Sectoral Strategies and Participant Commitments: The Keys to Effective Trade and Industrial Policies

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The declining competitiveness of the U.S. manufacturing sector is one of the most important causes of the decline in real wages and the stagnation in the level of the median family incomes which have plagued the United States since about 1973. Although the reports of the decline in American living standards were greeted with some skepticism when they first appeared in the work of the Economic Policy Institute ("EPI") in 1985, they have now achieved a high level of prominence on the national policy agenda. More recent studies by EPI and other research groups urge two cures for the decline. First, employment and output in the manufacturing sectors must increase in order to sustain increases in the real median income of two to three percent per year while simultaneously reducing the national unemployment rate. Second, new forms of industrial assistance and new public and private institutions to assess industry structure and develop policy are needed to create high-wage manufacturing jobs.

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Assess industry structure and develop policy are needed to create high-wage manufacturing jobs. Industrial policies will be ineffective unless they are developed in the context of a stable macroeconomic environment with full employment, stable prices and interest rates, and balanced trade. The Clinton administration is taking steps in these directions, but its deficit reduction program threatens to worsen unemployment unless further steps are taken to revitalize the goods producing sectors of the economy.

Policies which increase the competitiveness of all U.S. workers and industries, such as investments in human capital and infrastructure, are also highly desirable elements of an effective industrial policy. These can be supplemented with specific policies to raise the demand for goods produced in the United States, including: 1) public procurement (e.g., environmental cleanup, housing/urban renewal, energy efficiency/public transportation); 2) trade policies to assist both "sunrise" industries (those which enjoy a trade surplus) and "sunset" sectors (those currently experiencing trade deficits); 3) investment policies to increase the ben-
efts of foreign direct investment in the United States (including local content regulations).

Macroeconomic stability, public investment, and even targeted demand enhancements will not be sufficient to restore the competitiveness of many domestic industries. Exporting industries face a host of anti-competitive behaviors and practices which restrict access to foreign markets and create advantages for producers in these countries. Import-competing industries have also been scarred by the period of sustained dollar over-valuation which occurred in the early- and mid-1980s and by more than a decade of what at best may be viewed as benign neglect. Competitiveness is also influenced by a host of structural problems which are the result of domestic factors such as the small number of firms which have dominated U.S. auto production in the post-war era.

Sector specific studies which have been published by the Economic Policy Institute, the Berkeley Roundtable on International Economy, and the Institute for International Economics suggest that sector specific trade and industrial policies, when required, must be designed to address the particular needs and problems of that industry in order to be effective. While the authors of these studies differ about the need for specific types of policies, there is general agreement that policies must be designed to address the specific problems caused by imperfect competition and other forms of “market failure” and by the unfair practices of foreign competitors. Trade and industrial policies often provide assistance by shielding participants from the winds of competition, providing an umbrella under which prices can be raised and output decreased. In these cases incentives must be created which encourage firms to use such protection to expand output, increase efficiency, and improve quality while minimizing price increases. The precise nature of the incentives required depends on the structure of the industry being helped. Commitments will generally be required from all who benefit from sectoral policies (e.g., firms, workers, and state and local governments).

Critics of industrial and trade policies are quick to point out that measures of the type outlined here represent extensive interference in the workings of the “private market.” It is important to acknowledge at the outset that a number of policies which interfere with the workings of the market distort the performance of the market in ways which make U.S. firms less competitive. For example, U.S. imports of autos from Japan have been restrained since 1981, resulting in substantial increases in auto prices in the United States. However, the market share of U.S. producers has continued to decline and the United Auto Workers
can improve national welfare when it increases the national share of such high-wage jobs, relative to total international employment in such jobs. Furthermore, despite all the attention which services-sector trade has received in the popular press, the great majority of all non-financial trade flows involve goods trade—agricultural products, natural resources, and above all, manufactured goods.

Because manufacturers dominate our trade flows, the decline in the U.S. trade balance has caused a reduction in U.S. manufacturing industry employment. The loss of good manufacturing jobs is an important cause of the decline in real wages and the stagnation in U.S. living standards experienced in the 1980s. Manufacturing and other forms of goods production have also declined in other developed countries, but not as rapidly as in the United States, which has the smallest industrial sector of any major developed country. In 1990, only twenty-six percent of the U.S. workforce was employed in goods production (including mining, construction, and manufacturing), versus forty percent in Germany, thirty-four percent in Japan, thirty percent in France and twenty-nine percent in the U.K.

Productivity Growth Trends

The United States has experienced a sustained decline in its rate of overall productivity growth from a long-run average of about two percent per year (and a post-war surge of three percent per year between 1946 and 1973) to a miserable one percent per year. The decline in industrial employment contributes to the productivity slowdown in two ways. First, the substitution of low-wage service jobs for high-wage industrial jobs lowers average output per worker. Second, productivity growth rates are typically highest in the manufacturing sectors, where capital/labor substitution and learning curve possibilities are greater than in other sectors. The decline in manufacturing’s employment share reduces the impact of manufacturing sector productivity growth on average output per worker throughout the economy simply because its weight in total output has become smaller.

Service Sector Employment Shares

Service jobs provide last-resort employment for those unable to find jobs in goods producing sectors. Some service-sector jobs do pay high wages, particularly in professional business services (e.g., law, accounting, and computer programming). However, the manufacturing sector is one of the most important customers for high-wage business services, and hence the “good” service sector jobs remain tied to manufacturing competitiveness.

The service sector in the United States is much larger than in other industrialized countries. Furthermore, the rate of growth in service sector employment has been higher in the United States than in some other countries (especially Japan) in the 1970s and 1980s. The huge size of the U.S. service sector is not the result of a “natural” shift out of declining manufacturing industries. It is a direct consequence of the deteriorating trade performance of U.S. manufacturing. Because most service jobs pay very low wages, the rapid growth in this sector’s share of U.S. employment has had a severely depressing effect on U.S. wage and income levels.

