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Yen Appreciation, Structural Reforms and External Imbalances ---International and Domestic Factors in Japan's Economic Adjustment---

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March 1989

To be presented for International Symposium "Global and Domestic Factors in International Cooperation" sponsored by Harvard Center for International Affairs, Instituto Affari Internationali, National Bureau of Economic Research and NIRA on April 3-4, 1989 at Trento, Italy.

I. Introduction - defining the issues

The yen appreciated by nearly 100 percent against the U.S. dollar in the relatively short time span (i.e. from about ¥260 per dollar in the first hall of 1985 to ¥130 per dollar in the second half of 1988). Despite such substantial appreciation of the currency, the Japanese economy has expanded since mid-1987 at much stronger tempo than expected. In the second half of 1987, the economy began to recover, registering the annual growth rate of domestic demand of 8.4 percent and GNP of 6.8 percent. The expansion continued in 1988, when domestic demand and GNP grew by 7.7 percent and 5.7 percent, respectively. As indicated by the gap in the growth rate between domestic demand and GNP, increases in net imports (imports of goods and services minus exports) amounted to 1.5 percent and 1.9 percent of the GNP growth, respectively, in the second half of 1987 and the whole year of 1988. In other words, the Japanese economy has successfully switched from exports-based-expansion to domestic demand-based-growth. In fact, imports of goods and services including investment income paid abroad increased by 22.7 percent in real terms in the second half of 1987, whereas exports expanded only modestly by 9.9 percent per annum. In 1988, imports continued to expand by 21 percent as against of a 12 percent increase in exports (Table 1).

Does this speedy reorientation of the Japanese economy reflect successful implementation of structural reforms in such a short span of time? Does it simply reflect resilient market mechanisms at work in Japan or policy enforced structural "reforms"?

An important issue has been raised in Japan : micro economic structural reforms are irrelevant to reduction of the current account imbalances, since the latter imbalances are essentially macro economic phenomena of domestic investment-saving imbalances. What are then structural reforms in Japan? In view of the fact that the need for structural reforms in Japan has been advocated in the context of a national policy goal of reducing its large current account surplus, where and how should we locate such reforms in international economic cooperation in the period after the G-5 Plaza meeting in September 1985 ? This issue of the location of structural reforms in the present framework of international economic corporation has not been well discussed. As known well, three basic policy instruments have strongly been recommended to unwind huge international payments imbalances : (1) exchange rate adjustments (e.g. stronger yen and weaker dollar), (2) domestic demand expansion in surplus economies, and (3) fiscal deficit reduction or I-S imbalance improvement in the U.S. How have then structural reforms contributed to increasing domestic demand in Japan as one of the policy instruments?

It goes without saying that structural reforms must have confronted strong resistance from vested interest groups who might loose their own interests if reforms are implemented. And yet, how have structural reforms become Japan's own national interests? Who or which economic agents have actually adjusted so quickly to the yen appreciation?

This paper attempts to shed light on these questions, in particular focusing on the following : (1) the nature of structural reforms and their relevances to macroeconomic excess

of savings over investment in Japan, (2) driving forces of structural reforms and international policy coordination, and (3) characteristics of current restructuring of the Japanese economy.

II What are structural reforms in Japan?

In late 1985, the Advisory Group on Economic Structural Adjustment for International Harmony, or the so-called Maekawa committee (chaired by former governor of the Bank of Japan, Haruo Maekawa) was established by then prime minister, Nakasone. The committee was composed of 17 experts in various areas, ranging widely from macro-economics to trade and finance. The purpose was to conduct a study on policy measures to restructure the Japanese economic system in response to its large external surplus so as to reorient the economy toward international harmony. International harmony is the key word to the purpose and orientation of the restructuring the economy. As well known, structural problems and hence needed structural reforms are unique to a country or region. As often claimed, an important structural problem confronting the U.S. is the shortage of domestic private savings. In Europe, the labour market rigidity is identified as one of the most important structural problems. For Japan, neither of these problems have been identified as its own structural issue, since its savings are abundant and its labour market is flexible. By international harmony, it is meant that the Japanese economic system and policies should be internationally compatible. The excessively export-based-economy can not be internationally harmonious to the economic development of other countries. What policy measures

can contribute to this reorientation of the economy? Its good export performance and its large external surplus can be the effects of the flexible labour market and abundant savings in Japan as compared with other countries. Should the reorientation toward domestic demand-based-economy then suggest that the labour market should be less flexible and that savings should be substaintially reduced for the sake of attaining international harmony ? Answeres are clearly negative. What are then the "problems" in Japan? High savings, high work ethnics and high flexibility of labour adaptation to new technologies can not be claimed as problems. It is instructive that when the OECD very recently attempted to produce "structural performance indicators", it suggested such indicators as export performance and productivity improvement, the trade-off relationship between the rate of unemployment and inflation, and the saving and investment rates. All these indicators, however, point out the reality that Japan faces no serious structural problems as compared with the U.S. and Europe, so long as one judges from these indicators.

