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by

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Abstract

This paper investigates the macroeconomic effects of fiscal policy and the fiscal reconstruction movement in Japan. We first summarize Japan's fiscal policy in recent years and discuss advantages and disadvantages of government deficits. Next, we investigate the macroeconomic effects of Japanese fiscal policy and evaluate the plausibility of non-Keynesian effects. We also analyze the possibility of the crowding-in effect of fiscal policy and investigate the spillover effects of deregulation. Finally, we discuss political constraints in the fiscal reconstruction attempts and propose some measures for successful fiscal reforms in the near future.

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1. Introduction

Public finance in Japan is a shambles. The central and local governments will owe more than a total of ¥700 trillion – a sum more than 50 percent larger than the nation's gross domestic product (GDP) – at the end of fiscal 2004. In addition, these government entities have huge budget deficits. The central government's general account budget is based on scheduled marketing of ¥ 36 trillion in new bonds in fiscal 2004. This will bring the year's combined budget deficit for central and local governments to about ¥40 trillion, representing 8 percent of GDP. This is an extremely high ratio among the world's industrialized nations.

The government has devoted large expenditures on wasteful projects. The most obvious examples are public works spending, which still remains high. Furthermore, spending for social programs continues to rise, reflecting the accelerated aging of the population. At this rate, Japan's public finances will eventually be bankrupt. Balancing the budget requires both cutting spending and increasing taxes. These reforms are painful, but the budget gap will widen if hard decisions are put off. The administration of Prime Minister Koimumi, who says that a "full-scale economic recovery cannot be achieved without structural reform," is committed to administer painful prescriptions that in the long run will help cure the ailing economy. However, the speed of fiscal reform is not significant. Bold political action is the key to deficit reduction and structural reform.

The purpose of this paper is to analyze the macroeconomic effects of fiscal policy and the fiscal-reconstruction movement in Japan. The following points are considered: (1) what caused a rapid increase in fiscal deficits? (2) what are the macroeconomic effects of government deficits and fiscal reconstruction attempts? (3) how could the government stimulate private demand without relying on traditional Keynesian measures? (4) why is the speed of fiscal reform so low in Japan? and (5) what factors are crucial for attaining successful fiscal reconstruction in the future?

This paper investigates theoretically and empirically these questions using Japanese fiscal data. We will also incorporate the political aspect of fiscal policy into our analysis. We will therefore evaluate the growing dependence on government bonds for covering financial deficits and Japan's fiscal-reform attempts.

The paper consists of six sections. In Section 2, we summarize Japan's fiscal management in recent years. In Section 3 we discuss the advantages and disadvantages of government deficits. In

Section 4, we investigate the macroeconomic effects of Japan's fiscal policy in the 1990s, and analyze the plausibility of non-Keynesian effects. Then, we analyze the possibility of the crowding-in effect of fiscal policy and investigate the macroeconomic effects of deregulation in Section 5. Finally, in Section 6, we discuss political constraints in the fiscal-reconstruction attempts and propose some measures for successful fiscal reforms in the near future.

2. Japanese Fiscal Management

2.1 Fiscal policy and government deficits

Traditionally, the Japanese government has followed a balanced-budget policy. A balanced budget was maintained until 1965, when national bonds were first issued in the postwar period. The gap between government expenditures and tax revenues, which corresponds roughly to the fiscal deficit, began to expand rapidly at the time of the first oil shock in 1973. Asako et al. (1991) present a description of the rise and fall of deficits in the 1970s and the 1980s in Japan. They interpreted the increase of deficits in the second half of the 1970s as being due to a combination of factors. That is, the larger fiscal deficits resulted from the major burst of new spending on social welfare programs in the first half of the 1970s and on public investment in the second half of the 1970s, and the lack of tax revenues reflecting the slowdown of economic growth. Also, the understanding of Keynesian fiscal policy became popular beginning in the 1960s.

Since the increase in the budget deficit in 1975, deficit reduction has become one of the most important objectives of economic policy. Eliminating fiscal deficits was officially called 'fiscal reconstruction'. In this connection, the Ministry of Finance (MOF) constantly pressured each ministry of the government to hold down expenditures when drawing up the initial budget. Since 1982, the principle of zero growth requests (zero ceiling) has been imposed on budget requests. The ceiling was sharply tightened during the budget reductions in the late 1980s.

There were significant tax increases from 1986 to 1991. The abnormal increases in stock and land prices generated a great amount of tax revenues from the corporate tax, the security transaction tax, capital gains tax, etc. These revenue increases were of great help in reducing accumulated deficits, which in turn helped achieve the target of fiscal reconstruction by 1991. "Windfall" tax increases thus played a vital role in achieving the MOF's target in the second half of 1980s.

However, after the "bubble economy" was broken in 1991, taxes were lowered to generate revenue. At the same time, the politico-economic pressures for larger expenditures and counter-cyclical packages of fiscal measures intensified. Responding to them, the MOF employed measures to stimulate aggregate demand. It turned out, however, that these counter-cyclical measures were not effective, so that there was an increase in the fiscal deficit.

The bond-dependency ratio rapidly rose in the latter of the 1990s. Figure 1 shows the bond-dependency ratio in the consolidated account, that is, the net total of the General Account, the Special Account for Grants of Allocation Tax and Transfer Taxes, and the ordinary account (net total) of local governments. The bond-dependency ratio was 10.9% in FY 1990, and it rose to 40.2% by FY 1999. The deficit on the general government financial balance in FY 1999 was 10.0% of GDP, with a gross debt of over 108%. The inclusion of the surplus on social security reduced that deficit to 7.8%, but even this figure was the highest among G7 countries.

Let us now compare some fiscal indicators for the 1990s among the G7 countries.[1] For the general government financial balance as a percentage of GDP, Japan's figure was +2.9% in 1990,[2] but it dropped significantly to –7.9% in 2000. In contrast, the figures in the other G7 countries mostly improved in the 1990s. In the U.S., the improvement was from –2.7% in 1990 to +0.9% in 2000. In the U.K., it was –1.5% in 1990 and +0.8% in 2000. In Germany, it improves from –2.1% in 1990 to –1.2% in 2000. In France, it was –1.6% in 1990 and–1.7% in 2000. In Italy, it changed from –11.2% in 1990 to –1.6% in 2000. In Canada, the improvement was from –4.5% in 1990 to +1.6% in 2000.

For the general-government-gross debt as a percentage of GDP in the 1990s, Japan's figure increased significantly from 61.4% in 1990 to 114.1% in 2000. The increases in the other G7 countries were smaller than in Japan. In the U.S., this figure was 55.3% in 1990 and 57.1% in 2000. In the U.K., the increase was from 39.1% in 1990 to 51.2% in 2000. In Germany, the increase was from 43.2% in 1990 to 61.7% in 2000. France's figure was 40.2% in 1990 and 64.6% in 2000. In Italy, the increase was from 105.4% in 1990 to 115.2% in 2000. In Canada, the increase was from 71.5% in 1990 to 82.5% in 2000. A comparison of these fiscal indicators for Japan and the other six G7 industrialized countries shows the fiscal situation in Japan to be markedly worse than in the other countries.

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[1] The source of these data is OECD (1999).
[2] The general government includes the central government, local government, and social security fund.

