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The Governed Market School of thought: a critical analysis of arguments proposed in favour of Japan's Selective industrial policy supporting the hi-tech industries

Abstract

The article refers to the so called "Governed Market School" of economic thought. It supports the idea that the Japanese state is primarily responsible for the accelerated growth of the Japanese post – war economy. The representative authors of GM school are: Charlmes Johnson, Thomas Hout and Ira Magaziner, John Zysman, Laura D' Andrea Tysan. But their viewpoint is based only on theoretical reasoning (They do not do the empirical work) and they lead analysis at macro level eclusively. So the conclusions of the developmental state are not convincing although deserve taking into account during research.

1. The Model of the Developmental State Proposed by Ch. Johnson

An overview of the many scientific and academic works devoted to the dynamic development of Japan's economy in the years following World War II reveals two fundamentally different schools of thought: one placing emphasis on the role played by the "governed market" (the GM school); and the other emphasizing the role played by the "free market" forces of competition and independent industrial enterprises (the FM school). The within article examines the views inherent in the former (GM) school of thought, in particular as regards the emphasis placed on Japan's hi-tech industry.

The leading work on Japan's governed market, glorifying the role played by Japan's Ministry of International Trade and Industry (MITI), is Ch. Johnson's *MITI and the Japanese Miracle* (1982), which traces the evolution of Japan's industry between 1925-1975. This work is considered to be in the mainstream

of the so-called "developmental state" theory, and the author's main goal was the construction of a theoretical model which would explain Japan's economic recovery following World War II, which was then considered to be an economic miracle. Mr. Johnson posited that the leading factor in facilitating the economic recovery was role played by governmental administration, in particular the MITI.

The basic elements of Johnson's model may be identified as follows: In the first place, the Japanese government must implement the pro-active concept of plan rationality, in contrast to other countries such as the United States where the government performs only a regulatory function, adhering to the concept of market rationality. Secondly, the government must develop and implement a selective industrial policy, which serves to maintain its dynamic economic growth. Thirdly, there must be a national consensus regarding fundamental economic aims and a support system for implementing them. (In the case of Japan, the economic players and instruments used are the MITI, big business, and big banks, combined in the concept of *Japan Incorporated*). And finally, the implementation of the overall policy strategy must be placed in the hands of a powerful coterie of public servants whose competence is unquestioned and who enjoy widespread public respect.

As proof of his economic credo Johnson lists the many accomplishments of Japan's public administration, which he demonstrates is guided by deep knowledge and insight, experience, and skill in mapping out long-term strategies and guiding industrial executives toward appropriate and well-planned investments in strategically selected industries. Without this guidance, Johnson argues, Japan's economic miracle would not have been possible. Johnson's views are captured in the following quote given in page 28 of his book:

"The propensity of corporations is to invest in particular industrial sectors or product lines even though these areas may be declining ...In response to rising foreign competition and relative decline, the tendency of corporations is to seek protection of their home market or new markets abroad for old products. Behind this structural rigidity is the fact that for any firm, its experience, existing real assets, and know-how dictate a relatively limited range of investment opportunities. Its instinctive reaction, therefore, is to protect what it has. As a result, there may be no powerful interests in the economy favoring a major shift of energy and resources into new industries and economic activities."

Johnson posits these and similar views, for example that the MITI played the leading role in transforming Japan's economic structure away from its heavy reliance on labor-intensive light industry to an industrial structure based on electronics, steel production, and the manufacture of ships and automobiles

(p.240) without providing any empirical proof of his hypotheses. He denies that Japanese entrepreneurs undertook relevant decisions and treats them solely as functionaries carrying out ministerial initiatives, supported by a whole range of government incentives (which he categorizes as their "responsive dependence" (p. 24).

Johnson's arguments are unconvincing for at least two reasons: In the first place one could list a number of examples of exporting industries (in electronic goods, precision instruments, and automobiles, for example) which developed, thrived, and achieved world-renowned success without any special support from the Japanese government. Secondly, while Johnson continually recites and lists a wide-range of governmental economic supports, ranging from tax benefits to governmental subsidies and credit guarantees to licensing of economic activities and regulation of foreign currency transactions, he provides no proof that these policies were significantly linked to any of Japan's economic successes. This assumption that there is a direct correlation between the existence of governmental support programs and corresponding economic successes, assigning them a cause-and-effect relationship without any proof thereof, is a characteristic feature of the GM school noted by many of its critics.

This glorification of the role of government and underestimation of the creativity of the private business sector results in an over assessment of some proffered arguments, and an under assessment of others. This phenomenon is all the more surprising given the fact that the Japanese private sector has a more than century-old active history, while the engagement of government in production activities in competition with private enterprises is a rare occurrence. One can find a glaring example of Mr. Johnson's unjustified belief in the effectiveness of governmental policies in his commentary regarding the affect of the 1970 oil crisis on the Japanese energy-dependent industries. According to the author the gradual substitution of natural gas and coal in place of oil as an industrial energy source was a direct result of the wisdom of governmental energy policy and not, as common sense would assert, a natural economic reaction to the sharp rise in the price of oil. In short, by concentrating his entire focus on the positive effect of governmental industrial policies Mr. Johnson significantly underrates, if not omits, the input of business decisions and the influence of other outside factors. While it is true that in his *Introduction* he acknowledges the existence of other possible explanations for Japan's dynamic economic development – listing, among others, factors such as Japan's high rate of personal savings, its system of opening certificate deposit accounts in the Post Office, organization of the *keiretsu* industrial group, the practice of hiring pensioned bureaucrats in the private sector, the stability of its political

system, and its separate and unique cultural identity – in fact he never returns to analyze their effects in his model.