Overall Wage Levels

The internationalization of the domestic economy has depressed wage levels in several ways, in addition to the direct loss of high-wage manufacturing and business service jobs discussed above. The elimination of those jobs has increased the supply of semi- and unskilled workers in the economy, relative to demand, with a depressing effect on U.S. wages. Foreign Direct Investment (“FDI”) by U.S. firms also puts domestic workers into competition with workers with similar skill levels in other countries. For example, U.S. firms began to use the threat of moving manufacturing plants to the Maquiladora region to extract wage concessions from their workers in the 1980s. In addition, low-cost imports put domestic workers into indirect competition with foreign labor in many industries, resulting in stagnant or declining real wages in these sectors as well. Thus trade influences a much broader share of the economy than the twelve or thirteen percent of gross domestic product (“GDP”) which directly involves imports or exports.

Edward Leamer has estimated that the completion of the proposed North American Free Trade Agreement will be directly responsible for an additional decline of $1,000 per year in wage incomes for low skilled workers in the United States. Between 1979 and 1989 the real wages of the poorest twenty percent of all Americans declined by more than one quarter of one percent per year, while those of the top twenty percent increased by more than one percent per year and the top five percent of all workers saw their incomes grow by more than 1.5 percent per year. A substantial share of the decline in the real wages of the poorest segment of the population is directly related to the increased internationalization of the U.S. economy during this period.

Despite all the problems described above, trade grew about twice as fast as real output, worldwide, in the 1970s and 1980s. Foreign direct investment exploded,
The United States must first create a climate in which productivity-enhancing investments can yield positive returns.

Growing about 3.5 times as fast as real world GDP. Furthermore, trade is increasingly driven by the search to exploit imperfections in the structure of markets, factors which can generate enormous profits for both firms and for the societies in which they prosper. As a result, much of the expansion in trade has involved what is known as intra-industry trade, in which one country both imports and exports similar types of products in the same industry.

Conditions of trade when markets are imperfectly competitive have been the subject of a decade of intensive research in what has come to be known as the new trade theory. This new approach has focused on the study of many different types of market imperfections, including: (a) scale economies, which can leave room for only a few firms in the global industry (such as aircraft production), and which may reflect large fixed costs for research and development as well as traditional scale factors; (b) learning curves, which result in substantial, sustained cost reductions as output expands (common in the production of electronic products such as transistors, computer chips, and photovoltaic cells); (c) knowledge spillovers, common in high-technology industries such as biotechnology (green revolution plant varieties), computers and machine tools, which result in benefits going to the consumers of new products, as well as producers; (d) high risks in producing and marketing new products combined with barriers small firms face in obtaining access to capital markets, which can limit investments in pharmaceuticals and other biotechnology fields.

Governments in many other countries have developed a broad range of trade and industrial policies which take advantage of the new opportunities created by these types of market imperfections. The United States has remained a largely passive bystander in this intense competition for what has come to be know as "created comparative advantage." The decline in the manufacturing sector is testimony to the wisdom of the U.S. policy of benign neglect.

In order for trade and industrial policies to have any hope of succeeding, the United States must first create a climate in which productivity-enhancing investments (both public and private) can yield positive returns. Before tackling complex, industry-specific trade and industry policy problems and opportunities, it will be necessary to put into effect a series of facilitating policies referred to previously. These facilitating policies will be briefly discussed before turning to an examination of the kinds of trade and industrial policies which have been used and a discussion of policies which should be developed in the future for four large, established U.S. manufacturing industries.

THE FIRST STEPS

Macroeconomic stability, public investment, and targeted demand enhancements are necessary to increase the share of manufactured goods in total output and to reduce or eliminate our trade deficit. Such policies can stimulate the competitiveness of U.S. industries and provide the foundation for sustained increases in the rates of growth of long-term productivity levels and real wages. These policies are needed to create the economic and social environments in which sector-specific trade and industrial policies can contribute significantly to productivity and wage growth.

Macroeconomic Stability

Full employment, stable prices and interest rates, and limited federal borrowing are goals which every administration would subscribe to. The way in which we seek to achieve these goals, and the priorities set among them, will have huge effects on the competitiveness of U.S. manufacturers. Of particular concern is the relationship between trade and budget deficits. There is an accounting relationship between the trade and budget deficits which has resulted in the development of a "twin deficits" literature. By definition, the trade deficit is equal to the difference between national saving and domestic investment. The federal government's budget deficit is a use of national savings, and therefore an increase in the federal deficit will, holding everything else constant, result in an increase in the trade deficit. However, in the real world changes in the federal budget deficit usually affect other components of national savings and domestic investment, as well as the trade account. More to the point, Robert A. Blecker points out that government policies to improve competitiveness can simultaneously lead to an improvement in the trade balance and an increase in national savings. Direct deficit reduction measures (such as a reduction in infrastructure spending) may have perverse effects on both the trade balance and the federal budget deficit if they reduce our
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competitiveness. Blecker argues that measures to attain full employment should have first priority, along with measures to improve our international competitiveness. The former should include efforts to coordinate macroeconomic policies with other developed countries (to increase global demand for all products). Competitiveness policies must be developed to address structural trade deficits with countries such as Japan, China, and Taiwan. Import surcharges and, especially in the case of Japan, other market opening policies should be used to improve the U.S. trade balance with these chronic surplus countries. 13

Public Investment

Investments in education and training can be used as industrial policy tools. There is an extensive body of experience with training programs in other countries, and in state and local governments, which provides a number of important lessons for human capital development. 14 Such programs, which should target disadvantaged groups, should also create incentives for both individual firms and consortiums of firms, unions, and schools to engage in a wide variety of locally controlled training activities. Firms should be required to support these activities with a tax which is graduated to reflect the fact that small firms have difficulty retaining the benefits of training their workers because of their higher turnover rates. This should be a payroll tax of the pay—or—play variety, with firms receiving tax credits for training expenditures. Apprenticeship programs, while important, will probably have to be accompanied by other education and youth employment initiatives in order to be successful. Increases in wage levels, especially at the lower end of the wage spectrum would provide important incentives for firms to upgrade the skill and productivity levels of their employees and would discourage firms from following a low—wage path to improved competitiveness.

Public infrastructure investments can be of both a general form (highways, airports) and an industry or region specific nature. The latter necessarily involves some type of targeting. Paul Geroski has argued that groups of closely related firms concentrated in particular locations can benefit from external economies and from a dynamic competitive environment. 15 Such agglomeration economies can be fostered by public investments in specialized education, transportation, and distribution systems.