2.2 “Do everything possible” policy and fiscal-structural reform

Former Prime Minister Obuchi’s administration, which took office in July 1998, adopted a more expansionary fiscal policy to stimulate the economy. The Fiscal Structural Reform Law, which was intended to cap central government bonded indebtedness, was suspended late that year, and this was followed the next year by a series of stimulus measures, including income-tax cuts and the distribution of cash coupons intended to spur consumer spending. A supplementary spending budget was implemented to provide funding for the measures.

Referring to the ballooning budget deficit, Obuchi called himself “the biggest borrower in the world”. The Obuchi administration’s aggressive public-spending policy was carried over into the subsequent administration of former Prime Minister Mori from April 2000. These and other spending measures were intended to encourage demand in any way possible to improve the economic environment. The reasoning was that a policy of “chasing two rabbits at once” – meaning economic recovery and fiscal consolidation – would fail to achieve either objective, so the first priority should be on recovery.

However, the “do everything possible” policy, obstensibly intended to yield quick results, led to a runaway expansion of the budget deficit, raising concerns about the sustainability of fiscal balance. As one nonessential public facility after another was built across the nation, the costs of maintaining them mushroomed. The expansionary economic policy pursued by the Obuchi administration through more public works spending and tax cuts therefore raised questions about the effectiveness of their macroeconomic impacts.

The stimulus measures created another major problem: a tendency to postpone structural reforms. The consensus at the time was that there was no immediate need for painful measures as long as government policy prevented the economy from slipping into recession. There was, indeed, a widespread feeling in the private sector that the government would come to its aid if the economic situation worsened. That feeling fostered a certain complacency in the business world, making many corporate managers liable to “moral hazard” risks stemming from a lack of self-discipline. The continuation of the short-term stimulus policy, at a time when the economy needed long-term structural changes, discouraged self-help efforts in the private sector.

The concern for sustainability of fiscal deficits provides a background for the fiscal reconstruction and structural reform movement by the current Koizumi Administration. The “Structural

Reform of the Japanese Economy: Basic Policies for Macroeconomic Development" was decided upon after acceptance of the report compiled by the Council on Economic and Fiscal Policy, an advisory council to the Prime Minister. In this report the core of policies for structural reform was made clear. There was a goal to limit the amount of government bond issues to less than 30 trillion yen in the FY 2002 budget, and afterwards to achieve a primary surplus. The point was to show the necessity to take on full-scale measures towards fiscal consolidation. However, in order to cope with the unfavorable macro-economic situation, 1.8 trillion yen of the advance tax cuts was employed with a view to strengthening the competitiveness of industry, facilitating a smooth transfer of assets to the next generation, promoting a shift from "saving to investment", advancing effective land use, etc. The goal to limit the amount of government bond issues to less than 30 trillion yen in the FY 2002 budget was finally abandoned.

The Japanese government now aims at stopping debt accumulation by the early 2010s. The target is to reduce the primary deficit to 1.3% of GDP and to maintain gross debt less than 150% of GDP in 2010. See Figure 2. But, the planned consolidation may not be achievable if lobbying activities of several interest groups are too strong to allow the drastic fiscal reforms to proceed.

3. Advantages and limitations of fiscal deficits

3.1 Gross debt vs. net debt

The central and local governments, although heavily indebted, also have credits and assets. The total value of the government-held tangible and financial assets – those of the central government, local governments and social security funds - is about ¥900 trillion, far more than the ¥700 trillion government debt. It is therefore argued that government debt is not a great concern because the net asset position is positive.

Public pension funds, in particular, now hold assets of about ¥200 trillion, a sum amounting to about two-thirds of the central government's outstanding debt load. The funds are creating net surpluses because contributions exceed payouts. So, in terms of the general government (the central and local governments plus the public pension funds), the fiscal deficit is not extremely large. The increasing reserves in the public pension funds help to offset, as it were, the increasing government debt. On balance, therefore, Japan's net fiscal position does not look so serious.

To be sure, the sale of government-held assets translates immediately into government revenue and thus reduces the debt, of the balance of the public bonds. However, the argument that debt is not much of a problem in net terms raises two questions.

One question is just how many government assets could actually be sold. Many government-held tangible assets exist in the form of public infrastructure, such as roads. These would be difficult to sell. By the same token, many of the financial assets, held in pension funds, are also illiquid. The pension reserves, of course, are intended to be dedicated to future payments to pensioners. The pension insurance premiums collected from working people must be paid some time in the future, in the same way that public bonds must be redeemed as they mature. The pension fund is thus different from tax revenues, which the government can use freely.

Another question is how these public pension funds will develop over the long run. The indicators are that the balance of pension funds will deteriorate as the birthrate declines and the population ages. Perhaps 20 years from now, this could lead the overall government deficits to assume even more serious proportions.

3.2 Public deficits vs. private surplus

Although the government-sector debt is large, the nation overall is not in deficit. In fact, the private sector – households and businesses – has large surpluses. In other words, the private-sector surplus exceeds the government deficit by a large margin, as evidenced by current-account surpluses, which attest to the accumulation of net external assets.

Nations hit by financial crises, such as Mexico and Russia, have had to borrow heavily from abroad because they had large deficits in the domestic-sector balance –a sum of fiscal deficits and the investment-to-savings difference in the private sector. In such nations, the growing fiscal deficit signaled not so much the instability of their governments to pay foreign debts as the lack of viability in their economies. Japan has current-account surpluses on a long-term basis, so it is unthinkable that the nations as a whole will go bankrupt under a massive debt burden.

However, Japan faces two potential problems. First, the current-account balance could tip into deficit in the future. The savings rate will drop if the working population – the mainstream savers – shrinks. The current-account surplus will also evaporate if the private-sector slips into deficit as a result

of recovery in corporate investment demand, unless the huge government-sector deficit is eliminated. Confidence not only in the Japanese government but also in Japan itself could suffer in consequence.

Another potential problem is that the government sector could collapse, even as the private sector remains solvent. This possibility makes it doubtful whether it is appropriate to lump together government- and private-sector balance. The integrated approach may be useful in determining the limits of the government's ability to pay debt, because the government – which has the right to taxation – can tap private resources through higher taxes. The catch is that Japanese people and businesses can transfer some of their income abroad or move to foreign nations. In this globalization and information age, attempts to levy extremely high taxes are likely to fail. So, even if the private sector is in surplus, the government could go bankrupt because of its inability to secure enough tax revenue to pay its debt.

3.3 Macro balance equation

Japan's fiscal deficit widened in the 1990s because economic-stimulus measures, notably the combination of increased public investment and tax cuts, were implemented on the basis of the theory of macroeconomic balance. This theory says that government deficits are necessary to absorb excess savings in the private sector. If the government were to actually balance the budget, the argument goes, GDP would drop, throwing many people out of work and worsening the recession. This is because the market is already glutted with goods, reflecting excess private-sector savings. Fiscal deficits ease recession and reduce unemployment.

Under the system of national accounts, macro balance is shown by the following equation:

(1) Private-Sector Saving – Private-Sector Investment =

Fiscal Deficit + Current-Account Surplus

But this equation applies only ex post facto. In reality, government-sector deficits can be expected to increase savings in the private sector as a higher fiscal deficit prompts households and businesses to save more in anticipation of higher taxes.

