.

Being faithful to the spirit of the dynamic Schumpeterian economic model, however, meant that this post-occupation round of cartel creation was based on economic justifications that went far beyond that of avoiding the pernicious effect of cutthroat competition during recession. In fact, the state's formal and informal assistance in cartel creation seems to reveal an unequalled level of awareness of the problems that unrestricted price competition can introduce in the early stages of long-term investment in new plant and equipment. For instance, firms that would be willing to make long-term investments which could eventually generate economies of scale would likely shy away from such investment decisions if that meant they would be vulnerable to other non-investing/adaptive competitors in the short-term.[8] Thus cartels

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[8]The theory behind cartels centers basically on the idea that uncoordinated price competition becomes a self-defeating approach when the long-run dynamics of the business cycle are considered. It presents us the following line of argument :

> Price competition leads to overproduction, insufficient specialization, cutthroat competition, and bankruptcy in the inevitable business downturns. The result would be less investment as firms opted for financial liquidity for fear of bankruptcy during a downswing and less competition among survivor firms in the ensuing upswing. Control associations, or cartels, by facilitating cooperation among competitors on prices, output, and investment plans, could counter the tendency to cutthroat competition *without sacrificing industrial dynamism*. [Therefore] [h]igher prices to consumers in the short run would be counteracted by the lower prices resulting from long-term investments in the modernization of production in the long-term. (Best, 1990: 170).

could be perceived as justifiable on the grounds that they actually contributed to increasing the overall level of future competitiveness. It is in this sense then that cartels are referred to as rationalization cartels.

These reforms opened the way to what is now perceived as MITI's historical influence over inter-firm cooperation schemes. More important, this framework for cartel creation catapulted MITI's sectoral bureaus into a new role, namely that of a conduit for shaping and implementing sector strategies, which, in turn, can "have considerable influence in the shaping of business plans of individual firms" (Best, 1990: 178). These vertically integrated sectoral bureaus were constituted as sector-specific deliberation councils composed of private and public officials. Meeting on a permanent basis their task — usually referred to as "administrative guidance"[9] — has been that of forging joint private-public consensuses with the ultimate goal of promoting — through their influence over member business enterprises — international competitiveness. Though lacking statutory powers, these sectoral bureaus were were at the basis of MITI's influence during the 1950's especially because of the range of domestic market restraint instruments that MITI could resort to whenever it saw fit to mold a consensus. The most important of these were:

a) tariffs and quotas;
b) control of foreign exchange;
c) influence over credit allocation in public and private banks;
d) technology import licenses;
e) accelerated depreciation allowances;
f) land subsidization;

Such considerations assume incredible importance especially when one considers the Japanese status as an industrial follower at that time and their obvious need to encourage nationally-based industrial dynamism.

[9]See Aida (1979), Best (1990), and Hart (1992).

g) influence over cartel legalization with the FTC;
i) creation of a joint private-public company.[10]

The result of this mixture of private and public forces was a well arranged Japanese trade and industrial strategy which strengthed the export competitiveness of the Japanese industry. However, it becomes clear that for Japanese enterprises — follower firms at the time — these market restraint mechanisms represented more than a shelter from the competitive dynamism then held by their foreign rivals. With the combined introduction of MITI's consensus-based "vertical bureaus," market restrictions served as a crucial temporary "window of opportunity" in which Japanese firms not only attempted to catch up but also in the process were given a chance to jointly implement decision criteria that went far beyond the short run without being directly threatened by domestic adaptive competition.

The success of this shared experience in public-private relations brought more than industrial development and export growth to Japan. It caused the international perception of Japan to be gradually upgraded from that of a modest industrialized nation to that of a new dynamic economic challenger with which other nations had to reckon. That new status, however, brought its own set of problems. By 1960 Japan was put under pressure by foreign governments and international agencies (e.g. GATT, IMF, EEC) largely because of the market restraint measures contained in its industrial policy. A country's access to foreign markets was becoming increasingly conditioned to the degree to which restraints were being put on imported commodities, capital flows, and foreign exchange — and Japan was no exception. As Japan complied with these pressures, the loss of direct controls in each of the markets involved, reduced

[10]See Best (1990: 181). The sheer number of these market controlling instruments and the degree to which they could and were used in Japan should in some way force some critics of ISI to rethink the whole structure of their free-trade based "inefficiency" arguments since these measures seem to be at the root of the great export dynamism later assumed by Japan.

MITI's power to influence enterprise decision making. Added to these externally induced changes, the increasing profitability of Japanese firms reduced their dependence on bank loans, and, thus, had a cumulative effect on the reduction of MITI's influence.

The 1963-80 Period: The Consolidation of Strategic Sectoral Planning and The Promotion of Technology Transfer

Market liberalization forced MITI to look for new ways to promote market rationalization. This meant that a new planning framework had to be elaborated so that MITI's institutional goal of providing development plans for different sectors could be achieved. MITI responded to this challenge by providing firms with sector strategic analysis. The uniqueness in the kind of "administrative guidance" provided by MITI's vertical bureaus lay not in the mere existence of development plans for different sectors — there are examples of such plans in both market and planned economies —but on the fact that such plans were based on a strategic analysis of the threats to and opportunities for specific sectors in the international market.

The task of elaborating *bona fide* strategic planning on such a grand scale, especially on the part of a governmental institution such as MITI, requires that the planner have a great sensitivity to global business dynamics. Because many in the West seem predisposed to see government involvement as a threat to the unique business dynamism of private enterprise, the thought of a government agency that is capable of devising not only successful but even *strategic* industry-based plans may seem outlandish. But the value of MITI for the Japanese derives exactly from the fact that its deliberation councils — by virtue of not having any pecuniary involvement of their own — have had a capacity for dispassionate analysis of strategies that would be impossible for fims to supply themselves.

In concrete terms most of these sector strategic plans, called "visions," have commonly addressed three related but distinguishable concerns: a) the articulation of a long-range vision which suggests future sectoral contours; b) the suggestion of a potential place for Japanese firms within that broader picture; and c) the shaping of strategies of individual enterprises to make the transition from the present organizational capabilities to those required by the sector strategy, thereby converting Japanese firms into international market forces. Much of the international competitive success of Japanese firms can be credited to their level of long-range strategic awareness. In fact, quality arguments aside, it is not by chance that Japanese firms have been most successful in industries in which their foreign competitors have seemed to be poor in strategic sophistication. Citing the motorcycle, electrical appliances, steel, and automobile industries as examples, Best comments,

> American and British firms retreated to low volume up-market products when faced with the invasion of the Japanese-made motorcycles at the high volume lower end of the market. But Japanese success at the bottom end was used to finance moving up a segment which led to a futher retreat by the traditional producers. The process of segment retreat continued until Japanese firms were using scale economies to produce at costs that could only be achieved by focused production. In the case of consumer electrical products, U.S. competitors chose to produce overseas [with subcontractors] rather than modernize their production facilities at home. But losing control of production has turned out to be one step towards losing control of the market (Best, 1990: 183) [comments added].

In the automobile industry, one example of how a market niche was established reveals the strategic awareness contained in MITI's success in promoting the transfer and difusion of technology as part of its production rationalization campaigns. The technological apprenticeship of Nissan is the case in point. It started with the production under license of European vehicles, such as the Austin A40 built from 1952 to 1959. By 1959, when the joint venture with Austin was completed, Nissan started production of the Cedric, a clone of the Austin A40. By 1963, Nissan was producing

original, if technologically unsophisticated, automobiles. The current Nissans are characterized by original in-house design, refinement and creation of new technologies, and product (not necessarily price based) competitiveness. In this example, as in many others, one sees the following developmental stages: *apprenticeship by imitation* geared to high volume markets (an equivalent product is sold much cheaper than the competition), *consolidation of lessons learned* (a now refined product is sold for somewhat less), and *dynamic innovation* (an innovative product is sold for the same price or more).

But the idea of sector strategy has also answered to an inward-oriented purpose. As elsewhere indicated, "sector strategy is more than the promotion of effective strategies within individual firms, it implies that the strategies of firms within a sector are interdependent" (Best, 1990: 183). Hence sector strategies have also been used as a tool for determining the contours that competition should take so that the long-term development of the sector is ensured. For instance, the number of competitors and even the model of competition altogether were occasionally targeted in order to promote MITI's envisioned ideals of production rationalization (see ff. 8). At times the pursuit of such sectoral strategies lead to conflict between MITI and the specific industry or firm which was then being targeted for change within the scope of a new sectoral policy. A case in point was MITI's 1965 decision to remove tariffs in the automobile industry. This voluntary exercise in *tariff removal* on the part of the Japanese government — not to be confused with the 1963 overall *tariff reduction* that followed foreign pressures for market accessability — derived from MITI's evaluation that tariff removal from that moment would actually contribute to increasing the competitiveness of the Japanese automakers. Nissan's success in acquiring and then improving the technology to develop a genuine competitor of the Austin A40 was perceived as positive evidence that a competitive disadvantage had been sufficiently

diminished to justify the introduction of foreign competition. The decision was bitterly opposed by Japanese automakers. As government planners in Brazil and Argentina learned about a decade later, "protected industry syndrome" is likely to manifest when government signals with removal of tariffs removal and other protective measures. Obviously Japanese industry was no exception. Nonetheless, from the point of view of Naohiro Amaya, the MITI's vice-minister, "the timing was quite important and was probably the greatest single contribution made by the ministry to the industry's development."[11] Amaya further argues that to have removed the quotas five years sooner or later would have been equally damaging to the industry's development.[12]

However, MITI's success in removing import quotas notedly reduced its influence over the automobile industry. This is perhaps best illustrated in 1966 when MITI — led by the belief that the Japanese automobile industry had too many producers which would be more easily overwhelmed by the more advanced American companies — pursued a strategy of agressively restructuring the entire industry around two leaders Nissan and Toyota. At first MITI was successful in arranging a merger between Nissan (then a partially government owned company) and Prince Motor Company. However, when it attempted to promote a merger between Mitsubishi and Isuzu Motors against the wishes of Mitsubishi, MITI grossly failed. If we take into account that MITI was opposed to American auto maker investments in Japan, MITI's overall defeat was actually even greater because: a) Mitsubishi established a joint venture with the Chrysler Corporation; b) Isuzu closed a joint venture agreement with

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[11]See Jim Smith's article in *Automotive News*, March 9, 1987.

[12]It is my opinion that Amaya's comments can be equally applicable to the Latin American context, where prolonged government unwillingness to remove the protective measures earlier called for and theoretically justified by ISI, ultimately led to the development of an inefficient and obsolescent industrial structure in the continent. Note (see chapter 2) however, that the sectoral abolition of ISI was an integral part of ECLA's economic analysis.

General Motors; and worst of all c) Ford acquired an equity holding in Toyo Kogyo (which later became Mazda Motor Corporation).[13] Although time came to prove MITI's concerns about Japanese competitiveness were unwarranted, the embarassement resulting from its unsuccessful pursuit of sectoral reorganization only the begining of a period of dimished influence. The competitive dynamism that Japanese industry came to assume — which should be partially credited to policies based on MITI's deep analytical perception of strategic competition — furthered the trend toward greater independence from MITI, though membership and participation in the same period clearly intensified.

The 1980 - Present Period: The Achievement of Competitive Leadership and The Reemergence of MITI as the Advocate of Japanese Industry.

Broadly speaking the Japanese government remained aloof from the affairs of the auto industry until the end of the 1970's. Toyota, Nissan and other Japanese manufacturers not only had overcome their initial limitations as followers but indeed, through internally created production processes had become aggressive, if not superior competitors to the American producers (see chapter 2). By 1980, Japan led the world in automobile production with an annual output of 11 million vehicles while the United States produced 8 million. Also, by 1983 Nissan-Japan overcame Ford-USA to become the third largest auto maker behind General Motors and Toyota.[14] By now, "the threat to the Japanese automobile industry was not that of direct foreign competition, but protective legislation by foreign governments faced with structurally depressed regions that had historically depended upon car production" (Best, 1990:

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[13]See *Automotive News* (March, 1987).

[14]See Cusumano (1985).

186). In 1979, the rapid increase in Japanese imports into the United States following the second oil price increase created a trade dispute that required the government's attention.

MITI's influence quickly resurged under such conditions. In the spring of 1981 in anticipation of protectionist legislation in the United States, MITI placed export ceilings on car exports to the United States as part of the Voluntary Restraint Agreement with the Reagan administration. Illustrative of their past history of constructive cooperation with MITI, Japanese automakers — though natural early opponents of the VRA — contributed to the determination of their own shares in close negotiations with MITI. After all, faced with a worse outcome — that of the passage of a protectionist trade package by the U.S. congress — this was their only choice; and they were aware that MITI could indeed be effective acting as their common advocate.

The VRA forced MITI to play the role of a cartel organizer — a role it had played voluntarily, and very well, in the past. Each firm received an export allowance equal to its proportion of Japanese exports to the United States for the previous three years times the total quota. The objective was to freeze the export shares of each firm in the U.S. market. However, the highly aggregate nature of the goals being pursued by this new approach to trade imbalances — a theme which will be closely discussed in the next chapter on U.S. trade policy toward Japan — glossed over an important dimension of the trade relationship between the North American and the Japanese auto industry: the dependence of the big three U.S. firms on imports from Japanese firms in which they had an equity share.[15] The U.S. firms, especially GM, were put in the

[15]These ties become actually more easily perceived when one observes that Chrysler had a 17 year old joint venture with Mitsubishi and actually marketed their models in the U.S. market, Ford owned 25 percent of Toyo Kogyo (which later became Mazda), and GM had purchased 34.2 percent of Isuzu in 1971 and 5.3 percent of Suzuki in 1979 (Saso, 1981: 94).

strange position of lobbying for higher export quotas for Japan so that they could market a sufficient number of small Japanese-built models under their own labels.[16]

Although this quota system was mostly based on the objective criterion which stipulated that a company's export share would be based on the previous three years's export performance, MITI actually increased its leverage over the auto makers. It did so by apportioning quota 'leftovers' among firms which had managed to completely sell up to the limit of their export shares. MITI also used its discretionary power to "encourage Japanese firms to adopt a variety of strategies to reduce the continued underlying trade tensions" (Hart, 1992: 70). For instance, it moved to limit export quotas of Toyota and Nissan as an inducement for them to consider alternatives to exports in meeting U.S. demand. In a move symptomatic of the changed times, MITI particularly supported and approved joint ventures for producing Japanese models in the United States — as in the GM-Toyota joint venture in Freemont, California — and for setting up entire production facilities — as in Nissan's truck plant in Smyrna, Tennessee, and Mazda's plant in Flat Rock, Michigan.[17] In fact, since the conversion of the Honda motorcycle plant in Marysville, Ohio, into an automobile plant in 1982, Japanese have become a major presence in the United States (see table 4.1).

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[16]See "GM Seeks Higher Japanese-Import Quotas So That It Can Sell Affiliates's Cars in U.S.," *Wall Street Journal*, September 12, 1983: 17.

[17]See Susan Chira's "For Mazda, a U.S. Car Plant," *New York Times*, December 1, 1984: 21.

Table 4.1: Japanese Plants in the United States as of 1990

Company	*Location*	*Date opened*	*Capacity*	*Models*
Honda	Marysville, Ohio	1982	360,000	Accord
	East Liberty, Ohio	1989	150,000	n.a.
Mazda	Flat Rock, Mich.	1987	240,000	MX-6
Mitsubishi-Chrysler	Normal, Ill.	1988	120,000	Eclipse
Nissan	Smyrna, Tenn.	1983	265,000	Sentra and light trucks
Subaru-Isuzu	Lafayette, Ind.	1989	240,000	n.a.
Toyota-GM	Freemont, Calif.	1984	100,000	Corolla
Toyota	Georgetown, Ky.	1988	200,000	Camry

Source: Author's calculations based on table originally printed in *Business Week*, April 25, 1988.

But even this remarkable shift on the part of MITI toward favoring joint ventures with North American firms and stimulating Japanese overseas production appears to have its foundations in carefully thought out strategic planning. The presence of a strategic concern behind these developments is perhaps no more clear than in the words of J. Baranson, a technology-transfer expert:

> Ten years ago [the Japanese] were already talking about phasing out their automobile and steel industries and moving into more productive areas. In 1971 they predicted they would be spending $65 billion over the next ten years to move into "knowledge-intensive industries" (Baranson, 1983: 13)

This statement helps reveal another important dimension of the strategic planning done by MITI: Japanese industrial policy has involved more than just sectorally-based planning but, most important, sectoral strategic plans seem to represent only the second level of strategic planning in a broader intersectoral strategic analysis which establishes guidelines for long term investments which help in turn shape the future of sectoral compositions.

This becomes clearer when one considers the definite pattern according to which Postwar Japanese industry seems to have developed, namely that of sequentially moving into higher and higher value-added production. As Best indicates,

> Japanese industrial policy involves sequential targeting of sectors to maintain industrial competitiveness. [I]t started with low-skilled labor-intensive products, but with the intention of moving first to medium-skilled medium-capital-using products, second to skilled-labor raw-material-intensive sectors, and third to knowledge-intensive sectors. The process of moving through such a hierarchy of sectors [or] sectoral restructuring meant increasing the value added of existing resources as Japan established competitive predominance in more organizationally complex processes and developed more highly skilled labor and experienced enterprises (Best, 1990: 189) [comments added].

Clearly, as most nations attempt to develop new sectors of economic activity, they allocate resources according to the notion of establishing competitive advantage. But what makes the Japanese case unique is that such successful transition across sectors has been carefully thought out as an integral part of Japanese industrial policy. This in turn can be explained by the fact that Japanese industrial policy has been more successful than others in "integrating this shifting sectoral pattern with the competitive strategies [which MITI jointly elaborated with industries] and organizational capacities of individual business enterprises [which they developed themselves]" (Best, 1990: 189).

MITI's task of guiding allocation decisions across sectors, however, is a complicated one because the choice between betting on new technologies for old industries *versus* betting on new industries altogether is neither simple nor avoidable.[18] The mission of MITI's Industrial Deliberation Councils has been to ensure that such bets are informed ones.

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[18]As I indicated in the discussion of the choice (see chapter 2) that the mass production firm faces between innovating or using adaptive strategies, assuming that choices are either simple or allow themselves to be statically analyzed always constitutes a big mistake.

As the above discussion suggests, the strategic analysis of each sector has proved to be pivotal to the success of Japanese firms, but, more important, it has also affected the role that MITI has come to play in a sector at any given time. Furthermore, as economic development has taken place this role has depended upon the changing relationship between Japanese firms and their competitors in the rest of the world. It is also evident that a given pattern of state-societal arrangement can be credited for the emergence of an industrial policy which is, in large part, the result of an effective joint public-private articulation and coordination of long-term strategic analysis occurring both at the sector level and beyond it. Although mechanisms limiting market access were used, government "intervention" was not at all about creating master plans for directing business activities to avoid the market. Rather the planning that existed was a means of fostering strategic planning within enterprises so that they could become truly dynamic market forces.

