

Alternatives of Disinflation and Stability Policy

— Costs, Efficiency and Implementability:

A Comparison Between Japan and West Germany

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This paper aims to explain the differences in macroeconomic performance between Japan and West Germany with respect to disinflating and stabilizing the economy after the two oil price shocks. The main causal factors derived are differences (a) in the timing of the disinflation policies, and (b) in labor market flexibility. Besides, there were also other factors, such as demographic, structural and external ones, which have played a role. The author argues that the macro-costs of shock absorption could have been reduced in both countries by implementing some institutional supplements, such as wage indexation or (tax-based) incomes policy.

I. Introduction

Japan and West Germany have often been considered as countries with very successful macroeconomic performances. This is true at least for the period from the 1950s till the middle of the 1970s. During this period of time the performance of both countries with respect to high economic growth rates was often titled as “economic miracle.” Both countries — driven in the 50s and 60s by a national resolve to rebuild their economies ravaged by World War II — had managed to become two of the leading industrial nations by the middle of the 70s.

From the second half of the 70s on, however, economic growth rates in both countries have been significantly lower. In particular West Germany, although still more successful than most of the other countries, has not been able to master the task of absorbing the series of shocks which, appeared in the 70s and 80s without producing long-run high unemployment and only modest economic growth. Japan appears to have

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been more successful in this process of shock-absorption.

This analysis tries to show what have been the main causal factors behind the different performances as to disinflating and stabilizing the economy in these countries during the 70s and 80s. Furthermore, I shall investigate various political and especially institutional alternatives that might have improved macroeconomic performances with respect to shock-absorption.

The paper is organized as follows. In section II, I shall present the macroeconomic developments in both countries from 1960 to 1987. In section III, I shall try to explain the differences in macroeconomic performance in Japan and West Germany, respectively, by firstly analyzing the macroeconomic policies implemented and by secondly investigating the institutional and micro-political characteristics. The discussion will concentrate on the past 15 years which is the period of time within which a series of shocks have happened world-wide. I shall conclude that in particular institutional differences, with respect to monetary, fiscal and incomes policy but especially with respect to the labor market, have played a major role in producing different macroeconomic outcomes in Japan and West Germany, respectively.

Observation of the better macroeconomic performances in Japan has sometimes induced proposals in West Germany, as to imitating or transferring policy patterns or institutions implemented in Japan, in or to West Germany. However, as I shall argue in a subsequent part of section III, transferring policies or institutions employed in Japan to West Germany could well fail to improve macroeconomic performances there. Even if this transfer did enhance macroeconomic outcome, it might nevertheless reduce the welfare level in West Germany, based on the different norm system there. Thus I conclude, that each country has to search for its own solutions as to a better, welfare-enhancing, position.

Nonetheless, one can analyze potential welfare-increasing solutions within a common analytical framework. This will be done in section IV. There I shall analyze the effects and the implementability of various political and institutional alternatives that may have improved shock-absorbing performances as well as welfare in each country. The alternatives to be discussed are, besides a long-term commitment to a monetary rule policy, wage indexation schemes, a share economy and a tax-based incomes policy.

Section V will conclude the paper with a résumé.

II. Macroeconomic Performances: Japan and West Germany¹

Basic macroeconomic developments in Japan and West Germany for the period

¹The structure of this section is similar to the one Stanley Fischer employed in his multi-countries comparison (Fischer 1987). There is also a similarity in using the two oil price shocks in the 1970s as elements of structural ordering.

Figure 1. Gross National Product at 1980 Prices

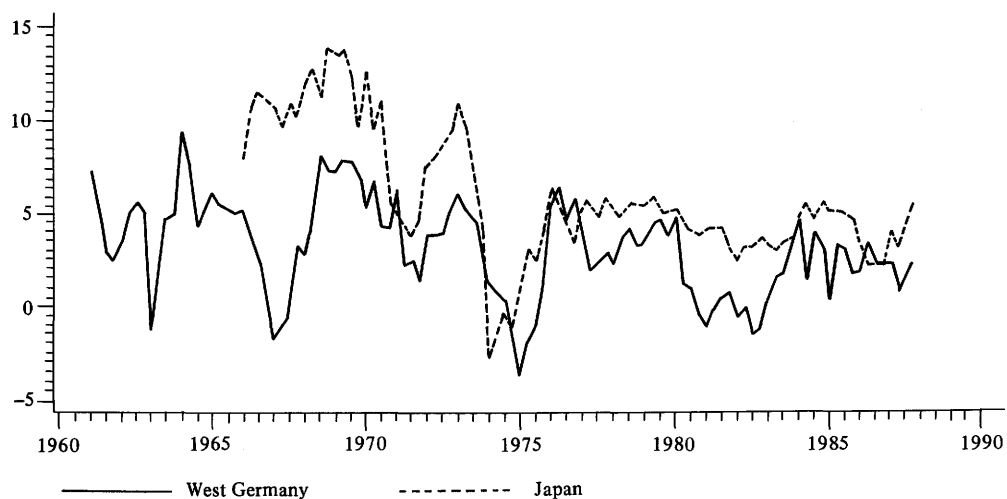


Figure 2. Consumer Price Index

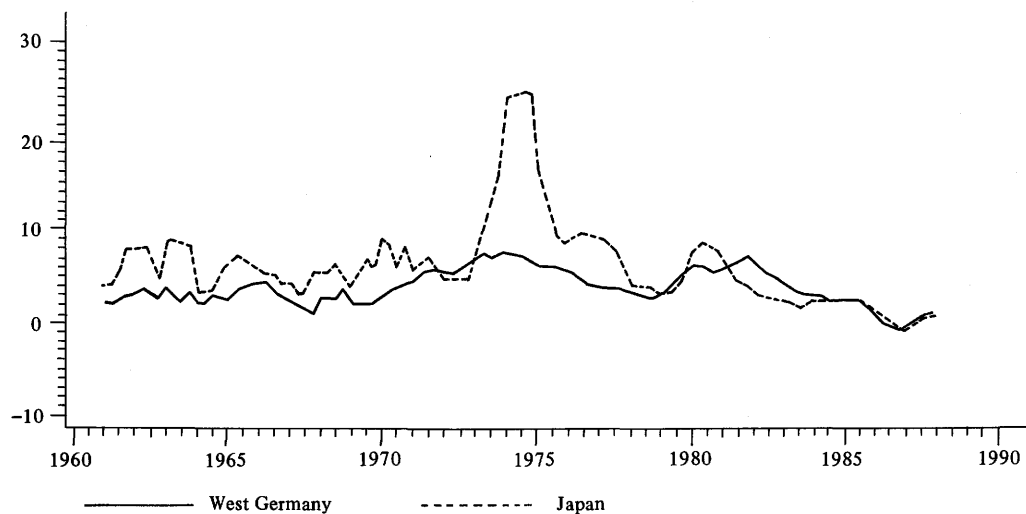
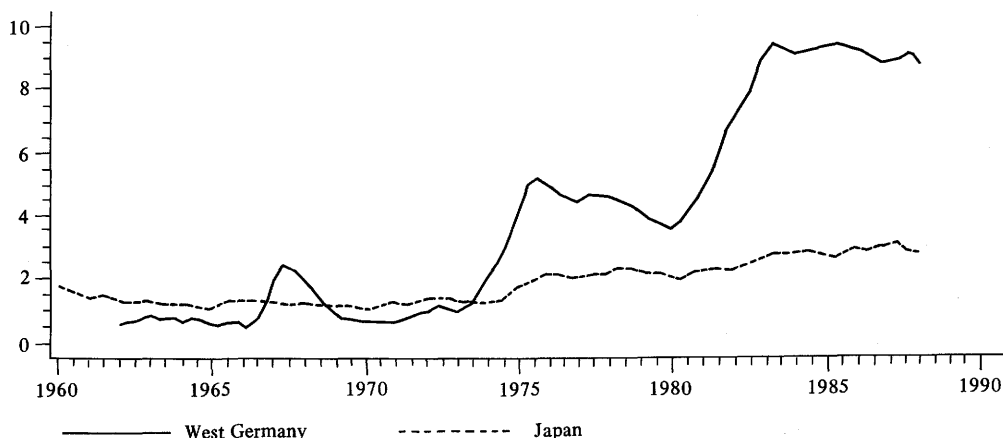


Figure 3. Unemployment Rate



1960–87 are summarized in Figures 1, 2, and 3, which present information on real GNP growth, inflation (measured by the CPI),² and unemployment respectively, and in Table 1. Table 1 presents trend or average values³ for the time period 1960–87 as well as for the subperiods 1960–69, 1970–79 and 1980–87 respectively.

In this paper, I regard unemployment, inflation, real GNP growth and their respective fluctuations indicated here by the standard deviation (SD) as the main macro-welfare indicators. Besides these three indicators, there is a fourth one which deserves attention, and that is the current balance of payment surplus (or deficit).⁴ In West Germany, for example, these four indicators are explicitly listed in the Stabilization Law of 1967 (see in section III. below) as the policy targets.

By looking only at the data in Table 1, for the whole period 1960–87, one gets the impression that in Japan, compared to West Germany,

- real GNP growth has been much higher and more unstable,
- unemployment has been much lower and more stable, and

²Inflation measured by the GNP deflator is on average somewhat lower in Japan as for the period 1974–87 and somewhat higher in West Germany as for the period 1960–73. But on the whole there is no principal difference in the fluctuations pattern between inflation measured by the CPI and that measured by the GNP deflator.

³I used quarterly data here. If not indicated otherwise, the data in this paper for West Germany are from OECD, *Main Economic Indicators* (current series) and from IMF, *International Financial Statistics* (current series). The data for Japan are mostly from Bank of Japan data base; some are from OECD and IMF data bases. A data appendix which contains the data presented in the figures is available from the author on request.

⁴Balance of payments disequilibria have on average been higher in West Germany than in Japan, in particular in the 1960s and 1970s. The average rate of current account/NGNP over the period 1960–87 was 1.0 for Japan (J) and 2.5 for West Germany (G). The respective figures for 1960–69 were 0.1 (J), 2.1(G); in 1970–79: 0.8 (J), 2.6(G); in 1980–87: 2.1(J), 3.0(G).

Table 1. Macroeconomic Trends

		Real GNP growth		Inflation		Unemployment	
		Japan	West Germany	Japan	West Germany	Japan	West Germany
1960–87 ^a	Mean	6.6	3.1	6.1	3.6	1.8	3.8
1960–69	Mean	10.5	4.5	5.6	2.6	1.3	1.0
1970–79		5.4	3.1	9.1	4.9	1.7	2.9
1980–87		3.9	1.5	2.7	3.1	2.6	7.8
1960–87 ^a	S.D. ^b	4.0	2.6	4.8	1.9	0.6	3.2
1960–69	S.D.	2.8	2.8	1.8	0.8	0.1	0.5
1970–79		3.6	2.4	6.1	1.5	0.4	1.7
1980–87		1.0	1.7	2.6	2.4	0.3	2.0

^a Real GNP growth and inflation data start only in 1961.

^b The abbreviation S.D. indicates standard deviation.

– inflation has been much higher and more unstable over the past almost three decades. From this, one could be seduced to conclude that Japan has followed a rather activist and successful Keynesian-type full-employment policy.

However, the above data are only long-run average data, and by looking more closely at the performances in the decade-based subperiods (see Table 1), one gets a quite different impression.

In the 60s (and in the period till 1973 included), West Germany not only had lower inflation (on average) but also lower unemployment than Japan. Only real GNP growth was then higher in Japan. But even in this respect, one has to consider that the so-called economic growth “miracle” in West Germany already peaked in the 50s⁵ whereas that in Japan reached its highest level only in the 60s.

In the 70s and the 80s there was a common trend in both countries towards a lower real GNP growth and a higher unemployment rate. Inflation in both countries reached its peak in the 70s and went down again in the 80s. The fluctuations in inflation were much greater in Japan than in West Germany. Generally, in Japan the 70s were the decade with the highest instability measured by the standard deviation of all the indicators considered. For West Germany, the respective results are rather mixed. It seems that in West Germany the 80s have shown even slightly more macro-instability than the 70s, at least with respect to inflation and unemployment. Only real GNP growth became more stable, on a low level, however.

The mentioned trend in unemployment and real GNP growth has its roots in the first

⁵The average real GNP growth rate was 7.8 percent in West Germany during the 1950s.

oil crisis.⁶ Therefore, by splitting the 1960–87 period in two subperiods (1960–73 and 1974–87) one gets even clearer insights in the patterns of development in both countries. Table 2 presents the respective values of real growth, inflation and unemployment when splitting the period in this way.

In 1973–74, there was a break in long-run trends with respect to real GNP growth and unemployment. The average real GNP growth in the after–1973 period in Japan was only 40 percent of that in the 1960–73 period; and in West Germany the respective rate was 43 percent. The average unemployment rate in the after–1973 period in Japan was 77 percent higher whereas it was 520 percent higher in West Germany, compared with the 1960–73 period level.

The trend towards lower output growth and higher unemployment represents to a great extent the difficulties or, respectively, the costs of absorbing the supply shocks that hit both countries in the 70s. There were various supply shocks during the 70s, harvest catastrophies as well as oil crisis.⁷ Without doubt, the two oil crisis were the most aggravating ones. After the first oil crisis, both countries, Japan and West Germany, had

Table 2.

		Real GNP growth		Inflation		Unemployment	
		Japan	West Germany	Japan	West Germany	Japan	West Germany
1960–73	Mean	9.7	4.4	6.2	3.5	1.3	1.0
1974–87		3.8	1.9	5.9	3.8	2.3	6.2
1960–73	S.D.	3.1	2.5	2.5	1.6	0.1	0.5
1974–87		1.9	2.2	6.3	2.2	0.4	2.4

Table 3.

		Real GNP growth		Inflation		Unemployment	
		Japan	West Germany	Japan	West Germany	Japan	West Germany
1974–79	Mean	3.6	2.4	10.2	4.7	2.0	4.1
1980–87		3.9	1.5	2.7	3.1	2.5	7.8
1974–79	S.D.	2.6	2.6	7.3	1.6	0.3	0.8
1980–87		1.0	1.7	2.6	2.4	0.3	2.0

⁶See for the same view Fischer (1987). At the end of 1973, OPEC quadrupled the price of oil.

⁷Besides there were also other shocks such as the suspension of convertibility of the dollar to gold in 1971 which is in Japan referred to as the “Nixon shock,” and the final breakdown of the Bretton Woods System in 1973.

some problems in absorbing this shock, though the negative macroeconomic effects were of different kinds. After the second oil crisis, however, the performance in absorbing the shock has been quite different in both countries. This can be seen in Table 3, where I split up the 1974–87 period into two subperiods: the first period is the period between the first and the second oil crises,⁸ and the second period is the period after the second oil crisis.

After the first oil crisis, in Japan, the inflation rate went up sharply exceeding 20 percent in 1974. In West Germany, however, inflation hardly rose.⁹ The highest level ever reached was 7 percent in 1974. But this stability performance is only part of the story. The recession introduced by anti-inflationary policies in both countries raised unemployment sharply in West Germany, whereas it increased unemployment only slightly in Japan.

Inflation declined in both countries from 1975 on, whereas unemployment hardly went down.¹⁰ The disinflation costs in both countries were substantial.¹¹ In West Germany, especially the sharp increase in unemployment was felt as shocking. For Japan, the drastic reduction in real GNP growth as well as the more than 20 percent high inflation rate in 1974 were rather a traumatic experience that has lasted in the memory of the public and the politicians.

The performances with respect to absorption of the *second oil crisis* were quite different between the two countries. The side-effects or disinflation costs of the second oil crisis were relatively low in Japan whereas they were quite high and long-lasting in West Germany. In particular, unemployment rose in West Germany from 3.8 percent in 1979 and 1980 to over 9 percent in 1983, and has stayed about there since then. Inflation went down in West Germany from 5.5 percent in 1980 and 6.3 percent in 1981 to 3.3 percent in 1983 and finally to below 0 percent in 1986. Japan, in contrast, succeeded in bringing down inflation from 8.0 percent in 1980¹² already to 1.9 percent in 1983 by increasing the unemployment rate only to 2.6 percent by then. Without doubt, there are

⁸Actually, the second oil crisis did not happen at a fixed date. It lasted from end of 1978 till fall of 1980. During that period of time the price of oil increased by 150 percent from 13 dollars to 33 dollars per barrel (average price).

⁹In this context, one has to consider that the sharp revaluation of the Deutsche Mark following the breakdown of the Bretton Woods System to a large extent offset the adverse impact of the price increases of raw materials on the German price level. In Japan, to the contrary, the devaluation of the yen accelerated domestic inflation in 1974–75.

¹⁰In West Germany, the unemployment rate declined to a larger extent only during the second oil crisis (as a lagged indicator of the preceding economic upswing).

