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Thomas R. Atkinson  
*International General Motors Corporation*

Susan G. Ezrati  
*General Motors Corporation*

James J. Flynn  
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# The Experience of the Automotive Industry in Industrial Policies of Selected Governments

**Thomas R. Atkinson,\***  
**Susan G. Ezrati,†**  
**James J. Flynn†**

The effects of industrial policies have rarely been analyzed in any industry-specific detail. Instead, judgments tend to be all-encompassing and depend on the ideological view of the commentator. Yet, many countries have attempted long-term industrial policies for particular industries. The automotive industry is frequently a major focus of such programs. Accordingly, it is illuminating to examine the effect of recent industrial policy programs of six governments on motor vehicle manufacturing. It must be emphasized that this is not a study of targeting which, while currently topical, is usually for a very limited objective and not part of a broad integrated program.

We shall not define precisely industrial policy other than to note that the cases we intend to examine involve some form of general, integrated, economic policy that, among other things, includes industry-specific measures that have had direct or indirect consequences for other countries through trade or investment links. Many other characteristics, including program integration; abridgment of private business governance, perhaps involving varying degrees of compulsion or subsidy; non-market incentives; and subordination of the market mechanism, may or may not be present in the industrial policies discussed. Very often specific protection of favored industries is a major instrument of industrial policy; nearly always, the other measures employed also create changes in international competitiveness. Not all such factors, or objectives, need be present to constitute industrial policy for our purposes.

\* Senior Advisor, International General Motors Corporation; Vice President, General Motors Overseas Corporation. Member, Investment Policy Advisory Committee to the Office of the United States Trade Representative; Chairman, Industry Sector Advisory Committee to the U.S. Government for the Tokyo Round Trade Negotiations, 1973–1979. A.B. 1943, Denison College; M.A. 1947, University of Wisconsin; Ph.D. 1951, University of Wisconsin (Economics).

† Economics Staff, General Motors Corporation. Other GM staffs assisting this project include those of GMOC Japan, GM Canada, GM France, Industry-Government Relations Staff in Brussels, GM de Mexico, GM do Brasil, GM-Holden's (Australia), and Worldwide Product Planning, Detroit. We are also indebted to the staff of the Motor Vehicle Manufacturers Association of the U.S., Inc.

Industrial policies employing only socio- and macro-economic measures such as tax and expenditure policies or education or broad labor and community programs will not be considered. Similarly, auto industry policies bearing little relation to other national policies such as measures inhibiting consumer use of motor vehicles to save resources, will not be reviewed as they do not represent part of a general industrial policy. We recognize that industrial policies are designed for a particular economy and environment, and judgments of them are not necessarily transferable. Nevertheless, useful lessons may be found in the role played by industrial policies for given industries in other countries.

This study examines the automotive sector aspects of the industrial policies of six different governments, five of them nations and one, the European Community, a supra-national organization with an overall program for its industrial sector. The nations include two developing countries (Brazil and Mexico), a recently arrived industrial giant (Japan), a mature industrial country (France), and a resource-based developed country (Australia). In examining these cases, our first task is to determine how the programs for the auto industry fit into the general industrial policy of the country. Thereafter, we describe the various representative instruments of policy, including import relief, subsidy, and regulation. Finally, we analyze the effectiveness of the policy in reaching the intended general goals and how the industry has appeared to fare.

Whatever the overall conclusions on industrial policies for all countries, these programs have sharply different meanings for developing countries than they do for industrial countries. Intervention in developing countries substitutes policy judgments for market direction in determining how new or underutilized resources may be employed, with probable long-term consequences. Within mature countries, industrial policy for the automotive industry may be restricted by limited short-term capital or finite labor mobility. Policies in developed countries are largely concerned with easing the painful adjustment of the industry to the demands of international competition. Here industrial policy has produced a dilemma which was recently described by the Organization for Economic Cooperation and Development (OECD) staff:

The fundamental question at the OECD intergovernmental level is as follows: given the increasing and inevitable internationalization of automobile production, how can governments facilitate positive adjustments in the automobile industry, while both paying due regard to the problems—particularly of a social nature—that may be posed by unduly abrupt adjustment, and avoiding distortions in international trade?

One principle must be set forth at the outset: neither the automobile industry nor governments themselves favour, or regard as an *a priori* necessity, intervention by the public authorities in the industry's problems, particularly where trading strategies are concerned. Governments' role should be as limited as possible, to ensure that the economic and international environment created makes it easier to resolve difficulties. It must also be recognized, however, that governments cannot dissociate themselves from an industry which is a major supplier of jobs, and is strategic, politically sensitive and a source of technological progress. It is therefore necessary to identify, at both national and international level, means of meeting these two requirements which may conflict in certain difficult periods.<sup>1</sup>

## I. JAPAN

The Japanese automotive industry has been the object of some form of industrial policy since its inception. In the 1920s and 1930s, military preparedness was the prime goal of Japanese industrial policy. In the early post World War II period, the key goal was the creation of a national industry independent of foreign influence. At various times, this goal had a rationale both in terms of how the industry was seen to contribute to the overall national economic program and the proximate goals for the industry itself. While the periods tend to overlap, Table 1 shows the relationship of goals for the general economy and the automotive industry.

**Table 1**  
*Japanese Industrial Policy*

National Economic Goals	Corresponding Automotive Industry Goals
1952-1960	
Reconstruction	Import of technology
Building of basic modern industry	Elimination of dependence on foreign manufacture
Creation of manufacturing efficiency	Develop supplier industries
1960-1970	
Rapid growth and internationalization	Achievement of economies of scale
Income doubling plan	Rationalize terminal industry production
Industrial restructuring	Fend off foreign investment in domestic industry
	Develop international competitiveness
1970-1980	
Adaptation to global integration	Export volume aimed at foreign mass markets
Avoidance of resource limitations	Establishment of export technology and bases for penetration of foreign markets
Insurance against external shocks (commodity prices, energy)	
Develop knowledge-intensive industries	
1980-	
Consolidation of position in world economy	Preserve home base advantage for export
Insurance against political change adverse to Japanese economy	Create overseas manufacturing bases
Insurance against protectionism	Reduce foreign protectionism
Emphasis on technology	

Source: Adams and Ichimura, *supra* note 2. See also William Chandler Duncan, *U.S.-Japan Automobile Diplomacy, A Study in Economic Confrontation*, Cambridge: Ballinger, 1973) and Johnson, Chalmers, *MITI and the Japanese Miracle*, (Stanford: Stanford University Press, 1983) 198-304.

Practically speaking, postwar industrial policy dates from the end of the occupation in 1952, the same year in which U.S. purchases of vehicles in Japan for the Korean War made the vision of a reawakened industrial sector realistic. In 1949, the Governor of the Bank of Japan urged the nation not to use its scarce resources to build an automotive industry which it felt had little chance of being competitive.<sup>2</sup> By the Korean War, the government's attitude had changed: the Ministry of International Trade and Industry (MITI) concluded that Japan, if left alone, would continue to develop light industry but would never really create the core sectors associated with a world industrial power. Consequently, the steel, shipbuilding, and automotive industries became focal points for industrial planning by government.

When vehicle procurement orders were placed during the Korean War, MITI, for the first time, requested that the Ministry of Finance make commercial bank funds available in volume for expansion of the automotive industry.<sup>3</sup> Thereafter, MITI assisted and shaped the industry through a series of laws, policy statements, and informal pressure in the form of administrative guidance. There has never been any doubt that the automotive industry was a prime candidate for MITI's attention, second only, if at all, to the steel industry.<sup>4</sup> The various instruments used by MITI or by other ministries at MITI's urging are shown in Table 2. Only limited comment will be made on them. The questions posed by MITI in designating the automotive industry as an industry to be encouraged epitomized MITI's general selection criteria. It asked:

- (1) Is the industry internationally competitive or capable of becoming so?
- (2) Will a given amount of capital produce a world scale industry faster in this industry than in another?
- (3) Does the product have high income elasticity in world markets?
- (4) Does the industry have high potential to create employment in supplier and service industries?<sup>5</sup>

As early as October 1951, the Japanese resolved that their automotive industry would not be merely an appendage of a foreign industry as it had been before World War II. This goal was underscored by a policy statement<sup>6</sup> prohibiting capital repatriation guarantees for foreign investments in Japan in automotive sales organizations or assembly plants. At the same time, production in Japan by foreign companies that contributed to Japanese technological development was

2. Adams & Ichimura, *Industrial Policy in Japan*, in *INDUSTRIAL POLICIES FOR GROWTH AND COMPETITIVENESS* 305 (F. Adams and L. Klein eds. 1983).

3. E. KAPLAN, *JAPAN: THE GOVERNMENT-BUSINESS RELATIONSHIP, A GUIDE FOR THE AMERICAN BUSINESSMAN* 111, 114-15 (1972).

4. The view of the primacy of the motor vehicle industry continued into the 1980s. "[U]nless [the automotive industry] errs in coping with the changes in its environment, it will be able to maintain its position as Japan's key industry." *The Vision of MITI Policies In 1980s, Recommendation of the Industrial Structure Council* (March 1980) (unpublished).

5. Adams & Ichimura, *supra* note 2, at 316.

6. E. KAPLAN, *supra* note 3, at 111-12 (discussing MITI Announcement of June 1952, entitled *Basic Policy for the Introduction of Foreign Investment into Japan's Passenger Car Industry*).

**Table 2***Instruments of Industrial Policy and their Application to Japanese Automotive Industry*

Characteristic	Government Measure Applied to the Automotive Industry
Modification of governance	Administrative guidance <sup>a</sup> Industry committees <sup>b</sup>
Non-market incentives	MITI "alumni" presence <sup>c</sup> Directed financial assistance <sup>d</sup>
Subsidies	Control over technology imports <sup>e</sup> Below market-rate loans <sup>f</sup> Subsidies to capital goods industries <sup>g</sup> Tax incentives <sup>h</sup> —export revenue tax relief —accelerated depreciation —tax reduction for affiliated suppliers <sup>i</sup> Government procurement policies <sup>j</sup>
Trade protection	Tariffs <sup>k</sup> Quantitative Restrictions <sup>l</sup> Local content requirements <sup>m</sup>
Investment protection	Exchange control on imported parts <sup>n</sup> Withholding of repatriation guarantees for foreign assembly and sales operations <sup>o</sup> Limitation on percentage foreign ownership <sup>p</sup>
Restructuring	Rationalization Schemes —parts suppliers <sup>q</sup> —terminal industry • single firm industry (national car competition) <sup>r</sup> • two firm industry <sup>s</sup> • three firm industry <sup>t</sup> —weak-firm rescue attempts <sup>u</sup>
Research and development	Company subsidies and government projects —electric car <sup>v</sup> —ceramics <sup>w</sup>
Measures to limit damage from protectionist action	Voluntary restrictions on export quotas <sup>x</sup> Overseas parts procurement programs <sup>y</sup> Stimulation of overseas investments <sup>z</sup> Reduction of Japanese tariffs on parts <sup>aa</sup> Diplomatic pressure on raw material source countries to accept imports <sup>bb</sup> Market country political pressures (lobbying and marshalling public opinion) <sup>cc</sup>

Sources: <sup>a</sup> Johnson, C., *op. cit.*, Chapter 7.

<sup>b</sup> Duncan, *op. cit.*, pp. 84–85 and Kaplan *op. cit.* p. 44.

<sup>c</sup> Johnson, C. *op. cit.*, p. 280.

<sup>d</sup> Kaplan, *op. cit.*, pp. 110–111, and Johnson, C. *op. cit.* p. 268.

<sup>e</sup> Kaplan, *op. cit.*, p. 124.

<sup>f</sup> Phyllis A. Genter, "Japan's Industrial Policy: Effects on the Automobile Industries Developments," (U.S. Dept. of Trans., Transportation Systems Center, Contract Study, 1981), p. 34.