At the intersectoral level the industrial development of Japan is similarly strategically oriented. Attention is focused on the sectoral composition of long-term international competition with a systematic interest in gradually converting Japanese industry into production of higher and higher value added goods and services. Again, developmental stages similar to those occuring in "old" sectors where Japanese competition is still follower — apprenticeship by immitation, consolidation of lessons learned, and dynamic innovation — appear to be at work. Best well indicates some common aspects of this first stage:

> [i]n the early or high growth stages of the development of a new Japanese sector for which powerful competitors already exist, both the firms involved and MITI have the same goal: modernization (or creation) of productive plant as quickly as possible. The firms are likely to welcome MITI protection initiatives, including the formation of rationalization cartels where agreed by

> the FTC, or to agree to sector initiatives proposed by MITI officials under administrative guidance (Best, 1990: 191).[19]

If the sector becomes successful in the international economy, MITI's influence wanes — as illustrated in the development of the automobile industry. In this second stage, the firms are well situated to carry out strategic analysis, to generate long-term finance on their own, and to pursue technology agreements and even joint ventures with foreign firms. At that point they have little interest in having their policies examined by MITI. But even here MITI often continues to play a role. In the automobile industry, as noted, individual companies are ill suited to negotiate quota arrangements with the U.S. government. The car companies depend upon MITI to make the best possible case as their advocate and they also negotiate with each other through MITI over quota shares.

Another potential role for MITI emerges if success in a given sector eventually leads to tendencies to excess production and structural depression in the industry. However, MITI seeks to anticipate these developments and negotiate a planned reduction in the growth of Japanese capacity and eventual shift of resources to emerging sectors — many of which may be offshoots of the declining sector. In the car industry, for example, MITI believes that the present nine domestic competitors should be reduced to three or four. The car companies do not agree. But where excess production eventually leads to chronic excess capacity, cooperation with MITI can bring considerable relief through the efforts of firms to close down plants in a planned manner.

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[19]This stage seems to closely mirror what is happening behind the current (February-March, 1994) threats by the U.S. to use Super 301 against what appear to be Japanese informally imposed access limitations to Motorola — an apparently more developed competitor — to the new Japanese celular phone market.

State-Societal Arrangements and the erosion of U.S. Industrial leadership:

People knowledgeable about economic policy making in the United States would hardly question the assertion that historically this country has not had a set of policies that could be properly described as an industrial policy. More often than not, the term "industrial policy" is closely associated with planning or with market interference in the guise of 'Keynesian-style' market-stabilization — neither being a popular subject with American political and industrial elites.

This predisposition to view most government actions toward industry as ill-fated interventionist schemes appears to have taken a crucial shift in the 1980's when a variety of explicit protectionist measures were advocated by members of both major political parties and supported by diverse interests. However, the reemergence of protectionism in the late 1970's has not changed the nature of American economic policy making toward industry. On the contrary, the main argument of this section is that protectionism can be understood as one more evidence of the fragmented character of industrial policy[20] in the United States; an "industrial policy" — if it can be called one — that stresses the use of tax incentives, hard technology policies and relies mainly on the large size of the U.S. market and the enterprise of its firms to maintain competitiveness in global markets.

By now it should be obvious that this fragmented policy has not been very successful in the steel, consumer electronics, automobile, and, more recently, semi-conductor and machine-tool industries. In fact, when faced with competitors engaged in flexible production, American mass production-based industry has systematically

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[20]In connection with this *fragmented nature of industrial policy*, it is interesting to observe that one of the distinguishing characteristics of the organization of the American state is the *fragmentation of power*, where the federal government not only has to share powers with state and local governments, but is further divided along three branches, the legislative, the executive, and the judiciary. The thesis that power is fragmented in the United States owes much to Theodore Lowi (1979).

become a follower, whose catching up efforts can be characterized as the pursuit of a moving target (see chapter 2). Beyond that, however, the whole issue of competitive advantage appears to be clearly associated with events that are taking place in a country-wide rather than firm-specific context. For instance, the development of the individual firm's strategic awareness and the promotion of varying degrees of cooperation and competition among them should be given partial credit for the transformation of the competitive terms of industrial capitalism in the last quarter of this century. Here is where the impact of government should not be ignored.

In this section, as in the previous one, the core of the explanation lies in preexisting government-enterprise relations. Because of the absence of clear historical policy-based shifts in U.S. industrial policy, this section will not be constructed longitudinally like the previous section, rather I will concentrate on determining how the state (in a broad sense) has both acted and been pushed to act in order to promote the interests of the Big Three (Chrysler, Ford, and General Motors) in manner that does not appear to be clearly associated with the development of a new vision of industrial policy. I will examine government responses to the new realities of automobile competition from the late 1970's to present, the competition among U.S. states for transplant facilities, and whether I can identify any specific pattern in the pressures from the Big Three for policies that would enhance their position at the expense of the transplants.[21] It will be shown that the relationship developed between government and the automobile industry has taken on a clear pattern: the pervasive use of trade policy as the U.S. government's surrogate for the lack of a clearly articulated

[21]As the previous section suggested, transplants are more than an example of a successful Japanese response to import quota shares, they appear to be an integral part of their strategy of moving through a hierarchy of sectors which focus moving to higher and higher levels of value-added production.

industrial policy; a trade policy that alone cannot help the country address the causal linkages involved in the competitive weaknesses of the American industry.

Government Policies in the late 1970's and 1980's:

The Voluntary Export Restraint (VER) Agreement

That the lack of competitive dynamism of the U.S. automobile industry first presented its noticeable signs in the mid to late 1970's is an opinion widely held in the extensive literature on this industry. Agreement exists that the Big Three were too slow in accepting the defection of a large part of the U.S. domestic market from the larger models, believing that consumers would come back to bigger cars when gasoline prices stabilized.[22]

However, the U.S. firms' inability to match Japanese production costs and product quality in small car manufacturing is the main reason for the continued market share contraction that emerged in that period.[23] In fact, between 1980 and 1982, the Big Three reported losses around $2 billion, while in the 1979-82 period, employment in the motor vehicle and equipment industry fell by three hundred thousand.[24] Soon the high level of Japanese auto imports was perceived as a threat to national pride and this weakened elite and mass public support for free trade. Heading the list of discontents with Japanese competitive success were obviously the up to then fiercely independent industrialists of Detroit who turned to the government for help.

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[22]See Hart (1992).

[23]The slide in market share continued until last year. In 1993, the rapid rise in the yen-dollar exchange rate — a theme to be covered in the next chapter — sluggish U.S. demand and the depressed market for cars in Europe and Japan have apparently caused a noticeable turn around for the Big Three. The question that follows is whether this can correctly be interpreted as the beginning of a comeback for the Big Three (see conclusion to this chapter).

[24]See *Motor Vehicle Facts and Figures '88*, pp. 63 and 70.

To be true, the precedent had already been opened by the 1979 Chrysler Loan Guarantee Act passed by congress as a bailout for the financial troubles the car maker had experimented since 1975. However, the relief sought in the early 80's was guided by an altogether different objective. The Big Three began making use of the political process to secure their much disputed market share. The management of the most severely affected firms, Chrysler and Ford, pressed the federal government for tax reductions as well as regulatory relief. The United Auto Workers also asked for import restrictions and suggested that the government should try to influence the Japanese government to encourage Japanese firms to invest in automobile manufacturing in the United States. As Reagan took office in 1981, he asked his trade representative, William Brock, and the secretary of commerce to negotiate a new voluntary restraint agreement with Japan.[25]

The VER agreement negotiated in 1981 — and to be negotiated annually from then on — limited exports to the United States to 1.68 million automobiles per year. In April 1984, the import limit was raised to 1.86 million to allow Japan to benefit somewhat from the U.S. economic recovery. At first impression, the VER's appeared to be successful. The profits of U.S. firms between 1981 and 1984 jumped by about $8.9 billion. But the profits of the non-declining Japanese firms increased by approximately $2 billion largely because they could charge higher prices for their exports in the U.S. domestic market. Although VRA's surely made consumers pay higher prices, in an of itself an undesirable though predictable result of import quotas, any indictment of import restraining measures solely based on this loss of consumers' surplus might appear as unfair on the grounds that by protecting market share the

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[25]See Niskanen (1988: 139).

government bought a window of opportunity for the Big Three.[26] In fact the absence of such measures would have meant a repetition of the cycle that had began in 1978.[27]

However, even among the Big Three there was never a uniform consensus about the existence of the VER's. In fact, since the end of 1983, GM had been lobbying for relaxation of trade restrictions, and was especially in favor of a higher quota for Japan so it could import more cars from Isuzu and Suzuki — firms in which GM owned shares and depended upon their supply of parts. Thus, by 1985, when the United States economy was doing much better — and when there was no longer an electoral reason to support VER's — President Reagan allowed the VER agreement with Japan to expire. But despite the formal ending of the VER, the Japanese curiously decided to voluntarily continue to limit automobile exports to the U.S. A new upper limit was set at 2.3 million units for export from April 1, 1985, to March 31, 1986. On February 12, 1986, MITI announced that it would extend the voluntary limits until March 1987. In fact, the 2.3 million unit limit held until March 1989. As the discussion on the previous section implies, this self-imposed export restraint was not resultant of any kind of altruism. To the contrary, by the mid 1980's the Japanese government acting through MITI and after careful consideration of what should be the

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[26]Whether the Big Three used it wisely or not, however, is a separate issue.

[27]The *Economist* (March 9, 1985: 69) estimated that without the VER's by 1985 Japanese car imports would have increased from 1.85 million units to at least 2.2 million units. Although U.S. consumers were likely to be the immediate beneficiaries of the end of the VER's, unless production could be maintained at current levels despite increased imports — which would only be possible if overall economic growth remained high — autoworkers would have to suffer massive layoffs. Given the small likelihood that domestic production would remain at such levels without the VER's, the possibility of high economic growth itself would be highly questionable.

future desirable composition of Japanese industry saw this restraint mechanism as a means to encourage Japanese production in the U.S..[28]

But VER's represented only one of several approaches taken by the Big Three to use the political process in favor of their position in the United States domestic market. The reactive focus that characterized much of their early attempts to limit the impact of their competitive disadvantage — illustrated by the push for VER's — gradually gave place to a new, more active-oriented approach. Carried out largely by lobbying activity, the Big Three's use of preemptive measures sought to further increase their influence on U.S. trade policy.

The Automobile Industry and the Canada-U.S. Free Trade Agreement (CAFTA)[29]

By the mid 1980's the existence of a clear pattern of dependent dynamism in automobile manufacturing in favor of Japanese industry was no longer news for the American auto industry. The arrival of Japanese automobile production (see table 4.1) competing on the same turf with the Big Three, however represented a much bigger threat. Now American workers — the traditional target of blame for a typically defensive American management class — were given jobs by Japanese corporations which could no longer easily nor conveniently be accused of being the source of auto industry unemployment.

Japanese assembly and production of vehicles in the U.S. also posed a most important threat to the Big Three: American workers were producing what appeared to be genuine "made in America" vehicles, thereby blurring a historical concept which

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[28]The reasons behind the Japanese governtment's drive to expand overseas production were treated as part of a wider set of strategic considerations which were discussed in the previous section of this chapter.

[29]The material in the next two sections draws heavily from Lorraine Eden (1994).

had been traditionally used by the Big Three against Japanese products. The Big Three's reaction was to aggressively pursue a strategy which focused on demands for protection of their insider status — which involved an elaborated redefinition of the boundaries of the now elusive "made in America" concept — and for policies that would make it more costly and complicated for the transplants to sell vehicles in an increasingly integrated North American market. From 1984 to 1994 the Big Three pressed for policies they believed would enhance their capacity to compete against the transplants; the most important of which being their demand for the establishment of North American content requirements.

The Big Three found in the U.S. government a powerful ally to take these demands to the Canada-U.S. Free Trade Agreement (CAFTA) talks which occurred in the mid 1980's. Reflecting the Big Three's concern over the increasing Japanese onshore production, and the U.S. government frustration with the way the terms of the 1965 Canada-U.S. Auto Pact[30] had promoted the location of Asian transplant assembly plants to Canada, the provisions contained in CAFTA's autos chapter established specific North American content requirements and took definite steps toward the closure of the Auto Pact to new firms.[31] More specifically, this trade agreement first required that vehicles must achieve a 50 percent North American content in order to be exempt from duties between the two countries, and second, it closed the Auto Pact

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[30]The Auto Pact was a sectoral free trade agreement (designed for qualified producers) which was part of the 1965 Canada-U.S. Automotive Trade Agreement. As Eden (1994) indicates,

> The Pact was designed to promote rationalization of the auto industry. On both sides of the border, assemblers and component manufacturers could ship vehicles and parts across the border duty free as long as they met North American content requirements; however the requirements were different for the two countries. ... The criterion for goods entering Canada was ... not origin [the criterion for the United States] but certain performance requirements set by the Canadian government (Eden, 1994: 12).

[31]Thus the criterion of origin was then uniformly adopted by both countries.

provisions to new firms by requiring compliance with that requirement by the January 1, 1989 deadline (Johnson, 1993a).

Thus, CAFTA clearly helped reaffirm the then blurred legal distinction between domestic and transplant producers by making the latter's compliance to the Auto Pact a practical impossibility.[32] CAFTA's requirements , in effect, came to be the precursors to what the Big Three demanded — and got — from the NAFTA auto provisions in terms of a clear distinction between long-time (North American based) and new industry (foreign owned) participants.

The Automobile Industry and the North American Free Trade Agreement (NAFTA)

Similar to the approach taken under the CAFTA negotiations, the position of the Big Three producers during the NAFTA negotiations reflected their deteriorating competitive position *vis-a-vis* the transplants and their concerns that the inclusion of Mexico in a North American free trade agreement could open the door to cheap imports (*Inside U.S. Trade*, 1991:3). The only "novelty," if one could call it such, derives from the Big Three's seeking to augment their own position as insiders and to make it even more difficult for their competitors to attain insider status. Once again, their demands received a sympathetic hearing from the U.S. government.

Concerning specifically their efforts to limit transplant expansion through the benefits of free trade, the Big Three pressed for a regional content provision higher than the 50 percent rule under CAFTA,[33] and attempted to further clarify rules of origin. To compensate for what they saw as the restrictive conditions of the Mexican Automotive Decrees under which they had operated for years in Mexico, the Big Three

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[32]In fact, only one transplant successfully complied with that deadline, CAMI, a GM-Suzuki joint venture (See Johnson, 1993a).

[33]Ford and Chrysler advocated 70 percent while GM, which is the most vertically integrated of the Big Three producers sought a 60 percent North American (including Mexico) content rule.

further sought preferential access to the Mexican market for themselves during the NAFTA transition period (Eden, 1994). Mindful of the future influx of Japanese transplants into Mexico, the Big Three proposed the creation of a "Two Tier" system for auto producers in Mexico under which firms producing cars and trucks in Mexico on January 1, 1991 would be eligible for a more rapid decrease in tariffs and other trade-restricting requirements than those that might enter to the Mexican market later (most notably Toyota and Honda) (Johnson, 1993b).

Again, as one would expect from a closer collaboration between government and business enterprise, the Big Three got most of what they wanted out of NAFTA. NAFTA includes both a higher regional content provision — of 62.5 percent North American content by the time the agreement is fully implemented in 2004 — and new, more schematic definitions of the rules of origin that were intended to avoid some of the difficulties that the CAFTA rules had generated, rules which are so important for their strategy of defining "who is us" against the challenge imposed by transplant production.[34]

On the part of the government, the protective measures first negotiated through CAFTA and then NAFTA are intended as a public show of a clear disposition of the U.S. government to provide safeguards for U.S. jobs — itself a politically incontestable initiative — while acting in the interests of the industrial elite. However,

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[34]Perhaps the most important — and most symbolic — act of the Big Three in their effort to make very clear to the American public the distinction between themselves and the new transplant assemblers was the November 1992 decision to expel Honda from the U.S. Motor Vehicle Manufacturers Association (MVMA), the organization that represents auto assemblers. The rationale for the ejection of Honda was the need to create an association which could easily reach a consensus on industry positions. With Honda a participant in MVMA discussions, it was difficult to develop a position on NAFTA or on the minivan complaint (which will be discussed below) since Honda did not agree with the Big Three's stances. Restriction on MVMA membership would allow the Big Three "to focus on common issues and interests that are unique to the domestic manufacturers" (Levin, 1993).

there is more to this new government involvement in industrial affairs than negotiating "free" trade/preemptive protection agreements. If bargaining over the auto provisions in the trade talks primarily targeted Japanese firms assembling vehicles within the United States, improving market access in Japan for U.S. producers — under the guise of reducing the U.S. trade deficit — seems to be another dimension of this trade policy.

U.S. Efforts to Open the Japanese Market: More Evidence of Trade Policy As Surrogate to Industrial Policy

The first market opening effort launched by an U.S. administration, in which the Big Three were active participants, was President Bush's January 1992 visit to Japan. The stage was set by a huge U.S. trade deficit in autos. In 1991 U.S. companies sold 32,000 cars in Japan, most of which were manufactured by the transplants and then exported back to Japan.[35] The UAW was exercising pressure for a limit on Japanese sales in the United States that would include the use of quotas on imports and transplant production as well as local content requirements. Similarly, in 1991 Chrysler chair Lee Iacocca had pushed for a ceiling on Japanese auto sales in the U.S..[36] Little was accomplished on the trip, except for vague promises that the transplants would increase their purchases of North American-made parts and that the import of more U.S.-made vehicles would be encouraged. More than ever, the effort to defend the interests of the national industry without a clearly articulated industrial policy to guide those concerns — using instead a loosely defined trade policy that did not project to the Japanese an impression of a new resolve to solve the trade imbalance — worked to the Japanese advantage. Meanwhile the structural causes of the problem

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[35]See Keller (1993: 17).

[36]See Cowhey and Aronson (1993: 100).

did not appear to be addressed. The market successes of the Japanese relied on a form of continuous innovation, flexible production, that the Big Three found difficult to duplicate. Moreover, as the discussion in the second chapter indicated, their soft and hard technological competence was embodied in the firm and in part noncodifiable, and therefore difficult for the American follower firms to emulate.

A second set of market-opening efforts came with two U.S.-Japan economic summits, one in April 1993, the second in July 1993. In the latter a novel idea, illustrating the new trade aggressiveness of the Clinton administration was introduced in the form of the U.S.–Japan Framework for a New Economic Partnership. Among the issues addressed in this agreement are sales of U.S.-made vehicles in Japan and sales of U.S.-made automotive components to the transplant assemblers. The U.S. administration pushed hard for numerical targets — an idea closely associated with the academic work of Laura Tyson,[37] the Chief Economist of the President's Council of Economic Advisers (CEA) — which the Japanese strongly opposed.[38] The political fortunes of President Clinton — the fight for congressional approval of NAFTA — and Prime Minister Hosokawa — political reform, formation of a new Cabinet, and the battle for the budget bill for fiscal year 1994 — led both sides to exercise a temporary trade negotiation truce which lasted until mid-January 1994. However, the restablishment of the Framework Talks proved to be unsuccessful. The talks failed as Prime Minister Hosokawa — who after surviving two major threats to his leadership

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[37]The idea of attaching numerical targets to trade negotiations is given careful consideration in Tyson's *Who's Bashing Whom? Trade Conflict in High-Technology Industries* (Washington, D.C.: Institute for International Economics, 1992), where it becomes part of her theoretical argument for managed trade under what she terms as "an outcomes-based approach." The extent to which Tyson's managed trade ideas differ from mine will be treated in the next chapter.