What problems did then the Maekawa report (submitted to the prime minister in April 1986) identify as structural ones and required reforms unique to Japan?

Its recommendations are essentially threefold : (1) promotion of housing and social infrastructure (i.e. land and urban development measures and expansionary fiscal policies), (2) improvement of market access through lowering non-tariff barriers such as quantitative restrictions, particularly in agriculture, standards and certifications, government procurements, and privatization of public enterprises (i.e. broadly-defined

opening up policies), and (3) restructuring Japanese enterprises to encourage intra-industry international division of labour and direct investment abroad (i.e. restructuring at the enterprice level).

The Maekawa report claimed that the promotion of domestic demand particularly through housing improvement and social infrastructure development should reduce Japan's external surplus and that improvement of market access should contribute to import promotion while direct investment abroad should substitute for exports. At first glance, these suggestions are quite reasonable and understandable. However, two important basic issues are not explicitly addressed in the report.

First, there is no clear statement on what should be the basic stance of macroeconomic policies. The most important issue in this regard is whether expansionary Keynesian monetary and fiscal policies would undermine the medium-tern orientation of macroeconomic policies which was strongly recommended by OECD ministerial meetings in the early 1980s on a basis of learning from the failure of stimulative Keynesian policies to promote output and employment over the medium-run. In particular, the report did not address the international macroeconomic issue of the policy mix of expenditure-switching (i.e. exchange rate changes) and absorption-increasing policies for surplus economies under floating exchange rate regime. This policy mix issue is extremely important even if the fine-tuning Keynesian policy is allowed to be undertaken, because domestic demand boost alone would simply result in overheating the economy unless the

currency appreciation discourages Japan's net exports which had been expanding in 1982-85 due largely to the U.S. fiscal expansion-induced-dollar appreciation.

Second, the issue of the market access has two aspects to be discussed. One is the micro-macro economic interrelationship between the improvement of market access and possible reduction of external unbalances. Since external imbalances, i.e. exports minus imports, equal domestic savings minus investment, Japan's external surplus will not shrink unless either domestic savings decline or domestic investment increases. The Maekawa report did not, however, clarify how the improvement of Japan's market access can alter such domestic savings-investment imbalances. The other issue is that the Maekawa report presumed that the Japanese market is closed, without assessing "how much closed" it is. The Economist recently notes (February 25,1989) "But the World Bank has calculated that in 1981-86 the extent of Japan's trade protection through non-tariff barriers fell a little, while the EEC's rose by nearly 20 percent and America's by nearly a quarter" However, this data does not tell us levels of protection but only the direction of protection movements (Table 2). The Economist continues "As for manufactured imports, half the studies suggest that Japan buys from abroad just as much as you would expect given its GNP level, its lack of raw materials and its high transportation costs (associated with the distance from its trading partner countries). But if there is a discrepancy between Japan's manufactured imports and, say, West Germany's, there is no evidence that protection is the cause of it." (parenthesis inserted by this author). Since protectionism in the EC and the U.S have been intensified in the 1970s and 1980s

which were often claimed to be justified by the presumption that Japan's market is most closed or that levels of Japan's barriers are highest. Serious assessment based on economics, not on anecdotes, regarding the closedness of the Japanese market should have important international implications, but the Maekawa report failed to do so. (for the debate, please see Bergsten and Cline 1985, Saxonhouse 1983 and 1987, Balassa and Norton 1988)

The thrust of Japan's structural reforms is to meet the strong demand by Japanese people that their living standard should be enhanced so as to reflect to a possible extent the currently strong exchange rate of the yen. This demand should be interpreted not simply as the demand for fuller pass-through of the improvemed terms of trade to final consumer prices but as the enhancement of the domestic purchasing power of the yen, closer to the actual exchange rate. In 1987, per capita GNP in Japan in dollar ($19.400 at ¥140 per U.S. dollar) exceeded that in the U.S. ($18,500). Yet, Japanese people do not feel that they become too that rich. According to the OECD calculations, the nation-wide purchasing power party (GNP PPP) for the yen is ¥214-¥220 per U.S. dollar in 1986-87 (OECD, 1989), compared with the actual exchange rate of about ¥130 per U.S. dollar in 1988. Since Japan's manufacturing sectors (its main tradable sectors) accounting for approximately one-third of total value added are now capable of surviving the present strong exchange rate , this overall GNP PPP of ¥220 per dollar suggests that "equilibuim" exchange rate for Japan's non-manufacturing sectors which account for the remaining two-thirds of total national value added must be about ¥260 per dollar. In fact, another OECD study (OECD 1985) clearly suggests that "expenditure PPP" for

foods, beverage, electricity, transportation management, education, and housing construction would be around this low level.