Targeted Demand Enhancements

The slowdown in rates of growth of output per worker in the developed countries, which began in the 1970s and 1980s may worsen in the 1990s. 16 It is very difficult to achieve high levels of productivity growth in the absence of sustained increases in demand. Problems caused by the overall slowdown in growth have been compounded by a shift in the production of manufactured goods to Japan and some developing countries, particularly those in East and Southeast Asia, during this period.

Demand for U.S. products can be increased using public procurement, trade, and investment policies, as suggested above. Public procurement of socially desirable projects such as sewage treatment facilities, low—income housing and urban renewal packages, and inter— and intra—city mass transit can reduce unemployment and create demand for a stream of high—technology industrial products. Demand for these products can also be stimulated by substantial increases in energy and pollution taxes. Increased public investment, if financed through such new revenue measures, could offset the contractionary effects of reduced defense spending in the domestic economy. However, infrastructure spending would have a larger “multiplier” effect on output than defense spending because a larger share of such expenditures would be retained in the domestic economy (as opposed, for example, to military payrolls and expenditures for maintaining foreign bases which have a higher tendency to generate demand for imported goods and services).

Trade policies can be used both to open foreign markets to sunrise industries and to decrease the import share of sunset sectors. Market opening measures are trade—expanding and efforts to protect domestic markets are trade—contracting. Economists who utilize the theory of trade in perfectly competitive markets and empirical studies based on these assumptions claim that trade expanding measures will always enhance global income and consumer welfare. This point of view fails to account for important, trade distorting market failures which are responsible for the growth of intra—industry trade, and it also ignores adjustment costs caused by trade expansion. There are at least two general arguments for protecting domestic markets. First, such policies are needed to reverse the huge
flood of imports which entered U.S. markets in the 1980s as a result of flawed macroeconomic policies and the opportunistic strategies of foreign firms and governments. The second argument assumes that large domestic industries are going to obtain protection if they have been injured by imports (by exercising their rights under U.S. trade laws) and asserts that new trade policies will be less restrictive than the policies which will result from enforcement of those statutes (for example, the anti-dumping and countervailing duty (“CVD”) cases involving the steel and auto industries). Anti-dumping tariffs and CVDs can be highly disruptive to trade patterns, because they can completely eliminate imports from some producers and cause our trading partners to pursue retaliatory actions.17

Trade restraints should be used to provide assistance to domestic industries which can demonstrate that they have been injured by imports. Domestic firms have become more aggressive and more effective in their use of the anti-dumping and countervailing duty laws in the United States in the past two decades.18 Recent administrations have tended to settle big cases (e.g. autos and steel) by negotiating voluntary restraint agreements with exporters. Substantial tariffs have been applied in a number of smaller cases and were imposed on a large class of steel imports in mid-1993.19

Several general principles should be applied in developing new import adjustment policies. First, the United States should greatly reduce reliance on anti-dumping and countervailing duty law, in favor of more general import assistance under the escape clause of U.S. trade law (which is referred to as a safeguard measure in the General Agreement on Trade and Tariffs). This assistance should generally take the form of a tariff, or better yet a global auction quota in which the rights to import goods into the United States are sold to the highest bidders.20 An auction quota would prevent import surges, which tend to occur during recessions. Second, in order to accomplish this objective, the standard by which injury is defined in escape clause cases should be relaxed. Current standards require that imports be at least as important as any other source of injury before assistance can be provided.21 This standard should be converted to a threshold criteria, which defines a minimum level of import injury in terms of output or revenues (e.g., a five percent threshold), and which uses foreign market share (as opposed to changes in sales volume) to evaluate the effects of imports on domestic producers. Finally, countries should no longer be required to provide compensation to countries injured by escape clause protection (in the form of reduced barriers to other exports from the injured country), as required by the current GATT code.

The compensation provision makes countries reluctant to provide escape clause relief and makes it impossible to use such policies to increase the overall competitiveness of domestic industries, as suggested here. Specific trade policy proposals for several sunset industries and their relationships to industrial policies are considered below.

**Investment Policies** can be used to increase the domestic share, or local content, of goods produced in U.S. manufacturing facilities which are owned by foreign-based corporations (transplants).22 The U.S. trade deficit is increasingly driven by imports to feed transplants. Three-fourths of the U.S. trade deficit with Japan is composed of automobiles and auto parts.23 The Japanese share of the U.S. market (including vehicles made by Japanese firms and sold under U.S. nameplates) increased from twenty-four percent of U.S. vehicle sales in 1984 to thirty-seven percent in 1990. However, Japanese exporters recently reduced their quota for auto exports to the United States to 1.65 million cars, which is lower than the quota level applied in the early 1980s.24 Transplant production is primarily responsible for the growth in the Japanese share of the U.S. market in the 1980s, and substantial increases in the auto trade deficit are the result of increased parts imports to supply these plants.

Governments in Canada, Europe, and Japan are much more aggressive than the U.S. government in developing policies to encourage greater local returns from foreign direct investment. In Europe, informal negotiations generally take place at the plant or firm level. Thus, for example, Toyota has agreed to achieve ninety per cent local content by August, 1995.25 Investment policies should be developed to increase the local content levels of transplants operating in the United States.

**INDUSTRIAL AND TRADE POLICIES TO INCREASE COMPETITIVENESS**

Demand enhancement policies often support and/
or protect specific domestic industries. These policies should be coordinated with other measures designed to increase the competitiveness of the affected industries. They should address the particular market failures and structural problems which confront each sector, including foreign subsidies, non-tariff barriers, and other policies which limit access to foreign markets.

The need to develop such policies for sunrise sectors, especially those which use extensive amounts of R&D, has been well established by Laura D’Andrea Tyson and the Berkeley Roundtable on International Economics (“BRIE”) group. The tools and policy levers which can be employed in such industries as aircraft, semiconductors, and high-definition television, include R&D subsidies and training grants, anti-trust exemptions for research and production joint ventures, public procurement, and trade policies designed to promote the opening of foreign markets. The latter have included bilateral, sector specific deals in aircraft and semiconductors. The “Super 301” section of the Omnibus Trade and Competitiveness Act of 1988, which targets “unjustifiable and unreasonable” trade practices which impede U.S. exports, has been used to expand markets for cellular telephones and supercomputers.