[38]See MacKnight (1993: 5-6).

saw fit to use the trade talks as a show of force which could play well with the Japanese electorate — resisted to the numerical targets insisted upon by the Americans.

The strong resolve shown by the Clinton administration in the negotiation of trade agreements with Japan indicates that the new leadership in the United States will no longer rely on Japanese promises to open their markets to American products. Perhaps no one has summarized the new U.S. perspective better than President Clinton himself: "It is better to have reached no agreement than an empty agreement."[39] Linked with this clear shift in resolve, the Clinton administration has succeeded in putting in paper some adjustments in macroeconomic policy needed to reduce the bilateral trade imbalance, and established negotiations in a range of areas to reduce sectoral and structural impediments to trade and investment flows, though not succeeding in bringing the Japanese to sign onto specific target figures.

However, the macroeconomic character of an outcomes-based approach alone — Tyson's theoretical vision of managed trade — does little to attack the structural root of the problem in the auto industry, namely that of the dependent dynamism faced by the Big Three in their direct competition with Japanese continuous improvement firms. The structural sources of this new kind of dependent dynamism — as discussed in the second chapter — require more than a whole new trade strategy; although it cannot do without one. On these grounds then, the Clinton administration deserves praise in its efforts to solve broader issues such as that of formal and informal structural impediments to "fair" trade in Japan, especially in sectors where the United

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[39]See "U.S. Plans Sanctions Move As Talks With Japan Fail," Bob Davis and Jacob M. Schlesinger, *The Wall Street Journal*, February 14, 1994, p. A3.

States can clearly be seen as the leader.[40] But the lack of an industrial policy — where managed trade could indeed play an important role — will itself show the long-term limitations of the previous as well as the present administrations.[41] Nowhere perhaps is this fragmented approach to industrial decline more evident than in the current drive for states to bring foreign transplants at higher and higher costs while the federal government in combination with the Big Three is trying to limit the domestic effects of their competitive dynamism by resorting to content requirement targets.

State Bidding Wars of the 1980's and 1990's: A New Pattern of Within Center Industrialization from Without?

Bearing close resemblance to the industrializing efforts of the dependent-dynamic NIC's of the 1950's and 60's, states have for the past fourteen years been engaged in increasingly competitive incentive bidding wars to attract automobile plants. However, the similarities stop at the characterization of this trend as new kind of industrialization from without — a term created to highlight the differences between industrialization patterns in the West compared to the LDC's. The main difference is that, unlike ISI implementing countries, these states seem to have operated without any set of guidelines that should rule the ever more cutthroat contours assumed in this quest for job creation. In Europe, for instance, there are controls on the kind of incentives bidders can offer. It is unlikely, however, that such controls could be adopted here by the states themselves.[42] Again, this reveals the lack of a nation-wide coordination

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[40]The cellular phone industry is a timely example of how U.S. leadership in a specific sector has been limited in its export potential by formal and informal arrangements which have so far protected Japanese competitors.

[41]I will further elaborate on this topic in the next chapter.

[42]James C. Cobb, a University of Tennessee historian and author of *The Selling of the South* has been a loud critic of this unrestrained competition for manufacturing jobs. In a recent interview with Peter Applebome (*The New York Times*, October 4, 1993), he declared: "I couldn't begin to tell you how

effort; itself evidence of the lack administrative guidance which would exist as an integral part of any *bona fide* industrial policy.

The impact of state subsidies on auto plant location is well documented in Rubenstein (1992: chapter 8). Three types of state assistance have been typically offered: site improvements (e.g.: roads, sewer, gas, and electrical services), job training grants, and tax reductions. The latter usually includes the typical holiday from state and local taxes for a specified time period. Table 4.2 illustrates the evolution of the levels of state assistance given to foreign auto plants in the U.S..

Table 4.2: The Evolution of State Investment to Attract Auto Plants as of 1993

Company	*Location*	*Date of Decision to Invest*	*Incentive Package*
Honda	Marysville, Ohio	1982	$22 million
Nissan	Smyrna, Tenn.	1983	$20 million
Mitsubishi-Chrysler	Normal, Ill.	1985	$86 million
Subaru-Isuzu	Lafayette, Ind.	1986	$86 million
Toyota	Georgetown, Ky.	1987	$168 million
Mercedes-Benz	Tuscalossa, Ala.	1993	$253 million

Source: Author's calculations based on information compiled from Rubenstein (1992), Chappell (1994: 8), and *The Economist* (1994: 32)..

State competition to attract new plants apparently was reasonably quiet until the mid-1980's. From then on, competition to attract manufacturing jobs has assumed

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many speeches I've read by Southern governors saying: 'We're no longer going to get into that [granting of heavy subsidies and tax holidays to attract national or foreign manufacturing industry]. We only want industry that can pay their way.' It never means anything. And the sad fact is the situation is probably getting worse rather than better."

altogether different proportions, as illustrated by the sheer size of the incentive package used to bring the Mercedes-Benz sports utility factory to Alabama. Some skeptics say this investment is particularly perilous for a state like Alabama, which has crushing needs including an educational system so deficient that the state's supreme court ruled that it failed to provide students with a minimally adequate education guaranteed by the state Constitution.[43]

Although this competitive war for foreign and national[44] manufacturing plants is certainly a reflection of just how desperate states are for jobs, the fact that a practice that was supposed to be transitional has now become an entrenched and increasingly important part of economic development is an even clearer evidence of a much bigger problem with structural proportions. It also shows that adaptive schemes have been used by states to alleviate the problems caused by systemic deindustrialization, itself a direct result of similarly adaptive strategies chosen by American industry — such as outsourcing, *Maquiladora* production, rationalization, etc. — in its attempt to reduce costs to deal with an entirely different production paradigm. So far such strategies have not meant success for American industry, and a case could be made that narrow self-interested and uncoordinated action by Southern states is very likely to make continuously increasing costs more important than the present and future calculus of benefits. In any case, the lack of the coordination and cooperation that could be achieved through (federal) administrative guidance in the exercise of a clearly specified industrial policy will reduce their chances of reaping the fruits of concerted action.

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[43]In fact, this educational defficiency maybe the principal motive behind the special education programs that Alabama's investment package provides for German students.

[44]Saturn, GM's first answer to the Japanese flexible production cars, received a $ 50 million investment package from the state of Tennessee in 1984.

Unresolved Problems

The analysis of the government-business relationship in the United States developed so far suggests the need to be very cautious indeed in any assessment of the apparent present "success" of the Big Three in meeting the challenge of technological competition presented by Japanese modes of flexible production. Although there is a new resolve in dealing with the Japanese, a clear vision of an industrial policy is still distant. Nonetheless, it seems reasonable to state that the Big Three have made some progress under the revival of protectionism in the 1980's, though at first they did not seem to make good use of it and merely followed adaptive strategies. The direct challenge of transplant production forced them into taking the first concrete steps toward within firm structural change (Thomas 1994: 1). To the extent they have done that, they have shown the first clear signs of progress. For instance, each member of the Big Three reported a profit for 1993, with an even better year being predicted for 1994 and increases in total vehicle sales anticipated until 1996 or 1997. Also, for the first time since 1980 U.S. car and truck production is projected to eclipse automotive in production in Japan (*Wall Street Journal*, 1993: C18).[45]

A number of extra-industry factors have contributed to this upturn in the fortunes of the Big Three. First, the U.S. economy has come out of the recession. Second, the appreciation of the yen — a substantial part of the macroeconomic concessions made by the Japanese with the signing of the Framework Agreement —has raised the price of Japanese vehicles so that they average close to $2 thousand more than vehicles produced by the Big Three. Thus, there are questions about the degree to which these positive figures can actually be translated as a virtual closing of the gap between the American and the Japanese auto industry.

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[45]Note, however, that this figure includes Japanese transplant production totals in the U.S..

Another important question which remains incompletely answered has to do with how the Big Three will use their relationship with the U.S. government to protect and enhance their position — which, again, may provide them with a window of opportunity for readjustment and structural change, but which can become another shelter favoring short-term oriented adaptive strategies. The current development of government-auto industry relations in the U.S. appears to suggest that the Big Three are more than prepared to continue the use of the political process in an effort to protect their insider position by calling for further protectionist action on the part of the government.[46] Lorraine Eden positively identifies this reinforcement of protectionism:

> At President Clinton's request the U.S. industry has provided him with a list of possible measures that might be employed against the Japanese auto makers. This list includes: (i) the use of an executive order to reclassify sport-utilities and minivans as cargo vehicles and therefore subject to 25 percent duty ; (ii) withdrawal of free trade zone privileges from the Japanese MNE's, U.S. plants would then require them to pay duty on imported parts; (iii) raising the tariffs on imported auto parts; (iv) imposing quotas on U.S. sales of all Japanese-badged vehicles. The U.S. administration could also support a number of Congressional efforts aimed at inhibiting sales of Japanese vehicles, whether imports or U.S.-made in the United States. In short, *lobbying activities of the U.S. auto industry in terms of emphasizing the insider-outsider distinction have, if anything, intensified* (Eden, 1994: 32) [emphasis added].

The Big Three's reliance on their insider status in their claims for protectionist measures seems to indicate that although they appear to have reduced the competitive gap, the impression remains that the Japanese are still the industry's dynamic leader. In this, the evolving nature of the technological path set by the Japanese appears to have suffered no fundamental threats by a Big Three's apparent rebound. In fact, some important structural problems remain.

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[46]See Max Gates' article "Big 3: Keep pressure on Japan" in *Automotive News*, Feb. 21, 1994.

First, there is still substantial excess capacity within the North American auto industry, of approximately two million units (Rubenstein 1992: 289). And while Japanese-owned firms are operating at close to capacity, several of the U.S.-owned plants are not. GM intends to continue to cut employment and close more plants. Additional plant closures by the Big Three can therefore be expected. Second, the Big Three's transition from mass to continuous improvement production has only just begun. Although the Big Three have emulated many of the techniques of the Japanese — the move to JIT, the reduction in the number of suppliers, etc. — whether these methods have been fully adopted and integrated remains to be seen. Thirdly, part of the internalization of continuous improvement production is the education of workers and a synchronization of the attitude and expectations of management and labor. The historical antagonism between these two productive classes, though diminished, has in no way been removed. Finally, there are questions about whether natural flexible production evolution and not just emulation is possible in a society where the deteriorating trends of public education have not been successfully put in check by successive government policies.

Conclusion

Whether one accepts or rejects a role for protectionism as a necessary condition for the reversal of the current pattern of dependent dynamism in the automobile industry, it should be clear that neither free trade nor protectionism, because they do not address the basic source of the current dependent dynamism of the U.S. automobile industry, can be a sufficient condition for recovery. The discussion on the evolution of the Postwar Japanese government-business enterprise relationship revealed that a "calculated protectionism" is desirable when contained in the scope of a much wider, specifically outlined, long-term oriented industrial policy. By calculated protectionism,

I mean a form of managed trade that makes the use of strategically aware administrative guidance designed to improve the competitiveness of national industries which are considered at a given moment as followers in global competition. Although the elaboration and execution of strategically oriented analysis does indeed seem to assume much in terms of the cooperative behavior and expertise on the part of government agencies, those very same agencies — by virtue of being distanced from direct inter-firm competition — are perhaps the best suited institutions in society to become forums for consensual deliberation uniting the long term interests of government and enterprises.

Although this debate over institutional change in the United States may tempt us into arguing for the positive aspects of emulating Japan, it is perhaps wise to refrain from this approach. The history, the society, and the culture of these two countries would surely condemn such orientation from the outset. However, the other extreme, namely that of arguing that the United States can succeed best by being itself, is equally mistaken.[47] For the absence of an industrial policy, the use of trade policy as a surrogate for industrial policy, and many other equally disjointed government approaches to industrial competitiveness, all worked well when the competition American firms faced was within the boundaries of the mass production paradigm. If we still lived in such a world, the United States would indeed "succeed best by being itself." But the structure of the competition has been altogether altered by the introduction of flexible production. In this new context, to remain attached to the mass production paradigm, with its organizational, social and institutional basis in place and dteriorating, necessarily means to rely on adaptive strategies which are likely to bring

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[47]James Fallows in *More Like Us: Making America Great Again* (Boston: Houghton Mifflin, 1989) advocates this view.

failure in the new market competition — a competition based on the different dimensions of customer value.

Chapter 2 showed why such adaptive schemes are ill-fated. The first section of this chapter further clarified those points by indicating that strategic awareness of global competition is too important a task to be left alone in the hands of the private sector. The United States President himself appears to have fortunately perceived the role for government in this increasingly competitive international economy. Thus, the praise given here to Japan's diligent industrial policy should not be read as a suggestion for the U.S. government to emulate Japan by erecting a MITI-like type institutions[48] — itself an obvious impossibility — but rather they should be understood as a defense of the importance of a clearly articulated and compromise-based industrial policy. Only that instrument could effectively deal with the current structural problems behind the decline of U.S. industry.

In the next chapter I shall analyze the political impact that the perception of Japanese industrial leadership has had on the current relations between the United States and Japan. Although the idea that Japan has needed U.S. markets just as the United States had relied on cheaper Japanese consumer products in order to control inflationary pressures at home implies a somewhat harmonious interdependent relationship, what can be said of the future of this harmonious relationship once considerations of a strategic national interest begin to gain consideration? Can we expect the emergence of a more confrontational approach to trade issues, or should the thought that the complexities of the Post Cold War world by requiring a closer cooperation between the United States and Japan allow us to expect the emergence of a

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[48]Senator Adlai Stevenson III suggested the creation of a similar institution in the U.S. (See Franko, 1983: 18).

more cooperative "third way?" One thing is certain the *status quo* will surely change as more will be expected from both governments.

5. MANAGED TRADE: THEORETICAL ASSESSMENT AND LESSONS

As the discussion in the previous chapter indicated, the importance of the auto industry as a vital part of the U.S. industrial base has challenged concerned managers, policy makers, and analysts alike to develop effective responses to its current problems and to revise, explicitly or implicitly the trade policy for automobiles. The ignorance in the U.S. about the way policy choices can affect firm strategy[1], combined with the reactive behavior of an industry challenged at home by the competitive dynamism of continuous improvement manufacturing, has not been conducive to using industrial policy to manage the current course of structural change. Actually, by *not* recognizing the broader implications of specific policy actions (see the discussion on the VER's and the Japanese government/firm adjustment to it) — *nor* the critical role of policy in establishing the direction of strategic decisions made by U.S.-native firms and their foreign competitors (inland or overseas) — neither managers nor policy makers contributed to a systematic reduction of the current competitive gap, much less develop a genuine framework for an industrial policy.

In chapter 4 it was argued that the new Clinton administration represented a departure from the succession of merely incrementalistic trade/industrial policies which, according to President Clinton had not led Japan in the direction of "fair trade."[2] As the breadth of the term "framework talks" suggests, an overhaul of the bilateral relationship between the U.S. and Japan seems to be the direction chosen by this new administration. Meanwhile, this new resolve, though actively supporting Big Three demands for domestic protection and foreign open markets — and symptomatic

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[1]See Best (1990), Hart (1992), Hunker (1983), etc..

[2]The term trade/industrial policy I use in this chapter should be interpreted only as that part of trade policy having industry-specific implications, and not the existence of a clearly articulated industrial policy connected to a trade policy, which I have repeatedly criticized the U.S. for not having.

of closer exchanges between government and business enterprise — still did not seem to represent an altogether new approach to government-enterprise relations. The sheer size of the trade deficit had drawn government and the Big Three together since all were directly affected by it in their own ways, but that it had not led them to further extend their cooperation to address the structural nature of the problem. The purpose of this chapter is to describe, and then critically analyze, the elements of this new approach to the U.S. bilateral relationship with Japan. The main questions considered in this chapter are:

I. Whether this departure from the previous policies, evident in the U.S. aggressive pursuit of "removing the structural barriers to entry in the Japanese market", constitutes the first steps toward a systematic reduction of the huge trade deficit;

II. Whether the instruments used so far and those suggested by the Clinton administration are properly suited to bring about the desired goals; and

III. How likely the U.S. auto industry is to overcome the competitive gap with its Japanese competitors, gain more domestic and foreign market share in the context of a continued lack of an industrial policy and in the absence of the broad societal framework reforms suggested in chapter 2.

This chapter is then divided in two major sections. In the first, I will describe the economic/foreign policy of the Clinton administration towards Japan during the period going from January 1993 to March 1994. The intent is to provide an outline of the objectives, the components, and the agreements which have formed the new U.S. policy with respect to Japan (questions I and II) so that I can later analyze the probability of future efficacy of such a policy (question III). This will be done in the second section, where by elaborating on the differences between Laura D'Andrea Tyson's version of managed trade ("outcomes-oriented" managed trade plus demand

management) and mine ("import-management in support of continuous improvement evolution" plus societal-wide reform), I will attempt to explain why the trade deficit — though truly a problem of immense macroeconomic proportions — cannot be solely resolved by demand-management nor by diplomatic pressure for market liberalization in Japan because both courses of action gloss over the structural roots of the decline in U.S. manufacturing.

The Trade Policy Objectives and Methods of the Clinton Administration

President Clinton has defined job creation as an important economic priority during his tenure in office. From the outset he saw increased exports as a way to stimulate job growth. Demonstrating a clear vision of the relationship between growth and trade, the administration established early on a broad and ambitious trade agenda for fiscal years 1993 and 1994 designed to open markets to U.S. goods and services, protect the intellectual property rights of U.S. entrepreneurs from piracy, and conclude outstanding trade negotiations.[3] The long list of trade objectives identified by the USTR as well as other members of the administration was consistent with this vision. Among these was opening up the Japanese economy. Throughout the year, the Clinton Administration used three methods to pursue this objective:

a) it pressured the Japanese government to engage in stimulative fiscal policy, in order to increase demand for U.S. goods;

b) it implicitly supported a strong yen policy on the part of the Japanese government in order to increase the relative price of Japanese goods and reduce the relative price of U.S. products, thereby reducing the bilateral trade imbalance between the two countries;

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[3]These objectives were outlined during the Congressional testimony of Ambassador Mickey Kantor, United States Trade Representative (USTR), before the Committee on Ways and Means, U.S. House of Representatives, April 21, 1993.

c) it pressured Japan to engage in outcomes-oriented/managed trade agreements in order to secure shares of specific Japanese markets for U.S. goods.[4]

Of the three, the use of the third component by the U.S. had the most fundamental impact on the U.S.–Japanese bilateral relationship.

