

**JAPANESE INDUSTRIAL POLICY:
AN ECONOMIC ASSESSMENT**

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EXECUTIVE SUMMARY

Industrial policy in Japan was not successful and was not responsible for the country's economic achievements in the post-war era or the international performance of leading sectors, including autos and electrical machinery. There is no evidence that industrial policies raised productivity growth among the more rapidly growing or technologically advanced parts of the Japanese economy between 1955 and 1990 when industrial policy was utilized in Japan, raising doubts that industrial policy would be effective today in other countries. The data show a disproportionate amount of government industrial policy efforts in Japan went to slow growth or declining industries unrelated to productivity gains in growing and advanced sectors, including autos and electrical machinery.

Overall, Japanese industrial policy did not succeed in producing economic results and was ultimately abandoned by the Japanese government. Japan discontinued industrial policy targeting, starting in the 1990's, due to a growing consensus that such policies were unsuccessful, pressure from the United States and growing budgetary pressures on the government from the 1990's onward as economic growth stagnated.

There is no evidence to support the claim that Japanese industrial policy during the 1955-1990 period enhanced growth rates by sector, industries with economies of scale (greater efficiency when produced in increased amounts), productivity growth or "competitiveness." The reality of the political process and government spending priorities makes it very difficult for such policies to be effective. Furthermore, even if political pressures had not intervened, it seems questionable to suggest that government policymakers would be better than actual market participants in determining the most efficient allocation of resources to produce the best economic outcomes.

Among the key findings of this research:

- The industries that we associate with Japan during the high growth period, electrical machinery (most of the "tech" sector), general machinery (most capital goods industries) and the transportation equipment sector (which includes autos) were generally toward the bottom in terms of government support between 1955 and 1990. What these and other sectors received in quantifiable public policy was largely unrelated to growth or productivity growth, and government policy acted as an impediment to the more rapidly growing sectors because such sectors had higher rates of effective taxation than the slow growers. This result arises from two facts: Actual resources are allocated according to the political preferences of lawmakers, and actual patterns of growth and productivity during the period were largely determined by market forces. That the policies might have affected the product mix and possibly harmed consumer welfare as a consequence

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is difficult to measure but quite likely. However, this was not the desired result of policymakers, and certainly not what is claimed by industrial policy supporters.

- Even during its zenith, industrial policy in Japan was not executed in a way that favored the rapidly growing sectors.
- The data show industrial policy tools were disproportionately allocated to the slower-growing industries. Governments in most countries provide some support to virtually every industry, rapid and slow growers alike. Slower-growing industries are likely to be more active in securing government funds, and some of the slow growers are likely to be situated in certain geographic regions, and politicians from those regions have an incentive to push for more government funding for those industries.
- While many advocates attributed rapid growth among the leading industries to Japanese industrial policy policies, the problem with such analyses is they ignore that both “winners” and “losers” were the beneficiaries of such policies. A breakdown of the government-sponsored benefits by industry is necessary to determine whether the “winners” actually benefitted disproportionately from such policies. Policies that benefit all industries cannot correctly be described as “industrial policy,” nor can the usual “pork-barrel” style policies that benefit the losers in politically sensitive regions or declining industries be described as industrial policies designed to promote high growth or high productivity sectors.
- To address the issue of the actual allocation of government policy by sector, we identified quantifiable policy measures undertaken by the Japanese government at the time and considered the relationship of these policy measures growth rates by sector. While various measures might be used by governments to promote some industrial sectors relative to others, the key (and quantifiable) measures of industrial policy used by the Japanese government during the 1955-1990 period included 1) subsidized government loans to industry, 2) subsidies, 3) tariff protection and 4) tax relief.
- The actual distribution of industrial policy tools was the outcome of the political process such that implementation in Japan was unfocused and arbitrary. The data show it was often the case that an industry might benefit disproportionately in terms of some measures but not others. Mining, for example, was the number one recipient of cheap loans, government subsidies and tax relief for the 1955-1990 period, undoubtedly because it was such a slow grower and employment in the sector was concentrated in particular geographic regions (where unemployment in the sector would have been politically problematic). However, it received the least amount of tariff protection. Japan is a resource-poor country, and high tariffs on mining products would have crippled other industries.