Johnson's book, which provides an excellent insight into the internal functioning of the MITI as well as a fascinating historical portrait of some of its leaders, is no longer considered to offer a true and balanced presentation of the methods and functioning of the Japanese economy. In addition to the previously-indicated superficiality in his interpretation of the relationship between economic accomplishments and the underlying reasons therefore, he similarly misinterprets the relationship between Japanese politics and its economic management. According the Johnson the politicians *reign* and the government administrative officials *rule*, and there is a close relationship between the two. In fact beginning in the 1960's the MITI, feeling the effects of political pressure brought to bear by the electorate on the ruling Liberal-Democratic Party (LPD), began to modify its policies of rapid industrial growth in order to offer a wider range of consumer goods and services, more housing, and better environmental protection. In addition, various sectors or branches began to more aggressively assert their own interests, either through the ruling LPD or by offering support for minority parties. It's difficult to imagine that the bureaucratic administrators would have changed their strictly economic goals and aims had they been immune to the social and political pressure.

And finally one of the main criticisms of Johnson's work concerns his gross overestimation of the role and function of the Japan Development Bank (JDB), the only governmental bank in Japan which lists as a charter aim "the promotion of sunrise enterprises". According to Johnson, "a loan from the JDB, regardless of its size, became MITI's seal of approval, and the company that had received such a loan could easily obtain whatever else it needed from private resources" (page 211). Leaving aside the question of what is meant by "whatever else it needed", the statistical data does not bear out the assertion that the JDP invested significantly in developing enterprises. Furthermore, even one were able to prove a correlation between the economic results of given enterprises and the lending strategies of commercial banks (Johnson does not provide any such data), that fact in and of itself would not prove the "leading role of the MITI", but may well have been based on the ordinary commercial considerations of those banks which decided the opportunity was ripe to invest in selected developing branches of industry.

It's also important to remember that Johnson's analysis of the functioning of the MITI and its far-reaching influence on the economy covers the period only until the early 1970's, that is, prior to the period when Japan significantly liberalized its trade and monetary policies, thereby depriving the MITI of many of the instruments whereby it could exercise direct control over the allocation of

resources, in particular as regards the allocation of foreign currency and credit. From this point on the role of the government became more subtle and equivocal, a point which it should be noted Johnson himself acknowledged in his subsequent works (Johnson 1988, 1989). In these works Johnson suggests that the new role of the MITI can be based either on the management of global demand in the Keynesian sense (as a ministry of imports), or – which he considers more attractive – on the promotion of hi-tech industries. In the latter instance, however, the MITI would need to increase its influence over the telecommunications and/or biotechnologies industries, which in fact are under the jurisdiction of other Ministries (the Ministry of Post and Telecommunications, and the Ministry of Health).

2. The argument in favor of supporting infant industries and application of the wave principle in providing such support

The second significant publication representing the thought of the GM school was written in 1980 by I. Magaziner and T. Hout. It is worthy of study for at least two reasons. In the first place, in contrast to Mr. Johnson's exclusive focus on the role of the MITI, Magaziner and Hout's work specifically deals with the role of the private sector in Japan's post-war recovery effort. In addition, their work makes use of the results of research at the industrial level (concerning the steel, automobile, aluminum metal works, shipbuilding, electronic goods, and telecommunications industries). As an example of the authors' methodological position one may cite their assessment of the achievements of the Japanese steel industry (where in addition they necessarily assessed the role of the MITI, which treated the steel industry as a priority industry between 1950-1960). The authors crowning argument to prove the success of the dynamic development of the industry lies in quantitative figures: from 1963 to 1970 steel production tripled and the Japanese steel industry ranked first in worldwide export. This was undoubtedly a feat worthy of admiration, particularly taking into consideration that Japan had to import nearly all the raw materials necessary for steel production. It should be recalled, however, that immediately following the first energy crisis of 1973 Japan had at its disposal the most contemporary and new iron plants in the world, working at the lowest production costs. Owing to the heavy dependence of steel production on energy prices, only the Japanese plants were thus able to continue production at extensive levels, while their American competitors were forced to shut down plants or significantly reduce production and the Europeans embarked on a path of government subsidies.

The fundamental question remains however: would the Japanese have achieved the same extraordinary results had the government not intervened and had the private sector been left to respond only to market forces? Magaziner and Hout largely ignore this question, although they do mention in passing (page 59) that it was precisely industrial production plans (and not those of the MITI) which were assessed with regard to projections for worldwide demand and the investment plans of competitors in the same branch of industry.

In the end the authors' positive assessment of the "visionary" role of the MITI is not wholly objective. It is based on only one criteria of selective industrial policy – effectiveness - omitting such important criteria as the relevance of investment decisions and efficiency. And they ignore the fundamental issue that the selection of strategic branches for investment takes place relative to other branches, i.e., that it is a question of which industry to prefer *at the cost of* other industries. In assessing Japan's preferential policies for investment into steel production, one must try to determine what economic advantages may have been forgone by the diverted investments (not to mention the later restructurization and environmental protection problems which were created).

Hout and Magaziner's work is also valuable for their thesis regarding the variable intensity of the effects of governmental intervention on the decisions of individual producers. This thesis is in accord with the concept of protecting so-called *infant industries,* a concept often advanced as a theoretical justification for intervention into market mechanisms. This theory argues that preferential treatment offered selected industries (via subsidies, low-interest credit, and the protection against foreign competition by tariffs, import quotas, and restrictions on foreign investment) should be of a transitional nature and applied only during the "incubation" phase of industrial development, i.e., until the moment when the selected industries become independently competitive. Unfortunately practice has shown that the instruments of selective industrial policy, once implemented, show a remarkable resiliency and that it is much easier to implement preferential policies than it is to retract them. In addition the preference of selected industries or branches motivates others to seek the same preferences and creates pressure on the regulatory institutions to offer access to preferences to an ever-widening circle of industries, thus causing them to become gradually universal, in which case they lose their original character as preferences and the original intent is obliterated. It seems likely that many of the aforementioned phenomena took place with regard to Japan's preferences for the steel industry, and they should be the subject of empirical study. Magaziner and Hout do not deal with them.

According to the authors, the second phase of a pro-active industrial policy takes place when the selected and preferred production process reaches its zenith and begins a period of decline and requires adaptation (Okimoto 1989, Yakushiji 1984). Sound governmental intervention must take into account this "wave principle", whereby support is provided in the preliminary and concluding phases of an industry's development and withdrawn in the interim during its mature period. The government must know when to intervene and be capable of withdrawing at the appropriate moment. They also suggest that each product has its own life cycle.