**Table 2 (Continued)**

- <sup>g</sup> *Ibid.*
- <sup>h</sup> *Ibid.*, p. 34.
- <sup>i</sup> Martin Anderson, "Japan's Strategic Umbrella," (April 1981, unpublished manuscript), pp. 85-87.
- <sup>j</sup> Duncan, *op. cit.*, p. 75.
- <sup>k</sup> Kaplan, *op. cit.*, pp. 112-113.
- <sup>l</sup> *Ibid.*
- <sup>m</sup> *Ibid.*
- <sup>n</sup> *Ibid.*
- <sup>o</sup> *Ibid.*
- <sup>p</sup> Duncan, *op. cit.*, Chapter 4 and p. 94.
- <sup>q</sup> Duncan, *op. cit.*, pp. 96-100, Kaplan *op. cit.* pp. 117-119.
- <sup>r</sup> Duncan, *op. cit.*, p. 75.
- <sup>s</sup> Johnson, *op. cit.*, pp. 287-288, Duncan, *op. cit.* p. 87.
- <sup>t</sup> Duncan, *op. cit.*, pp. 88-89.
- <sup>u</sup> Kaplan, *op. cit.*, pp. 126-128.
- <sup>v</sup> Kaplan, *op. cit.*, p. 136.
- <sup>w</sup> U.S. Int'l Trade Comm., *Foreign Industrial Targeting and Its Effect on U.S. Industries*, Phase I: Japan, p. 131 and H-6, October 1983.
- <sup>x</sup> MITI Announcement, May 1, 1981, Press Statement by Minister Uno, November 1, 1983.
- <sup>y</sup> Verbal report of a meeting Sept. 8, 1980, indicating a commitment or intention for Japanese manufacturers to procure \$300 million in automotive parts in the U.S. Meeting attended by then Under Secretary of Commerce, Robert Herzstein, and the head of the Japanese parts buying mission, Mr. H. Takahashi, Executive VP of Nissan. The head of the Auto Division in MITI, Mr. T. Yokoyama, was also present.
- <sup>z</sup> MITI Announcement of Voluntary Export Restraints, May 1, 1981, referring to an unpublished "auto package" agreed to in May 1980 containing provision for cooperation with the U.S. government in *inter alia*, the promotion of investment into the U.S. and the elimination "in principle" of Japanese duties on auto parts. Additionally, May 1982, Release of Government of Japan, "Positive Promotion of Industrial Cooperation," describing trade liberalizing measures.
- <sup>aa</sup> *Ibid.*
- <sup>bb</sup> Speech and interviews with Kioyohisa Mikanagi, Japanese Ambassador at the *Toronto Star*, October 20, 1983; and Yutaka Fujimoto, Commercial and Economics Counsellor, Ottawa, *Calgary Sun*, May 22, 1983.
- <sup>cc</sup> Christopher Madison, "Is Japan Trying to Buy Washington or Just Do Business Capital Style?", *National Journal*, pp. 1710-1714, October 9, 1982.

welcomed.<sup>7</sup> Three years later foreign exchange for imported components was restricted.<sup>8</sup>

Initial attempts to direct the organization of the automotive industry involved a 1955 plan for cooperative design of a national "Peoples Car" modeled after Volkswagen. MITI was to select a winning design and would subsidize its production by a chosen manufacturer. The plan failed to reach the Diet as a result of rival companies' objections to the proposed monopoly.<sup>9</sup>

Not to be rebuffed, MITI's next move was to increase economies of scale by reorganizing the already growing industry. In June 1956, a law was passed to

7. See W. DUNCAN, U.S.-JAPAN AUTOMOBILE DIPLOMACY 74, 145-46 (1973).

8. See *id.* at 75.

9. See E. KAPLAN, *supra* note 3, at 121.

rationalize the auto parts business, establishing an elaborate consultative mechanism.<sup>10</sup> The companies did not use it, however. They were busy forming chains of supplier affiliates and thus solving the problem themselves.<sup>11</sup>

MITI continued to be concerned about the necessity of achieving economies of scale in accordance with its perception that ten was an excessive number of terminal automotive manufacturers. At various times through 1968, MITI tried to encourage a two-firm industry (Toyota and Nissan) and a three-firm industry (with Mitsubishi), attaching weaker firms to larger companies (Hino and Daihatsu to Toyota), and a rescue merger of Nissan and Prince. This merger was facilitated by the Japan Development Bank extending approximately \$15 million of credit. The merger was justified as an attempt to increase Japan's export competitiveness through economies of scale. However, creditor banks were partly responsible for the pressure to consummate the arrangement, suggesting that more than international considerations were at stake.<sup>12</sup>

Thus, during the late 1950s and early 1960s, the focus of Japanese industrial policy for the automotive industry was the creation of a national industry emphasizing economies of scale through rationalization. Significantly, the restructuring effort was encouraged by the liberalization of international trade and investment which MITI believed might wipe out the inefficient Japanese industry. A fairly consistent pattern of this period was the intervention by MITI in other industries to assist the creation of cartels by preventing antitrust action by the Japan Fair Trade Commission. But MITI's policy favoring reduced competition among domestic firms had virtually no influence on the auto industry.<sup>13</sup>

In 1963, MITI introduced a Draft Law of Special Measures for Strengthening the International Competitive Ability of Designated Industries.<sup>14</sup> A later version of the proposed law provided for the designation of industries for special treatment. It was at the heart of Japanese industrial policy even though it was never formally adopted. The draft required industry cooperation and banking assistance and provided various financial inducements and exemption from the Anti-monopoly law. Initially, the specialty steel, auto, and petrochemical industries were designated to receive assistance. A selected three-way "discussion" committee of bankers, industrialists, and government representatives was authorized to carry out "promotion standards." While the original Special Measures proposal failed to pass the Diet because of political and personal animosities,<sup>15</sup> it

10. *Id.* at 117.

11. *See id.* at 66.

12. MITI's various efforts to consolidate the Japanese automotive industry in the 1960s are described in E. KAPLAN, *supra* note 3, at 120-28.

13. A committee chaired by Nakayama Sohei of the Industrial Bank of Japan and with members from MITI and EPA in 1967 called for mergers and cooperation in seven industries, including automobiles, in order to end excessive competition and prepare for the difficulties expected from foreign investment in Japanese industry. By that time, the structure of the automobile industry was already fairly visible and the ability of the government to influence it was waning. *See* C. JOHNSON, *MITI AND THE JAPANESE MIRACLE* 277-78 (1982).

14. *See id.* at 255, 258.

15. *See id.* at 255, 260-63.



established the pattern of administrative guidance that is one of the unique features of modern Japanese industrial policy.<sup>16</sup>

The legal basis for this administrative guidance is contained in the laws setting up the ministries and authorizing various forms of directives. Public response to public policy statements also aided the administrative guidance process.<sup>17</sup> Typically, refusal to follow such guidance risked the threat of administrative retaliation and, while the latter could be challenged in court, retaliatory measures were in some cases sustained.<sup>18</sup> The impact of administrative guidance in the automotive industry, while perhaps less than in other sectors, was not negligible.

More important was the Japanese tax system, which in general encouraged capital intensive industries through liberal depreciation provisions. It particularly favored enterprises relying on the chains of affiliated small business suppliers characteristic of the Japanese automotive industry.<sup>19</sup> The tax incentives had their most obvious effect on specifically targeted industries and, particularly, as a stimulus to exports.<sup>20</sup> A tax credit based on total overseas revenues could be deducted (later deferred) from taxes on current income from both domestic and foreign operations. Depreciation "kickers" notably useful for the auto industry included a deduction of 25 percent of cost in addition to first-year normal depreciation for equipment, such as electronic and computer controlled machinery, and cutting, forging, assembly, and design equipment. All of these are state-of-the-art capital equipment for the automotive industry.<sup>21</sup> With the possible exception of import protection which, in the early period, prevented the domestic auto industry from being smothered by foreign companies, the tax provisions were the most valuable element of MITI-sponsored automotive industrial policy.<sup>22</sup>

Opinions are mixed as to whether MITI-sponsored measures significantly benefited the Japanese auto industry. One commentator concludes that industrial policy measures helped the automotive industry by creating and preserving a strong domestic market and moderating problems of a changing industrial structure.<sup>23</sup> Certainly, the steel industry and the machine tool industry were major

16. *See id.* at 265. Chalmers Johnson devotes an entire chapter of his book to administrative guidance. *See id.* at 242-74.

17. *Id.* at 266.

18. Johnson cites the case of a housing contractor who ignored City of Musashino guidance requiring project developers to provide land for schools. The city retaliated by capping water and sewer lines and was upheld in court. *See id.* at 266.

19. M. Anderson, *Japan's Strategic Umbrella* 81 (April 1981) (unpublished manuscript).

20. *Id.* at 89.

21. *Id.*

22. One of the most influential tax measures assisting Japanese producers was largely unplanned. In 1954, when a major commodity tax was proposed on passenger cars, taxi drivers lobbied to obtain a lower tax for the smaller cars used for public conveyance which happened to be entirely Japanese produced. The discrimination against larger cars, despite several successive rate reductions, has continued and virtually entirely impacts vehicles from abroad. By the 1970s, of course, MITI became a vigorous defender of the higher tax on large cars as being justified by Japan's crowded urban environment. P. Genter, *Japan's Industrial Policy: Effects on Auto Industries Developments* 32 (1981) (contract study for U.S. Dep't of Transportation Trans System Center).

23. *Id.* at 2.

beneficiaries of MITI policy, and they contributed heavily to the success of the automotive industry. On the other hand, another commentator is much more reserved regarding the contribution of industrial policy to the strength of the general market: "[T]he impressive economic growth and social stability are not owing in any decisive degree to microeconomic decision making . . . even though there has been a pervasive pattern of interventions . . ." <sup>24</sup> According to this commentator, the strength of the market that was so important for the industry's development must have come from forces outside industrial policy.

Citing the fact that MITI's prescriptions for restructuring were generally not effective, commentators sometimes suggest that industrial policy did not work for the Japanese automotive industry. Despite the fact that the consultative mechanism seems to have been much less prominent in the automotive industry than in other industries, the opposition of the industry to the restructuring proposals did find expression in the failure to implement major proposals. This suggests that a give and take relationship between MITI and the industry was working outside of formal ties. That MITI's restructuring goal was the achievement of economies of scale which the industry in its various business combinations largely obtained through its own efforts, does not mean the general industrial policy program was of little effect. Numerous other elements of MITI-guided industrial policy, quite apart from restructuring, affected the auto industry.

MITI's efforts were directed toward at least three other objectives. First, MITI tailored trade and investment measures to create a national industry outside the influence of the major foreign automotive firms. This was no mean feat, as several influential companies were established in a limited way in Japan. <sup>25</sup> MITI's adroit discouragement of foreign firms' assembly and import operations, plus the existence of more easily conquered markets elsewhere, left the Japanese free to develop independently their own domestic market.

Second, the 1963 Draft Law of Special Measures for Strengthening the International Competitive Ability of Designated Industries had identified the automotive industry for special treatment. The failure of the measure to pass the Diet did not prevent the provision of favorable financing and tax treatment to the industry through less formal administrative guidance and interministerial consultations. This aid in amassing internal savings for its heavy investment needs could not fail to be significant to the rapidly growing auto industry.

Much of Japan's industrial policy aimed at creating export industries that were internationally competitive. This was the third objective of MITI's efforts in the automotive industry. While blatant export subsidies had to be withdrawn as Japan

24. Trezise, *Industrial Policy Is Not the Major Reason for Japan's Success*, BROOKINGS REV., Fall 1983, at 13.

25. The Japanese chose to discourage American companies from producing in Japan by maintaining limitations on imports of engines without which assembly was not practical and which could not be economically made locally in the volumes initially anticipated. See generally W. DUNCAN, *supra* note 7, at 3-42. While the companies and the U.S. Congress threatened, the American Administration's pressure on MITI was tempered by considerations of the U.S. capital outflow, which would only have been further exacerbated by American automotive investment in Japan.

was forced to live up to its GATT commitments,<sup>26</sup> the scale of production the incentives helped produce and the plant modernization and the development of supplier industries they stimulated, enabled the Japanese industry to bring its costs down rapidly relative to foreign competitors. In 1952, the best the Japanese could do was produce the small "Toyopet" which sold for about \$167 less in their home market than a much more luxurious Ford import which had to surmount both ocean transportation and import taxes.<sup>27</sup> In that year the entire Japanese production of four-wheeled passenger cars amounted to 4,837 units, none of which were sold abroad.<sup>28</sup> In 1982 Japanese passenger car exports alone totaled nearly 3.8 million units.<sup>29</sup> Japanese competitiveness had grown so much that numerous American studies show a Japanese cost advantage in the U.S. of \$1,200 to \$2,500 per unit over comparable American cars on a landed cost basis.<sup>30</sup>

MITI's efforts may have produced a supplier base for the automotive industry at an earlier time and a lower cost and more abundant capital structure in the featured industry (though quite possibly at the expense of other equally desirable industries). Its protectionist measures could well have led the local firms to reach world scale more rapidly than they would have otherwise. The restrictions on foreign-owned, local production facilities reserved the benefits of exploiting the domestic market to Japanese companies. From these accomplishments some degree of international competitiveness no doubt followed.

