JOHN HALL AND UDO LUDWIG

East Germany's Transitional Economy

Despite some initial successes for the East German worker and consumer, comprehensive improvement of the East German economy does not appear to be in the cards.

No one could expect East Germany's transition to a market economy to follow some predictable path. First of all, after four decades of development in a different and even conflicting economic system, its transition is inextricably linked to a reintegration into West Germany's economy. This is much more complex and problematic than, for example, Poland's or Hungary's return to a market system—a process that might be considered a more typical model.

One significant result of unification is that some East German families are benefiting from rising family incomes and enjoying substantial increases in their bundle of consumer goods with greater choice, despite the difficult problems. Moreover, the unified system now offers greater stability through the overarching umbrella of West German institutions, including a major currency—the Deutschmark. In addition, West Germany's well-developed social welfare system—an integral part of its social market economy—is a safety net to catch East Germans, if they happen to stumble as a result of their integration into the more productive West German economy.

Emerging problems

After four years of unification, some economic indicators look promising. Labor productivity in industry increased from an estimated 30 percent of the West German level at the start of unification to 50 percent in 1994. In 1993, the growth rate of output in East Germany was greater than 6 percent, and rivaled the rapid growth rates of some developing economies in East Asia. Nevertheless, problems which suggest that East Germany will fail to recover its historical losses relative to West Germany can be seen beneath the surface. This is a pattern that was evident at the end of World War II and that was only aggravated by the forty-year experiment with planned socialism.

According to conventional economic wisdom, East Germany's economic problems are rooted in the German Monetary Union that became effective on July 1, 1990. That is when East Germany changed to the market and adopted the German mark as its currency. The logical sequence of that story ran as follows: When unification began, East Germany's economy exhibited lower levels of labor productivity than did West Germany's. Its infrastructure was antiquated, its industrial structure was old-fashioned. Its rapid union with the more productive West German economy was expected to result in precipitously declining employment, as real output fell. These were thought to be the inevitable consequences of newly created markets, and the normal outcomes of a new market system.

Perhaps more important, the initial losses inflicted by the adoption of a market system aggravated the

JOHN HALL is Professor of Economics and International Studies, Portland State University. UDO LUDWIG is Senior Research Fellow at the Institute for Economic Research in Halle, Germany.

Table 1 **Public Sector Transfers to East Germany**
(In Billion Deutschmarks, Current and Rounded)

Year	1991	1992	1993	1994 (est.)
Total Transfers	129.2	150.3	162.9	165.5
of which:				
Unemployment Insurance	20.9	30.6	32.1	28.5
Pensions	—	1.5	4.9	7.0
Total Transfers as % of East German GDP	71.4	64.4	59.1	55.0

Source: Die Lage der Weltwirtschaft und der Deutschen Wirtschaft, Herbst 1993.

losses that the Eastern Laender (five new states) had suffered since the Second World War and had never overcome. Moreover, West Germany's unification policies did not even seem to address those problems. Rather than promoting economic equalization between East and West, unification policies seemed to subordinate the East to the West. Those problems have been compounded by the fact that the transformation extends well beyond the economic system and reaches deeply into the political and social systems as well.

West Germany's financial burden

Since its inception, unification has been an expensive proposition that tended to grow more expensive over time. It has required the transfer of subsidies and investments from West to East in amounts that the Bonn Government deems "massive." In 1993, transfers amounted to sizable portions of East German output. Roughly 20 percent of the total transfers went to support labor market policies, by and large in the form of unemployment insurance. In addition, pensions (often induced by forced early retirements) accounted for another 3 percent (see *Table 1*).

The transfer of funds can be viewed as a useful measure of West Germany's commitment to unification and a market economy in East Germany; however, it is typically presented in a distorted light. On the one hand, transfers are regarded as West Germany's responsibility and burden; on the other hand, they are considered the essential means of transforming the East German economy.

Closer examination of the intra-German financial flows reveals a peculiar pattern. Transfers of funds from West to East Germany are not new phenomena; they occurred as inter-German flows, when Germany was separated into two nations. For example, close to 2 billion Deutschmarks were paid annually to the East German (GDR) government for transit rights to the geographic island of West Berlin. The West Berliners also paid the East Germans to dispose of their garbage in East German dumps. West German families often transferred funds to family members in East Germany. There was also an active prisoner trade. Since 1977, the West German government has paid upwards of 96,000 Deutschmarks to buy a prisoner from an East German jail.