During its first eight months the Clinton administration displayed the general pattern in the tactics it would use with Japan. That is, the Clinton team exerted the maximum pressure that it possibly could to push the Japanese government towards outcomes the administration deemed desirable. But, aware of the constraints both at home and within Japan, the administration displayed its willingness to cut back on its pressuring tactics, and settle for that which was politically feasible whenever strong diplomatic pressure for "fair trade" coincided with increased levels of domestic political pressure for Prime Ministers Miyazawa and Hosokawa.

The Pressure for Fiscal Stimulus:

Pressures prior to the Framework Agreement.

Between 1991 and 1993 the Japanese economy was in the midst of one of its longest recessions since the oil shock of 1974. In 1993, following two earlier recession spending packages, the Japanese government proposed a record breaking Y13.2 trillion ($120 billion) package of pump-priming measures.[5] The Structural Impediments Initiative of the Bush administration had accustomed the Japanese to having discussions with the U.S. about the size of its fiscal packages. Thus, Mr. Miyazawa unveiled his plan just days before his scheduled visit to Washington, where he expected to face pressure from the Clinton administration to revive the Japanese economy.

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[4]More than anything else, this willingness to depart from a pure free trade ideology differentiated the Clinton administration from those of Presidents Reagan and Bush.

[5]See *Japan Economic Institute Report 9A*, March 4, 1994, p.7.

President Clinton lived up to expectations. On April 16, 1993, in their first meeting, President Clinton urged Prime Minister Miyazawa to increase the general level of government spending in order to pull the Japanese economy out of its recession and increase the demand for all types of goods, including imports. He also suggested that the Japanese government increase the level of government spending targeted toward the procurement of foreign goods.[6] While the latter measure would not directly stimulate the Japanese economy, it was suggested as a means of directly increasing U.S. exports to Japan. Moreover, this conforms to the general argument underlying all recent U.S. trade negotiations with Japan, namely that Japan's sizable trade surplus not only with the U.S. but with the rest of the industrialized world is solely "the result of a host of structural impediments to imports"[7] and not necessarily connected to the competitive dynamism of its industries.

Pressure prior to the Failed Negotiations.

The pressure placed by the U.S. on Japan for a fiscal stimulus intensified again in the winter of 1993, as Prime Minister Morihiro Hosokawa attempted to push the plan for fiscal year 1994 through the Japanese Diet. After a bruising battle the Diet enacted a three-part plan to revive the economy. The most important components of this plan were the deregulation of 94 listed areas — in order to promote competition and expand foreign access to Japanese markets — and the passage of a Y6.2 trillion ($55.9 billion) government spending plan, which included Y1 trillion ($9.1 billion) for social infrastructure projects.[8]

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[6]See *Weekly Compilation of Presidential Speeches*, vol. 29, p. 597.

[7]See Laura Tyson's "Japan's Trade Surplus Matters" in *The Wall Street Journal*, Tuesday, March 1, 1994.

[8]See "Chronology of U.S.-Japan Relations and Japanese Economic Developments in 1993," *Japan Economic Institute Report 9A*, March 4, 1994, p. 17.

The Clinton administration did not give a warm welcome to this new stimulus package. In fact, the package was received with strong criticism as administration officials characterized it as lacking punch. They pointed out that the two previous stimulus plans, worth nearly Y24 trillion, had not had much effect.[9] In particular, Treasury Secretary Lloyd Bentsen commented that "more steps would be needed to get the Japanese economy back on its feet."[10]

Historical Assessment.

In retrospect, the U.S. and Japanese governments were in basic agreement on the need for fiscal stimulus in Japan. The pressure from U.S. officials on Japan regarding fiscal stimulus was intense. The tone of the administration was critical, and at times arrogant especially if we note that while the U.S. was pushing for more market accessibility in Japan it was itself engaged in limiting future incursions by Japanese transplants in the North American market under the provisions of NAFTA (see chapter 4).

The Strong Yen Policy from January to August 1993:

In the first eight months of 1993 the yen appreciated dramatically against the dollar, rising from about Y125 to the dollar in January to about Y100 by mid-August. During this period, the Clinton administration took a tack with respect to exchange rates which frustrated the Japanese: while it did not openly advocate a stronger yen — which would strengthen recessionary pressures in Japan and necessarily undermine the desired counter-cyclical efforts of the Japanese government— the administration

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[9]See "U.S. Calls Japanese Economic Stimulus Insufficient" by Thomas L. Friedman, *The New York Times*, February 9, 1994.

[10]See "Japan Unveils Stimulus Package, But Many Say Effort Lacks Punch" by Michael Williams and Jacob Schlesinger, *The Wall Street Journal*, September 17, 1993, p. A8.

signaled to the international financial markets that it was willing to accept the rise of the yen, in order to bring down the Japanese trade surplus. For the Japanese this rhetoric indicated that the United States wanted the best of both worlds, regardless of the clear contradiction that the objectives of such half explicit half tacit strategy posed to Japan.

The Clinton administration maintained its preference for a stronger yen until August 20, 1993. On that day, the Federal Reserve Board took traders by complete surprise when it intervened in the foreign exchange markets by buying dollars and selling yen, as the price of the dollar rose by 4.3 yen in a single day.

Historical Assessment.

There are several explanations for this change in policy, all of which are probably accurate to some degree. Officials may have been concerned that a further fall in the dollar at that time would have ultimately hurt the U.S. economy by causing inflation, a rise in interest rates, and a subsequent drop in national income. On the other hand, the U.S. action may have been an attempt to lend an economic/political hand to newly appointed Prime Minister Morihiro Hosokawa, who had emerged as the leader of a divided but reform minded coalition of political parties. Furthermore, one could speculate that in exchange for halting the rise of the yen, the U.S. government may have received a promise of a drop in interest rates by the Japanese government. Politically and even economically wise, this seems to be the more likely motivation for the apparent U.S. change of policy, especially if one observes that the Japanese — who had been relying on fiscal policy to stimulate the economy — would be more than willing to turn to a drop in interest rates to do the job, which would be greatly aided by a fall in the price of the yen.

Also, the fact that the administration took no further actions in the remainder of the year as the dollar price of the yen rose again suggests that in the end there was no

basic shift in the tacit policy of supporting a strong yen. Taken together, these interrelated explanations suggest that the Clinton administration was willing to drastically shift its policy on the yen, when it realized it was expedient to do so. But neither an appreciation of the yen nor the direct support for fiscal stimulus by the Japanese government— important as they have been acknowledged to be by the Clinton administration — constitutes the main thrust of the Clinton trade policy with Japan. Rather, these seem to function as accessory elements of a more broadly concerned view of the trade imbalance between the two countries, a vision itself embedded in a theoretical defense for managed trade which is distinct from that elaborated in the second and fourth chapters.

Outcomes-Oriented Managed Trade:

The Managed Trade Perspective and the Intellectual Influence of Laura Tyson.

As the first year of the Clinton administration unfolded, the term "managed trade" dominated much of the debate about trade policy between the U.S. and Japan. This concept can be linked more closely to Dr. Laura D'Andrea Tyson, the Chairwoman of the President's Council of Economic Advisors (CEA), than to any other member of the Clinton team. Prior to joining the administration, she had written extensively on the topic. In her work, Tyson makes the distinction between managed trade agreements that are either "rules-oriented" or "outcomes-based" in nature. She defines a rules-oriented agreement as one

> ... that specifies a set of policy rules and guidelines that will be adhered to by the signatories to the agreement for the sectors covered by it. ... The rules do not specify quantitative outcomes for sectoral trade, but they certainly influence such outcomes in profound ways. (Tyson, 1990: 148-149).

In contrast, she states that the distinguishing feature of results-oriented agreements

> ... is the establishment of quantitative trade targets. Most often, such agreements can take the form of limits on trade in particular products among the signatories. These limits can be expressed in value or volume terms and in allowable levels or rates of growth. (Ibid.).

Therefore, according to Tyson, the managed trade position

> ... rests on the notion that some industries may be of strategic significance to national welfare in one of three distinct, often interrelated ways. First, because of imperfectly competitive structures, some industries may generate excess profits ... over time. ... [Second,] they generate spillover benefits for the rest of the economy, and government policies to promote them can improve welfare by fostering these benefits. ... Finally, [these] industries may ... provide inputs to other industries at decreasing costs over time. (Ibid.: 154)

If these attributes are present in certain industries, then the case for managed trade can be made for four specific reasons:

> ... to promote the competitive strength of such industries in the U.S. economy; to improve the management of high-technology trade in the presence of widespread government intervention around the world; to support an expansionary adjustment of the U.S. trade deficit; and to deflect the growing protectionist pressures at home and abroad. (Ibid.: 144).

While Tyson believes that rules-oriented agreements should be pursued before outcomes-oriented agreements, she is equally clear about the fact that *managed trade agreements of either sort cannot serve as remedy for either an overall trade deficit or as a substitute for other policy measures needed to build a strong national base in high-technology industries*. In this vein, she asserts that,

> There are only two defensible goals for managed trade arrangements in high technology industries. First, because of widespread policy intervention in these industries by national governments — intervention that is not effectively covered by the GATT and that can have profound effects on trade outcomes — it is critical that there be internationally accepted rules of the game for competition. ... Second, as a strategic move to press for the introduction of such rules, to induce other nations to open their markets, or to deter other nations from closing their markets, managed trade agreements specifying sectoral outcomes may be defensible. An outcome approach may be essential if barriers to critical foreign markets are causing serious harm to domestic producers in important high-technology industries. A negotiated outcome

> approach may look especially attractive if the likely political alternative is unilateral, aggressive reciprocity, with the threat of retaliatory-beggar-thy-neighbor actions abroad. (Ibid.: 150-151).

Historical Assessment.

Before critically analyzing Tyson's case for managed trade, exposing the points of agreement and disagreement that such position has with my arguments for managed trade contained in the second and forth chapters, I need to make two major points concerning Tyson's views and the way they have been adapted during the Clinton administration. First, according to Tyson, a managed trade approach should be limited in its application to a very special set of industries. However, as the year unfolded, the Clinton administration began pressuring the Japanese for outcomes-oriented agreements in sectors that did not meet the stringent criteria just noted, such as auto parts and insurance. In this sense, it should be clarified that Tyson's version of managed trade became somewhat debased as it was implemented by the present administration. Second, during her confirmation hearings, Tyson noted that it would be best for the U.S. to adopt a two track approach to dealing with Japan. It should include a) negotiations aimed at specific sectors, as well as b) separate on-going discussions about broad issues, such as Japan's economy-wide structural impediments to imports, and the need for the U.S. and Japan to coordinate macroeconomic policies. Curiously, this was precisely the strategy of the Bush administration, when it simultaneously launched the Structural Impediments Initiative and Super 301 Negotiations in 1989.[11] Thus,

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[11]See Testimony of Laura D'Andrea Tyson, before the Committee on Banking, Housing and Urban Affairs, United States Senate, January 21, 1993, p. 96.

while there appeared to be a clear distinction in philosophy between the two administrations, there was commonality in general strategy.[12]

The U.S.–Japanese Framework Agreement:

Pressures and Frictions Prior to the Agreement.

In early spring 1993, United States and Japanese officials agreed to a July 9, 1993, self-imposed deadline to complete their talks and sign what would be called the "Framework agreement." By late April, members of the administration began to put pressure on the Japanese. Talking about auto parts, Commerce Secretary Ron Brown called on Japan to essentially "buy American," indicated that the administration was pursuing a "results-oriented agreement, with specific targets and timetables," and stated that it would not tolerate any agreement that was devoid of commitment, such as that offered to President Bush in 1992.[13] Members of the U.S. negotiating team[14] attempted to use press interviews and releases as preemptive bargaining leverages by threatening retaliation if the negotiations happened to fail.[15] In the first week in June while participating in the OECD summit in Paris, Treasury Secretary Lloyd Bentsen said: "for four decades, we accepted protectionism elsewhere as the price of stability

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[12]However, it should be said that Tyson acknowledged that in the short run, "industry-specific talks and precise sectoral commitments" would probably prove "more effective at enhancing access to Japan."

[13]See "Buy America, Japan Told" by Mary Ann Maskery, *Automotive News*, vol. 67, April 26, 1993, p. 41.

[14]The U.S. negotiation team included Roger Altman, Deputy Treasury Secretary; Bowman Cutter, Deputy Director of the White House National Economic Council; Charlene Barshefsky, the Deputy USTR; Joan Spero, Undersecretary of State; and Alan Blinder, a member of the President's Council of Economic Advisors.

[15]See "Kantor Issues Threat Against Japan" by Asra Q. Nomani and Masayoshi Kanabayashi, *The Wall Street Journal*, May 3, 1993.

and winning the Cold War. But that day is over."[16] In that same week President Clinton reiterated his belief that the trade deficit was evidence of Japan's closed markets and unfair trade practices, and conveyed his determination to reduce the trade deficit.

By early June, the major elements in the U.S. proposal became clear. The U.S. plan for the framework agreement consisted of broad proposals to open Japan's market by setting specific targets of imports from the United States and other countries. However, in an effort to weaken criticism of the proposed managed trade policies, the U.S. plan explicitly ruled out any automatic retaliation if the targets were not met. The main points of the U.S. proposal were as follows:[17]

1. Numerical benchmarks would be used for measuring progress in a wide range of disputes in five key sectors: Japanese government procurement, computers, autos and auto parts, financial services, and compliance with past agreements;

2. A combination of sectoral and industrial issues would be attempted. For example, negotiations on foreign car sales in Japan would include structural issues like the car dealer system;

3. Japan's trade surplus would be reduced to 1.5-2% GDP as compared to the existing 3%;

4. The benchmarks proposed by the administration would not be legally binding and, therefore, would not be subject to automatic retaliation by the U.S.. However, the U.S. could use its existing laws to punish Japan for violating previous agreements; and

5. The U.S. would keep its market open if Japan lived up to the agreement.

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[16]See "US and Japanese Trade Negotiators Angle for Advantage Ahead of Talks" by David Wessel and Terence Roth, *The Wall Street Journal*, June 4, 1993, p. A2.

[17]See "US Gives Trade Plan to Japan" by Keith Bradsher, *The New York Times*, June 8, 1993, p. D1.

The Japanese government realized that if it did not respond to the strong U.S. rhetoric, then it would either have to walk away from an agreement, or accept the ideas which had been so forcibly expressed by the U.S. during the negotiating process. Thus it went on the offensive. In late April, then-MITI Minister Yoshiro Mori released a report that accused the U.S. of imposing unilateral trade penalties on partners without consulting the GATT. He then claimed that while almost 14% of the Japanese government's large-scale procurement was from foreigners, the same could be said for only 9% of U.S. government procurement. A month later, Japanese negotiators suggested that they might impose conditions on the negotiations. These ranged from prohibiting the use of U.S. trade law to enforce agreements, to ensuring that "if either side evokes unilateral measures, the other will reserve the right to suspend those talks," to affirming that "managed trade approaches will be precluded," to insisting that "no discussions will be made for the purpose of setting a numerical target" which reserves for the U.S. any part of the Japanese market.[18]

This fiery rhetoric led both, Miazawa and Clinton to look for ways to reduce demands a bit, preserving, however, some degree of success in the negotiations, while providing each other a face saving option. Towards this end Miyazawa circumvented Japan's powerful bureaucrats, and sent a personal letter to Clinton in which he indicated that, although numerical targets were unacceptable, Tokyo could live with an "illustrative set of criteria," whether qualitative or quantitative in nature, for gauging progress in opening Japan's markets.[19] On the other hand, the Clinton administration — realizing that the new coalition government might not have as strong an incentive

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[18]See "Japanese Say They'll Impose Conditions in Trade Talks Contrary to US Views" by Jacob Schlesinger, *The Wall Stree Journal*, May 28, 1993, p. A7.

[19]See "Chronology of U.S.-Japan Relations and Japanese Economic Developments," *Japan Economic Institute Report 9A*, March 4, 1994, p.13.

for signing an agreement as did Mr. Miyazawa[20] — concluded that a compromise, even if in the form of a vaguely worded agreement, represented its best possible option.

The Framework Agreement. (See Appendix A).

The agreement signed by the President and the Prime Minister was modest in length but still ambitious in design. It included a statement of basic objectives, which indicated that the agreement would act as a "new mechanism" as the United States and Japan took steps to achieve substantive progress on a range of "medium-term" objectives. For instance, these steps included adjustments in macroeconomic policy which were thought to reduce the bilateral trade imbalance, as well as negotiations in a range of areas to reduce sectoral and structural impediments to trade and investment flows.

The final section of the Framework Agreement described expectations regarding procedural items. For example, it specified that there would be a Heads of Government meeting every six months, in which progress under the Framework Agreement would be assessed. This section of the agreement also included two sentences which would prove to be the major point of contention in the coming months,

> The two Governments will assess the implementation of measures and policies taken in each sectoral and structural area within each basket under this Framework; this assessment will be based upon sets of objective criteria, either qualitative or quantitative or both as appropriate, which will be established using relevant information and/or data that both Governments will evaluate. ... These criteria are to be used for the purpose of evaluating progress achieved in each sectoral and structural area, including the collaborative efforts of the two Governments.

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[20]See "A Trade Agreement Born of Political Necessity" by Andrew Pollack, *The New York Times*, July 12, 1993, p. D1.

Historical Assessment.

During the negotiations which preceded this agreement, the U.S.-team crystallized its view that numerically-based results-oriented managed trade should be the guiding principle in its trade relationship with Japan. Because the Japanese vehemently rejected the idea of an agreement based on such principles, the Clinton administration pragmatically compromised on the language included in the agreement, and accepted a last-minute, vaguely-worded document which permitted both sides to claim victory.

The Failed Framework Trade Talks.

In mid-January of 1994, the U.S. and Japan began negotiations for the purpose of "filling in" the July Framework Agreement. Both sides realized that this had to be accomplished before the February "Heads of Government Framework Trade Talks." On its part, the U.S. established an opening position that employed numerical targets — that is, an outcomes-based managed trade approach — in the auto parts, medical equipment, and telecommunications equipment sectors, as well as a more generalized call for increased sales in the insurance industry (see Appendix B). In response, Japan was equally adamant that it would not accept an agreement based upon numerical targets.

Throughout January, the Americans maintained the pressure on the Japanese. For example, on January 23 Treasury Secretary Bentsen met separately with Prime Minister Hosokawa and with Finance Minister Hirohisa Fujii in Tokyo and delivered a personal message from President Clinton. To the press, he made the following remarks:

> What we are looking for in the Framework is progress in Japan getting into step with the world economy. Japan is out of step right now. It has a continuing trade surplus. It has the lowest penetration of manufactured imports, and it has the lowest foreign investment levels among the major

> nations. ... If we do not have credible agreements by the time of the summit, we would have to re-examine the basis of the framework.[21]

However, not even this display of overt dissatisfaction on the part of a high level official led the Japanese to make concessions in the areas contained in the Framework Agreement. In fact only two weeks later, in another display of frustration, and in an attempt to win a last minute capitulation from the Japanese, the U.S. team broke off the negotiations.[22] On Friday, February 11, Prime Minister Hosokawa and President Clinton met as planned. At the conclusion of their meeting, they announced, in a joint press conference, that the countries would not be able to successfully conclude the Framework Trade Talks.