On the other hand, it may be argued that the development of an industry producing an initially underutilized consumer product in a large, rapidly growing, and, ultimately, high income economy probably would have succeeded with or without the help of an interventionist industrial policy. It might be that the unique competitive advantages of the Japanese auto industry stemmed less from MITI's intervention than from product engineering and design for markets, production methods including labor relations management, and plant layouts and logistics, over which MITI had little control.<sup>31</sup> Intense domestic competitiveness was not the result of MITI policies (and indeed was contrary to their initial

26. As Japanese firms increasingly developed overseas markets, blatant export subsidies had to be eliminated to achieve full rights under the General Agreement on Tariffs and Trade (GATT). *Opened for signature* Oct. 30, 1947, 61 Stat. A3, T.I.A.S. No. 1700, 55 U.N.T.S. 187. The process began in April 1963 when Japan notified GATT it was shifting to Article XI status by agreeing not to use quantitative restrictions for correction of balance of payments problems.

27. W. DUNCAN, *supra* note 7, at 72.

28. See AUTOMOBILE MANUFACTURERS ASS'N, WORLD MOTOR VEHICLE DATA 1970, at 16, 20 (1971).

29. See MOTOR VEHICLES MANUFACTURERS ASS'N OF THE U.S., WORLD MOTOR VEHICLE DATA 81 (1983).

30. See Abernathy, Clark & Kantrow, *The New Industrial Competition*, HARVARD BUS. REV., Sept.-Oct. 1981, at 68, 72; Gomez-Ibanez & Harrison, *Imports and the Future of the U.S. Automobile Industry*, AM. ECON. REV., May 1982, at 419-23; M. Anderson, *Comparisons of Labor and Management Costs in the Motor Vehicle Industries of Japan and the United States* (1983) (Massachusetts Institute of Technology Future of the Automobile Program Working Draft); W. Abernathy, J. Harbour & I. Henn, *Productivity and Comparative Cost Advantages: Some Estimates for Major Automotive Producers* (1981) (Harvard Business School Working Paper).

31. See, e.g., Burck, *Can Detroit Catch-up?*, FORTUNE, Feb. 8, 1982, at 34-39; Abernathy, Clark & Kantrow, *supra* note 30, at 73-76.

desires), but it must certainly have played a role in honing the competitive abilities of the firms for battle in a world market. Furthermore, the Japanese embarked on large-scale exports with a fuel-efficient car designed for their own markets at precisely the time the oil crisis broke. It was a circumstance scarcely within MITI's planning abilities that U.S. customers would suddenly turn to fuel-efficient cars as gasoline prices soared and oil availability seemed threatened.

Furthermore, according to indices of internal performance, the industry has been successful. Compensation for Japanese automotive laborers is apparently higher than the national average for manufacturing workers and profits have been satisfactory in most years by world standards.<sup>32</sup> It is unlikely that MITI has had anything to do with this situation. Indeed, some of the current financial well-being of the industry may be a result of protectionist measures in foreign markets which have caused Japanese cars to sell at a premium.<sup>33</sup> That MITI fought unsuccessfully against these limitations suggests both ineffectiveness and possible contradictions between public and private interests.

## II. EUROPEAN COMMUNITY

Two general themes characterize European Community (EC)<sup>34</sup> industrial policy. First and foremost is the promotion of community integration of trade, movement of labor, prices, and standards. This involves measures which harmonize the actions of member states and limit competition among them in industrial matters. Integration within the Community also requires management of external trade relations. Second, the economic viability of the Community is promoted by stimulating Community-wide firms and industries to achieve otherwise difficult to obtain economies of scale. One aspect of this is supranational cooperation

32. See BUREAU OF LABOR STATISTICS, DEP'T OF LABOR, HOURLY COMPENSATION COSTS OF PRODUCTION WORKERS IN MOTOR VEHICLES AND EQUIPMENT MANUFACTURING, 14 COUNTRIES, 1975-1983 (1984); BUREAU OF LABOR STATISTICS, DEP'T OF LABOR, HOURLY COMPENSATION FOR PRODUCTION WORKERS, ALL MANUFACTURING, 1975-1983 (1984).

33. The impact of the Japanese voluntary export restraints on the price of imported passenger cars entering the U.S. market is indicative of the impact of protection. This has been extensively studied recently. See U.S. INT'L TRADE COMM'N, REVIEW OF RECENT DEVELOPMENTS IN THE U.S. AUTOMOBILE INDUSTRY INCLUDING AN ASSESSMENT OF THE JAPANESE VOLUNTARY RESTRAINT AGREEMENTS (1985). Wharton estimated that the average price increase of a Japanese car in the U.S. was \$851 from 1981 to 1982. See Wharton Econometric Forecasting Assocs., Wharton Motor Vehicle Service 32 (Feb. 1983) (Special Analysis: The Japanese Quota). Feenstra estimated the increase as much less, 3.1 percent or about \$200. His calculation was based, however, on a determination that quality improvement accounted for two-thirds of the total price increase. See Feenstra, *Voluntary Export Restraint in U.S. Autos, 1980-81: Quality, Employment, and Welfare Effects*, in THE STRUCTURE AND EVOLUTION OF RECENT U.S. TRADE POLICY 35, 56 (R. Baldwin & A. Krueger eds. 1984).

34. This article uses the term European Community in accordance with the resolution of the European Parliament. *Resolution on a single designation for the Community*, 21 O.J. EUR. COMM. (No. C 63) 36 (1978). The European Community was formed in 1957. See Treaty Establishing the European Economic Community, *done* March 25, 1957, 298 U.N.T.S. 11 (1958) [hereinafter cited as Treaty of Rome]. The six original Member States were Belgium, the Federal Republic of Germany (West Germany), France, Italy, Luxembourg, and the Netherlands. Denmark, Ireland, and the United Kingdom joined the Community on January 1, 1973. Greece became the tenth Member State on January 1, 1981. Finally, in 1985, Spain and Portugal became Member States.

among members in matters of industrial cooperation, technology, and cross-border adjustment policies.<sup>35</sup>

The Community's industrial policy has grown in stature most conspicuously as a result of its success in tackling the problem of excess steel production and achieving some agreement among the member states to reduce capacity. The powers in this area have been reinforced by the Commission's ruling of October 30, 1980,<sup>36</sup> imposing fines for violation of production quotas which was upheld by a 1983 decision of the European Court of Justice (ECJ).<sup>37</sup> While there have been occasional suggestions that the Community may face an overproduction capacity problem in the motor vehicle industry similar to that which it faced in the steel industry, EC policy has nevertheless encouraged or stimulated the industry rather than facilitated adjustment to lower volume levels.

The basic documentation for the application of EC industrial policies to the automotive industry is the statement on the European Automobile Industry of June 1981 (Statement 1981). It identifies the four major aspects of EC industrial policy as (1) strengthening the internal market; (2) furthering the structural development of the industry; (3) changing employment; and (4) maintaining a dialogue with the Community's trading partners.<sup>38</sup> A 1983 report, following up on the 1981 document, succinctly describes the Commission's overall objective as creating conditions within which the auto industry "would develop and apply the best possible strategies for adopting the requirements of the future and for remaining competitive at the world level."<sup>39</sup>

Perhaps the most identifiable automotive-directed internal policy has been removal of impediments to a united market within the Community. While many of these efforts involve harmonizing manufacturing standards, an area not usually considered part of industrial policy, some efforts directly affect trade. Differences in car prices between member countries<sup>40</sup> have caught the Commission's attention, and efforts are being made to reduce the barriers permitting these price

35. Draft speech by P. Defraigne, Chef de Cabinet of the European Economic Community, entitled *Industrial Policies in the EEC*, for the Meeting of the American-European Community Association, Nice, France (1983) [hereinafter cited as Defraigne speech].

36. The decision established a system of steel production quotas for undertakings in the iron and steel industry. See Commission Dec. No. 2794/80/ECSC, 23 O.J. Eur. Comm. (No. L 291) 1 (1980).

37. Klockner-Werke, a West German steel producer, was ordered by the Commission to pay fines of about DM 23.9 million (\$8.6 million) for breaching EC crisis regulations. The ECJ upheld that ruling. See *Klockner-Werke AG v. Commission of the European Communities*, 1983 E. Comm. Ct. J. Rep. 4143; see also *European Court tells Klockner it must pay Commission fine*, *Fin. Times*, Dec. 15, 1983, at 2.

38. Comm'n of the European Communities, *Commission Statement on the European Automobile Industry*, BULL. EUR. COMM. Supp. 2/81, at 6-9.

39. Comm'n of the European Communities, *Commission Activities and EC Rules for the Automobile Industry 1981/1983, Progress Report on the Implementation of the Commission's Statement "the European Automobile Industry"* of June 1981, at 5 (December 1983) (Mimeo) [hereinafter cited as Progress Report].

40. Industrial passenger car models were priced before taxes on average above Belgium (100) at 112 for France, 115 for Germany, and 138 for the U.K., according to an October 1983 survey. See Bureau European des Unions de Consommateurs, *reprinted in ICC BUS. WORLD*, Jan.-Mar. 1984, at 9.

differences.<sup>41</sup> Statement 1981 suggests the unification of the internal market will spawn the dynamics needed to reorganize and rationalize the industry. Somewhat less ambitious is the Community's sponsorship and subsidization of auto-related research including projects in raw materials, ceramics, engines, biomechanical subjects, fuel savings, and fuel substitutions. The total of research and development expenditure on automotive matters is approximately 10 million ECUs (European Currency Units) (\$9.1 million).<sup>42</sup>

The Commission's concern with the industry's structure represents more traditional industrial policy. Statement 1981 identified the fragmentation of the European automotive industry, particularly in the parts and components sector, as a major problem. The Commission associates the reduced efficiency and competitiveness typical of smaller European plants with the existence of state grants and loans, and accordingly has set up a monitoring system. "The Commission's overall policy is to increase the transparency of national aid to industry, and thus to help avoid the appearance of surplus capacity arising which could subsequently lead to protectionist measures and state aid liable to distort competition and to interfere with free [product] movement."<sup>43</sup>

The Commission does not publish figures on member governments' financial support to the industry but it did report Community funds in the form of loans of 97.8 million ECUs and grants of 32.6 million ECUs to the automobile sector in 1981 and 1982 combined.<sup>44</sup> The motor vehicle and components sectors were the largest ultimate manufacturing industry beneficiaries of the EC's Regional Fund in 1981. In its description of some of these loans from the "New Community Instrument," it indicates that components manufacturers should benefit, particularly small or medium-sized enterprises. This suggests that the Community's own aid program did not necessarily further its industrial policy aim of reducing the number of sub-optimal-sized suppliers.

The role of the Commission in trade policy reveals another way that the Community may be able to bring about some restructuring of the European automotive industry. The Community's role in trade policy stems from its delegated power to speak for member countries as a group in trade negotiations. To a lesser degree the Commission derives some power from its ability to enforce origin rules.<sup>45</sup> The Commission has powers to force member governments and

41. These barriers include (1) local dealer control over type certification and inspection procedures, allegedly making cross-border arbitrage difficult and expensive; (2) refusal of producer companies to sell right-hand drive cars to continental dealers for resale to British customers visiting the continent; and (3) assistance to national governments in obtaining information to help eliminate transfer price differences between countries which distort the flow of new car sales.

As this is written, the status of the Commission's efforts is unclear. Ford Werke of West Germany halted sales of right-hand drive cars to its continental dealers, but the European Court of Justice gave an interim order to Ford to continue to supply the cars. However, the manufacturer declined in February 1984, arguing that a 1982 order by the Commission exceeded its powers. Presently, written agreements limiting dealership sales power are at issue under the Treaty of Rome and the auto industry is trying to obtain block exemptions for itself. See *Fin. Times*, Feb. 29, 1984, at 2.

42. See Progress Report, *supra* note 39, at 31-36.

43. *Id.* at 37.

44. *Id.* at Tables 27a and 27b.

