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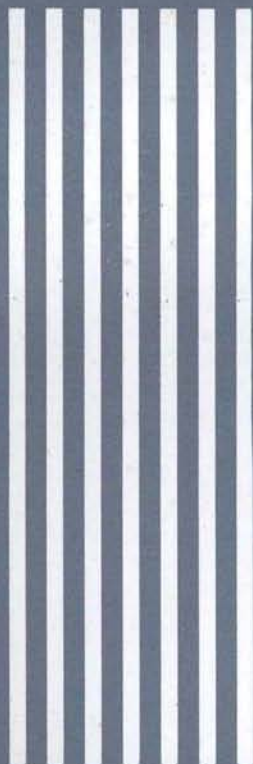
**GERMAN ECONOMY AFTER  
UNIFICATION - FACTS, PROSPECTS AND  
IMPLICATIONS FOR KOREA**

**Sung-Hoon Park**

**KIEP**  

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**Working Paper**



**KOREA INSTITUTE FOR  
INTERNATIONAL  
ECONOMIC POLICY**

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## **I . Introduction**

About three years after German Economic, Monetary and Social Union (GEMSU), which was introduced on July 1, 1990, the economy of the newly founded Federal Republic of Germany (FRG) has been showing signs of weak economic performance that can be characterized by the so-called “three High’s”: high government deficit, high interest rates and high unemployment. Despite the formal union of the two economies through GEMSU, a real integration of the two different economic systems has not yet taken place, and main problems are arising from the difficulties in adjusting the two economies to each other.

On the one hand, the economy of the former GDR(German Democratic Republic; East Germany; the East), which had largely been sustained by more than 230 state-owned conglomerates(Kombinat) in agriculture and main industrial sectors, must undergo a transformation of the economic system to a market economy: all state-owned properties including more than 230 conglomerates(Kombinat), land and many others should be privatized, the lack of entrepreneurship training in the market economy must be overcome, and the low productivity of production factors should be improved, to mention only a few. The investments needed to bring the productivity of the east German economy to the west German level in 10 years after unification (up to the year 2000)

have been estimated at more than \$150 billion per year.<sup>1)</sup> With wages rising faster than the productivity change, the eastern part of Germany has been suffering a negative supply shock; the industrial production in 1991 has been reduced to 33% of the level of 1989, and the number of officially unemployed workers has soared up to a record 1,181 thousand as of February 1993.

The economy of the former FRG(Federal Republic of Germany; West Germany; the West), on the other hand, is now experiencing recession, partly due to the sluggish growth of the world economy, but mostly due to high financial burdens arising from the unification; the federal government transferred an average 30 billion DM yearly to the East, partly financed by tax increases, and partly by credits in the capital market. Including financial help from social insurance organizations and municipal governments, net transfer payments from the West to the East summed up to 150 billion DM in 1992 alone.<sup>2)</sup> Fearing high inflation due to huge government deficits and high-speed wage increases the Deutsche Bundesbank, which is the German Central Bank, was practicing contractionary monetary policy by keeping inflation rates high, aggravating private investments not only in Germany, but also in most European countries,<sup>3)</sup> which is partly responsible for a Europe-

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1) The initial productivity level of the East is assumed to be 30% of that of the West. See Lipschitz & McDonald (1990), p. 77.

2) See Sachverständigenrat(1992).

3) The policy of high interest rates by the Bundesbank spills over to the European countries through the channel of Exchange Rate Mechanism(ERM) in the European Monetary System (EMS).

wide recession. Additionally, the world economy as a whole showed sluggish growth, so the west German economy, highly dependent on export sectors, could not compensate internal economic difficulties with external expansions.

Confronted with a higher possibility of reunification than ever, the Korean economy should and can learn valuable lessons from Germany's experiences. It is apparent that the process of reunification is not without pain and requires more time than ever expected. Considering specific economic, political and social conditions in the Korean peninsula, however, most of the German experiences are to be modified in order to be helpful for the Korean case.

This paper tries to briefly examine the German experiences with unification, especially the integration of two different economic systems and derive implications for the coming reunification of the two countries in the Korean peninsula. It is organized as follows. In section 2, current economic performances and future prospects of the united German economy are discussed, and main economic policy measures practiced after GEMSU are reviewed. Here, also, the activities of the Treuhandanstalt, which is a government trust engaged in privatizing the formerly state-owned properties, will be introduced. Section 3 presents a simple model of system transformation that is developed based on the German experiences and could be used for the Korean case. Here, the effects on the integration process of GEMSU will be discussed briefly. In Section 4, implications on the Korean unification

of German experiences with unification will be derived based upon the discussions so far. The paper ends with a summary of results and concluding remarks in section 5.

## **II . Current Performances and Prospects of the German Economy**

### **1. Main Economic Indicators**

In order to evaluate current performances of the German economy, it is necessary to differentiate the western from the eastern part of the country and then to integrate the two into a unified German economy, which is done in Table 2-1. Main macroeconomic indicators of the two regions shown in this table differ heavily from each other, reflecting different developments in important microeconomic conditions such as wages, productivity growth, rate of change of relative prices and consumer behaviours etc.

Before unification the west German economy had shown sound economic performances that can be represented by an average growth rate higher than 2% during 1982-1989. Due to additional demand effects arising from the unification process, the economy was projected to grow by 5.1% in 1990 and 3.7% in 1991. Since mid-1991, however, signs have been accumulating that show additional demand effects were being exhausted and the west German economy's growth slowed

down, leading the unified German economy, around mid-1992, to a reduction of real GDP in the absolute sense.<sup>4)</sup> For 1993 a further reduction in GDP in the West by 2.0% is expected, and the number of officially unemployed could reach 2.3 million.

〈Table 2-1〉 Main Economic Indicators for Germany (1991~1993)

	West Germany			East Germany			Unified Germany		
	1991	1992 <sup>1)</sup>	1993 <sup>2)</sup>	1991	1992 <sup>1)</sup>	1993 <sup>2)</sup>	1991	1992 <sup>1)</sup>	1993 <sup>2)</sup>
Real GDP (YoY; %)	3.6	1.5	-2.0	-28.4	6.8	5.5	0.7	2.0	-1.5
Unemployed (thousand)	1,689	1,797	2,300	913	1,170	1,300	2,602	2,967	3,600
Rate of unempl. (%)	6.4	6.4	7.5	11.6	14.9	16.5	7.3	7.7	9.2
Productivity (YoY; %)	-	1.0	1.5	-	9.5	9.0	-	1.9	2.0
Unit Labor Cost (YoY; %)	4.2	5.4	4.0	52.7	13.9	7.0	7.3	6.7	4.5

Note: 1) Estimated value

2) Expected value

Sources: DIW (1993a) and Research Institutes (1993)

Even though the Federal Ministry of Economics(FME) was unwilling to accept, research institutes such as Deutsches Institut für Wirtschaftsforschung(DIW) or Kiel Institut für Weltwirtschaft (IFW) and several academicians had been claiming that the economy was entering a recession, and the policy of high interest rates by

4) See DIW(1993a).



the Bundesbank should be eased.<sup>5)</sup> In addition to the contractionary monetary policy by the Bundesbank, a sluggish growth in the world economy and a cyclical slowdown of domestic investment activities after years of relatively high investment have been responsible for weak economic performances, especially in 1992.<sup>6)</sup> By way of high interest rates in the German money and capital market,<sup>7)</sup> foreign capital could be attracted and invested in facilities and construction in the eastern part of the country. However, they were also responsible for a successive appreciation of the DM, which deteriorated the price competitiveness of German products, thereby reducing the traditionally high trade surplus very quickly.