In addition to transfers, there was an active merchandise trade. In 1985, the total of inter-German trade amounted to 15.5 million Deutschmarks; East German exports to West Germany accounted for 49 percent of the total. Several important sectors in East Germany relied on exports to West Germany (and, in effect, the European Community). Some exports (listed in cardinal order of value) were: textiles and apparel; fuels; chemicals; steel; ferrous and nonferrous metals; electrical engineering products; and processed wood products (including furniture).

Prior to the start of German unification in 1990, the methods used to transfer funds from West to East, and the ways in which goods flowed from East to West, were many. West Germans imported established product lines from East Germany. With respect to types of products and their quality, these must have contributed something to the utility maximization of the discerning West German consumers, and to the profit maximization of competitive West German firms.

But East German merchandise exports to West Germany have stagnated since unification, while West German exports to the East have increased

Table 2 **Inter and Intra-German * Merchandise Trade**
(in Thousand Deutschmarks, Current)

Year	Total Trade	Imports from West Germany	Exports to West Germany
1985	15,537	7,901	7,636
1989	15,309	8,104	7,205
1990	29,600	21,324	8,275
1991	55,718	46,733	8,985
1992	74,684	63,530	11,154

* Viewed as West German imports into East Germany, and East German exports to West Germany.
Sources: "Kein Gewinn von Marktanteilen im innerdeutschen und Aussenhandel", in *Konjunkturbericht* 5-7/93, Institut fuer Wirtschaftsforschung Halle; and Ingrid Haschke, "Der Innerdeutsche Handel im Strukturwandel," *Kunjunkturbericht* 5-6/93, Institut fuer Wirtschaftsforschung Halle.

Table 3 **Total Capital Formation in * Two States and East Germany (Public plus Private Investment)**
(in Billions of Deutschmarks, Current, and Rounded)

	North Rhine Westphalia	Bavaria	Five New States
1988	97.6	93.5	
1989	107.1	102.5	
1990	119.6	115.6	
1991	133.5	130.5	87.2
1992	—	—	108.1
1993	—	—	124.3

* Total capital formation is assumed to come into federal states as flows. There is no measure to account for that portion of capital formation that might also be generated and invested internally, within states.
Sources: Volkswirtschaftliche Gesamtrechnungen der Laender, Investitionsdaten. Statistischen Landesamt Baden-Wuertemberg, Stuttgart, 1993; *Volkswirtschaftliche Gesamtrechnungen,* FS 18, Reihe 1.3 und Reihe 3, Statisches Bundesamt, Wiesbaden 1993 and 1994.

markedly (see *Table 2*). In effect, the East German market serves as a newly opened frontier—a market for expanding West German exports. While this might serve to improve the material standard in East Germany, the implication of the burgeoning trade imbalance is that East Germany will be left with the difficult (if not nearly impossible) task of developing a market economy in the face of stagnating exports to West Germany. Those exports, which could most effectively bring about demand management policies to promote microeconomic restructuring in East Germany, appears to be closed to expansion.

Changing German transfers

Prior to unification, trade in goods and services (as well as financial flows) were regarded as inter-German trade and transfers. With unification, East Germany is now the eastern region of a unified Germany. Trade and transfers between the East German region and the former West Germany are now part of intra-German economic activity. With respect to intraregional transfers, does East Germany fare well or poorly, relative to other federal states?

Large financial flows, in the form of private and public investments, production and consumption subsidies, and other transfers are found throughout Germany. The division of Germany into regions, and the organization the five new states (Laender) as the East German region of the new Germany, has caused a curious pattern to emerge. The total of private and public investments in East Germany (primarily flowing from West to East) is not so massive as it is proportional, at least when compared to the levels of private and public investments in other regions of unified Germany.

The 1991 population of the five new Laender of East Germany (excluding West Berlin) is 16.4 million. This compares to the 17.5 million people living in the industrialized state of North Rhine Westphalia, located in the North Rhine and Ruhr Valleys. It is a region noted for traditional industries such as coal mining, chemicals, metallurgy, and numerous forms of steel fabrication (including automobile manufacturing and machine building).

Bavaria serves as a useful, contrasting example. With its smaller population of 11.6 million, it is a federal state that advanced its relative position in cold-war West Germany and functioned as a magnet that attracts advanced industries. Numbered among them are aerospace, defense, and (some related) advanced electronics and semiconductor industries. An examination of capital formation that stemmed from flows of private- and public-sector investments into East Germany shows that these flows were proportional rather than massive. In considering that East Germany is now composed of five new federal states which are not represented as single states (such as North Rhine Westphalia and Bavaria), the investments are proportionately smaller; they have to be split among five recipients (see *Table 3*).

