

THE ECONOMICS OF GERMAN UNIFICATION

*Edited by
A. Ghanie Ghaussy
and Wolf Schäfer*



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CONTRIBUTORS

Herbert Baum, University of Cologne

Dieter Fritz-Assmus, University of the Federal Armed Forces Hamburg

A.Ghanie Ghaussy, University of the Federal Armed Forces Hamburg

Helmut Gröner, University of Bayreuth

Rolf Hasse, University of the Federal Armed Forces Hamburg

Michael Hüther, Council of Economic Advisers

Manfred Knapp, University of the Federal Armed Forces Hamburg

Michael Krakowski, HWWA–Institut für Wirtschaftsforschung
Hamburg

Detlef Landua, Wissenschaftszentrum Berlin

Otto G.Mayer, HWWA–Institut für Wirtschaftsforschung Hamburg

Hans-Georg Petersen, University of Giessen

Birgit Sander, Kiel Institute of World Economics

Wolf Schäfer, University of the Federal Armed Forces Hamburg

Klaus-Dieter Schmidt, Kiel Institute of World Economics

Günther Schmitt, University of Göttingen

Egon Tuchtfeldt, University of Berne

Klaus Zimmermann, University of the Federal Armed Forces Hamburg

PREFACE

The idea of preparing this book on the economics of German unification was born in the heat of the German unification process in the winter of 1990–1, during discussions at the seminars held by the Institute for Economic Policy and the Institute for Economic Theory of the FAF-University in Hamburg. These discussions led the editors to conduct a session at the Annual Congress of the Eastern Economic Association held in April 1991 in Pittsburgh. The editors were encouraged by many participants to prepare a book in which the different economic aspects of German unification would be made available to a larger group of non-German readers.

At that time, the prevailing optimistic view of German unification was primarily the result of the same political considerations that had accelerated the process of the German unification treaty and its immediate ratification. However, the economic aspects of unification have not been adequately considered. The general view was that unification would soon lead to a ‘second economic miracle’ similar to the first one in the Federal Republic of Germany in the 1950s. But events since implementation of the unification treaty have not justified such expectations. There have been too many restrictions of a complex nature that have led economists to the conviction that the economic revitalization of eastern Germany might be a rather long-term process. The objective of this book is to attempt to give readers a different outlook on the complex economic aspects of German unification, one which is as comprehensive as possible, and to show the manifold problems of German integration.

The editors would like to thank all the contributors to this volume for their efforts in preparing the articles within a short time and for their profound views of the respective problems that might encourage new discussions on different issues of German unification. Dr Dieter Fritz-Assmus was engaged in the preparation

of the manuscripts and conducted the managerial work for this book, for which we would particularly like to thank him.

A.Ghanie Ghaussy
Wolf Schäfer

NEGOTIATING THE UNIFICATION OF GERMANY: INTERNATIONAL DIMENSIONS

Manfred Knapp

INTERNAL AND EXTERNAL DIMENSIONS OF THE UNIFICATION PROCESS 1989–90

The peaceful unification of the two German states took place within the remarkably short period of time of less than twelve months. In October 1989, when the government of the German Democratic Republic (GDR) celebrated with a fanfare the fortieth anniversary of the ‘first workers’ and peasants’ state on German soil’, nobody could foresee the imminent collapse of the communist regime in East Germany. Certainly, during the preceding months a mounting wave of discontent and creeping opposition had turned against the dictatorial power structure within the GDR and its authorities, who stubbornly denied any need for long overdue far-reaching reforms. Moreover, the hundreds and thousands of (mainly) young East Germans, who fled their country via the embassies of the Federal Republic of Germany (FRG) in Prague, Warsaw, and above all, by way of Hungary, sounded the tocsin.

Yet only a few did realize that the completely unexpected opening of the Berlin Wall and of the borders between the two German states on 9 November 1989, already marked the end of the second post-World-War-II German state. The sweeping thorough-going reform processes within the socialist countries, keenly initiated and supported by Gorbachev since the mid-1980s, eventually seized also the GDR and in a revolutionary manner swept away the communist state once established in 1949 between the Elbe and Oder-Neisse rivers by the Soviet Union. While in all other states in Central and Eastern Europe the radical political and societal changes led to a more or less substantial transformation with an overthrow and replacement of the respective communist governments and the related political and economic systems, in the case of East Germany the revolutionary changes went much further: within only a few months they resulted in the entire disintegration and dissolution of the whole state. Thus, following the rapid succession of events, and surprisingly

enough, the reunification of Germany had returned to the international agenda.