45. See generally *id.*; Treaty of Rome, *supra* note 34, at art. 115.

industries into taking certain internal measures if they seek Community assistance in trade matters, such as reducing Japanese penetration. Thus, Pierre Defraigne, Chef de Cabinet of the EC, notes:

The producers are anxious for effective Community protection against Japanese imports, given the limited success of the bilateral understandings. The Commission is making this conditional on the unification of the internal market being completed by the adoption of provisions for Community type-approval of vehicles from third countries, to be implemented of course in line with the commercial policy agreed on jointly. It is also encouraging cooperation on components (engines, transmissions, accessories).<sup>46</sup>

The tying of restraints on Japanese imports to internal EC industry restructuring was specifically recognized in a report to the Council in December 1983 on products determined to be import-sensitive, including motor vehicles. However, no agreement was reached other than noting the Community's responsibility for the economic environment.<sup>47</sup>

Community actions on automotive trade, as indicated above, are heavily but not entirely focused on four aspects of Japanese imports: (1) direct penetration of national markets; (2) uneven application of restraints by individual member countries and traditional non-member markets; (3) trade deflection from North America; and (4) access to Japanese markets by EC exports. The most visible evidence of this aspect of industrial policy has been the creation of "retrospective monitoring" of Japanese shipment to the EC of a number of sensitive products including video tape recorders (VTRs) and passenger cars. The special cases of Spanish and Portuguese motor vehicle production, and Japanese investment in European and non-European markets are also subjects of Community interest in trade discussions. One aspect of general community industrial policy applied to the motor vehicle industry is a Community procurement preference system favoring EC-made vehicles purchased by government contracts or through participation in Community-financed projects.<sup>48</sup>

The European Community's industrial policy, at least for the automotive industry, in some respects represents a much different program than most national programs. For example, the major goal, that of achieving unimpeded sales of cars across the Community regardless of origin, is scarcely of concern to individual nations with respect to their domestic markets. This goal may be achieved in part through extracting concessions from individual member states (and their producers) in return for Community assistance in restraining Japanese imports. It is by no means clear, however, that such bargains have been completed. Thus, the linkage of protective measures with positive (not predatory) goals puts some redeeming quality on the Community's program. The fruits of other, more traditional, goals of industrial policy such as technological development, restructuring of the industry for greater efficiency, and joint endeavors to create economies of scale are not yet visible even though they are on the Commission agenda.

The lack of strong efforts in the Community's industrial policy for the auto-

46. See Defraigne speech, *supra* note 35.

47. See Progress Report, *supra* note 39, at 46.

48. See *A nasty disease in Brussels*, *ECONOMIST*, May 14, 1983, at 72.

motive industry probably arises in part from the less-than-desperate circumstances of the industry in most of the member states. Only in the United Kingdom and perhaps France is there obvious distress not related to cyclical factors in the auto market.<sup>49</sup> While Japanese imports, if unconstrained, would be increasing in Europe, the Community's motor vehicle industry does not have the structural problems of the type thought to be appropriate for industrial policy solutions. U.S. firms have made major investments recently in European production facilities, both within and outside the Community.<sup>50</sup> The shift on the part of some companies from domestic to continental (EC) plants in order to supply passenger cars to British buyers illustrates that rigidities are not present in the system. Finally, while it is possible that European makers are not competitive in the sector of the market dominated by the Japanese, Community exports to non-EC countries amounted to 1.7 million vehicles in 1981.<sup>51</sup> Thus, even though its costs may not be comparatively low, the EC still maintains a high degree of international competitiveness, whether through style, quality, or tradition.

### III. FRANCE

In recent years, the member states of the EC have all intervened in the private sector in various forms. While some observers would suggest that the actions of the ten individual member countries were manifestations of industrial policy, most do not measure up to the principal criteria for such a regime suggested in the introduction. The micro policy measures are not part of an integrated overall program. France, where a coordinated program involving specific industry interventions has existed since World War II, is an exception.

France practices industrial policy with some advantages since legislation or specific authorization is less necessary than in other countries. In practice, all actions of significance by industry are disclosed to the government in advance. While the process of formal application and approval is not always involved, the use of consultation undoubtedly influences the actions of industry.

The French dirigiste system is sufficiently informal and non-specific to raise the question of whether industrial policy may not be largely an exercise in rhetoric, short on action and long on description. However, the various periods of policy seem fairly complete and well defined. *Le Plan*, as French Development Plans have been known since they were initiated in 1945, over the years incorporated various phases: the rebuilding of the basic economy to 1958, the maintenance of French ownership to 1976, and, more recently, the adjustment to slow

49. European specialty car makers (Saab, Volvo, BMW, and Daimler-Benz) have continued to be profitable, and even Fiat turned a small profit in the latest year. This is in spite of major losses by Ford, GM, Renault, Peugeot, and Volkswagen. Continued profits of some European companies plus the general ability of European firms to stay current on product and manufacturing technology suggest the industry has not generally suffered from obsolescence or lack of ability to compete.

50. Ford Espana, Almusafes (Valencia) began production in October 1976. General Motors Austria Ges. mbh, Aspern (Vienna) and General Motors Espana, S.A., Zaragossa and Cadiz began production in May 1982 and August 1982 respectively.

51. See Progress Report, *supra* note 39, at Annex 13.



economic growth conditions.<sup>52</sup> While facts are hard to obtain on the explicit manner in which government guides industry, some obvious cases have occurred in the automotive area.

Prior to 1976, the emphasis, according to government statements, was on creating broad-based industrial corporations for achievement of economies of scale, retaining national ownership of industry, achieving self-sufficiency in energy, and fostering high technology. French industrial policy apparently succeeded in restructuring the automotive sector, although the rationalization was more of a rescue operation than the deliberate merger of healthy firms. Renault had been nationalized at the end of World War II, as a result of the owners' collaboration with Germany.<sup>53</sup> Since that time, the firm has been run as a state enterprise with a board consisting of government officials and company employees. The other major company, PSA Peugeot-Citröen, was formed in 1974 by merging distressed Citröen into Peugeot in return for government arranged financing. In 1978, with government encouragement, PSA purchased Talbot, Chrysler's faltering European subsidiary, which included French, British, and Spanish passenger and commercial vehicle operations. The weak French domestic commercial vehicle operations were shored up by a Renault takeover of Berliet adding to its own line and its Saviem operation. This was followed by a Renault purchase of a 22.5 percent equity in American Motors Corporation and a 20 percent share of Mack Truck. Thus, there are at present two large French companies, each with broad product lines of passenger cars and commercial vehicles and each with international connections.<sup>54</sup>

French industrial planning in the automotive industry seems to be largely a policy of reaction to specific events. Thus, the government may be consulted on a plant location matter or a reduction in work force. Trade policy is also quick to challenge an import threat: the Japanese have been limited by administrative action to three percent of the market.<sup>55</sup> Even under the Socialists, however, the industry is largely free from government intervention so long as the broad outlines of the Plan are not challenged.

Although from the end of the rebuilding phase to 1976 the Plan's emphasis was apparently on retaining French ownership of industry and assisting exports, the general economic goal of full employment tended to override any strategy of sectoral industrial policy. This changed with the coming of the Barre government in 1976 when the government began to place less emphasis on its direction of industry and to rely more on the private sector. At that time, the philosophy encouraged adaptation to achieve competitiveness. Costs were lowered by creating larger units, more capital, less labor, or better management. The so-called Albert's theorem, named after Commissaire du Plan, Michael Albert, became the

52. Dewitt, *French Industrial Policy from 1945-1981: An Assessment*, in *INDUSTRIAL POLICIES FOR GROWTH AND COMPETITIVENESS* 222 (F. Adams and L. Klein eds. 1983).

53. The truth of this charge is disputed. See W. NELSON, *SMALL WONDER: THE AMAZING STORY OF THE VOLKSWAGEN 103* (1965).

54. K. BHASKAR, *THE FUTURE OF THE WORLD MOTOR INDUSTRY* 143-47 (1980).

55. This limit is said to have originated as a result of a remark by General DeGaulle which became translated into practice by the French customs service. It illustrates typical French "administrative guidance."

guiding philosophy: "Employment comes from growth, growth comes from exports, exports come from industrial adaptation."<sup>56</sup> Despite the change in philosophy, the underlying conditions and political realities of the time forced Barre, against his philosophy, to intervene even more than his predecessors to support industries in distress.<sup>57</sup> The Socialists since their rise to power in 1981 apparently have not changed this direction. Indeed they seem to have fostered further industrial adjustment, sometimes with fairly harsh effects. The stormy workforce reductions of spring 1984 at Peugeot's Talbot and Citroën plants bear the clear imprint of the French industrial policy goal of improving competitiveness.

A partial explanation for the ill-defined treatment of France's automotive industry as part of broader national industrial policy is that the French have never given priority to industries that were reasonably competitive.<sup>58</sup> While industrial planning in the automotive industry seems to be a collection of moves to improve chances of survival, they were not merely unguided reactions. The major companies have been led to absorb the minor ones. The units are now bigger and therefore in theory more efficient.

The aims of French automotive industrial policy, as this description suggests, are more easily articulated than attained. Most of the moves made by the government were reactions to financial weaknesses of the national firms rather than fresh starts in restructuring the industry. Nevertheless, the rescue and survival measures have not deviated in direction from the overall blueprint. In dealing with the automotive industry, the government authorities have linked assistance to desired structural changes, using financing as a means of persuasion at critical times. Consolidation and rationalization is a natural strategy for such times. The more imaginative aspects of industrial policy mentioned in the planning documents, such as new production techniques, and product improvements, seem to have been more elusive perhaps because they often are not immediately related to survival.

In pursuing industrial policy France has been unable to use import protection of the automotive industry as effectively as other countries. The most important current restriction limits Japanese vehicle imports to three percent of the French market. Also France and EC members generally have kept moderately high passenger car and truck tariffs. However, the importance of avoiding retaliation by other European countries and maintaining EC and European Free Trade Association (EFTA) trade commitments, precludes France from shutting off its market

56. DeWitt, *supra* note 52, at 230.

57. *See id.* This view may be deceptive. A recent study by the Economist Intelligence Unit of the European and Japanese components industries notes recent French objectives to improve the international competitiveness of their national industry and prevent foreign penetration by restructuring around two companies have been implemented through government-approved acquisitions. *See* ECONOMIST INTELLIGENCE UNIT, EUROPEAN COMMUNITY, COMPARATIVE ECONOMIC STUDY OF THE AUTOMOTIVE COMPONENTS INDUSTRY IN THE EUROPEAN COMMUNITY AND JAPAN 213 (1981).

58. *See* C. STOFFAES, LE GRANDE MENACE INDUSTRIELLE 163 (1978) (T. Atkinson, S. Erzati & J. Flynn trans.) Stoffaes, the head of industrial strategy studies of the French Ministry of Industry, notes: "France must do everything to preserve the chances of its automotive industry and in particular it must end its attitude of benign neglect which it has also had for its major industrial success, because in a sense the automobile has developed by itself without any industrial policy." *See also* DeWitt, *supra* note 52, at 242-44.

to its greatest rivals, European producers. Thus, import protection has not been used as vigorously for industry promotion as in some other countries.

Industrial policy has touched the French automotive industry only lightly probably because the industry itself has not suffered prolonged distress. State intervention has occurred only once because of financial problems.<sup>59</sup> Ranked by production volume, Renault and PSA Peugeot-Citr en are rated sixth and seventh in the world. While both companies have had periods of unprofitability, there is no reason to view them as generally unprofitable. The number of workers in the French motor vehicle industry has increased. This stands in contrast to the decline in overall employment in French industry and shrinking employment in the British and Italian automotive industries.<sup>60</sup> Currently, operation of the French automotive industry is little affected by industrial policy even though the present structure of the industry is a creation of such policy.<sup>61</sup>

#### IV. BRAZIL

As a result of a balance of payments crisis during the late 1940s, a set of programs which can properly be described as industrial policy was instituted in Brazil. At that time the government, which had become increasingly disposed toward intervening in economic affairs, responded to the crisis by restricting imports.<sup>62</sup> Moreover, a new constitution ratified in 1946 specifically authorized government intervention in the economy and established the National Economic

59. The French Government in 1974 provided a \$51 million rescue loan to provide for Peugeot to take over Citr en and Renault to take over Berliet. This was seen as an obvious rationalization to complete the product lines of each producer with acquisitions of manufacturing facilities that were then experiencing trouble. See K. BHASKAR, *supra* note 54, at 143, 146.

60. See Progress Report, *supra* note 39, at Annex 25.

61. Since the final version of this article was completed, a study commissioned by the French Government has been released. The Commission, according to press reports, recommended a restructuring of the French automotive industry along the lines of the Japanese auto industry, which would encompass labor force reductions, government-supported financing and an overhaul of production methods. Since 1979, Renault and Peugeot combined have experienced a six percent drop in their share of the domestic market. The Commission recommended that the government relax price controls on cars to permit the manufacturers to raise prices by about three percent on the domestic market and suggested that Renault and Peugeot each introduce a new model each year.

The study also recommended that the government advance low interest loans to Renault and Peugeot of the equivalent of \$638 million per year for each of the next three years to help finance the needed investment, which should reach a level equal to \$4 billion in 1986-87. The recommended 30 percent reduction in the combined workforce by 1988 would be accomplished by early retirements and repatriation of "guest" workers. In addition, the study recommended a 16.4 percent cut in jobs in supplier industries. The report recommended government-supported retraining and relocation programs to ease the resultant unemployment problem.