An after-the-fact macroeconomic balance does not in itself determine which of these two views is correct. A corroborative analysis of the Japanese economy shows the truth lies somewhere between these extremes. That is, the savings-to-investment difference has created a deflation gap (an imbalance in the macro market for goods), but the possibility cannot be ruled out that the gap might have widened in

reaction to the fiscal deficit. In other words, the fiscal deficit has shown its effect in slowing the fall of GDP and providing a prop for faltering economy. However, that effect has been rather modest.

3.4 Concerns about the accumulated deficit

There are two long-term concerns about the accumulated fiscal deficits. One is whether such a large deficit can be sustained. The system will be paralyzed if public finance collapses under the weight of massive deficit. As a result, the financial system and the economy as a whole will be seriously affected. An extreme case of inflation, or hyperinflation, could develop.

The question arises as to whether Japan's fiscal policy has been sustainable in the sense of being consistent with an intertemporal budget constraint. There have been a few analyses of the sustainability problem in the government debt in Japan. So long as we use the data until 1990, it appears that the government debt has been sustainable in Japan. However, as explained in Section 2, deficits have increased rapidly since 1990. It is uncertain then if the present fiscal system in Japan may be sustainable in the long run. Ihori, Nakazato, and Kawade (2003) used a standard approach to test the fiscal sustainability condition, following the methodology of Hamilton and Flavin (1986).

Japan has two serious difficulties in terms of sustainability. First, the Japanese primary surplus has apparently been a decreasing function of the debt-GDP ratio since 1990 and hence does not satisfy the sustainability condition. Second, the rate of interest has exceeded the growth rate in Japan in the 1990s. As shown in Ardagna, Caselli, and Lane (2004), government deficits may raise interest rates in the long run. Hence, it is important to reduce the government deficit in the near future.

Another concern, assuming that the financial system will be sustained, is what happens if a considerable deficit accumulates over an extended period of time. Public finance will not collapse even if the debt load grows, unless the ratio of debt to GDP also increases. But if that debt ratio rises, it would have a more restrictive impact upon private investment. Public borrowing – the fiscal deficit – would cut into private-sector savings and private investment would be restricted by that much. If the money raised by borrowing is squandered on public works projects, private investment would be restricted even more. Japan's long-term economic prospects would dim even more if growth is restricted, even if the deficit is sustainable and a fiscal collapse is averted.

4. Macroeconomic effects of fiscal reconstruction

4.1 Efficacy of fiscal policy in 1990s

Using the VAR method, Ihori, Nakazato, and Kawade (2003) showed that fiscal policies have generated limited effects on output in Japan. Namely, tax policies did not have a stronger effect than changes in government expenditure. Furthermore, the effect of fiscal policies was too marginal to restore macroeconomic activities, which is consistent with the latter view based on the neoclassical model of rational agents.

Therefore, we may say that the multiplier effect of public works has become very low in recent years, and hence the efficacy of stimulating aggregate demand by using public works is controversial. As the allocation of public works is not appropriately determined, it could not stimulate private consumption or investment. The resulting cost is a huge increase in the government deficit in the 1990s. There are some empirical studies on the productivity effect of public capital in Japan, including Doi (1998), Yoshino and Nakajima (1999), and Ihori and Kondo (2001). They commonly conclude that public capital has been productive but that its productivity has declined recently.

4.2 Lessons from fiscal reconstruction in other countries

It is useful to examine the recent fiscal reconstruction movements in other countries. First, from the experiences of the United Kingdom or France, it appears that when the government raises tax revenues during the fiscal-reconstruction process, it is important to expand the tax base and reduce the marginal tax rate. For example, by reducing corporate-income and personal-income tax rates, the government might vitalize private economic activities.

Similar attempts were actually seen in the United Kingdom with the introduction of “universal testing,” that is, capital projects will not be approved unless private finance options have been explored. Moreover, in the United States, when introducing various tax increase measures, the government extended implementation of a R&D tax credit and expanded the instant inclusion of “in-expenses” limit of the investment expenditure for small and medium-sized enterprises. The lesson is that fiscal reform should consider the spillover effect on the private sector. When an increase in taxes is needed for fiscal reconstruction, it should also minimize the distortionary burden to the private sector.

Next, let us investigate the efficacy of budgeting rule. The method of deficit targeting, which aims

at the reduction of the deficit itself, may not work well. For example, in the case of the U.S., the Gramm-Rudman-Hollings law was not effective and in Italy a similar attempt also failed. These experiences suggest that it is difficult to predict the real growth rate and inflation rate, and hence it becomes infeasible to be committed to the predetermined deficit path.

On the other hand, several countries controlled government expenditure by imposing a ceiling rule. For example the “control total” approach was established in the United Kingdom, and a scrap-and-build system was set up in Germany. The “cap” and “pay-as-you-go” principles were set in the U.S. These measures apparently succeeded in fiscal reconstruction

Since a budget deficit is a gap between tax revenue and expenditures, it is more effective to control tax revenue or expenditures directly rather than to target deficits. Such measures should be transparent and satisfy requirements for a realistic validation of a policy of fiscal reconstruction. Too strict and ambitious targeting or rules would be difficult to follow.

4.3 The non-Keynesian effect of fiscal reconstruction

When we consider the relation between fiscal consolidation and macroeconomic activities, it is important to evaluate how the non-Keynesian effect becomes relevant for Japan’s case. The so called “non-Keynesian” effect means that cuts in public expenditures and/or tax increases contribute to stimulate private demand under some fiscal situations or macroeconomic environments: that is, when government spending is inefficient, and/or the budget deficit is so large. this seemingly paradoxical effect may occur. If this is the case, it becomes possible to attain simultaneously two policy objectives of fiscal reconstruction and macroeconomic recovery.

As shown in Giavazzi and Pagano (1990) and Perotti (1999), whether the non-Keynesian effect really occurs is dependent on how agents view future fiscal management based on the fiscal situation at the time fiscal reform is undertaken and on the magnitude of the reform.

(1) Nature of fiscal policy:

Drazen (1990), Giavazzi and Pagano (1995), and Giavazzi, Jappelli, and Pagano (2000), using OECD country data, showed that the efficacy of fiscal reconstruction depends on the size and duration of the policy. That is, if the size is small and time is short, the usual Keynesian effect will occur. On the contrary, if the size is large and time is long, the non-Keynesian effect will occur.

The fundamental logic is as follows; when fiscal reconstruction is performed by a large reduction in government spending (G), consumers will anticipate a reduction of the permanent level of government expenditure (Gp), resulting in a decrease in the permanent level of the tax burden (Tp). That is, if $\Delta G < -\alpha < 0$ and α is large, consumers expect $\Delta Gp = \Delta Tp < 0$. This will raise permanent disposable income ($Yp - Gp$), stimulating consumption from the present. When the non-Keynesian effect occurs, the size of reduction (α) must be so large that consumers expect a decrease in the permanent level of public spending.

On the other hand, when the magnitude of fiscal reconstruction (α) is small, the private sector would likely expect that the government would return to expansionary policy again in the future, and hence private demand would not be stimulated. Namely, if $-\alpha < \Delta G < 0$, consumers rather expect $\Delta Gp = \Delta Tp \geq 0$.