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- Other than the mining example, however, the distribution of these policy tools was arbitrary and inconsistent. Not at all what we would expect if the Japanese government had been dispassionately executing growth-oriented industrial policies. However, it is what one would expect if political pressure and political maneuvering actually determined the distribution of government policies toward industry. It should not be surprising that the allocation of industrial policy tools was the result of the political process and not purely in line with the policy prescriptions of the then Ministry of International Trade and Industry (MITI). Indeed, it seems highly unlikely that the actual allocation of industrial policy tools would have been apolitical, even though many advocates of industrial policy at the time argued the allocation was apolitical.
- There seems to be no evidence that Japanese policy was aimed at promoting industries exhibiting economies of scale. Industrial policy advocates of the 1970's through 1990's seldom, if ever, mentioned this or other policy goals. On the issue of promoting scale economies, the correlation coefficients between estimated scale parameters and policy tools by period show most of the measured coefficients are negative, and those that are positive are very small.
- Industrial policy tools generally also had no positive and significant impact on productivity growth ("competitiveness") for the various sub-periods from 1955 to 1990. One exception to this finding is for Japanese Development Bank loans, though the impact on productivity growth is small. Furthermore, this very small positive impact of JDB loans on productivity growth was driven by one sector alone: mining. Mining was a declining and economically insignificant sector, but it was politically significant and was undergoing mechanization and downsizing of the labor force during the period. Overall, Japanese industrial policy did not enhance the competitiveness of key sectors during the period.
- There is no evidence that any help to declining industries via industrial policies allowed those industries to achieve long-term success. Declining industries, such as textiles and mining, were previously heavily supported in Japan. Mining and textiles were the two slowest growing sectors over the period 1955-1990 in Japan but were the number one and three largest recipients, respectively, of government subsidies during the period for the 13 primary two-digit industries under the Japanese industrial classification system. In general, the four types of policy tools (JDB [Japanese Development Bank] loans, government net subsidies, tariff protection and taxation) were more favorably geared toward the slower-growing sectors, though the application of the tools appears to be generally unsystematic. Application of the tools of industrial policy does not appear to follow the pattern suggested by proponents of the statist view of Japanese economic development during the period (i.e., the view that economic growth was the result of government industrial policies).

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- The two sectors that received so many resources during the high growth period, mining and textiles, have gradually faded into insignificance since such policies were unwound during the 1990's. The trade surplus in textiles was \$1.13 billion in 1970. It steadily moved into deficit from the mid-1980's, reaching a deficit of \$28.4 billion in 2016. Similarly, employment in the sector eroded from 719,814 in 1985 to just 109,064 in 2011. When it comes to the mining sector, it is difficult to understand why so many public resources were dedicated to promoting such an uneconomic sector. Employment in the mining sector was less than 20,000 persons in 2020.
- Japanese policymakers did not experiment with strategic trade policies. Strategic trade policies would include identifying industries that are experiencing economies of scale (greater efficiency), then protecting those industries from imports while they achieve scale and subsidizing exports so to achieve economies of scale in foreign markets as well. Not only is there is no evidence that Japan ever engaged in such policies but most of the discussion centered on the use of such policies *against* Japan, especially in autos trade.

Japanese industrial policy lies essentially dormant as a “positive example” of industrial policy measures. Policymakers in Japan abandoned industrial policy because such policies were unsuccessful, the public finance resources needed for such a policy eroded and international relations mitigated against it. However, the emergence of China and Japan's declining semiconductor sector has changed that, and industrial policy, at least with respect to semiconductors, has gained renewed interest in Japan. That renewed interest does not change the historical economic record: Industrial policy in Japan was not successful and was not responsible for the country's economic success in the post-war era or the international performance of leading sectors, including autos and electrical machinery.

EVIDENCE FROM THE “GOLDEN AGE” OF INDUSTRIAL POLICY IN JAPAN

During the ‘golden age’ of industrial policy in Japan (1955 to 1990), there is no clear evidence supporting the notion that industrial policies raised productivity growth among the more rapidly growing or technologically advanced sectors of the economy. Indeed, the data show not only find that government industrial policy efforts during the period were unrelated to productivity growth in the more rapid growing and technologically advanced sectors, but that a disproportionate amount of government efforts actually went to slow growth or declining industries.¹

There had been a general tendency on the part of observers of Japanese industrial policy to look at the growth rates of Japan’s leading sectors during the industrial policy heyday and attribute this growth to such policies. This is especially true of “the usual suspects,” sectors like electrical machinery, general machinery and transportation equipment (which includes automobiles). A breakdown of growth rates by sector during the period of explicit industrial policy (1955-1990), including the sub-periods before and after the oil shock, is provided below.