Helmut Kohl, Chancellor of the Federal Republic of Germany, immediately took the initiative, when on 28 November 1989, in a remarkable speech before the Federal Parliament he proposed in a ten-point programme, a linkage between the resolution of the German Question and pan-European evolutions, advocating for the time being confederate structures between the two German states, which eventually would lead to a reunited German federal state.¹ But this move was simply overtaken by events in a very short period of time.

Regarding the process of German unification, it is appropriate to distinguish between two different issue areas, or sets of dimensions: namely on the one hand the internal (or domestic) dimensions, and on the other hand the external (or international) dimensions. As concerns the domestic dimensions, the governments and representatives of the two German states paved the way for a rapid step-by-step merger of the two Germanies in terms of newly emerging all-German domestic and, in particular, constitutional politics. Within a few months it became evident that the vast majority of the people of East Germany strongly favoured a swift accession to and incorporation into the Federal Republic of Germany and not a unification on the basis of a gradual integration of two separate states. This at least was proved by the outcome of the first free parliamentary elections held in the GDR on 18 March 1990, at which the so-called 'Alliance for Germany' scored an impressive victory (48.15 per cent). This party grouping (Christian Democratic Union (CDU), German Social Union (DSU), Democratic Awakening (DA)) advocated an immediate accession of the GDR to the FRG according to Article 23 of the Basic Law.

On 18 May 1990, the next major step in the process of unification was taken upon concluding the treaty establishing a monetary, economic, and social union between the FRG and the GDR. By this treaty, which entered into force on 1 July 1990, the deutschmark was also introduced to East Germany, thus supplying the hard currency that the East Germans had been longing for. Eventually, the internal unification of the two Germanies—at least in formal legal terms—had been achieved by the signing of the Unification Treaty on 31 August 1990, a broad legal framework providing a host of agreements and binding regulations covering almost all fields of domestic politics. By 3 October 1990, the official reunification and the formal foundation of the enlarged FRG was celebrated. Already on 2 December 1990, general elections were held, in the greater FRG, in which for the first time the electorate of the five so-called new federal states (*neue Bundesländer*, established in the former GDR) was also entitled to vote. From these all-German elections the Christian Democrats (CDU/Christian Social Union (CSU)) emerged as

the strongest party, thus enabling Chancellor Kohl (CDU) to continue his coalition government with the Free Democrats, i.e. the (smaller) Free Democratic Party (Liberals), to which the then Foreign Minister Genscher belongs.

At the same time as the internal legal and administrative framework for the German unification had to be tackled, the so-called 'external aspects' of the reunification of Germany also had to be negotiated and resolved. In an unprecedented effort of international co-operation, rightly characterized by one observer as 'one of the greatest triumphs of professional diplomacy in modern times',² the chief diplomats and government officials of the four former victorious and occupying powers, i.e. the United States (US), the Soviet Union, the United Kingdom (UK) and France, together with their counterparts from the two German states, succeeded in resolving most of the highly complex and intricate problems comprising the international dimensions of the reunification of Germany. These manifold international dealings, leading to the final settlements with regard to a united Germany and, moreover, some basic questions about its future international role mark the central points of this essay.

THE STRUCTURE AND MAIN ISSUES OF THE INTERNATIONAL NEGOTIATIONS

The entire matter usually referred to as the 'external aspects' of the unification of Germany embodies in reality a bulk of highly complicated political issues. Among them are on the one hand the whole international framework and the external preconditions that shaped the negotiations regarding the emergence of a reunited sovereign German state. On the other hand, the so-called 'external aspects' point also to a number of important questions with respect to the future status and role a united Germany may have in relation to its neighbours, and in world politics at large.

To begin with, at least five points deserve special attention if one tries to delineate briefly the scope of the international negotiations, which eventually paved the way for a swift reunification of the two Germanies and the specific agreements for coping with the related security problems. First, the negotiations needed to address the basic questions concerning the termination of the rights and responsibilities with respect to Germany and Berlin as a whole hitherto reserved by the Four Powers, thus restoring to a united Germany full sovereignty. Second, it was necessary to confirm the definitive borders of the united Germany, especially the Polish-German border, understandably a crucial point for Poland. Third, agreement had to be reached on the delicate subject of the temporary stationing of Soviet troops in Germany and their ultimate withdrawal, and the no less sensitive question regarding the right of the united Germany to belong to alliances, both of which apparently called for substantial concessions on the part of

the Soviet Union. Fourth, provisions to tackle the size of German armed forces and other limitations regarding the military power status of the united Germany also had to be worked out. Finally, in a fifth point, the German negotiators had to meet some wishes and expectations advanced mainly by the Soviet Union and Poland for financial and economic support to overcome at least some of the most urgent needs associated with the new situation.