What accounts for this large gap in ppp between manufacturing and non-manufacturing sectors in Japan? Since levels of average nominal wages are more or less same for both manufacturing and non-manufacturing, the strong exchange rate for manufacturing must be a result of its high productivity and high efficiency and hence its low prices. By contrast, the weak exchange rate for non-manufacturing must mean the reverse, i.e. its low productivity and low efficiency and hence its high prices and charges. These high prices and expensive charges in Japan's non-manufacturing sectors in turn yield the domestically weak yen of GDP PPP at ¥220 per dollar as compared with externally strong yen of ¥130 per dollar. Living standards can be improved by enhancing the domestic purchasing power of the yen, which can in turn be realized by improving productivity and efficiency in non-manufacturing. Non-manufacturing sectors range from agriculture to distribution, housing, construction, transportation, education, banking, and insurance. For instance, some of Japan's agricultural prices are five times as expensive by international standards at the present exchange rate, suggesting that the "equibilium" exchange rate for Japan's agricultural goods would be ¥750 per dollar. Likewise, other sectors in non-manufacturing suffer from low productivity and hence weak "equilibrium" exchange rates.

Why has such a large gap in productivity emerged between manufacturing and non-manufacturing? Two basic reasons can be cited. One is the sheer fact that when an economy rapidly

industrializes itself, the productivity of manufacturing sectors tends to improve much faster that of non-manufacturing ones. During the high growth period in Japan, the so-called productivity-differential-inflation rates emerged between the wholesale price index (WPI) and the consumer price index(CPI). While the WPI remained nearly flat throughout the whole high growth period, the CPI increased by 5 percent or so per annum. This inflation rate differential arose from productivity growth differential, namely, the annual rate of increase in labour productivity was approximately 10 percent for manufacturing but only five percent for non-manufacturing , given about 10 percent annual increase in nominal wages which were more or less common to both industries. As a result, unit labour costs remained largely unchanged for manufacturing but increased by 5 percent per annum for other industries. The Japan's high growth period conincided with the fixed exchange rate period, but this inflation rate differential between the tradable and the non-tradable sectors must have resulted in the energence of a gap under the floating exchange rate regime between an externally strong yen reflecting completely stable labour costs in manufacturing on the one hand and an internally weak yen reflecting cumulative rises of the CPI over time on the other. The productivity improvement differential has continued in the 1970s and 1980s. In 1987, the level of value-added per employment in non-manufacturing was only two-thirds that of manufacturing in Japan (EPA, 1988).

The other reason for the gap in productivity is that while manufacturing has constantly been exposed to tough international as well as domestic competition through the series of

international trade liberalizations. By contrast, non-manufacturing sectors such as agriculture, distribution, construction, housing, transportation, educaion, banking and insurance have in general not been exposed to such tough competition due to various kinds of regulations. Regulations have in turn hindered stronger growth of labour productiiivity in non-manufacturing. Therefore, structural reforms in Japan, which is aimed at raising living standards so as to reflect to a maximum possible extent the externally strong yen, mean that presently expensive prices charged by non-manufacturing sectors are to be reduced through de-regulations and liberalization and resultantly through rationalization and productivity improvement comparable to manufacturing.

Japan's agricultural protection is often cited as one of the most important structural reforms to be done by liberalization since the protection levels are among the highest (Table 3).

It is interesting to note that Japan is the largest customer for U.S. agricultral exports, accounting for nearly 20 percent of its total, 77 percent of its. beef exports and 55 percent of its grapefruit exports. Moreover, the liberalization of agricultural protection advanced most in 1988 among other reforms. Most importantly, quantitative import restrictions on beef and oranges were decided to be abolished by 1991, together with rapid increases in the import quota during the transition period. In addition, such restrictions on beef will be replaced by a 70 percent tariff which will be progressively reduced to 50 percent by 1993. Quantitative restrictions on 8 other agricultural products such as processed cheese, pineapples and beans will be abolished by April 1990. The number of the

remaining agricultural products subject to import quotas will thus be reduced to 13 including rice. Rice is now subject to the Urguay Round multinational negociations, together with EC common agricultural policy and U.S. "waiver" agricultural products (See Table 3).

However, agricultural output accounts for only 3.5 percent of GNP, compared with two-thirds of GNP produced by whole non-manufacturing. Non-manufacturing sectors other than agriculture are also to improve their productivity through deregulations and liberalization.

III. Driving forces of structural reforms and international policy coordination.

As emphasized in Section II, the driving force for structural reforms in Japan is the substaintial appreciation of the yen which have accentuated and highlighted the gap in the purchasing power of the yen between external and internal. The aforementioned agricultural liberalization is the typical case where price differential between domestic and international has so much widend that Japanese people now feel that they are paying too much even after taking into account alleged benefits of food security obtaind from such protection. At the same time, important changes in international understanding on world-wide agricultural protection policies have worked in favour of Japan's liberlization. The Tokyo Summit in 1985 and the OECD ministerial meeting in 1986 contributed to such a change, where it was widely admitted that agricultural protection policies which every

country is engaged in is "sin". However, together with the Recruit stock scandal and the introduction of consumption tax effective April 1, 1989, such agricultural liberalization is counted as one of the factors responsible for defeats of the LDP party in local elections in 1989, particularly in Fukuoka prefecture in February, throwing dark shadow over the governing party as to the upper-house election scheduled for July 1989.