The U.S.-Japan Relationship Following the Collapsed Framework Talks.

Immediately following the failed negotiations, both Prime Minister Hosokawa and President Clinton attempted to interpret the current events in a positive light. Nevertheless, since the Clinton team had made such strong statements in the weeks leading up to the negotiations, it did not want to appear weak by taking no action; but neither did it want to create an incendiary situation.

In the following week, the administration employed a strategy of "constructive uncertainty"[23] about its possible next actions. The idea was to pressure Japan into unilateral actions which would make official U.S. retaliation unnecessary. Towards this end, the President said:

> I'm going to make a decision within a few days. We need to clarify what America's approach is going to be. There are a number of options open to us,

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[21]See "Bentsen Warns Japan on Stalemate in Trade Talks" by Thomas L. Friedman, *The New York Times*, January 24, 1994, p. A3.

[22]See "U.S. Suspends Talks on Trade with Japan" by Bob Davis and Jacob M. Schlesinger, *The Wall Street Journal*, February 10, 1994, p. A10.

[23]I believe this term may have been introduced by Thomas L. Friedman of *The New York Times*.

including some that have not been widely discussed that may offer great promise.[24]

By the end of the first full week following the failed Framework Talks, it appeared that the administration would use a three-point response. It would act on an outstanding dispute in the cellular phone market, featuring Motorola; it would watch as the yen strengthened against the dollar; and would resuscitate the "Super 301" provision of the Trade Act of 1988.[25]

Historical Assessment.

Although it is not the direct purpose of this policy section to further elaborate on each of the components of Clinton's response to the Japanese, the above description of Clinton's trade policy has allowed me to identify a definite pattern of action in its firm disposition to deal with the Japanese. Additionally, the absence of any definite or significant change in the trade imbalance between the U.S. and Japan suggests that the problem — and its many policy-driven solutions — will remain in the forefront of the two countries' relations for a significant number of years. Thus, it is clear that the events of the last 14 months are likely to provide the best model for the future of the U.S.-Japan bilateral relationship under the Clinton administration. The U.S. will continue to provide external pressure on the Japanese Prime Minister by pursuing a strategy of pushing for fiscal stimulus and outcome-oriented trade agreements, and it will not support a weaker yen until it perceives that Japan has shown further signs of

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[24]See "US Taking Action Against the Japanese in One Trade Case" by Thomas L. Friedman, *The New York Times*, February 15, 1994, p. D7.

[25]"Super 301" is the label given to Section 301 of the Trade Act of 1988 and has been the chief tool of U.S. policy-makers for opening foreign markets to U.S. exports. Basically stated, Super 301 dictates that the USTR has administrative authority to identify unfair trade practices ("priority practices") and nations engaged in such practices ("priority foreign nations"); establish negotiations with those nations under a specified timetable; and back those negotiations with the threat of sanctions if the negotiations fall short of their objectives. (See "After Three Years, Trade Bill Finally Clears," *Congressional Quarterly Almanac*, 1988, p. 210).

liberalization. However, the Clinton administration will show a willingness to reduce external pressures, and compromise, when it becomes politically expedient to do so. A critical discussion of this set of trade policies is much needed, however, to establish whether this export-oriented version of managed trade will indeed help alleviate a huge trade deficit and, more important, whether this trade deficit can be reduced without any specific set of policies to deal with the structural problems of follower industries in the United States.

A Managed Trade Critique of Outcomes-Based Managed Trade

In the above presentation of the Clinton administration's trade policy it was noted that *Tyson regards managed trade only as a "second best", but nevertheless necessary approach to policy for situations in which free trade is not appropriate.* Although in principle her advocacy of trade policy stands in contrast to that of the Bush administration — which was based upon a commitment to free-trade and multilateral initiatives — it still largely subscribes to the idea that in those sectors where a foreign industry's competitive dynamism is maintained without direct (or indirect) support from its government's policy interventions, free trade should still be the guiding principle. This clearly characterizes the most important difference between Tyson's perspective on managed trade and that adopted in the discussion of Import Management in support of Continuous Improvement Evolution (IMCIE) (see chapter 2). IMCIE was proposed with the understanding that because the American automobile industry is a strategically important industry in decline due to direct competition with a superior Japanese production paradigm, it needed a set of temporary government policies (a targeted and qualified protectionism within an all encompassing industrial policy) which provided it incentives and a window of opportunity to develop a culturally and institutionally-relevant American version of continuous improvement production.

Although it should be duly noted that Tyson's academic "cautious activism" for managed trade is primarily concerned with high-technology industries, it is reasonable to infer from her characterization of such industries as being of "strategic significance to the national welfare"[26] that the Japanese automobile industry should only be targeted for managed trade if the Japanese government were associated with their competitive success.[27] Thus, while there would be a clear agreement that this is not the case of the present Japanese auto industry, the different approach to managed trade formulated in this dissertation would support government import-limiting action in this sector— due to the decade-old dependent dynamic condition of U.S. auto manufacturing — rather than a cautious activism that does nothing to remedy the situation. However, it is ironic — and surely irritating to Japanese officials — to see a section on auto parts and autos included in the list of U.S. demands for Framework Talks with Japan (February, 1994) (See Appendix B) when considering the follower status of the U.S. auto industry.

The above example is illustrative of a major difference in policy recommendation which exists under the managed trade orientation: that is, the notion that targeted protection should be applied in those sectors suffering from a systematic competitive lag even in those cases where foreign competition is not being helped by direct or indirect government support. It should be noted, however, that in order not to foster inefficient industries such selective protection would have to be necessarily

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[26]See Tyson (1990: 154)

[27]It should also be indicated that my defining criteria for labeling an industry as being of strategic importance have been primarily its overall macroeconomic significance, and, related to that, its potential for becoming an important source of industrial progress for other industries (i.e. having spillover benefits for the rest of the economy). The automobile industry with its substantial macroeconomic impact fits well this criterion. But describing just how the strategic sectors requiring managed trade should be chosen is a highly clouded issue. For instance, while Tyson seems to be referring primarily to the high technology industries, Hufbauer suggests "that not too long ago steel was considered a crucial strategic sector."

coupled with an insistence that domestic firms become world-class exporters, a goal which could be achieved, among other things, by means of establishing specific result-oriented domestic and export targets. The discussion in the previous chapter clearly showed the impact that a government may have in influencing the overall competitiveness of national industry.

But the clearly activist tone of the import-protecting/managed trade stance taken here offers much more in contrast to Tyson's export-promoting version of managed trade than a mere difference in the perception of the suggested role for action on the part of government. Krugman (1986) suggests four generic policy positions with respect to trade, two bearing close allegiance to the ideal of free trade (i.e. "cautious non activism" and "strong non activism") and two more favorable to a managed trade position (i.e. "cautious activism" and "immediate activism"). He characterizes the two managed trade perspectives in the following manner:

> Immediate activism. On this view, although there are substantial uncertainties about appropriate trade policies, we should nevertheless act strongly on the basis of the best analysis we can do. Behind this position might be a belief that the stakes are high, and perhaps other countries are already successfully playing the game at our expense.
>
> Cautious activism. This position would call for immediate action only where the case seems most clear-cut (perhaps in some high technology sectors). However, the philosophy of U.S. trade policy would shift from one of free trade except in extremis to one of sophisticated intervention. A natural counterpart of this policy position would be a program of research and study aimed at *identifying potentially useful government interventions in trade*. (Krugman, 1986: 20).

Although I would not dispute the use of Krugman's trade policy view types to identify some basic contrasts between Tyson's position on managed trade and mine — especially as they recommend different levels of government commitment to action — I do object to the use of the adjective "activism" to denote an approach which only calls for government "sophisticated intervention" in lesser labor-intensive sectors (highly

capital-intensive) and where the United States competitiveness in domestic and export markets has not been greatly diminished.

In fact, Tyson's case for managed trade is entirely built around the notion that government action should be limited to diplomatic and legal (antitrust) pressures for so called Voluntary Import Expansion (VIE) agreements.[28] Moreover, the qualified tone of this policy recommendation is especially felt when one is told that such import-expanding agreements should only target technology-intensive industries.[29] It is in her defense of VIE's as a *non-protectionist* form of trade agreement — this, in open opposition to Bhagwati's (1988) opinion — that Tyson reveals how her version of managed trade does not represent a major departure from the free trade doctrine,

> In Bhagwati's view, both the export restraints and the voluntary import expansion agreements are protectionist — the export restraints constitute import-protectionism, while the import expansion agreements constitute export-protectionism. But, there are important differences between the two. The import expansion agreements do not discriminate against imports to the advantage of domestic producers, and they do not directly restrict the volume of trade. Indeed, they are meant to expand the volume of trade by setting a quantitative import floor in markets perceived closed to import competition by policy or structural barriers. ... As such their intent is trade liberalization, not trade restriction. (Tyson, 1990: 149).

In clarifying her argument for managed trade in high-technology industries, Tyson further clarifies the line between free and managed trade by negatively demonstrating

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[28]She cites the Semiconductor Agreement as one example of an import-limiting/export-expanding managed trade agreement (Ibid.: 149).

[29]The origin of the term Voluntary Import Expansion or VIE agreements is attributed to Jagdish Bhagwati's book on *Protectionism* (1988). Comparing Voluntary Export Restraint (VER) agreements to VIE agreements, Bhagwati states:

> Whereas VER's restrict imports of specific goods from specific countries by getting those countries to adopt export quotas and restraints, VIE's require imports of specific goods by specific countries by all possible means. (1988: 83).

that the otherwise "normal" assumptions of free trade theory no longer hold in the case of such industries,

> In [technology-intensive] industries, costs tend to fall and product and product quality tends to improve over time, the returns to technological advance tend to spill over into various other activities, and barriers to entry and first-mover advantages tend to result in imperfectly competitive industrial structures. As a result of these characteristics, *a nation's comparative advantage* in such industries *is less a function of its natural factor endowments and more a function of strategic interactions between its firms and government and the firms and governments in other nations*. In such industries, *comparative advantage is created not endowed by nature*. ... In industries with increasing returns, technological externalities, and imperfect competition, free trade is not necessarily and automatically the best policy. (Ibid.: 153) [emphasis added].

Thus, Tyson's defense for a role of managed trade is built around — though in negative terms — the limits of the logic of free trade. Of special relevance to the wider argument being made in this dissertation, however, is the idea that in making her case for an extremely cautious managed trade regime, Tyson acknowledges the existence of industries — though in much more limited number than in my own estimate — where "comparative advantage is created" and not necessarily "endowed by nature," a point earlier (see chapter 4) indicated as a serious omission of the neoclassical paradigm. This is an important point because one of main themes of the second and fourth chapters was that postwar Japan did not choose to specialize according to measures of comparative resource endowments — as the neoclassical doctrine would recommend — rather they sought to specialize in those sectors where a competitive advantage could be established by developing industry and sector-wide organizational superiority.[30] In fact, Michael Best (1990) has suggested that MITI went

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[30]The neoclassical theory of comparative advantage recommends that a country or a region specialize according to relative costs of production. The Hecksher-Ohlin-Samuelson addition to this theory is the notion that relative costs are a function of a particular country's or a region's endowment of resources. For postwar Japan — which lacked both natural resources and capital, labor being the cheap resource, relative to other nations — this would suggest that Japan would maximize national income by producing and exporting labor intensive products. According to the neoclassical trade theory, the virtue

quite far from applying the free trade/free market logic to direct the development of the postwar Japanese economy,

> For MITI, the problem with passively accepting the composition of industries that are generated by the "market" is that the market, left alone can reinforce productive backwardness. The reason is that production begets ... economies of organization and learning which can be self-reinforcing under conditions of free trade. From the early days MITI officials argued that Japanese productive services would suffer, consumers would seek foreign products, and Japan would become a permanent follower in production capabilities. Japanese firms would remain a victim of market forces rather than becoming market forces themselves. (Best, 1990: 188).

And just as this policy regime characterized the abandonment of the doctrine of free markets, this departure from the logic of comparative advantage theory was also evident in Japan's most characteristic trade regime: managed trade for follower or dependent dynamic industries.

Tyson's failure to forcefully extend her insights on the possibility of a government role in helping create comparative advantage — possibly as part of an import-limiting program of managed trade — is intensified by her limiting the scope of trade agreements to only one of a longer list of industrial sectors which could become targets for managed trade under similar grounds (i.e. technological externalities, imperfect competition, etc.). Rather, she remains confined to arguing that agreements to expand imports (VIE's), or more specifically, to reduce existing foreign barriers, can be a beneficial move. In fact, I question the probability of success of even this moderate proposal for managed trade. Since VIE's are voluntary in name only, why would Japan agree to import more semiconductors? For that to occur either Japan

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of free markets is that businessmen responding spontaneously to market prices would shift toward those products that utilized the comparatively abundant resource. Therefore, government interference with free markets, according to the theory, could only lead a country away from the income-maximizing allocation of resources.

would have to give in to U.S. threats, or it would have to get something in return. As the turmoil and the measures taken by the Clinton administration after the February collapse of the Framework Trade Talks have indicated, U.S. threats are likely to be either ineffective — which is what happened — or damagingly heavy handed, such as threats of widespread application of Super 301 to several industrial sectors — which did not occur.[31]

Nonetheless, Tyson's approach is valuable because it moves beyond the pretense that free trade exists and it points toward the messy but crucial problem of finding sets of rules. She acknowledges that the policy situation with regard to U.S. foreign trade was unsatisfactory and chaotic. Abroad, other countries apply different rules and policies. It would be much better, Tyson argues, to obtain an agreement on the rules for high-technology industries. She argues that the United States would have a stronger presence in these industries if U.S. producers were not discriminated against in Europe and Japan and if antitrust and antidumping regulations were brought into conformity throughout the world market. Because such agreement is unlikely because of the different trade regimes in Europe and Japan, Tyson makes a valuable point in observing that the best the United States could hope for today is an agreement on outcomes. Indeed for that sector of the economy, outcomes-based agreements would be the best alternative for the U.S., though its prospects seem to be rather dim, as shown by the recent and continued Japanese refusal to sign agreements containing numerical targets.

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[31]Avinash K. Dixit (1990: 191)— a strong supporter of free trade theory — has in my understanding correctly pointed out that "the United States must modify its domestic policy process before it can wield threats with skill and success — the nation must learn to act quickly, unambiguously, and credibly." The reform of the domestic policy process, as well as antitrust and other aspects of the legal framework surely remain as one of the most important areas of change required within the scope of IMCIE.

Managed Trade and Macroeconomic Policy[32]

As a member of the "new international economics," Tyson has contributed with empirical evidence (Tyson, 1993) to the understanding that because some industries are of strategic significance to national welfare, the case for government intervention can be made on the grounds of economic efficiency. However, this theoretical contribution by the "new international economics" has not been translated into a commitment to government interference in otherwise free markets. While for the theory of comparative advantage the case against government interference was economic — economic growth would suffer, hence a theoretical reason — for the "new international economics" the case against government "interference is merely political — though in theory it could lead to higher national growth, governments cannot be trusted. Perhaps this can be appointed as the most probable reason why Tyson — and the rest of the Clinton team — have remained skeptical of government "interference" in areas where American competitiveness have remained quite diminished, even though — willing or not — the administration has clearly collaborated with the protectionist demands of the Big Three under NAFTA.[33]

It is Tyson's brief but sure recognition of a role to be played by the government in the development of a created rather than only endowed comparative advantage in the context of international trade that should be cited as her most significant contribution to the theoretical debate over managed trade. This is an important point to be made because the main thesis of the previous chapter was that the culmination of Schumpeterian competition on an international scale had undermined the institutional

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[32]The material in this section draws heavily from Best (1990).

[33]The skepticism common to the members of "new international economics" (e.g. Krugman, Dornbush, Tyson, etc.) toward the government's ability to successfully conduct a wider managed trade regime will be later disputed.

presuppositions of Keynesian and neoclassical monetarist economics. One of the main presuppositions is that domestic production and aggregate consumption patterns can be regulated by demand management — an assumption shared without reservations by Tyson and the rest of the Clinton team as exemplified in their efforts to push for fiscal stimulus in Japan as a means to increase demand for U.S. goods with the goal of reducing the trade deficit.[34] To explain how demand management has been used as a stabilizing policy in the United States and how it also has been adapted as a tool of managed trade, I will briefly describe the use of demand management in the United States in the 1980's and 90's. I will also show how it stands in contrast with the policies followed by Japan which had — as discussed earlier — direct industrial policy concerns.

In the 1980's United States economic authorities used the interest rate to squeeze out inflation while the government ran large fiscal deficits. High interest rates attracted foreign short-term capital which drove up the exchange rate. The rising exchange rate curbed, in turn, inflation by lowering import prices which limited domestic price rises.

Although the Reagan administration appealed to the virtues of free markets — in their ability to determine the price of credit and foreign exchange — it, at the same time, raised taxes and spending, which are themselves the major instruments of "demand management." In that case, the purpose of demand management was not to regulate production, but to regulate demand for purposes of economic stabilization. The long-run effects on production were obviously ignored in the process — the "invisible hand" of the market was enough, by itself, to establish winners and losers.

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[34]See letters "a" and "b" on page 3.

In fact, the American government went a step further: it tended to define economic problems in terms that are manageable by the instruments of monetary and fiscal policy. For instance, unemployment is caused by insufficient spending, while inflation is caused by an oversupply of money. Best (1990) makes a good argument about the logical deficiency of such a self-constrained approach,

> Defining the problems in terms of the remedies at hand may be soothing in the short run, but it only obscures the deeper structural problems. If [my] analysis is correct, it has intensified them, for the high interest and overvalued exchange rates of the Reagan [years] have curbed inflation but undermined the long-term productive base of [the] econom[y] in the process. (Best, 1990: 200).

Indeed observers would agree that the U.S. did enjoy a consumption-led boom in the 1980's but which generated — through the accumulation of enormous export deficits — productive capabilities that were built up elsewhere. The early 1990's recession and especially its ensuing sluggish recovery — perhaps not equaled in history — may be pointed out as direct results of such policies.

Although it should be duly given credit for addressing a budget deficit and an increasing government debt as economic structural effects of policies of the Reagan–Bush years, the Clinton administration has also relied on demand management in order to accelerate the pace of cyclical recovery. His economic stimulus package ($11 billion) of a year ago (1993) and his pressure on the Japanese for a fiscal stimulus that "does not lack punch" indicate a undeviating course on the path of demand management reliance. Also, though representing an independent monetary authority, the Federal Reserve under chairman Alan Greenspan has repeatedly(four times from January to May of 1994) increased the interest rate as a means of allegedly cooling off feared inflationary pressures.