In the overall negotiation process which brought about the international settlement of the reunification of Germany, several bargaining levels, bilateral as well as multilateral, had to be distinguished. With regard to the multilateral negotiations, the single most important forum was what became known as the 'Two-plus-Four' negotiations in which the foreign ministers of the Two Germanies and the Four Powers participated. The talks and deliberations of the Bonn Government with its foreign partners, in the European Community (EC) and in the North Atlantic Treaty Organization (NATO), greatly facilitated and supported the negotiations regarding the unification of Germany. Due to the fact that from its very beginning the achievement of the political unification of Germany was considered a subject of utmost importance to all other European states, agreement was reached to the extent that the Conference on Security and Co-operation in Europe (CSCE) should also in some way be brought in to finally approve the results arrived at.

However, first and foremost, several bilateral talks and basic arrangements between the respective parties proved decisive and were instrumental for the successful conclusion of the negotiations at an early date. In the first place, continuous and close contacts between the Bonn government and the Bush administration were extremely helpful during the negotiations, which President Bush himself and Secretary of State James Baker firmly took an active part in. Without the unflagging and determined backing of the Bush administration (and its diplomatic efforts urging the other parties to take the necessary steps to a final agreement), the unification of Germany could hardly have been achieved so smoothly and so rapidly. Moreover, the talks between Chancellor Kohl and President Gorbachev were indeed extremely important. Last but not least, the ongoing discussions between Bonn and the Polish government formed a substantial part of the overall deliberations because the definitive settlement of the border question and the evolution of the still sensitive relationship between Germany and Poland necessarily had to be regarded as part and parcel of any stable solution for German unification. Seen as a whole, the different multilateral and bilateral negotiations constituted a rather complex network, from which in the following only the main issue areas and the central topics can be dealt with.

For the whole international negotiation process, it proved very helpful that already on 13 February 1990, as a result of the agreement to the

'Two-plus-Four' platform, the stage was set for settlement of the open questions with respect to the unification of Germany. According to a suggestion put forward by US Secretary of State Baker and his German colleague, Genscher, on the occasion of the Ottawa meeting (12–14 February 1990) of the foreign ministers of NATO and the Warsaw Pact to discuss the proposal for 'open skies', basic agreement was reached to deal with the external aspects of German unification only within the small circle of the two post-war German states and the former four victorious powers. Thus, from the outset it was intended to demonstrate the participation of the two German states as equal partners. The early commencing of the negotiations had been facilitated by a preceding statement made by President Gorbachev at his meeting with Chancellor Kohl in Moscow on 10 February 1990, indicating, 'that the Germans themselves must resolve the question of the unity of the German nation, and that they themselves must make their choice in regard to the types of government, the time schedules, the pace and under what conditions they would like to realize that unity'.³

The six foreign ministers met four times in the ensuing months, on 5 May in Bonn, on 22 June in (East-)Berlin, on 17 July in Paris (with the Minister for Foreign Affairs of the Republic of Poland participating to deal with the Polish-German border issue) and on 12 September in Moscow.⁴ The result of the Two-plus-Four negotiations, the Treaty on the Final Settlement with Respect to Germany,⁵ was signed in Moscow on 12 September 1990, at the concluding ministerial meeting of the six signatories.

From a German point of view, an essential feature of the treaty is the provision that the Four Powers terminate their rights and responsibilities relating to Berlin and Germany as a whole. Accordingly, all corresponding related quadripartite agreements and practices are also terminated and all Four-Power institutions are dissolved. Thus, united Germany has full sovereignty over its internal and external affairs (Article 7). This also includes the right to belong to alliances with all the rights and responsibilities arising therefrom (Article 6).

Altogether, the Treaty on the Final Settlement embodies 10 articles, beginning in Article 1 with the confirmation of the definitive nature of the external borders of united Germany. It is stated that united Germany has no territorial claims whatsoever against other states and shall not assert any in the future.

Article 2 contains general pledges and assurances from the then two German states 'that only peace will emanate from German soil'. Among these assurances for peaceful conduct is also a reaffirmation of their renunciation of the manufacture and possession of and control over nuclear, biological and chemical weapons and a declaration that united Germany will also abide by these commitments, including the adherence

to the rights and obligations arising from the Treaty on the Non-Proliferation of Nuclear Weapons of 1 July 1968 (Article 3). Article 3 also takes note of a statement made earlier (on 30 August 1990) in Vienna at the Negotiations on Conventional Armed Forces in Europe (CFE) by the Federal Republic of Germany, acting with the concurrence of the Government of the GDR, that the armed forces of united Germany shall be reduced to 370,000 men (ground, air and naval forces) within three to four years, commencing on the entry into force of the first CFE Agreement. This undertaking means a substantial reduction (both German armies combined) of roughly 40 per cent.