This section will review the history of trade and industrial policies and will recommend new policies for four sunset sectors: motor vehicles, steel, textiles and apparel. In the case of the auto industry, protection was provided without requirements to make any competitiveness enhancing commitments in return. In the case of the steel industry, trade policies were combined with measures requiring that the industry reinvest its cash flow in worker retraining and capital improvements. The textile and apparel industries have been protected since the 1950s by a combination of gradually expanding quotas and tariffs. The quotas were increased rapidly in the 1980s and few steps were taken to improve the competitiveness of domestic producers.

The U.S. auto industry was the first major domestic sector to receive trade protection in the 1980s. No other facilitating industrial policies were employed. As a result, the competitiveness of the industry continued to decline and the survival of GM, the largest firm, in its present form is still in doubt. Trade and industrial policies helped the steel industry recover in the 1980s, but future trade policies may destabilize the world industry in the 1990s. The textile and apparel industries have experienced the largest declines in output and employment among this group, yet the textile industry is still highly competitive on world markets. An array of industrial policies are available which could help the apparel industry increase its competitiveness, but these have yet to be applied on a large scale.

These case studies will illustrate a basic principal from microeconomic theory: that there should be a close relationship between policy tools and sources of market failures. Problems fundamentally domestic in nature (for example, those related to excess concentration) should be addressed with domestic industrial policies. Those which are rooted in international exchange (for example, dumping and public subsidies) should be addressed with trade policies. These studies will also provide support for recent theoretical results which demonstrate that pursuing trade or industrial policies alone can reduce industry welfare whereas an appropriate combination of both types of policies could improve it.

The Japanese Auto Export Restraints

The U.S. auto industry is struggling under a set of problems both cyclical and long-term in nature. The recession made 1991 the worst year on record for the domestic auto industry, which lost $7.5 billion while total domestic car and truck sales fell to 12.4 million units, down 11.2 percent from the 1990 total of about fourteen million. The industry also has a continuing competitive problem with Japanese auto producers, who increased their total share of the U.S. auto market by thirteen percentage points between 1984 and 1990. This occurred despite the fact that Japanese auto exports to the United States have been limited by a Voluntary Restraint Agreement (“VRA”) since 1981. GM, in particular, has endured a prolonged decline with its share of the total market falling from about forty-five percent in the early 1980s to less than thirty-five percent today, including a one year decline of almost five points between 1986 and 1987.

In 1992 total U.S. auto sales were up about three percent. Ford and Chrysler have captured their market share from the Japanese and both have seen sales increase by about eleven percent. GM continued to struggle. Its total sales increased by only 2.3 percent over the disastrous levels of 1991, and its market share continues to sink. The problems of the U.S. auto industry are now synonymous with the question of what should be done with General Motors.

The U.S. auto industry has two basic structural problems: The first is inadequate competition, which is the result of scale economies in production, new product development and marketing, and a history of lax anti-trust enforcement. The second is GM’s particular inability to undertake the reforms necessary to become competitive. These structural problems have had a number of distinct
effects on the competitiveness of U.S. auto producers. In the late 1970s, U.S. firms fell behind Japanese producers both in terms of production costs and vehicle quality in the small car segments. These problems were compounded when gasoline prices nearly doubled between 1979 and 1981. Demand for small cars jumped sharply and the Japanese share of the U.S. auto market jumped seven percentage points between 1979 and 1980.30 These problems led to the negotiation in 1981 of the VRAs restricting Japanese auto exports to the United States.

It is interesting to note that in 1980 and 1981, prior to the completion of the VRA negotiations, some U.S. auto producers and leaders of the United Auto Workers recommended that price and wage restraints be required as a quid pro quo in return for protection. This type of measure would have helped the industry resist the temptation to raise prices under the umbrella of protection. This request for assistance was denied by the Reagan Administration.31

Effects of Protection
The VRAs resulted in substantially higher prices of both imported and domestic vehicles and some increases in domestic small car output. The effects differed significantly across firms. The VRAs caused the prices of small cars sold by all U.S. makers to increase by eleven to thirteen percent. Only GM increased prices across all sizes of vehicles. Ford and Chrysler had either no change or decreases in the prices of their larger cars as a result of the VRAs in this period. Total vehicle sales of the Big Three increased by about six percent following the VRAs, but again the results differed sharply among the firms. Ford and Chrysler were able to increase their sales of small cars by twenty-four to twenty-nine percent, but no significant output effect was observed at GM.32 These firm-specific differences help explain the decline in GM's market share noted above.

The VRAs also created incentives for Japanese firms to build vehicles in the United States in order to get around the VRAs. In 1992 Japanese firms assembled approximately 1,800,000 vehicles in the United States and Canada (including joint venture facilities with U.S. auto producers). These facilities did create some jobs in the industry. But because they resulted in a tremendous increase in auto parts imports to supply these facilities and because most of their production was used to capture market share from U.S.-based auto makers, their net effect was to displace substantial numbers of workers and substantially worsen the trade deficit.33

Policy Proposals
The VRAs primarily resulted in higher prices and profits for domestic producers. GM, in particular, was more likely to raise prices and less inclined to expand output in response to reduced import competition. The industry earned very large profits in the mid-1980s as a result of the VRA–induced price increases discussed above, which it used, in part, to diversify. GM purchased EDS and Hughes Aerospace, Ford invested in a savings bank and a leasing company, and Chrysler bought four money-losing auto rental companies and Gulfstream Aerospace. Most of these investments were unsuccessful,34 and the industry squandered the opportunities it had to regain market share from the Japanese in the 1980s because of its failure to use VRAs to increase output. As a result, most recent proposals to increase protection for the auto industry have also included performance requirements for the industry.

Senator Max Baucus proposed a bill in 1992 which would have provided increased protection for domestic producers. In exchange for that protection the industry would have been required to demonstrate improvements in quality levels and customer satisfaction, using the standards developed for the Baldrige Quality Awards. In addition, his bill would have imposed limits on executive compensation and encouraged worker training and joint research and development. The problem is that these requirements alone fail to address the industry's structural problems, reflected in its tendency to raise prices rather than output, and in the management problems which have plagued the industry, and GM in particular, in the 1970s and 1980s.