This agricultural liberalization process suggests how such liberalization became possible politically. First, in the absence of international pressure and negociations, the Japanese government would have considerably delayed the adoption of the liberalization measures. Second, the quick liberalization was possible only because minority within the government actually favoured such deregulation polisies on domestic ground, particularly due to the extraordinally widened gap between domestic and international prices caused by the yen appreciation, as noted above.

International macroeconomic coordination after the Plaza meeting has also highlighted the interaction between international pressure and domestic interests. First, in the absence of international pressure whether it was right or wrong, the adoption of expansionary macroeconomic policies in Japan would heve been more considerably delayed. Second, the unprecedentedly large appreciation of the yen in the very short period exerted increasingly stronger deflationary effect on manufacturing sectors in the due course of 1986. Domestic interests echoed to international demand for Japan's domestic demand stimula.

There are two basic differences in international economic problems in the post-Plaza period compared with 1977-78. One is the emergence of largest international payments imbalances relative to GNP and associated largest and sustained change in the exchange rate in the post-Plaza period. The other is the emergence of huge fiscal deficit of the dominant key currency country this time, whereas such problem did not exist in 1977-78. In 1977-78, the legacy of the first oil price hike and different adjustments to such crisis among major countries remained the core issues for international macroeconomic coordination, which was aimed at smooth recycling of petro-money and at maintaining world trade expansion. By contrast, the post-Plaza international cooperation has attempted to deal with the issue of sustainablity of the current account deficit of the key currency country and hence the dollar problem.

The different nature of international economic problems is bound to be reflected in the different interactions between international pressure and domestic interests. In international economics, it is a well established policy prescription that the exchange rate change should be accompanied by expenditure-increasing policies in surplus economies (Japan and West Germany) and expenditure-reduction policies in the deficit country (the U.S.), if external imbalances are to be corrected effectively. In modern democracy, absorption-increasing, namely, belt-easing policies are far easier to be implemented than absorption-reducing, i.e. belt-tightening policies. This asymmetry in adjustment policies has featured the latest world economic development. Once currencies substantially appreciated and resultantly deflationary pressure fell on surplus economies, it

was a matter of time that Japan adopted such absorption-increasing policies for its own interest. Such political mechanisms do not work in a timely fashion for the U.S. where belt-tightening policies naturally confront strong social resistance, as indicated by political difficulties in cutting down the budgetary deficit. Because of this delay in expenditure reduction policies in the U.S. the possiblity of overheating of the economy has increased since the early 1988, requiring monetary policy to eliminate excess demand in the place of fiscal consolidation.

However, international monetary policy coordination is now extremely fragile, given this inability to implement the needed fiscal consolidation in a timely manner in the U.S. The inflation control by monetary policy is more effective under floating exchange rate regime because not only the direct effect of the tightened money supply or high interest rates but also the indirect effect of induced currency appreciations contribute to inflation control. However, the induced currency appreciation of the dollar tends to export inflation to other countries and exercabate the potential inflation problem of surplus countries particularly when the business cycle is also getting matured in surplus economies like in 1989. If these countries raise their own interest rates in order to stem inflation acceleration , the inflation control in the U.S. may be undermined, leading the U.S. to even higher interest rates. At the time of inflationary circumstances, the heavy reliance on tight monetry policy for inflation control in a large economy under floating exchange rate regime tends to produce an deflationary bias through an escalation of a global interest rate war.

By contrast, when international monetary coordination is aimed at stimulating economies, the potential problem is inflation bias of such coordinated monetary expansion under floating regime. Unilaterally expansionary monetary policy causes the currency of such policy initiating country to depreciate, which aggravates the trade-off relationship between output (or employment) and price inflation because curency depreciation worsens inflationary expectation held by the private sector. Compared with this, coordinated monetary expansion yields a better trade-off between output and inflation because it does not induce exchange rate depreciation since every country is simulateneously engaged in monetary expansion. Therefore, wage setters, both management and labour unions, realize that the authorities' incentives to inflate are greater in a cooperative regime. This recognition by wage setters may exacerbate the credibility problem of central banks vis-a-vis the private sector and hence lead wage setters to high nominal wage claims. Once such credibility is considerably weakened, coordinated monetary expansion will not be effective in stimulating output even in the short-run, thus running counter the original aim of internationl monetary coordination. A solution to this problem will be international monetary coordination which contains institutional constraints on global systematic inflation, as suggested by James Baker at the time of the Fund-Bank annual meeting of 1987.

The nature of this kind of interaction between coordinated central banks and the private sector is quite different from that of "two-level games" suggested by Putnam (1988), in the following fundamental sense.

The basic concern of the two-level game approach is how international economic cooperation can become possible politically, whereas that of international economics is whether such cooperation is wise economically. Mr. Putnam (1988) even went further by saying, "Most observers at the time welcomed the policies agreed to at Bonn, although in retrorpect there has been much debate about the economic wisdom of this package deal. However, my concern is not whether the deal was wise economically but how it became possible politically."