In Article 4 the governments of the two German states and the Soviet Union state that united Germany and the USSR will arrange by treaty the conditions for and the duration of the presence of the Soviet armed forces in the former GDR and Berlin, as well as the procedure of their complete withdrawal by the end of 1994.

Article 5 of the Treaty regulates the stationing of troops and military activity on the territory of the former GDR and Berlin both during and after the Soviet withdrawal from that territory. It provides that, until the withdrawal of the Soviet armed forces is completed, only German territorial defence units which are not integrated into the alliance structures (of NATO) will be stationed on that territory. During that period, armed forces of other states will not be stationed on that territory or carry out any other military activity there. Also pursuant to Article 5, it is stated that the government of united Germany will reach agreement with the Western powers on the continued stationing of the forces of the United States, United Kingdom and France in Berlin for the period of the Soviet military presence in Germany. Following the completion of the withdrawal of Soviet troops, units of German armed forces assigned to any alliance structure to which Germany is a member may also be stationed in that part of Germany, but without nuclear-weapon carriers. Foreign armed forces and nuclear weapons or their carriers will not be stationed in that part of Germany or deployed there after the Soviet departure.⁶

It should also be mentioned that several letters were exchanged on issues arising in the context of the Two-plus-Four negotiations.⁷ In their letter of 12 September 1990, to the foreign ministers of the Four Powers, Foreign Minister Genscher of the FRG and Prime Minister and Foreign Minister de Maizière of the GDR conveyed several additional statements and assurances with regard to (a) the former expropriations effected on the basis of occupational law in the former Soviet zone of occupation, (b) the preservation of foreign war memorials on German soil, (c) the constitutional protection of the free democratic order and the prohibition of parties and associations with National Socialist aims, and (d) the treatment of the GDR's external treaty obligations. In reply to previous

NEGOTIATING THE UNIFICATION

letters of Secretary of State Baker to Foreign Minister Genscher, the latter in his note, dated 18 September 1990, to Secretary Baker declared that the government of united Germany is prepared, shortly after unification to resolve the claims against the German Democratic Republic both of US citizens and of Jewish victims of the Nazi regime.

According to a previous agreement, after its signing, the negotiated Final Settlement was submitted first to the meeting of the Foreign Ministers of the CSCE held at the beginning of October 1990 in New York and later in November 1990 to the CSCE summit in Paris at which it was met with wide approval.

After the Supreme Soviet, as the last of the parliamentary bodies of the six contracting parties, had also ratified the Final Settlement on 4 March 1991, this treaty entered into force on 15 March 1991. Earlier, on 1 October 1990, the Four Powers had already signed a document suspending their Four-Power rights during the interim period between the unification of Germany (3 October 1990) and the final coming into force of the treaty.

In retrospect, it is worth recalling that the definition of the security status of united Germany and particularly the question of Germany's continued membership in NATO was the most difficult problem to be resolved.⁸ For some time, the Soviet Union strongly opposed the proposal of the West and the wish of the Germans to maintain German membership of the Western Alliance. Nevertheless, Soviet leaders were well aware that their struggling against united Germany having NATO membership was contrary to the right of a sovereign state to choose its alliances freely. Only after intensive bilateral talks and arrangements between Kohl and Gorbachev in Moscow and in the Caucasus, on 16 July 1990, was an overall agreement reached that included Gorbachev's willingness to accept NATO membership for united Germany.⁹

The underlying prerequisite for this unexpected concession on the Soviet side was on the one hand the London Declaration of the NATO summit of 6 July 1990, in which the heads of the Western allies offered to the Soviet Union and to the other members of the then still existing Warsaw Pact not to treat them as adversaries any longer and to exchange with them renunciation-of-force-agreements, thus demonstrating the new attitude of NATO to East-West relations.¹⁰ On the other hand, apart from the arrangements to limit the size of the armed forces and the military potential of a united Germany, Chancellor Kohl in his meeting with Gorbachev was prepared to promote closer Soviet-German cooperation and above all to meet requests for considerable financial and economic support in return for Moscow's concessions to allow Germany to unify basically on Western terms. It thus can be argued that Bonn was prepared to draw on its rich economic resources to buttress the international agreements to bring about Germany's unification.