Thus the second important principle underlying the application of selective governmental intervention is proper timing. The concept of infant industries assumes that government support is of a transitional nature, and is reduced step-by-step until it is finally eliminated upon an industry's becoming fully competitive. The authors, however, fail to treat the question of whether MITI acted in accordance with this principle and whether it withdrew its preferential support at the time when industries reached, or should have reached, competitive maturity.

The effectiveness of various actual instruments used in the implementation of industrial support policies is difficult to assess, for even if we accept a direct cause-and-effect relationship between a defined industrial policy and increased growth in a targeted industrial sector, it is nevertheless extremely difficult to determine the precise role played by each particular element in the overall policy in achievement of the final result, especially in the context of dynamic growth. And finally the most important issue involved is simply ignored by Magaziner and Hout, as is routinely the case with economists who over evaluate the role of governmental industrial planning. For in order to be effective governmental intervention must above all properly assess the objective structure of both the export and investment markets. Once this assessment is properly made, the choice of incentives used is of a secondary nature. (This problem is treated further in the next section of this paper).

In conclusion the authors' thesis that governmental industrial policy plays a leading and critical role in preliminary and declining stages of industrial development remains unproven. The authors assign to government both a *"guiding"* (pp. 11, 89) and *"mediating"*(pp. 58-60) role without offering the basis for their conclusions. They fail to present research into the mechanisms by which investment decisions are made in particular industrial branches (such as the criteria of relevancy), and cite numerous examples of conflict between the aims of MITI and various enterprises while stressing at the same time the independence of the enterprises and concluding that a leading role is played by *consensus* among the leading actors in Japanese society. Hout and Magaziner's

work stresses the process of evolution in the aims of selective industrial policy, according to which MITI is able to anticipate changes in the competitive positions of various industrial branches in order to attain its overall goal of creating a modern and contemporary industrial structure. The authors fail to appreciate the influence of many crucial factors, such as international pressure which restricts the temptation of governments to engage in protectionist policies, or the role of independent enterprises or informed consumers. It was precisely the pressure of business forces (not governmental bureaucrats) which forced enterprises to locate their capital- and energy-absorbent phases of production overseas in the cellulose and paper, petrochemical, and steel industries (and later in the assembly of cars and electrical equipment), in order to take advantage of low production costs and avoid import restrictions or environmental regulations.

Magaziner and Hout posit that selective industrial policy remains very active and important, even as its aims constantly change. The era of protectionism has disappeared in favor of the selective financing of large R & D projects, the promotion of export sales of entire industrial enterprises, and the adaptation of declining industries. Fascinated by the new role of MITI, the authors fail to observe that the financial incentives it can offer in the afore-listed areas are quite limited (more on this later).

Recapitulating, Magaziner and Hout's work is disappointing, despite the undoubtedly interesting material it contains. The authors offer a great deal of statistical data in support of their efforts to show the wide range of industrial planning instruments in use. They list, for example, the total amount the government invested in initiating governmental research programs, but fail to place it perspective against the total amount invested in overall industrial research, or even to offer comparative data on how much financing the government provided for private research. By failing to provide a proper background against which to analyze their data, the authors strip it of its relative importance and thus its usefulness in making sound judgments and drawing the appropriate conclusions therefrom.

3. Choosing appropriate production and export structures

A group of so-called "revisionist economists" occupy a central place in the school of thought which glorifies the role of government in economic planning. This group would certainly include the following: the earlier-mentioned Ch. Johnson, L. D'Andrea Tyson, K. van Wolfreen, E. Vogel, W. Nestler, R. Reich, and C Prestowitz. They are critical of the "liberal" – in the

European sense of the word – policies of the American government, and offer Japan's selective industrial planning policies as a cure-all for every economic woe. They seem to be more in the nature of "ideologues" and "doctrinaires", offering catchy phrases and palliative prescriptions, than doubting scientists who objectively question each proposed dependency relationship. Nevertheless they represent a highly influential group, especially in the USA, and thus it is worthwhile to examine their views in detail.

Assigning them the title "revisionist" implies, quite correctly, that these revisionist economists suggest fundamentally new ways of looking at old and established doctrines. They propose that the method of undertaking economic decisions in Japan's socio-political system be examined taking into close consideration the "uniqueness" of Japan's political and economic system, which is tied to the spectacular advances Japan made in terms of both civilization and technological development in the post – World War II period.

W. Nestler's 1991 work, which is examined in some detail hereinafter, constitutes a characteristic example of this revisionist school of thought. In his Introduction he offers a quotation summarizing Japan's developmental strategy:

"Japan's success rests on rejection of both communist-style state ownership of the economy and the neoclassical belief that free markets and minimal state interference are the answer. In complete contrast to the United States, neomercantilist rather than neoclassical ideals and practices shape and fuel Japan's economy. Strategic industries are targeted for development and declining industries for protection, and those industries are nurtured through a dynamic mixture of corporate collusion and competition. These policies assumed a similar pattern: "Japan imports a technology...from the West. It then protects the industry...from foreign competition to whatever extent and by whatever means may be required while it gains scale, experience, cost parity, and momentum in Japan itself – the world's second largest and fastest growing market, exporting aggressively, further enhancing its cost position. Gradually it converts a part of its cost advantage into improved product quality. At some point the Japanese producer is able to offer a better product, profitability, and lower price." (pp. 4-5)

All this, Nestler leads us to believe, owing to Japan's well-aimed and implemented industrial policy.

Nestler's book is full of examples of his unwavering faith in the wisdom and effectiveness of Japan's post-war industrial policy. He states, for example, that Japan's neomercantilism decidedly outdistanced America's free market policies, leading Japan to displace America as the world leader in the processing and finance industries and to gain an ever greater share of the market in high-technology defense products. We also learn from Nestler that without active

governmental intervention Japan's large firms would never have become leaders in the automobile and computer industries, nor in the semi-conductor or telecommunications industries. The author offers so many wide-ranging generalizations and bald conclusions that it is difficult to subject them to critical analysis. Thus the within author's fundamental criticism of Nestler's work needs to be re-emphasized here: that his conclusions are based neither on empirical research nor objective statistical data.