Considering the fact that the economic prospects for 1993 as shown in the table are drawn based on the assumption that several big wage talks will be able to limit the wage growth in the West within 3-3.5%,<sup>8)</sup> thereby giving signaling effects for the East to avoid an excessive increase in the wage level, some corrections should be made,<sup>9)</sup> since wage increases in the East still exceed its productivity

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5) e.g. Research Institutes (1992), Boss et al.(1993) and Sievert(1992).

6) See DIW(1993a), Sachverständigenrat(1992)

7) In mid-September, 1992 the Bundesbank started a policy of interval interest rate reductions, partly forced by member countries of the EMS and partly encouraged by the rather low inflation rate in Germany, so that as of April, 1993 the discount rate was 1.5% and the lombard rate 1.75% lower than at that time.

8) In 1993, wage talks with trade unions like the ÖTV(Öffentlicher Dienst, Transport und Verkehr), which represents all the semi-official servants, and the HBV(Handel, Banken und Versicherung), which represents employees in commercial houses, banks and insurance companies, have been concluded with success meeting this assumption.

9) As of mid-May there is an ongoing conflict between IG Metall(Industriegewerkschaft Metall),

growth substantially.

In comparison, the economy of the East has been recovering steadily since 1992, if not very rapidly, from a collapse of industrial production in the years 1990 and 1991.<sup>10)</sup> The Treuhandanstalt as a government trust which administrates state-owned properties could privatize most of the state-owned firms (See Table 2-2 in section II.3.), and various programs stimulating investments have been implemented, leading to a massive influx of domestic and foreign capital into the East.<sup>11)</sup> Even if the productivity in this region has been growing rapidly, the rate of wage increase has been much higher than the productivity improvement,<sup>12)</sup> so that the economy of the East, despite increasing production, will further be forced to reduce the number of employees, reaching an unemployment rate of 16.5% this year. In addition to rapidly increasing wages, a 1:1 or 2:1 conversion rate of Ostmark to DM which de facto appreciated the Ostmark by approximately 300% thereby

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which represents more than 3.5 million workers in steel and electronics and related sectors, and Gesamtmetall, a group of employers, over how and when to raise the wage level in the East to the level in the West. To an infringement of a two-year old contract by the employers according to which the wage growth in these sectors in the East should be at 26% in 1993, IG Metall responded with a east-wide strike, which is expected to affect important sectors such as automobiles, electronics and the steel industry.

10) This can be referred to as a "J-curve effect". See Siebert(1992a).

11) In the years 1990-1993 approximately 350 billion DM would have been invested in the East. The investment per capita for the East would reach a record 8,300 DM in 1993, compared to 8,800 DM in the West. See Handelsblatt, 1993.4.27, p. 16.

12) The BMWi(1993a) reports that in 1992 the wage-productivity-ratio in the East was 60% higher than that of the West. In 1993 this gap is expected to be broadened to over 70%.

deteriorating the competitiveness of east German products, a significant reduction in the trade volume with east European countries largely affected the deindustrialization process of the east German economy. Obsolete production facilities and lack of modern entrepreneurship are problems that must also be challenged so as to provide the economy with production factors that are necessary to restructure and rebuild functioning industrial sectors. The speed of economic recovery in 1993 will be largely dependent on the factors described so far.

Putting aside the traditional non-tradables sectors such as services and construction, industrial production in the East as a whole decreased even in 1992,<sup>13)</sup> causing a high rate of unemployment of 14.9% in 1992. The above-mentioned high wage-productivity-gap and high unit labor costs are mainly responsible for the current situation in the labor market. Even though unit labor cost in the East, which increased 53% in 1991 and 14% in 1992, is expected to be stabilized with a 7% increase in 1993, the speed of its change will be still faster than the productivity growth and wage increase in the West, so that it will play a crucial role in the process of structural adjustment of the united German economy. (See Table 2-1) Moreover, the share of wage income in GNP generated in the East has been calculated at over 100% for 1992, which implies there exist very little incentives for firms operating without profit to further execute new investments in R&D or

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13) See Sachverständigenrat(1992)

new products that are crucial for strengthening the economy. These factors<sup>14)</sup> altogether and the business cycle of the West in coming years will determine management performances of individual firms on the microeconomic level and the speed of recovery of the east German economy on the macroeconomic level. If the growth rate of the west German economy remains low and the East cannot recover faster than has so far, an optimistic projection which states that per capita income of the East could reach 80% of the level of the West in 10 years after unification will not be realized.<sup>15)</sup>

## **2. Review of Main Economic Policy Measures**

“Recession in the West, slow recovery in the East” has been characteristics of German economic performances in 1992 and 1993 and is the outcome of a large number of policy measures practiced since unification. Among them the following three are most frequently accused of having caused the weak performances: large-scale federal transfer payments to the East with the result being high government

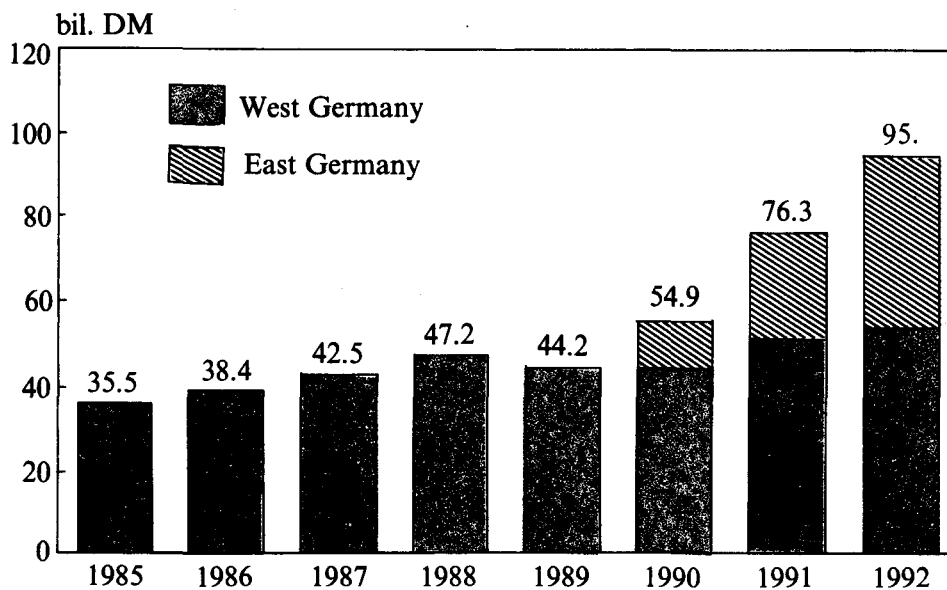
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14) The results of a joint business survey by DIW and IFW(1992) show 60% of privatized firms and 80% of firms owned by the Treuhandanstalt claim that extremely high wages and very low profit margins deteriorate their price competitiveness and are severe barriers to new investments.

15) Siebert(1992a), for example, reports results from his catch-up calculation that it will take 5, 10.5, and 21 years for the east German per capita income to reach 80% of the level in the West, if the gap in the real growth rate is 20%, 10%, and 5% respectively.

deficit, a rapid increase of wage levels in the East in order to equal the western level of income, and a policy of high interest rates by the Bundesbank in order to reduce inflationary pressure arising from the first two policy measures mentioned above. This section will touch upon all three measures and their impacts on main economic indicators.