The treaties generally agreed to at the Caucasus meeting to provide for the limited stay and the withdrawal of the Soviet troops stationed on German territory were the first testing ground for the new German-Soviet co-operation. In an Agreement¹¹ On Some Transitional Measures, signed by the two governments on 9 October 1990, the Federal Republic of Germany committed itself to contribute substantially to the financing of (temporary) stationing, withdrawal and reintegration (mainly housing) of the Soviet troops and to allot DM 13.5 billion for the scheduled four years' period ending in 1994. The Treaty,¹² of 12 October 1990, on the Conditions of the Limited Stay and the Modalities of the Planned Withdrawal of the Soviet Troops from the Territory of the Federal Republic of Germany provides for the departure of the Soviet armed forces in detail.

Special importance was attached by Chancellor Kohl and President Gorbachev to the German-Soviet Treaty¹³ on Good Neighbourly Relations, Partnership and Co-operation, which was signed as the first political treaty of united Germany together with the Treaty¹⁴ on the Development of a Comprehensive Co-operation in the Field of Economics, Industry, Science, and Technology on the occasion of Gorbachev's visit in Germany on 9 November 1990. Both treaties were thought to lay the ground for a new quality of partnership between the two countries at the same time as the Soviet Union consented to German unity in conjunction with Germany's continued membership in NATO.

The notion that bilateral agreements played an important role in the process leading to the unification of Germany was also demonstrated in the relations between Germany and Poland. As already mentioned, the Final Settlement describing the borders of a united Germany asked Germany and Poland once again to confirm their border by treaty. This border treaty, in which united Germany unambiguously recognized the Oder-Neisse border, was signed on 14 November 1990.¹⁵ In addition, another general treaty on Good Neighbourly Relations and Friendly Cooperation to foster Polish-German co-operation in the broadest sense was signed on 17 June 1991. A similar treaty between Czechoslovakia and Germany was signed by President Havel and Chancellor Kohl on 27 February 1992.

In a brief survey of the negotiation processes that brought about the unification of Germany, two observations, at least, can be made. First, the bilateral and multilateral negotiations dovetailed with each other and put an end to the sorrowful period of the Cold War, and all the distresses and pains of a divided country in the centre of a similarly divided continent, where the so-called German Question could not find any satisfying answer for more than four decades of bitter East-West confrontation. Second, the outcome of the negotiations with respect to Germany, which eventually reunited the people and the territory of the

Federal Republic of Germany, the German Democratic Republic and the whole of Berlin into one single German state, created, of course, a new, bigger German actor in a completely changed international environment.

German unification did not occur only by lucky chance at a unique historical moment in post-World-War-II European history. Rather, it was made possible by the concurrence of a variety of factors, the most influential of which were the lasting consequences of the previous *détente* policies, in particular the long-term pay-offs of Bonn's *Ostpolitik* dating back to the early 1970s, the changes being promoted by the CSCE process, the new rapprochement in the US-Soviet relations and the changing nature of the Soviet-American duopoly, and above all Gorbachev's decision to encourage reform at home and abroad and to reduce Soviet power in Central and Eastern Europe.

As the old FRG steadily maintained its constitutional commitment to reunification, the Bonn governments, according to their basic foreign policy aims, had always emphasized that reunification should only take place within the context of overcoming the division of Europe within the framework of a new pan-European peace order. By October 1990, however, it appeared that due to the rapid Two-plus-Four negotiations, the unification of Germany preceded that of both parts of Europe. This fact alone points to the new opportunities and responsibilities united Germany will have to assume in future European affairs. The most important commitments and challenges for a united Germany in international relations both in Europe and in world affairs will be sketched briefly in the following section of this essay. The underlying assumption for this undertaking is the idea that already the international negotiation processes that accomplished the unification of Germany are likely to influence and determine the foreign policy of united Germany in the years ahead.¹⁶

INTERNATIONAL POLITICAL AND ECONOMIC IMPLICATIONS OF THE UNIFICATION OF GERMANY

The historic preconditions, the international circumstances, and the actual negotiation processes that created united Germany have provided a frame of reference for a discussion of the implications the unification of Germany might have for a future international order in Europe and for the evolution of German foreign policy as well. Virtually all agreements and treaties signed during the unification process pointed to Germany's historical responsibilities and stressed its future peaceful role in international relations.¹⁷ At the same time, however, all observers and commentators emphasized, too, the greater role that the new Germany can (or should) adopt in European politics, and, moreover, on the global stage.

Due to its geographic position, its increased economic strength, considerable conventional military forces, and its great influence in the EC, NATO, the CSCE and in the other organizations and councils of Europe, a united Germany undoubtedly can and will play a key role in any future European state system. In this capacity, Germany has to face a rather difficult double task, namely to continue its successful co-operation with its Western allies and partners to ensure welfare and security, while at the same time developing promising working relations with its Eastern neighbours in order to help to build a balanced and stable all-European peace order. As the unification process had already suggested, the new role united Germany might assume in European affairs is likely to alter also its bilateral relations with its traditional allies, including its relations with the US.¹⁸ This applies both to security policies as well as to economic relations.