Nestler offers only positive assessments of Japan's selective industrial policy and devotes little space to the question of what criteria Japan used in choosing its priorities. Being convinced at the outset of the efficacy of industrial targeting, he uses only generalizations to examine the process, most of which are employed to frame the debate between neomercantilists and neoliberals. In so doing, he omits analysis of several fundamental issues.

In the first place one must analyze whether, and to what degree, the structure of Japan's production (and export) attained in the 1970's was a result of investment decisions undertaken within the context of and under the influence of Japan's system of industrial incentives designed to spur economic development, as developed by MITI? While any final authoritative answer to this question is probably unattainable, Nestler does not even attempt to address it. Secondly, one must determine the "quality" of the criteria used to select which strategic branches or sectors are in need of support. It is generally recognized that justification for governmental intervention in the free market, either *ex ante* or *ex post,* occurs when there is an unnatural imbalance in the market. The chief aim of such interventionist policy is either the avoidance of a future market disruption, or compensation for a pre-existing one. In the case of the hi-tech industries, economists list the most common example of market failure to be the current lack of a future market (for goods or information). Adherents of the Governed Market school thus praise the role of the Japanese government (i.e., MITI) for implementation of its so-called "economic vision", which constituted a kind of prescription for a ten-year development plan.

Leaving aside the obviously important question of whether (and to what extent) the "prescriptions" were in fact carried out, it would seem that the criteria used for selecting priority industries should be examined to determine whether they were appropriate to achievement of the overall aim: the stimulation of economic development and of export for strategic industries. Nestler offers no such proof or analysis, which leaves his general conclusions less-than-convincing.

Inasmuch however as this author wishes to analyze the issue of proper selection criteria, taking issue with Nestler's views along the way, a more precise and detailed description of the background facts is hereby offered.

In the 1950's and 1960's MITI specifically envisioned the following for Japan: 1) modernization of industrial machinery and plant; 2) development of foreign trade; 3) increased self-sufficiency; and 4) reduction in consumption (Komiya 1988; Ito 1992). Points 2) and 3) are contradictory, unless one assumes that the promotion of international trade will bring about an increase in exports only. Priority 3) implies the necessity of restricting imports and its natural – as the economy diversifies – growth. In the meantime Japan's import priorities concentrated on raw materials and investment goods essential to domestic production (both for export as well as for anti-import), while at the same time importation of consumer goods as well as supply goods which were capable of domestic production were strictly regulated. These policies were consistent with the aim of attaining self-sufficiency.

This internal contradiction between the twin aims of self-sufficiency and development of international trade may have been directly related to the fact that Japan had a significant foreign trade deficit until about 1968. The fixed rate of exchange for its yen at 360 to the USD, established at Bretton Woods in 1949, assured that it was overvalued and failed to provide stability in its domestic market. It is thus quite possible that the driving force behind the decision to stimulate exports in the high-tech industry while at the same time restricting imports was the necessity to achieve a balanced foreign trade. (The Japanese government did not take into consideration devaluation of its currency, as was done in Germany).

During the period of Japan's accelerated economic growth in the 1970's the government supported the development of industries fulfilling two criteria: 1) a rapid growth in production efficiency (measured as value-added output per worker); and 2) a high income elasticity of demand. These were two common features of hi-tech products. Unfortunately little is known about the process of choosing priority branches, but we may make use of the following example (Wade 1990, p. 335). In the first instance the bureaucrats at MITI looked to foreign markets, especially in the USA, in search of goods with a high coefficient of income elasticity of demand and a large potential for production growth. Next they created a so-called "specialization index" for such goods, which consisted of the relationship between the percent of the export of such goods in Japan's overall export and the percent of the export of such goods in overall worldwide export. If Japan's indicator was lower than that attained worldwide, it constituted a signal to Japan to promote the production of such goods. An ancillary index used to "pick up winners" expressed the relationship between the percent of a given product in Japan's overall export to its percentage in domestic production.

It is difficult to avoid the conclusion that if a given branch of the high technology industry was characterized by efficiency and demand rising faster than income it would develop and prosper naturally without special governmental assistance. Examples can be given of several such branches which met the above "tests" and subsequently prospered even though they were never the recipients of governmental incentives, such as supermarket chains or the foreign tourism industry. Taking into consideration the criteria discussed above for selecting priority industries, an analysis of the industrial structure of Japan which crystallized during and following its dynamic growth period after 1973 leads to the conclusion that the issue of preempting market failures was of considerable less importance than the imitation of successful industries. All the modern processing industries in which Japan invested and later excelled were in widespread operation throughout the USA and Europe. If the conclusions drawn herein are correct, then it stands to reason that the criteria which led to the selection of hi-tech industries for promotion in various decades were not of such critical importance as is commonly believed (Komiya 1990).

The contradictoriness of delineated industrial policies and ambiguity of criteria made itself felt again in the 1980's when, in addition to the priorities of production efficiency and high income elasticity of demand the government added two additional priorities: the so-called *linkage argument* and the need to create additional jobs. The former concept referred to the ability of an incentive to have a positive "ripple effect" on the development of other industries. If for example the government decided to invest more money into the steel industry than private investors would likely have risked (and in addition at the cost of investing less in other industries), the assumption was that the steel industry's development would spur development in related industries such as the automobile and shipbuilding industries. This argument is much criticized by the counterargument that only a competitive free market is able to insure the optimum level of investment in a given branch, without the distortion of unnecessary governmental intervention. The effect of the second additional priority is similarly unclear. Should a more labor-intensive industry be given priority over a less-labor intensive one (for example industries with a high degree of technological development)? If so this principle appears contradictory at a glance with the priority given to production efficiency. And what is to be done with branches which fulfill only two or three of the given priorities? No unequivocal answers are given to these and similar questions.