The length of reconstruction policy attempts can work in the same way. That is, if the duration of policy is long and would continue in the future, consumers will expect a return to an expansionary policy, resulting in stimulating consumption.

(2) Conditions of fiscal situation

Perrotti (1999) noted that, for countries having brought about an expansionary effect, government debt had been accumulated too much before the fiscal reconstruction started. He explained this fact by exploring the nonlinear effect of fiscal policy. Moreover, using cross-country data for OECD countries, he showed that the non-Keynesian effect occurred when the ratio of government debt/GDP was high. Sutherland (1997) and Blanchard (1990) have provided theoretical explanations for this nonlinear effect.

The fundamental idea is as follows: When an outstanding government bond (B) is higher, consumers would be more concerned about the future distortionary burden (D) of fiscal deficits (a huge cut of government spending, a big increase in distortionary taxes, etc.). They would feel better when fiscal reconstruction attempts actually started to restore the sustainability of public debt. Hence, their lifetime income become larger to some extent if reconstruction could alleviate those negative factors. Namely, if $B > \beta. > 0$ and β is large, an increase in taxes and/or a decrease in spending would mean a reduction of the permanent level of fiscal burden ($\Delta D < 0$), so that permanent disposable income increases ($\Delta(Yp - Gp - D) > 0$).

Overall, it is important to evaluate the macroeconomic effects of fiscal reconstruction attempts by focusing attention on the nature of fiscal policy and conditions of fiscal deficits. If fiscal reconstruction has a stimulating effect on private demand due to "the non-Keynesian effect," it will be helpful for Japan's fiscal reconstruction. Surely, the accumulated debt balance is still growing and people are concerned with the future burden of tax increases or spending cuts. Therefore, some degrees of non-Keynesian effects may be relevant if drastic reform is pursued. However, it does not necessarily mean that the non-Keynesian effects actually become relevant in a quantitative sense.

4.4. Empirical analysis

Nakazato (2002) has studied non-Keynesian effects in Japan, using fiscal data from 1955 to 1998, following Perrotti (1999). Although a reduction in government spending during the fiscal reconstruction period in 1980s stimulated private consumption moderately, Nakazato's study did not confirm non-Keynesian effects strongly.

As an extension of Ihori, Nakazato, and Kawade (2003), we now estimate the impulse effects of fiscal variables by including more recent fiscal data until 2002. First, we decompose time series data using the HP filter. Then, we examine the impact of fiscal variables of the cyclical component on macroeconomic activities by using vector-auto regression (VAR) and impulse response functions. Since our aim is to clarify the impact of fiscal policies without prior information, we adopt non-structural VAR estimation. The variables used are private consumption (CP), private investment (IP), public investment (IG), and tax revenue (GR), export (EX) and import (IM). To decide the order of the lags, we use the SBIC criterion.

The estimated impulse responses are shown in Figures 3-1–3-4. In Figure 3-1. a 1% increase of public investment does not stimulate private consumption strongly.[3] Figure 3-2 suggests that the crowding-out effect on private investment was still observed in recent years. We then estimate impulse responses of tax increase. The impact of tax revenue in the 1990s was marginal as was the case in the 1980s. As shown in Figure 3-3, a 1% increase of tax revenue raised private consumption for the following quarter before the 1990s, and it had similar marginal effects in the 1990s. In Figure 3-4, the effect on

[3] Ihori and Kondo (2001) estimate the effect of public capital on consumption by incorporating public capital into the utility function and point out that the effect had been declining since 1965. Kato (2001) estimates the effects of government consumption and public investment based on structural VAR and points out that the effects became rather low after 1985.

private investment was not significant although the effect was sometimes negative in the recent years.[4]

In short, increasing public investment in the 1990s crowded out private investment to some extent and did not increase private consumption much. It appears therefore that the standard Keynesian effect was not observed strongly in Japan. On the other hand, although the adverse (non-Keynesian) effect was often observed, the magnitude was not large. As in the previous results by Ihori, Nakazato, and Kawade (2003), our results do not strongly confirm the non-Keynesian effect. The overall policy implication is that Keynesian fiscal policy in the 1990s was not effective, but we could not strongly count on the non-Keynesian effects. Therefore, when aiming at financial tightening, careful consideration is needed with respect to the timing of fiscal-consolidation policy.

5. Fiscal policy and crowding-in effect

5.1. Macroeconomic effect of regulatory reform

As a policy that can produce the crowding-in effect, we now consider the experiences of deregulation policy for several industries in Japan. With a regulatory reform, there may be: (1) a rise in productivity by introducing more competition; (2) a fall in the price level by reducing costs; and (3) diversification of goods and services, technical innovation, etc. On the other hand, there may be: (1) a short-term rise in unemployment, and (2) enhancement of monopoly and oligopoly.

There have been some previous studies on calculation of the benefits of regulatory reform. For example, deregulation in the telecom industry began from the privatization of JDD to NTT, and then the government permitted free entry into the telecommunication industry in 1985. According to Sumitomo-Life Research Institute Inc. (1999), this became the most changed industry, resulting in the biggest impact among the movement toward deregulation by crowding-in the explosive spread in the use of cellular phones. Table 1 presents calculation of the benefits for the regulatory reform of the telecom industry. In this table, “the user merit” refers to the amount of money estimated by “gap of price level assumed when there is no deregulation, and actual price level with deregulation” times quantity demanded each year, and “the demand effect” refers to an amount of consumption and investment expansion due to deregulation.

[4] Ramaswamy and Rendu (2000) point that the slowdown of private investment was the main reason for the recession in the 1990s, and fiscal expansion did not have much effect in spite of its scale.

5.2. Estimation

While the traditional Keynesian fiscal policy is not feasible in Japan, the government may still stimulate private demand by using microeconomic policy in the form of deregulation, which would not require substantial public funds. If such micro-based policy crowds in private demand, this is certainly compatible with fiscal-reconstruction efforts. Hence, we wish to compare the macroeconomic effect of such deregulation with that of public investment. In particular, we consider the spillover effect to private investment caused by deregulation using a VAR analysis.

Our purpose is to compare the crowding-in effect of a particular type of private investment due to deregulation with that of government spending as a macro-stabilization policy. Here, investment in the telecom industry will be used as an alternative index of the direct impact of deregulation. We assume that investment in this industry was mostly controlled by the degree of deregulation, which can be thought of as a policy variable akin to public works.

For simplicity, we use investment in the “other transportation and communication” of the “business and investment survey of incorporated enterprises” as a proxy variable for “an investment in telecom business”. The “other transportation and communication” is the transportation business, i.e., “service accompanying aviation transportation business, warehousing and carrying charges business, and transportation, mail, and telecom business”, except “transportation by land” and “water transport”.

We first decompose the time-series data using the HP filter. The variables include: Private Consumption (CP), Public Investment (IG), Tax Revenue (GR), Export (X) and Import (M), “an investment in other transportation and communication” (S) and “private investment minus investment in other transportation and communication” (AS) .To decide the appropriate order of the lags, we use the Akaike Information Criterion (AIC) and Schwarz’s Bayesian Information Criterion (SBIC) criteria.

The estimated impulse responses are shown in Figures 4 and 5. Figure 4 indicates that, since the middle of the 1970s till the 1980s, investment in “other transportation and communication” had stimulated private fixed capital formation in other industries, while public investment crowded out private investment considerably.