By their very nature, security issues are closely intertwined with economic questions, and vice versa. This interconnection of the different issue areas will presumably be even greater in international politics in the post-Cold-War era than it was before. Nevertheless, for analytical purposes it might be useful to discuss both issue areas successively.

As to the security dimensions, both parts of Germany are no longer the exposed front-line states of their respective alliances. After unification, Germany will be able to take a more assertive role in the East-West relations than was possible in the past, 'when foreign policy in a divided Germany was largely consumed by the contest of political and security issues that two competing alliance systems played out on its soil'.¹⁹ Following the retrenchment of Soviet power in Central and Eastern Europe, united Germany is no longer as dependent on US security guarantees and American military presence as it used to be during the Cold-War era.

None the less, Germany and most of its Western allies will continue to rely on NATO for their security. Security risks in Europe certainly did not disappear with the abolition of the Warsaw Pact as a military alliance on 1 April 1991. Russia (and the three other republics of the former Soviet Union, which have nuclear weapons—Ukraine, Bielarus and Kazakhstan) is still a tremendous military power with a huge potential of nuclear weapons, although the whole of its domestic and economic system is in great disarray and its internal cohesion at stake. In addition to the instability stemming from the precarious situation within and among the members of the recently founded Commonwealth of Independent States (CIS), a variety of other security problems is coming to the forefront, for instance, a resurgence of old and new nationalist rivalries between and within states (see Yugoslavia), and growing disparities between more or less rich and poor countries or regions can produce grave tensions.

Therefore, Europe still needs a stable security system, and NATO is likely to continue to play a central role in it, provided, however, that the North Atlantic Alliance is able to adjust to the new situation. This means, in the first place, that its political functions, following the Harmel report of 1967, will be stressed progressively, including its indispensable tasks in the field of arms control and disarmament. As suggested above, the Two-plus-Four Treaty has important implications in this respect for future NATO security policy.

Another difficult problem that gathered momentum from the unification of Germany is the question of whether or not the European NATO members will be able to lend credence to the request for a 'Europeanization' of the security system in Europe. Whether the Western European Union (WEU) or another (West-)European security organization will be brought up to bolster a so-called 'European pillar' in a Euro-American security system is highly dependent on the future development of the EC in the direction of a European (Political) Union. This might also imply new efforts to create a common EC security policy, which would gradually reduce US influence in European security affairs.²⁰ Similarly, in the long run, the more basic question as to the *raison d'être* for maintaining collective self-defence organizations in the new Europe has also to be addressed. With reference to the CSCE, at least some experts seem to favour a swift shift from the traditional alliance structure to a pan-European collective-security system. Yet for the time being, it does appear unadvisable to replace NATO entirely by another security organization. Instead, in addition to a modified NATO, several complementary security tasks can be borne by the CSCE process. Moreover, in view of the unification of Germany it seems useful to stress those components of collective security, which had been already installed in NATO from the outset (mainly to discreetly control Germany).

Finally, in the wake of the unification of Germany the question of the participation of German forces in military operations outside the NATO area has become an ardently debated issue. In view of Bonn's reluctant stance during the Gulf War in January/February 1991, it was argued that a united Germany should take more 'responsibility' in world affairs. On the other hand, many Germans emphasize the importance of the restrictions in the use of military force hitherto imposed by the Basic Law. Accordingly, they support only a limited revision (or clarification) of the German constitution, allowing German participation in international peace-keeping operations (and at the most also peace-enforcement actions) under United Nations (UN) auspices. The debate on this issue is still going on.

By no means less important are the conceivable implications of the unification of Germany for the evolution of the international economic relations both in Europe and on a global scale.²¹ This large and complex

field may be subdivided into different regional issue areas. Most prominent, of course, is the impact of the unification of Germany on the European Community and on Germany's position regarding key issues in the process of deepening and widening European integration.