Not surprisingly, postwar Japanese fiscal, monetary, exchange rate, and financial policies have reflected an industrial policy orientation. In the early postwar

period the exchange rate was consistently undervalued to favor exports and hinder import competitiveness because they were still an industrial follower nation. In recent years the exchange rate has appreciated dramatically — even exceeding the symbolic Y100 to the dollar mark — but only after Japanese firms became world leaders. In fact, the appreciation of the yen has had the opposite effect on Japanese competitors: it has created extra pressures for even greater competitiveness on their part in order to maintain market share. Comparing the Japanese industrial policy orientation to the demand management/free market approach of the United States and Britain in terms of financial policies, Best states,

> The contrast in the allocation of long term industrial finance is particularly striking. Whereas long-term industrial finance in Japan is deeply influenced by the public-private administrative interplay, ... in the United States and the United Kingdom the stock market plays a leading role. Here prices fluctuate freely as anonymous investors gamble on the value of companies which, in turn, adjust with every speculator's purchase or sale. (Best, 1990: 201).

It is interesting to observe that in the name of revitalizing the private sector and reducing the role of government, the high interest rate policies of the Reagan and Thatcher years ended up by crowding out domestic industrial investments at precisely the time when domestic firms were being challenged by the "new competition." The short-term result has been a consumption boom in the U.S. and a production boom for countries in which the leader firms were established. The long-term results of eroding industrial bases will take years — or, maybe, recessions of increasing severity — to be felt.

The continuity that Tyson's managed trade propositions reveal, especially in their unshaken reliance on the mechanistic and overly aggregate assumptions of demand management, is but one more sign of the slowness of the economics profession to perceive the inconsistency between short-run macroeconomic policies and the

promotion of long-term strategic investment.[35] The persistence in evaluating the tremendous trade imbalance the U.S. has with Japan as a problem of economy-wide structural barriers to imports — in other words, as a merely macroeconomic problem is surely a confirmation of this continuity. In fact, such a firm attachment to the perception that the trade deficit is a problem of macro dimensions is retained almost in complete disregard to the view that it may well be related to the competitive dynamism of Japanese firms. The most surprising evidence of this is found in a recent article in which Ms. Tyson defends the administration's tough stance on the Framework Talks with Japan,

> They [the Framework Talks] are designed to address Japan's multilateral current-account surplus and structural barriers to Japan's markets, both of which matter very much to Japan's trading partners. ... *Can Japan do anything to reduce its current-account surplus?* Luckily, yes. *Increases in public spending and tax cuts can stimulate domestic demand, increase imports and reduce the trade imbalance without jeopardizing Japan's fiscal stability.* ... *Fiscal expansion* is a win-win strategy for Japan and the rest of the world — and it *was a major focus of the Framework talks.* (Tyson, 1994) [emphasis added].

Knowing the foreign import-expanding objectives around which Tyson's entire managed trade case is built, as well as the framework upon which it is constructed, it is only a matter of logical consistency to expect nothing more than her total commitment in advancing the cause of import expansion for Japan through the use of traditional aggregate demand stimulative fiscal policy. Yet what is most troubling is Tyson's full attachment to an entirely macroeconomic analysis of the trade deficit even in areas where it would seem least applicable. For instance, in the same article she states,

> Japan also has a distinctively low level of intra-industry trade — that is, trade in differentiated manufactures within a given industry. *Japan does import — but it tends not to import very much in industries in which it is a major*

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[35]Some of these inconsistencies were pointed out in the second and fourth chapters.

> *exporter. Japan is a major exporter of automobiles, for example, but it imports very few of them.* In contrast, the U.S. and the other advanced industrial countries that trade with one another tend to buy and sell in the same product lines, thereby reaping the benefits of enhanced product competition and lower prices for their consumers. (Ibid.). [emphasis added].

Although institutionally based structural barriers to trade may be to blame for the scarce penetration of foreign industrial competitors in some segments of the Japanese market — and, note that those are usually sectors where Japanese companies being still followers are under strategically minded government supported protection — the failure to recognize the slacking demand for American autos in Japan as a possible sign of perceived inferior quality and follower status of the American product is quite alarming to say the least.[36] But open proponents of free trade are the most extreme in their understanding of the trade problem as a macroeconomic problem. In her defense of free trade against trade management which she seems to confound as mere protectionism, Ann Kruegger, states,

> The current account deficit is a macroeconomic phenomenon. It is incurred because of an excess of expenditures over output in the United States. (Krueger, 1990: 80).

This failure to perceive the otherwise obvious microeconomic roots of the problem is especially curious given the micro foundations of neoclassical macroeconomic theory. Those foundations, as earlier discussed (see chapter 4), presume perfect competition and the passive firm (i.e. firms as price-takers and as users of profit-maximizing technological combinations assumed to be available "off the shelf"). However, when those assumptions are relaxed and replaced with Schumpeterian competition and the continuous improvement firm, one can better perceive the full range of unfavorable consequences that industrial enterprises face

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[36]This is even more troubling if one observes that Tyson (1993) has collectively characterized U.S. auto manufacturers as "weak producers" (p. 75).

under demand managed macroeconomic policies. Because of this — and beyond suggesting a revision of micro and macro economics (see chapter 2) — I have concluded that it is crucial to integrate a concept of industrial policy into any trade policy proposal (chapter 4). Again, a comparison with Japan is instructive. While in the United States industrial regulatory policy has presumed the ideal of perfect markets and defined inter-firm cooperation as collusion against the public interest, Japanese industrial policy, in contrast, has been based on the presumption that a mix of inter-firm competition and cooperation can promote international competitiveness.

IMCIE as Managed Trade

As implied by the above discussion, the term "managed trade" evokes different sorts of government restrictions and intrusions on what is an otherwise free trading system. It was also shown that the theoretical allegiances that one has do greatly impact on the kind of managed trade regime one has in mind. It is, however, in the real policy choices concerning how trade is to be managed that these theoretical differences most show their effects — which industries should be targeted for government support, how is that support to be given, what should be its goals, and how should success on these goals be measured. But most important, the choice of a desirable trade strategy among many possible policy choices depends on the goals one seeks to accomplish through trade, and ultimately on one's faith in the capacity of government to implement such a strategy.

With Import Management in support of Continuous Improvement Evolution (IMCIE) I am basically suggesting the elaboration of a new trade policy as an auxiliary tool of an industrial policy for the automobile industry —though generalizable to other industries facing continuous improvement competition — to be jointly developed through the forging of a new relationship between government and industrial

enterprises. Although this directly calls to question the possibility and feasibility of government being at the forefront of such a complex task, let me first address the issue of what should be the central goals of one such task.

Increasing Competitiveness and Profits of American Industry

Although Tyson and other proponents of managed trade do not suggest that the goal should be to improve the profitability and competitiveness of American-owned corporations, much of the discussion one hears these days about American trade policy in Washington assumes that this should be the goal. By this view, one should seek to improve the profitability and competitiveness of American-owned businesses, even if many of their employees are non-Americans living and working in the United States. American industries, such as the automobile industry, which have become dependent dynamic or followers in direct competition with foreign competitors operating under a more dynamic competitive paradigm, should be assisted with a mix of import restrictive/developmental subsidization targeted at reestablishing their competitive position under the terms of the new production paradigm. To stimulate wise use of this temporary competitive shelter, restrictive schemes should be gradually removed according to competitive developments toward continuous improvement production are attained in constant coordination with strict, preset time deadlines. Finally, in sectors where American corporations have a technological lead but lack scale economies, for example, the best strategy might be to help them penetrate large potential markets from plants anywhere in the world — even if by means of aggressive, bilateral and sectoral negotiations.[37]

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[37]The United States has pursued precisely this strategy, for instance, when it threatened sanctions on Japan with the purpose of opening the Japanese market to Motorola celular phones, many of which are made outside the United States.

However, such a goal may not improve the living standard of Americans nearly to the extent that standards of living would be improved if companies (both American owned and foreign owned) undertook high-value added production in the United States. The industrial policy orientation of postwar Japanese economic policymaking attests to the social benefits of such an approach. One of the most articulate defenders of such a view has been Robert Reich (1990). Concerning the benefits of high value-added production he states,

> Returns to financial capital are limited by how much Americans save and how wisely they invest, here and abroad. Returns to human capital have no such limits: they depend instead on how much Americans learn, including their cumulative experience on the Job. (Reich, 1990: 220-221).

This is a tremendously important issue because it puts in rather vivid relief the question of created comparative advantage of the sort that I (and Tyson) have indicated in the previous and in the present chapters, and which constitutes an equally important goal for trade and industrial policy.

Work Force Learning and Development

The declining "productivity" of the American factory relative to the Japanese continuous improvement firm can be responded to within the enterprise in two ways: either reorganize production according to the principles of continuous improvement production or seek a technological, capital-intensive-based solution that replaces humans wherever possible. Best (1990) well characterizes the first as "a skill-based, human-centered approach" in which the enterprise increases its competitiveness by "enhancing the peculiarly human capabilities of perceptual discrimination, learning and inferring from experience, reasoning, making fine judgments, coping with unforeseen events, and acting as distinct from rule-based responses."[38] The second or the

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[38]See Best (1990: 272).

technology-intensive approach corresponds to "more of the same" (see chapter 2) by continuing to rely on increased automation or a computer-integrated manufacturing (CIM) strategy.[39] This would clearly bring the futuristic vision of the factory in which direct human labor is replaced by the computer.

If the arguments of this dissertation are correct, the CIM vision is a chimera. Although it may have been particularly appealing to many American managers trapped in the Taylorism of mass production, the fact that CIM does not and cannot engage in innovation with respect to new products — which by definition have not yet been designed and modeled — would only further perpetuate the current patterns of competitive followership on the part of the mass production firm. Beyond the more obvious wider societal implications (e.g. rise in unemployment, continuation of the trend in removing the skills off the plant floor, etc.) of this capital-intensive approach, CIM's lack of flexibility and innovative powers, coupled with the enormous financial costs normally involved would reinforce the age-old antagonism in the manager-worker relationship which has proved so detrimental to the American mass production firm.[40]

Supporting and directly funding work force learning toward the creation of a skilled-based factory has, as in the case of Japanese industry, been shown to create a national comparative advantage in knowledge-intensive production. But because life long employment is not a distinguishing feature of American manufacturing, new knowledge can be perceived as easily leaking out beyond the firm, and, hence, investments in employee learning often are not appropriable by investors. Government subsidies might, in this case, potentially overcome this problem if made available to

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[39]For a detailed discussion of the limitations of this approach see the discussion of the historical development of mass production in the United States contained in the second chapter.

[40]For a deeper discussion of the limitations of the CIM approach in favor of the skill-based alternative, see Brodner (1986).

corporations that undertook production within the United States, hence providing Americans with valuable on-the-job training. Toward this end, Tyson and I agree that the goal of trade and industrial policy is "not simply to improve the trade balance or to address external barriers abroad, but to secure a share of the world production and employment in such industries[41] with local knowledge, skills, and other spillover benefits that they are perceived to generate" (Tyson, 1990: 167-168).

The Capacity of Government

The following discussion deals with the "capacity of government" to develop and successfully implement an industrial/trade policy which — by creating an environment favorable to the development of an American version of continuous improvement production — may thereby directly address one of the most important micro-based structural causes of the trade deficit. It will be divided in two parts, each dealing with two kinds of skepticism. In the first I will deal with the debate that paradoxically has united both free-trade and managed-trade advocates: although they reach different conclusions with respect to the applicability of free trade, they are somewhat united in their skepticism over the possibility of a government's successful interference in trade matters by means of engaging in sectoral managed trade. I intend to establish whether much of this skepticism is warranted or not, as well as establishing whether the path of non-action is at all an affordable choice. The second kind of skepticism — whether managed trade itself can help the government alter a problem of such structural depth and involving such institutional and social complexities as the generation of conditions that may lead to institutionally and culturally viable continuous improvement production — appears to be the most relevant form of skepticism to be

[41]I should reiterate, however, that my view of which industries are applicable in this case is broader than the highly-skilled high-tech industry to which Tyson is alluding here.

addressed. This seems to be the case because, as the coming discussion will indicate, it touches on a theme of crucial importance in this dissertation: whether bridging the competitive gap or dependent dynamism between mass production and continuous improvement firms is ultimately possible or not if one considers the different cultural and institutional framework within which one has to operate.

Government's efficacy on trade policy: From the time of John Stuart Mill to date, students of the political economy of trade/industrial policy echo his verdict on the old mercantilists — "when they say country, read aristocracy, and you will never be far from the truth"[42] — in expressing skepticism toward their advocacy of government's direct involvement in these matters, replacing "aristocracy" by "business" or "organized labor." Indeed it is a variation of this skepticism that has fueled the academic concerns of even the advocates of a "new international economics." Therefore it does not require too much thinking to expect a similar kind of criticism toward the proposed IMCIE. Why? The view is often expressed that government simply is incapable of undertaking a trade/industrial strategy of this sort. Ann Krueger (1990) (an advocate of free-trade), for example, has voiced in an explicitly cautionary tone these concerns in her criticism of the managed trade case for high-technology industries, which could possibly be extended to IMCIE. She believes that unless government were to develop appropriate procedures or mechanisms that might be used to identify potentially strategic technologies or sectors, every industry will assert the existence of important externalities — opening up a Pandora's box of special pleadings.[43] And even with appropriate procedures, it is likely, she says, that

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[42]See Mill (1949: 276).

[43]In the case of IMCIE, industries could, for instance, argue their strategic importance (as defined here) as well as try to imply that their competitors were continuous improvement firms.

political pressures will arise to expand the scope of policy beyond that intended and devised under the criteria and procedures. As she states,

> It is in the nature of the political process that pressures will arise for extending favorable treatment to ever larger groups than those initially intended for eligibility. ... Political scientists have long since recognized the iron triangle of politics, between politicians, bureaucrats, and their constituents.[44] *Trade policy, especially one in which a sectoral component is a key feature, runs the serious risk that it will be captured by the iron triangle, as members of Congress vote for protection for the items important to their constituents, and trade votes with representatives of other districts whose voters are concerned about other sectors.* (Krueger, 1990: 81, 85-86) [emphasis added].

When considering the capacity of government to implement policy, economists who are otherwise careful to ground their conclusions on detailed studies of prices and markets often fall back on the loosest form of anecdotal evidence, mixed with strong assertions based on "public choice" economic doctrine. Indeed, those who seek it can find ample evidence of government's inability to form and implement microeconomic policy without succumbing to demands of the loudest and best-connected constituencies.

But is one talking about all governments or just the U.S. government? Because if we look at the Japanese government (see chapter 4), most would agree that Japan has proved capable of undertaking a strategic trade policy, a trade policy whose long-term orientation has proven highly successful. Thus, from an outright rejection of the success of governments in properly dealing with industrial/trade matters, one has to concede that the problem is rather a matter of adjusting, or even reforming the policy process and the legal framework to make the achievement of those goals possible. In fact, this is what seems to be behind claims that "while other governments, notably

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[44]At this point she cites, in a footnote, the work of Morris Fiorina, *Congress: Keystone of the Washington Establishment* (Yale University Press, 1977), and briefly explains the inner workings of the "iron triangle."

Japan, may be able to marshal the necessary authority and gain the requisite competence, the American government does not stand a chance" (Reich, 1990: 223).

Nevertheless, there have been times and occasions at which even the U.S. government has been quite strategic about international trade. One obvious evidence is the central role played by the United States in establishing the General Agreement on Tariffs and Trade (GATT), the International Monetary Fund (IMF), the World Bank, Bretton Woods and related mechanisms — all of which were no small accomplishments in the face of demands by particular industries and sectors for favorable treatment. Also, it is interesting to note that those American industries that are now among the most productive and competitive — aerospace, telecommunications, pharmaceuticals, and biotechnology — are also the industries in which the U.S. government has been most actively involved, through public procurement, publicly funded research and development, and regulation.[45]

As to competence in American government *per se*, it is worth noting that certain government agencies have enjoyed a high degree of competence, despite their important effects on American business. In such list are the Antitrust Division of the Justice Department, the Securities and Exchange Commission (SEC), the Office of the United States Trade Representative (USTR), the Council of Economic Advisers (CEA), and the Defense Advanced Research Projects Agency (DARPA) in the Department of Defense (DOD). Each of these agencies has been able to recruit excellent professionals to their staff. Each has proved capable of policymaking with the interests of the American economy as a whole, rather than the interests of the most powerful business constituencies. In any case, to argue that a certain course of public policy is desirable

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[45]A longer list, as well as a similar argument is found in Tyson's book, *Who's Bashing Whom? Conflict in High-Technology Industries* (Institute for International Economics, 1992).

but cannot be implemented hardly puts an end to the discussion. If other nations are being more strategic about their trade and industrial policies than the United States is, and if that is occurring to the U.S. detriment, then it is entirely reasonable to at least conclude that the United States must change its current ways. If this means that the way public policy is formed and executed must change, then why not let the nation at least attempt to do so? As Reich (1990: 224) has put it "an attitude of resignation about the capacities of the U.S. government to implement good or effective policy is no more justifiable than resignation over the substance of policy itself." Indeed, one cannot defend a policy position on one hand without favoring policy-based action on the other. Such ambivalence serves no purpose.

Government and the reversal of dependent dynamism: As indicated in the conclusion to the second chapter, the change in industrial leadership from the U.S. to Japan over the past few decades clearly demonstrates how the social basis of economic institutions has played a tremendous role in the development and utilization of the productive resources of a country. It was under this view that — when stating the differences in the structures of production between the continuous improvement firm and the mass production firm — I suggested that they had important socio-cultural roots which should not be ignored. Other authors also had also recognized such institutional dimension (Best, Cole). However, I explicitly indicated that the institutional dimension behind this industrial dynamism had a particularly important implication: that this competitive dynamism by being so much a function of a distinct institutional arrangement brought about a degree of vulnerability, if not impotence on the part of the follower — a situation similar to that of ISI implementing countries in the past as they learned that industrialization involved more than the mere transfer of technology: "The follower cannot simply catch up on the different dimensions of the economy of net customer value by trying to graft the elements of the new

manufacturing system onto the existing system, since more is at stake than simply "learning" new technologies or emulating methods of production."

Thus, I suggested that because the ultimate source of the dynamic nature of the technical advances is related to aspects of the societal framework which contained the continuous improvement firm, it was essential to formulate public policy that — recognizing this fundamental connection — attempted to promote competitiveness (i.e. institutionally relevant American continuous improvement production) through the implementation of changes that would have to start at bringing about an institutional impact in education, in the legal framework, and in government-private-enterprise relations. As an alternative to an adaptive strategy that would always leave a competitive gap to be filled by U.S. competitors — thereby further reproducing the follower nature of U.S. competitors — this "innovative" approach of competing against continuous improvement production by learning to become one's own source of continuous improvements, has, in principle, good logical consistency.