Private-sector commitments

West German investment in East Germany increased significantly from 1991 to 1993. Moreover, increased investment also seemed to be fostered by sending less capital out of Germany as foreign direct investment. West German private investment in East Germany nearly doubled in current Deutschmarks—

Table 4 **German Foreign Investment and West German Investment in East Germany**
(In Billions of Deutschmarks, rounded)

Year	1991	1992	1993
Total German Foreign Direct Investment (est.) 1	31	24	17
West German Investment in East Germany 2	19	29	33
Total	50	53	50

1. Does not include purchase of foreign stocks.
2. Includes long-term credits and reinvestment of profits.
Sources: Deutsche Bundesbank Zahlungsbilanzstatistik, February 1994; *Wirtschaft in Zahlen,* Bonn, 1993.

Table 5 **Births and Deaths in East Germany and West Germany**
(Actual Figures)

	In Five New States plus East Berlin			Former FRG
Year	Live Births	Deaths	Difference	Live Births
1988	215,734	213,111	+2,623	677,259
1989	198,922	205,711	-6,789	681,537
1990	178,476	208,110	-29,634	727,199
1991	107,769	202,427	-94,658	722,250
1992	87,030	187,083	-100,053	718,730

Source: Zur Wirtschaftlichen und Sozialen Lage in den Neuen Bundeslaendern Sonderausgabe, April 1993.

from 19 billion in 1991 to 33 billion in 1993. During the same period, total German foreign direct investment declined from 31 billion Deutschmarks in 1991 to 17 billion in 1993. There appears to be a real shift from direct foreign investment to domestic investment in East Germany (see *Table 4*).

Per capita and spatial equalization

How large should German private investments in East Germany be in order to promote an equalization of investment activity and, ultimately, of economic activity? To promote investment equalization, the amount should, in principle, be at least as proportionately large as German private investments are in West Germany; it should be even greater, if the East is to catch up. The East German states represent less than 20 percent of the total population of unified Germany—a declining share. In 1939, East Germany's population was 29 percent of the total German population that lived within the present borders of unified Germany. A 20-percent share of population fails to account for the fact that the East German region suffered a decline in population—a secular trend that started after the end of World War II and extended through the forty years of planned socialism. Moreover, it now continues, either in the face of, or perhaps more realistically as a result of, unification policies.

A 1993 study conducted by the German Institute for Economic Research (DIW) in West Berlin shows that Eastern Germany's population share (relative to the German total and in actual numbers) is expected to continue to decline until the year 2040, even under the more optimistic of the two scenarios. This decline can be attributed to emigration, a fall in East German birth rates, and marked increases in the ratio of deaths over live births. A detailed study would be required to determine the exact causes of the sharp declines in live births. Even though East Germans of child-bearing age may well have emigrated to West Germany, we do not see corresponding increases in live births in West Germany (see *Table 5*).

More realistically, a decrease in live births reflects the citizenry's perception of economic uncertainty. But changing family policy appears to be more important. East German women are forced to accept conservative West German policies. In the first instance, these policies throw a disproportionate number of women out of work altogether. In 1989, the participation rate for women in the total labor force was 49 percent. In 1992, this share had already fallen to 44.8 percent. In addition to squeezing women out of the labor force, there has been a simultaneous failure to provide accessible, affordable child care—a service previously available in East Germany.

With respect to geographic area, East Germany's five new Laender account for 30 percent of the land area of unified Germany. For per capita investment to be equalized on an annual basis, it would require that Eastern Germany receive close to 30 percent of total German private investment.

Table 6 **Private, Public, and Foreign Investments in Germany**
(in Billion Deutschmarks, Current and Rounded)

	1991	1992	1993
Total Investment in Corporate Sector in Unified Germany [1]	411	429	402
of which:			
West Germany	353	356	318
East Germany	58	73	84
East Germany as percentage of total	14%	20%	21%
General Government [2] (in Unified Germany)	75	85	86
of which:			
West Germany	61	66	65
East Germany	14	19	21
East Germany as percentage of total	19%	22%	24%

1. Includes companies, financial institutions, plus public corporations, excluding housing.
2. Includes public investment in roads, public buldings, public hospitals, public schools, and the like.
Sources: Volkswirtschaftliche Gesamtrechnungen Fachserie 18, 1992; for Year 1993, *Vierteljahresergebnisse der Inlandsproduktberechnung,* 4. Vierteljahr, 1993 (preliminary document); *Wirtschaft in Zahlen.* Bonn, Bundesministerium fuer Wirtschaft, 1993.