Figure 5 shows that in the 1990s the negative effect of public investment on private investment was also larger than previously, and investment in “other transportation and communication” had large spillover effects on private investment as well. These results suggest that the macroeconomic effect of

deregulation was larger than that of traditional Keynesian fiscal policy. As long as there is a crowding-in effect on private investment, deregulation might therefore be more effective than public works.

6. Fiscal reform and political constraint

6.1 Delay of structural reforms

As to the political constraints on the fiscal-reconstruction efforts, politicians can accept the idea of fiscal structural reform and reconstruction only if the government has a majority in the Diet, and the probability of its losing power is low enough. Among others, Persson and Svensson (1989), and Alesina and Tabellini (1990) have found that a stable government has an incentive to reduce government deficits. Also, Alesina and Perotti (1995, 1996) reported that coalition governments in OECD countries delayed reductions in fiscal deficits.

In Japan, the government party (the LDP) has been weakened and budget deficits have increased. In the 1990s, especially after 1993, several parties formed a coalition government and fiscal deficits increased as already noted. Japan's experince thus fits the findings of previous theoretical and empirical studies. Although the central government can impose a ceiling constraint on some public spending for fiscal reconstruction, it cannot easily restrain region-specific transfers.

During the Obuchi and Mori administrations, structural reforms were put on the back burner for three reasons. The first was that everyone expected that things would get better even before such hard-hitting measures were implemented. Draconian efforts such as corporate restructuring and bad-debt disposal were postponed in the hope that land and stock prices would begin to rise in due course. This procrastination had earlier led, for example, to a full-blown crisis in the financial sector in the autumn of 1997. Things developed in a similar fashion with regard to fiscal consolidation. Structural measures that would reduce the budget deficit were put off in the hope that the deficit would begin to shrink once the economy recovered.

The second reason was that scandals swirling around government officials and politicians undermined public confidence in the central government and the ruling political parties. Poor communication between the public and the government politicians delayed structural reforms. Even if policymakers were correctly informed about the concepts of reform, the voting public was unable to share that information and therefore could not properly evaluate government policies. Drastic reforms could not

get off the ground because voters did not trust the government and the ruling coalition.

Third, fiscal consolidation and other structural reforms were put off because of short-term benefits needed by the coalition governments. In the autumn of 1999, Komeito joined the coalition administration of the Liberal Democratic Party and the Liberal Party. As a result, the three parties secured a combined majority in the House of Councilors (Upper House) as well. The overriding objective of the three party coalition at the time, as stated by Prime Minister Obuchi, was to maintain a numerical advantage in the Diet. Given its low public approval ratings, however, the ruling alliance faced a pressing need to produce results quickly to gain public support. This was particularly true of Komeito, which needed even more urgently to deliver short-term achievements because of its emphasis on welfare-related spending. Such political pressures set the stage for a free-spending policy.

Also, Ihori, Doi and Kondo (2001) and Doi and Ihori (2002) provide evidence for Japan that indicates that lobbying activities of local interest groups were exacerbated in the 1990s, which is the main reason why fiscal reconstruction did not perform very well in Japan.

6.2 Credibility and fiscal structural reform

A credible policy is often successful, and in the case of fiscal structural reforms, this principle is applicable as well. If consumers and firms believe that the government has committed itself to carry out the reforms, they have an incentive to accept the cost of reform. This is a self-filling mechanism of rational behavior. As a result, the efficacy of such policy reform also becomes greater.

From the political viewpoint, overall political support will also be improved if some private agents' support increases and there is more support and hence credibility of reform also increases. In such a case, the belief that reform produces greater political support with credible government policy is self-filling. This strengthens further the belief that agents become more supportive under government action. In short, the credibility (and reliability) of the government commitment would stimulate drastic fiscal reforms.

Moreover, in such a situation, multiple equilibria may arise in many cases. There may well be a case in which private action is a strategic complement insofar as an agent supports more when other agents support more. If private sectors expect that many other agents will make an effort to support the reform and if we have multiple equilibria, the government may be able to realize a favorable equilibrium

with considerable political support.

Consider the following simple model. A representative agent maximizes net gain from its political support e_i for a two-agents economy (i=1,2).

(2) $R(e_1 e_2) - c(e_1)$ $R' > 0, R'' = 0, c' > 0, c'' > 0$

where c is the private cost of supporting the reform. R is the gross gain of supporting the reform, which is positively dependent on overall support from other agents. Then the first-order condition is

(3) $R' e_2 = c'$

And

(4) $\frac{de_1}{de_2} = \frac{R'}{c''} > 0$

Thus, e_1 is an increasing function of e_2. We may draw the reaction curve as an increasing function of the average level of support e.

Consider two equilibrium points as shown in Figure 6. The horizontal axis shows the average support level (e) in the economy, and the vertical axis shows an optimal support level (e_i) for each agent. A representative agent may want to support more, as the curve of Figure 6 shows, when other agents support more. If agent i observes the support level of other agents, and its support brings about large gains when other agents support more, e_i will increase with e. This curve is the support-reaction curve. In equilibrium, it is also required that the average support level is equal to each agent's support level. This equilibrium condition is expressed as the 45 degree line. Therefore, equilibria will be expressed as the intersection of the 45 degree line and the support-reaction curve. When the reaction curve is nonlinearly increasing, multiple equilibria may occur.

Bad equilibrium e_L indicates little support, and good equilibrium e_H much support. A good equilibrium takes place when many agents expect that the government reform generates a lot of agents' support. With such a property, if fiscal-policy reform stimulates agents' political support due to better credibility on political commitment, then it can attain a good equilibrium.

For example, suppose local governments believe that gains from fiscal decentralization are very high if many local governments support them. Then an increase in the average level of political support will stimulate more support for the reform. Since gross gains are strategic complements with respect to each agent's support, the gains of each agent's support will increase. If this is the case, the government may just target only a small number of agents to attain their support. In other words, the government can

activate drastic reform by stimulating political support of some firms or consumers.

A promising policy that targets specific economic agents would be deregulation in some specific areas. For example, a successful outcome of deregulation in agriculture and/or welfare-related areas may increase overall political support among firms and consumers for drastic fiscal reforms without spending much public funds.

6.3. Path to fiscal consolidation

Japan must now move quickly to put its fiscal house in order. Government bonds now sell at low interest rates despite the huge fiscal deficit. This means that investors are optimistic about the future of Japan's fiscal system. They consider a collapse of public finance unlikely. Such investor confidence reflects the overall tax burden as a percentage of national income remaining relatively low. Investors therefore believe that the Japanese economy can withstand further tax increases.

However, if the expansionary trend in government spending continues at this pace, the fiscal deficit will increase further, and the political ability to raise taxes in the future will be limited. Investors will lose confidence in Japan's public bonds if they believe that the nation's public finance is bound for long-term crisis. The result is that interest rates will rise and fiscal failure will become a more tangible reality.

It is therefore, time to discuss the direction of fiscal reform and draw up a specific consolidation plan. For that purpose, it may be useful to promote reform in two ways. The first is by revamping the fiscal system drastically. The following changes are needed:

- Introduction of a taxpayer-identification numbering system to correct inequalities in the tax burden
- Overhauling the project-evaluation system to eliminate wasteful public-works programs
- Streamlining the revenue-sharing system (the so-called local allocation tax) that is creating "moral hazard" on the part of local governments
- Streamlining the "pay as you go" pension system that now taps contributions by the young to pay the elderly and thus is spreading a sense of mistrust among young contributors.