But although this response to the follower-impotence argument may have, at least in part, removed the skepticism over the possibility of competing with this new production paradigm in the future, one still has to differentiate the kind of argument made here in favor of educational and other societal-wide reforms from the argument recently made by economists under the name of "the convergence hypothesis." The convergence hypothesis argues that those nations which have made fundamental public investments in the education of their people — nations that belong to what Baumol, Blackman and Wolff (1989, ch. 9) call the "convergence club" — have the capability of borrowing new technology from technological leaders, which in turn permits them to increase their rates of productivity growth so that their levels of productivity converge with that of the leaders (Baumol, Blackman and Wolff, 1989: Ch. 5). Discussing the problems of the convergence hypothesis and analyzing how its assumptions differ may

point to problems in my argument for IMCIE and social-wide reform, leaving thus room for criticism.

Similar to my proposition for framework reform, the convergence hypothesis focuses attention on the roles of education and technological change as critical determinants of long-run industrial competitiveness. But the institutional perspective on learning and competitive advantage that is offered here (see chapter 2) suggests a number of weaknesses in the convergence hypothesis, and, possibly, in my own case for reform. For instance, defenders of the convergence view argue that a sound educational system provides the foundation for followers to adopt foreign technology, thus permitting their rates of productivity to converge on that of the leader. In the long-run historical perspective, however, it must be recognized that the relation between public investment in education and industrial leadership is a twentieth-century phenomenon. In the nineteenth century Britain became the "industrial mecca" of the world with little investment in, or assistance from, a system of public education. It was only on the twentieth that the development of a system of public education became critical for successful economic performance. In fact, particularly in the U.S., the form and content of the system of public education responded to the changing labor force requirements of business enterprises, and these requirements were determined by the strategies and structures of these enterprises.[46] In the case of Japan public it was not public education alone that evolved to accommodate those requirements, but the enterprise itself became interested in enriching the worker with mental and physical skills which could be used in the plant floor (see chapter 2).

To be sure, in all the advanced capitalist economies of this century, the willingness of the state to invest in an educational system has been of vital importance

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[46]See Noble (1977), and Lazonick (1986).

to the growth in productivity. But, most important, the rate and direction of such public investments have been profoundly shaped by the rate and direction of business investments. Indeed, it can be said that part of the U.S. economic problem in the last quarter of the twentieth century has been the failure of business enterprises to make widespread and effective investments in organizational and technological innovation that could in turn have placed enough pressure on — and provided enough resources to — the educational system to transform it to serve the human-resource needs of business. Consequently, educational reform, by itself, would do little toward the actualization of an institutionally relevant continuous improvement system in America — not to mention the long list of unresolved questions that educational reform alone would get me into — if American business enterprises are not that engaged in their own form of institutional reform. Thus, in this qualified sense, the case made in this dissertation for educational reform as an important means of increasing industrial competitiveness is not much different from the case made by the advocates of the convergence hypothesis in its failure to observe that a specific set of behaviors might be absent in the very actors upon which the expectation of entrepreneurial dynamism — in the form of institutional reform — is entrusted.[47] In other words, by not accurately accounting for the unwillingness to introduce institutional reform on the part of the American industrial elite as part of the competitiveness problem, I am also likely to give too much credit to a solution that does not address a number of complexities contributing to the problem.

However, the similarities with the convergence hypothesis stop here. For example, contrary to the innovative-bound approach proposed here, the convergence

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[47]Note that while advocates of the convergence hypotheses speak in terms of productivity to refer to the concept of competitiveness, I prefer to directly use the term competitiveness, because I see more in the last concept than the mere intensity of resource use application of the former concept.

hypothesis — like the earlier ECLA advocates of import substitution industrialization (ISI) — overestimates the degree to which technology can be adapted from one national environment to another in its attachment to the view that better education provides the foundation for followers to adopt foreign technology. Although there is no dispute to the notion that the utilization of technology requires complementary human inputs with specific cognitive capabilities — hence the importance of education for industrial development — "transferred" technology in this sense is ultimately developed so that it can be productively utilized in a new national environment, being in effect a new technology. The problem with that argument is that transferred technology in that sense is often part of an adaptive industrial strategy, a strategy which besides suffering from institutional inconsistencies — and hence difficult to implement — further strengthens existing patterns of industrial followership in the form of dependent dynamism, even if in the short-run it represents a superior technology in terms of its impact on productivity.

The convergence hypothesis fails in not acknowledging the importance of the social determinants of technological change within particular national environments, a point much emphasized in this dissertation. In fact, the entire argument for IMCIE was made having in mind the idea that beyond grafting bits and pieces of the continuous improvement system onto an existing less competitive structure — consummating the strategy of following a moving target and remaining in the path of dependent dynamism — only a strategy of developing America's own's version of flexible production could assure the final closing of the competitive gap between American and Japanese producers. That was the essence of the idea of "learning by becoming" illustrated in figure 3 of chapter 2.

Conclusion

Our major purpose in this chapter has been to describe and develop a critical analysis of "managed trade" as a new approach to the U.S. bilateral relationship with Japan. From the first section we learned what were the main instruments — and the theoretical/political justification for their use — as members of the Clinton administration indicated in their congressional testimonies and, more directly, in the academic work of Laura D'Andrea Tyson, this administration's CEA. In that section, it was indicated that the pursuit of an outcomes-oriented approach, and the strong rhetoric in its backing by all members of the administration provided evidence to the belief that the current policy represented a clear departure from the previous policies. Central to this new approach, and the quest for expanding VIE's, is the macroeconomic-motivated notion that removing structural barriers to entry in the Japanese market should be the guiding principle for this administration's efforts to reduce the large trade deficit with Japan.

In the second section, as part of the critical portion of the chapter, I addressed some of the problems with this allegiance to the view of the trade deficit as a macroeconomic problem, and indicated that continuing to view the trade situation from such an aggregated perspective posed serious threats to present and future administrations' success in addressing the structural causes behind the trade deficit. In fact, if the macroeconomic logic is applicable here, it indicates that in the context of the 1980's and early 1990's, it was the pursuit of a specific type of macroeconomic policy by the United States itself that intensified the trade problem. This became clear by the suggestion that the combination of demand-management with the use of the interest rate to squeeze out inflation — while the government ran large fiscal deficits — resulted in valuation of the exchange rate, which in turn facilitated the expansion of Japanese-made products in the American market at a time when American industry showed signs of

lack of competitiveness. Thus, the non-recognition of some basic microeconomic forces as potential determinants of the trade imbalance with Japan, combined with the tendency to overemphasize the role of existing structural barriers to entry in the Japanese market, suggest that the policy instruments used by the Clinton administration are not likely to effective in achieving its aspired goals.

However, the most important criticism addressed in that section was that Tyson's managed trade argument, by not distancing itself enough from free trade assumptions of mainstream economic theory proposes no relevant remedy for industries which — being of strategic importance, and sharing similar characteristics with technology-intensive industries — are suffering from direct competition with firms operating in an altogether more dynamic paradigm. This view was reiterated in the above discussion of IMCIE as a proposed managed trade alternative, where I indicated that the U.S. industry is not likely to overcome the competitive gap with its Japanese competitors — and eventually gain a greater share of domestic and foreign markets — in the absence of an industrial/trade policy which directly attempts to address some structural causes of the problem by engaging in the broad societal framework reforms suggested in chapter 2. It was then observed that the mere allusion to a more active role for government in welding a successful industrial/trade policy — not to mention its role on framework reform — immediately requires me to justify my high expectations from the government, seen by some many critics in America as one of the major impediments to economic dynamism. The last section of this chapter attempted to address these issues by providing an answer partly empirical — with the suggestion that different government agencies had given proof of competence and efficacy on related issues in the past — and partly ideological — by implying that the challenge presented by the "new competition" was too serious to be left alone to private

enterprise, with its short-run orientation and institutional limitations, to establish a new competitive strategy.

In contrasting the policy position adopted in this dissertation with that known as the "convergence hypothesis" I once more attempted to emphasize the view that current adaptive strategies adopted by the American auto industry, seen in its reliance on emulating bits and pieces of flexible production systems on top of an existing, less dynamic mass production system, based on antagonistic relations with labor, does not go far enough in the direction of eliminating the current state of dependent dynamism in their competitive relationship with the Japanese industry. Such a strategy shares with the convergence hypothesis — and even with the ISI thesis — the mistake of not accurately accounting for the social determinants of technological change across national environments. Therefore, it intrinsically fails to provide a realistic solution to the problem of dependent dynamism by not pointing to the structural changes — from legal, policy process-related reforms, through firm institutional reforms, to the more encompassing restructuring of public education — required to generate an institutionally-relevant version of continuous improvement production in the U.S..

Throughout this dissertation I have used the ISI thesis as a major theoretical and policy-related model for addressing the new kind of dependent dynamism that I have identified in the second chapter. The analysis of the social determinants of technological change in the construction of that argument, however, suggested that this proximity to the ISI thesis should be a matter of constant concern since, in constructing the case for dependent dynamism in within center relations, I indicated flaws in some behavioral assumptions contained in the ISI model. The most important of these was the naive expectation by ISI advocates that once ISI was implemented the local elites — initially of an agrarian background — would automatically assume a set of behaviors similar to those shared by the industrialized country's elites. This called attention to

the fact that after identifying the basic sources of this new dependent dynamism, the policy proposal to be elaborated had to be explicit about the construction of an industrial/trade policy that was in tune with the institutional reality of the American industrial elite, and that it would only have a chance of being viable if the new policy was the product of a joint effort by industrialists and government officials. This is what constitutes the heart of the IMCIE thesis. The findings contained in the fourth chapter suggested that more than the end of an antagonistic relationship, the welding of an industrial policy required first a realization, by government and the auto industry, of the strategic constitutive components of the competition posed by the current leaders. I then indicated that the government, in its role and perception as a disinterested player, could be pivotal in forging such a view. The final portion of this chapter addressed the limitations of government but focused on identifying the potential it has already demonstrated in trade/industrial related areas.

In the next and final chapter, I intend to summarize the evolution of the entire causal model developed in this dissertation: from its ECLA conceptual roots, to the current stage where arguments for managed trade are made. I shall check whether I have had success in further developing the scope of the original dependency formulation, while remaining within the theoretical and conceptual boundaries earlier set by the ECLAistas. That will also be the best setting for a discussion of the different kinds of problems (inter-industry and societal) and policies (short and long term oriented) identified and suggested in this dissertation so that one can finally determine whether the institutionalist contribution to an originally structuralist theory has allowed me to elaborate an IMCIE program that is able to avoid some basic problems earlier encountered by the ISI model. This analytical exercise will help me review some crucial findings made in this dissertation while enabling me to have a final assessment

of what have been the advantages and compromises involved in studying this type of asymmetric relation in the way I have here.

6. CONCLUSION

In the mid to late 1960's, after about a decade of ISI policies, Latin American nations began to express their dissatisfaction with the North-South process of technology transfer. Empirical studies revealed the existence of restrictions in contractual agreements covering technology transfer from abroad that were deleterious to the host country. To many leftist Latin American intellectuals, it seemed as if the condition of technological/industrial follower would never be superseded if "firm" support to the policy tools of ISI were maintained.[1] Although complaints were aired repeatedly regarding how poorly the technology being imported meshed with the character of local factor endowments, available skills and inputs, and market size, few pursued the view that the problem — beyond having its political roots in an "unfair" international distribution of labor — was a consequence of a basic flaw in the initial ISI model: not accounting for the importance of the social determinants of technological change within a particular national environment.

Therefore, a typical reaction to these concerns in the late 1960's and early 1970's was to establish regulations on imports of technology in Argentina, Brazil, Mexico, and the Andean Pact countries. However, a second, and more positive, reaction was to establish national councils expressly charged with overseeing science and technology issues. More than the beginning of the formal evolution of science and technology institutions in Latin America, this measure marked the birth of a strategy of

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[1]As discussed in chapter 2, this provided the theoretical ammunition needed by the leftist enemies of developmentalism, who were more than prepared to establish a superficial connection between ISI policies and the then emerging military regimes in Latin America. The adjective "superficial" is used to describe that connection because, Latin American regimes were possibly the greatest detractors of the ISI development view, since the stage of removal of import barriers never came to be implemented. Going against the views of Prebisch and other ECLAistas, the gradual removal of import-protecting/infant industry promoting barriers never occurred because it became a means to obtain political support from national industrial elites.

autonomous technology development in Latin America. Interest in augmenting Latin America's internal technological capacity received a further boost in the late 1970's when it was found that some technical learning and innovations were already taking place. Jorge Katz and associates (see Katz 1984a, 1984b, 1987), in a revealing series of case studies of Latin American manufacturing enterprises, found that their cumulative impact on productivity probably rivaled or surpassed the productivity effects of introducing updated equipment (i.e. an adaptive strategy).

The two interrelated approaches for solving the problem of industrial followership indicated above will help illustrate the two main points studied in this dissertation. First the analysis focused on further refining the concept of dependent dynamism by looking at its dynamics and the different forms it may take in the industrial/trade relations between center nations. The development of the concept of dependent dynamism produced by ECLA economists — then solely concerned with the Latin American economic context — came out of their discussions on the different characteristics of the production structures in core and peripheral countries.[2] Thus, as it was conceived in the original ECLA model, if the concept of dependent dynamism were to be applicable in a new context, it would require the positive identification of two significantly different production structures in at least two countries, and, more important, these production structures needed to have clearly discernible structural differences — as in the center-periphery case — which could be then traced in the superior technological (hard and soft) performance of a typical product produced by one in comparison with the other. The choice of the automobile industry as the focus of this part of the analysis was made because it seemed to fit as an "ideal type" or a

[2]Chapter 2 presents a thorough discussion on this matter.

good measure of central tendency for both countries' industries, thus providing a fair test.

Second, as the qualitative and quantitative evidence came to support the application of dependent dynamism to nations within the center(see chapters 2 and 3), the analysis focused on the role of trade/industrial policy as a means to solve the problem posed to the dependent dynamic nation/industry by the "new competition" referred to as the continuous improvement firm. However, because economic gains associated with flexible production were shown to be largely the result of a different socio-institutional evolutionary process, the attempt to emulate and or purchase — whenever possible — portions of these engineering and managerial methods showed severe limitations. This argument about the importance of social organization as essential to the development and utilization of productive resources explains why former technological leaders, such as the U.S. and Great Britain, may have problems responding to competitive challenges from foreign industries that, through the dynamic interaction of organizational structure and technological change, have generated rapid rates of competitiveness and productivity growth. Without a clear focus on society-wide reform that may create the basis for the development of a similar, but culturally and institutionally relevant, continuous improvement system in America, and, without the development of a closer relationship between government and business enterprise which recognizes the increasingly strategic nature of global trade, free-market evolution will relegate American industry[3] to the role of technological follower.

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[3]Note that the "American industry" or the "American corporation" I am referring to here — and throughout this dissertation — should be understood only as that wide segment of the American industry that is operating the main principles of mass production as identified in the second chapter of this dissertation.

The "catching up" that needs to be undertaken — and which is somewhat similar to what dependency theory had historically argued in a different context — is the target toward which the policy focus of this dissertation was directed. It is also quite illustrative of the similarities and differences between the proposal for Import Mangement with the purpose of Continuous Improvement Evolution (IMCIE) advanced in this dissertation, and its original parent: ECLA's ISI model. Beyond the use of the notion of dependent dynamism, the major similarity lies in the rejection of the comparative advantage argument and the notion that government has to be somehow engaged in going beyond a country's factor endowment limitations toward the creation of comparative, if not competitive advantage. In attempting to identify the direct structural cause of the problem (dependent dynamism), both theoretical contributions call for an active role of the government in interfering with the otherwise "natural" evolution of events deemed to be detrimental to the follower country and or industry.

Arguing along lines similar to those used by the original dependency contribution, I have demonstrated (see chapter 2) how market forces currently in place in the U.S. domestic market favor adaptive schemes as justifiable and feasible economic strategies — though not "rational" in terms of the long-term interests of the country (see the Schumpeterian interpretation of dynamic economic evolution) — over the pursuit of otherwise more long run oriented strategies directed toward transforming internal obstacles to competitive dynamism into competitive strengths. To this effect, for instance, I indicated the allocative problem usually presented to managers as they weigh the usually higher risks involved in implementing a higher fixed cost strategy (HFC), which may be associated with greater short-run costs and, hence, lower profits, against the advantages of remaining in an adaptive path, which, though profit-maximizing in the short-term, may cause the decline of a firm's competitiveness. The rationale is simple: by avoiding HFC investments in organizations and technologies that

would have generated returns only in the future, the adaptive strategy may augment rates of productivity growth in the short run while making it impossible to sustain these rates of growth in the long run. It is important — as IMCIE proposes, and the proponents of the convergence hypothesis argue — to focus the analysis of economic performance on the long run; but, it is even more important to recognize — as it was done throughout this dissertation — that it is the dynamic interaction between organization, technology and the social environment (of which government, and labor are crucial parts) that determines whether the long run results in competitive success or relative decline.

Still in common with the center-periphery model, it was observed that if market forces are left alone to determine who just might be the competitors of the future, we might be robbing ourselves of a future if we forego the attempt to become market forces ourselves and opt to quietly accept the suggestions of a theory which merely suggests we should concentrate on that which we do better. That is, by not giving much consideration to the possibility of creating comparative advantage as an alternative to a lacking naturally-based comparative advantage, we cannot plan or even hope for a better future.

A major initial barrier to the traditional foreign technology adapting schemes or the "borrowing back strategy" was identified: "with institutions in place that were appropriate for the development and utilization of what by now have become typical follower-rooted technologies, the formal technological leaders may be incapable of increasing their rates of productivity growth by simply borrowing back technologies (hard and soft) from the rising competitors" (see Ch. 2). That seems to be the case because the American-owned corporation, structured in a different socio-historical context, appears to have inherent organizational and structural limitations which might hinder it from developing, and perhaps even utilizing, superior technologies. Instead,

they may — as was done first by Great Britain and more recently by the U.S. — pursue the alternative strategy of adapting on the basis of their traditional organizations and technologies, a strategy which, if faced with the dynamic type of competition offered by the continuous improvement firm, is bound to failure. Thus, with the recognition of the importance of the social determinants of technological change, the analysis in this dissertation was elaborated within a comparative, cross-national perspective which sought to emphasize the importance of creating socio-institutional conditions that might favor the emergence of local (domestic) sources of competitive dynamism rather than the continuous reliance on adaptive strategies such as that of emulating production techniques/styles of the leader.

In suggesting a focus on creating socio-institutional conditions capable of generating a culturally relevant form of continuous improvement production, I also indicated the existence of one of the basic ambiguities in dependency theory which might raise some questions about whether the dependency orientation goes much beyond an ideological commitment to reform. To be sure, a source of ambiguity within the ISI model is that it is unclear as to how much of the problem with overcoming dependent dynamism can indeed be solved by short term policy adjustments (such as import substitution *per se*) and how much of that solution would have to occur at the level of some deeper kinds of structural change (such as developing technologies compatible with the character of local factor endowments, and institutional organization). I attempted to develop an analytical and prescriptive model that — by recognizing this problem —may provide a way out of dependent dynamism for America's mass production firm, and, especially, for the American automobile industry. Thus, the policy recommendations contained in the previous chapter were explicitly about two levels and rates of change, that is, change in trade/industrial policy and change in both how policy is made and in social structures.