In the last two decades the role of hi-tech industries in Japan's overall economic development has increased. Despite this, the MITI has not been inclined to resign from playing a "leading" role in encouraging and supporting the development of new hi-tech firms. It advances two arguments in support of

its position. The first is concerned with the fact that implementation of innovations by particular firms *spill-over* into other firms or branches without any accompanying recompensation to the innovating firm. Since the innovating firm has no legal protection, in the form of patents or otherwise, to protect against the diffusion of its innovations, it must instead rely on government subsidies to protect its activities. The problem with such an approach, as noted by P. Krugman (1987), is that the general increase in productivity resulting from the "ripple effect" of particular innovations is an overall desired result, and it is highly difficult to assess optimal subsidies to both encourage and protect innovation, as well as to determine the proper beneficiaries of such subsidies. In addition there is a danger that in the competition for government assistance large bureaucratized firms will be favored over smaller, more informal organizations.

MITI's second argument is advanced having in mind those branches of hi-tech industries which have achieved a significant degree of monopoly in a highly concentrated oligopolistic worldwide structure. Owing to their high capital investment and highly advanced technologies there are characteristically significant barriers to the creation of competitive firms, hence according to MITI it only makes economic sense to subsidize existing national potentates to aid them in the highly competitive world market. This approach can be questioned on a number of grounds relating to the effectiveness of such subsidies. Although they may bring about the desired effect (prohibiting rivals from entering the highly lucrative market), it may happen that rivals capture the market anyhow, in which case the extensive government subsidies are wasted. There is also the danger that other governments may reply in kind and subsidize rival competitors. Finally, there is the real possibility that national competitors will exert political pressure in the rivalry over subsidies. In sum, MITI's entire reasoning raises more questions than answers.

The industrial policy priorities which MITI lists for the 1990's decade include not only the promotion of hi-tech industries and those which offer high productivity but also the promotion of firms which satisfy increasing domestic demands, as well as those which reduce Japan's dependence on the outside world and those which rationalize its energy consumption (Anezaki 1989). Once again thus Japan's ministerial industrial policy is characterized by a wide range of criteria which are both ambiguous and internally contradictory. There are no guidelines for those situations when a firm meets some, but not other, of the listed criteria. There is a real danger of a return to the prior emphasis on self-sufficiency.

Alongside the established priorities focusing on goods are those focusing on enterprises (especially large enterprises); and alongside the export priority

(particularly emphasized until the early 1970's) one finds an emphasis on self-sufficiency favoring of national production. This system of multi-priorities could not fail to lead to internal inconsistencies, discretion, and to internal rivalry over the granting of subsidies. In order to palliate pubic opinion new criteria were also devised in the 1990's granting a premium to investments designed to improve living standards. These new criteria complicated and distorted the overall meaning of "priorities".

In summary, the within author cannot share Nestler's view that the Japanese government (i.e., MITI), in attempting to formulate Japan's production and export structure, intentionally favored hi-tech industries. Even if they flourished, they did so for other reasons.

4. Anti-import protections and innovation

The scholarly work of J. Zysman (1983), who discusses in a clear manner the role of the government in funding industrial development, is worthy of separate treatment. In his opinion the Ministry of Finance, through its contact with the private system of commercial banks and its ability to directly influence the lending policies of government banks, promoted hi-tech industries. Unfortunately, like most of his colleagues of the GM school of thought, he fails to provide empirical data to verify his postulates. A similar position in this matter is taken by other statist economists (Boltho 1985; Vogel 1981). Before further addressing these matters, however, let's return to the matter raised in the sub-title of this section: the protection of domestic production against import competition during the "maturing period" of new industries.

The topic of protective tariffs for industrial production has long interested many economists, including Polish economists, and is thus worthy of our attention. It is basically a reasoned extension of the concept of *infant industries*. Tyson and Zysman (1989) present their view of Japanese governmental strategy during the period of accelerated economic growth in the 1960's, as follows:

"The theory underlying industrial structure policy was to place underdeveloped domestic industries with little competitive power under the government's active interference and to build up large scale production system, while limiting entry into the domestic market of foreign enterprises...." (p. 69).

Further on they add that:

"Import substitution created circumstances in which innovation took place and allowed maximum advantage to be harvested from such innovations." (p. 127 and others).

These are clearly oversimplifications. In the first place, it's difficult to imagine, even under the most favorable of circumstances, how placing industries characterized by low production efficiency under the orbit of governmental care and protection would suddenly transform them, as if by the touch of a magic wand, into highly competitive industries. If such were the case the problem of inefficient enterprises would be erased altogether. Secondly, original and contemporary solutions to production processing and technical organization flowed into Japan *from the outside*, not the other way around. While it's true that this concerned primarily the import of technology, it's equally difficult to imagine overall technical progress occurring on a large scale within a closed economy without foreign trade.

A close review of Zysman's work raises additional questions. The author fails to mention that in addition to its prohibitions against competitive imports Japan perhaps even more strongly prohibited the import of foreign capital. One of the reasons was its financial concern that the transfer of profits abroad would further weaken its already disadvantageous foreign trade balance. It also feared the monopoly potential of large international enterprises and desired to protect small domestic firms. Most likely, however, the decisive factor in Japan's decision to restrict the import of foreign capital lay in its fear that strategic industries, such as advanced technology, would become controlled by foreign capital.

While a number of noteworthy economists warn of the dangers of economic isolationism in the form of import restrictions (Krueger 1993, 1995; Bhagwati 1988), the "revisionists" suggest that the fencing off of Japan's domestic market created the financial resources for the expansion of exports. But at what price? The prohibition against outside firms – both foreign and national – entering protected production areas could produce a number of unintended consequences:. Instead of encouraging export, by fencing off imports domestic cartels avoid international price and quality competition and are thus able to assure for themselves high incomes. S. Callon (1995, p. 41) is right in suggesting that the maintenance of high domestic prices by granting monopolies over supply is a negative and often overlooked consequence of closing domestic markets off from foreign competition. It becomes highly likely that the high profits will produce intensive internal rivalry over shares in the oligopolistic market. This takes place to the detriment of the consumer, as the oligopolistic enterprises are not required to provide the lowest priced and highest quality goods in order to compete with large foreign enterprises competing within the context of an open international market.