¹¹In Japan, the manufacturing production recovered to the pre-oil-crisis level only in April 1978. Kimio Uno even notes that there was no recovery seen in Japan until May 1979. See Uno (1987, chap. 5). This protracted stagnation after the first oil crisis ironically turned out to be one of the favorable circumstances for Japan's mastering the second oil crisis so well.

¹²In contrast to this CPI-figure, the year-over-year inflation rate measured by the GNP deflator was only 3.8 percent for 1980 in Japan. It went down to 0.8 percent in 1983. In West Germany, this inflation rate was also lower than the respective CPI-inflation rate. The figure for 1980 was 4.8 percent, that for 1983 was 3.2 percent.

some differences in unemployment measurement between both countries that distort the comparison a bit.¹³ But this does not change the general difference in the success with respect to shock absorption in both countries. In the following section, I shall try to investigate the main causes for this difference.

III. Explanation of the Differences in Macroeconomic Performances

The most striking aspects with respect to the comparison between macroeconomics performances in Japan and West Germany since 1973 are:

- the low and stable unemployment rate in Japan,
- the relatively low and stable inflation rate in West Germany over the whole period, and
- the still relatively high real GNP growth rate in Japan.

In this section I shall try to answer the question whether and in how far these differences are based on different macroeconomic policy patterns, perhaps expressing different values due to inflation and unemployment, or are derivable from different institutional patterns and restrictions. I shall start with a review of the policy choices made over the past 15 years.

A. Macroeconomic Policy

Before analyzing the macroeconomic policy courses in the 70s and 80s, I would like to point out two main characteristics with respect to macroeconomic policy objectives in either country. Firstly, one can state that the fight against inflation gained weight in the 70s in both countries as against a policy of fostering real GNP growth and fighting unemployment that rather dominated in the 50s and 60s. This is due to the experience of the inflationary shocks caused by the Vietnam War, harvest catastrophies and the two oil crises that produced a more or less steadily increasing inflation trend.

This is still present in the memories of the populations and the politicians. In this context of strengthening disinflation policies and price level stability policies, monetary policy became quite naturally more important in the macroeconomic policy mix as against fiscal policy.

¹³In Japanese statistics, "completely unemployed workers" are defined as those among the population over 15 years of age who are not employed, who are able to work, wish to work and *actively seek work during the last seven days of the month - excluding those engaged in paid work for one hour or more during the survey period*. In West Germany, on the other hand, unemployed are defined as persons with no job but who have been registered for at least 3 months for a job of 20 hours or more per week. Therefore one can conclude that the real unemployment rate in Japan is higher than the statistics show. There have been some attempts to put the Japanese unemployment figures in comparative perspective to the U.S. standard which is closer to the German one. The result was that male unemployment increased by about one-quarter and female unemployment more than doubled. See Taira (1983). For other references (mostly in Japanese), see Hamada (1985) or Hamada and Kurosaka (1987).

Secondly, aversion to inflation has always been high and has influenced macroeconomic policy in West Germany during the past decades¹⁴ whereas in Japan it gained a rather new dimension of political weight only after the first oil crisis. Insofar there was not really a change in trend in West Germany whereas there was a large change in policy pattern in Japan in 1974–75 towards an anti-inflationary policy line.

1. Monetary policy

Both countries employed a strict monetary disinflation policy after the oil crises, so producing deep recessions. The measures of disinflationary monetary policy used in both countries were quite similar. The timing of introduction of the disinflationary policies, however, was different in both countries.

West Germany, in contrast to Japan, had already started its disinflation policy quite a while before the *first oil crisis* hit the economy. Inflation began to steadily rise in West Germany in 1969 and reached more than 5 percent in 1971.¹⁵ This was the highest rate since 1951 and an alarm signal for inflation-averse West Germany. Therefore the Bundesbank raised its discount rate to 6.9 percent (annual average) in 1970.¹⁶ After changing its course and decreasing the discount rate in 1971 and 1972 to a level of 3 percent (because of fears of endangering the full-employment situation at that time by too a long-lasting disinflation policy), the Bundesbank again raised the discount rate from 3 percent in the fourth quarter of 1972 to 7 percent in the second quarter of 1973. The growth rate of M_1 decreased sharply from the second quarter of 1973 on and reached the record-low level of 0.6 percent in the third quarter of 1973. But also the growth rate of M_2 as well as that of central bank money stock (CBM), which became the main intermediate target for the Bundesbank from 1975 on, started to decline from the second quarter on. This means that the disinflation policy and the recessionary effects following this policy with a time lag were already effective when the first oil crisis hit the economy. Therefore the first oil crisis at the end of 1973 only led to a longer-lasting disinflation policy without

Table 4. Inflation and Money Growth Record in West Germany, 1973–75

	1973				1974				1975			
	I	II	III	IV	I	II	III	IV	I	II	III	IV
Inflation (CPI)	6.5	7.3	6.8	7.3	7.4	7.1	7.2	6.4	6.0	6.1	6.1	5.6
CBM (growth rate)	13.5	12.2	8.0	7.6	5.5	5.6	6.7	6.3	7.4	6.9	8.2	10.0

¹⁴This traditionally great aversion to inflation in Germany is mainly based on the experiences of the two hyperinflations in the 1920s and the 1940s.

¹⁵Here I refer to inflation measured by CPI. The GNP deflator rose even by 7.6 percent already in 1970.

¹⁶In 1968, the discount rate was 3 percent and in 1969, 4.5 percent.

having had a substantial inflation-increasing effect. In contrast to the second oil crisis, the Bundesbank decreased the discount rate already one year after the shock event, so allowing the economy to recover very soon. In 1976 the economy could again show a real GNP growth rate of 5.6 percent (on annual average) and simultaneously a slightly declining unemployment rate.

Japan, in contrast, began its disinflation period only shortly before the *first oil crisis* hit the economy. After a relatively moderate and stable inflation rate of 4.5 percent (annual average) in 1972, inflation started to rise in 1973. This was based on an excess-demand boom following an expansive fiscal policy in 1972 and 1973 accompanied by easy-money policy of the Bank of Japan. Inflation reached the 10 percent mark in the second quarter of 1973. Only then did the Bank of Japan react and raise its discount rate. But till the beginning of the fourth quarter of 1973, i.e. the quarter when the oil price increase hit the economy, the money (M_1 as well as M_2) growth rate exceeded 20 percent. In 1974 then, the inflation rate rocketted exceeding 24 percent in all four quarters. After a severe recession in real GNP growth with negative growth rates in 1975, real GNP growth recovered rather slowly in 1975 and 1976, exceeding the five percent mark only in 1977. But inflation then was still above 8 percent (on annual average). This experience of

Table 5. The Monetary Targets and Their Implementation in West Germany

(%)

	Target: growth of the central bank money stock			Actual growth (rounded figures)		
	In the course of the year ^a	On an annual average	Tangible results in the course of the year	In the course of the year ^a	On an annual average	Target achieved
1975	8	—	—	10	—	No
1976	—	8	—	—	9	No
1977	—	8	—	—	9	No
1978	—	8	—	—	11	No
1979	6 – 9	—	Lower limit	6	—	Yes
1980	5 – 8	—	Lower limit	5	—	Yes
1981	4 – 7	—	Lower half	4	—	Yes
1982	4 – 7	—	Upper half	6	—	Yes
1983	4 – 7	—	Upper half	7	—	Yes
1984	4 – 6	—	—	5	—	Yes
1985	3 – 5	—	—	5	—	Yes
1986	3½ – 5½	—	—	8	—	No
1987	3 – 6	—	—	—	—	—

^a Between fourth quarter of the previous year and fourth quarter of the current year; 1975: December 1974 to December 1975.

Source: Bundesbank (1987, p.92)

such high disinflation costs, and the memory of the traumatic shock experience itself, prevented the Bank of Japan from changing its anti-inflationary course — even though the real GNP growth rate has never again by now exceeded the 5.5 percent mark (on annual average), which is a rather low rate for Japan compared with the pre-1974 period.

When the *second oil price shock* hit both economies, the *West German* economy was in the middle of an economic upswing. The unemployment rate, however, was still above 3 percent. In order not to throttle the upswing and to produce even higher unemployment, the Bundesbank only hesitatingly reacted to the inflationary tendencies. Only from the second half of 1979 onwards did it heavily restrict money supply. Central bank money growth then fell from 10 percent per annum in the first half of 1979 to 5 percent in the first half of 1980. Since then, the Bundesbank has stuck all the more to this restrictive course (hereto see Table 5 above), now led by the philosophy that only by totally erasing inflation and inflationary expectations can a sound basement for a higher long-run real GNP growth path be produced. The effects and costs of this policy were described in section II.¹⁷

The interesting and for many economists puzzling¹⁸ phenomenon, however, is that this Bundesbank policy, though it well succeeded in bringing down inflation to about zero, has produced such high macro-costs in the 80s. The disinflation process took a relatively long time and unemployment steadily rose and is today still almost 9 percent.

There is, however, not a real puzzle with respect to a comparison between the performance after the respective oil crises. The difference in macro-costs lies only in the different strength of disinflation policy employed by the Bundesbank after the first and after the second oil crisis. After the first oil crisis, the Bundesbank released its restrictive course in 1975 when the inflation rate was still around 6 percent.

In the following years, the Bundesbank stuck to its rather expansionary course. This can be seen from Table 5.

In contrast to the Bank of Japan, the Bundesbank from December 1974 on announced its monetary target one-year ahead.¹⁹ Actually it only made a “point-announcement” till 1978. Afterwards, the Bundesbank announced a target range. One of the reasons for changing the procedure was the permanent overshooting of the point-target from 1975 to 1978 (Table 5). After the second oil crisis, however, the Bundesbank stuck to its restrictive, disinflationary course, with a short release in 1983, till at least the second half of 1986, when a negative inflation rate already prevailed. So the mean of CBM growth in West Germany from 1975 to 1979 was 8.6 percent and that of the period

¹⁷For a theoretical analysis of the costs of a long-term, purely monetary disinflation policy, see Wagner (1987a, 1987b). See also section III.B.3. below.

¹⁸See for such a characterization Fischer (1987).

¹⁹The Bank of Japan has only made some short-term ($M_2 + CD$) growth projections, and has announced this only from 1978 on. A comparison of projections and actual outcomes is listed in Table 6. The procedures of the central bank policies are briefly explained in Appendix A.

1980–87 was only 5.7 percent. For the whole growth rate history of CBM in West Germany and of M_2 +CDs in Japan, see Figure 4.

In contrast, *Japan* disinflated more quickly and has produced much less extra unemployment after the second oil crisis. The success of quick disinflation allowed the Bank of Japan to ease its restrictive course very soon and so to keep the output loss of disinflation low. The different time structure of disinflation policy can be seen when looking at the development of the discount rate in both countries (Figure 5).

The question, however, is whether the preceding monetary policy course of the Bank of Japan can be credited for this quicker and less costly disinflation process after the second oil crisis. When we only look at the better performance in disinflating and preventing inflation in a comparison with the first oil crisis period, then the new policy of the Bank of Japan appears to have been responsible for this success, at least to a substantial extent (Suzuki 1985). This new policy, which used the M_2 (+CD)—indicator as an intermediate objective from 1975 on and announced primary interest in price-level stabilization, proved “credible” insofar as it actually stabilized money supply growth and simultaneously reduced inflation gradually after 1975. This gained credibility made disinflating easier and less costly after the second oil crisis.

Though the new monetary policy course of the Bank of Japan can well explain a part of the *intertemporal* success story in *Japan*, it can hardly explain the difference in macroeconomic performance between Japan and West Germany after the second oil crisis. The reason is that firstly the Bundesbank has followed a similar monetary policy course.

Table 6. (M_2 + CD) Growth Projections and Outcomes, Japan

(%)

	Projection	Actual
1978	12 – 13	12.6
1979	11	10.3
1980	8	7.6
1981	10	10.4
1982	8	8.3
1983	7	6.8
1984	8	7.9
1985	8	9.0
1986	8–9	9.2
Mean	9.0	9.1
Standard deviation		1.7
Standard error ^a		1.2

Note: Data are for fourth quarter of each year.

^a(Mean square difference between actual and mean of projection) \times 4, to transform error to an annual rate.

Source: For 1978 through 1983, *BIS Annual Report*, 1983: 71; for later years, *BIS Annual Report*; for 1986 actual, IFS.

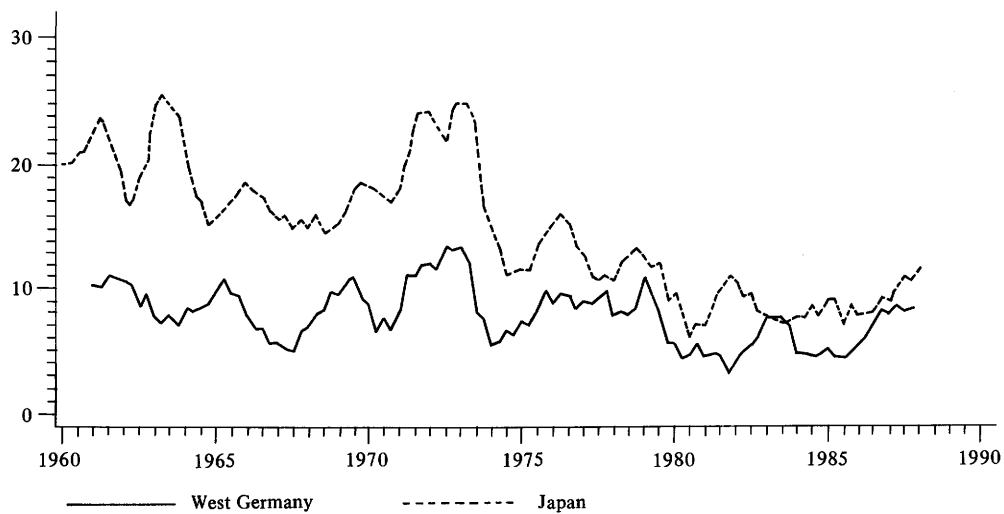
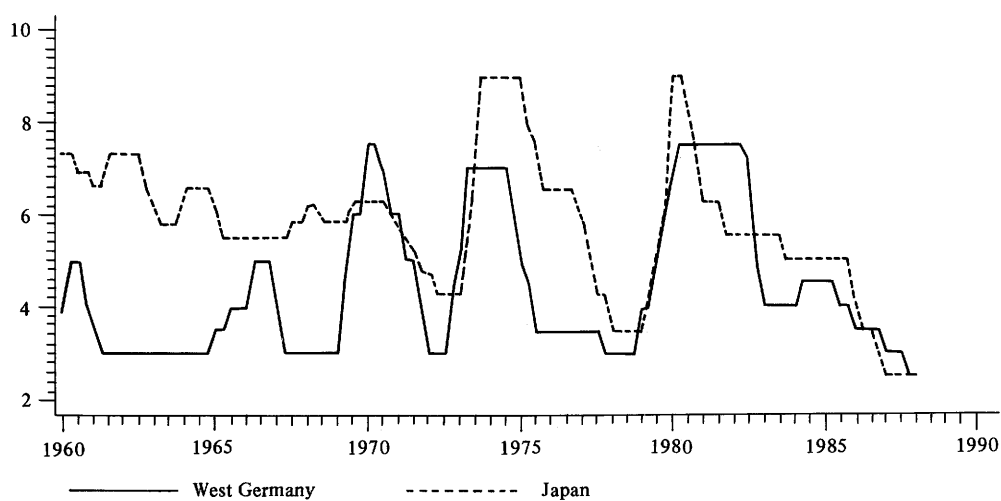
Figure 4. Central Bank Money Stock (WG) – $M_2 + CD_s$ (JP)

Figure 5. Discount Rate



Both central banks employed short- to medium-run monetary targeting or projecting policies, without sticking to a long-term rule commitment. (The latter alternative will be discussed in section IV.A.) The Bundesbank used the central bank money stock growth as an intermediate target from 1974 till 1987.²⁰ Moreover, it also explicitly announced that it will try to stabilize the price level. And, secondly, also the Bundesbank actually succeeded in stabilizing the money supply, though not in such an impressive way as the Bank of Japan did (Figure 4). Standard deviation of CBM growth was 2.2 percent over the period 1960–73 whereas it declined to 1.2 percent in 1975–79 and 1.6 percent in 1980–87, respectively (for Japan, the respective figures as to $(M_2 + CD)$ growth are 3.3 for 1960–73, 1.8 for 1975–79, and 1.3 for 1980–87).

The disinflation course of the Bank of Japan, that tried to gradually decline the inflation rate, was a bit more stable and may have gained more credibility with respect to inflation fighting for the long run than the Bundesbank did with its more expansionary course during 1976–79 (Figure 4).²¹ One, however, can hardly contend that the Bundesbank's loss of credibility was so large that this could explain the slower disinflation process in the 80s in West Germany. There must hence have been other "deeper" causes for the different macroeconomic performances of Japan and West Germany in the 80s, to which I shall come in section III.B.