Not unlike ISI policy recommendations, the IMCIE model is well positioned to say a good deal about the first kind of change. However, and similarly to ISI-type propositions, all sort of unanswered questions arise when one looks at the second type of reform. An example of this kind of unanswered structural question is educational change. If educational change is part of what is required for industrial catching up and the elimination of dependent dynamism — as suggested in the second and fifth chapters —what kind of education and educational change do we want? Though I have made direct references to the desirability of this kind of structural change in the previous chapter, these references do not place me in a particularly good position to state what it is about Japanese education that contributes to their industrial dynamism, and what it is about American education that makes it work less well. In fact, neither I nor, it seems, even education scholars know where educational change is going to come from; if indeed it is to occur.

Thus, interestingly enough, I found out that the same kind of ambiguity run into by the earlier ISI model shows up again within the IMCIE framework: while there are very clear policy recommendations in terms of the trade/industrial policy issues — as indicated, for instance, in fig. 3 in chapter 2 — direct discussion of the very important structural social changes required — which I earlier criticized the ECLA model for ignoring — is only carried out at the descriptive level and relies on anecdotal evidence. Yet, even if one concedes that the argument made by IMCIE concerning the structural elements of the problem of eliminating dependent dynamism is indeed plagued with anecdotal evidence, one would have to concede that there still remain important distinctions. A quick return to the argument for society-wide reform is needed here.

Concerned with the certain impact that society has on the dynamics of technological change I suggested it was important to include structural "framework reform" as one crucial policy area on the side of the more directly related area of

industrial/trade policy. Indeed, the main argument of the historical background chapter (chapter 4) was that variations in state-societal arrangements were the key to explaining the current pattern of dependent dynamism in the differential stage of competitiveness in which U.S. and Japanese firms are found. It was shown, for instance, that differences in state-societal arrangements — more specifically in the government-business enterprise relationship — did greatly affect competitiveness mainly through their effect on the creation and diffusion of new technologies. Furthermore, throughout the period investigated evidence was produced that indicated how governmental policy, or its absence, had been pivotal in either accelerating or impeding the development and diffusion of technological innovations that are crucial to competitiveness. Admittedly, the search for a policy solution became then the principal focus of my attention. But, aware of the socio-institutional complexities involved, I immediately started asking what were just some of the possible limitations to that policy solution in terms of short term change.[4] Because a set of elements that involved long term change had been identified, it then became necessary to identify from where that long term change would have to come. In this sense, then, the framework laid out for IMCIE bears some resemblance to the ideological commitment to reform of earlier dependency theory, but such a resemblance fades when one considers that the broad policy framework proposed here actually helps me start to identify some of the areas where change has to be produced. In fact, the theory and the analysis that I have developed suggests that if the United States is to have the kind of technological innovation it needs, then it has to undergo modifications not only of the policy environment in which government, business, and labor are operating, but, most important, changes are required in the way people are trained to understand problems,

[4]This is in itself a question that ECLAistas never really gave much attention.

in the way people are trained to interact in a worker-management context, all of which have deeper societal elements associated with them. In other words, at the policy level I was able to observe the dynamics of this process of innovation and increasing international competitiveness and indicated some desirable industrial/trade policy changes, and at the structural level I avoided the dismal ideological tone of saying "it's all deep structure and one can't do anything about it." I then recognized the fact that I am dealing with different sources, kinds, and rates of change, and that the next step is to identify the areas where action should be taken, without, at this point, knowing exactly what will produce the change.

Thus, beyond the neo-Marxist tone which later dependency theory took in its call for social revolution, much of what was said here can be summarized by stating that wherever the set of changes required for the elimination of dependent dynamism is coming from, some of that change will have to take place in public education, government-business relationships, worker-management relations, and, more immediately, in the articulation of a dynamically active industrial/trade policy. If the United States is to eliminate current patterns of dependent dynamism now faced by its mass production-type industries, the short and long term types of reform suggested in this dissertation have to occur.

"Is there an analytical core in dependency that goes beyond a neo-Marxist ideological commitment?" "Is there a specific set of theoretical concerns within the original dependency contribution which limits its use and or extensions to regions of the world other than Latin America?" These questions were broad in scope and of great importance for the epistemological objections they could raise to the theoretical contribution developed here. Nonetheless, in the sense that I was able to use approximately the entire causal logic of the initial model — only differing where I believed a certain assumption was not tenable — and in the sense that I appear to have

been successful in establishing a set of theoretical expectations, informed by the original contribution, and confirmed by the evidence presented here, I can safely conclude that the causal structure behind the ISI and IMCIE arguments shows that there is an analytical core in dependency that goes much beyond an ideological commitment. Dependency, as it was first elaborated, and as it is found now, stands on good logical, theoretical and empirical grounds.

The major original contribution of this dissertation is a different, but theoretically and empirically sound, account of the current decline in U.S. industrial and economic leadership that points to the importance of building up a nationally based, culturally and institutionally relevant technological capability in pace with the new production paradigm: the continuous improvement system. A set of overreaching policies which must be initialized by the government with the indispensable collaboration and interest of private enterprise was advanced. The logical thrust of all these solutions resides in the understanding that building up a national base of technological innovation is certainly crucial to industrial development in the long run as the only truly viable alternative to short term adaptive strategies given the particularly new dynamic character of the "new competition." Furthermore, it was indicated that such short term strategies would lead this country to become a great consumer of imported technology, which, as a neoclassical economist would put it, is cheaper and "more readily available", yet — as it is shown here — it is not the precursor of progress in the direction of economic dynamism, rather, the harbinger of increased dependent dynamism.

Finally, I would like to outline a conceptual perspective that I have found useful in differentiating the neoclassical synthesis from the structuralist-institutionalist approach taken in this dissertation, particularly as regards the understanding of

economic development processes.[5] My proposal consists simply of distinguishing between them according to the emphasis that each one places on factors of production, or "stocks," *vis à vis* flows, or the demand side, in the process of economic evolution. By stocks I mean the classical view of the endowments of human, natural, and capital resources that a society has at its disposal at a certain point in time; by flows, "the production, income, expenditure, and transfer streams per unit of time obtained from those endowments" (Sunkel, 1990: 37). Classical political economy placed a great deal of emphasis on resources, or the supply side of production, without neglecting the flows derived from them. Mainstream neoclassical economics, the current paradigm, on the contrary, has managed to expurgate from its theoretical framework, its teaching, and its policy recommendations, almost all reference to the productive resources of society and has concentrated almost exclusively on the demand or consumption side of production, both at the micro and macroeconomic levels.

This difference in focus has had profound implications. Mainstream economics has excluded from the field of economic inquiry and policy almost all that pertains to that other major part of the socioeconomic process that directly deals with resources, their dynamics, and their relations with the flows that derive from them, with technology, institutions, power, and culture — all of which are responsible for the way those resources are created, owned, combined, used, and reproduced. Although neoclassical economics mentions these matters in introductory chapters of economic textbooks, it strips them of their real significance by transforming them into factors of production that can be mechanistically manipulated in any way one wishes according to the logic of the corresponding markets.

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[5]Portions of this argument were originally elaborated by Sunkel (1990).

A case in point is the analysis of labor. Labor seems to be often treated as a disembodied commodity (Marx was right?) without any relation to the man or woman who performs it, to the social class they belong, and, in summary, to the society and culture that determines their skills, habits, values, work ethic, and aspirations. This usually corresponds to an exercise in abstracting labor from its socio-cultural environment and making it responsive solely to changes in wages, an exercise not at all concerned with asking whether the quality of education available — itself a fundamentally important input to labor — is to blame for lower productivity levels.

Hence, it not surprising to see why neoclassical doctrine suffers from an inability to perceive the possibility that public expenditure can complement ("crowd in") private economic activity, although one would think that the large orthodox literature on public goods and externalities would have put this issue to rest. In fact, the existence of beneficial externalities resulting from state intervention is usually downgraded or ignored. That the capital goods sector generates national technical learning, or that achieving dynamic comparative advantage in selected industries might require deviation from unfettered market forces, seems not to have found a place in the neoliberal basket of theories, despite compelling contemporary evidence from South Korea, and Taiwan just to mention two of the most often cited successes in recent development history of former technological followers which appear to have finally bridged the gap.

The structuralist-institutionalist approach taken in this dissertation, by giving explicit attention to resources — their dynamics, the relations among them, the way they can be made to generate flows, and the feedback of flows on resources — has provided better understanding of the current problems of the U.S. auto industry (and other types of mass production firms) and of the strategies and policies that might bring about the resurgence of American industrial leadership. At the theoretical level, I

sincerely hope that this discussion has contributed to a geographical expansion of the political economic insights of the original dependency contribution and has helped build a solid bridge between the two schools of thought — structuralism and institutionalism.

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APPENDIXES

APPENDIX A

JOINT STATEMENT ON THE UNITED STATES-JAPAN FRAMEWORK FOR A NEW ECONOMIC PARTNERSHIP
JULY 10, 1993

Reaffirming their understanding at their meeting of April 1993, the Prime Minister of Japan and the President of the United States agree to establish the United States-Japan Framework for a New Economic Partnership, as described below.

Basic Objectives

The Framework will serve as a new mechanism of consultations for United States-Japan economic relations. This new economic relationship must be balanced and mutually beneficial, and firmly rooted in the shared interest and responsibility of the United States and Japan to promote global growth, open markets, and a vital world trading system. These consultations will take place under the basic principle of two-way dialogue.

The framework provides a structure for an ongoing set of consultations anchored in biannual meetings of the Heads of Government. The goals of this Framework are to deal with structural and sectoral issues in order to substantially increase access and sales of competitive foreign goods and services through market-opening and macroeconomic measures; to increase investment; to promote international competitiveness; and to enhance bilateral economic cooperation between the United States and Japan.

Japan will actively pursue the medium-term objectives of promoting strong and sustainable domestic demand-led growth and increasing the market access of competitive foreign goods and services, intended to achieve, over the medium term, a highly significant decrease in its current account surplus, and to promote a significant increase in global imports of goods and services, including from the United States. In this context, Japan will take measures including fiscal and monetary measures as necessary to realize these objectives.

The United States will also actively pursue the medium-term objectives of substantially reducing its fiscal deficit, promoting domestic saving, and strengthening its international competitiveness.

Steady implementation of these efforts on both sides is expected to contribute to a significant reduction in both countries' external imbalances.

The United States and Japan are committed to an open multilateral trading system that benefits all nations. Benefits under this Framework will be on a Most Favored Nation basis.

Consultations will be limited to matters within the scope and responsibilities of government.

The two Governments are committed to implement faithfully and expeditiously all agreed-upon measures taken pursuant to this Framework. Both Governments agree that tangible progress must be achieved under this Framework.

The two Governments will utilize this Framework as a principal means for addressing the sectoral and structural areas covered within it. If issues within these areas arise, both sides will make utmost efforts expeditiously to resolve differences through consultations under the Framework or, where appropriate, under applicable multilateral agreements.

Sectoral and Structural Consultations and Negotiations

Japan and the United States will engage in negotiations or consultations to expand international trade and investment flows and to remove sectoral and structural impediments that affect them. Initial areas include the following issues of interest to both countries:

Government Procurement - Measures undertaken in this area should aim at significantly expanding Japanese government procurement of competitive foreign goods and services, especially computers, super computers, satellites, medical technology, and telecommunications. The U.S. Government will encourage U.S. firms to take advantage of opportunities created by the Government of Japan. The U.S. Government reconfirms that it is the policy of the U.S. Government to provide non-discriminatory, transparent, fair and open opportunities consistent with its obligations under the GATT Agreement on Government Procurement. The U.S. Government will consult with the Government of Japan upon request concerning such policies, and areas of particular interest.

Regulatory Reform and Competitiveness - Measures undertaken in this area will address reform of relevant government laws, regulations, and guidance which have the effect of substantially impeding market access for competitive foreign goods and services, including financial services, insurance, competition policy, transparent procedures, and distribution. The United States will undertake efforts to promote exports to Japan, including business facilitation measures and other measures to further enhance U.S. international competitiveness.

Other Major Sectors - Measures undertaken in this area will address other major sectors, including the automotive industries. Efforts in this area, including existing arrangements, such as MOSS, will have the objective, *inter alia*, of achieving significantly expanded sales opportunities to result in a significant expansion of purchases of foreign parts by Japanese firms in Japan and through their transplants, as well as removing problems which affect market access, and encouraging imports of foreign autos and auto parts in Japan. The U.S. Government will promote the export of autos and auto parts to Japan and will encourage U.S. companies to pursue more actively market opportunities in Japan.

Economic Harmonization - This area will address issues affecting foreign direct investment in Japan and the United States. In addition, this area encompasses issues such as intellectual property rights, access to technology, and long term buyer-supplier relationships between companies in the two countries.

Implementation of Existing Arrangements and Measures - All existing bilateral arrangements and measures will be closely monitored and fully implemented. Specific commitments made under the Structural Impediments Initiative (SII) talks will be absorbed into this basket as appropriate.

Discussions in the above areas will begin as soon as possible. Each basket will be chaired at the subcabinet level with working groups as appropriate. The two governments will make utmost efforts to agree on measures regarding significant market access problems in government procurement, the insurance market, the automotive industries, and other high priority areas to be determined, at the first Heads of Government meeting in 1994 or within six months of the agreement. Each such issue will be dealt with separately. Agreements on measures in the remaining areas are expected to be announced at the second Heads of Government meeting in July 1994.

Common Agendas for Cooperation in Global Perspective

The two governments will also jointly pursue positive cooperation in a wide range of global areas and bilateral projects of potentially global application. In doing so, Japan and the United States will build new cooperative relations and thereby contribute to the development of technology and the world economy. The two Governments will pursue a new joint response to the challenge in environment and other common economic issues of global implication. Through this joint collaboration, the two nations will establish a constructive global partnership.

Progress on results arising out of such consultations will be included in the statements at the biannual meetings of the Heads of Government. Progress reports will be prepared by the subcabinet group at the pre-Heads of Government meetings.

Discussions will begin as early as possible in the following areas:

1. Environment. The United States and Japan will establish a forum for regular consultations on environmental issues at the subcabinet level. The United States and Japan will collaborate on the following specific environmental priorities: oceans, forests, global observation information network, environmental and energy efficient technologies, conservation of important natural and cultural resources, and environment-related development assistance.

2. Technology. Japan and the United States agree to cooperate on mutually-agreed projects in the following areas of technology development: transport technology, telecommunications, civil industrial technology, and road technology and prevention of disaster.

3. Development of Human Resources. The United States and Japan agree to strengthen bilateral cooperation in the development of human resources in the areas of labor exchanges and the Manufacturing Technology Fellowship Program.

4. Population. The United States and Japan will work together to enhance the effectiveness of efforts to stem rapid global population growth, including strengthening multilateral population programs. The United States and Japan will work together to use our bilateral programs to enhance the effectiveness of population programs in the developing world.

5. AIDS. The United States and Japan will cooperate to enhance multilateral efforts on AIDS. The United States and Japan will work together to use our bilateral programs to address the AIDS crisis in the developing world.

High-Level Consultations

Both Governments will seek as expeditiously as possible to begin consultations under this Framework, with achievements to be announced at the Heads of Government meetings to be held twice a year.

The two Governments will assess the implementation of measures and policies taken in each sectoral and structural area within each basket under this Framework; this assessment will be based upon sets of objective criteria, either qualitative or quantitative or both as appropriate, which will be established using relevant information and/or data that both Governments will evaluate. Such assessment will occur at the biannual Deputy Minister level meetings prior to the Heads of Government meetings and, in addition, as determined by the negotiating teams within each basket. These criteria are to be used for the purpose of evaluating progress achieved in each sectoral and structural area, including the collaborative efforts of the governments.

At their biannual meetings, the Heads of Government will issue public statements that include reports of results achieved under the Framework on sectoral, structural and macroeconomic issues, as well as a common agenda for cooperation in global perspective.

Deputy Minister level meetings will be held twice a year to prepare reports to be submitted to the two leaders. Meetings can be held as appropriate several seeks before biannual Heads of Government meetings. The first Deputy Minister level meeting will be held within six months of agreement on this Framework.

Consultations will be carried out making use of the existing fora where appropriate, and working groups may be established as necessary in order to facilitate dialogue in this Framework. All relevant agencies will participate.

After two years, both Governments will decide whether to extend consultations in this Framework beyond the fall of 1995.

An update on progress toward reducing current account imbalances and other macroeconomic issues will be included in the biannual Heads of Government statements. Progress will also be reviewed at the pre-Heads of Government meetings. While ongoing talks will be anchored in the G-7 process and central bank dialogue, other contacts between the two Governments will offer the opportunity to discuss these concerns, for example during discussions between the Council of Economic Advisers and the Economic Planning Agency.

Source: United States Department of Commerce.

APPENDIX B

U.S. Demands for Framework Trade Talks with Japan

Industrial Sector	*Goal*	*Measures to Reach Goal*
Auto Parts and Autos	20% annual sales increase for four years in auto part sales to Japanese car makers in U.S. and Japan.	1. Increase domestic content of Japanese cars made in North America to 75%; 2. Steady increase in Japanese car dealers selling foreign cars; 3. Ease car registration and inspection requirements.
Medical Equipment	25% annual sales increase for four years to Japanese government.	1. Early information about hospital purchasing plans; 2. Judge bids by "overall greatest value," not lowest price; 3. Track contracts awarded to foreigners.
Telecommunications Equipment	30% annual sales increase for four years to Nippon Telegraph & Telephone and Japanese government.	1. Reform NTT purchase practices; 2. Earlier notice of bids; 3. Track contracts awarded to foreigners.
Insurance	General expansion of foreign sales, so Japan moves in line with other industrialized countries.	1. Eliminate rules requiring companies to consult with competitors before introducing new products; 2. Measure how fast applications are approved; 3. Track approval rate for foreign applications.

Source: "U.S. Plans Sanctions Move as Talks with Japan Fail" by Robert Davis and Jacob M. Schlesinger, *The Wall Street Journal*, February 14, 1994, p. A8.

VITAE

Juscelino Filgueiras Colares was born in Fortaleza, Brazil, on May 6, 1967. Upon graduation from high school in 1984, he entered Universidade de Brasília (UnB) in 1985. The following year he attented Universidade Federal do Ceará (UFC), and in June 1989 he received a Bachelor of Arts degree in Law. In the fall of 1989 he accepted a Rotary Foundation grant and departed to L'Université de Montpellier, France and began study toward a Maîtrise in International Law. This degree was awarded in June 1990. In August 1990 he continued his graduate work at the University of Tennessee, Knoxville, where he finished the Master of Art degree in International Relations in December 1991. The following semester, he began his doctoral program in the departments of political Science and economics and was awarded the Doctor of Philosophy degree in December 1994. He is married to Susana Colares and, so far, has one lovely daughter.