〈Figure 2-1〉                      Trends in Subsidies by the Federal Government



Source: DIW(1992b)

### (1) Trends in Transfer Payments to the East Germany

In Figure 2-1, the trends in transfer payments by the federal government to the East before and after unification are presented.

As is shown in Figure 2-1, the west German government's direct transfer payments to firms had been rather moderate until 1989, but have increased rapidly since unification. In 1992, the federal govern-

ment transferred twice as much as in 1989, reaching a record amount of 95 billion DM. The East alone received about 41.5 billion DM, four times as much as in 1990 and almost 80% of federal transfer payments to the West. Taking tax-related benefits into account, net federal transfers to the East in 1992 is estimated at 50.0 billion DM, more than 60% of the estimated federal deficit for the corresponding year.

In addition to the federal transfers, municipal governments, social insurance companies, and the “German Unification Fund” provided the East with financial supports amounting to 100 billion DM in 1992, totaling the transfer payments from the West to the East at 150 billion DM.<sup>16)</sup> With the purpose of reducing financial burdens of the federal government, the Federal Ministry of Finance has been implementing a series of revenue-generating measures since unification, as is summarized in Table 2-2.

With respect to the structure of public transfer payments to the East, approximately 70% of gross transfers in 1992 have been laid out for consumptive purposes such as unemployment benefits, interest payments and general grants to municipal governments etc. rather than productive purposes,<sup>17)</sup> thereby increasing pressures on interest rates and inflation.

At the same time, the traditional “system of financial settlements

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16) Sachverständigenrat(1992)

17) See Deutsche Bundesbank (1992)

〈Table 2-2〉

**Main Revenue-generating Measures after Unification**

<b>I . Increases in Taxes and Contributions</b>	
1. Contributions to Unemployment and Annuity Insurance (from 23% to 24.5% of Gross Income)	1991. 4. 1
2. Solidarity Tax (7.5% additionally to Income Tax)	1991. 7. 1 ~ 1992. 6.30
— will be reintroduced	1995. 1. 1
3. Fuel Tax (30% increase in average)	1991. 7. 1
4. Insurance Tax (10% increase)	1991. 7. 1
	1993. 1. 1
5. Cigarettes Tax (5% increase)	1992. 3. 1
6. Adjustment in VAT (from 14% to 15%)	1993. 1. 1
<b>II . Removing Tax Preferences and Financial Supports</b>	
1. Special Tax Packages for Berlin	stepwise from 1991.7.1
2. Special Packages for Boundary Regions	stepwise until 1994.12.31
<b>III . Reducing Financial Supports</b>	
1. Financial Supports to Federal Labor Office	
<b>IV . Increasing Services Fees of TELEKOM</b>	
	3 times since 1991.4.1

Source: Sachverständigenrat(1992)

(Finanzausgleich)”, through which financial burdens of the federal government and governments of the Länder(states) are distributed as equally as possible, has been changed in favor of the new Bundesländer(federal states) in the East. A blueprint indicates that the East will receive an average 60 billion DM yearly from 1995.<sup>18)</sup>

18) The rules in the system of Finanzausgleich are rather long-term, whereas direct and indirect transfers by the governments and social insurance companies as well as by the German

## **(2) Current Developments in the Labor Market**

The total factor productivity(TFP) of the East increased from 30% of the level in the West in 1991 to 39% in 1992, and the comparative labor productivity is estimated to have reached about 43% of the West.<sup>19)</sup> Considering the per capita labor income of the East which exceeds that of the West by 65% along with its sudden increase,<sup>20)</sup> a serious disparity between wage and productivity can be easily documented. This can also be reflected by the fact that the East's unit labor cost is not as low as 160% of the level in the West. Low productivities and high speed wage increases are determining the current developments in the labor market as shown in Figure 2-2.

With a collapse in industrial production, the number of officially unemployed has been increasing steadily since the implementation of GEMSU, whereas an increasing number of people who are living in the East have been working in the West. In the case of short-time workers,

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Unification Fund are regarded as transitional and considered for coming years only. In this respect, the first category will prove more effective in restructuring the east German industry at least in a long-term perspective.

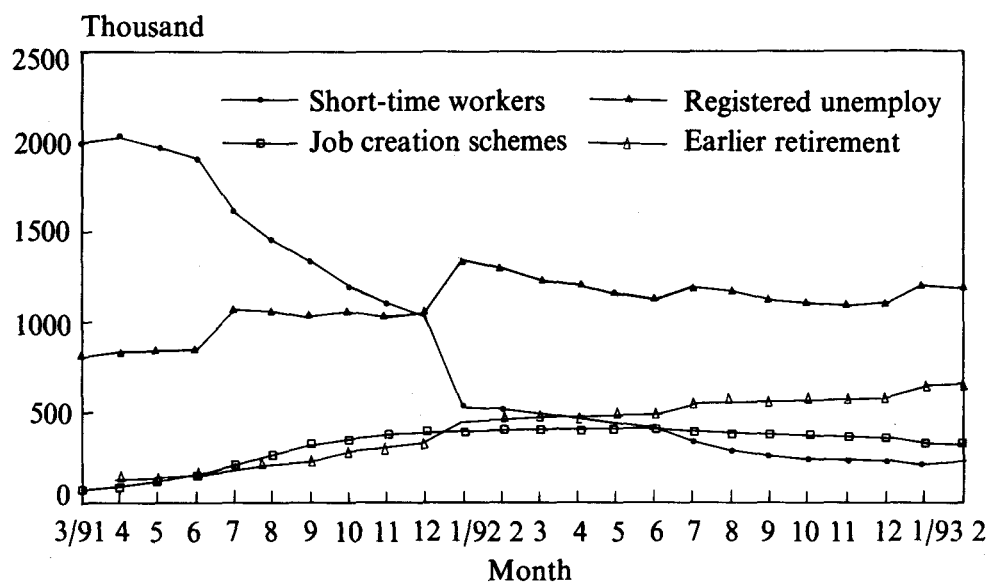
19) Calculated based on statistics reported in DIW(1993b).

20) The wages in the East are increasing very rapidly due to special agreements made in last year's wage talks to, in most cases up to 1994 or 1995, raise in intervals the eastern wages to the western level. According to these agreements, this year's wage increase in the steel and electronics industries should have been 26%. The association of employers "Gesamtmetall" indicated in April, 1993 that it will disregard this agreement, which has led trade unions to resort to strikes. With strikes still occurring as of mid-May, the result of further negotiations will significantly influence performances not only in the East, but also in the West.



they are, after one year, to be listed as officially unemployed, so that there is a negative correlation between these two indicators. As of February, 1993, some 1.181 million and 235,000 people are registered as unemployed and short-time workers, respectively.<sup>21)</sup>

〈Figure 2-2〉 Major Developments in the East German Labor Market



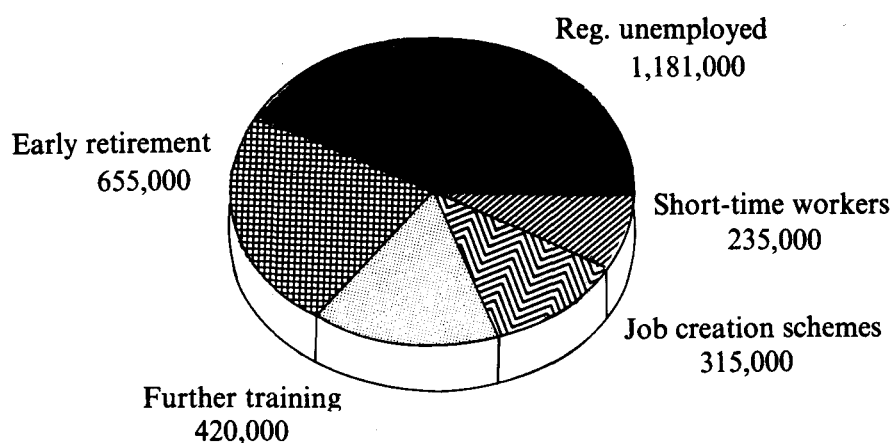
Source: Deutsche Bundesbank(1993)

Considering specific labor market policy measures, which are mainly taken to smooth shocks of abrupt job losses, the real rate of unemployment as of February, 1993 seems to exceed 30%(See Figure 2-3); Special rules for short-time workers (accommodating 235,000 unemployed), job creation schemes (315,000 unemployed), further training (420,000 unemployed), and earlier retirement systems (655,000 unem-

21) See Research Institutes(1993).