Confidence in future fiscal management should be enhanced by implementing these and other structural reforms intensively in the next three years or so. At the same time, seeking to enhance both

efficiency and transparency, the efforts to reduce costs and to utilize cost-benefit analysis have been complemented by a new re-assessment system. These changes are desirable but the speed of structural reform is not impressive. Further determined efforts are needed to reform public spending and taxation in a more efficient way.

The other way to promote fiscal reform is to reduce the massive deficit. Needless to say, it is not rational to give top priority to deficit reduction alone. Even so, deficit reduction is still an important policy objective, given the nation's deteriorating fiscal health. The question is how long it should take to cut the deficit. Considering the problems that could arise from delays, a reduction program should be implemented as soon as possible, just as with reform of the system. In light of the sorry state of public finance, however, effecting major tax increase or spending cuts in the short term might impose, if temporarily, an inordinate burden on the public.

Japan's fiscal condition has deteriorated markedly over the past ten years. It is therefore imperative that the deficit be reduced over an extended period. More specifically, the budget gap should be reduced gradually over the next eight years, through 2013, to a level at which the budget balance – the balance including the interest and debt servicing – is maintained. To this end, the deficit as a percentage of GDP needs to be cut by 1 percentage point each year. This target should be achieved through a combination of spending cuts and tax increases.

Finally, it should be noted that the credibility (and reliability) of the government commitment facilitates drastic fiscal reforms. A successful outcome of deregulation may increase overall political support for the drastic fiscal reforms without spending much public funds.

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Figure 1

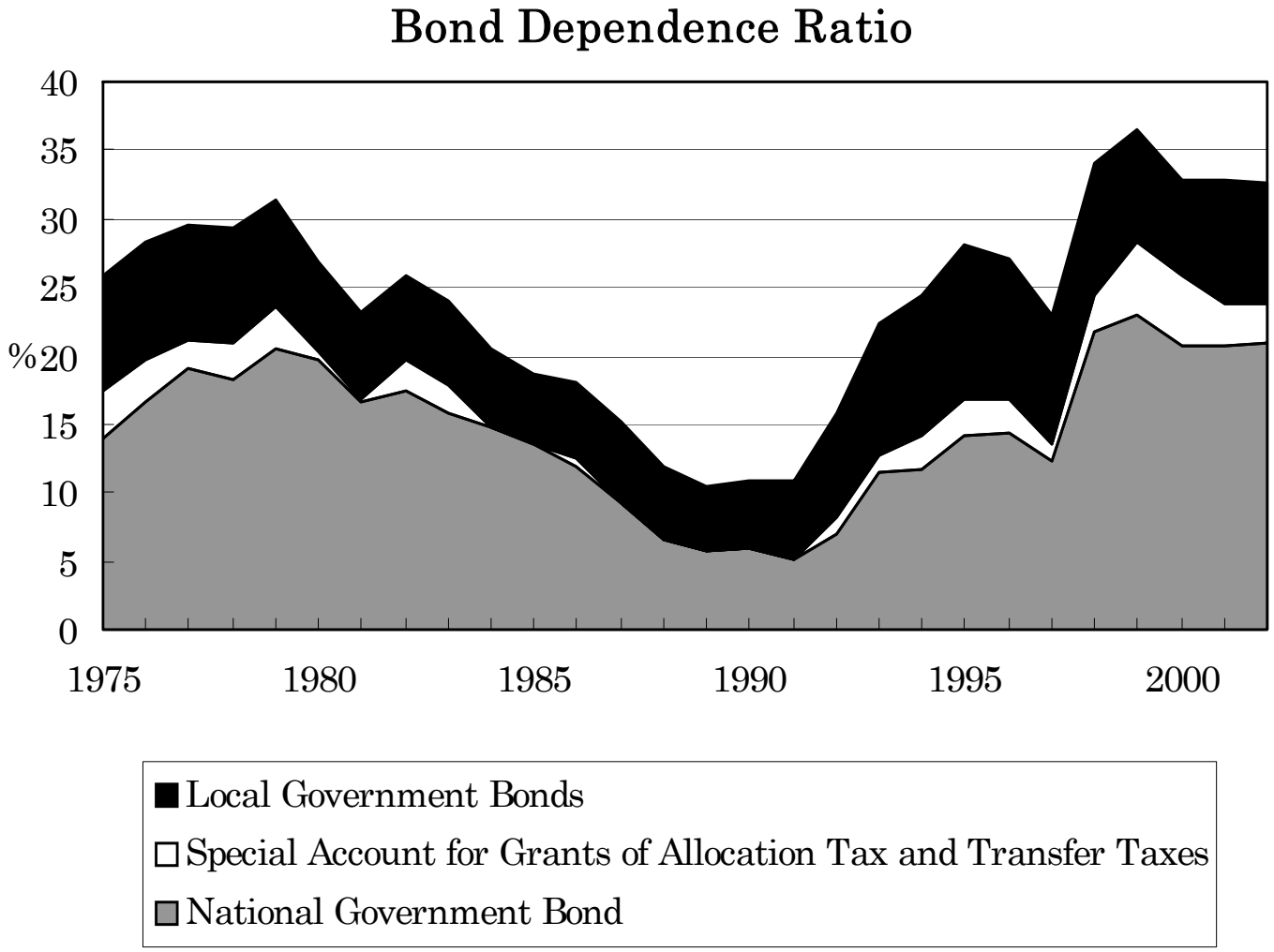
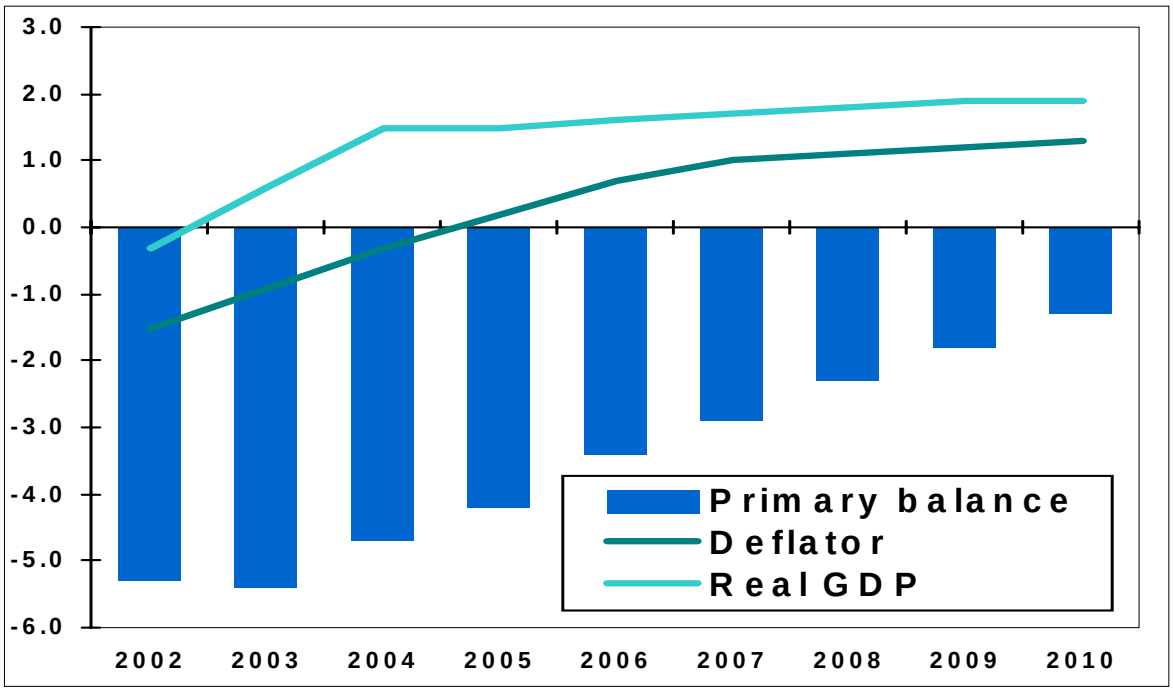
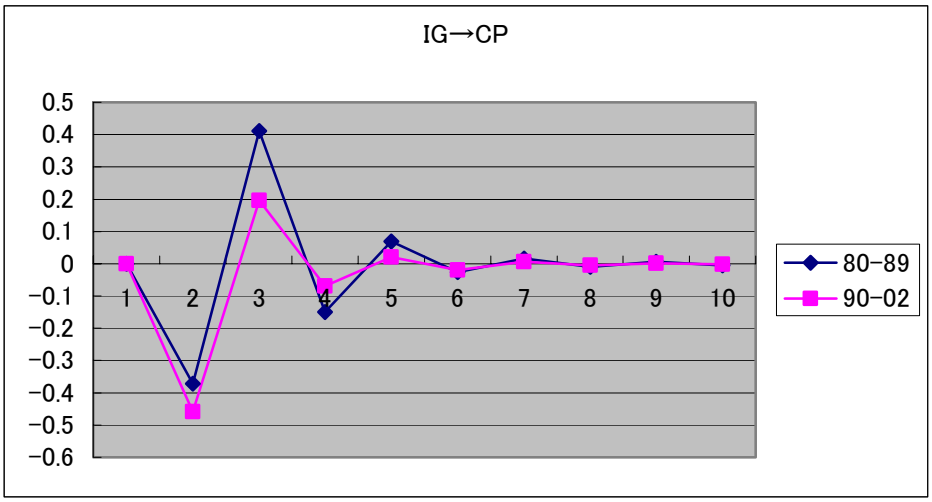