Table 1
Rates of Growth of Japanese Industries

| INDUSTRY | 1955-1990 | 1955-1973 | 1974-1990 |
|--------------------------|-----------|-----------|-----------|
| Electrical Machinery | 12.17 | 17.94 | 6.06 |
| General Machinery | 11.39 | 17.35 | 5.07 |
| Transportation Equipment | 10.76 | 16.93 | 4.42 |
| Fabricated Metal | 10.07 | 16.75 | 3.94 |
| Petroleum/coal | 9.78 | 15.47 | 3.88 |
| Precision Instruments | 9.33 | 14.93 | 3.77 |
| Ceramics/stone/glass | 8.66 | 14.89 | 3.39 |
| Pulp and paper | 7.66 | 13.16 | 2.80 |
| Chemicals | 7.64 | 12.32 | 2.72 |
| Basic Metals | 7.17 | 11.13 | 2.05 |
| Processed Food | 6.29 | 8.56 | 0.82 |
| Mining | 3.83 | 7.48 | 0.19 |
| Textiles | 2.73 | 7.27 | -0.23 |

Source: Beason and Weinstein (1996); Beason and Patterson (2004).

While many advocates of Japanese industrial policy attributed rapid growth among the leading industries to such policies, some analysts did elaborate on the actual policies undertaken to promote growth in these sectors.² The problem with such analyses is that they ignore the fact that both “winners” and “losers” were the beneficiaries of such policies, and that some kind of breakdown of the government sponsored benefits by industry is necessary to

¹ Beason and Weinstein (1996).

² Johnson, 1982; Johnson, Tyson and Zysman, 1990.

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determine whether the “winners” actually benefitted disproportionately from such policies. Policies that benefit all industries cannot properly be described as “industrial policy,” nor can the usual ‘pork-barrel’ style policies that benefit the losers in politically sensitive regions or declining industries generally be described as industrial policies designed to promote high growth or high productivity sectors.

In order to address this issue, that of the actual allocation of government policy by sector organized by sectoral growth rate, we need to identify quantifiable policy measures undertaken by the Japanese government at the time and consider the relationship of these policy measures to sectoral growth rates. While various measures might be used by governments to promote some industrial sectors relative to others, the key (and quantifiable) measures of industrial policy used by the Japanese government during the 1955-1990 period include subsidized government loans to industry, subsidies, tariff protection and tax relief.³

Table 2
Industrial Policy Tools and Growth Rates by Sector

| Period/Policy Measure | Correlation Coefficient |
|------------------------------|--------------------------------|
| 1955-1990 | |
| JDB Loans | -0.31 |
| Subsidies | -0.13 |
| Tariffs | -0.31 |
| Tax Breaks | -0.33 |
| | |
| 1955-1973 | |
| JDB Loans | -0.48 |
| Subsidies | -0.05 |
| Tariffs | -0.11 |
| Tax Breaks | -0.47 |
| | |
| 1974-1990 | |
| JDB Loans | -0.07 |
| Subsidies | -0.34 |
| Tariffs | -0.14 |
| Tax Breaks | -0.77 |

Source: Beason and Weinstein (1996).

Loans made by the Japan Development Bank to industry during the period certainly represent government sponsored low interest loans, and are easily quantifiable. Data on subsidies to the various industries included in the 13 major industrial sectors are also available for the period from Japanese government sources. The protective nature of tariffs for various industries can be quantified by looking at the effective rate of tariff protection (basically the sectoral average tariff level minus the average tariff level) for each sector. Finally, effective tax relief by sector

³ Beason and Weinstein, 1996.

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can be found in essentially the same way as effective tariff protection: the sectoral level of effective corporate income tax rate paid minus the average corporate income tax rate paid.⁴ Table 2 shows the correlation coefficient between the application of these policy measures and sectoral growth rates for the three periods considered in Table 1.

A glance at Table 2 negates the arguments of the industrial policy advocates of the 1970's, 80's and 1990's. The data show industrial policy tools were disproportionately allocated to the slower-growing industries. This should not be surprising. Governments in most countries provide some kind of support to virtually every industry, rapid and slow growers alike. One must add to that the fact that slower-growing industries are likely to be more active in trying to secure government funds, and the fact that some of the slow growers are likely to be situated in certain geographic regions, and that politicians from those regions will have an incentive to push for more government funding for those industries.