2. Fiscal policy

(West Germany)

In 1967, West Germany for the first time employed fiscal policy in the Keynesian sense. In 1967, the West German economy was hit by its first severe recession after World War II. The new type of policy was introduced not as a discretionary measure but as a law (see in more detail in Section III.B.). The primary goal was to keep business fluctuations small and — politically more important — unemployment low. The first use of anticyclical fiscal policy in 1967 was a full success and confirmed politicians in following this type of policy. The second attempt after the first oil crisis, as well as the third one in 1977 after some recession signs, however, produced some disillusionment. Though output increased, unemployment did not react as fast or as strongly to the policy of deficit spending as expected. Therefore tax returns did not realize as expected in the following upswing and government was left with a lasting high deficit. Thus a serious debt problem arose constraining further fiscal anticyclical actions. Hereto see Tables 7 and 8.²²

The debate on whether to implement further employment programs went on, but the fears of thereby raising inflation expectations and of producing crowding-out effects

²⁰In 1988, the Bundesbank turned to M_3 as the intermediate monetary target. See in more detail Appendix A.

²¹The credibility gain of the Bank of Japan is reflected in the development of the exchange rate. While after the first oil crisis the Japanese yen depreciated, it appreciated in the second oil crisis. This latter appreciation offset a part of the adverse impact of the price increases of raw materials in the second oil crisis.

²²Tables 7 and 8 are from Willms and Karsten (1985).

Table 7. Fiscal Policy Programs of the West German Federal Government
1967-79 (DM million)

1967	January	Special Investment Program	2.500
	September	Second Anti-Cyclical and Structural Program	5.300
1969	January	Program to Promote Structural Change	600
1974	September	Special Program for Regional and Local Employment	950
	December	Program for the Promotion of Employment and Growth	2.600
1975	January	Program to Reduce Youth Unemployment	200
	August	Program to Stimulate Housing and Investment	5.750
1976	November	Program to Promote Employment	430
1977	March	Program for High Technology Investment	13.800
	May	Program to Support the Construction Industry	600

Source: Council of Economic Experts, *Annual Reports* (various issues).

Table 8. Public Expenditure, Revenue and Debt in West Germany
(annual data, DM billion)

	Expenditure	Revenue	Net increase in public debt	Total public debt	Ratio of total public debt to GNP (%)	Growth of total public debt (%)
1965	139.3	129.9	9.9	83.0	18.1	13.5
1970	196.3	188.3	9.8	125.9	18.6	8.4
1971	226.5	211.2	14.5	140.4	18.7	11.5
1972	252.1	239.2	15.7	156.1	18.9	11.2
1973	280.5	271.5	11.7	167.8	18.3	7.5
1974	318.3	290.9	24.6	192.4	19.5	14.7
1975	360.5	296.6	64.0	256.4	24.9	33.3
1976	376.8	328.7	40.3	296.7	26.4	15.7
1977	395.2	364.0	31.8	328.5	27.5	10.7
1978	433.4	393.7	42.3	370.8	28.7	12.9
1979	469.9	423.5	43.1	413.9	29.7	11.6
1980	509.3	451.9	54.7	468.6	31.6	13.2
1981	542.2	465.6	77.0	545.6	35.4	16.4
1982	566.0	495.5	69.0	614.6	38.4	12.6

Source: Council of Economic Experts, *Annual Report* (1983); Deutsche Bundesbank, *Monthly Reports* (various issues).

outweighed the desire of reducing unemployment more quickly. Moreover, the West German economy was not caught in a recession then. The capital utilization rate was quite high. This turned out to be, in an ex post view, a rather unfavorable circumstance for absorbing the inflationary momentum of the second oil crisis quickly and with small macroeconomic costs.

After the second oil crisis, the government in West Germany turned away from Keynesian-type fiscal policy and turned to a more supply-side type fiscal policy. This means that it restricted itself to trying to provide an institutional fiscal framework favorable for investment and economic growth. This new policy in particular included two objectives as to (a) reducing the public debt (consolidation policy), and (b) erasing inflation and inflation expectations (disinflation policy). In order to reach both goals simultaneously, a restrictive fiscal austerity policy was accompanied by a restrictive monetary policy. The motto was to "stay the course" no matter how long it would take.²³ The policy perspective was now one of the long run, claiming that unemployment would be structural anyway. Thus the buck was passed to the unions asking them for substantial wage decreases as a precondition for a new economic upswing and for a reduction in unemployment. In 1983, the new conservative-liberal government which had come into power in 1982, decided to follow the English-American policy example of reducing taxes. It hoped so to be able to stimulate the economy that grew only at a moderate rate of 1.5 percent in the period 1980–87. It took, however, several years to implement this policy effectively. So the unemployment rate was still 8.9 percent in 1987.

(Japan)

Governments in Japan had not employed deficit-financed spending to a large extent before the first oil crisis. Before 1965, the individual income tax schedule had regularly been realigned in such a way that public expenditure stayed within one fifth of GNP (Hamada 1985, p. 191). The issuance of public bonds to finance current expenditure had been prohibited by the Government Budget Act (*Zaiseihō*). Only after a recession hit the Japanese economy in 1965, did the government introduce a special statute enabling it to issue long-term bonds. It, however, was not until the fiscal year 1976 that a large volume of public bonds was issued.²⁴

In order to cope with the prolonged stagflation after the first oil crisis, the government then expanded fiscal expenditure aggressively,²⁵ even though tax revenue

²³The restriction on nominal demand was so strong that even the then more or less conservative German "Council of Economic Experts" complained that the unflexible consolidation course would endanger economic recovery (see SVR 1983, p. 36).

²⁴Ibd. The expansion of public bonds issuance in the second half of the 1970s required a change in the old, highly regulated financial framework prevailing in the high growth period. Financial innovation began to sprout and financial liberalization necessarily had to take place. See, for more details, Suzuki (1987).

²⁵But some of the expansion of public expenditures seen in the second half of the 1970s was based on the major expansion of welfare programs that had occurred already in 1973.

Figure 6. Government Deficit/Nominal GNP

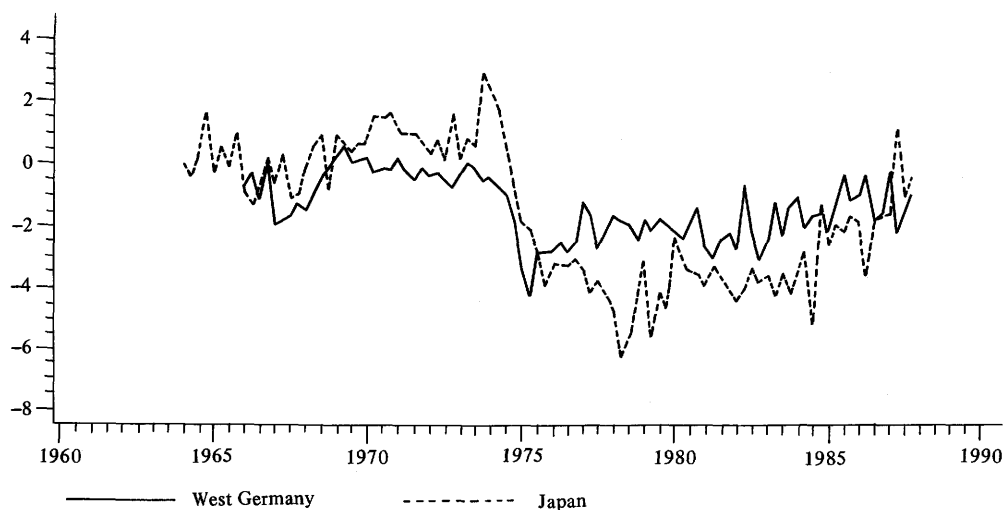


Table 9. Public Budget and Debt in Japan (annual data)

	Public budget ^a	Public debt ^b	Growth rate of public debt ^c
1970	+1.2	11	
1975	-12.7	18	13 ^d
1977		28	28 ^d
1978	-32.0	33	18
1979	-39.6	33	0
1980	-31.3	42	27
1981	-26.1	46	10
1982	-29.1	48	4
1983	-27.3	52	8
1984	-25.6	56	8
1985	-22.3	57	2
1986	-18.8		

^a Surplus (+) or deficit (-), percentage of public expenditure; only government.

^b Total public debt per GNP.

^c Own calculations

^d Average

Source: Institute of the German Economy (IWD), *International Economic Indicators*, 1987, pp.27-28.

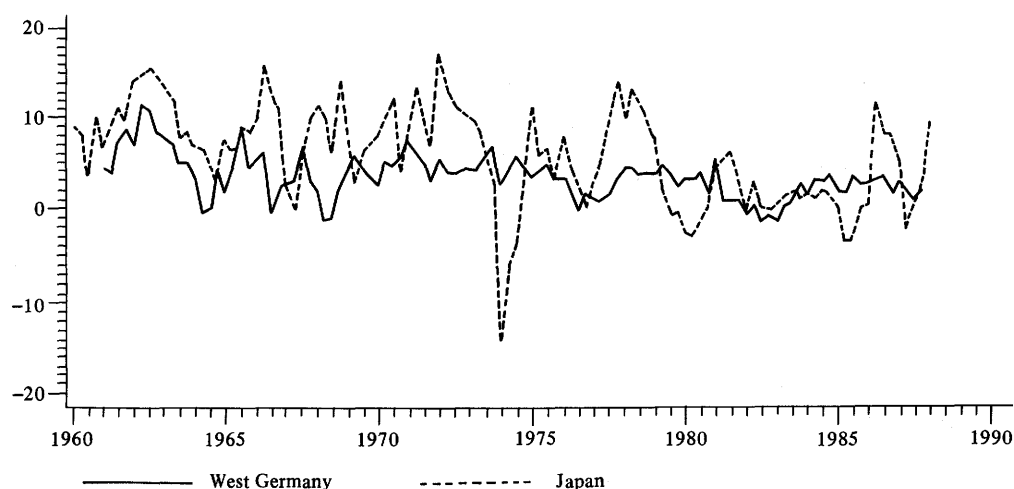
Original Source: Ministry of Finance, Germany, fiscal reports, various years.

stagnated.²⁶ As a result, the fiscal deficit began to increase from 1975 on, reaching more than 5.4 percent of GNP in 1978 (Figure 6). On the one hand, this massive fiscal deficit, which led to a tripling of public debt/GNP from 1970 to 1978 (from 11 to 33 percent), had the effect of preventing further large-scale countercyclical fiscal policy after 1978. On the other hand, after the first oil crisis and particularly in 1977–78 when recessionary tendencies were arising, fiscal spending filled a gap caused by a substantial fall in private domestic demand. It contributed so to the high stability in real GNP growth during the second half of the 70s.²⁷

In the first half of the 80s, when the public debt problem worsened (Table 9), the government adopted a policy of fiscal retrenchment and considerably restrained the growth rate of public investment, along with the growth of current expenditures. This policy line, which was similar to the West German fiscal consolidation course in the 80s,²⁸ proved successful insofar as it has by now decreased the budget deficit problem in the second half of the 80s (Table 9 and Figure 6).

In recent years, however, Japan seems to have turned again to a more expansionary

Figure 7. Government Expenditure



²⁶Already during the first half of the 1970s, there was a fairly steady rise in current public expenditure (centering on personnel and consumption expenditures). However, in this period, current public receipts (centering on tax revenue) also rose steadily.

²⁷After the first oil crisis, personal consumption, housing investment and plant and equipment investment in Japan declined substantially. See Horiye *et al.* (1987). Therefore governmental deficit spending proved favorable then though it raised the budget deficit problem. See *ibid.*

²⁸In Japan as well as in West Germany, the restrictive courses of fiscal policy, and in Germany also of monetary policy, were explicitly interpreted as an attempt by politicians to gain or regain a reputation as inflation fighters and debt combatants.

fiscal (and monetary) policy. The federal government has during the past few years undertaken several fiscal policy programs in order to stimulate domestic demand.²⁹

Compared to West Germany, Japanese fiscal policy has always been more "activist" with the exception of the period 1982–84 (Figure 7). While the Bank of Japan succeeded in stabilizing money supply growth after 1975 in an impressive way, government expenditure behavior is still rather activist, at least in comparison with the government expenditure pattern in West Germany. But maybe just this activist expenditure pattern has had a stabilizing effect on the private economy there insofar as it may have stabilized entrepreneurial demand expectations(?). At least Horiye *et al.* (1987, p. 65) from the Bank of Japan recently expressed such a view in an empirical work on Japanese business cycles: "The correlation between government expenditure including transfers and domestic demand has been negative and it suggests that, as a whole, the cyclical fluctuations in government expenditure have helped to level business cycles." One has, however, to be cautious with respect to such a "straightforward" conclusion. Principally, the causality behind the negative correlation mentioned can also be converse. Moreover, it has to be taken into account that the success of monetary and fiscal policy programs is always to a certain extent dependent upon the support by institutional frameworks. This is the matter of the following section III.B.

3. Incomes policy

(West Germany)

Monetary and fiscal policies in West Germany have been supported by different kinds of "informative incomes policy."³⁰ This supplementary policy has aimed at influencing prices and wages in order to reduce costs of disinflating and stabilizing the economy. The different kinds of informative incomes policy employed were:

- "moral suasion" during the 1950s (and afterwards),
- "social dialogue" in the early 1960s, and "concerted action" (Konzertierte Aktion) from 1967 to 1978, respectively.

"Moral suasion" means that the government tried to detain unions and employers from raising wages and prices "too much" by publicly emphasizing the negative effects of such actions on the macroeconomic process and by pleading for the "social responsibility" of the wage negotiators and price setters.³¹

²⁹In October 1985, federal government decided 3100 billion yen of additional expenditures, in September 1986, 3600 billion yen, and in May 1987, 5000 billion yen as well as tax decreases.

³⁰Incomes policy can be subdivided into (1) "informative incomes policy" which includes all forms of persuasion and of voluntary coordination of behavior on the basis of orientation data and informal guidelines, (2) "imperative incomes policies" which include wage and price stops, (3) "incentives incomes policies" based on tax policy and new markets formation.

³¹The function of incomes policy arises, as is well-known, from (a) the existence of externalities of private wage and price contracts, and (b) the lack of effective private contracts between individuals or groups which could internalize these externalities.

"Social dialogue" and "concerted action" included the Minister of Economics' organizing meetings between representatives of the various economic organizations from time to time. In these meetings, the participants discussed general economic prospects and necessary economic actions of government, labor and capital in order to facilitate long-run economic stability and growth. This latter kind of incomes policy was included in the Stability Law of 1967, in particular in §3 of this law. §3 reads: "(1) In the case of the danger of not achieving any one target listed in §1,³² the federal government makes orientation data available for a simultaneously coordinated behavior (concerted action) of the governmental units, the unions and the employers' associations in order to achieve the targets of §1. These orientation data contain in particular a representation of the macroeconomic relations with respect to the situation given. (2) The Minister of Economics has to explain the orientation data by request of any participant."

(Japan)

Japan never has introduced such a formal and legal procedure of incomes policy in the period after World War II. Nevertheless, the actual behavior of the Japanese government can well be interpreted as a certain kind of an informative incomes policy. Insofar as the information flow between government and industrial companies have traditionally been high in modern Japan, there has always been a pretty strong influence of government on firms' price-setting behavior. The maintenance of close ties with private industry has allowed the government also to influence indirectly the wage behavior. The reason is that unions in modern Japan are mainly company-based unions and behave through the bonus system and traditional ties relatively cooperatively.³³ After the first but also after the second oil crisis, it became very clear that the Japanese government used a kind of informative incomes policy. So government heavily influenced the Spring Labor Offensive (*Shuntō*) in 1975 and 1976. In consequence, the deflated "*Shuntō* rate" as well as the rise in real wages in manufacturing industries turned negative (−0.4 percent and −1.7 percent, respectively) in 1976 (Komiya and Yasui 1984, pp. 73–74). On the whole, one can even contend that Japan's informal kind of incomes policy has, in particular after shock events, been more successful than West Germany's formal introduction of the concerted action. Japan's informal incomes policy contributed to the success of getting private agents (firms and unions) to voluntarily constrain themselves to a macroeconomically rational behavior. This, however, is finally not based on political, but on institutional ground (see section III.B. below). In West Germany, in contrast, the traditional conflict between labor and capital creates a permanent distrust between both sides. This makes cooperation so difficult and institutional solutions such as the "concerted action" unstable and largely ineffective. Although (or because) one cannot reliably measure the

³²§1 reads: "Target of the Law...(is) to contribute simultaneously to the stability of the price level, to a high employment and external equilibrium at steady and appropriate economic growth."