Both private and public investment is needed, if regional equalization is to be furthered. In 1993, East Germany received 21 percent of private-sector investment and 24 percent of public-sector investment. This can be interpreted as a firm commitment to a per capita equalization of investment. But the share is closer to the level of population engendered by a secular trend of emigration for over fifty years (see *Table 6*).

Transfers of stocks

Funds are flowing from West to East, presumably in order to promote economic integration, regional equalization, and, thereby, German unification. But there is a reverse transfer of stocks. Compared to flows of funds, transfers of stocks are characteristically lumpy and often permanent.

Privatization through the *Treuhandanstalt* (the institution created in autumn 1989 to serve as the holding company of state-owned, productive and property assets of the GDR) can be considered successful because of its rapidity and completeness (certainly when compared to other Central and East European economies in transition). But a curious feature lingers. Through *Treuhandanstalt* privatization, the productive assets (stocks) of the previous East German nation (and which are now geographically located in the East German region) essentially were transferred from East German to West German ownership.

Of the thousands of firms privatized through *Treuhandanstalt*, a total of 819 were bought by foreigners. This amounted (as of January 1994) to a financial obligation on their part of just over 20 million Deutschmarks. Foreigners taking over East German firms also assumed responsibility for 146,786 salaried employees and wage workers. In all, this amounts to less than 7 percent of the privatized firms and less than 4 percent of the 4 million salaried employees and wage workers. By March 1994, only 242 firms, with 92,754 employees, remained under the control of *Treuhandanstalt*. Management buy-outs (MBOs) by East German workers have not occurred often. In real terms, this means that a share greater than 90 percent of East Germany's productive assets fell into the hands of West German corporations and entrepreneurs.

In addition to the transfer of stocks of productive assets, 40 percent of the land surface of the former GDR fell to *Treuandanstalt*'s portfolio. These included *Volkseigen Gueter* (public lands). Most of these were state forests. Another portion were *Staatsgueter* (state-owned farms). It appears that all of this stock was transferred to the ownership portfolios of West Germans.

Sandwiching the East German economy

Rules for property restitution were spelled out clearly in Article 41 of Germany's Unification Treaty. Property that had been taken over during the GDR days were to be returned as property rather than as financial compensation (*Rueckgabe vor Entschaedigung*). With the start of unification, this initially slowed investment in East Germany, because the return of properties takes some years to sort out. But more important than the slowing of investment flows from West to East is the transfer (and portending transfer) of these types of stocks from East to West. By 1994, 2,170,000 claims had been filed for the return of real estate (typically lots, houses, and apartment buildings) .

The effects of claims against, and actual transfers in, real estate on East Germany's economic future have already been measured and forecasted. The DIW reports that the *Mittelstand*—those people who own the medium-sized firms that played such an important role in West Germany's postwar reconstruction and, especially, in the increase of labor demand—has failed to take form and rescue the East German economy. Above all, there has been a failure to reverse the continuing trend of the loss of factories. While a discernible *Mittelstand* does exist in East Germany, it tends to be concentrated in secondary activities such as food processing (baking and meat packing), cabinetmaking, plastics, and repair services.

East Germany's *Mittelstand* is characterized by firms with less than twenty employees. Only 10 percent of the total has 200 to 500 employees. Thus the East German *Mittelstand* tends to be composed of small businesses (proprietorships) rather than middle-sized firms. As a result, these firms are not in the mainstream of the East German economy, with respect to earnings, assets, or number of employees. A major cause of the *Mittelstand's* aborted growth is a shortage of capital—a condition that is related to

East Germans entering unification, by and large, without equity in the form of property assets.