First of all, it is noteworthy that from the outset both the EC and the Bonn government stressed that unification should take place within a European context and that the emerging new Germany should remain firmly integrated into a wider European structure. Above all, it was the President of the European Commission, the former French Minister of Finance, Jacques Delors, who strongly advocated an early admission of the GDR into the EC system, as it was later provided in the German Unification Treaty. Under his leadership the Commission, in a report to the European Council in April 1990, stated that the requirements were met for the accession of the GDR as part of a united member state. Consequently, the Commission proposed a specific integration scheme which was basically accepted by the European Council at its special meeting in Dublin, 28 April 1990, thus paving the way for a swift entry of the former GDR into the community (as a special admission procedure without altering the basic EC treaties). The European Parliament, too, in a resolution dated 17 May 1990, advocated the unification of Germany and approved the admission of East Germany to the EC.²²

During the ensuing negotiations preparing for the accession of the GDR to the EC, all governments of the EC countries expected that the unification of Germany, in close association with the EC, would strongly stimulate European integration processes towards the economic, monetary and political union heralded by the Single European Act. Hence, the meetings of the European Council, held in October and December 1990 in Rome, especially the two Intergovernmental Conferences opened on 15 December 1990, to promote an Economic and Monetary Union together with a Political Union, obviously got some impetus from the unification of Germany. It can be argued, therefore, that the decisions taken by the leaders of the European Community at their summit held in Maastricht in the Netherlands on 8-10 December 1991, towards a more united Europe were substantially influenced by the preceding German unification.

United Germany with its strong economy and as the EC's largest exporter will undoubtedly play an important role in the internal and external politics of the Community. With respect to the latter, Germany may exert considerable influence on the economic (and political) relations between the US and the EC as a whole as well as on the relations between the EC and the European Free Trade Association (EFTA) and also Eastern European countries, including the succession states of the former Soviet Union.

Within the spectrum of Euro-American relations, united Germany's influence on the course of transatlantic monetary politics and the related exchange rates of the most important currencies will be even greater than it has been. The same applies to international trade and investment politics, a rocky field where sharp differences emerged repeatedly during the last years between the US and the EC and which are likely to come to the fore again (see, for instance, the problem of agricultural-export subsidies, which brought recent GATT negotiations to an impasse).

Of great importance also are the prospects for new economic (and political) relationships between united Germany and the countries of Eastern Europe. It should be kept in mind that united Germany felt obliged to take over some previous foreign economic commitments of the former GDR, which, at the time of unification, carried out roughly 65 per cent of its foreign trade with the member states of the former Council for Mutual Economic Assistance (Comecon), 40 per cent of that with the Soviet Union.

Recent discussions focused on the wishes and demands of virtually all Eastern European countries (with the inclusion of the countries of the former Soviet Union) for economic aid from united Germany. In fact, this is a crucial matter since all these countries have endeavoured to reform their economies according to free-market principles at the same time as the economic exchanges and trade flows in connection with the ill-fated Comecon (which was officially dissolved in June 1991) have deteriorated sharply and almost ceased to function. The economic breakdown and its social consequences are threatening the consolidation of democracy in these countries. Due to its geopolitical position and its economic resources Germany has already provided substantial amounts of aid to several countries in Eastern Europe, thus supporting their political and economic reforms, and especially in the case of Hungary, honouring its conspicuous help in tearing down the Iron Curtain. Beyond that, the German government is prepared to support the special association agreements between the EC and Poland, Hungary, and Czechoslovakia to ensure that these countries will enter into a closer cooperation with prosperous Western Europe. In fact, the commitment to support the Polish request to join the EC is part of the already mentioned German-Polish treaty; the same German pledge was given in the treaty with Czechoslovakia.

Finally, it should also be mentioned that united Germany, as one of the world's strongest economic powers, must also come to terms with increasing demands, and conform to the expectations of a variety of developing countries scattered all over the world. Although Germany will have to mobilize many of its resources during the next years to overcome the striking economic disparities that exist between western Germany and the five new states in the eastern part, it is very likely that united

Germany will also have to play a decisive role both in European and in global political and economic affairs.

CONCLUSIONS AND OUTLOOK: UNITED GERMANY AND ITS FUTURE ROLE IN INTERNATIONAL RELATIONS

The unification of Germany in 1989–90 was the result of a peaceful agreement, which was achieved by a number of bilateral and multilateral talks and negotiations, ultimately consented to by the former four victorious powers, the two Germanys and, moreover, all other European states working together within the CSCE process.

The single most important precondition for the reunification of Germany was the retreat of the Soviet Union under the leadership of Gorbachev from its sphere of influence in Central and Eastern Europe, hence from the GDR too. The unleashing factor setting off reunification was the peaceful revolution of the people of the GDR, which gathered momentum in its opposition to the repressive communist regime and the ineffective command economy in Eastern Germany. Within a few months the vast majority of the citizens of the GDR called for a swift reunification with West Germany. The self-assertive slogan often heard during the Monday demonstrations in Leipzig and in other East German cities ‘*We are the people*’ changed within days to the slogan ‘*We are one people*’ and ‘*Germany (is a) single fatherland*’.