〈Figure 2-3〉

**Specific Labour Market Policy Measures in the East Germany**



Source: Deutsche Bundesbank(1993)

ployed) are absorbing more than 1.6 million de facto unemployed workers.<sup>22)</sup>

In view of increasing financial burdens, recession in the West and relatively slow recovery of the East, the federal government proposed a so-called “Solidarity Pact(Solidaritätspakt)”, which was accepted in March, 1993 by political parties, federal and municipal governments and organizations representing employers as well as trade unions. The Solidaritätspakt contains measures to reduce financial deficits of the federal governments, to increase the purchase of products from the East, and to increase investments in the East, while transfer payments

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22) As of October, 1992, some 800,000 workers were directly or indirectly employed in connection with offers from east European countries. As these deliveries will not be realized fully, a great majority of them will lose jobs, sooner or later, so that they could also be regarded as de facto unemployed. See Henzler and Späth(1992), p. 3.

to the social insurance systems will be reduced on a large scale, with an attempt to revitalize economic activities especially in the East. Even though some minor problems included in this program need to be solved and will take time to realize favourable effects on the economy, a significant improvement of the investment environment can be expected in coming months. With many other disposable policy measures practiced more or less exhaustively during the transitional period, however, contributions of the Solidaritätspakt could be rather small, unless supported by an expansionary monetary policy by the Bundesbank.

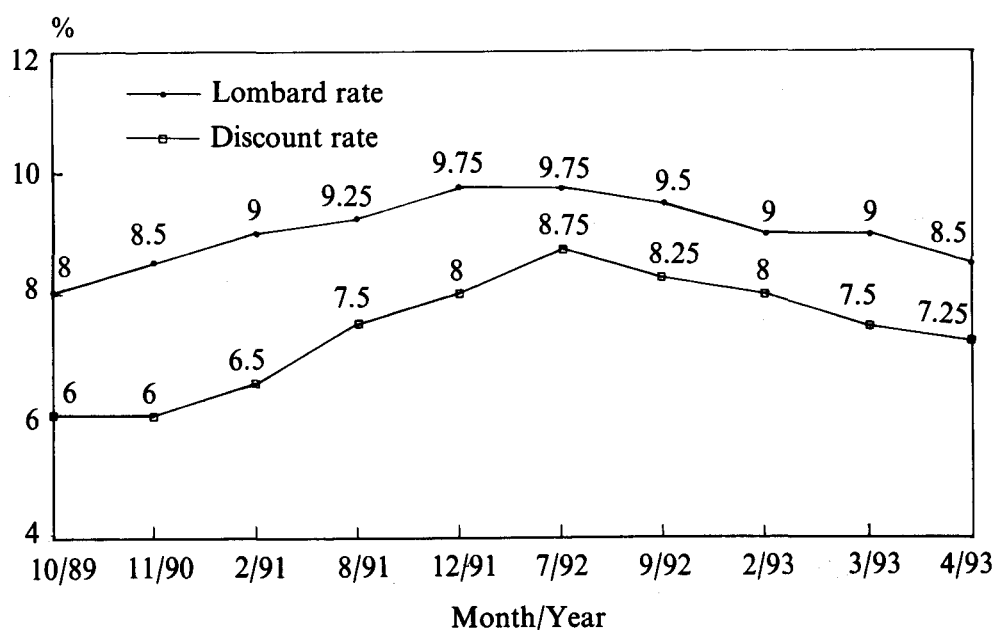
### **(3) Monetary Policy by the Deutsche Bundesbank**

The Bundesbank has traditionally been regarding a monetary policy designed to keep the DM value stable as its primary goal, as defined in the Bundesbank Act. Recognizing increasing inflationary pressure arising from high budget deficits and rapidly climbing wage levels in the East, the Bundesbank kept interest rates high. The lombard rate, which is usually regarded as a lower limit of short-term money market interest rates (similar to call rates), has been raised in four instances from 8.0% in Oct., 1989 to 9.75% in July, 1992. In the case of the discount rate, which usually is a leading indicator for other interest rates, an increase by 2.75% point has been observed.

Besides keeping the inflation rate low, the Bundesbank seems to have intended to attract foreign capital that can be invested into the

〈Figure 2-4〉

# Monetary Policy of the Bundesbank



Source: Handelsblatt(1992, 1993)

East. From the point of view of European integration, an additional purpose of the Bundesbank in trying to keep the inflation rate low could have been to fulfill the convergency criteria<sup>23)</sup> to be able to form the Economic and Monetary Union (EMU) successfully. Otherwise, the position of the Bundesbank in the System of European Central Banks (SECB) and/or in the European Central Bank (ECB) which are modelled similarly to the Bundesbank, could have been weakened considerably.

When the Exchange Rate Mechanism (ERM) in the European

23) Convergency criteria include, inter alia, low inflation rates which should not be as high as 3% and a budget deficit which should not exceed 3% of GDP. As of May, 1993, there is only one country, Luxemburg, that can satisfy all the required criteria.

Monetary System (EMS) tumbled in September, 1992 and a few central bank governors accused the Bundesbank of too egoistic of a monetary policy throwing other EMS member countries into recession by keeping its interest rates high, a policy of successively reducing interest rates was adopted by the Bundesbank. In 1993, with expected domestic inflation rather moderate and the rate of wage increase in the West showing a tendency to slow down, which would have had signaling effects on wage talks in the East,<sup>24)</sup> the Bundesbank reduced its two key interest rates continuously(See Figure 2-4). Nevertheless, German interest rates are still significantly higher than those of Japan and the U. S., and there is a sign indicating that the German monetary policy has had pro-cyclical effects on the economy,<sup>25)</sup> so that a further expansion of the monetary base seems inevitable in order to bring the economy to sustainable growth. In doing this, the Solidarity Pact accepted by all participating groups, whose main goals are to reduce government deficits and revitalize the east German economy, also appear to provide the German economy with a favorable investment environment to a certain extent.<sup>26)</sup>

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24) The ÖTV and IG-Metall in the West, for example, accepted a 3%-3.5% wage increase in March this year. In the East, especially in the steel industry, there are difficulties in settling divergencies in determining this year's rate of wage increase. See footnote 9.