Zysman postulates that Japan's tariff protectionism of production continues to encourage innovation in such contemporary fields as new materials,

electronics, telecommunications, or biotechnology; and that import restrictions have been lifted in those areas where they ceased to have any significance, i.e., in those industrial branches and sectors where Japanese firms have attained 100% competitiveness. (p. 129) Without underestimating the importance of so-called "invisible import barriers", i.e., intermediary distribution through tried and tested national channels, nevertheless it should be recalled that we are talking now not about the 1950's, where the application of governmental economic interventionism was widespread, but the 1990's, where world markets are subject to international agreements and protectionist measures may bring about swift retaliatory responses.

In addition, once the state includes a selected enterprise under its protective umbrella, that enterprise frequently becomes complacent and puts off its moment of achieving "maturity". It becomes much more convenient to exert political pressure to continue receiving governmental preferences than to seek and implement that innovation which would assure unaided competitiveness. The authors remain convinced of the efficacy of selected interventionist mechanisms in bringing about technological progress: government regulation, common R&D initiatives among enterprises, subsidies and tax incentives, and even the organization of cartels. In the meantime all these legal mechanisms share in common the characteristic that their efficiency (or lack thereof) cannot be properly assessed until after they have been implemented. In addition in many cases they are simply a reflection of existing business conditions and do not necessarily represent an independent governmental initiative (the problem of relevancy). In addition the successfulness of subsidies, tax incentives, and other interventionist mechanism depends in the first instance upon the proper selection of priorities, which is difficult to assess. Finally it must be borne in mind that subsidies constitute a significant burden on national budgets and taxpayers, and this burden must be taken into consideration not only in the case of their failure to achieve their aims (in the case of failure of private investments, of course, only the private investors lose), but even in making a final assessment in those cases where industrial targeting results in a commercial success.

J. Zysman is a faithful adherent to the concept of "dynamic comparative advantage", which is inextricably linked to the developmental function of government. According to these tenets, conscious governmental planning and intervention can secure future competitive conditions for those selected branches of industry which the government chooses to take under its wing. This theory assumes that market signals reflecting the current position and profitability of particular branches of industry in light of existing labor and capital resources are not always reliable indicators for undertaking appropriate structural decisions. This reasoning is based on belief in the "ripple effect" of technological

spillovers and the so-called "new theory of trade" (Brander, Spencer 1985). According to the author private enterprises are guided by static existing market conditions, such as current comparative advantage, in their production-investment decisions, and fail to appreciate the prospects for future evolution. The MITI and/or other governmental agencies responsible for the economic development of the nation as a whole must, on the other hand, select those branches of industry which, although currently not in a position of comparative economic advantage, are characterized by long-term prospects for success, in particular a high income elasticity of demand and good potential for growth in production efficiency. (p. 66)

The author fails to take into consideration the following issues: 1) Even among enterprises engaged in the same branch of industrial activity one finds promising firms (the support of which makes good economic sense) and weak firms which are unable to produce quality goods at competitive costs (the support of which would constitute "a waste of money); 2) once an enterprise begins to become profitable as a result of increase in demand, the governments selection indicators no longer make economic sense as they become unnecessary; 3) it's difficult to agree with the author's postulate that governmental administrative officials possess a greater predisposition than business executives for seeking new solutions. On the contrary it would seem that producers, who find themselves "in the line of fire" would be much more likely to seek alternative solutions to problems than bureaucrats, whose work often takes on a routine nature. In addition there is the problem of practical knowledge transfer, which again seems much more likely to occur in actual market conditions.; and 4) Zysman identifies upgrading with high production efficiency. This is not always the case; in fact often the reverse is true.

In concluding this section, it must be stressed that the anticipation of comparative economic advantage over the long-term is extremely difficult to realize in practice.

5. L D'Andrea Tyson in defense of trade regulation

Ms. Tyson, who spent several years as Trade Advisor to USA President Bill Clinton, has devoted a great deal of time and effort urging the United States to adopt a so-called "strategic trade policy" based on managed trade. In her opinion

"Technology-intensive industries clash with the assumptions of free trade theory – and with the largely static economic concepts that are the traditional

basis for U.S. trade policy – in several ways. In such industries, costs tend to fall and product quality tends to improve over time, the returns to technological advance tend to spill over into various other activities, and barriers to entry and first-mover advantages tend to result in imperfectly competitive industrial structures. As a result of these characteristics, a nation's comparative advantage in such industries is less a function of its national factor endowments and more a function of strategic interactions between its firms and government and the firms and governments in other nations." (Tyson 1990, p. 153).

The author's reasoning is squarely based on the so-called "new theory of trade"[1], which assumes the existence of strategic industries distinguished by high profits (having a oligopolistic market position), advantages springing from the spill-over effect, payment of high wages and maintenance of high production efficiency, and characterized by the need for heavy investment into R&D. In the author's opinion the government has a fundamental duty to select proper production fields and promote their international development in order to increase domestic growth and wealth at the cost of foreign competitors. In addition, because other highly-developed countries – in particular Japan – protect their hi-tech industries by various mechanisms aimed at limiting competitive imports (including those from the USA), the government should support domestic monopolies in order to secure for itself the highest possible share in the global market for its strategic industries such as semi-conductors, computers, and telecommunications. Thus Ms. Tyson strongly advocates trade regulation and governmental intervention, both in terms of export and import policy.

Before beginning a detailed analysis of Ms. Tyson's reasoning, it should be stated that even if one accepts much of the reasoning and achievements of the "new school of trade", they need not be identified with the necessity of active governmental intervention or the protection of selected strategic branches of industry, a false assumption which underlies Tyson's work. It is also intriguing that this well-known figure in American politics acknowledges the validity of several principles which significantly restrict the application in practice of regulated trade, while at the same time remaining a spokesperson therefore. She herself lists three problems associated with trade regulation:

1) proper identification of strategic branches and precise assessment of the advantages to be attained by their support ;

[1] There is a great deal of literature concerning this school of thought. As representative works one may cite: P. Krugman (ed.), *Strategic Policy and the New International Economics*, MIT Press, Cambridge Mass., 1986; and J. Brander, B. Spencer, *Export Subsidies and International Market Share Rivalry*, „Journal of Inernational Economics", vol. 18, February 1985.