Two comments are worth making. One is the interactions between economic rationale of international economic cooperation and political acceptability of sucn cooperation. The former of economic rationale has significant impact on the latter of political acceptability, though the former can not always be shared commonly by economists (economic advisess) or politicians (Frankel 1986). Without analysis of economic rationale, the so-called peer pressure would never work. In the 1980s, the pattern of disagreements among states on macroeconomic issues or the timing of the changes in policy that actually took place were strongly influenced by differences over underlying analytical frameworks (e.g. Keynesianism versus monetarism, government intervention versus market machanisms, adaptive versus rational expectations, conventional I-S balance analysis versus Richardian equivalence theorem, short-run fine-tuning versus medium-term oriented policies, and equity versus efficiency). A typical example was that the U.S. made a 180 degree turnaround in international macroeconomic cooperation from "A Strong Dollar, A Strong America" policy in the first term of Reagan administration to "A Weak Dollar, A Strong America" policy in its

second term. In any international adjustment, asymmetrical sacrifices of particular nations are likely to be required at any one point of time, although the burden of adjustment might be evenly spread over time. This raises the issue of "sequencing" of which country should first change policies, which policy instrument should first be utilized and which country and policy instrument should follow. Under these circumstances, international agreement on analytical frameworks is necessary condition to justify and legitimize one-sided policy changes. The length of time required for realizing international coordination process which consist of three stages of (1) benign neglet, (2) recognition of conflicts of interests and (3) agreements to cooperation, depends on whether or not major participants can share common analytical framework. Only a global crisis and the shared sense of contingency enforce major nations to reach ad hoc international coorperation, without agreeing on underlying fundamental analytical frameworks.(See Hening for the debate)

International political scientists are interested in investigating how the international condition of state power and institutions influence and affect whether international cooperation is actually realized. This influence, however, depends greatly on whether analytical economic frameworks of cooperation are shared among major nations.

As stated earlier, economic analyses of the failure of expansionary Keynesian policies to stimulate output and employment over the medium-run due to inflation accelration profoundly influenced economic frameworks of international cooperation. At the same time, much greater emphasis has been stressed on market mechanisms in many states with reduced

government intervention. This has affected the underlying framework of international cooperation in the 1980's as to macro-and micro-econommiic policies compared with the 1970's. In the name of the yen appreciation which was essentially market-induced, economic agents in Japan have undertaken all possible measures of rationalization and innovations to meet the challenge of suructural adaptations. Domestic interest groups once complained and blamed the policy-induced exchange rate appreciation after the Plaza meeting, but soon realized that the appreciation was permanent, not reversible, ontcome of market mechanisms under large external imbalances so that they had no other recourse but to adapt to changing international environments. They could not blame the marketplace for a long time.

The other comment worth making is that economic analysis of international macroeconomic policies on a basis of rational expectation theorem and game theoretic approach does not throw light on politics of two-level games. It is indeed true that, in the economic analyses based on rational expectations, "a government contends simulatneously against other governments and against domistic trade unions over monetary policy" (Putnam 1988, footnote 43). However, what is "common" to both this type of economic analysis and two-level game politics approach is only superficial similarity as to "two-level games". As explained above, the economic analysis based on rational expectation theorem handles the issue of whether macroeconomic policies, in particular monetary policies, are effective in stimulating output and employment, if expectaions held by economic agents as to consequences of policies are forward-looking rather than

adaptive. For instance, if policy consequences are inflationary, inflation expectations which are formed only in an adaptive manner to the past inflation will lead real wage to decline and hence wage earners will be fooled by such inflationary policies. Once expectations are formed by taking into consideration such inflationary consequences of policies, nominal wages will increase immediately after such policies are announced and implemented so as to keep real wages not undermined by inflationary acceleration and , therefore, output or employment will not increase. Policy makers in turn have to formulate their policies by taking into account such rational expectations, i.e. reactions of private economic agents to government policies.

Economic analysis of international policy cooporation based on game theoretic approach deals with the basic issue of whether (theoretically) and how much (empirically) a case for international policy coordination can be made as against a case of non-coordination. The starting point of such economic analysis is interdependence of national policies and international spill-over effects of economic policies of (large) individual countries. Governments may behave like oligopolists, taking other countries policies given. Such non-coordinated behaviours in the sense that each country undertakes its policies assuming that other countries will not change their own policies despite their adverse international spill-over effects will lead only to a suboptimal situation (i.e. the so-called Nash equilibrium) of national economic interests in terms of output (employment), inflation and capital accumulation. If national policies are coordinated beforehand by taking into account the impact of possible changes in policies of other countries, then

the economic outcome can improve, in comparison with a suboptimal solution reached by the abovementioned non-coordinated policies among governments. For example, non-coordinated fiscal policies will lead to a situation where both the borrowing and the leading country expand debt-financed fiscal expenditure excessively. Such fiscal policies of large economies under free capital movements and flexible exchange rates raise the common world real rate of interest. Therefore, capital accumulation of the world economy tends to bias towards under-accumulation. This non-coorperative situation can be improved by coordinated fiscal policies among national governments (See Hamada 1985 and 1988).