³³See, in more detail, in section III.B.

effect of the "concerted action" in West Germany during 1967–78³⁴ quantitatively, the estimates thereon are very controversial.³⁵

On a theoretical basis at least, one can expect that the efficacy of an informative incomes policy is rather limited compared to Japan in a conflict-ridden society such as West Germany. The main reason for introducing an incomes policy is to try to ensure the production of "price level stability," which is a collective good(!), by providing an institutionalized form of conflict regulation, of information and of creating trust. The question is, however, whether a purely informative incomes policy heretofore is effective enough. In any case, there appear to be more effective alternatives of incomes policy. One of these will be briefly discussed in section IV below.

B. Institutional Characteristics

We can conclude from the foregoing section that macroeconomic policies in Japan and West Germany did not differ greatly from each other during the past 15 years. This means that the differences in macroeconomic performances in both countries during the 80s can hardly be based on different macroeconomic policy behavior alone. Institutional differences must have played a decisive role in this process, too.

In the following, I shall examine some of these institutional differences. I shall in particular concentrate on labor market conditions, because they determine the shock-absorbing capacities of an economy to a large extent. The difference in the Japanese and West German labor market flexibility has — as I shall substantiate — had a decisive influence on the difference in macroeconomic performances (i.e. in particular on disinflation and stabilization costs). However, as I shall explain in subsections B.2 and B.3, also other factors and especially hysteresis effects have played an important role in recent years in creating the worse unemployment and real growth record in West Germany.

1. Labor market flexibility

It has often been emphasized that Japan's labor market, compared to that in Europe, exhibits a high degree of flexibility.³⁶ Yoshio Suzuki (1985, p. 3) even contends "that the Japanese economy behaves quite like the Classical model of a labor market

³⁴In 1978, the unions withdrew their participation. The main reason was, that they felt themselves under permanent pressure by employers' associations and government officials urging them to reduce their wage demands. On the other hand, they were under simultaneous legitimation pressure from their work force "basis" which asked for converse, i.e. expansionary, actions.

³⁵Sachs (1979), for example, suggested that the absence of high inflation during the first oil crisis in West Germany was a result of the "concerted action" in particular.

³⁶See, for example, Gordon (1982) or Grubb, *et al.* (1983).

implies.³⁷ If this is true,³⁸ the shock-absorbing capacity in Japan must naturally be quite high.

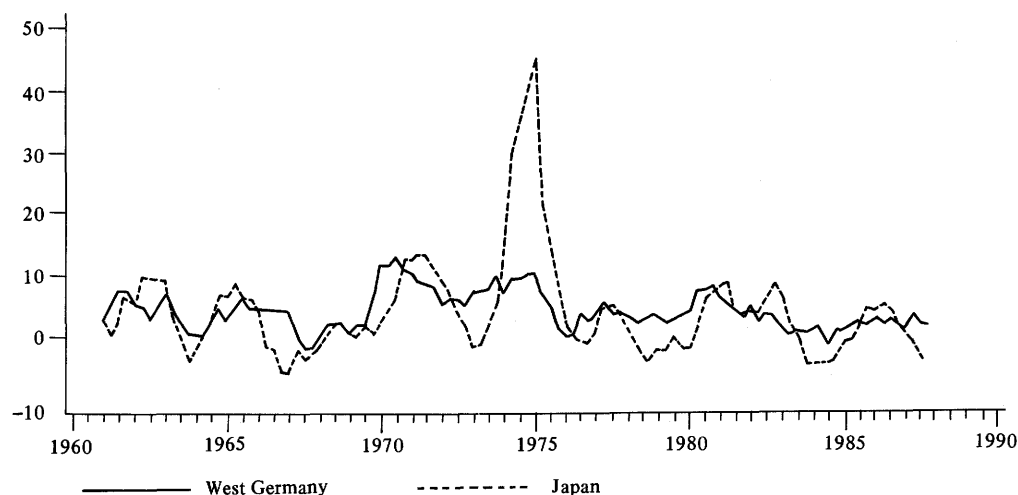
Labor market flexibility can mean real wage flexibility and flexibility in hours supplied and demanded, respectively.

a. Real wage flexibility

One cannot really prove real wage flexibility in the sense of labor market flexibility directly by only looking at the time series of macro-wage data. The development in different micro-labor markets are quite different from each other. Nonetheless Figure 8 presents some interesting information about the average wage behavior during and after the two oil crises.

To this figure, I like to emphasize only a single point. It is striking how relatively low (high) the increase in labor unit costs has been before and during the second oil crisis in Japan (West Germany). Deeper insights into the wage behavior in either country, however, can only be gotten by looking at the payment structures and collective bargaining structures respectively.

Figure 8. Unit Labor Cost



³⁷See for a similar view Hashimoto (1979). Suzuki's second contention is that the implementation of the new monetary policy course of the Bank of Japan after 1975 "has been such that expectations of inflation held by the participants of the labor market have not deviated by great deal or for a long time from the actual inflation path." These two specialities explain, in his eyes, why in Japan since 1975 "the economy has been gradually moving down along the long-run Phillips curve, implying stable real growth and a decreasing inflation rate." (Suzuki 1985, pp. 3-4).

³⁸Some Japanese labor market experts like e.g. Toshiaki Tachibanaki from University of Kyoto, disagree with this view. See Tachibanaki (1987).

(Japan)

Wage contracts in Japan are rather short. This means on the one hand, *base wages* are usually revised each year in spring. Wage contracts of two or more years, as in the United States and sometimes also in West Germany, are not common in Japan. On the other hand, about one quarter of annual labor income consists of *bonuses* which are paid semi-annually, mostly in June and December.

Bonus payments are flexible in Japan and reflect the short-term profit performance of the respective firm. Insofar, the bonus system as employed in Japan can be considered as a form of gain-sharing that cushions shock effects.³⁹ However, this bonus system actually is only a "weak" version of a "share economy" in the sense of Weitzman's proposal (Weitzman 1984; see, hereto, in section IV.C. below). Firstly, the share or bonus factor is rather small (about one quarter of total labor income, on average). Secondly, the profit elasticity of the bonus is rather low, as has been shown in various investigations. Weitzman (1986) and Blinder (1986), for example, found a profit elasticity of bonus payments of 10–14 percent on average over the past decades. Considering the average bonus share of one quarter, this means that only about 3 percent of the wage income in Japan can be considered as genuine gain-share income. Therefore there is still a possibility of increasing real wage flexibility, even in Japan, by raising the share factor and the profit elasticity of bonus payments (see below in section IV.C.). Nevertheless, even the existing semi-annual bonus system allows for some flexibility.

But not only semi-annual bonuses exhibit some flexibility with respect to profit changes. Annually adjusted base wages, which are simultaneously determined for all the leading sectors of the Japanese economy in the so-called "Spring Labor Offensive" (*Shuntō*) are rather flexible and adjust to shock effects which have hit the economy in the preceding year. Insofar, base wage adjustments in Japan implicitly include an element of *ex post* macro-level indexation of nominal wages to some macro-performance variable such as nominal GNP.⁴⁰ Actually, the *Shuntō* wage rate differs from industry to industry

³⁹See, e.g., Freeman and Weitzman (1987).

⁴⁰The empirical results by Gordon (1982, pp. 21–22) and by Freeman and Weitzman (1987, p. 177) and the description of *Shuntō* by Komiya and Yasui (1987, pp. 85–86) and Dore (1986, pp. 104–105) can be interpreted in this way. See also Galenson and Okada (1976, pp. 644–645) who also emphasize the standardization of base wage increases across firms in the *Shuntō* process. Dore, a well-known Japanologist and sociologist, interpretes the Spring Offensive method of base wage determination as follows (Dore 1986, pp. 104–105):

"It achieves what many other countries seek to achieve by an incomes policy - the establishment of an authoritative norm for wage increases. The difference is that the Japanese norm is not set by government or by tripartite council. It is an emergent norm, a little like the wage leadership of IG Metall, but of slightly wider application. The synchronization of the pay round and the coordination of strategies, both by unions and managers, means that before any particular firm or industry gets to serious negotiation about, or even formulation of, a particular pay claim, there has been a preceding period of intense public discussion (in the press and in seminars at prestigious research institutes) concerning what the economy can afford as an *average* increase in wages. And out of that discussion there does emerge a consensus as to the 2–3 percentage-point span within which the norm will be established. That consensus has a powerful influence

mirroring the different industry-specific economic performances. However, as long as the workers' wage rate in each industry is equally indexed to the respective industry-specific economic performance, i.e. the industry's revenue, the nominal wage rate in the aggregate economy acts as if it were indexed to nominal GNP. Thus, the average base wage in Japan can be interpreted as if it were indexed to nominal GNP.

Analogically, profit-elastic bonus payments can be regarded as an implicit form of an *ex post* or maybe even an *ex ante* micro-level indexation of nominal wages to profits.⁴¹ (West Germany)

In West Germany, real as well as nominal wages are, compared to Japan, less flexible. The normal length of wage contracts is around one year, too. But there are no regular profit-elastic bonus payments for all workers. Only for a small group of employees (for example, top managers), are such bonuses part of the annual income. However, there are firm-specific extra payments ("wage drift") which implicitly are positively correlated with the firm's profit performance. Nonetheless, a hindrance for absorbing shocks or structural shifts in the West German economy as efficiently as in Japan has been based on the tendency in the West German collective bargaining system of neglecting firm- and sector-specific differences in productivity growth or in profit performances. This tendency is based on the traditional, egalitarian principle of "equal wage for equal work" independently of the specific profit situation of the respective firm in West Germany.

Trade unions in West Germany are, in contrast to Japan,⁴² rather centralistically organized and politically strong. Their first aim in collective bargaining efforts during the last 2 decades has been to reach at least a nominal wage increase which consists of an inflation adjustment and a participation in productivity growth, so that the adjusted labor share does not decrease. Insofar, there has been in West Germany, especially during the 70s, an implicit macro-level indexation of nominal wages to the CPI price level. (The problems with using such an indexation scheme are analyzed in section IV.B. below).

The second goal⁴³ has been to reach a rather uniform percentage wage increase of all

on the wage leaders when they sit down to bargain and, within a week or two of serious bargaining (starting with a schedule of weekly one-day or two-day strikes established beforehand) establishes a "norm" - i.e. the figure for "the average percentage increase in settlements so far this year" which thereafter changes very little because it has such a persuasive influence on subsequent settlement."

⁴¹See, e.g., Hashimoto (1979). For the macroeconomic effects of such indexation schemes see in sections IV.B. and IV.C. below. There I shall also argue that, if my, analogue with respect to indexation schemes is true, Japan could still have increased its shock-absorbing capacity by raising the index factors.

⁴²In Japan, trade unions are organized along enterprise or company lines, and they are rather weak. In Japan, there are more than 70000 unions, in West Germany only 20 mainly branch unions (of which 17 are centralized in the German Trade Union Confederation (DGB)). Moreover, the rate of unionization in Japan is only about 26 percent, compared to about 40 percent in West Germany.

⁴³For a more detailed description of the West German union system and policy, see, for example, Bergmann, *et al.*, (1979).

employees in order to avoid a widening of income inequality between workers across industries and firms and thus to prevent a weakening of workers' solidarity. One macroeconomic problem in this context arose from the unions' having often orientated themselves to the productivity growth of the most productive sector, so that a permanent inflation bias existed.⁴⁴ This bias was strengthened by a tendency towards a downward rigidity of nominal wages, which was supported by strictly surveyed minimum wage regulations.⁴⁵

There is another institutional factor which is sometimes counted as an additional causal factor for the relative downward stickiness of wages in West Germany seen during the 70s and the beginning of the 80s. This institution is the *Stability Law of 1967* ("Act to Promote Economic Stability and Growth"). This Law obliged the federal government as well as the state governments to run their budgets in an anti-cyclical manner in order to stabilize macroeconomic demand. Government was enabled to raise or lower income and corporate taxes by up to 10 percent and to grant tax deductions for investment purposes *by decree* in order to overcome the time lag problem as to macroeconomic policy measures. Unions and workers interpreted this Law, strengthened by election promises by politicians, as a commitment of the state to use demand policy in order to keep economic recessions short no matter what the causes for recessions might be. Such a commitment, however, reduces the expected costs of group-egoistic, stability-averse behavior in income distribution conflicts. This will, as long as there are no other institutional precautions such as an effective incomes policy for example, raise the resistance of employees to wage decreases and lower the restraint of firms to price increases after an adverse supply shock (such as an oil crisis). When, in addition, unions are politically influential and strong, a medium-term wage rigidity of the "insider-outsider theory"- type tends to arise.⁴⁶

b. Labor demand flexibility

When an adverse supply shock occurs and real wages are inflexible, one can expect

⁴⁴See Okun (1978, 1981) for a discussion of the general problem of "relative wage" orientation.

⁴⁵For a survey about such regulations in West Germany, see Soltwedel (1988). In Japan, there is also a "minimum wage law" specifying that the minimum wage should be determined by each prefecture. However, the minimum wage law is not strictly obeyed by employers, and there is almost no penalty. See Tachibanaki (1987, p. 663).

⁴⁶The so-called "insider-outsider theory" by Lindbeck and Snower (1986) belongs to the "theories of union wage" (see, e.g., Oswald 1986), which try to explain business fluctuations by the specific behavior of unions. Unions are considered in these theories as pure interest organizations of *employees* ("insiders"). The main statement of this theory is that unions can control the access to labor markets because of the existence of transaction costs of dismissing and hiring people. These transaction costs can be influenced by unions' activities. So unions can realize wages higher than that at full-employment level and thus produce unemployment. The lower the expected costs of an economic recession, in terms of the risk *including the duration* of becoming unemployed ("outsiders"), are for employees ("insiders"), the stronger will be their resistance to real wage decreases.

Table 10. Real Wages and Employment in West Germany

	1979	1980	1981	1982	1983	1984	1985	1986	1987
Real wage increase ^a	1.6 (2.6)	1.6 (0.4)	1.0 (0.7)	0.3 (0.7)	0.4 (3.4)	0.6 (3.2)	2.1 (1.3)	1.0 (1.4)	1.8 (1.0)
Employment increase (%, annual data)	1.4	1.1	-0.7	-1.6	-1.5	0.1	0.7	1.0	0.7

^a% annual change of hourly earnings in manufacturing deflated by GNP deflator. Labor productivity growth in parentheses.

Source: OECD data, own calculations.

labor demand to decline (*ceteris paribus*). This was the case in West Germany after both oil crises, and in Japan at least after the first oil crisis.⁴⁷ When, *vice versa*, real wages decrease, as in West Germany during the first half of the 80s, one would expect labor demand to rise. This however, was not or only in a minor extent the case in West Germany (Table 10).⁴⁸

In this context, one has to consider that besides the wage costs there are also institutional hindrances or regulations which firms use to take into account. Such institutional hindrances are, for example:

- non-wage labor costs, and
- costs of dismissals.

(*Non-wage labor costs*)

In *West Germany*, there are many regulations in the labor markets imposed either by the government or by collective agreements between unions and employers' associations.⁴⁹ Important regulations, imposed by the government, which directly affect employment costs, are, for example:

- employers' contributions to the social security funds, and
- paid sick leave, paid holidays and vacations.⁵⁰

These types of additional employment costs have risen sharply during the past two decades (Table 11).

⁴⁷That Japan was not so successful after the first oil crisis, is based in particular on two factors. First, the shock mechanism was not yet understood well during this first larger shock period. Second, the monetary policy course was much too expansive then and produced high inflation expectations. However, the Bank of Japan, the Ministry of Finance as well as Japan's unions learnt very fast, so that real wages reacted faster during the second oil crisis.

⁴⁸Real wages reacted very late in West Germany, and furthermore, they never turned negative, as they did in Japan immediately after the second oil crisis.

⁴⁹However, there is also a large "shadow economy" or "underground economy" in West Germany, in which no regulations are effective and where real wages are quite flexible. Estimations of the size of this shadow economy differ very much with a mean of about 10 percent of GNP. See, e.g., Kirchgässner (1983).

⁵⁰Other types of costs are listed, for example, in Soltwedel (1988).

Table 11. Structure of Employment Costs in Manufacturing, West Germany

	1966	1969	1975	1984
(1) Remuneration for time effectively worked (DM)	9.230	11.208	19.033	30.837
(2) Indirect employment costs (DM)	4.002	5.181	12.907	25.163
percent of (1) in parentheses	(43.4)	(46.2)	(62.8)	(81.6)
(3) Basis for (2)				
Prescriptions by law	19.4	21.3	30.7	34.7
Collective bargaining agreements and voluntary fringe benefits of the firms	24.0	24.8	32.1	46.9

Source: Federal Statistical Office (Soltwedel 1988).