Stock of human capital

A significant transfer of human capital (also defined as a stock) has occurred. In the first instance, these were workers who migrated from East German industries to West Germany in search of higher wages and better job prospects. They were part of an exodus that accelerated in 1989 and 1990, just before and at the beginning of unification. Between the Fall of 1989 and the Fall of 1990, East Germany lost 600,000 employed persons to West Germany. In July of 1991, 415,000 East German *Pendlers* (table leg makers) were commuting to West Germany. Reports emphasize that, of young males between the ages of eighteen and thirty—those who composed the backbone of technical labor employed in East German industry, and who were the best qualified of this generation—moved from East to West shortly before and at the onset of unification. A detailed sectoral study reveals the significant and presumably permanent loss of skilled workers in East German shipyards. The major exodus of East Germany's best technical and skilled workers took place before the end of 1991.

While the East-to-West transfer of human capital stock is important to consider, another important loss has damaged and reduced East Germany's stock of regional wealth, as a result of unification. While the loss in industrial output is significant (down in 1993 to less than 40 percent of the 1989 level), perhaps the loss with the greatest implication for the future of the East German economic region is the destruction of the careers of the significant portion of their educated workers. The German Academy of Sciences, nearly all universities and professional schools (*Hochschulen*) in their previous incorporated forms, as well as academic and enterprise research-oriented centers have been liquidated. Vast numbers of those specialists affected by closures and dismissals have been unable to reclaim meaningful employment either in East Germany or even in the whole of unified Germany.

In 1990, a West German specialist on the subject of the role of human potential in research and development filed a report on the stock of human (intellectual) capital in East Germany—a stock composed of 140,200 people. This included the research and development potential in state-owned enterprises, agricultural research institutes, the Academy of Sciences, and universities and colleges. It estimated that 45 to 68 percent of the intellectual potential that had been devoted to research and development in the GDR could be assimilated by unified Germany.

More detailed statistical evidence reports on the fates of the 18,000 East German scientists who had been employed by the East Berlin-based German Academy of Sciences. The pattern for these scientists can be extrapolated and applied to other fields. It illuminates the prospects for research and development (as well as advanced teaching) in East Germany. Of the 18,000 scientists affiliated with the German Academy of Sciences, about 2,000 (or less than 12 percent) were included in the newly created Scientists' Integration Program (*Wissenschaftlerintegrationsprogram*). Scientific integration means that their work could continue until 1996. Another portion is temporarily being funded in the Federal Jobs Program (*Arbeitsbeschaffungsmassnahmen*), but their possibilities for advanced research are limited, especially when research centers are being closed, reorganized, or simply made inaccessible. At the most, an estimated 20 percent of the original 18,000 research scientists who were inherited by unified Germany are continuing to work in their fields, or have been moved to related fields. No more than 10 percent of the original 18,000 have secure jobs.

The effects of significant losses in the stock of human capital, either through emigration or through termination inside East Germany, are significant. The DIW has assessed the destruction of research and development potential in East Germany. It concludes: "the likelihood is great that, for a long time, East Germany will remain a weakly developed economic region (*schwach entwickelte Region*) and there, above all, the majority of activities shall remain as an extended workshop bench (*verlaengerten Werkbank*)."

Facing a stacked deck

Ostensible commitments to unification on the part of the directors of unification policies appear to be no more than chest-beating. A clearer view shows that the price paid for East Germany's share of the investment pie also means the transfer out of title to productive assets, stretches of forests, farmland, real estate, the emigration of the best portion of the technical work force, as well as the liquidation of a sizable portion of the region's research and development potential. In principle, economic equalization does not have to take place in the new Germany. In many national economies, some regions often lag behind relative to others. In numerous cases, they are the beneficiaries of transfers (certainly an integral dimension of the workings of the European Union). But, for historical reasons, East Germany should be viewed differently.

By its geographic location and through Allied policy, East Germany was designated as that German region, that portion of the German population, and that part of the German economy, that would pay most heavily for the Nazis' catastrophic invasion of the Soviet Union. Under political duress, the region was strategically absorbed by the Soviet Union; it then contributed (and rather heroically) toward propping up the Soviets for forty years of the postwar cold-war era. It was an economic system on the slow road to eventual liquidation.

Since 1945, East Germany has suffered losses, according to numerous economic indicators (even with respect to vital statistics). After more than four decades under Soviet domination, the unraveling of its planned socialism and its simultaneous integration with West Germany offers Eastern Germany the first good historical opportunity to reverse the relative and (in some cases) real declines. After four years of unification, there are no clear indicators that those policies designed by a unified Germany to reverse East Germany's historical losses are either sufficient in size and scope or capable of effectively addressing the problems. Because of its geographic location, losses appear to be continually inflicted on the East German region, population, and economy. It has been dealt an unfair hand.