Washington industrial policy advocates have combined an emphasis on opening foreign markets with proposals providing subsidies to domestic producers. These include a training tax credit (Pat Choate, Manufacturing Policy Center), tax credits for buying new cars and low interest loans for joint industry R&D (Kevin Kearns, formerly of the Economic Strategy Institute), and health insurance cost pooling with Japanese transplant operations.
to take away part of the advantage they gain from having a young, newly hired work force (David Hirschland, UAW Social Security Department). While these measures may improve the bottom lines of domestic producers, they will not address the industry's basic structural problems.\textsuperscript{35}

Industrial and managed trade policies should address the U.S. auto industry's two central obstacles. In order to provide resources for the industry to rebuild, it will be necessary to impose additional restrictions on U.S. auto imports in the future. The best mechanism to achieve this goal would be an auction quota or tariff, to minimize net losses to the United States associated with the transfer of quota rents to foreign producers. In addition to trade restriction, some form of price restraint (possibly including a roll-back mechanism) should be required to limit rent-seeking behavior in this industry.

One of the most interesting ideas for a price restraint mechanism is a quantity incentive. Each firm would be given a market share incentive, based on its historical performance patterns. It would be taxed if it failed to meet the incentive level, and would receive tax rebates if it exceeded the target level. The rebates could be financed with revenues from the auction quota or tariff. Each firm could then set prices and quality levels as it saw fit, to achieve its target market share. Penalties could be set at levels such that firm profits would be higher with trade restrictions and the penalties than without either, so that firms would enter into such agreements voluntarily. This would protect the United States' interest in increasing domestic auto output levels, increasing employment in the auto industry and related supplier sectors and improving the U.S. trade deficit with Japan.

The United States needs a more competitive auto industry. The Japanese industry consists of eight highly competitive firms. There are only three firms in the United States, not enough to ensure competitive behavior in this industry, in part because of its extensive product differentiation. Left to their own devices, U.S. auto producers will experience continuing market share erosion and are likely to squander their capital in futile efforts to diversify, as they did in the 1980s. Competition in the industry can be enhanced through the judicious use of local content legislation, which would raise the labor content of Japanese cars assembled here and create more opportunities for domestic parts producers to share in the benefits of working with Japanese assemblers. Local content regulations could increase the effective number of integrated auto producers in the United States.

With respect to the particular problems facing GM, the first step is to divest many of its parts-making subsidiaries to take advantage of the efficiencies available in a less centralized system of management and control. Market forces have not brought about the necessary changes in GM's structure (through, for example, a leveraged buyout). It may be ultimately desirable to split GM into two or more final auto assembly companies to increase competition in the domestic market and to further streamline management of its constituent parts.

\textit{Trade and Industrial Policies for the U.S. Steel Industry}

The steel industry is characterized by a number of market imperfections, involving both structure and conduct at the firm level. Firm behavior in the United States, Japan, and Europe is also shaped by a number of government regulatory and industrial policies which combine to produce distinct regulatory regimes in each region. Interaction between market forces and regulatory regimes have tended to destabilize the industry during periods of weak product demand, which have become increasingly frequent and severe in the past twenty years.

\textit{Market Imperfections}

The steel market diverges from the model of the perfectly competitive industry in at least five significant ways, three of which result from structural market failures and two of which result from government behavior. The existence of significant scale economies in basic steel production is the fundamental determinant of market structure. These economies, combined with a relatively low level of product demand and high transportation costs, provided substantial barriers to entry to domestic steel markets during the first half of the twentieth century. Growth in the size of product markets, reductions in transportation costs, the development of a competitive fringe of "mini-mill" producers and the growth of competitive exports from third world countries eroded the market power of basic steel producers in the triad countries beginning in the 1960s. The ability of large firms to dominate product markets and earn above-normal returns was eroded in the 1970s and 1980s. However, the industry is still characterized by large fixed costs, which have resulted in periods of intense price competition when product demand is weak. This competition is rooted in international trade patterns.

The structural problems of the steel industry were compounded in the 1970s and 1980s by a sharp shift in steel consumption patterns. World steel output nearly doubled between 1960 and 1975, but increased only twenty percent between 1975 and 1990. After 1975 the growth of steel demand was constrained by technological factors includ-
Dumping is both illegal and a potential market failure. Price dumping, in both domestic and foreign markets, of substantial excess capacity has frequently resulted in a substantial percentage of output in the mid-1970s and early 1980s.

The combination of high fixed costs with periods of substantial excess capacity has frequently resulted in price dumping, in both domestic and foreign markets. Dumping is both illegal and a potential market failure. Legally, dumping is defined as selling below cost in a foreign market. Selling below cost is anti-competitive, in an economic sense, when it is the result of predatory behavior which is designed to reduce competition in either the domestic or foreign market. Prior to the mid-1960s the U.S. steel industry was able to exercise price restraint during periods of reduced demand. However, the growth of competition from imports and mini-mills has resulted in increased price competition, especially during periods of slack demand, since the 1970s. Allegations of dumping in international trade have become increasingly common during this period. Government policy in such cases is discussed below.

A third market imperfection is the existence of substantial wage premiums or rents for workers in this industry. These rents reflect the fact that steel workers earn wages higher than those available in alternative jobs. The existence of such rents can justify trade intervention at the national level.

**Government Intervention**

European and Japanese governments have intervened frequently in the steel market, for a variety of reasons and with some success. Governments in Europe have heavily subsidized steel production for many years. For example, between 1980 and 1985 the European Community provided more than $35 billion in subsidies to their steel producers. Steel producers in Japan and Europe have also been allowed to establish formal and informal cartels which restrain output during periods of excess demand and prevent price dumping in their home markets. As a result, steel prices in Japan remained fifteen percent higher than those in the United States in 1992. Industry-wide profits in Japan totaled $2 billion in 1991, as compared to a net income of -$2.1 billion in the U.S. steel industry.

The combination of subsidies and home market cartelization has allowed European and Japanese steel producers to engage in aggressive price discounting in the United States during periods of reduced demand. U.S. firms have responded to these price wars with periodic waves of legal complaints under U.S. trade laws which prohibit dumping and subsidized imports. Each time the industry filed a major set of dumping and countervailing duty (CVD or anti-subsidy) complaints in the 1970s and 1980s these cases were settled by the administration through a negotiated agreement in which foreign producers agreed to “voluntarily” restrict exports to the U.S. market or to maintain a price floor in this market.