In sum, strategic analyses of international policy coordination based on rational expectations and game theory shed light on the issues of whether and how much economic outcomes or welfare in terms of output, employment, inflation and capital accumulation can improve through international coordination. In other words, the main concern of the economic analysis, which is based on "two-level games" between goverments and markets and between governments thmselves, is still whether international deal can be wise in terms of economic benefits and costs and how much such net benefits will be (See Quidz and Sachs 1984). The concern is not how such deal can become possible politically. As Rogoff (1985) pointed out, there is a case of international monetary policy coordination where it can exacerbate global inflation problems, and in such a case welfare in one or both countries may be higher even when central banks conduct their own monetary policies independently. When he said, "the key point is that it can be misleading to model strategic interactions of two governments without also modeling the game between

governments and the private sector," the issue is still economics, i.e. whether international coordination makes sense in terms of welfare improvement and if so, under what conditions.

IV. The nature of recent restructuring of the Japanese economy

As indicated earlier, the reduction of the current account surplus must correspond to the reduction of the excess of domestic savings over investment. Table 1 shows that the external surplus /GNP ratio declined from, indicating that Japan's external adjustment made good advance 4.4 percent in 1986 to 2.9 percent in 1988. Correspondingly, business investment and residential construction increased by 1.3 percent and 1.4 percent, respectively, in relation to GNP. Therefore, judging from the identity between the external balance and S-I balance, it was these stronger investments that most importantly contributed to the reduction of the external surplus over the past two years. It is difficult to attribute the recent external adjustment to the forceful implementation of the aforementioned structural reforms.

The speedy adjustment of the Japanese economy under the yen appreciation can be accounted for largely by structural adaptation in manufacturing not by structural "reforms" in non-manufacturing.

Strucutral adaptation and resultant changes in Japan's manufacturing are clearly reflected in strong growth of domestic industrial production in the face of rapid increases in imports of competitive manufactured goods over the recent two years.

From April-June 1987 to October-December 1988, the volume of imports of manufactured goods increased by 49.7 percent (i.e. 33 percent per year) after 22.6 percent increase in 1986 over the previous year. As a result, the share of import value of manufactured goods grew to account for 51 percent in October-December 1988, from 31 percent in 1985 and average 24 percent in 1973-82. By contrast, the volume of exports of Japan's manufactured goods increased by only 11.1 percent from April-June 1986 to October-December 1988 after a 0.6 percent decline in 1986 over the previous year. Direct investment abroad has also increased very rapidly, now accounting for more than five percent of domestic business investment in 1988. Despite the deflationary impact of much greater increase in the volume of imports of manufactured goods than the volume of exports, the industrial production index grew by 16 percent from April-June 1987 to October-December 1988, after a 0.2 percent decline in 1986. The once-heard fear of possible hollowing-out of Japanese manufacturing has disappeared despite the strong yen and the continued expansion of net imports of manufactured goods. In fact, business investment in manufacturing increased by 23 percent in 1988.

It is indeed true that Japan's manufacturing sectors were helped by expansionary monetary and fiscal policies, particularly in 1987. Monetary ease under the yen appreciation and associated extremely low interest rates helped residential construction substantially to increase by 25.6 percent in FY 1987. Public works expenditure encouraged by fiscal ease also increased by 15 percent in real terms in January-March 1988 (the ending quarter of FY 1987) over a year earlier. Therefore, strong demand for

construction goods such as iron and steel and non-ferrous metal products contributed to bottoming of a yen appreciation-induced-recession of basic matereal, intermediate goods industries. However, residential construction and government fixed capital formation together contributed to 2.4 percentage points of GNP growth (1.4 percent for housing and 1.0 percent for public works expenditure) out of 9.3 percent and 7.2 percent growth of real domestic demand and real GNP, respectively, in January-March 1988 compared with a year earlier. This suggests that private domestic demand has accounted for the bulk of the growth over the recent years. Furthermore, even after the temporary stimulative effects of the expansionary policies weakened considerably after the end of FY 1987 (as indicated by relatively small increases in housing and public works expenditure since then), private demand continued to expand, with resultant growth of 6.1 percent and 4.9 percent for domestic demand and GNP, respectively, in October-December 1988 compared with a year earlier.