However, this kind of welfare state development has not only happened in West Germany, but also in *Japan* from the first half of the 70s on. The decisive difference, however, is that the cost burden for the firms in Japan is relatively low compared to that in West Germany.

(Costs of dismissals)

The *dismissal protection act in West Germany* covers all employees in firms with more than five employees (excluding apprentices). Each dismissal has to be socially justified, and it is — after a continuous employment of six months — ineffective if it is found to be “socially unfair.” In case of substantial changes within the firm, *social plans* can be enforced by the works council, on the legal basis of the shop rules act of 1972 that applies to firms with more than 20 employees. Such a “substantial change” can be a prolonged cut in production, a partial or complete closing down of a firm, a change of the firm’s site or an introduction of new technologies. Dismissal compensation payments in manufacturing increased tremendously in the 70s and in the first half of the 80s in West Germany. They amounted to about two and a half billion DM in 1984 (Table 12).

In *Japan*, there are also hindrances for firms from dismissing employees. However, firstly these hindrances are not legally enforced but are based on tradition and (slowly changing)⁵¹ social norms in general. Secondly, if necessary, dismissals are by far not so costly for Japanese firms. In Japanese firms, at least in the so-called first segment of the labor market,⁵² employees usually are not dismissed. Instead of this, the firms search for

⁵¹The number of dismissals has considerably increased in Japan during the 1980s.

⁵²This segment of the labor market still dominates in large companies. But there is also a large, highly mobile “fringe labor force” — the marginal workers. These workers (among them, most of the female work force) offer their services in a spot market for labor with relatively few legal or social regulations. See, e.g., Komiya and Yasui (1984, p. 88).

Table 12. Dismissal Compensation Payments (DCP) in Manufacturing, West Germany

	1972	1975	1978	1981	1984
DCP ^a	158	545	657	1175	2514

^a Firms with more than 50 employees. DCP in million DM.

Source: Federal Statistical Office (West Germany)

new employment opportunities for "affluent" employees in other departments or in sub-companies. Such shifts, however, are often connected with wage losses which the employees usually accept without going before labor court as it is often the case in West Germany.

(Conclusion)

A *major cause*, compared to Japan, of the poor macroeconomic performance of West Germany after the second oil crisis was as follows. After the experience of a series of shocks in the 70s, the entrepreneurs in West Germany could not exclude the future reappearance of such shocks. In other words, they became aware of and more sensitive with respect to the probability of the reappearance of shocks within an internationally closely related world economy. In such an expectations situation, where the reappearance of shocks such as the oil crises of the 70s does not seem unlikely, entrepreneurs become cautious as to hiring workers that they cannot get rid of any more or only with very high costs, when new adverse shocks occur. The risk in this respect has been much greater for entrepreneurs in West Germany than it has been for entrepreneurs in Japan where dismissals have also been very difficult however from a social point of view. This means, in portfolio-theoretical terms, that the risk premium for real capital investments must have been higher in West Germany in comparison with Japan. The reason herefore is that in a case of a shock-caused "affluency" of workers, in West Germany real wages have not reacted in the same way as they did in Japan. As I mentioned before and which I shall theoretically analyze in section IV.B., Japan has employed a kind of implicit indexation scheme where nominal wages behaved as if they were indexed to nominal GNP and to firm's profits. This indexation scheme compensates for the risk of firms' not being able to get rid of "affluent" workers without high economic or social costs. "Affluent" here means "*in excess*" at the going real wage level. In Japan, those workers have not been really or only for a short time⁵³ "affluent" because then real wages adjusted so that the new equilibrium real wage at the stable employment level was soon reached again. This has kept employment stable and real growth high in Japan. In the contrary, in West Germany those workers have really been "affluent" in a market-mechanism-based sense,

⁵³ During these periods of time, however, there is a kind of "labor hoarding" effective in Japan. This shows up largely as changes in productivity.

because real wages have not reacted fast enough.⁵⁴ They reacted only after having been driven down by prolonged unemployment in a short-run Phillips curve way.

In order to avoid just-described high costs of getting rid of "affluent" workers after adverse supply shocks, entrepreneurs in West Germany have been reluctant to hire new workers even when real wages went somewhat down and even when the short- to medium-run demand situation looked favorable as in the recent cyclical upswing.

c. *Labor supply flexibility*

The second characteristic of Japanese labor market flexibility, besides real wage flexibility, is *working hours flexibility*. In Japan, most of the short-term labor adjustments have been made through the change in working hours,⁵⁵ so that the employment rate could stay very stable even in the short run. When there is a cyclical upswing, hours of overtime work increase. But also in cyclical recessions, such as after adverse supply shocks, labor supply reacts flexibly. This does not only mean that then overtime work is reduced, but that also "voluntary" terminations of employment regularly happen. Such voluntary terminations are reached by offering premiums or, in particular with respect to older employees and female married employees, by morally "convincing" them to quit and temporarily or permanently retire from the labor market. The latter group of employees are afterwards sometimes called "discouraged workers" or "marginal workers" in the literature.^{56,57} In West Germany, there have also been such tendencies during the last one and a half decades, however they have by far not been so large and effective.

Another aspect of labor supply flexibility in Japan has been the high *mobility* of employees within companies. Shock events, such as the oil crises of the 70s, usually produce substantial changes in relative prices and consequently also structural changes in production. This creates labor demand changes with respect to qualifications, locations, branches and work places. Japanese workers have in this regard always reacted with a relatively great flexibility or mobility. It has been quite usual for employees in Japan to be asked by their company to change not only work place, but also location (city) and

⁵⁴It is an economics fact that there cannot be both, stable employment and stable real wages after a supply shock. See, in more detail, section IV.B. below.

⁵⁵See, e.g., Tachibanaki (1987, pp. 652–654). The rate of overtime hours to total hours worked was, for example, 9.4 percent in Japan in 1983, whereas it was only 4.8 percent in West Germany in the same year.

⁵⁶See *ibid.* for a summary of some Japanese studies on this topic of "discouraged workers." For an analysis of trends in female labor force participation in Japan see Shimada and Higuchi (1985). Recently, women have become more "sticky," as Nishikawa and Shimada (1986) expressed it, in remaining in the labor market seeking employment opportunities or at least unemployment compensation while being unemployed. This has raised the rate of unemployment in Japan.

⁵⁷As Hamada and Kurosaka (1984) estimated, the number of men and women who were discouraged and went out of the labor force in Japan between 1973 and 1975 (after the first oil crisis) increased by 350,000 and 840,000 respectively, while the number of those who stayed as officially unemployed increased only by 220,000 and 100,000 respectively.

even "profession," when structural changes happened within the company.⁵⁸ And it has been quite usual, too, that the employees have accepted the company's desire⁵⁹ without contradiction. This very special "cooperative" behavior of employees has been based on various factors. Firstly, one can interpret this behavior, in an economics sense, as the result of an implicit contract between companies and employees, where mobility (and wage flexibility) is exchanged against life-time position. The implementation and the stability of such an implicit contract, however, are not independent of social-cultural norms and values. In this context, Confucian tradition has played an important role in Japan.⁶⁰ Secondly, natural conditions of living are also responsible for the behavior described. In a densely populated society such as Japan, homogenous and harmonious behavior is necessary for peaceful social and corporative life. In other words, the pay-off of cooperative behavior is higher in such an environment.

Besides the cooperative behavior of employees, there is another factor which is responsible for the high potential of shock absorption in Japan. This factor is the special training system. Workers or employees are trained in Japan after school usually on-the-job, i.e. within the company, and rather to be "generalists."⁶¹ This turns out to be an advantage when shock-caused structural changes happen within a company. Employees then are not only ready to be mobile and change, as I just explained, but they are, due to this special training system, also able to be re-trained within a relatively short period of time. This makes shock absorption easier than in a country like West Germany where employees are (a) rather unwilling to change locations, branches, qualifications or even work places⁶² and (b) are usually trained to be "specialists" in their field. In West Germany, there is a centuries-old tradition as to "professionalism," "*Berufsethik*" (professional ethics) and "*Berufsstolz*" (professional pride). The German way proves to be the better one in a rather shockless economy insofar as it favors productivity. When shocks frequently appear, however, this immobile structure hinders the shock absorption pro-

⁵⁸After the first oil crisis, Japan was more successful in restructuring its economy toward a structure of production which is less dependent upon the raw material "oil." So the ratio of oil consumption versus real GNP production declined faster in Japan than in West Germany. Setting the ratio of index as 100 in 1973, the ratio decreased in Japan to 85.3 in 1978 and 81.4 in 1979 while the respective figures in West Germany were: 87.2 in 1978 and 85.5 in 1979 (see Suzuki 1981, p. 95). This process of faster restructuring is partly based on the greater mobility of employees in Japanese companies.

⁵⁹This desire need not be combined with the offer of a monetary incentive. It can even be combined with a cut in salary.

⁶⁰According to Confucianism, one must be faithful first to one's own family, then to one's local community, and then to one's nation. This kind of group ethic has facilitated the implementation and maintenance of permanent employment and of a seniority wage system in the postwar period. See, e.g., Morishima (1982), Fukutake (1982) or Glazer (1976).

⁶¹This can be seen as a consistent by-product of life-time employment in companies.

⁶²One reason for this unwillingness is certainly the, compared to Japan, generous unemployment compensation in West Germany.

cess and makes it very costly.

(Non-transferability of social institutions)

There have been many proposals in West Germany, made by politicians as well as by economists, to imitate or transfer aspects of the Japanese labor market flexibility in or to West Germany.⁶³ The question, however, is how this could and whether it should be done. A legal coercion to follow Japanese labor market rules would not have necessarily raised macroeconomic performances in West Germany. Even if it had, this would not have meant that welfare had increased then. In fact, there is a trade-off between macroeconomic performance or economic welfare and social welfare. (Social welfare here refers to the fulfillment of norms of social justice and social relations or customs.) West German labor market institutions as well as the Japanese ones are based on very own social and cultural patterns of values (e.g. distributional justice patterns, labor preference and labor-capital-relations) which have developed over a long period of time. Legal acts cannot destroy such social and cultural patterns and create new ones in their stead, and if they try, this can well be counter-productive. For example one cannot transfer the typical Japanese cooperative behavioral pattern, including the willing mobility of employees within companies, without simultaneously transferring the Japanese-type Confucian social tradition which implies conflict avoidance and loyalty as social norms.⁶⁴ This, however, is impossible in a country with a very different social and cultural history. Therefore, if Western societies want to "learn" from the Japanese society how to react more flexibly to shocks, they can, besides loosening some regulations,⁶⁵ only try to set in motion a process of enlightenment that explains to the public how shock mechanisms, effects and costs function under different contract patterns. (In section IV, such a comparison is briefly outlined.) The introduction of new contract patterns, however, is all but easy since in reality not only Pareto-efficiency counts but also distributional conflicts which are not solved by the "invisible hand" of competition. Socialized mistrust between conflicting interest groups often prevents the implementation of Pareto-efficient cooperative, institutionalist solutions.

Nevertheless, these difficulties must not exempt scientists to search for institutional alternatives that can help reduce the costs of shock absorption. This task becomes even more urgent in a world where nations and their economies are becoming more and more interrelated, caused by advanced information techniques and increased economic (inter) dependencies. Section IV below relates to this commitment.

⁶³The former Minister of Economics, Graf Lambsdorff, as well as the German Council of Economic Experts (Sachverständigenrat für die gesamtwirtschaftliche Entwicklung) have been among these advocates.

⁶⁴It is this social tradition, which guarantees the stability of implicit contracts between employers and employees on which the above cooperative behavior is based.

⁶⁵See, e.g., Soltwedel (1988). The abolishment of regulations, however, is not as easy as it is sometimes supposed to be. Many regulations are based on traditional historical developments, and some of them play an important stabilizing role for social and corporative life.

2. Other conditions

So far I have only discussed the main differences in labor market flexibility in Japan and West Germany. There are, however, also other factors which have influenced the difference in macroeconomic performances between Japan and West Germany. Because of the limited space here, I can only name some of them.

a. *Demographic developments*

West Germany has experienced from the late 70s on a higher entry of young people into the labor market, resulting from high birthrates during the 60s. Furthermore, women have participated more actively in the labor market. To the contrary, in Japan there was no strong pressure of labor supply by young people and female workers between the mid-70s and mid-80s. Their proportion of the working population had even declined somewhat (Tachibanaki 1987, p. 650).

b. *Pressure of foreign workers*

Between 1970 and 1973 alone, just before the first oil crisis, the intake of foreign workers in West Germany was equivalent to a 3 percent addition to the dependent labor force; and at the peak in 1973, about 2.5 million foreign workers represented 11 percent of all workers. A large percentage of these foreign workers stayed after the oil crises and represented a substantial part of the unemployed.⁶⁶ To the contrary, in Japan the pressure of foreign workers was almost negligible in the 70s and the first half of the 80s.

c. *Structure of employment by status*

In Japan, only about 40 percent of the non-agricultural work force are permanent employees. An estimated 30 percent are temporary employees and about 30 percent are self-employed (Tachibanaki 1987). In West Germany, the respective percentages of temporary employees and of self-employed are only a fraction of the above figures.⁶⁷

This high percentage of temporary employees and self-employed in Japan represents a high reservoir of flexibility in the Japanese labor market and helps keep the unemployment rate low.

3. Hysteresis effect in the West German labor market

In West Germany, the mix of restrictive monetary and fiscal policy, described in section II, on the one hand, and institutional and structural characteristics on the other hand has produced not only a steadily climbing unemployment rate but also the problem of long-term unemployed. The share of long-term unemployed⁶⁸ rose in West Germany

⁶⁶The percentage of unemployed foreign workers among total unemployment in West Germany was 14.1 percent in 1975, 12.1 percent in 1980, and 11.5 percent in 1987.

⁶⁷The percentage of self-employed in West Germany is about 12 percent (including unpaid family workers). The percentage of temporary employed is less than 10 percent.

⁶⁸Measured as percentage of total unemployment. Long-term unemployed are defined as those who are already at least one year in unemployment.

from 13.8 percent in September 1981 to 31.0 percent in September 1985.⁶⁹ The longer people are unemployed, however, the more they lose their job qualification: they are out of practice and out of on-job-training which is important in a world of permanent technological change. This means that after a while they are not "tradeable" in the labor market any more because their supply of job qualifications does not fit the firms' changed demand for job qualifications. In other words, human capital is destroyed and the "natural" rate of unemployment is increased by long-term unemployment. This connection, sometimes called "hysteresis effect," (Blanchard and Summers 1986) raises the question whether the German "stay the course" -type of macroeconomic policy has been such a wise policy. It has, in any case, been an extremely costly policy. The decisive question is how great the opportunity costs have been. The West German government has during the 80s always been afraid of rising inflation (even when inflation was negative as in 1986) and of rising government deficits. Furthermore, it implicitly hoped that by sticking to its restrictive macroeconomic policy course the institutional hindrances described above would be overcome. That, however, turned out to be an illusion. Institutions do not change quickly. The remaining crucial question is whether a more flexible or expansionary monetary and fiscal policy (after 1983 or 1984) would have been effective. The experiences in Japan and in the United States seem to prove that it would have. Nobody knows for sure what the side effects with respect to inflation or government deficit would have been, but there is strong evidence that at least the hysteresis problem could have been mitigated. The main obstacle to changing the restrictive monetary and fiscal policy course in West Germany, however, has been the extreme fear of inflation for which West Germany is well-known and for which it often has been ridiculed by other nations during the last years. This fear, in particular because firstly it is well based on practical experience and theoretical knowledge and secondly fighting it by restrictive monetary policy alone is very costly, makes it necessary to look more closely at alternatives or, rather, additions to traditional monetary inflation fighting.

IV. Political and Institutional Alternatives and Their Implementability

I have shown so far what the macroeconomic performances in Japan and West Germany over the past 15 years have been like and how the difference in macroeconomic performances between the two countries can be explained.

The question remains whether there would have been better options with respect to macroeconomic policies and in particular to institutional frameworks, and if so why they have not been employed. In order to answer this question, I shall analyze different types

⁶⁹Source: Federal Statistical Office. In Japan, the share of long-term unemployed *decreased* from 13.4 percent in 1981 to 12.8 percent in 1985. (Source: "Report on the Special Survey of Labour Force Survey," Management and Coordination Agency, 1981, 1985)

of political and institutional alternatives.