The U.S. steel industry was protected by another set of VRAs between 1982 and 1992. In June 1992, after the Steel VRAs expired, U.S. producers filed a series of dumping and CVD complaints with the U.S. government for a number of the most important, flat-rolled steel products. Preliminary dumping margins ranging between 0.3 percent and 109 percent for individual producers were announced by the U.S. Department of Commerce in January, which had earlier announced substantial (additional) CVD margins.

**De-Stabilizing Regulatory Regime**

The combination of imperfections in the steel market and the disparate industrial and trade policies pursued in each region of the triad have served to de-stabilize steel markets during periods of reduced demand. Producers in all three markets tend to prey on each other’s markets during such periods. The import share of the U.S. steel market rose from 15.4 percent of apparent consumption in 1990 to 16.2 percent in 1991. However, U.S. exports also expanded by forty-seven percent in the same period. As a result of the growth in low priced imports, U.S. firms filed the unfair trade complaints described above in 1992. Producers in Canada and Mexico then filed unfair trade complaints against U.S. exporters to their home markets. The existence of high fixed costs and the tendency of firms in this industry to price-cut during downturns creates conditions in which unfair trade complaints are likely to succeed even if dumping does not reflect predatory intent.

Reliance on trade remedies to settle dumping and CVD complaints is likely to cause further disruptions to international steel trade. The imposition of new duties will sharply restrict steel imports. New duties are also likely to trigger responses from governments in other countries, including Mexico, Canada, and other producers in the E.C. and Japan, which could depress U.S. steel exports. Aggressive enforcement of trade remedy laws does not address the fundamental causes of instability in the global steel market.

During the 1980s, the VRAs provided the domestic steel industry with a breathing space which allowed them to catch up to and surpass a number of foreign producers in terms of cost-efficiency. Output per worker increased by 4.8 percent per year between 1984 and 1990.
as compared with 0.5 percent between 1973 and 1983. The average real price of steel declined during the VRAs, and by the end of the period, U.S. steel production costs were lower than those in most other triad countries.\textsuperscript{44}

The VRAs contributed to productivity improvements in the domestic steel sector in at least two ways. First, the VRAs guaranteed a modicum of market stability and import protection, improving the firms' financial positions. Second, legislation which authorized the VRAs in the U.S. Congress also required the steel firms to reinvest their increased earnings in the industry. In addition, domestic producers developed a number of joint venture projects in combination with foreign steel producers during the 1980s.

\textbf{Policy Proposals}

A small tariff, or an auction quota, would have provided protection equivalent to that provided by the VRAs for the domestic steel industry in the 1980s. An auction quota would have had the additional advantage of preventing import surges during periods of reduced demand, which in turn could have prevented the conditions resulting in the filing of dumping and CVD petitions in 1992.

European and Japanese steel producers would prefer to negotiate a new VRA with the administration, as a settlement to the current trade cases. The Clinton Administration does not seem inclined to accept these proposals. Given the likelihood of foreign retaliation and the development of a steel trade war, it may be prudent to consider other policy alternatives. The Japanese recession cartel model, which allows domestic producers to collaborate so as to avoid price wars when demand declines, provides a highly desirable stabilizing effect. A cartel can be designed as an industrial policy measure which addresses the domestic market failures associated with capital intensive production and global excess capacity. A recession cartel also provides a forum for allocating capacity reductions across all market participants, encouraging orderly market adjustment.

U.S. industrial adjustment would be facilitated by new import restraints. It would also be important to create incentives for firms to restrain prices and continue to innovate and improve productivity in the steel industry. However, such incentives are less important in steel than in autos because the U.S. industry is more competitive than it was in the 1960s and 1970s, and because of the productivity gains made under the steel VRAs. Investment \textit{quid pro quos} implemented in the 1980s were a step in the right direction. Targeted taxes could be used to encourage large producers to achieve a market share target in each year.\textsuperscript{45} Firms could be required to pay a tax penalty for falling short of their target share and could receive a tax credit for exceeding their target. Properly calibrated, such a tax-based incentive program could offset the price-inflating consequences of the market-restricting measures discussed above.

An alternative approach would combine import restraints with direct subsidies to steel producers, following the European model. However, given the budget constraints facing the U.S. government, direct subsidy programs not offset by revenue generation measures are unlikely to be politically viable.

\textbf{The Multi-Fiber Arrangement: Trade and the Textiles and Apparel Industries}

The textile and apparel industries lost a combined total of over 420,000 jobs between 1980 and 1991, largely as a result of Reagan and Bush administration policies which increased apparel imports. Policies now being discussed will accelerate the decline of both these industries, with disastrous consequences for domestic firms and workers.

Textile and apparel have been the most consistently and heavily protected manufacturing sectors in the United States in the post–war era. Many analysts have suggested that the textile industry has improved its efficiency and competitiveness under this arrangement, while the apparel industry has not. While this perspective is accurate at one level, it ignores the symbiotic relationship which exists between these two industries. The U.S. textile industry is highly dependent on domestic apparel manufacturers as a source of demand for its products. During the period of protection, the textile industry invested in new, capital intensive modes of production, primarily in the synthetic–fiber based markets. It became one of the world's
most competitive producers of such products and by 1980 the United States had become a net exporter of textiles. Textile productivity growth has been substantially above the average for all manufacturing industries and as a result consumers have realized substantial benefits in the form of lower prices. Employment shrank in the 1970s at a rate of 1.2 percent per year, despite the fact that real output was growing.