The key to this expansion of domestic demand is technological innovations. Let me cite just one example. A medium-size company in Hokkaido (Northern island out of four major islands of Japan) produces sophisticated electronics components and parts. At the time of the Plaza meeting, the export ratio of this company was 78 percent, but it is now 35 percent. Yet, total revenues of the company have remained virtually unchanged. How could the company survive the sharp decline of its exports ratio just in a few years? The answer is strong domestic demand for word processors that can operate in Japanese characters. It was difficult tecchnologically to translate the binary yes-no system into a word processing program

that could handle complicated Japanese characters compared with English alphabet. Moreover, the semiconducter industry should be in a position to produce high quality but low-priced integrated circuits and chips for Japanese-language word processors which require such components. Just a few years ago, the Japanese-language word processor became marketable at reasonable prices helped by the development of both word processing program and the semiconductor industry. At the end of 1986, a diffusion rate of word processors was virtually zero, but at the end of 1987 and 1988, it already grew to 14 percent and 20 percent, respectively, of total households of about 40 million in Japan. Hence, this company has been benefited by producing the electronics components and parts in order to satisfy the rapidly increasing demand for such word processors. This example highlights the rapid spread of microelectronics-based information technologies (IT) into the economy under the yen appreciation.

In recent few years, Japan's consumption demand has concentrated on consumer durable goods, demand for which has increased by 15 percent per annum until very recently. This includes traditional consumer durable goods such as refrigerators, washing machines, and vacum clearners, which are now to be renamed electronic rather than electrical appliances since they use electronics for sensor systems. Relatively new consumer durable goods such as small portable liquid crystal colour TV sets, mulrilinqual TV set, video-cameras, compact disc players, and Japanese-language word processors have also increased in demand. Domestic demand for cars also increased by 15 percent per annum since the middle of 1987. The innovation-induced-strong domestic demand for these consumer

durable goods explains a quicker than expeceted transition from export-based to domestic demand-led growth of these industries which heavily relied on exports until the Plaza meeting.

Another important component of domestic demand is private business innestment, which began strongly to grow after mid-1987 and insereased by 16 percent in 1988. In particular, hitherto export-oriented industries such as general machinery, electric and electronic machinery, precision instruments, and automobiles all increased their business innestment by nearly 20 percent in 1988. It was these indurtries that suffered a sharp decline of business investment until the middle of 1987. During the recession period, however, non-manufacturing business investment remained robust due partly to benefits from the terms of trade improvements through falls in import prices in contrast to manufacturing. Led by the banking and insurance, telecommunications, construction, transportation and lease industries, information technoligies and de-regulations encouroged their business investment.

Rseponse of Japanese enterprises to the yen appreciation include both business and product divesification away from main streams and overseas expansion through direct investment.

For example, the five integrated steelmakers planned to call for the closing down of several blast furnaces and a cut of 44,000 employees, fully 25 percent of their total employees. Some of them have been and will be transfered to affiliate companies. In order to make up for the declining earnings of the mainstay operations and to lay the ground work for absorbing redundant employees, the steelmakers are pressed ahead with diversification. In 1987 alone, the five integrated steelmakers

established a total of more than 100 new companies in new fields, ranging from new industial materials to electronics and electronic machinery to services. In 1990, the ratio of sales from mainstay operation to total sales will decline to 65 percent from 81 percent in 1985. Similar diversifications have taken place for seven non-ferrous metal companies. Importantly, such diversifications of business and products have required large R and D investments which have in turn generated strong demand for computors and highly-qualified engineers.

Japanese direct investment abroad has been increasing in the context of the new-dynamism seen for Pacific Basin economies. The interdependence between international trade and direct investment is getting deeper, as intra-industry trade is encouraged by the intensification of the international division of labour in the production process of a particular finished goods and by direct investment. For instance, South Korean exports of electrical and electronic products and automobiles heavily rely on Japan for its imports of sophisiticated high value-added parts and components. The nature of Japan's direct investment has been changing. While trading and service industries such as finance and real estate still occupy the largest share, Japan's direct investment has now been increasing most rapidly in the manufacturing industry. In the 1950s and 1960s, Japan'S direct investment concentrated on mining industries in developing countries, supporting the traditional vertical inter-industry trade. In the 1970s, Japan's direct investment began to increase there., manufacturing, circumbenting newly imposed trade barriers there, revealing its complementary nature to Japan's exports. The yen appreciation has forced Japan's direct

investment to accelerate, playing a role of substituting for exports by shifing production location abroad. An even more global approach is now taking place : Japan's direct investment is becoming "cosmopolitan" in the sense that Japan's firms determine, without much consideration of its own national boundary, where to develop innovations, conduct R and D investment, market their products, and locate management headquarters. Together with its now strong domestic absorption of imports, Japan's direct investment and its supply of highly sophisticated capital and information technologies goods contribute to dynamic development of the Pacific Triangle Area, consisting essentially of the U.S., Japan and the Asian developing countries.

V. Conclusions

The most important international driving force of Japan's structural change and reform is the 100 percent appreciation of the yen against the U.S. dollar over the past three years.. Technological adaptation supported by innovations and flexible attitude of management and labour unions is the most important domestic factors for the rapid transition from export-based to domestic demand-led growth in the Japanese economy, particularly in the manufacturing industry. The yen appreciation has also counributed to revealing badly needed structural reforms in Japan, through widening gulf in purchasing power of the currency between an externally strong yen and an internally weak yen. The former reflects high productivity in Japan's manufacturing, whereas the latter, low efficiency in non-

manufacturing sectors crippled by various kinds of regulations. Japan's structural reforms should be aimed at rationalizing and liberalizing such low-productive, inefficient non-manufacturing sectors so as to reduce their prices and charges, whereby the purchasing power parity of the yen and living standards can be enhanced.