A. Long-term Commitments to a Policy Rule: A Monetary Policy Alternative?

There are many "policy rules" which have been proposed over the past decades as an alternative to the more or less flexible and discretionary way central banks use to employ monetary policy. By now, however, no optimal rule has been found that may be considered as convincing or "super-optimal." The optimality of rules generally depends upon the source of shocks, the persistence of shocks, the kind of expectations formation, and the information advantage of the monetary authority. In other words, the optimal criterion changes when changing the assumptions about the source and persistence of shocks, about the kind of expectations formation, or about the information advantage of the monetary authority. I showed this very clearly in a recent article when comparing fixed money supply targeting and nominal income targeting (Wagner, 1988b).⁷⁰ The problem now is that in the time period when we have to decide which policy rule to employ we do not really know in advance which kind of shocks will mainly arise in the next periods, how persistent they will be, and how the public forms their expectations. Therefore, the risk of choosing and implementing the "wrong" rule is very great. This is one reason why central banks avoid committing themselves, at least not in the long run, to a specific monetary rule. (Sometimes, they do for a shorter term, like the Bundesbank has done since 1975, as described above and in Appendix A.) In other words, the environmental conditions can change and force the central banks to react in order to avoid greater losses for society.

However, as the so-called dynamic- or time-inconsistency theory has convincingly demonstrated,⁷¹ there is a tendency towards time-inconsistency of policy if politicians do not commit themselves to a long-run, legally-bound rule. This is the case, even if politicians try to maximize social welfare. The main assumption used in this literature is that there is a short-run Phillips curve which the politicians utilize when they try to maximize social welfare. Thus, in order to push unemployment below the natural rate, they tend to deviate from a prior commitment when the public's expectations have stabilized themselves on the basis of the politicians' prior commitment. So they can increase welfare (or decrease loss)⁷² for the short run, as long as expectations have not adapted to future (or current) inflation produced by this. In the long run, however, only higher inflation results; i.e. in the long run, welfare decreases (or loss increases).

The typical conclusion in this time-inconsistency theory is that only a long-run and

⁷⁰This article is based on a paper written at MIT with Kazumi Asako, (Asako and Wagner 1987). See also Wagner (1988a).

⁷¹See for a summary of the argument, for example, Barro (1986), Rogoff (1987) or Fischer (1988b).

⁷²It is not necessary here to stick to the usual assumption of governments' trying to maximize social welfare. We can instead assume that politicians follow their own interests. But even then, trying to push unemployment below the natural rate can be desirable for politicians when this raises their chances of re-election.

legally-bound commitment to a specific rule avoids this kind of trap described. However, there are *several caveats* with this theory or this conclusion, respectively. *Firstly*, as in particular history after World War II in West Germany and Japan has shown, politicians or central banks do not necessarily succumb the incentive of using expansionary monetary policy to push the unemployment rate below the natural rate.⁷³ It appears to many observers to be even the converse case in West Germany during the 80s, as that the Bundesbank has tried to keep the unemployment rate above the natural rate in order to insure against the slightest chance of a reappearance of higher inflation expectations. This means, there must be other factors weighing against the inflation-producing incentive worked out in the time-inconsistency literature. These factors may be called “reputation” on the one hand and “ideology” or “conviction” with respect to inflation aversion on the other hand. At least for West Germany, and to a similar degree also for present-day Japan, the conclusion of the time-inconsistency theory, that calls for a long-run and legally-bound commitment to a specific monetary rule, does not seem to be practically relevant. This is so as in both countries the counter-factors called “reputation” and “aversion to inflation” are so strong that they outweigh the inflationary incentive emphasized in the time-inconsistency literature. *Secondly*, there is a trade-off between the gain from time consistency and the gain from flexibility. The gain from time-consistency consists in the government’s staying “credible” to the public. However, the gain from flexibility consists in the government’s avoidance of high welfare costs in the case of unforeseen (and unforeseeable) shocks hitting the economy. Now there is the question whether the central banks in Japan and West Germany really have suffered a loss of credibility by not having followed a strict rule and by having been once in a while time-inconsistent in their policies. I doubt this. Moreover, I believe they would have lost more credibility and confidence in their policies if they had chosen a long-run commitment to, say, a fixed money supply rule with the consequence that they would not have been able to react in time to shocks during the 70s and 80s. *Thirdly*, the implementation of a strict long-run monetary rule is politically and practically not feasible. In democracies, where elections are held regularly and governments or politicians change, subjective welfare functions and subjective Phillips curves change, too. This means that such long-run monetary rules would not be stable. This again would mean that the commitment to a strict long-run rule would not be credible to the public even not if it were legally bound. Laws always can be changed and are changed. Besides, even the public does not have a static subjective welfare function or a static view with respect to the relevant Phillips curve. Thus, the public’s pressures towards abolishing a monetary rule would be differently strong, even if the shock-environment had not changed.

These remarks against a too “straightforward” conclusion from the time-inconsistency theory should not be interpreted as a pleading for a discretionary policy of

⁷³It may be better, in this context, to talk of the NAIRU instead of the natural rate.

central banks in general. I think that the "mixed" courses followed by the Bundesbank and the Bank of Japan after 1975 that employed "rules with flexibility" have been, on the whole, politically and practically wise ways. Central banks have to stabilize expectations of the public as well as to keep their flexibility for the case of unforeseen shocks hitting the economy. That is, central banks should commit themselves to a kind of "rule" and announce it in advance but should not give away the right and the possibility of changing that rule or political course in the case of substantial changes in social and politico-economic environment.

The question remains, to *which* rule should central banks commit themselves. I don't think that there is a general answer because, as emphasized above, the optimality criterion with respect to a certain rule changes with the environmental conditions. And the environmental conditions may be different in different countries. For example, there has been a debate in the academic field in West Germany whether the Bundesbank should implement a nominal GNP rule or not. One of the major arguments in favor of a nominal GNP rule was in this context that the stability-political core of a nominal GNP rule would rather be understood and trusted by the unions, so that the latter would rather be willing to agree on a social cooperation or "contract" with respect to disinflating.⁷⁴ In other words, the specific normative and labor market conditions in West Germany were the main reason for proposing such a specific rule. For Japan, however, this line of arguments is less applicable and therefore another monetary rule, like e.g. a fixed one-year money supply rule, may be more appropriate there. As emphasized above, however, there is no generally superior monetary rule. This means the adequacy of a certain rule for a country has to be examined from case to case (country to country) and re-examined from time to time.

B. Alternatives to Increase Wage Flexibility

As we have seen above, there are a lot of inflexibilities with respect to wages in the labor markets. This is in particular the case in West Germany, whereas wage flexibility is relatively high in Japan. Nevertheless, even in Japan there are still short-run inflexibilities, and hence disinflation costs have been substantial here too.

I shall briefly analyze whether and in how far such disinflation costs could be lowered by the introduction of some institutional supplement. I shall concentrate on those three proposals which have dominated in the theory of stability policy over the past decade, i.e., on wage indexation, gain-sharing and taxed-based incomes policy.

1. Wage indexation schemes

In order to accelerate disinflation and reduce the costs of disinflation, wage indexation has often been advocated. In many countries one or the other form of indexation has

⁷⁴See, for more detail, Wagner (1988a).

already been introduced during the past decades.⁷⁵ The most common form employed has been the indexation of wages to a certain price level index.

The general argument strongly spread by Milton Friedman in the beginning of the 70s has been the following. With wage indexation, wages and prices adapt more quickly to a reduction in money supply implemented in the course of a disinflation policy. (Perfect) indexation of wages to the price level, for example, prevents an increase in real wages during the process of disinflation. Hence, restrictive monetary policy will cause less real disturbance appearing as smaller fluctuations in real output and employment. Nevertheless, West Germany as well as Japan have refused to officially implement this kind of institutional supplement during their disinflation periods.

In West Germany there has been a lively debate about introducing or not introducing wage indexation before and after the first oil price shock. The experience of the so-called "September strikes" in 1969⁷⁶ induced quite a number of economists in West Germany, led by Herbert Giersch, to advocate the introduction of wage indexation. The goal was to avoid such strikes and the costs connected (loss in work hours) in the future. However, the fear of accelerating inflation by introducing wage indexation outweighed at that time, finally strengthened by the inflationary effects of the first oil price shock. Nevertheless, as I argued in section III.B. above, collective wage bargaining procedures in West Germany as well as in Japan have included some implicit form of price level indexation and of nominal GNP indexation respectively.

During the last 15 years, a lot of empirical and theoretical work has been done on the indexation topic. I shall concentrate in the following on the indexation of wages to the price level and to nominal GNP, alternatively. The empirical investigations of the success of wage indexation in different countries have been "mixed,"⁷⁷ whereas the theoretical results with respect to the effects of wage indexation on disinflation and stability are rather clear-cut.⁷⁸

a. Indexation to the price level

The main results of theoretical analyses are that wage indexation to the price level

- a) stabilizes real output when monetary or demand shocks arise, however destabilizes real output when supply shocks appear;
- b) strengthens or accelerates price reactions of all kinds of shocks, that includes inflationary effects of positive or expansionary shocks.

These effects are derived within a simple macroeconomic model in Appendix B.

⁷⁵For a survey, see, e.g., Braun (1986, chap. 8) or Giersch (1974, Appendix).

⁷⁶The "September Strikes" were illegal wildcat strikes, implemented by large groups of the German workers. The reason for striking was to fight for a compensation for inflation losses and for a reversal of the decline in the wage share which occurred 1969 during the wage lag period based on long-term wage contracts without any indexation.

⁷⁷See, e.g., Carmichael, *et al.* (1985) and Braun (1986, chap 8).

⁷⁸For a survey, see Carmichael, *et al.* (1985) and Fischer (1986, Part II).

Accordingly, the *advantages* of introducing wage indexation to the price level are a greater and quicker reduction in the inflation rate during a disinflation process and a relative stabilization⁷⁹ of real output in the cases of monetary and demand shocks. The *disadvantages* however, consist of stronger inflation effects when expansionary shocks occur and of a relative destabilization⁸⁰ of real output in the case of supply shocks.

There are, of course, theoretical possibilities of reducing the disadvantages. It is not difficult to imagine that authorities, when knowing these results, may try to limit the use of indexation to recessionary monetary shocks (i.e., to traditional disinflation policy) and perhaps to recessionary demand shocks. In practice, however, such a fine-tuning of institutional introduction and abolition is hardly realizable. There are high microeconomic costs due to an introduction and an abolition of social institutions that will prevent such an institutional fine-tuning. Moreover, unfortunately, the true sources of shocks are not always immediately recognizable. This means there would be unavoidable time lags as to introducing and abolishing indexation and also perception errors due to the true sources of shocks. Last but not least, as the time-inconsistency approach suggests, governments may proceed to a more inflationary policy course when that part of inflation costs which consists of the costs of disinflating is reduced by wage indexation. However, in practice, this correlation is not always obvious. For example, as explained in the preceding section, the unemployment costs of disinflating are much lower in Japan compared to West Germany. Nevertheless, it does not appear as if Japan had tried to follow a more inflationary course than West Germany has done since 1975.

There are, however, still other uncertainties with respect to introducing wage indexation. As long as indexation is introduced as an *ex ante* scheme, it can be expected to lower the costs of disinflation. If it, however, is implemented as an *ex post* scheme, adapting nominal wages to a prior price level, as it has been the case in different countries, the advantage of lower costs of monetary disinflating is not assured any more. This has been pointed at by Simonsen (1983), on the basis of the Brazilian experience with indexation in the context of disinflation policies. It has also theoretically been confirmed by Fischer (1988a). Fischer shows in a model analysis that, as long as there is no base nominal wage adjustment at the reopening of each wage contract, *ex post* indexation may well increase the output costs of disinflation.⁸¹ For Japan, it is, however, not difficult to imagine that an *ex ante* indexation could be realized. This would presuppose that in wage negotiations both sides, employers and employees, used the same price level forecasts. The forecasts could be made, for example, by some respected research institution. Even in West Germany, where distrust between both sides rather prevails, such an agreement

⁷⁹"relative" here means: compared to the case of non-indexation.

⁸⁰See the preceding footnote.

⁸¹The reason is that at the beginning of disinflation with an *ex post* indexation, real wages rise because the price level decreases while money wages at first remain constant. During disinflation then real wages remain unchanged at this higher level because of the indexation, as long as the base wages are not adjusted downwards.

upon commonly used price level forecasts is well imaginable.

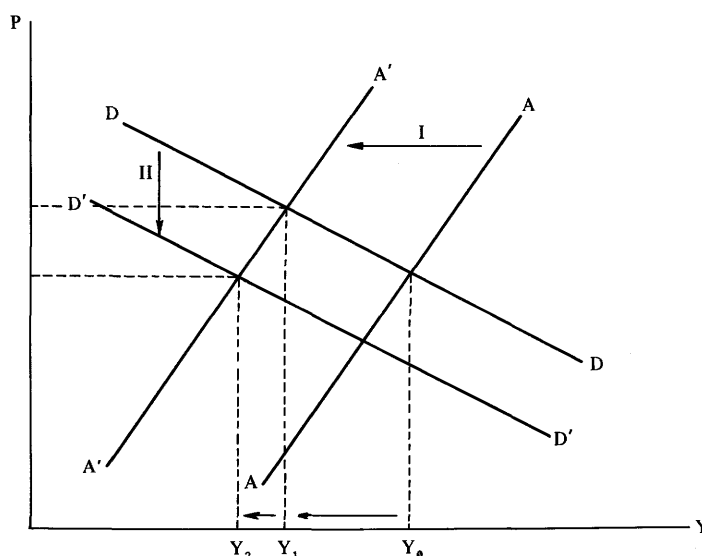
However, in both countries, the incentive to introduce such an *ex ante* indexation scheme seems to be not strong enough. This partly is based on the relatively low employment costs of disinflation in Japan and, respectively, on the high risk-aversion in West Germany as to dangers of inflating the economy when implementing a wage indexation. Besides, the non-introduction of wage indexation on a private basis between the wage bargaining "partners" could also be based on an externality problem similar to that of the non-introduction of outside money on a private basis. The introduction costs here outweigh the utility of outside money for an individual. That means, the positive macro-externalities cannot be internalized on a private basis so that the state has to become active in introducing this institution (i.e., outside money). Once introduced, the private agents are interested in using it. The same may be the case with indexation. After introduced by the state on a broad basis, the individuals may have a greater private incentive to use wage indexation. If state activity is really demanded for the introduction of wage indexation, then it is, however, only necessary in low inflation situations. For, the higher the inflation rate is, the greater is the private incentive to introduce wage indexation. The reason is that the real income losses increase with the inflation rate during the periods of wage lags between discrete wage negotiations. Also entrepreneurs can expect gains from agreeing upon wage indexation in periods of high inflation because they so can avoid costs arising from permanent negotiations and strikes for inflationary adjustments. This is the main reason that there have been wage indexations in most countries with high inflation and in all countries with so-called hyperinflation. In contrast, wage indexation has been rather seldom in periods with low inflation. The risks of only accelerating inflation and destabilizing real output when unfavorable shock events occur are regarded as too high. This is especially the case for Japan and West Germany where the aversion to inflation is relatively high.

b. Indexation to nominal GNP

Over the past decade, many proposals have been developed to overcome the caveats of wage indexation to the price level. In particular the series of supply shocks during the 70s have made the weakness of wage indexation to the price level very clear. The institution of wage indexation to the price level may well have accelerated the stagflationary process after the two oil price crises in Japan and West Germany, the fastening of the disinflation process described above notwithstanding. The reason for this lies in the rigidity of the real wage implied in wage indexation to the price level. Figure 9 should make that clear. A recessionary supply shock shifts the supply curve (AA) to the left leading to higher prices and lower output if real wages do not adapt. This output costs ($Y_0 - Y_1$) add to those ($Y_1 - Y_2$) created by monetary disinflation policy which shifts the demand curve (DD) down (shift II in Figure 9).

In order to avoid such stagflationary effects of wage indexation, advocates of wage indexation have proposed the exclusion of price increases which are based on material

Figure 9.



price increases or on increases in indirect taxes. Many countries have followed those proposals during and after the second oil price shock.⁸² An even better proposal seems to be to index nominal wages to nominal GNP. This procedure would induce real wages to react automatically to supply shocks. So the destabilizing output effects of supply shocks, which are correlated with wage indexation to the price level, could at least partly be absorbed. They are even completely absorbed within our model case when the elasticity of aggregate demand with respect to real balances is greater than 1. This is shown in Appendix B. This means, wage indexation to nominal GNP is then not only superior to wage indexation to the price level, but also superior to non-indexation for *all* kinds of shocks. However, also with wage indexation to nominal GNP, the price level is destabilized with respect to supply and demand shocks (see also in Appendix B). Another problem is that wage indexation to nominal GNP includes different data lags with respect to the price level and real output.⁸³

Nonetheless, as argued in section III.B., Japan's flexibility of base wages can be considered as if having been based in part on an *ex post* indexation of nominal base wages to nominal GNP. However, the indexation factor k appears to have been substantially smaller than one. Thus there may have been a chance of increasing the shock absorbing

⁸²See, e.g., Carmichael, *et al* (1985, p. 96).