Productivity growth in apparel, on the other hand, has lagged behind the manufacturing average for several decades. Manufacturers remained competitive by putting downward pressure on real wages. The growth of apparel imports was limited in the 1970s to an average of 8.8 percent per year (in real value terms) by the Multi-Fiber Arrangement ("MFA"). The real value of U.S. apparel production increased by two percent per year. As a result, apparel employment fell by less than 0.3 percent per year in the 1970s. The growth of apparel output contributed to textile demand and helped to restrain employment losses in that sector. Most apparel exporting countries (e.g., the big four: China, Taiwan, Korea, and Hong Kong) also restrict textile imports, so that domestic apparel demand has been the foundation for the textile industry's recovery.\(^4\)

**Market Opening Initiatives**

In the 1980s, relaxed MFA enforcement, expanded quotas, the Caribbean Basin Initiative, and an overvalued dollar resulted in an increase in the growth of U.S. apparel imports to 10.8 percent per year in real value terms. As a result, textile and apparel output was constant between 1980 and 1990 and employment in both industries fell by about three percent per year. Displaced apparel and textile workers are frequently from minority groups and are often women living in rural areas or immigrants in large cities. Up to thirty percent of these workers will drop out of the labor force if they become unemployed, resulting in the permanent loss of their output and increased social costs. Policy proposals currently being discussed will substantially increase textile and apparel imports.

A proposal to phase out the MFA within ten years has been adopted in the "Chairman’s Text" in the Uruguay Round of trade negotiations. Elimination of the MFA would dramatically increase imports and job losses in these two industries, with disastrous consequences for many of the very low income workers which they employ.

The dramatic growth of both legal and illegal imports from countries such as China and India are of major concern in the industry. China is accused of circumventing its MFA by shipping products to countries which are not significant exporters (and are hence exempt from the MFA) and re-labeling their products for re-shipment to the United States.

**Policy Proposal**

Two principles should guide the formation of trade and adjustment policies. First, we should recognize that trade adjustment is costly for firms and workers and adopt policies to minimize adjustment costs for the economy while achieving gains for consumers from increased trade liberalization. Second, we need to develop industrial assistance plans and policies which reflect the unique institutional characteristics and structural needs of each of these sectors.

Adjustment costs can be minimized in the textile and apparel industries by returning to the original MFA framework, which called for imports to grow by six percent per year. This limit was ignored in the 1980s and the proposed elimination of the MFA will generate a flood of new imports. From the current import base, six percent import growth will provide substantial market access for importers, with attendant benefits for consumers.

The MFA should be converted to a global auction quota in order to eliminate cheating problems and to increase U.S. government revenues. These new revenues could then be used to expand a program of trade adjustment assistance and create new manufacturing extension services for the apparel and textile industries, to compensate displaced workers, and to help create comparative advantage for U.S. firms.

**Industrial Assistance for the Apparel Industry**

There are a number of industrial policies which can help U.S. apparel producers move into higher value-added product lines and production niches in which they can be more competitive.\(^5\) The core model is the *Quick Response System* ("QR"). This system would displace the older "progressive-bundle" batch production modes in job oriented contractor shops with more flexible, product (as

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4. In the U.S. context, the Federal Reserve system, independent from the influence of partisan politics, may be a more appropriate model for an industrial policy agenda.
opposed to piece) oriented work patterns. These patterns are tied to the computerization and networking of the entire fiber–textile–apparel–retailing complex.

1. Market Matching Programs for Small and Medium Suppliers. There are scale economies involved in the marketing of apparel production services which tend to disadvantage small producers (who are more flexible and better suited to QR production). What the industry requires is the domestic equivalent of U.S. Department of Commerce programs for the Caribbean Basic Initiative, which links apparel buyers with contractors ready to supply capacity in the Caribbean, but not in the continental United States.

2. Promote the Formation of Cooperatives in Apparel Production. At low output levels there are economies of scale in the administration of apparel firms (e.g., payroll) and in the provision of engineering services. There are also economies of scope available to groups of firms in a common location. These concepts have been pioneered in Northern Italy, and have been cultivated in state–level economic development programs in the northeastern, southern and western United States. Such programs can be tied to the provision of low–cost space (for example, in incubators).

3. Industrial Extension Services. Governments can take advantage of externalities in the development and dissemination of technical knowledge among groups of small firms. These services, which are also being developed on an experimental basis at the state level, can provide design services, worker and management training programs, and can disseminate information about new design and production systems. This concept is based on the hugely successful model of the U.S. agricultural extension service.

4. Credit for Small– and Medium–sized Firms. Historically this industry has relied on non–bank “factors” for working capital. Not only is this more expensive than the traditional bank financing (unavailable, because few physical assets are available for securing loans), but it has become increasingly hard to find in the late 1980s as a result of the bank crises and resulting credit crunch. Revolving credit funds have been an important part of the package of support developed for Northern Italian apparel cooperatives.

5. Public Health Insurance. The high costs of health insurance have been well documented by industrial giants such as the Chrysler Corporation. However, the cost of employer provided insurance is higher in the apparel industry than in other manufacturing sectors because of its: 1) high labor intensity, making the per unit effect on product costs much higher in apparel than in a unit of similar cost made with less labor inputs; 2) low wages (since health care is more or less a fixed cost item, it causes a larger proportionate increase in production expenses in apparel than in a high wage sector such as autos). Proposals which require all employers to pay for health insurance will be disproportionately more expensive for apparel firms than for firms in high wage sectors such as motor vehicles, for both of these reasons. Publicly funded health insurance could eliminate this source of competitive disadvantage for U.S. apparel producers, vis–à–vis foreign producers.

Funding for some or all of these programs could be provided out of revenues from tariffs or from auction quota revenues on apparel imports, if the United States opts to tarifficate the MFAs. This approach is consistent with trade adjustment assistance statutes, which have focused on positive adjustment programs since at least 1974.

The textile industry can prosper with a healthy U.S. apparel industry. However, if the textile sector’s competitiveness is to be maintained, official pressure may be required to open export markets as we open our own apparel markets.

CONSTRUCTING A NEW POLICY REGIME

New industrial policies are constantly being developed in the United States. Most are implicit, generated as largely unintended by–products of existing laws and programs. They include trade policies resulting from antidumping and countervailing duty regulation (such as the VRAs in steel and autos and duties imposed in many other cases); public procurement programs; and restrictions on the export of high technology products.