25) See DIW(1993c) and Boss et al.(1993)

26) In reducing government deficits, the Solidarity Pact resorts to several revenue generating measures rather than expenditure reducing measures, so that leading research institutes claim the effects will be limited. See Handelsblatt, 1993.5.5

### **3. Activities of the Treuhandanstalt**

In transforming a centrally planned economic system to a market economic system, the first step should be to provide the economy with legal and institutional frameworks within which a market mechanism can work. The market mechanism itself cannot function unless private property rights prevail in the system. The Treuhandanstalt (THA) as a government trust dealing with state- and/or people-owned properties is in charge of privatization especially of state-owned conglomerates (Kombinat) inherited from the former GDR. Installed by the last GDR government under de Maiziere, the THA has been taken over by the Federal Ministry of Finance of unified Germany since the implementation of GEMSU. Primary goals of THA are 1) to reduce commercial activities of the state as rapidly and extensively as possible by privatizing state-owned firms, 2) to improve competitiveness of firms, thereby securing employment and creating new jobs, 3) to provide the economy with land and premises for commercial purposes, and 4) to investigate the inherited property thoroughly and make balance sheets, so as to use revenues, if any, to help the economy adjust to new environments and to consolidate the budget of the state.<sup>27)</sup>

In dealing with state-owned firms, the THA follows three main methodological concepts, namely privatization, restructuring and liqui-

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27) See Treuhandanstalt (1992a)

dition: all the firms that can survive without any financial aids are already sold or will be sold soon. Firms that are deemed not to be able to survive will be closed. The remaining firms are assumed to be able to survive, if financially supported for a while, so they are restructured (consolidated) and then privatized. In Table 2-3 the THA's activities so far are summarized.

〈Table 2-3〉      **Results of Privatization by the Treuhandanstalt (1993.1.31)**

Privatization (Number of firms sold out)	11,234
Sales Revenues (Million DM)	40,600
Investment Commitment (Million DM)	173,200
Guaranteed Number of Jobs	1,413,262
Number of Firms to be Closed	2,340
Management Buy-Out	1,958
Foreign Investment	
— Number of Firms	556
— Investment Commitment	17,400
— Guaranteed Number of Jobs	122,500
Reprivatization*	1,213
Number of Firms Returned to Municipal Governments	327

Note: \* Number of firms and parts of firms to be returned to the old owners according to the new property law

Source: Treuhandanstalt(1993)

As of January, 1993, 11,234 firms have been privatized immediately or after consolidation procedures and revenues of 41 billion DM have been generated. Investors are investing a sum of 173 billion DM in coming years, through which approximately 1.4 million jobs will be

created. 2,340 entities or parts of entities are planned to be closed through liquidation. In the course of privatization, the Treuhandanstalt has especially accented the building of efficient small and medium-sized enterprises(SMEs) through splitting the conglomerates into smaller units.<sup>28)</sup> And through the MBO's approximately 17% of privatized firms have been taken over by the east German managers and workers. As of February, 1992, only 2,400 of the initial 12,600 firms are totally or majority owned by THA.

The sales revenues of the THA are to be used primarily for helping the economy of the East adjust to new market conditions and improve competitiveness. Then, it is defined in the Treuhandgesetz, they should cover current expenses of the THA and be distributed to the savers who experienced losses due to the 2:1 conversion rate in GEMSU. As of the end of 1992, an accumulated sum of 20 billion DM had been granted to the THA by the federal government, as revenues of the THA fell short of its expenditure.<sup>29)</sup>

Despite a far-reaching consensus that an institution like Treuhandanstalt is inevitable in transforming one economic system into another

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28) Especially in Nr. 3 of the "Guidelines to General Business Policy(Oct., 1990)" of the Treuhandanstalt, a clearly defined priority for building SMEs has been established. See Treuhandanstalt (1992b), p. 6.

29) Expenditures of the THA consist mainly of 1) current expenses to working personnel, 2) interest payments on credits by way of the "German Unification Fund", 3) subsidies to firms in the restructuring process, and 4) liquidation-related financial obligations as well as 5) interest payments on 50% of the "Credit Clearance Fund(Kreditabwicklungsfonds)".



er, the evaluation of its performances is rather divided. On one side, there are voices that praise a relatively rapid privatization<sup>30)</sup> and argue the east German economy could thereby facilitate its economic adjustment process. On the other side, main research institutions are indicating several deficiencies in the concept of privatization by the THA as follows:<sup>31)</sup> 1) In many cases in the first stage of privatization, firms have been sold under price, because the THA could not develop appropriate evaluation methods; 2) In the second stage, the THA seems to put too heavy a weight on its consolidation program that will lead authorities to a long-lasting subsidization of remaining firms;<sup>32)</sup> 3) By including investment promises and a guaranteed number of jobs to be created as part of a sales contract, risks to the investors, in general, increased; 4) In determining buyers of firms, there were signs indicating discrimination against foreign investors,<sup>33)</sup> so that their engagement remained relatively low.

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30) As of the end of January, 1993, more than 75% of initially state-owned firms have been sold out.

31) See, for instance, Müller(1992).

32) Under the current form of the consolidation program, THA appears to follow two goals simultaneously: "protection of firms" and "protection of people". Siebert(1992), for instance, recommends the THA differentiate one from the other.

33) For example, relative shares of foreign investors' contractual engagements in job creation and future investments exceed 8% and 10% respectively, whereas their share in number of firms sold is less than 5%. See Table 2-2.

### **III. Transformation Process of the East German Economy**

In the course of analyzing and evaluating policy measures that are practiced to remedy microeconomic and macroeconomic difficulties described so far, there can be frequently observed a debate between Keynesians and Neoclassics. This kind of debate is especially intense on topics such as 1) How should the privatization performances of the THA be evaluated? Should the THA be given the authority to implement its own industrial policy? Should the majority of firms which have not yet been privatized remain state-owned for a while or should they be liquidated? 2) How much are the costs related to unification and how should they be financed? Should they be financed on a private or on official basis? 3) Should the federal government be more active in creating jobs or does a currently practiced rather passive labor market policy do better for the economy? Answers to these questions will be political rather than based on economic analysis, and it can be expected that such discussions will go on until the two economies show signs of a high degree of convergency. Another type of academic controversy concentrates on the transformation process of the economies itself. Questions raised are 1) Is there any relevant theory of system transformation? 2) If not, what are crucial factors that are to be considered in such a process? 3) How many alternatives are there as to the sequencing and timing of specific policy measures, and which is the best

approach for a specific country? 4) What are the consequences of a gradual approach versus shock therapy?

In this section, a simple model of system transformation based on east German experiences will be presented, and three stages belonging to the process and necessary policy measures will briefly be discussed. GEMSU and the two-way effects of the conversion rates of Ostmark to DM also deserve a review. From the perspective of Korean unification, German experiences with system transformation will be very helpful for preparing unification and determining the right track to a full integration of two economies.