This report was commissioned by the government in the summer of 1984 under the auspices of the government-established National Industry Commission. The publication of the report was delayed several times because of reported objections to the Commission's recommendation on reductions in the workforce and the massive injection of funds by the government. See *Report urges 74,000 job cuts to rescue French car industry*, *Fin. Times*, Oct. 20, 1984, at 32.

62. See generally R. DALAND, *BRAZILIAN PLANNING: DEVELOPMENT POLITICS AND ADMINISTRATION* 22-23 (1967); S. ROBOCK, *BRAZIL: A STUDY IN DEVELOPMENT PROGRESS* 13, 24-26 (1975).

Council, a new planning agency.<sup>63</sup> This institutionalized a shift away from Brazil's prewar industrialization phase, during which there was no concerted effort by the government to promote the development of local industry, and ushered in an era of import-substitution in Brazil, which lasted until the late 1960s. Eventually, these policies developed into more comprehensive planning schemes oriented toward the development of particular sectors of the economy and the stimulation of general economic growth. The industrial sectors that constituted the primary focus of the government's attention included consumer durables, basic intermediate goods, and capital goods.

Brazilian efforts to develop and implement industrial policy have exhibited a substantial degree of pragmatism and have not been motivated by a rigid statist ideology.<sup>64</sup> The political circumstances during which these policies emerged, however, have typically been dominated by national crises. Thus, Brazilian industrial policy has been colored by nationalistic sentiment. Indeed, the institutional basis for the development of industrial policy was established in response to two cataclysmic events: the Great Depression and World War II. While increased governmental intervention in the economy during these periods was occasionally prompted by specific economic problems, for example, difficulties faced by the private sector in obtaining capital goods during World War II,<sup>65</sup> justification of such measures more frequently involved an appeal for the reinforcement of national security.<sup>66</sup>

The government's first major effort to implement some form of industrial policy occurred in 1947. It imposed an import licensing scheme to control the level and composition of imports.<sup>67</sup> Initially, the government's objective was to reduce imports to ease the balance of payments crisis,<sup>68</sup> protection for specific industries and the encouragement of new industries was a secondary objective. In 1949 the movement toward increased protectionism became more pronounced as the government resuscitated a little used law that had been enacted in 1911, the Law of Similar.<sup>69</sup> This law virtually prohibited the public sector and firms that wanted to qualify for government assistance from importing goods for which domestic substitutes were available.<sup>70</sup> The effort to limit imports was further enhanced when a multi-tiered exchange rate system was instituted in 1953, and again in 1957 when stringent tariff protection was imposed.<sup>71</sup>

However, by the mid 1960s the Brazilian Government realized that import substitution policies were too restrictive and had the effect of constraining rather than promoting economic growth. Consequently, during the late 1960s and

63. See S. ROBOCK, *supra* note 62, at 25 (discussing Article 146 of the Brazilian Constitution).

64. See R. DALAND, *supra* note 62, at 12; S. ROBOCK, *supra* note 62, at 41, 56.

65. See N. LEFF, *THE BRAZILIAN CAPITAL GOODS INDUSTRY* 14-15 (1968).

66. For example, initial support for government intervention in the steel industry during the 1930s came from the military. N. LEFF, *ECONOMIC POLICY-MAKING AND DEVELOPMENT IN BRAZIL, 1947-1964*, at 47-48 (1968).

67. See S. ROBOCK, *supra* note 62, at 27.

68. See N. LEFF, *supra* note 66, at 14-15.

69. For a brief discussion of Brazil's import policy during this period and The Law of Similar, see B. BALASSA, *THE NEWLY INDUSTRIALIZING COUNTRIES IN THE WORLD ECONOMY* 231 (1981).

70. *Id.*; see also S. ROBOCK, *supra* note 62, at 27.

71. See S. ROBOCK, *supra* note 62, at 27.

throughout the 1970s, the government reformed industrial policies to make export growth the primary focus of attention. Import restrictions remained intact, but numerous incentives were offered to industries to promote exports. Frequently, these "incentives" merely compensated for the distorting effects of the import restrictions.

The pattern of increasing import restrictions throughout the 1950s and early 1960s, and then increasing efforts to promote exports, is clearly visible in the automotive industry. In the early 1950s, the Brazilian Government began to develop plans to target the automotive industry as one of the principle sources of industrial development. Under the Kubitschek Government (1956–1961) specific measures were introduced to achieve this objective.<sup>72</sup>

A series of presidential decrees issued in the mid-fifties established the legal framework for government involvement in the development of the Brazilian automotive industry. The first decree, issued on June 16, 1956, set forth the general policy objectives and created the executive bodies responsible for implementing the specific measures of subsequent decrees.<sup>73</sup> It indicated that the government perceived the automotive industry as one of the key sectors of the economy and that the forthcoming regulations would be structured so as to use the automotive industry as a means of stimulating economic growth in general.

The most important specific feature contained in the first decree was the creation of the Automotive Industry Executive Group (GEIA), which was charged with responsibility for formulating automotive plans (which were subject to the approval of the President), examining and approving automotive industry projects, and supervising the execution of those policies.<sup>74</sup>

Vehicle manufacturers were required to submit production programs to the GEIA and, if approved, the manufacturers could be granted "reasonable access" to imports of inputs necessary for production. The GEIA had substantial discretionary powers in this matter. The decree stated that these import allowances would depend on the "degree of economic interest" the particular automotive products were deemed to possess, subject to the interpretation of the GEIA. The specific allowances that would be granted to vehicle manufacturers included easier access to foreign exchange and the favorable classification of imported component parts.<sup>75</sup> The decree declared that automotive projects were to be considered part of the "basic industries," making them eligible for special credits and guarantees by official financial institutions.<sup>76</sup> It also specified the general criteria that were to be employed by the GEIA when considering automotive industry projects for approval.<sup>77</sup>

72. See N. LEFF, *supra* note 66, at 52.

73. See Decreto No. 39.412, 1956 Coleção das Leis [Coleção], Vol. IV (junho) - Exec.

74. See *id.* at arts. 14, 16.

75. See *id.* at art. 5, para. 1.

76. See *id.* at art. 11.

77. In particular, Article 8 indicated that one of the most important objectives of government policy toward the automotive industry was to help develop an indigenous supplier industry. Article 8 therefore instructed the GEIA to view favorably those projects that made intensive use of subcontractors for the specialized production of vehicle parts.

More specific regulations for the automotive industry were contained in subsequent decrees issued in 1956–58.<sup>78</sup> Their most important feature was the phase-in of vehicle local content requirements, rising from 50 to 95 percent over three years for passenger cars and from 35 to 90 percent over four years for trucks.<sup>79</sup>

A principal characteristic of Brazilian industrial policy is the use of incentives to guide resource allocation to particular sectors, as well as regulations and prohibitions such as those listed above. For example, the automotive decrees provided for certain foreign exchange benefits to those automotive manufacturers who fulfilled the commitments established in the regulations.

Initially, the policies designed to protect the infant automotive industry in Brazil did result in the development of the local vehicle industry. Multinational automotive corporations jumped the trade barriers by establishing local production facilities.<sup>80</sup> In addition, the influx of new foreign direct investment undoubtedly contributed to Brazilian economic growth throughout the late fifties and early sixties. However, the distorting effects of Brazilian commercial policies eventually emerged by the mid-sixties. Specifically, the Brazilian automotive industry exhibited overcapacity and a high cost structure which rendered local manufacturers incapable of competing effectively in international markets.<sup>81</sup> The inability to compete globally compounded the efficiency problem by preventing firms from gaining access to a larger market that would lead to economies of scale. Moreover, the pervasive use of import substitution policies resulted in a poor competitive position for the Brazilian manufacturing industries in general. Consequently, the focus of Brazilian industrial policy shifted in the late 1960s from import substitution to export promotion. The new approach typically did not entail the dismantling of import barriers; rather, it extended export incentives which provided some compensation for the high cost structure imposed by trade barriers.<sup>82</sup>

In addition to shifting from import substitution to export promotion during the late sixties, Brazilian industrial policy became less an ad hoc effort to deal with balance of payments problems and more a comprehensive and deliberate effort to target and develop particular industries. The increased comprehensiveness of Brazilian industrial policy is reflected in a series of decrees issued between 1969–1972. Although these decrees were not aimed solely at the automotive

78. The national plan for the truck segment of the auto industry was presented first in Decreto No. 39.568, 1956 Coleção, Vol. VI (julho) - Exec. The national plans for the light truck and passenger car sectors followed. See Decreto No. 39.676-A, 1956 Coleção, Vol. VI (julho) - Exec. (light trucks); Decreto No. 41.018, 1957 Coleção, Vol. II (fevereiro) - Exec. (passenger cars).

79. Local content requirements refers to the mandatory use of locally made parts in vehicle assembly and manufacture.

80. Major companies that had been participants in Brazil on a built-up basis or assembly from kits (CKD) went into full-scale manufacturing. These included General Motors, Ford, Volkswagen, and Chrysler. Since the early 1960s, Chrysler has withdrawn as a manufacturer of passenger cars and Fiat has entered the Brazilian market, building a plant there in the early 1970s.

81. See generally J. BEHRMAN, *THE ROLE OF INTERNATIONAL COMPANIES IN LATIN AMERICAN INTEGRATION* 136 (1972).

82. The most important export promotion program is the BEFIEX program, described *infra* notes 88–92 and accompanying text.

industry, they nevertheless had a significant impact on the structure and functioning of the industry.

For example, one decree outlined the comprehensive objectives of Brazilian industrial policy, including improvement in the domestic and international competitiveness of Brazilian industry; acceleration of the rate of growth of employment; establishment of new industries, especially those in the high-tech field; and the development of new export industries.<sup>83</sup> In order to implement these objectives, the Industrial Development Council was established.<sup>84</sup> This body was presided over by the Minister of Industry and Commerce and its membership included various other governmental ministers, as well as representatives from the financial, industrial, and commercial sectors. The Chief of Staff of the Armed Forces was also included on the membership list, indicating that national security concerns were still motivating the development and implementation of industrial policy. The Industrial Development Council was given responsibility for periodically reviewing industrial sectors, establishing priority areas, and providing sanctions for the implementation of industrial programs.<sup>85</sup> The Council was set up with eleven executive groups, each of which was responsible for specific industrial activities. Group Two was given responsibility for the automotive industry.<sup>86</sup>

Decree-law 767, issued concurrently, established a variety of tax and credit incentives to promote industrial development.<sup>87</sup> These incentives were made available only for industrial development projects which were approved by the appropriate Executive Group of the Industrial Development Council. One of the principal production incentives granted by the decree was the exemption from import taxes and duties of machinery, equipment, parts, appliances, and instruments for which there were no Brazilian substitutes.

In 1972, decree-law 1.219 created a special export program, known by the acronym BEFLEX, and instituted new incentives to promote industrial development, facilitate the transfer of technology, and expand foreign trade.<sup>88</sup> This decree represented a sharp departure from earlier policy measures to promote import substitution, although the export incentives were essentially just a form of partial compensation for the distortions accompanying the import restrictions.

The special export programs instituted by the Brazilian Government entitled participating manufacturers to exemptions from import taxes and the Industrialized Products Tax.<sup>89</sup> To qualify for the incentives, manufacturers were required to submit an export program and a list of imports they needed (including both price and quantity information) to the Ministry of Industry and Commerce and the Customs Policy Council. The value of the imported goods that could be covered by the incentive provisions was limited to one-third of the net value of the

83. Decreto No. 65.016, art. 2, 1969 Coleção, Vol. VI (agosto) - Exec.

84. *Id.* at art. 3.

85. *Id.* at art. 4.

86. *Id.* at art. 8.

87. Decreto-Lei No. 767, 1969 Coleção, Vol. V (agosto) - Leg.

88. Decreto-Lei No. 1.219, 1972 Coleção, Vol. III (maio) - Leg.

89. *Id.* at art. 1.

firm's annual average exports of manufactured products.<sup>90</sup> In order to stimulate increased demand for Brazilian services, the program stipulated that the calculation of the value of a firm's exports would include insurance and freight charges to the extent that Brazilian insurers and shippers were used.<sup>91</sup> The program was structured in a rather pragmatic and flexible fashion; in particular, firms participating in the same BEFIEEX program were allowed to transfer goods imported under the BEFIEEX benefits among themselves.<sup>92</sup>

A particular benefit for automobile manufacturers participating in a BEFIEEX program was the relaxation of local content requirements. The new regulations required that automobile manufacturers who did not participate in a BEFIEEX program (and satisfy their export commitments) would be subject to a minimum local content of 95 percent (of value rather than weight) for all classifications of vehicles. However, if the manufacturer joined a BEFIEEX program, they would be subject to a more favorable minimum local content schedule.