⁸³This data lag problem counts even more for more ambitious indexation schemes which enlarge the range of contingencies in wage contracts. Besides, such theoretically "nearly perfect" indexation schemes can hardly be introduced on a private basis because it is too costly for private agents to gather all the informations which are needed in such a perfectly contingent rule. (Hereto see Blanchard 1979). Furthermore, such complicated rules almost always include an element of "moral hazard." (Hereto see Karni 1983 or Cukierman 1980).

capacity in Japan by raising k in the implicit indexation scheme, i.e. by considering the development of macroeconomic performances even more in base wage increases.

The main problem as to introducing wage indexation to nominal GNP in an extensive way, however, appears to be that on the one hand workers or unions in companies or sectors with relatively high and stable demand may oppose such an institutional reform. The reason is that they would have to accept wage decreases when nominal GNP declines *because of* a decrease in demand in *other* firms or sectors. Therefore they will be likely to reject such an institutional macro-solution to the stagflation problem if they are not going to be compensated for such losses. One can, however, well imagine some compensation procedures that would overcome this hindrance. Hereto see, in more detail, in the following section.

But, on the other hand, also firms might oppose such a macro indexation scheme. The reason is that at least risk-averse firms are more interested in a *micro*-indexation, i.e. particularly in that their factor payments are connected to an index which follows their own output prices. This would create a greater certainty as to their investment planning with respect to their *real* factor costs.

This kind of micro-indexing is similar to the more ambitious proposal of a share economy which has aroused a lot of interest in the academic field over the last four years. Before I shall turn to that institutional proposal, I, would, however, like to mention that formally a wage indexation to nominal GNP has the same wage-flexibility effect as a (pure) share economy. If all firms paid their employees a fixed share of their revenues, the money wage rate in the aggregate economy would be the same as in the case where the money wage rate were indexed to nominal GNP. That is, wage indexation to nominal GNP can be regarded, in a certain sense, as a substitute for revenue- or gain-sharing.

2. Share economy

I had already pointed out in section III.B. that the bonus system in Japan can be seen as one factor contributing to the greater real wage flexibility and hence to the better macroeconomic performance in Japan compared to West Germany. However, as has been emphasized there too, the share factor in Japan is not very high and the elasticity of the bonus with respect to revenue or profit is not very high either. Therefore one could think of raising the share factor and the bonus elasticity in Japan in order to further increase wage flexibility and so to reduce disinflation costs.⁸⁴

The theoretical basis of such a proposal can be seen in the work done by Martin Weitzman of MIT over the past few years. Since the publication of his book (1984) "The Share Economy," the idea of gain-sharing or revenue-sharing as a stabilization instru-

⁸⁴This would, however, presuppose some institutional changes in Japan. For example, the tax system would have to be adapted in some minor points. By now, the pension fund system is only based on base wages or salaries. When raising the share factor in employees' remuneration, this would presently mean that pension funds would decline. This would have to be changed.

ment has aroused a lot of public and scholarly interest. Symposia were held and many conference discussion papers on this topic have been written over the past 4 years. The "New York Times" called Weitzman's proposal "the most important new idea in economics since Keynes," and in United Kingdom there have been serious considerations over the last few years to politically favor such share contracts. In West Germany, too, there have been several trials by governments and entrepreneurs to increase the interest in a certain kind of gain-sharing. The main interest there, however, has not been one of stability policy⁸⁵ but of accumulation of risk capital.⁸⁶

The idea of gain-sharing, however, is not new; for example, the age-old practice of piecework is the most common form of gain-sharing. The new idea in Weitzman's proposal is the prediction that one can get rid of unemployment *and* inflation simultaneously by indexing worker remuneration to firm's revenue. Weitzman argues that gain-sharing would boost employee moral thereby raising productivity, that it would lead to greater aggregate wage flexibility which is rated by him as desirable *per se*, and — the decisive element in Weitzman's plan for reducing the NAIRU — that it would result in a perpetual *excess demand for labor*.

This is derived from the analytic essence of a share contract which is *defined* as any payment mechanism where worker remuneration varies inversely with the firm's employment level (see Weitzman 1984, pp. 83–86). If workers are laid off or quit, the remaining employees are paid more, whereas if new workers are hired, all employees are paid less. Therefore, the average cost of labor declines when the employment level increases. So *in a share economy the marginal cost of labor to the firm is – by definition or construction – always lower than the average cost of labor*, which is equal to the average compensation per worker.⁸⁷ In the case of a pure share economy the marginal cost of labor is zero,

⁸⁵This subject has only recently begun to be discussed in West Germany. See, e.g., Siebert (1986).

⁸⁶In general, the traditional impetus for favoring a share economy has been more on the micro-level. Either the target has been the positive motivation effect of gain-sharing which has been expected to raise labor productivity, or it has been, as for example in West Germany, the positive share capital accumulation effect. In West Germany, there have over the past decade been different trials by the "Council of Economic Experts" as well as by different governments to get the wage negotiation parties to enlarge the share factor of employees' remuneration. The target, however, was not to thereby stabilize the economy, but to enlarge the fraction of share capital in the companies. Employees have been asked to accept a change toward a higher gain-dependent share income factor and to leave this share income within their company for a certain period of time. By this, the risk capital equipment of private companies was supposed to be enlarged. However, this proposal has never been realized on a broader basis. The main reason was that the unions have distrusted this kind of policy where their determination about a part of their income would have been taken away from them. Instead they have demanded enlarged co-determination in the companies' management and investment decisions.

⁸⁷In a share economy, a representative worker's payment (W) consists of a base wage (B) and a share (λ) in the firm's gross profit (R) per worker (N), i.e.

(1) $W = B + \lambda(R/N)$ where

(2) $R = X(N) - BN$.

$X(N)$ denotes the firm's revenue after deduction of capital costs, depreciation and indirect taxes. BN describes base wage costs.

because the firm's labor budget is fixed in the short run and each additional employee costs no more. Hence, as Weitzman concludes, the marginal value of an extra unit of labor to the firm exceeds its marginal cost. If unemployed labor is available, each share firm will attempt to expand. This means, "a share system possesses a relentless underlying drive toward absorbing unemployed workers, increasing output, and lowering prices which does not cease until all available labor is fully employed." (ibid., p. 89).

The vision is one of excess demand for labor *without inflation*. For Weitzman, inflation in the Western wage economies during the last few decades has mainly been a cost-push, wage-price spiral. A share system, however, is supposed to have a kind of self-cleansing tendency which spontaneously discourages local outbreaks of cost-plus infestations. Should a share firm be subject to a cost-push shock and forced to raise its pay above the competitive level, it would offset this pay increase by hiring more labor, increasing output, and *lowering price*. The main reason for this is: there are fewer incentives for a share firm to raise prices and there are more incentives to lower them in response to any given shocks, because all price changes now automatically show up also on the cost side.

The theoretical basic argumentation of Weitzman seems to be not generally convincing.⁸⁸ This is in particular true for the microfoundation of the hypothesis of perpetual *excess demand for labor* as a characteristic of a share economy.⁸⁹ Nevertheless, the hypothesis of a share economy's stabilizing employment and, if supported by anti-inflationary monetary policy, stabilizing also the price level appears to be more convincing.⁹⁰ As I mentioned above, a (pure) share economy has the same wage flexibility effect as a wage indexation to nominal GNP. If all firms paid their employees a fixed share of their revenues, the money wage rate in the aggregate economy would be the same as in the case where the money wage rate were indexed to nominal GNP. Further analyses as to a share economy's effects, however, have to be awaited to get a clearer view. By now, many economists still feel a bit "confused" and unsure about the macro-stability effects of a share economy.

But even if a share economy had the positive characteristic that Weitzman contends it has, there would still be problems with respect to implementing such an institutional reform. These hindrances would in particular be strong in West Germany. The main problem is the following. Any gain-sharing plan will create a basic conflict between the interests of senior workers and the interests of the unemployed (i.e. those who would be hired under the new system). The reason is that senior workers would have to accept a lower wage. Only thus could higher employment and a lower NAIRU be reached. It is

⁸⁸Hereto, see Nordhaus (1988) and Nordhaus and John (1986).

⁸⁹A main problem is the assumption of temporary payment of labor below its marginal value which is necessary for deriving the above result. See Nordhaus and John (1986).

⁹⁰Hereto, see, e.g., Blinder (1986) and Nordhaus (1988).

very likely that many of the senior workers would systematically try to prevent employment expansion beyond a certain "solidarity" level that may vary between different countries (cultures) and different persons.

The solution to such a problem is, from an economist's point of view, rather clear. The government, acting in the national interest, must change the private reward structure so that the resistance of the senior workers can be overcome. One obvious solution is that share workers are to be entitled to a tax reward. In other words, wage income and share income have to be taxed differently, giving to share income a tax break.

From a political point of view, there will be, however, some hindrances. The main hindrance might be that of financing this solution. There are good reasons for assuming that such a solution would finance itself in the medium run: positive accelerator and multiplier effects, produced by increasing employment and output, would raise income and income taxes too. In the short run, however, this solution would include higher government debts. Raising government debts, however, is a politically very sensitive subject nowadays, at least in West Germany. But also in the United States, exactly this debt problem was the final reason for the Congress to reject another famous proposal of alternative disinflation policy in 1978. What I mean, is the Carter administration's attempt to introduce tax-based incomes policy.⁹¹

3. Tax-based incomes policy

As I pointed out in section III.A., West Germany had introduced an "informative incomes policy" by law in 1967 and have had actively employed this policy within its disinflation concept during the late 60s and the 70s. Further I argued that Japan has also heavily relied on such an informative incomes policy, especially during the oil crises, even though it has not been legally bound.

In contrast, traditional "imperative incomes policies" such as wage and price stops have lost much credit among politicians and economists, especially after the experiences with the Nixon experiment in 1971–73.

There are, however, other alternatives of incomes policies, that have not yet been practically implemented, that, however, from an economist's point of view, are more effective than "informative incomes policy" and less costly than wage and price stops. One of these alternatives is "tax-based incomes policy" (TIP) which is, for example, strongly suggested by James Tobin as the optimal and most costless way of disinflating economies. A typical *tax-based incomes policy* has the following characteristics: guideposts for wages and prices — in the "fixprice" sectors of the economy — are announced yearly. Compliance with the guideposts would not be compulsory but would be encouraged by penalties or rewards. Sidney Weintraub and Henry Wallich suggested extra corporate taxes for transgression of a wage guidepost. To the contrary, Arthur Okun and

⁹¹Hereto, see, e.g., Nordhaus (1981).

others suggested reward for compliance with the guideposts. For example, those employers and employees which comply with the wage guidepost could be rewarded by tax credits.⁹² The known *problems* associated with TIP are mainly the followings:⁹³

- a) Bureaucratic costs of introduction and operation.
- b) Problems of realization and control, because there arise
 - attempts to shift the “penalty taxes”
 - increases in incomes through non-monetary allowances or perhaps through promotions
 - *ex-ante*-uncertainty about who eventually bears the penalty tax
 - free rider behavior within the functional income groups
 - intensification of the distribution fights (→production losses).
- c) Difficulties in the fixation of a norm for a guide-line.
 - use of past values as guide-lines in a changing world
- d) Various burdens of taxation for different branches depending on productivity growth (→structural distortions).
 - growth-hindering effects, because the entrepreneurs’ incentive to compete for the most efficient workers through increases in wage supply declines
 - hindrance of changes in relative wages and prices

There are surely ways to reduce these kinds of problems.⁹⁴ Furthermore, one has also to consider the trade-off between these costs and the costs of higher inflation and a prolonged disinflation period which are seen by the advocates of TIP as being very much higher than the former costs.

However, as emphasized before, the main hindrances to getting TIP implemented are political ones. Firstly, there is the sensitivity as to the debt problem, as in the United States in 1978. Secondly, there is a time lag of positive effects and an uncertainty of the exact quantity of the side-effects listed above. The more risk-averse a government is —

⁹²Eligibility for the tax credits could be claimed by declaration. Claims of employees would be based on certification by the employer. The employer’s reward would be contingent on his compliance with a mark-up guidepost (see hereto, Tobin 1984).

⁹³A different incomes political approach is market-based incomes policy (MAP). Hereto see Lerner and Colander (1980). The general idea is to make increases in payrolls per person-hour and/or nominal value added per unit of output dependent on vouchers issued by the government. There is a strict analogy with the market-/quantity-solution to the problem of environment pollution by issuing freely tradable vouchers for pollution. MAP aims at internalizing negative external effects of stability-adverse behavior of individuals or social groups by creating a new market where vouchers for “stability pollution” are publicly traded. In this way the remaining allocational distortions still associated with TIP are supposed to be avoided or reduced, at least. Although this MAP-alternative is theoretically more elegant and, when implemented, also more effective than TIP, one can hardly imagine that governments really would implement such an institutional solution. The reason is simply that this MAP-plan is too difficult to understand for the public. (Specific implementation problems connected with this incomes policy approach and their possible solutions are investigated, for example, in Colander (1986)).

⁹⁴See, e.g., Seidman (1983).

and the parliamentary election system tends to keep governments risk-averse — the more it will avoid experiments. In particular, experiments that are not likely to pay off during the very first year(s) — such as TIP or gain-sharing — are avoided. In a certain way, it might be easier in Japan than in West Germany for the government to risk something new which does not pay off immediately because of the stability (majority) of the ruling party in Japan. On the other hand, as I have already mentioned several times, the unemployment costs and therefore the public pressure to the government “to do something” is not so high in Japan as it presently is in West Germany. Moreover, as described in section III.B., several institutional alternatives which increase flexibility in the labor market, have already been realized in Japan. That is, the political problem lies more in countries such as West Germany where the minor flexibility in the labor market leads to higher disinflation costs so that institutional reforms in these countries are more urgent. The problem is only that the cultural and political preconditions for introducing the institutional reforms that would be needed are less given in West Germany than they are in Japan. This explains a great deal of the better macroeconomic performances in Japan over the past decade with respect to reacting to new developments and shocks.

V. Résumé

In this paper, I have tried to explain the differences in macroeconomic performance between Japan and West Germany with respect to disinflating and stabilizing the economy after the two oil price shocks.

The conclusion from my analysis is as follows. The macroeconomic policy patterns as to disinflating and stabilizing the economies have not been very different in both countries. There was, however, a difference in the *timing* of the disinflation policies. The Bank of Japan reacted relatively late to inflationary tendencies in the first oil crisis, whereas the Bundesbank started to fight inflation relatively late in the second oil crisis. Nonetheless, aversion to inflation has always been higher and more influential on macroeconomic policy in West Germany than in Japan. However, these differences led to the difference in macroeconomic performance only in combination with the different labor market flexibility conditions in both countries.

Labor market flexibility includes not only wage flexibility but also flexibility of labor supply and demand. Labor supply flexibility consists of flexibility in working hours and of employees' mobility. Labor demand flexibility on the other hand is based on employers' (expected) possibilities as to transferring or dismissing “affluent” workers and to reducing wage costs in unfavorable economic situations. With respect to all three categories, Japan has showed higher flexibility than West Germany. In this context, differences in social values, attitudes and traditions in both countries play an important role, i.e. differences with respect to individualism, faith, sense of duty, discipline, and with respect to labor preferences, industrial relations, and attitudes (risk aversiveness) towards new developments and new technologies. Japan is a country, where traditionally, compared

to West Germany, industrial relations are more harmonious, people are less individualistic, have higher labor preferences (depending partly on housing and leisure opportunities) and are more open-minded for new developments or technologies. This eases the absorption of shocks.⁹⁵

There are, however, also other factors, such as demographic, structural and external ones, which have played a role with respect to the different macroeconomic performance of both countries after the oil crises. In particular the lower pressure of labor supply by young people, female workers and foreign workers as well as the higher percentage of temporary employees and of self-employed in Japan have helped keep unemployment lower there.

In the last section, I discussed various proposals of institutional alternatives or supplements which all might have reduced the macro-costs of shock absorption in both countries. The alternatives or supplements analyzed were long-run monetary targeting, wage indexation (macro- and micro-based variants), and tax-based incomes policy. My conclusion was firstly, that the monetary policy courses of both central banks were in principle better than rigid long-run monetary targeting would have been. Secondly, by introducing or enlarging wage indexation to firms' profits and to nominal GNP, the shock effects could have been diminished in both countries. In this context, I emphasized in sections III and IV that Japan actually followed an *implicit* concept of wage indexation to firms' profits (as in bonus payments) and to nominal GNP (as in base wage payments), however with low index factors. Thirdly, tax-based incomes policy might have, from the first, reduced the inflationary momentum of the oil crises. The *microeconomic* side-effects of the introduction of a tax-based incomes policy, however, are substantial. Consequently, this institutional supplement only pays off in countries with great and thus costly shock-absorption problems such as in West Germany. In Japan, however, a tax-based incomes policy would be too costly. In Japan, a "weaker" and less costly form of incomes policy (i.e. a kind of informative incomes policy) is sufficient, and such a form has already been effective and efficient in the shock-absorption process there, as I argued in section II.