Progress in such structural reforms has been slow. In 1988, however, agricultural liberalization went much faster than expected, helped by commanly shared international understanding on adverse effects of agricultural protection particularly after the Tokyo Summit in 1985 and by increased recognition of too costly agricultural protection by Japanese people owing to the yen appreciation. Distribution system and air transportation have been under intense domestic pressure for dergulation and liberalization. By contrast, land and urban development policies have been slow in progress of deregulations, partly because the yen appreciation has not exerted liberalizaiton pressure on these areas.

The nature of international macroeconomic cooperation after the G-5 Plaza meeting in 1985 is different from that in 1977-78, reflecting different characteristics of international macroeconomic problems. The main issue this time is the sustainability of the external deficit of the dominant key currency country. The problem of "sequencing" has become serious, since substantial changes in the exchange rate relationship have been reasonably successfully followed up by belt-easing macroeconomic policies in surplus countries as indicated by a recent boom in world trade in 1988-89, but not well followed up by belt-tightening absorption reduction policy

in the deficit country. Because of the inability to implement fiscal consolidation in a timely manner, there is now danger of global competitive interest rate war under presently rising inflationary pressure in both the deficit and the surplus economies.

The two-level game approach advocated by Prof. Putman is quite different from economic analysis of international policy coordination based on rational expectations and game theory in economics whose main concern is still whether and how much international coorporation can improve welfare as compared with non-cooperative solution. By contrast, political science based on two-level game approach appears to be concerned not with whether or not international cooporation makes sense but with how such international deal can be possible politically, regardless of the economic validity of the deal.

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Table 1

Japanese Economy, 1985-88

(annual rate of growth over the previous period, %, at constant prices)

	1985	1986	1987	1987		1988	Nominal GNP ratio	
				Jan.-June	July-Dec.		1986	1988
GNP	4.9	2.5	4.5	3.6	6.8	5.7	100	100
Domestic demand	5.3	4.1	5.2	3.7	8.4	8.5	95.6	97.1
Private consumption	2.7	3.1	4.2	4.2	4.5	5.0	57.8	57.1
Private housing	2.5	8.3	22.2	14.8	40.6	13.4	4.7	6.1
Private business investment	12.7	5.8	8.0	8.3	11.6	15.9	16.1	17.4
Government consumption	1.7	6.2	-0.7	-9.3	0.9	2.1	9.8	9.2
Public fixed capital formation	-6.4	4.3	8.0	4.5	13.0	6.5	6.7	6.9
External balance*	(1.1)	(-1.4)	(-0.6)	(0)	(-1.2)	(-1.9)	4.4	2.9
Exports of goods and services, etc.	5.6	-5.2	3.8	3.4	10.2	7.9	13.1	13.0
Imports of goods and services, etc.	-0.1	2.8	8.7	4.3	21.4	21.2	8.7	10.1
Industrial production index	3.7	-0.2	3.4	1.8	8.9	9.4		
Volume of exports	4.6	0.6	0.3	-3.2	0.7	5.1		
Volume of imports	0.4	9.9	8.9	-0.1	18.5	16.5		
Volume of imports of manufactured goods**	4.2	14	20	8.4	40.9	30.4		

* Contribution to GNP growth (in percentage points)
** Excluding gold for coins

Source : Economic Planning Agency

Table 2 Extent of Non-tariff Barriers 1983

	All products	All, less fuels	Fuels	Agriculture	Manufacturing	Textiles	Footwear	Iron and steel	Electrical machinery	Vehicles
Japan	11.9	16.9	7.0	42.9	7.7	11.8	34.1	0.0	0.0	0.0
U.S.	43.0	17.3	100.0	24.2	17.1	52.0	9.5	52.6	13.4	45.3
EEC	22.3	21.1	24.4	36.4	18.7	57.0	11.5	37.7	5.2	34.2

Source : J.J. Nogues, A.Olechowski, and L.A.Winters, "The Extent of Non-Tariff Barriers to Industrial Countries' Imports," World Bank Economic Review, Vol.1, 1986, PP. 181～199

Table 3 Agriculture and labour market protection

	Agricultural net producer subsidy equivalents		The cost of agricultural policy, 1988			Public expenditure on labour market programme, 1987
	1982/85	1988	Net cost to taxpayer	Transfer from consumer	Total cost	
			($ billion)			(In percent of GDP)
Japan	66	75	3.9	60.4	64.4	0.59
U.S.	28	34	50.4	23.4	73.9	0.83
EEC	35	46	44.2	75.3	119.4	——
Germany						2.34
France						3.07
Italy						1.27
U.K.						2.57

Source : OECD