To participants in the Brazilian automotive industry during the 1970s, the pattern of industrial policy appeared fairly simple. Credit, import, and price controls were used to vary the sales and production levels of the automotive industry in accordance with desired goals of general economic stabilization. In the case of policy goals affecting the industrial structure, investment was directed into desired activities such as exporting through government control over capital goods imports and relief from the extremely high tariffs on such goods. Companies were allowed to expand production capacity to maintain a desired share of the domestic market only so long as they increased exports. As long as exchange rate depreciation offset rising manufacturing costs, the export potential of such expanded facilities seemed quite realizable as production volumes approached world scale. Thus, the opportunity to participate in the robust growth of the Brazilian market provided a strong incentive for automotive companies to comply with industrial policy measures as a condition for enlarging their operations.

But there was also a negative side to Brazilian industrial policy as it affected the automotive industry. Until the late 1970s, when national production approached one million vehicles annually, manufacturers' inability to reach optimum production volume and variety imposed a welfare loss for local consumers. Moreover, the costs of vehicle production tended to be high relative to international norms because of the protected supplier industries' high cost structure.<sup>93</sup> In addition, the prices of passenger cars were maintained at artificially high levels because they were subject to high value-added and excise taxes. It followed that the demand-side distortion in resource allocation that results from artificially high prices hindered the development of other industries, especially those industries that must also exploit economies of scale to produce efficiently, by reducing the demand for their output.<sup>94</sup>

90. *Id.* at art. 3.

91. *Id.* at art. 3, para. 3.

92. *Id.* at art. 9.

93. Throughout the 1960s, the Brazilian cost for manufacturing automotive products was approximately 1.7 times the international level. See J. BARANSON, *AUTOMOTIVE INDUSTRIES IN DEVELOPING COUNTRIES* 35 (1969).

94. For a more general discussion of the economy-wide effects of protectionism in Brazil, see B.



Furthermore, other industries were injured by the supply-side distortion that occurred as the protected automotive and supplier industries drew resources (capital, labor, and production inputs) from other sectors of the economy. The Brazilian trade balance was quite possibly worsened as well. It is therefore not surprising that many of the industrial policy measures undertaken in the last 15 years have been designed to offset the distorting effects of the initial import restrictions. However, while Brazil has been slow to ease the import barriers (indeed, they are currently restrictive because of the payments crisis) and to give up general export incentives, the enlargement of the domestic market for the Brazilian automotive industry resulted in increasing economies of scale and more efficient production, which enabled it to become internationally competitive.

## V. MEXICO

Mexican industrial policy has for many years been based on an import-substitution strategy aimed primarily at the manufacturing sector and some agricultural areas, such as grain production. However, in the 1970s the government's industrial policy began to include efforts to promote exports. Throughout the post-war period, the Mexican Government has developed industrial policy in the belief that national economic planning is necessary for the nation to realize its economic growth potential, increase employment, strengthen its balance of payments, and reduce its economic dependence on imports. The government also seeks to facilitate labor mobility by socializing the adjustment costs associated with the movement from an agrarian to an industrial economy and the physical transfer of labor from agricultural to non-agricultural sectors.<sup>95</sup>

The Mexican Government first undertook comprehensive measures to restructure and develop the domestic automotive industry in 1962 when it issued an automotive decree. This decree established a variety of performance requirements and other protectionist measures to stimulate import substitution. Specifically, the decree imposed a local content requirement of 60 percent of direct vehicle cost,<sup>96</sup> equivalent to approximately 36 percent of vehicle value at international price levels.<sup>97</sup> It also subjected vehicle imports to licensing requirements and tariffs ranging from 100 to 150 percent, prohibited the import of assembled vehicles beginning in 1964, and established individual and industry-wide production quotas.

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BALASSA, *supra* note 69, at 232-34. For a discussion of the bias such policies introduce against exports, see N. LEFF, *supra* note 66, at 91.

95. See generally T. KING, MEXICO—INDUSTRIALIZATION AND TRADE POLICIES SINCE 1940, at 111 (1970); see also MINISTRY OF NATIONAL RESOURCES AND INDUSTRIAL DEVELOPMENT, 1 MEXICO: NATIONAL INDUSTRIAL DEVELOPMENT PLAN, 14-15, 144-46 (1979); C. FORD, PAST DEVELOPMENTS AND FUTURE TRENDS IN MEXICAN AUTOMOTIVE POLICY: IMPLICATIONS FOR UNITED STATES-MEXICO TRADE RELATIONS 12-13, 21-22 (APRIL 1980) (DRAFT PAPER BY MOTOR VEHICLE MANUFACTURERS ASS'N).

96. See R. JENKINS, DEPENDENT INDUSTRIALIZATION IN LATIN AMERICA: THE AUTOMOTIVE INDUSTRY IN ARGENTINA, CHILE, AND MEXICO 54 (1977) (discussing the decree of August 25, 1962).

97. *Id.* at 228.

These requirements were enforced flexibly. For example, the production quota could be increased if a manufacturer exhibited a strong export performance, increased its local content above the required levels, or reduced the difference between its Mexican and international vehicle prices. In addition to enforcing the decree requirements with some flexibility, the Mexican Government, through another decree in 1963, extended certain incentives to vehicle manufacturers who complied with the government's plan. These incentives included import duty exemptions on machinery and equipment for five years and raw materials, components, and parts for four years. Also, the federal assembly tax was reduced by 80 percent for those firms that complied with the government's regulations.<sup>98</sup>

The 1962 decree was superseded by a decree issued in 1972, which principally featured a requirement that automobile manufacturers within ten years increase their export of automotive products sufficiently to compensate for parts and component imports.<sup>99</sup> As an incentive to increase exports, the government provided for a tax rebate equivalent to 11 percent of the value of a firm's exports of automotive products.<sup>100</sup> At the same time, measures to reduce overcapacity were instituted. In particular, subcompact car manufacturers were prohibited from producing vehicles for any other market segment and vice versa. Also, the decree established minimum local content requirements of 50 percent for passenger cars and 65 percent for trucks, based on a material cost formula. The policy's goals, which were made progressively more demanding, were increased local manufacture and greater exports.

In 1977, the government announced a new decree to govern the automotive industry.<sup>101</sup> Export requirements were given a new twist. Foreign exchange expenditures (including local supplier imports, border dealer imports, interest payments, and royalties) were required to be offset 110 percent by export revenues if the firm was operating at mandatory local content levels, or 100 percent if the firm was operating at the higher recommended levels (beginning in June 1981). Also, the production of more than one engine family was permitted only if the firm exported at least 60 percent of the units of the additional family.<sup>102</sup> The new decree further required that half of a vehicle manufacturer's import-compensating exports be sourced from suppliers that had at least 60 percent local ownership. Export revenue generated by border plant sales could account for no more than 20 percent of total foreign exchange requirements. In addition, majority local ownership was required to manufacture or install diesel engines for trucks.<sup>103</sup>

98. *See id.* at 54–55.

99. *See* C. Ford, *supra* note 95, at 20 (discussing the Mexican automotive policy statement of 1972).

100. This rebate was eliminated in 1977 because a large devaluation in the preceding year created an undervalued peso. A similar measure was enacted in 1978 with rebates ranging from four percent to 11 percent. *See id.* at 21.

101. Decree for the Development of the Motor Vehicle Industry, *translated in* MINISTRY OF NATIONAL RESOURCES AND INDUSTRIAL DEVELOPMENT, 2 MEXICO: NATIONAL INDUSTRIAL DEVELOPMENT PLAN, 31–61 (1979).

102. Following the 1977 decree, all three major U.S. manufacturers announced the establishment of major engine plants in Mexico with significant volumes targeted for exports.

103. For a more thorough discussion of the 1977 Automotive Decree, see C. Ford, *supra* note 95, at 22–26.

Hence, in addition to increased local manufacture and export promotion, government authorities emphasized the goal of greater Mexican ownership in the industry.

In the wake of Mexico's debt and payments crises of 1982-83, the government, in an effort to rationalize the industry and reduce pressure on the balance of payments, imposed the most stringent of all its automotive decrees.<sup>104</sup> The 1983 decree established new minimum levels of local content, which by 1987 will reach 60 percent for passenger cars and 80 percent for trucks.<sup>105</sup> The decree also requires that automobile manufacturers operate with a balanced foreign exchange budget (which includes all payments abroad, including debt service,<sup>106</sup> and covers all supplier industries' foreign exchange requirements). The only exception is for the import of capital goods connected with a project oriented toward export production, and even then only under certain conditions.<sup>107</sup> The new decree imposed tighter restrictions on the number of lines and models each company could manufacture, but additional lines could be authorized if exports from the new line generated sufficient foreign exchange to cover all external payments associated with its production.<sup>108</sup> Furthermore, the decree requires that 25 percent of production be economy class vehicles.<sup>109</sup>

The decree limits imports of automatic transmissions to 20 percent of total passenger car production for 1984 and these imports are expected to be phased out entirely by 1988. Imports of specific luxury items (such as power windows and power doorlocks) are prohibited by an earlier decree. Gasoline engines for medium and heavy-duty trucks will be prohibited beginning in the 1986 model year, which effectively excludes foreign firms from producing these trucks because previous decrees have prohibited foreign-owned firms from installing diesel engines in trucks.<sup>110</sup> Also, eight-cylinder engines were prohibited in passenger cars in November 1984, and in light trucks starting in November 1985.<sup>111</sup>

Industrial policy in Mexico has imposed dramatic changes on the structure and function of the automotive industry. Although the assembly industry had been established in Mexico prior to the government's efforts to target the automotive sector for development, its rapid growth, along with the development of the vehicle manufacturing industry, came after performance requirements were in-

104. Decreto para la racionalizacion de la Industria Automotriz, Diario Oficial, 15 septiembre 1983 (Mex.) (Decree for the Rationalization of the Automotive Industry). For a delineation of the principal measures of the 1983 decree, see N. Schuster, *The Motor Vehicle Industry in Mexico* 17 (Dec. 1983) (paper by the Int'l Affairs Dep't, Motor Vehicle Manufacturers Ass'n); Wharton Econometric Forecasting Assocs., DIEMEX-Wharton Mexican Letter 1 (Oct. 15, 1983) [hereinafter cited as Mexican Letter].

105. N. Schuster, *supra* note 104, at 17.

106. See Mexican Letter, *supra* note 104, at 1, 2.

107. *Id.* at 2. Imports of such items will not be counted as part of a firm's external payments as long as the project for which they are used is completed by October 31, 1985, and the payments for the items are financed over a ten-year period. *Id.*

108. *Id.* at 2, 4.

109. *Id.* at 4.

110. See C. Ford, *supra* note 95, at 25 (discussing the 1977 Automotive Decree).

111. Mexican Letter, *supra* note 104, at 4.

stituted. However, it may have been the industry's growth potential that made it possible to institute performance requirements rather than vice versa. The automotive industry witnessed a consolidation following the introduction of performance requirements. The number of automotive firms operating in Mexico declined from 16 in 1962 to 12 in 1967 and the number of car models assembled in Mexico declined from 44 in 1962 to 22 in 1964.<sup>112</sup> But employment for the entire sector increased fourfold and investment from 400 million pesos to three billion pesos between 1962 and 1967.<sup>113</sup>

The problems of overcapacity and high cost structure which result from the imposition of trade barriers continue to be evident in the Mexican automotive industry, however. These problems are the result of more vehicle lines and models than are warranted by economy-of-scale efficiencies, as well as typically higher-priced vehicles than comparable vehicles available in international markets.<sup>114</sup> In addition, efforts to restructure the industry have been imposed through legal restrictions on the number of lines and models each firm can produce, rather than through more flexible devices such as export subsidies, tax rebates, or other measures that are less binding with respect to the functioning of market mechanisms.

It is not clear whether the industrial policy measures aimed at developing the automotive industry have eased or exacerbated problems related to the transfer of labor from the agrarian to the industrial sectors in Mexico. It can be argued that industrial policies contributed to the growth of employment in the automotive industry, since jobs have been created. However, the net effect on employment growth may well have been negative; indeed, such policies probably contributed to the large mass of underemployed workers in Mexico. Efforts to develop the automotive sector involved the reallocation of resources to an industry which utilizes capital-intensive and skilled-labor-intensive production techniques. Consequently, scarce resources were transferred from other sectors, including those which use labor-intensive production techniques and in which a given amount of investment would generate relatively more employment. Thus, a resource drain on the agrarian sector, for example, may have intensified the adjustment costs associated with the process of industrialization by further impoverishing rural-agrarian areas and forcing mass migration to urban-industrial areas (or the United States). This interpretation of the employment effects of Mexican industrial policy is consistent with the fact that the income elasticity of employment growth in Mexico has been unusually low.<sup>115</sup>

Moreover, it is probably true that import-substitution policies have moved resources away from sectors in which Mexico has a comparative advantage to those areas in which it does not; that is, away from the production of goods and

112. C. Ford, *supra* note 95, at 19.

113. *Id.* at 19-20.