## **1. A Simple Model of System Transformation — The East German Case**

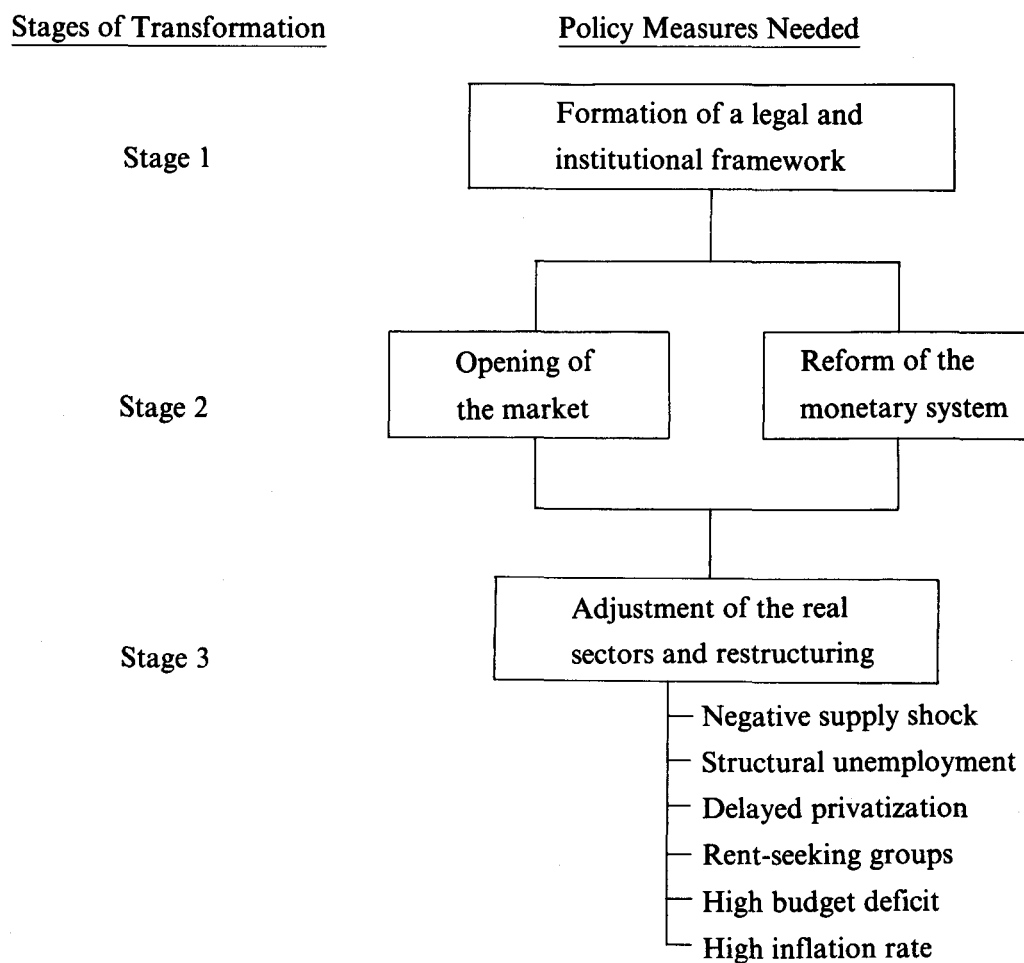
The process of economic integration in Germany after political unification can be described with a simple model of system transformation of the east German economy, as shown in Figure 3-1.

In the case of east Germany a kind of shock therapy has been practiced via “German Economic, Monetary and Social Union (GEMSU)”; Beginning July 1, 1990, almost all of the laws regulating the economy in the West have been carried over to the East, the Ostmark which had been the official currency of the East disappeared and has been converted into the DM at 2:1 (partly 1:1), and the East adopted a full version of the modern social security system prevailing in the West.

The East, in fact, has been annexed by the West.

That is to say, in the first stage of system transformation, typical market-oriented legal and institutional frameworks have been established in the East. For a frictionless functioning of the market mechanism, formation of private property rights and privatization of all types of state-owned properties including firms, buildings and houses as well as land and underground resources were necessary. The privatization pro-

〈Figure 3-1〉 A Simple Model of System Transformation



cess, which in the German case the THA is responsible for, is of immense importance because it affects the future structure of the unified economy. An additional factor to consider in the course of establishing an economic and social system, specifically in the case of one country annexing the other as was the case in Germany and will possibly be in Korea, is to decide whether the old laws prevailing in the annexing country are to be implemented in the annexed country or new rules be created. In Germany, which transplanted the prevailing rules of the West into the East, some counter-productive policy measures have been implemented.<sup>34)</sup>

In Stage 2, the economy of the annexed country should be opened and integrated into the international division of labor, thereby confronting it with competition from abroad and maximizing the benefits from international trade. Simultaneously, a currency reform must occur since opening of markets makes convertible currency necessary. Confronted with competition from abroad, competition inside the domestic markets will also be facilitated, meaning that market entry and departure will be determined by the market mechanism rather than central planning. A well functioning market mechanism is able to

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34) A good example is the rule "restitution prior to compensation" in dealing with old property rights that had been valid before Germany was divided. As of May, 1993, only 14% of more than 1.1 million applications for restitution were processed. Considering that resources being wasted here could have been invested for productive uses, the rule must have been highly counter-productive.

allocate resources as efficiently as possible so that the growth potential of the economy will be strengthened. In case there exist firms with monopoly power, it should be considered that private monopoly firms could do more harm to the economy than those that are state-owned, so they are either to be divided into smaller and more efficient units or to remain in the hands of the state.<sup>35)</sup> In reforming the monetary system, convertibility of currencies should be given the highest priority and, in the case of annexation, a reasonable conversion rate between participating currencies be determined. The conversion rate of currencies does directly affect, not only the B/S and P&L of firms, but also the wage and disposable income of households (two-way effects of the conversion rate). Therefore, a deliberate calculation is necessary. In doing a cost-benefit-analysis during this process, however, we are to take not only economic but also social and political factors into consideration.

With legal and institutional frameworks established efficiently, the domestic economy opened to competition from abroad, and monetary reform successfully accomplished, the economy will start to adjust to new environments in Stage 3.<sup>36)</sup> Typical adjustment costs to be observed in this stage could be outlined as follows:

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35) See Jens (1993).

36) The economic adjustment process will start as soon as some major policy measures are implemented. For convenient and analytical purposes a rather clear-cut description method is adopted.

- Production facilities of the annexed region are usually very old and partly obsolete in comparison to market economic standards: the quality of its labor force is weaker than that of its counterpart and the industrial structure has not been formed according to comparative advantage. Therefore, opening up to international competition implies a negative supply shock to this economy, revealing all the inherited distortions in resource allocation. In order to lesson this shock, there must be an influx of capital, domestic or from abroad, which appears to be one of the most urgently needed measures to enhance the overall productivity level of the economy. At the same time, this could be the only chance for the economy to make its production technology “state of the art”, thereby being able to pursue a sustainable growth policy for the long-run.
- With negative supply shocks in many sectors apparent, there will be increasing pressure for firms to reduce production costs. As investment in production facilities is an inevitable factor for surviving, unemployment of the frictional and structural nature will soar, until the supply shocks end. Besides increasing investments in facilities, specific labor market policy measures seem necessary in order to dampen social disturbances arising from increasing unemployment. In the case of Germany, specific measures like “short-time working mechanism”, “job creation schemes” and “earlier retirement systems” have been prac-

ticed for the purpose of financially supporting people who have lost jobs.<sup>37)</sup>

- With the possibilities of turbulent macroeconomic changes rising rapidly, risks to potential investors will increase, causing the privatization process to be delayed considerably. To maximize the efficiency of privatization, a detailed shock-absorbing mechanism should be established in newly created legal and institutional frameworks and programs to facilitate investments. Measures reducing investment barriers specifically to foreign investors will also facilitate the privatization process.
- Increasing structural and frictional unemployment together with a delayed privatization process is expected to breed a “rent-seeking” mentality and a need for an active industrial policy for weak performing industrial sectors. Several interest groups will expect the authorities like THA to be responsible for specific industrial policies. This way, the state could be trapped in a long-term subsidization of non-promising industries. However, industrial policies, if any, are to be formulated not for weak performing

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37) Because these labor market policies can be regarded as “subsidizing unemployment” rather than “subsidizing jobs(employment)”, they are criticized from many sides. Akerlof et al.(1991) e.g. presented calculations indicating that a program called “self eliminating flexible employment bonuses(SEFEB)” will enhance privatization and raise the level of new job creation, with possibly lower budget deficits. An extensive critical review on this topic is given in Bös(1992) and Kromphardt and Kraft(1992).



non-promising sectors, but for promising and emerging industrial sectors. A clear-cut conceptual scheme in this direction will help avoid waste of resources.