It really should not be surprising that the allocation of industrial policy tools was the result of the political process, and not purely in lines with the policy prescriptions of the then Ministry of International Trade and Industry (MITI). Indeed, it seems highly unlikely that the actual allocation of industrial policy tools would have been apolitical.⁵

If one accepts the argument that the actual distribution of industrial policy tools is the outcome of the political process, then it seems reasonable to argue that such distribution might be unfocused and arbitrary. Indeed, as we can see from Table 3, it was often the case that an industry might benefit disproportionately in terms of some measures, but not others. Mining, for example, was the number one recipient of cheap loans, government subsidies and tax relief for the 1955-1990 period, undoubtedly because it was such a slow grower and employment in the sector was concentrated in particular geographic regions (where unemployment in the sector would have been politically problematic), but it received the least amount of tariff protection. This is understandable. Japan is a resource poor country, and high tariffs on mining products would have crippled other industries. Other than the mining example, however, the distribution of these policy tools seems somewhat arbitrary and inconsistent. Not at all what we would expect if the Japanese government had been dispassionately executing growth oriented industrial policies, but precisely what one would expect if political pressure and political maneuvering actually determined the distribution of government policies toward industry.

⁴ Ibid.

⁵ Many observers at the time argued it was apolitical. Johnson, 1982; Johnson, 1995; Johnson, Tyson and Zysman, 1990.

Table 3
Industrial Policy Support Rankings and Growth by Sector

| Sector | Average Growth | Cheap Loans | Government Subsidies | Tariffs | Tax Breaks |
|----------------------------------|-----------------------|--------------------|-----------------------------|----------------|-------------------|
| Electrical Machinery | 12.2 | 8 | 9 | 8 | 8 |
| General Machinery | 11.4 | 12 | 4 | 11 | 8 |
| Transportation Equipment | 10.8 | 7 | 11 | 4 | 8 |
| Fabricated Metal | 10.1 | 10 | 6 | 12 | 7 |
| Oil and Coal | 9.8 | 2 | 13 | 7 | 3 |
| Precision Instruments | 9.3 | 13 | 10 | 6 | 8 |
| Ceramics, Stone and Glass | 8.7 | 5 | 8 | 9 | 3 |
| Pulp and Paper | 7.7 | 6 | 5 | 10 | 13 |
| Chemicals | 7.6 | 3 | 7 | 5 | 3 |
| Basic Metals | 7.2 | 4 | 2 | 3 | 6 |
| Processed Food | 6.3 | 9 | 12 | 1 | 12 |
| Mining | 3.8 | 1 | 1 | 13 | 1 |
| Textiles | 2.7 | 11 | 3 | 2 | 2 |

Source: Beason and Weinstein (1996). Beason and Patterson (2004). Same ranking indicates tie.

While the evidence presented above seems to indicate clearly that industrial policy in Japan, even during its zenith, was not executed in a way that favored the rapidly growing sectors, this is not the end of the story. It is possible that industrial policy was aimed at promoting other goals, though the many White Papers from Japanese government agencies from the time indicated that policy was primarily aimed at promoting high growth sectors. Policies might have been nuanced in a fashion to promote other goals, such as promoting returns to scale industries, or promoting productivity growth (competitiveness) rather than simple growth rates by sector. Considering these other factors gives the devil more than his due: the industrial policy advocates of the 1970's through 1990's seldom if ever mentioned these other possible policy goals. On the issue of promoting scale economies (greater efficiency when produced in increased amounts), the correlation coefficients between estimated sectoral scale parameters and policy tools by period is presented in Table 4 below. Again, most of the measured coefficients are negative, and those that are positive are very small. There seems to be no evidence that Japanese policy was aimed at promoting industries exhibiting economies of scale.

Table 4
Industry Scale parameters and Allocation of Industrial Policy Tools

| Industrial Policy Tool | Correlation Coefficient |
|-------------------------------|--------------------------------|
| 1955-1990 | |
| JDB Loans | -0.29 |
| Subsidies | -0.14 |
| Tariffs | -0.27 |
| Tax Breaks | -0.34 |
| | |
| 1955-1973 | |
| JDB Loans | -0.31 |
| Subsidies | 0.08 |
| Tariffs | 0.02 |
| Tax Breaks | -0.28 |
| | |
| 1974-1990 | |
| JDB Loans | -0.26 |
| Subsidies | 0.10 |
| Tariffs | -0.39 |
| Tax Breaks | -0.76 |

Source: Beason and Weinstein (1996). Beason and Patterson (2004).