114. See generally J. BEHRMAN, *supra* note 81, at 137 (discusses price controls and cost penalties imposed on the Mexican auto industry).

115. Over the period from 1973 to 1983, the income elasticity of employment growth in Mexico was 0.46. In the high period from 1973 to 1981, the income elasticity was even lower. For the data used in making this calculation, see Wharton Econometric Forecasting Assocs., DIEMEX-Wharton: Mexican Economic Outlook 205, 229 (Feb. 1985).

services that use unskilled labor relatively intensively to those which require the relatively intensive use of capital or skilled labor. And while it is likely that the Mexican authorities' increasing orientation toward export promotion will improve production in the automotive industry by increasing the possibility of realizing economies of scale, there is no evidence that the government's efforts to allocate resources toward the automotive industry, or toward the manufacturing sector in general, have resulted in a change in the dynamic pattern of comparative advantage. Nevertheless, costs of manufacture have always been reasonably attractive in Mexico if sufficient volume could be achieved to reach world scale, as has been the case with engine production. In this instance, Mexican industrial policy has promoted the accumulation of human capital and technology.

Finally, the policies employed by the Mexican authorities have been more distorting than alternative forms of industrial policy. In particular, Mexico has typically adopted tariff, quota, and local content forms of protectionism rather than production tax-cum-subsidy policies. The former are less efficient than the latter for achieving such objectives as increasing production in a particular industry because they include the negative demand side effects of inflated domestic prices.

## VI. AUSTRALIA

Over the past four decades the Australian Government, in varying degrees, has sought to change the competitive conditions facing Australian industries. While the objectives of these policies occasionally shifted with changes in the market for Australian products at home and abroad, the instruments used to implement the policies were largely limited to a mix of tariffs and quantitative restrictions on imports.

Until 1960, the Australian Government followed a pattern very similar to that of other resource-rich countries: it erected tariff barriers and quantitative restrictions to encourage the establishment of local production of many manufactured goods. The primary goal motivating these import substitution policies was to establish the local manufacture of many previously imported products. Policy makers justified the shift from low-cost imports to high-cost domestic manufacture on the ground that it would save scarce foreign exchange; reduce an excessive sensitivity to the international trade cycle; and provide side benefits such as human capital development and markets for supplier industries.

Moreover, during the fifties, prices for primary product exports—particularly agricultural products—were declining relative to prices for manufactured imports.<sup>116</sup> This phenomenon, referred to as the declining terms of trade between primary product exports and manufactures, gave rise to the belief that Australian living standards would decline relative to those in countries that were competitive producers of manufactured goods. If Australian incomes were to keep pace, Australia would have to become a competitive producer of manufactured products as well.

By 1960, however, Australian policy makers had begun to criticize the import

116. INT'L MONETARY FUND, 29 INTERNATIONAL FINANCIAL STATISTICS 70-71 (1976).

substitution policies. In many industries, tariff protection resulted in the proliferation of high-cost domestic producers and failed to lead to cost efficiencies in production. Public figures shifted their concern to the high cost that tariff protection appeared to be imposing on domestic consumers. An official inquiry board reviewed the import substitution policies and recommended the elimination of all quantitative restrictions on imports and further scrutiny of the high cost of tariffs.<sup>117</sup> In 1960, Parliament eliminated all import quotas.<sup>118</sup>

Economic events in and out of Australia also contributed to the shift in priorities of government policies. Australian terms of trade improved as rapid growth in the world's industrial economies increased demand for basic raw materials and agricultural products. Moreover, the reduced level of import protection pushed some domestic manufacturers to seek out export markets in an effort to achieve greater production efficiencies. Perhaps as important, the discovery and development of major mineral deposits in Australia offered an attractive alternative to investment in manufacturing in the late 1960s, and rapid growth of the services sector created strong demand for office construction late in the decade.<sup>119</sup>

The oil shocks and subsequent recessions in Europe, Japan, and the United States brought about a third generation of industrial policies in Australia. This time Australian policy makers sought to develop a more comprehensive approach to the development of specific industries in Australia. In 1973, an Act of Parliament<sup>120</sup> instructed the Industries Assistance Commission (IAC) to fashion an approach toward the development of industries which required "the Commission to have regard to the desire of Australian Governments' . . . to improve and promote the well-being of the people of Australia, with full employment, stability in the general level of prices, viability in external economic relations, conservation of the natural environment and rising and generally enjoyed standards of living."<sup>121</sup> In its report, the Commission recommended reduced levels of tariff and quota protection to all industries. It argued that tariff reductions would accomplish many of the goals set for industrial assistance strategy by allowing market forces to allocate the nation's scarce resources. The Commission avoided targeting specific industries for assistance and instead recommended across-the-board reductions of tariffs by 25 percent.

Although the Commission's recommendation for tariff reductions was enacted, the timing of the tariff cut could not have been worse from the point of view of

117. See FED. CHAMBER OF AUTOMOTIVE INDUS., 1 THE AUSTRALIAN AUTOMOTIVE INDUSTRY 35 (1971) [hereinafter cited as AUSTRALIAN AUTOMOTIVE INDUSTRY]. The recommendations were made by the Tariff Board which conducted its study between 1954 and 1957. See FED. CHAMBER OF AUTOMOTIVE INDUS., AUSTRALIAN AUTOMOTIVE YEAR BOOK 1970, at 38 (1970) [hereinafter cited as 1970 YEAR BOOK].

118. AUSTRALIAN AUTOMOTIVE INDUSTRY, *supra* note 117, at 35.

119. Bills, Love & Cocks, *Financing Manufacturing: Past Trends and the Current Crisis*, in POLICIES FOR DEVELOPMENT OF MANUFACTURING INDUSTRY 77 (Committee to Advise on Policies for Manufacturing Industry ed. 1976).

120. Industries Assistance Commission Act 1973, AUSTRALIAN ACTS P. no. 169 (1973).

121. Indus. Assistance Comm'n, *The Industries Assistance Commission's Approach to the Development of Industries—Implications and Procedures*, in POLICIES FOR DEVELOPMENT OF MANUFACTURING INDUSTRY 32 (Committee to Advise on Policies for Manufacturing Industry ed. 1976).

public support. The Australian dollar appreciated 20 percent between 1972 and 1974 and the oil shock brought on a protracted worldwide recession. These two factors added to the effect of the tariff reduction, reduced demand for domestically manufactured products, and sharply increased unemployment in those industries.

The policy reaction to these developments was to increase sharply assistance to those industries hardest hit: textiles, clothing, footwear, and motor vehicles. Moreover, the forms of protection assistance in the post-1973 round of measures increased both the average rate of protection provided to these industries and the dispersion of protection rates between different industries and among products within the same industry.<sup>122</sup>

Later studies by the Industries Assistance Commission of the effect of tariff and quota protection on domestic industries show that those industries that enjoyed the highest rate of protection generally had less growth in gross product than less-protected industries and experienced sharper declines in employment.<sup>123</sup> Moreover, the IAC estimated the cost to consumers of quota entitlements averaged \$600 to \$800 per household.<sup>124</sup>

Notably, those Australian manufactured products which have been successfully exported in recent years have been those products least protected in the domestic market.<sup>125</sup> These industries appear not to have been handicapped by the small size of Australia's market in achieving production economies. Competition from foreign products appears to have been a stimulus rather than a discouragement to their development.

Automotive policy in Australia exhibits all the characteristics of the general policy pattern. Government policies have promoted the development of an indigenous automotive industry from as early as 1917 when the Government first encouraged local assembly by placing quantitative limits on the import of completed vehicles.<sup>126</sup> Between World Wars I and II, a market for some locally manufactured components was created by prohibiting their import.<sup>127</sup> By 1940, Australia was already contemplating the production of an all Australian-made car. War shortages and demands further stimulated the development of supplier and replacement parts industries. In 1945, the Minister for Post-War Reconstruction declared:

It is the policy of the Government to encourage the local manufacture of motor vehicles. That policy is based on the overriding importance of motor transportation to the future prosperity and development of Australia. The government looks to a developing and expanding industry as the keystone that will consolidate the industrial structure built up during the war.<sup>128</sup>

122. See Krause, *Australia's Comparative Advantage in International Trade*, in *THE AUSTRALIAN ECONOMY: A VIEW FROM THE NORTH* 290 table 7 (R. Caves & L. Krause ed. 1984).

123. See *id.* at 291 table 8.

124. See *id.* at 291.

125. For example, pumps and compressors; measuring, professional, and scientific equipment; and cameras and optical goods.

126. See 1970 YEAR BOOK, *supra* note 117, at 1.

127. See *id.*

128. R. DeRoock, *Political Economic and Automotive Development in Australia and New Zealand*

From the immediate postwar period until 1960, domestic automobile producers were sheltered by import licensing which severely limited the quantity of completed vehicles that could be imported. The result was the proliferation of locally assembled vehicles. Furthermore, because the licensing authorities made sure that every existing firm obtained sufficient licenses to stay in business, the legislation served to preserve an uneconomic, inefficient market structure. By 1969, 11 car companies producing or assembling 45 different car models were operating in an Australian market in which new car sales did not exceed 350,000 units annually.<sup>129</sup>

In 1957, as a result of the Tariff Board's report, the Australian Government expanded protection from assembly to component manufacture.<sup>130</sup> The law provided high tariff protection (42.5 percent) for any component manufactured in Australia in sufficient quantities to supply the bulk of original equipment requirements. The law provided vehicle manufacturers with an incentive to make, or buy locally, parts which they otherwise could have imported more cheaply. Cost efficiency had only a small role in determining which components were produced. The result was expansion of component manufacture and increasingly high-cost production.

The year 1960 marked the first shift toward a less protective automotive import policy. In that year quantitative restrictions on the import of fully built-up cars were abolished.<sup>131</sup> The next five years witnessed extremely rapid growth in automobile sales and a reduction in the proportion of local content in production. Vehicle registration nearly doubled between 1957 and 1964.<sup>132</sup> Local content dropped from 77 percent in 1958 to 67 percent in 1962–63. Imports of fully assembled cars rose from just over three percent of new registrations in 1961 to over 14 percent in 1965 despite high transport costs and 35 percent tariffs.<sup>133</sup>

The liberalization of automobile trade was short-lived, however. Australia's reluctance to allow import competition to take a substantial market share from any existing producers inspired new legislation. In 1965, the Motor Vehicle Manufacturing Plan was enacted.<sup>134</sup> Under this plan, auto producers using a large share of local content were granted duty concessions and low volume producers unable to meet high local content standards were granted special protection. Producers were allowed to choose between two basic plans. Plan "A" required the company to achieve 95 percent local content within five years, but allowed plan participants to import all their component requirements duty-free during the buildup. Plan "B", designed for small volume producers, provided two options. Either participants were committed to achieving 55 percent local content in two

41 (May 1977) (paper for General Motors Overseas Operations) (quoting Minister for Post-War Reconstruction).

129. See 1970 YEAR BOOK, *supra* note 117, at 120.

130. See *id.* at 38.

131. AUSTRALIAN AUTOMOTIVE INDUSTRY, *supra* note 117, at 35.

132. See AUTOMOBILE MANUFACTURERS ASS'N, WORLD MOTOR VEHICLE DATA 1966, at 13 (1967).

133. See FED. CHAMBER OF AUTOMOTIVE INDUS., AUSTRALIAN AUTOMOTIVE YEAR BOOK 1968, at 70, 117 (1968).

134. See INDUS. ASSISTANCE COMM'N, PASSENGER MOTOR VEHICLES AND COMPONENTS—POST-1984 ASSISTANCE ARRANGEMENTS 254 (1981).



years, and were granted duty concessions only on non-protected components, or participants were required to assemble vehicles in Australia from completely-knocked-down component kits (CKD packs) and were granted duty concessions only on components which were sourced in Australia within 18 months. The local content requirements raised the effective rate of protection on the domestic portion of production by permitting some imported components to enter the market at a lower rate than that which applied to finished products.

Even with this increased effective rate of protection, the local content requirements proved too stringent. Small volume producers who had entered the 95 percent plan found that their scale of operations did not justify the enormous tooling expense necessary to increase the proportion of local components in Australian cars. By 1968, a third alternative, which permitted only 85 percent local content, was added to the plan. Successive modifications of the plan finally converged into a single plan, effective from January 1, 1976, which required all local producers to eventually use 85 percent local content in production.<sup>135</sup>

Despite the frequent modifications in performance requirements to accommodate the problems of particular domestic producers, these years witnessed the exit of two manufacturers, Volkswagen and British Leyland, from vehicle production in Australia. Chrysler would sell its Australian production facilities to Mitsubishi a few years later.