2) variability of intervention mechanisms and, associated therewith, uncertainty as the effects to be attained in particular branches, assuming an oligopolistic structure; and
3) she acknowledges the validity of the observation that in order to profit from the effects of new technology, they need not necessarily be implemented in domestic enterprises.

One could similarly profit from the spill-over effects of new technologies applied in foreign firms, and that for free, without risking the investment of domestic capital.

Despite acknowledging her "sympathy" for the above views, Tyson proposes what she considers to be the crowning argument in favor of the manipulation of foreign trade. It is reduced to an argument that the so-called Schumpeter theory of production efficiency should prevail over the Ricardian theory, which means in essence that prediction of prospects for economic structuring should be based on *future* costs, not current ones. (It is worth noting as an aside that no major corporations plan their expansion based on current costs). Tyson's theory remains unclear and she gives no indications how it should be applied in practice, nor does she offer any empirical data showing how this dynamic approach has been quantified in any application in the case of Japan's advanced, hi-tech industries.

In addition, expanding the decision-making framework to include long-term horizons does not necessarily strengthen the case for governmental intervention. On the contrary, over the longer perspective it would seem that barriers to entry onto the market would diminish, thus the argument for "guiding" profits loses its sense (Dixit 1990). In addition, the reciprocal relationship between "market distortions" in the high-tech sphere, consisting on the one hand of the existence of external effects and on the other of monopolistic profits, means that a policy of softening one effect may harden the other (Grossman and Helpman 1989).

One of the creators of the "new theory of trade", P. Krugman, acknowledges the complications which can arise from its application. It is difficult not to agree with his reasoning. He posits that in the first place there is the problem of separating profitability (particularly in cases of high income arising from labor or capital production factors) from quality. If a given branch is characterized by a particularly high yield, it may simply reflect the high qualifications of its staff, in which case any interventionist promotion seems unnecessary. The same is true if artificially high wages are maintained as a result of political pressure rather than as a result of producing value-added products.

Secondly Mr. Krugman notes that a situation may be encountered whereby a number of firms in a given branch achieve high profits while others in the same branch are not yet stabilized and may be operating at a loss, which has the effect of lowering the overall profitability of the entire branch. While the effects of specific government policies may result in a temporary "boom" in a targeted branch of industry, raising profits and salaries of enterprises benefiting from the policies, these benefits may not necessarily be passed on to new enterprises, and their employees, in the same branch of industry. In this sense the specific industrial policy may be said to fail to achieve its goal of proper reallocation of resources and increased overall profitability for a targeted branch of industry. And finally, the existence of a range of externalities are difficult to appraise in ordinary market terms. It is true that several efforts at quantification have been attempted, but in each case they were carried out *ex post,* and not *ex ante.* (Krugman 1986; Krugman 1994).

Next Ms. Tyson considers alternative methods for regulating trade (Tyson 1992). According to her a natural consequence of industrial targeting in the area of hi-tech industries is the protection of domestic producers and provision of export guarantees. This is achieved by the conclusion of trade agreements known as VIE (*voluntary import expansion),* which act analogously to the better known VER's (*voluntary export restraint)*; except that in the case of VIE's one country establishes a minimal value for its imports from another country. Thus unlike VER's, which are typical instruments of protectionist policy[2], it is Ms. Tyson's opinion that VIE's serve to develop trade and competitiveness on international markets, since potential exporters engage in price rivalry over the "fulfillment" of import quotas (p. 262).

Ms. Tyson also recognizes that, alongside the decidedly more efficient VIE's, governments may impose anti-dumping tariffs, which are usually short-term barriers designed to protect domestic producers. While these tariffs inevitably lead to increased prices, they constitute a source of government income which can in turn be used to subsidize the aggrieved domestic producers. While the author indicates her own preference for production subsidies, she acknowledges that in light of America's large budget deficit and the likelihood of other governments imposing retaliatory measures, the use of temporary anti-dumping tariffs constitutes a more practical solution. Finally Ms. Tyson also proposes subsidies for R & D for American hi-tech firms.

[2] A VER agreement increases prices and limits the supply of foreign products without securing a long-term increase in the competitiveness of domestic products. In addition, in contrast to protective tariffs, such agreements do not bring in income for national governments.

In attempting a brief critical analysis of the Ms. Tyson's proposed methodologies and assessments, and leaving aside questions concerning the underlying policy justifications for the manipulation of foreign trade, I would like in the first instance to note that the VIE formula, like all other forms of trade restrictions, encourages the formation of cartels, increases prices, and is inconsistent with the GATT policy of nondiscrimination. Empirical research has confirmed actual instances of such increased prices.

Ms. Tyson acknowledges that the methods she proposes are not free from criticism and contain their own restrictions, but she nevertheless rejects the neoclassical free trade theory, arguing that it fails to take into account existing realities and is politically unresponsive. This naturally raises the response: how realistic are Ms Tyson's conceptions? In the opinion of this author they contain a number of inconsistencies and contradictions, and there is no certainty in her assessment of likely reactions of foreign governments and both domestic and foreign producers. Allow me to list just a few of my doubts. Ms. Tyson opposes free trade with "simple" protectionism, and some of her core solutions, such as anti-dumping tariffs, are intended to be of a provisional nature only. She forgets, however, that temporary solutions have a tendency to become permanent, and government agencies in charge of international trade frequently support enterprise's aims to increase prices. In addition, taking into consideration the arguments for interventionist policies in three spheres – antitrust, anti-dumping, and VIE – one might ask why, for example, the Japanese government would wish to conclude a bilateral agreement with the USA? It also seems that Ms. Tyson devotes little attention to influence and activities of GATT (WTO). And finally, one always has to take into account the possible political and economic consequences of retaliatory measures on the part of other countries in the event the USA implemented some or all of Ms. Tyson's proposed measures.