The Clinton administration has proposed a new approach to industrial policy development which utilizes ad hoc national committees to address the needs of particular industries. The problems of the airline industry, and their connections to aircraft production, will be the first to be addressed using this approach. The national commission model, if it includes representatives of business and labor as well as the government, reflects a corporatist approach which is new for the United States. Corporatist policy development has been widely criticized because it assumes that each interest group accrues benefits for all its members, whereas industrial policy decisions in reality often involve picking winners and losers.48

A permanent executive branch agency with primary responsibility for industrial and trade policy development would possess several important advantages over the national commission model. First, it would provide some degree of insulation from the special interests of particular
industries, groups of workers, and state and local governments. Second, this agency would also develop the capacity to collect and evaluate data on the performance and competitiveness of a broad array of domestic industries. Access to accurate and timely data is essential to effective policy development and one of the most disturbing legacies of the Reagan/Bush era is that federal data collection systems were allowed to atrophy and have, in many cases, been eliminated. Finally, an industrial policy agency would also be responsible for coordinating policy across sectors, and for considering the impacts of policy in one sector on the competitiveness of others.

Close attention should be paid to the political and administrative status of any new industrial policy agency. The Japanese Ministry of International Trade and Industry is often cited as a model. However, it is important to recall that Japan is a parliamentary democracy with a strong, centralized federal government. Executive branch agencies in the United States have much less independence because they are imbedded in a weak, decentralized system of governance. In the U.S. context, the Federal Reserve system, independent from the influence of partisan politics, may be a more appropriate model for an industrial policy agency.

This review has demonstrated that trade adjustment assistance can work. The United States has one of the most competitive textile industries in the world, a direct result of more than three decades of protection under the MFA. The steel industry also made great progress while it was protected in the 1980s by a VRA. On the other hand, U.S. auto makers failed to increase their competitiveness under the VRAs because they were not allowed to develop an industry restructuring plan and a set of productivity enhancing quid pro quo commitments during the policy making process. The apparel industry has continued to decline, under the same protection provided to the textile sector, because the particular market failures and structural problems common to this industry have not been addressed with appropriate industrial policies.

The principles which could be used to guide the development of effective trade and industrial policy programs for the United States are well known. The constraints are largely political. Ideological opposition to an activist role for government is stronger in the United States than in any other large, developed economy and is a major impediment to development of new policy institutions. However, there are a large number of interest groups which could be mobilized to support new governmental capacity to develop effective trade and industrial policies. Leadership is the key missing ingredient. ¶

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NOTES


5 Paul R. Krugman states that “[i]t might, incidentally, also be a good thing if undergrads got a more realistic quantitative sense than the pop internationalists seem to have of the limited extent to which the United States has become a part of a global economy. The fact is that imports and exports are still only about one-eighth of output, and at least two-thirds of our value-added consists of non tradable goods and services.” Paul R. Krugman, What Do Undergrads Need to Know About Trade, Amer. Econ. Rev. Papers & Proceedings 23, 24 (1993).


12 This relationship holds because a trade deficit (or, to be more precise, a current account deficit) must be matched by an equal and opposite capital inflow in order for national accounts to balance. For a discussion of the relationship between the trade and budget surplus or deficit, see Robert A. Blecker, Beyond the Twin Deficits: A Trade Strategy for the 1990s 18-22 (1992).

13 Id. at 3-4, 129-32.


16 For a comparison of growth rates in GDP per worker for the U.S., Canada, Japan, and four E.C. countries between 1951 and 1987, see Barry P. Bosworth & Robert Z. Lawrence, America in the World Economy, 7 Brookings Rev. 44 (Winter 1989).

17 For example, an E.C. trade official has claimed that antidumping duties from the 1993 flat-rolled steel cases “would basically exclude many E.C. producers from the U.S. market.” See Canada, E.C., Brazil, Japan React Strongly to ITA Preliminary Steel Dumping Findings, INT’L TRADE REP. (BNA), at 176-77 (Feb. 3, 1993). Canadian and Mexican producers responded to the filing of antidumping petitions in these cases by initiating complaints with their own governments against steel exports from the United States. See Not Cast in Iron, Economist, Dec. 1992, at 72.

18 For a review of recent trade cases, see I.M. Destler, American Trade Politics 119-20 (1992).


20 For a review of the arguments for and against auction quotas, see C. Fred Bergsten, Kimberly Ann Elliot, Jeffrey J. Schott & Wendy E. Takacs, Auction Quotas and United States Trade Policy 147-69 (1986).

21 Section 201 of the Trade Act of 1974 requires that imports be a “substantial cause of serious injury, or the threat thereof,” with substantial defined as “not less than any other cause.” Destler, supra note 18, at 20.

22 See Robin Gaster, Protectionism with a Purpose: Guiding Foreign Investment, 88 Foreign Pol’y 91-106 (1992).


24 See Scott, supra note 3; Stokes, supra note 4.

25 Gaster, supra note 22, at 99.

26 See Tyson, supra note 2; Borus & Hart, supra note 2.

27 Tyson, supra note 2, at 109-19, 202-07.

28 See Destler, supra note 18, at 95, 132; Tyson, supra note 2, at 67-71, 76-82.


31 Id. at 49, 50.

32 The estimates in this paragraph are based on results in Scott, supra note 3, at 25. The prices and output levels of U.S. auto producers were also influenced by the U.S. Corporate Average Fuel Economy standards during the early and mid-1980s.


35 For a discussion of these policy proposals, see Stokes, supra note 4, at 797-98.


37 See Dickens & Lang, Industry Wage Differentials, supra note 7; Katz & Summers, supra note 7.

38 Thomas R. Howell et al., Steel and the State: Government Intervention and Steel’s Structural Crisis 107 (1988).


40 For the history of U.S. trade policy for the steel industry, including the settlements of steel dumping and countervailing duty cases, see Destler, supra note 18.


42 Figures are author’s calculations based on data from American Iron and Steel Institute, supra note 39. Spreadsheet available upon request.

44 BLECKER, supra note 2.

45 Under this scheme some or all mini-mills would be exempt from the market share incentive system. According to Christoph Scherrer, input supply constraints and productivity improvements in the integrated mill sector, combined with the difficulty of moving up-scale into higher value-added products, will limit the growth of the mini-mill sector in the future. Christoph Scherrer, *Mini-Mills: A New Growth Path for the U.S. Steel Industry?*, 22 J. Econ. Issues 1179 (1988).


47 The primary source for the policy recommendations discussed in the remainder of this section is RICHARD ROTHSTEIN, *Keeping Jobs in Fashion: Alternatives to Euthanasia of the U.S. Apparel Industry* 1 (Economic Policy Institute, 1989).