Again, in order to give the benefit of the doubt it is necessary to find whether, despite the unfocused application of industrial policy tools during Japan's high growth period, it might be possible that these tools were actually highly focused in terms of promoting productivity growth or "competitiveness" among these industries. "Competitiveness," especially as the term was used by most observers and policymakers in the 1990's, is generally not well-defined. From an economic point of view, what we want to capture is something best described as a "foot race." If we had two identical firms and allowed them to use the same resource inputs over some period of time, one firm would undoubtedly come out ahead. The way it would do this is by squeezing more output out of the same inputs over the period by using the resources more effectively in order to obtain higher productivity growth. For that reason, economists typically use measures of productivity growth in order to measure "competitiveness."⁶

Using a standard measure of productivity growth (Jorgenson and Kuroda, 1990), it is possible to model it as a function of the various policy tools. Beason and Weinstein (1996) find that the various industrial policy tools generally had no positive and significant impact on productivity growth ("competitiveness") for the various sub-periods of the 1955-1990 period covered in their analysis. One exception to this finding is for Japanese Development Bank loans, though the impact on productivity growth is small. Furthermore, this very small positive

⁶ Jorgenson and Kuroda, 1990; Nakamura, 1993.

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impact of JDB loans on productivity growth was driven by one sector alone: mining. Keep in mind that mining was a declining and economically insignificant sector, but it was politically significant and was undergoing mechanization and downsizing of the labor force during the period. Overall, Japanese industrial policy did not enhance competitiveness of key sectors during the period.

In sum, there is no evidence to support the claim that Japanese industrial policy during the 1955-1990 enhanced growth by sector, industries with scale economies, nor productivity growth or “competitiveness.” This is not to say that it could not have, but the reality of the political process and government spending priorities makes it very difficult for such policies to be effective. Furthermore, even if political pressures had not intervened, it seems to be a dubious argument to suggest that government policymakers would be better than actual market participants in determining an allocation of resources that would result in better economic outcomes than the market outcomes themselves.

It is generally fair to say that, until very recently, Japan abandoned industrial policy targeting, starting in the 1990’s. This was partly due to a growing consensus that such policies were unsuccessful, pressure from the United States, and growing budgetary pressures on the government from the 1990’s onward as economic growth stagnated. In addition, the U.S. interest in industrial policy that had so characterized the first Clinton Administration began to wane significantly from the period of his second administration.

Indeed, it is not until recently that one sees a renewed interest in industrial policy in Japan and the United States, with headlines such as “Japan worries it could be left behind as U.S. pours billions into chip industry to fend off China.”⁷ Arguably, the EU has had a more positive stance toward industrial policy, even as it has waned in interest in the United States and Japan.

MINING AND TEXTILES: DECLINING INDUSTRIES WITHOUT SUPPORT

What happened to declining industries, like textiles and mining, that were previously heavily supported in Japan? Mining and textiles were the two slowest growing sectors over the period 1955-1990 in Japan, but were the number one and three largest recipients, respectively, of government subsidies during the period for the 13 primary two-digit industries under the Japanese industrial classification system (see Table 3). In general, the four types of policy tools (JDB [Japanese Development Bank] loans, government net subsidies, tariff protection and taxation) were more favorably geared toward the slower-growing sectors, though the application of the tools appears to be generally unsystematic. Application of the tools of industrial policy do not appear to follow the pattern suggested by proponents of the statist view of Japanese economic development during the period.⁸

⁷ Reuters, August 17 2021.

⁸ Johnson, 1995; Johnson, Tyson and Zysman, 1990.

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It seems certain that the two sectors that received so many resources during the high growth period, mining and textiles, have gradually faded into insignificance since such policies were unwound during the 1990's. The trade surplus in textiles was \$1.13 billion in 1970. It steadily moved into deficit from the mid-1980's, reaching a deficit of \$28.4 billion in 2016.⁹ Similarly, employment in the sector eroded from 719,814 in 1985, to just 109,064 in 2011.¹⁰ When it comes to the mining sector, it is difficult to understand why so many public resources were dedicated to promoting such an uneconomic sector. Employment in the mining sector was less than 20,000 persons in 2020.