I would like to finish with a remark as to the introduction of the institutional supplements analyzed. The most suitable period of time for introducing such institutional supplements is when inflation is low, i.e. when the crisis has not yet occurred. The reason is, that the micro-costs of the introduction then are lowest.

⁹⁵The question, however, is how stable these values and attitudes are. Processes towards more individualism and lower labor preferences are very obvious among the younger generation in Japan. This erosion process of social values and traditions is the consequence of Japan's development process. Japan's stage of development, including that of international openness, has lagged behind that of Germany's over the past century. Now, Japan is catching up in this regard, which naturally leads to social changes. These side-effects could well reduce Japan's performance as to absorbing shocks efficiently and quickly in the future.

Appendix I Legal Basis and Organization of Central Bank Policy in West Germany and Japan

In this appendix I shall concentrate on a short outline of some important institutional and legal characteristics with respect to monetary policy in West Germany and Japan, respectively.⁹⁶

A. Organization and Independence of the Central Banks

1. *Bundesbank*

Led by the German hyperinflation experiences of the 1920s and 1940s, the military government of the Allies and later the Federal Government of West Germany set up a central bank system which was supposed to be independent of the Federal Government. Under the "Deutsche Bundesbank Act" of July 26, 1975, the two-tier central banking system, established by the Allies in 1948 and modelled on the strictly federative structure of the Federal Reserve System in the United States, was abolished and a unified central bank, the "Deutsche Bundesbank," was set up instead. Section 12 of the Bundesbank Act explicitly emphasized that the Bundesbank "shall be independent of instructions from the Federal Government." The Act (in section 13) includes regulations which commit both sides to cooperation and mutual consultation, however without containing any provisions for cases where serious differences of opinion and tensions may arise between the government and the central bank.⁹⁷

The Government, however, exercises a decisive influence on Bundesbank policy in appointing the members of the governing bodies of the Bundesbank. The governing bodies of the Bundesbank are the Central Bank Council, the Directorate, and Managing Boards of the Land Central Banks. The Central Bank Council is the supreme policy-making body of the Bundesbank and is composed of the President and Deputy President of the Bundesbank, the other members of the Directorate (up to eight, at present five other members) and the Presidents of the eleven Land Central Banks.⁹⁸ The members of the Directorate⁹⁹ (including the President and Deputy President of the Bundesbank) are nominated by the Federal Government and appointed for a period of normally eight, but at least two, years. The Presidents of the Land Central Banks are nominated by the Bundesrat (the Chamber of Parliament representing the Lander) which in turn is bound

⁹⁶In doing this, I shall draw freely on Bundesbank (1987) and Suzuki (1987).

⁹⁷There have been several such serious differences of opinion and tensions over the past decades. One of them led to the resignation of the Finance and Economics Minister, Karl Schiller.

⁹⁸The "Land Central Banks" are the Main Offices of the Bundesbank in every Land. They carry out the transactions and administrative tasks occurring in their area on their responsibility. In particular they are responsible for the (at present, about 200) "branch offices" that the Bundesbank maintains in larger towns and cities.

⁹⁹The "Directorate" is the central executive organ of the Bundesbank. The members of the Directorate must have special professional qualification (Section 7 of Bundesbank Act).

by the proposals made by the appropriate authority under the legislation of the Land concerned, which is generally the Land Government. This two-tier nomination system reflects the federative element in the Bundesbank constitution. It prevents the Federal Government from acquiring a dominant position in the appointment of the members of the Central Bank Council.

2. *Bank of Japan*

In contrast to the Bundesbank, the Bank of Japan is under the broad control of the Government. So the Minister of Finance has general powers of order over operations and supervision, along with the right to appoint and dismiss directors. For example, the setting, change, or abolition of reserve ratios as well as of maximum limits for some deposit interest rates requires the approval of the Minister of Finance. The officers of the Bank of Japan are the Governor, the Senior Deputy Governor, three or more (currently seven) Executive Directors, two or more (currently five) Executive Auditors and a number of Counsellors,¹⁰⁰ whereas the Policy Board is the highest decision-making body of the Bank of Japan. The Policy Board is composed of seven persons, the Governor of the Bank of Japan, four appointed representatives (from the city banks, the regional banks, commerce and industry, and agriculture, respectively), and two representatives of the Government (one representative each from the Ministry of Finance and the Economic Planning Agency without voting power). The appointed members as well as the Governor are selected by the Cabinet. The Bank of Japan emphasizes that although the legal dependence of the Bank of Japan is quite strong, in reality the powers of order have never in fact been used by the Government (Suzuki 1987, p.314).¹⁰¹ Nonetheless, the worse inflation record of Japanese monetary policy, compared to that in West Germany, in the 60s and 70s may have at least in part been based on this lower level of independence of the Bank of Japan.¹⁰² On the other hand, however, the Japanese inflation record in the 80s shows that a formal independence of the central bank is not a necessary condition for keeping inflation low.

B. Policy Objectives of the Central Banks

1. *Bundesbank*

Section 3 of the Bundesbank Act says:

“The Deutsche Bundesbank shall regulate the amount of money in circulation and of

¹⁰⁰The Governor and Senior Deputy Governor are appointed by the Cabinet while the Executive Directors as well as the Executive Auditors and the Counsellors are appointed by the Minister of Finance. The Governor and the Senior Deputy Governor serve five-year terms, the Executive Directors four-year terms, the Executive Auditors three-year terms and the Counsellors two-year terms, with reappointment possible.

¹⁰¹Hamada and Hayashi, on the other hand, emphasize, that only after the first oil crisis the “Bank of Japan was able to gain *de facto* autonomy of monetary policy, because the government and the public learned now costly it is to use monetary policy for objectives other than price stability and the maintenance of an adequate level of aggregate demand.” (Hamada and Hayashi 1985, p.83).

¹⁰²See the preceding footnote.

credit supplied to the economy, using the monetary powers conferred on it by its Act, with the aim of safeguarding the currency, and shall arrange for the handling by banks of domestic and external payments.”

In addition, however, the Bundesbank Act states in Section 12:

“Without prejudice to the performance of its functions (i.e. to section 3, H.W.), the Deutsche Bundesbank shall be required to support the general economic policy of the Federal Government.”

This addition has produced a lot of discussions and different interpretations in West Germany, also among Government members. The Bundesbank itself has never left any doubt that it regards its function of being the guardian of the currency as its *primary task*. Moreover, it has always made clear that it regards price level stability as a precondition for low business fluctuations and hence for sustained economic growth and a high level of employment.

The Bundesbank interpretes its commitment to “safeguarding the currency” mainly as the commitment to avoid inflation, i.e. to stabilize the *internal value* of the currency. External stability of the currency, on the other hand, is defined as stability of purchasing power (see Bundesbank 1987, p.11). That means exchange rate movements should correspond to the standard of the “purchasing power parity” of the Deutsche Mark *vis-à-vis* other countries, but should not be targeted at some constant level. In such an interpretation domestic and external stability are regarded as only two different aspects of the same aim.

2. Bank of Japan

The task of the Bank of Japan is written down in Article 1 of the Bank of Japan Law, that reads:

“The Bank of Japan has for its object the regulation of the currency, the control and facilitation of credit and finance, and the maintenance and fostering of the credit system, pursuant to the national policy, in order that the general economic activities of the nation might adequately be enhanced.”

The mode of expression mirrors the Law’s establishment during the time of war in 1942.¹⁰³ A contemporary interpretation of this article 1 is that the objectives of the Bank of Japan are to foster stability in the value of the currency and to maintain orderly credit condition, in order to foster the stable development of the Japanese economy.¹⁰⁴ Maintaining a stable currency is regarded as the essential purpose of a central bank. The question arises which value of the currency is more targeted, the internal or the external value.¹⁰⁵ Up to the end of the Bretton Woods System, the Bank of Japan, sheltered

¹⁰³Between 1957 and 1960 a plan to revise the Bank of Japan Law was discussed. However, the Committee concerned could not come to a unified conclusion.

¹⁰⁴This is the reading in Suzuki (1987, p.305).

¹⁰⁵The former Governor of the Bank of Japan, Haruo Mayekawa, emphasized at a symposium in Tokyo in June 1988, that one institutional difference between Japan and West Germany is that Japan’s priority is the

behind capital controls, followed, in a similar (and even stricter) way as the Bundesbank, a stop-and-go policy, reacting to the current-account surplus or deficit under the fixed-exchange-rate regime. Only in 1974, did the Bank of Japan switch to domestic price level stability as the main criterion for policy, with the strategic aim of gradually reducing the inflation rate.¹⁰⁶

C. Institutionalized Procedures of Controlling Money Supply

1. Bundesbank

The target for the planned annual rate of expansion of money supply, announced by the Bundesbank since December 1974, has been based on a combination of the following criteria:

- the expected increase in real production potential
- the “unavoidable” rate of price level increase (used till 1984)
- the expected change in the velocity of circulation of money (used till 1980).

One major modification of the original strategy was the introduction of the “corridor concept” in 1979. This took account of the limits of technical accuracy attainable in pursuing monetary targets. Furthermore it gave the Bundesbank some flexibility to react to unforeseen shocks without losing credibility. A second major modification was the change in the monetary indicator used. From 1975 to 1987 the Bundesbank expressed its monetary target in terms of the central bank money stock (CBM).¹⁰⁷ For the 1988 monetary target, it now changed to the money stock M_3 . The official reason given is that “of a technical nature.” The reaction of money stock M_3 to interest and exchange rate swings is less pronounced than that of the central bank money stock because of the smaller share of currency in it (11 percent versus 50 percent). So the Bundesbank expects to be able to reduce the over- (or under-) stating of the trend of monetary expansion which had caused some problems of credibility for the Bundesbank over the past two years.

2. Bank of Japan

Since July 1978, at the beginning of every quarter, the Bank of Japan has announced an estimated value for the growth rate of the average outstanding balance of the money supply relative to the same period in the previous year. This estimated value is called a forecast and applies to the current quarter. It is therefore, strictly spoken, not a monetary “target.”¹⁰⁸ In other words, Bank of Japan policy is not really a policy of announced

stability of the exchange rate whereas West Germany’s priority is the stability of the price level (In: Die ZEIT, No.26, June 24, 1988, p.33).

¹⁰⁶See, e.g., Hamada and Hayashi (1985, pp.96-97).

¹⁰⁷CBM = currency held by non-banks plus required minimum reserves on banks’ domestic liabilities (excluding bank bonds subject to minimum reserve requirements); calculated at constant reserve ratios.

¹⁰⁸However, the policy actions of the Bank of Japan itself are included in the determination of the forecast.

monetary "targeting." It is instead more discretionary.¹⁰⁹

Originally, the definition of the money supply used was M_2 , but the definition was changed to $M_2 + \text{CDs}$ when the latter started to be issued. The Bank of Japan gives two reasons for using $M_2 + \text{CDs}$: (a) $M_2 + \text{CDs}$ have the closest causal relationship with future income and expenditure; (b) the superior controllability of $M_2 + \text{CDs}$.

Appendix II The Macroeconomic Effects of Wage Indexation to the Price Level and of Wage Indexation to Nominal GNP

A. Wage Indexation to the Price Level

I shall use a simple macroeconomic model to derive the macroeconomic effects of wage indexation to the price level. The effects are summarized and subdivided in points (a) and (b) in section IV. B. 1. a. above.

The structure of the model used is described by the following three equations:

$$y_t = -\beta(w_t - p_t) + u_t, \quad \beta > 0 \quad (1)$$

$$y_t = -\gamma(m_t - p_t) + v_t, \quad \gamma > 0 \quad (2)$$

$$w_t = kp_t + (1 - k)E_{t-1} p_t, \quad 0 \leq k \leq 1. \quad (3)$$

Equation (1) gives aggregate supply.

Equation (2) denotes aggregate demand.

Equation (3) describes the wage equation, where k denotes the degree of indexation. When $k=0$, no indexation exists. When $k=1$, there is perfect indexation. If there is no indexation, money wage is assumed to increase by the rate of inflation expectations formed in period $t-1$. y = real output, w = money wage, p = price level, m = nominal quantity of money. All variables are in logarithmic form. u_t and v_t are error terms, assumed as being of white-noise. E denotes the expectations operator.

To (a): The solution of this model for y_t under rational expectations is

$$y_t = \theta_1(m_t - E_{t-1}m_t) + \theta_2v_t + \theta_3u_t, \quad (4)$$

where $\theta_1 = \gamma\beta(1-k)/[\gamma + \beta(1-k)]$, $\theta_2 = \beta(1-k)/[\gamma + \beta(1-k)]$, $\theta_3 = \gamma/[\gamma + \beta(1-k)]$.

By comparing the parameters θ_1 , θ_2 and θ_3 under the alternative assumptions of $k=0$ and $k=1$, respectively, we can determine the effect of wage indexation on the stability of real output. When $k=1$ (perfect indexation), θ_1 and θ_2 become zero, otherwise they are positive. That is, monetary and demand shocks can be fully absorbed by wage indexing.

¹⁰⁹Suzuki explains this as follows: "Announcements of targets might be subject to political pressures and even prove harmful by shackling monetary policy when it is related to the official economic forecast to the government and causing disruption when the government changes its economic forecast." (Suzuki 1985, p.6)

Thus real output is stabilized by wage indexation in the case of monetary shocks (where $m_t \neq E_{t-1}m_t$) and of demand shocks (where $v_t \neq 0$). In contrast, real output is destabilized in the case of supply shocks (where $u_t \neq 0$). From (4) one can see that θ_3 is equal to 1 in the case of indexation ($k=1$) and smaller than, 1, namely $\frac{\gamma}{\gamma+\beta}$, in the case of non-indexation ($k=0$).

To (b): The solution of the above model for p_t is:

$$p_t = E_{t-1}m_t + \theta[(m_t - E_{t-1}m_t) + (1/\gamma)v_t - (1/\gamma)u_t], \quad (5)$$

where $\theta = \gamma/[\gamma + \beta(1-k)]$.

From (5), one can calculate the (conditional) variance of the price level:

$$\delta_p^2 = (\theta/\gamma)^2[\delta_v^2 + \delta_u^2], \quad (6)$$

where δ_x^2 denotes the variance of x .

As θ/γ rises when k increases, the variance of the price level is the greater the more perfect indexation is. Thus an indexation of nominal wages to the price level destabilizes the price level.

B. Wage Indexation to Nominal GNP

I shall analyze the effects of wage indexation to nominal GNP by using the same model structure as above. One has only to exchange the wage equation (3) against the wage equation (3)' which is

$$w_t = k(p_t + y_t) + (1-k)E_{t-1}p_t \quad (3)'$$

The solution of the model, consisting now of equations (1), (2) and (3)', for y_t , is:

$$y_t = \Pi_1(m_t - E_{t-1}m_t) + \Pi_2v_t + \Pi_3u_t, \quad (7)$$

where $\Pi_1 = \gamma\beta(1-k)/[\gamma + \gamma\beta k + \beta(1-k)]$,

$$\Pi_2 = \beta(1-k)/[\gamma + \gamma\beta k + \beta(1-k)],$$

$$\Pi_3 = \gamma/[\gamma + \gamma\beta k + \beta(1-k)].$$

Again, all monetary shocks and demand shocks are absorbed by wage indexing to nominal GNP (when $k=1$), i.e. $\Pi_1=\Pi_2=0$. But now, Π_3 is $\frac{1}{1+\beta}$, i.e. the supply shock effect is smaller than with wage indexation to price level where θ_3 is equal to 1. With non-indexation ($k=0$), Π_3 is again equal to $\frac{\gamma}{\gamma+\beta}$. Comparing the respective variances δ_y^2 , for wage indexation to nominal GNP on the one hand and for non-indexation on the other hand, shows that wage indexation to nominal GNP only destabilizes real output in the case of supply shocks when $\gamma < 1$. For $\gamma > 1$, however, wage indexation to nominal GNP always stabilizes real output even in the case of supply shocks. On the other hand, however, also with wage indexation to nominal GNP, the price level is destabilized with respect to supply and demand shocks. One can see this by solving the above model for p_t

and herefrom calculating the (conditional) variance of the price level.

$$p_t = E_{t-1}m_t + \Pi[(m_t - E_{t-1}m_t) + (1/\gamma)v_t - (1/\gamma)u_t] \quad (5)'$$

$$\delta_p^2 = (\Pi/\gamma)^2[\delta_v^2 + \delta_u^2], \quad (6)'$$

where $\Pi = \frac{\gamma + \gamma\beta k}{\gamma + \gamma\beta k + \beta(1-k)}.$

As π rises, when k increases, the variance of the price level the greater the more perfect wage indexation to nominal GNP is.

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