- Adjustment problems and related policy measures mentioned above will, at least temporarily, lead to high budget deficits and high inflation, thereby affecting the growth path of the economy negatively. Temporary tax increases and expenditure cuts appear inevitable, and this will mean increasing financial burdens for all members of the unified country. A specific burden-sharing mechanism will be of immense importance, not to say the most important. The German experience with the Solidarity Pact, if effectively practiced, will be a good groundwork on which country-specific schemes for problem-solving could be built on.

Three stages of system transformation described so far are to be regarded as a conceptual division and not as necessary steps that all economies are to follow. In some cases, the second stage may be implemented prematurely during, instead of after the first stage (the problem of timing). In other cases, Stage 2 could begin simultaneously with Stage 1 (the problem of sequencing). Whether a shock therapy or a gradual approach should be chosen will depend on political, economic and social conditions that differ from country to country.

## **2. The German Monetary Union Revisited**

In transforming the centrally planned economy of the East to a market economic system, Germany adopted an approach called “shock therapy” by implementing Stage 1 and 2 simultaneously in the framework of GEMSU. One of the most important aspects in this process has been to determine the conversion rate between Ostmark and DM at 2:1 (partly 1:1 and effectively at 1.8:1). It is estimated that the Ostmark was evaluated at three times its real value, which deteriorated the competitiveness of most east German firms and made them non-viable.<sup>38)</sup>

After approximately three years since GEMSU was introduced, many observers evaluate the conversion rate positively despite the fact that the east German industry had to undergo a severe restructuring process: first, through the 1:1 conversion rate a certain amount of disposal income could be provided to most east German households. This was a signal indicating an ongoing process of real economic integration after political unification, which could possibly avoid a massive emigration to the West; secondly, this positive signal contributed to enhancing the willingness to work in the east German people in a new environment. Considering the worsening political environments immediately after political unification and the implementation of GEM-

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38) The Sachverständigenrat, for instance, appealed to the federal government publicly to abandon such a conversion rate that would destroy the east German industry.

SU, which could surely have reduced the possibility of unification itself, a quick integration via a shock therapy appears to have been the “right” political decision. These arguments can be supported by results from several research projects indicating that, even if the Ostmark had been converted to the DM at a realistic conversion rate, the majority of east German firms could not have survived, mainly because most of their production facilities were obsolete and productivities were too low.

#### **IV. Implications for Korean Unification**

In preceding sections, the actual and expected future performances of the German economy after unification have been discussed and a simple model for system transformation has been presented, through which characteristics of shocks arising from the transformation of the east German economic system and necessary policy measures to smooth the adjustment process could be pointed out. In this section, implications for the Korean economy will be derived. The discussion can be divided into two parts: macro- and micro-level implications.

From a macroeconomic point of view, the main implications to be discussed are as follows:

1) Analyses of economic adjustment after system transformation and discussions on the type of policy measures needed require a country- or region-specific foundation. Characteristics of the German

“experiences” with unification will differ substantially from those of expected Korean experiences. Lessons that can be learned from the German case appear to be of rather limited scope. Establishing an institution like Treuhandanstalt that should temporarily manage the state-owned properties in one form or another appears to be inevitable. Problems arising from system transformation will be similar, but they will be different in intensity and duration. Therefore, in fine-tuning the economic adjustment, Korea-specific concepts of problem solving and policy measures should be developed and implemented. Actual political environments as well as socio-economic conditions at the time of unification have to be taken into consideration in assessing costs and benefits of macro-level policies. It will be undesirable for Korea to deny all the policy measures implemented in Germany merely because they caused and/or intensified economic adjustment costs.<sup>39)</sup>

2) To develop and implement Korea-specific concepts, there appears to be a precondition to prepare a model for the transformation of the North Korean economy to a market economic system. It should be considered that in the transition period, not only the North Korean but also the South Korean economy will undergo structural adjust-

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39) For instance, the two-way effects of conversion rates of currencies should be taken into account: a conversion rate does affect not only the balance sheet and P&L of firms by determining the wage level, but also the disposable income of private households. Appreciating one currency will deteriorate the competitiveness of industries in the region, but will help secure a certain amount of disposable incomes for households.

ments, so that the building of a model that comprises both the South and the North will be helpful. Problems possibly arising after unification should be outlined, and sequencing and timing of various policy measures that are needed to dampen shocks have to be discussed on the basis of several scenarios of possible unification processes. A simple model of the east German system transformation presented in Section III.1. could give a good basis for further developing.

3) The concept of “unification costs”, which is widely discussed in Korea among academicians and politicians, appears to be accenting too much of the negative side of unification and, therefore, at least partly, is controversial. Unification will be “costly” for the South in that the South will have to come up with the majority of investments needed to make the economy of the North modern and competitive. At the same time, however, there are also benefits to be considered. Unification will provide the South with opportunities to modernize its own economic structure and make use of natural resources that are in abundance in the North like bauxite, coal, metal and so on. Political tensions between the two countries that have been prevailing for the last forty years will disappear, allowing the wastage of resources to come to an end and minimizing the defense budget of the unified Korea to an amount much smaller than ever before. There will also be more economies of scale on the production side. Considering these points, it appears to be more desirable not to further follow the one-sided analysis of unification

costs, but to make a cost-benefit-analysis of unification. There is a need to analyze medium- and long-term economic costs and benefits of unification rather than only the short-term adjustment costs in the transitional period.

4) Even though an active industrial policy is not an appropriate policy alternative for Germany as a highly modern market-oriented economy, it fits the historical environment of the Korean economic policy very well, because in Korea the role of the state in setting the future course of economic development has traditionally been very important. Specific industries could be concentrated in specific regions of the North in order to secure the access to resources, intermediate products and markets, thereby enhancing economies of scale.<sup>40)</sup> Intensifying the regionally differentiated structure of industrial concentration will give rise to the so-called “lighthouse effects” to the neighboring regions and strengthen the competitiveness of the Korean economy as a whole.<sup>41)</sup> Industrial policy, however, should not be adopted to bail out the weak-performing senile industries, but has to be carried out for the purpose of building up and developing newly emerging industries

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40) Krugman(1991), for instance, argues that there exist enough economic reasons for a regional concentration of specific industries, if economies of scale are sufficiently high and transportation costs are sufficiently low.

41) Similar recommendations have been made by, for instance, Henzler and Späth (1992) for the German case. Siebert(1992b), on the contrary, is strictly against any specific industrial policies and prefers a set of measures making Germany an attractive location for industries.