Ms. Tyson unnecessarily demonizes the effect of restricted access to the Japanese market for certain U.S. goods, seeing it in terms of loss of jobs throughout the *entire* economy; and treating the development of the Asian countries as a threat to overall USA GNP *per capita.* In the meantime, as demonstrated by Krugman (1996), economic performance on the global market is not a zero-sum game, and competition between particular enterprises should not be identified with competition between national governments. If a particular branch of industry is being outstripped by foreign competitors, that indeed signifies a problem for the enterprises involved in that branch of industry, but in the overall economic development of the country a comparative advantage will necessarily arise for some other branch.

In conclusion, it is this author's opinion that Ms. Tyson's arguments are unconvincing as regards the selection and promotion of future industrial

structures (the enigmatic comparative advantage proposed by Schumpeter). Neither are her arguments in favor of controlled foreign trade acceptable. It is not enough to posit, as Ms. Tyson does, that "other governments are doing it". For even if specific strategic branches of industry could be identified (a highly difficult task in and of itself), at least three problems are raised. First, the process of predicting concrete economic advantages is very complicated, and the outcome uncertain; indeed empirical research has suggested that the obtained advantages are likely to be minimal (Krugman, Smith 1994). Secondly, intense competition for the allocation of government resources among domestic enterprises may give rise to improper selection processes. And thirdly, subsidizing domestic oligopolies may not give rise to increased profits; on the contrary the opposite effect could occur in the event of a trade war between international potentates (a result which is easy to envision on more than just a theoretical level).

Thus it seems that the concept of regulated trade and bi- or multi-lateral trade agreements does not constitute a plausible alternative to the neoclassical free market theory, according to which foreign subsidies bring about direct profits to domestic consumers in the form of decreased prices and to producersby spill-over in the form of the "free" know-how generated by foreign subsidies. In the case of artificially lowered prices, the losers are those who dictate them.

6. Conclusions

The revisionist economists present Japan as a homogenous society, isolated from the rest of the world and controlled by an all-powerful government administrative machinery implementing an expansive policy designed to control foreign markets. Japan is presented as the "predator" of foreign trade, using unfair trade practices and specifically Japanese solutions designed to escalate export, particularly in hi-tech industrial branches. In the opinion of the authors of the GM school Japan's economy is characterized by close contacts between the governmental administration and business executives, resulting in the formation of special "arrangements" within industrial organizations (*keiretsu*), high and permanent trade barriers, and an aggressive and dynamic process of selecting the industries of the future.

The overall nature of the above observations is accurate enough (although with the passage of time certain elements have lost their significance or even become out-dated), but their close identification with Japan's successes may be

exaggerated. Nevertheless the revisionists go on to encourage the American government to adopt industrial policies *a la Japonais,* and in particular to create public/private R&D cartels and to create a U.S. governmental agency which would control trade and industry along the pattern assigned to MITI.

These ideas fell on fertile ground in the early 1990's among a significant a number of American politicians and business executives at a time when America was suffering significant economic effects associated with their foreign trade deficit with Japan. It was much easier to blame this foreign trade deficit on Japan's "otherness" than on American incompetence and poor foreign trade practices. Such arguments are influenced by business cycles and gain strength in times of recession when governments experience problems balancing their budgets and economic prospects for businesses are declining. While Johnson, Zysman, and Tyson present their ideas as an alternative to the conventional wisdom regarding Japan, in fact similar fears were expressed and the same policy objections made in the United States two and three decades earlier (Kaplan 1972, Yanaga 1968).

Economists representing the GM school of thought see exclusively positive effects arising from Japan's selective industrial policy. I am unable to agree with their interpretation, however, as it does not stand up to practical verification. I also cannot agree with their postulate that fencing off the Japanese economy from competitive imports encouraged the development of domestic hi-tech industries. The costs associated with this closing off of their market are not assessed, i.e., the costs to domestic consumers of subsidizing export production.

The role of governmental administration in encouraging the development of high-tech industries is also overstated and represents a relic of "other times", failing to take into account the changes which have occurred in the interim. Statist economists are making a mistake when they encourage the American government to take steps restricting the access of Japanese goods on the American domestic market. Such a step would only have the effect, contrary to the intention of its adherents, of increasing the role and authority of MITI.

There is also a striking failure on the part of revisionist economists to place sufficient emphasis on the elements of pluralism in Japan's politico-economic model. They stress the role of *consensus* in securing and maintaining public acceptance of the promotion of hi-tech industries and of the aims set forth by the MITI, without taking into account the conflicts, competition, and conflicting interests which were actually expressed (Calder 1988). This mistaken methodological approach results from the failure to collect and analyze empirical data, especially at the lower level of economic activity.

In their review of the Japanese model of capitalism these economists pretend that the negative features associated with over regulation of the

economy, such as the lack of quick response to signals emanating from the market or the maintenance of high trade barriers, simply did not occur in Japan. In this author's opinion, however, these symptoms were and are evident as a result of Japan's industrial policies *vis a vis* high-tech industry.

One may discuss at length the postulate of Japan's "uniqueness" (Boltho, Hardie 1985). Undoubtedly certain particular characteristics of the Japanese economy are observable (every country has them), but one may question how permanent they are or whether they guarantee economic growth. If it were otherwise, Japan should have achieved her economic success much earlier and not have encountered the significant structural problems that awaited her in the 1990's. In addition the theses presented would be capable of confirmation only based on an empirical historical analysis of the many institutions involved in Japan's hi-tech industry and their sectoral scope. The revisionist authors do not collect any research on this matter, much less attempt this type of analysis.

My final conclusions analyze the value of the works offered by the GM school of thought as regards two issues: 1) an objective description of Japan's actual economic system; and 2) indicators which would enable the assessment of the actual implementation of Japan's selective industrial policy as regards hi-tech industries. In both instances the theoretical achievements of the revisionist economists fail to provide any evidence which would verify the thesis that the development of Japan's hi-tech industries was exclusively or even primarily due to the role of government. The gaps and omissions in the "evidence" they offer spring from their adoption of either incorrect or incomplete methodological assumptions: conducting research only at the upper levels of the economy, lack of empirical evidence, and use of a static model which fails to take into account changes over time.

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