What does seem clear is that the industries that we associate with Japan during the high growth period, electrical machinery (which includes most of the "tech" sector), general machinery (which includes most capital goods industries) and the transportation equipment sector (which includes autos) were generally toward the bottom in terms of government support during the period. What these and other sectors received in quantifiable public policy was largely unrelated to growth or productivity growth, and government policy was effectively an impediment to the more rapidly growing sectors. For example, rapidly growing sectors had higher rates of effective taxation than the slow growers. This result arises from two facts: Actual resources are allocated according to the political preferences of lawmakers, and actual patterns of growth and productivity during the period were largely determined by market forces. That the policies could have actually affected the product mix and possibly harmed consumer welfare as a consequence is difficult to measure but quite likely. However, this was not the desired result of policymakers, and certainly not what is claimed by industrial policy supporters.

CURRENT STATE OF RESEARCH ON JAPANESE INDUSTRIAL POLICY AS INDICATOR

Academic research on Japanese industrial policy has essentially dried-up since the 1990's as there had been a general abandonment of such policies until recently. As Noland (2007) points out, there have been essentially two camps with respect to Japanese postwar economic success until the 1990's. One group has focused on the (perhaps somewhat unique) characteristics of private economic behavior and institutions, while the other has concentrated on the role of government during the period. This distinction is a bit unfair, however, as many observers attributed Japanese economic success to both private sector institutional factors *and* public policy in Japan at the time.

Noland's (2007) survey finds no modern industrial policy emphasis in Japan, and instead focuses on the issues discussed above with respect to industrial policy in the postwar period until the 1990's. In terms of "special features" of the Japanese economy in the postwar period, Noland mentions labor market arrangements, vertical integration of producers with their suppliers and the potential role of strategic trade policies as factors often raised when

⁹ Ministry of Finance.

¹⁰ METI.

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explaining Japan's economic success until the 1990's. While many authors, including this one, have considered possible links between "special factors" and Japanese postwar economic success, such factors are unrelated to industrial policy. Noland also considers strategic trade literature in the context of Japanese industrial policy.

The strategic trade literature explores the possibility of shifting rents in international trade transactions (Helpman and Krugman, 1989), or manipulating the terms of trade in a way that benefits one trading partner (Itoh and Kiyono, 1987). While this view might serve as a justification for state intervention in order to achieve a desirable outcome for the home country, one can find little if any evidence that Japanese policymakers pursued policies that would have resulted in such outcomes. The exception here might be Borrus, Tyson and Zysman (1986), though little empirical evidence is available to support the view of the Japanese government pursuing of such policies in the semiconductor or other industries.

There is no evidence that Japanese policymakers experimented with strategic trade policies. Strategic trade policies would include identifying industries that are experiencing economies of scale, then protecting those industries from imports while they achieve scale and subsidizing exports so to achieve economies of scale in foreign markets as well. Not only is there is no evidence that Japan ever engaged in such policies but most of the discussion on such policies centered on the use of such policies *against* Japan, especially in autos trade.

Such policies have certainly informed NAFTA policy and its new incarnation the United States-Mexico-Canada Agreement (USMCA). Voluntary export restraints by Japanese automakers are an implicit part of these agreements, with domestic content provisions specifying the amount of foreign auto production to take place in North America, especially the United States. There are benefits of such policies to domestic North American auto producers, and in terms of employment in the sector in North America, as well as North American governments in terms of tax revenue, but it is not at all clear that North American consumers have benefitted from such policies.

CONCLUSION

Japanese industrial policy lies essentially dormant as a "positive example" of industrial policy measures until very recently. As Noland puts it, "[E]ffective or not, since the mid-1980's the ability of Japanese economic policymakers to employ their traditional instruments of industrial policy has been increasingly circumscribed by changes in the domestic and international environment."¹¹ In short, policymakers in Japan abandoned industrial policy because such policies were unsuccessful, the public finance resources needed for such policies have eroded and international relations have mitigated against it. However, the emergence of China, and Japan's declining semiconductor sector has changed that, and industrial policy, at least with respect to semiconductors, has gained

¹¹ Noland (2007).

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renewed interest in Japan. That renewed interest does not change the historical economic record: Industrial policy in Japan was not successful and was not responsible for the country's economic success in the post-war era or the international performance of leading sectors, including autos and electrical machinery.

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