Any increased efficiencies that the exit of the German and British firms might have afforded the remaining producers were almost immediately offset by an official government decision to invite Nissan and Toyota to commence manufacture in Australia. That decision reflected a cross-current of political and economic forces. By 1975, imports of completed cars from Japan exceeded 23 percent of the Australian car market<sup>136</sup> despite a 35 percent tariff. The increase in imports of completed cars threatened to continue taking market share from domestic producers, who had invested heavily in production facilities in Australia in order to meet local content requirements. To support those firms that had conformed to the local content plans, the Australian Government reimposed quotas on imports of passenger cars and light commercial vehicles.<sup>137</sup>

In this same period, however, Australia was enjoying a large surplus in its trade with Japan and the Japanese objected strenuously to restrictions impeding their access to the Australian market. Moreover, the Australian consumer wanted to be able to buy small, fuel-efficient vehicles produced by Japanese firms. Therefore, the Australian Government offered the Japanese the opportunity to establish local production facilities to service the Australian market. The entry of additional low-volume producers, operating at high local content levels, tended to exacerbate the already fragmented character of component manufacture and militated against the achievement of economically efficient production volumes.

These policies did increase the proportion of automotive components produced in Australia, but they did so at considerable cost to production efficiency. That

135. See INDUS. ASSISTANCE COMM'N, MOTOR VEHICLES—IMPORT RESTRICTIONS 10–11 (1975).

136. See MOTOR VEHICLES MANUFACTURERS ASS'N OF THE U.S., WORLD MOTOR VEHICLE DATA 1976, at 134–35 (1977).

137. See INDUS. ASSISTANCE COMM'N, *supra* note 134, at 256.

cost was reflected in the escalation of tariff rates on both components and CKD kits from 1975 to the present. In 1975, the basic tariff rate on CKD kits was 25 percent. In that same year, a trigger tariff was introduced which established a higher tariff (27.5 percent) when imports exceeded 20 percent of the market.<sup>138</sup> In 1976, the basic CKD pack rate was increased to 35 percent.<sup>139</sup> From 1975 to 1980, the tariff rate on completed car imports increased from 35 percent to 57.5 percent and import quotas were enacted.<sup>140</sup>

The Industries Assistance Commission estimated that the cost of assistance was even higher. In its calculation, which includes the cost of tariffs, quantitative restrictions on imports, and production and export subsidies, it found that the average effective rate of assistance to the motor vehicle industry rose from 52 percent in 1968–69 to 158 percent in 1981–82.<sup>141</sup>

Alarmed by the high cost of protecting the automotive industry, the Commission recommended returning to duty-only protection. It argued that cost efficiencies could only be achieved through elimination of the local content plan and reductions in tariff protection which would put pressure on local producers to seek scale economies in production through exports and larger shares of the local market. The Commission's recommendations were not enacted.

In December 1981, the Australian Government released the Post-1984 Passenger Car Plan.<sup>142</sup> This plan maintains the two-tier tariff structure in effect since 1975, with higher tariff rates applying to imports above certain import quota limits. The tariff on imports above the quota limit is 150 percent in 1985 and is considered prohibitive. Cars imported under the quota are subject to a 57.5 percent tariff which provides an effective rate of protection of 67.6 percent to domestic value added. All firms producing for the local market are subject to 85 percent local content requirements.

The "export-facilitation credit" is the only notable shift in the protectionist policies in the post-1984 Passenger Car Plan. This clause permits exporting firms to reduce the proportion of local content in production and increase the proportion of duty-free components for which they are eligible, provided they achieve an equal dollar value of incremental exports of automotive goods. In other words, the sum of the value of the new export activity and the remaining manufacture for domestic consumption totals the original value of domestic manufacture. The new activity is likely to be at world scale volumes, however, and the activities displaced should be the least efficient ones. At the same time the total value added in the industry (domestic and export) is unchanged. While the export requirement forces firms to produce some components competitively in order to sell them internationally, it also increases the effective rate of protection on the domestic value added in the car that is sold in the Australian market. A firm that exports the full 15 percent allowed under the scheme can import duty-free up to

138. *See id.*

139. *Id.* at 78.

140. *See id.* at 256, 259.

141. *See Krause, supra* note 122, at 288.

142. For a summary of the major components of the plan, see Bowden, *New car policy hits at Ford, Mitsubishi*, *The Australian*, Dec. 22, 1981, at 1.

30 percent of the components used in producing the vehicle sold in Australia. The duty rate which applies to the entire value of completed car imports and CKD imports protects the 70 percent domestic value added in the car produced under the local content plan.

The export-facilitation credit may promote efficiency in production, since it permits automakers to eliminate the least efficient element in their operations and probably increases the scale of operation in the manufacture of the components that are exported. There is a risk, however, that instead of displacing high-cost manufacturing, the export scheme will be used as a means of avoiding new capital investment. If so, inefficient manufacture of components could continue indefinitely.

Australian industrial policy has been limited almost exclusively to tariffs and quantitative restrictions on imports. A key motivation for the policy has been the belief that the small size of Australian markets precluded achieving economies of scale in production and that if Australia is to develop its manufacturing base, it must protect local producers from foreign competition.

The long-term results of these policies have brought their usefulness into question, however. Production in the most protected industries has been fragmented and inefficient, with many producers servicing the small national market.<sup>143</sup> Moreover, the cost of protection has risen sharply as Australian producers have become less efficient relative to their foreign competition. In the automotive industry, tariffs and quotas have screened local producers from the competition of world-scale producers and have allowed the development of local automotive production which probably would not have otherwise occurred.

These same policies have thus far failed to promote an efficient scale of production in the automotive sector. Currently, no manufacturer dominates Australia's relatively small automotive market, and no car model is manufactured in a volume greater than 60,000 units a year. Indeed, the situation has apparently deteriorated since 1964 when no import quotas existed, and tariff rates were generally lower. Then, the dominant manufacturer produced 130,000 units per year of its most popular model.

As in all of the cases studied here, however, the viability and profitability of the Australian automotive industry have been affected by more than industry-specific governmental policies. The Australian economy and with it the automotive sector was buffeted by oil shocks and two worldwide recessions in the 1970s. While the industry clearly has lost ground in the past two decades, at least part of the blame lies with the same market forces that reduced the profitability of less-protected producers in the United States: namely, high fuel prices and competition from small, fuel-efficient Japanese cars. On balance, however, it is difficult to argue that tariff and trade policies directed toward Australian automobile producers have enhanced either the viability or profitability of the industry.

143. See generally Caves, *Scale, Openness, and Productivity in Manufacturing Industries*, in *THE AUSTRALIAN ECONOMY: A VIEW FROM THE NORTH*, *supra* note 122, at 313-47 (R. Caves & L. Krause eds. 1984) (contains a study of the effects of these policies).

## VII. CONCLUSION

In the preceding descriptions of various industrial policies there are several recurrent motives for measures applied to the automotive industry. They include:

- (1) development of an automotive industry either locally owned or independent of reliance on foreign support;
- (2) achievement of optimum economies of scale and financial strength in the finished vehicle industry or its supplier industries;
- (3) achievement of international competitiveness;
- (4) achievement of exports;
- (5) saving of foreign exchange;
- (6) promotion of technological diffusion; and
- (7) accumulation of human capital in the form of skilled workers.

Lack of quantification and an inability to isolate the effects of the industry-specific measures from those that may have come from outside forces necessitates cautiously phrased conclusions. In some cases, the effectiveness of an automotive industrial policy has been considered in light of how well it contributed to the goals of a general industrial policy, such as economic growth and job creation. In other cases, the effect of the policy has been assessed in terms of the strength of the industry itself as measured by profits, prices, or size.

The strongest conclusion that emerges from the six studies in this review is that the general direction and strength of the economy remains the dominant influence on the automotive industry, even in the face of strong government-sponsored industrial policy programs. While the automotive industry may contribute to the economy's growth rate and direction, it is a relatively small part of any country's industrial structure, thus such industry-specific intervention usually will have little effect on the economy as a whole. Furthermore, the costs of misdirecting resources to a chosen sector are born by other sectors. The net outcome of measures aimed at stimulating a specific industry may not be a net gain for all.

The study also demonstrates that the clearest success of industrial policy in shaping the automotive industry has been in the area of ownership and control. Japan ensured that its locally owned companies prevailed over foreign-owned companies in the domestic market. France seems to have maintained a minimal role for foreign companies by merging weaker domestic units into national groups, although minority foreign participation has been useful in the internationalization of the industry. Australia, when confronted with the choice of importing Japanese vehicles or establishing within Australia Japanese-owned motor vehicle manufacturers, chose the latter as a clear decision of industrial policy.

Insuring local ownership may be merely a matter of national preference for local institutions or it may be a strategy calculated to allow for maximum government control. In any event, it is not clear that national economic advantages flow from the nationality of ownership although many governments act as if they do. Our judgments on industrial policy have been confined to what the policies succeed in doing to the economies of the industry or nation, rather than their influence on the legal control of production.

Countries have been able to encourage investment and generate greater cash

for capital expenditures through industrial policy measures such as tax incentives for chosen industries. This seems to have occurred in Japan, both for the auto industry itself and its supplier chain. Brazil also has followed clear measures of tax encouragement fairly specific to motor vehicles. While such measures may have helped to create world-scale economic units, it is likely that other forces were also at work. Growth in the domestic market and the launch of a government program encouraging exports provided the demand to achieve a higher scale of production.

Other goals of industrial policy directed at the automotive industry include the upgrading of labor skills and the promotion of technological knowledge. It may be argued that the net gains from human capital formation in a protected industry may be outweighed by the costs of protection. Also, foreign direct investment in the automotive industry has brought some modern production technologies to countries such as Brazil and Mexico. It is not always clear, however, that the unsubsidized local product is always fully competitive as an import with vehicles produced in markets where the technological competition may be even more severe.

Apart from the effect of market expansion on the volume of sales and therefore on the scale of production, it is not clear that industrial policies have themselves succeeded in putting together efficient business units. For example, industrial policies based on import substitution typically generated inefficiencies due to the high cost structure of the protected automotive industry and its inability to achieve an economic production volume as a result of poor competitiveness in world markets. Governments have typically responded to these problems by providing export incentives, which in many cases have been crucial for achieving international competitiveness, and by undertaking rationalization efforts, which have had ambiguous results. The Japanese automotive industry was the object of restructuring attempts by MITI which bore little fruit and, in fact, would have disadvantaged the industry later if they had succeeded. This contrasts with other Japanese interventionist policies that were highly successful.

The most common industrial policy technique for the automotive industry in the countries reviewed has been measures affecting trade: import restraint or export promotion. Though this shared thread seems to be the distinguishing characteristic of industrial policy, it does not necessarily achieve common results. A number of forms of trade measures may be involved in industrial policy, from fairly benign and unsubsidized export requirements, to actual or hidden subsidies which may well have a predatory influence on other countries. There may also be strict import controls. Such trade measures can be used secondarily to affect volume and scale of production; moreover, the threat of withdrawal of protection can be used to persuade domestic companies to take other measures such as new investment. Trade measures can be used to encourage foreign investment to get behind trade walls. Or trade measures may be employed to force global rationalization of the industry in small markets.<sup>144</sup> Japan is the best example of a

144. Global rationalization attempts to achieve economies of scale by mandating reduction of makes and models while encouraging commonality of engineering design. This concept is incorpo-

case in which trade measures were used to build international competitiveness where it did not exist before. In other cases trade measures have not succeeded in producing an internationally competitive automotive industry. The role of government policy in facilitating comparative advantage is, therefore, currently controversial.<sup>145</sup>

rated into the "world car" whose efficient manufacture can be divided among several countries where it would not be efficient to do it in any single country because of the small size of its domestic market.

145. Charles Schultze points out the lack of clear economic criteria for nations to attain industrial preeminence in specific industries and cites Assar Lindbeck's argument that the origins of industrial specialization are largely historical coincidence and momentum. See Schultze, *Industrial Policy: A Dissent*, BROOKINGS REV., Fall 1983, at 3, 8-10; Lindbeck, *Industrial Policy as an Issue in the Economic Environment*, 4 WORLD ECON. 391, 394 (1981). Zysman and Tyson, on the other hand, point out that comparative advantage is a dynamic process in which government policy can play a role in altering the situation of particular industries. See Zysman and Tyson, *American Industry in International Competition*, in AMERICAN INDUSTRY IN INTERNATIONAL COMPETITION 20-48 (J. Zysman & L. Tyson eds. 1983).