5) For a successful accomplishment of a specific industrial policy as well as other policy measures suggested above, good functioning networks of infrastructure are a necessary precondition. Investments in telecommunication facilities and transport networks reduce costs of production and marketing activities of firms, thereby improving international competitiveness of the economy as a whole. Educating and training the North Korean people who lack market economic understanding will enhance their motivation and productivity. By accomplishing these tasks as soon and intensively as possible after unification, the environments for further long-term investments will be improved. We should not repeat the faults of the German fiscal policy which directed more than 70% the public transfer payments from the West to the East into consumptive uses.(See Section II.2.(1))

From a microeconomic point of view, the following points are to be considered:

1) In the case of unification in the Korean peninsula, the transformation of the North Korean economy into a market economic system should be accompanied with an improvement of productivities, according to which wages are to be determined (productivity-oriented wage policy). There should exist regionally and sectorially different structures of wages, because the productivities will differ from each other. This will enhance mobility of production factors, and the market

mechanism is expected to unfold its regulating functions. If, however, the level of households' disposable income in one region falls too much short of that in another region, an income policy that could help reduce this gap has to be adopted. In view of both reducing production costs of firms and providing the households with a minimum level of disposable income, a system of wage bonuses in which a certain percentage of wages paid to workers is subsidized by the state could be an alternative policy measure.

2) Establishing private property rights for state-owned properties like land, buildings and firms should not obstruct investments in production facilities that are urgently necessary in order to improve productivities. There appear to be three alternative avenues of managing this problem: compensation, restoring or restitution, and temporary state-ownership with possibility of hiring out or leasing. Restoring or restituting the properties to old owners will fit the property rights system in a modern market economy, but will raise uncertainties attached to potential investment projects and deteriorate the investment climate unnecessarily, as was the case in Germany. The privatization process will be delayed and there will be given more room for rent-seeking behaviour by interest groups. Compensation mechanisms for old owners, on the other hand, will not hinder necessary investments directly, but will raise financial burdens for the state government, thereby increasing the possibility of higher interest rates and inflation.



This will have negative indirect effects on investments. State-ownership with possibilities of leasing, hiring out, and selling out, which have partly been the practices of Treuhandanstalt,<sup>42)</sup> will not foster uncertainties and raise governments' financial burdens as much as in the case of compensation or restitution. Thus, it appears to be the most efficient way to manage property problems related with Korean unification, if there do not exist any legal or institutional restraints. Nevertheless, this system will not function well unless other barriers to investments like environmental problems and the low quality of the labor force, etc. are removed rapidly.

## **V. Summary and Conclusions**

The economy of unified Germany has been suffering from increasing financial burdens due to unification. Government subsidies to industrial sectors have been doubled since unification. The rapid rate of wage increase in the East, which exceeds productivity gains substantially, has been leading firms to dismiss lots of workers, thereby giving rise to transfer payments from the federal government and social insurance companies in the form of unemployment benefits and the

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42) After passing the "Enthemmungsgesetz(1991.3.22)" in the Bundestag, which was designed to reduce barriers to investments arising from the rule "restitution prior to compensation", this type of practice by the THA increased substantially. In the beginning of the privatization process, however, the activities of the THA were obstructed substantially by increasing claims for regaining old property rights.

like. A contractionary monetary policy by the Bundesbank with relatively high interest rates until September, 1992 deteriorated the investment climate, leading not only Germany, but also other EMS member countries into recession. A policy of successively reducing interest rates adopted thereafter has not yet been able to positively affect the business cycle of the economy. According to newly published joint research projects of six leading research institutes, this year's GDP of the unified Germany is expected to experience a minus growth of 1.5-2%.

With respect to the investment activities that are regarded to be one of the most important components of policy measures for the German economy during the structural adjustment after unification, there are several factors that have affected investment activities negatively. The export sector with traditionally strong international competitiveness has been suffering from a worldwide recession that has been in force for approximately two years. The activity of the Treuhandanstalt has been too centrally organized to react to changing economic environments efficiently, leading firms owned by the THA to retard many lucrative investment projects.<sup>43)</sup> The privatization process of state-owned properties of the former GDR has also been unnecessarily delayed due to increasing risks attached to investments because restitution and restorage rather than compensation of property rights

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43) See e.g. *Wirtschaftswoche*, 1993.5.7, p. 27-30.

to old owners of many properties have been given first priority. The monetary policy of the Bundesbank has put too much emphasis on limiting the potential of inflation by keeping interest rates high, rather than stimulating investments by reducing interest rates.<sup>44)</sup> Moreover, most public transfer payments have been concentrated on consumptive purposes rather than used to stimulate private investments. (See Section II.2.(1))

Valuable lessons we can learn from the German experiences are that timing and sequencing of policy measures do matter, and that it takes longer than ever expected to unify two different economies. Discussions on “Shock therapy or Gradualism?” as well as “What kind of long-term policy concepts should be adopted?” are of extraordinary importance.

Both extremes in designing the process of unification, gradualism and shock therapy, will apparently have advantages and disadvantages. A gradual approach will consist of several stages of economic and political integration, through which the two economies will be expected to converge with each other. The main elements presented widely are 1) political unification, 2) years of confederation with two different economic systems, and 3) economic unification. Even though short-term adjustment costs with a gradual approach are expected to be smaller, cumulative costs could be higher than in the case of shock

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44) High interest rates, however, contributed substantially to attracting foreign capital investment in German titles. An evaluation of Bundesbank policy, therefore, is rather controversial.

therapy, because the future course of the economy could be determined by ad hoc decisions rather than by consistent concepts of economic restructuring.<sup>45)</sup> Investment projects based on one political decision could be made unprofitable by another. There exists a possibility that even political unification could be endangered.

In the case of shock therapy, consistent long-term planning, which could not be adopted in the German case, appears to be applicable for the Korean case because Korea has enough time and the advantage to be able to, at least conceptually, prepare for unification. After a period of high adjustment costs, price mechanisms are expected to work well and unfold full signaling effects allocating resources efficiently. In the framework of a consistent industrial policy by the state, the future course of the economy is made visible to everybody, helping reduce information costs to the investors. Policy concepts that are inconsistent and designed on an ad hoc basis will, of course, not produce such effects.

It is, therefore, not the question “Shock therapy or Gradualism?” that matters, but the question “Are the long-term concepts for economic restructuring and related policy measures to be implemented sound foundations and consistent in themselves?”

Regardless of whether a gradual approach or shock therapy is preferred in the case of the Korean unification, a policy of sustainable

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45) See e.g. Fels and Schnabel(1991).

long-term growth should be adopted. An institution like Treuhandanstalt has to be established and given the responsibility to administrate state-owned properties temporarily. As was the case in Germany, splitting the big production units into small- and/or medium-sized ones will enhance their efficiency, and facilitate the privatization process. In contrast to the German case, however, this state organization could be delegated the responsibility of a region-specific industrial policy for the North. In this case the institution has to develop concepts not only for a rapid privatization of firms, but also for a consistent restructuring of the economy and should implement necessary policy measures. Access to resources and markets as well as to qualified labor forces will be important criteria that influence the choice of regions where specific industries are to be constructed.

It should also be kept in mind that real economic unification will be achieved either in the mid- or long-run, rather than in a short time span. Without giving too much attention to transitional adjustment costs, attractive packages to stimulate domestic and foreign long-term investments that will help enhance productivity and secure sustainable growth in the medium- or long-run must be offered. Here, policy measures directing public financial transfers to investment purposes such as infrastructure and the like should be adopted. Further, the privatization of state-owned firms and other properties should be challenged whenever temporary state-ownership appears to be the best choice, at least for the purpose of limiting the state's financial

burdens. If this is not applicable for one reason or another, a compensation scheme should be preferred over restitution or restorage of property rights to old owners, because the latter will raise uncertainties in property rights, thereby deteriorating investment environments. That is to say, legal frameworks should provide the government's trust with environments in which it is operationally able to fulfill its uppermost tasks, "privatization" and "restructuring of the economy".

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