Bond Dependence Ratio
40
35
30
25
%20
15
10
5
0
1975
1980
1985
1990
1995
2000
Local Government Bonds
Special Account for Grants of Allocation Tax and Transfer Taxes
National Government Bond

Figure 2
Primary Balance as a Percentage of GDP, 2002-2010



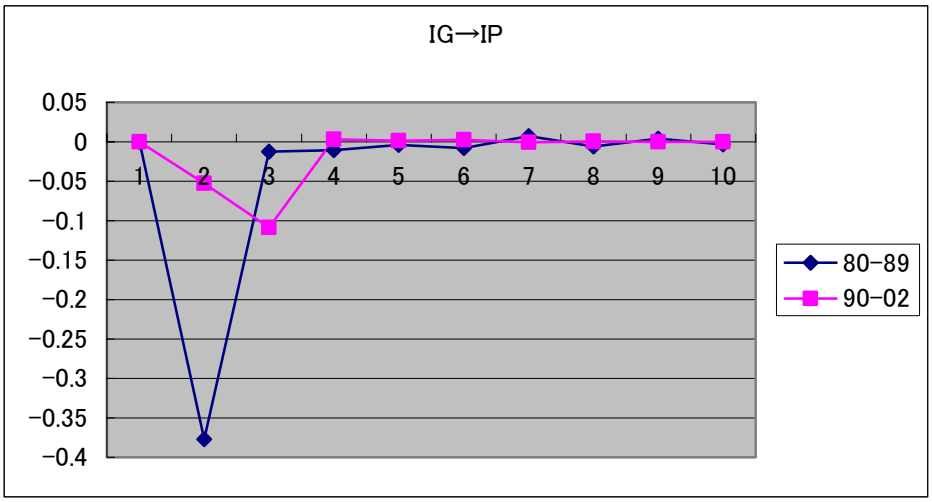
Source:

Figure 3-1



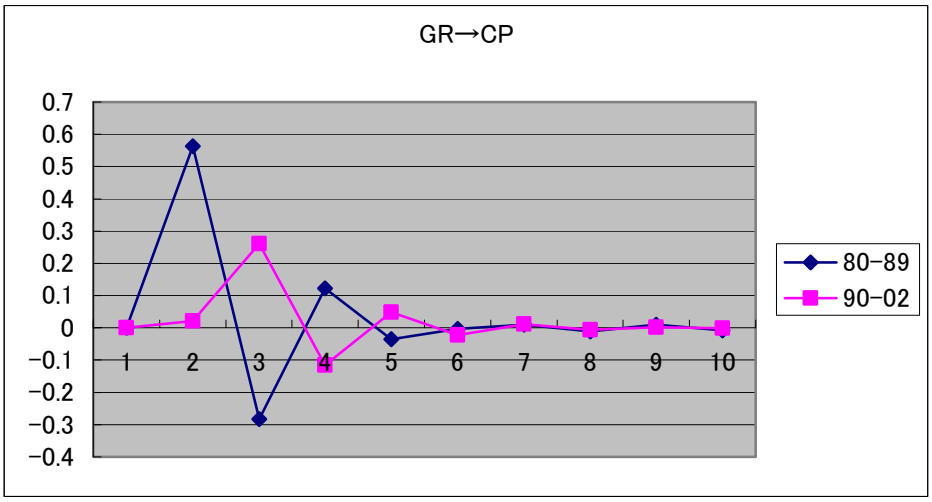
The impulse response of 1% increase of Public Investment on Private Consumption

Figure 3-2



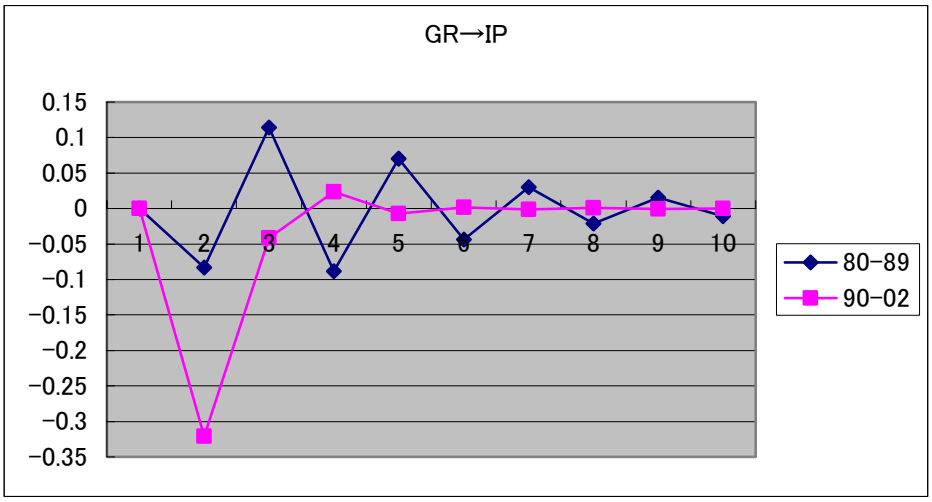
The impulse response of 1% increase of Public Investment on Private Investment

Figure 3-3



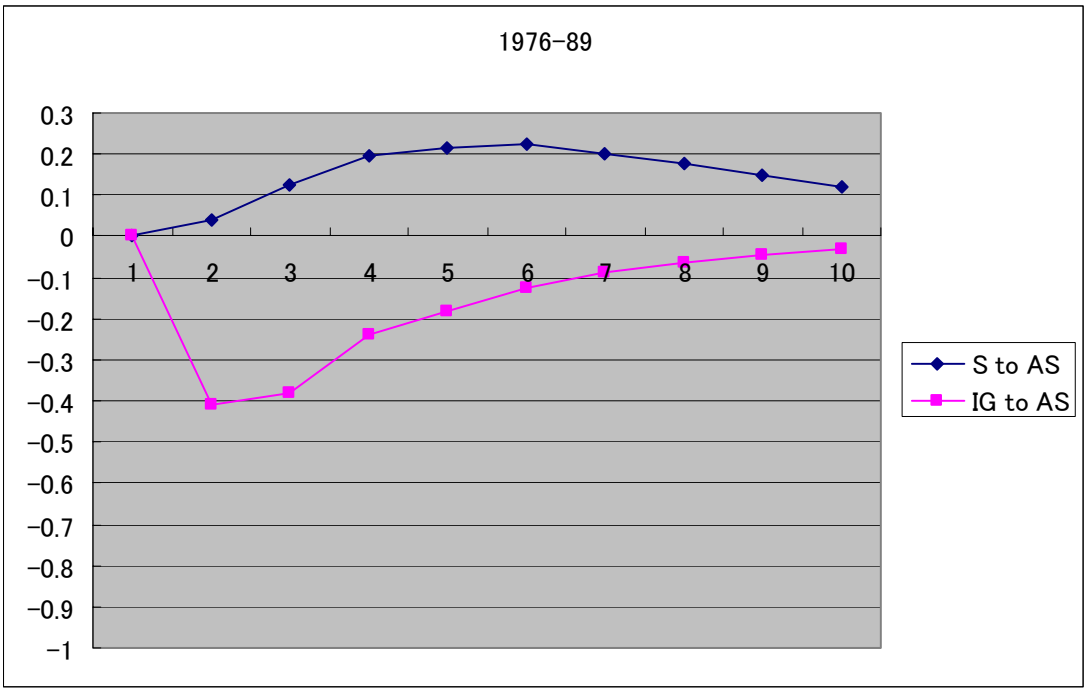
The impulse response of 1% increase of Tax Revenue on Private Consumption

Figure 3-4



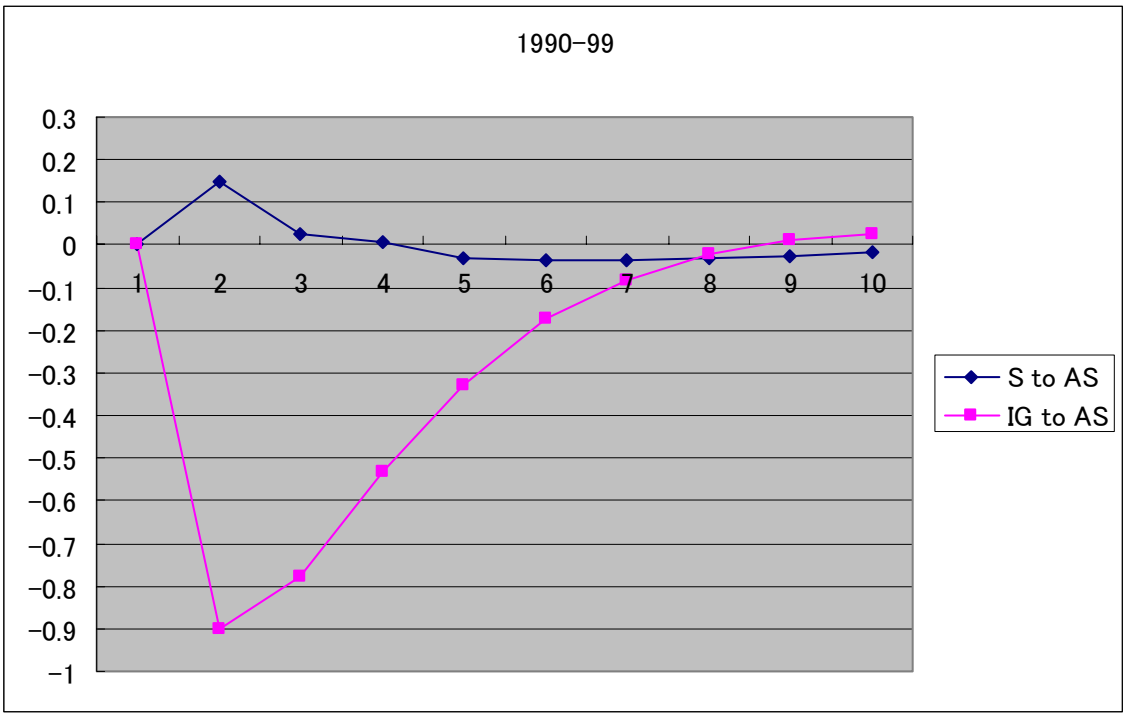
The impulse response of 1% increase of Tax Revenue on Private Investment

Figure 4



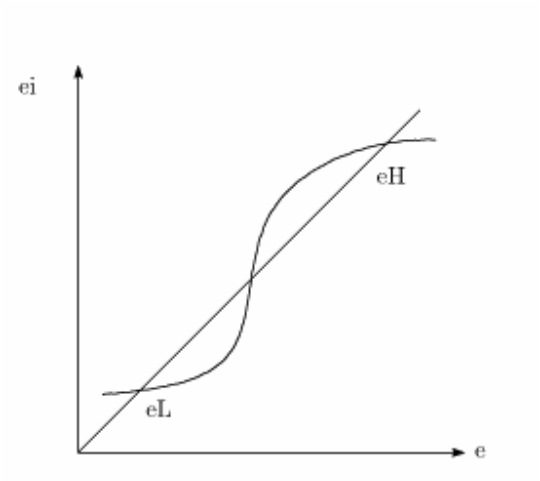
Comparison of impulse response of 1% increase in investment in ‘‘other transportation and communication’’ on other Private Investment and Public Investment, 1976-89

Figure 5



Comparison of impulse response of 1% increase in investment in ‘‘other transportation and communication’’ on other Private Investment and Public Investment, 1990-99

Figure 6



Good and bad equilibrium with policy reform

Table. 1 Calculation of the economic benefits of Telecom regulatory reform
(trillion yen)

	Period	User merit	Demand effect	
			Consumption	Investment
Economic Planning Agency (1997)	90～95	1.23	1.29	0,707
Ministry of International Trade and Industry (1997)	90～01		8.1	8.7
Sumitomo Life (1999)	90～97	2.67	2.3	0.9