With regard to the internal dimension, the reunification of Germany came about, in the first place, as an economic unification, although both parts of Germany will have to work hard to narrow the gap between the economic levels of western and eastern Germany. The exceedingly sweeping achievement of the state unity of Germany was not brought about by means of any force or pressure but rather by the superiority and the prevailing attraction of the Western and West German economic and social order. Thus, the accession of the GDR to and its incorporation into the constitutional framework of the old FRG under Western auspices occurred mainly by economic means. Its consequences, of course, will entail economic and political effects as well.

During the complicated negotiations leading to the contractual agreements to settle the so-called ‘external aspects’ of the unification, the Bonn government was heavily dependent on the support of its most important allies, above all on the United States. The Bush administration essentially paved the way for a successful conclusion of the Two-plus-Four negotiations. In particular, Washington and President Bush himself strove for good relations with the Soviet leaders (including

the talks on the occasion of the two summit meetings in Malta, December 1989, and in Washington, 31 May–3 June 1990), so that eventually Gorbachev could agree to the treaty that gave united Germany full sovereignty for the first time since the end of World War II, including the right to stay in NATO; moreover, the Final Settlement also provides basic agreements committing Moscow to removing its troops from German soil by the end of 1994.

In turn, however, Gorbachev in his remarkable talks with Chancellor Kohl in the Caucasus in mid-July 1990 tried to seek a quid pro quo in form of financial compensation for the burdens of the temporary stationing of Soviet troops and their withdrawal. Furthermore, he successfully negotiated two German-Soviet treaties for good neighbourly relations, partnership and co-operation. Whether the envisaged new quality of German-Soviet co-operation will ever materialize depends to a large extent on the former Soviet Union, whose evolving future does not look bright, to say the least.

On the other hand, Germany's partners within the European Community attach great importance to keeping the increased potentials of the new Germany firmly anchored and tied to the network of the EC, both economically as well as politically. It appears that the unification of Germany provided a strong incentive for many to decisively pursue the evolving single European market programme provided by '1992' as well as to spur on action to accomplish the Economic and Monetary Union together with the ambitious plans for a Political Union.

Nevertheless, it remains doubtful whether, in view of the different interests and historic traditions of the three largest EC countries, France, Great Britain, and Germany, the arduous security problem and the inner-European power balance can be tackled satisfactorily. It seems most likely, therefore, that especially under the new conditions the concept of 'partners in leadership' within a NATO context, suggested by President Bush in May 1989, might prove indispensable if a new international order is to be built in a united Europe.

The accession of the GDR to the FRG will not necessarily alter the basic lines of German foreign policy. However, to some extent at least the foreign relations of the new Federal Republic of Germany are bound to be readjusted because the international environment has experienced drastic changes at the beginning of the last decade of the twentieth century. Consequently, all the treaties and agreements signed during the course of Germany's unification point to the old and, more so, to the new responsibilities united Germany has to cope with in the evolving new international system. Since the creation of German unity has been achieved under the hallmark of peaceful change and freely negotiated settlements, the new Germany owes it all the more to all its allies and

partners to make vigorous contributions to ensuring stable and peaceful conditions in Europe and in the broader international system.

NOTES

- 1 For documentation of the early events following the demise of the GDR's regime since October 1989, see *Europa-Archiv* 44, 24 (1989): D 697-734, with the inclusion of Kohl's Ten-Point Program, *ibid.*, D 728-34.
- 2 Kaiser (1991:25).
- 3 Communiqué of the Gorbachev-Kohl meeting in Moscow, 10 February 1990, *Europa-Archiv* 45, 8 (1990): D 192.
- 4 In addition there were also ten meetings of the six Contracting Parties at subministerial level.
- 5 Text of the Treaty on the Final Settlement in: Presse- und Informationsamt der Bundesregierung (ed.): Bulletin no. 109 (14 September 1990). English version in: Treaty on the Final Settlement with Respect to Germany and a Related Agreed Minute, Message from the President of the United States, 101st Congress, 2d Sess., Senate, Treaty Doc. 101-20, 26 September 1990.
- 6 An Agreed Minute to the Treaty provides that application of the word 'deployed' as used in this Article for the period after Soviet withdrawal shall be decided by the Government of the united Germany 'in a reasonable and responsible way taking into account the security interests of each Contracting Party as set forth in the preamble'.
- 7 Special reference to the mentioned accompanying letters is made in: Treaty on the Final Settlement with Respect to Germany, Treaty Doc. 101-20 (see note 5): 2, 17-19.
- 8 Cf. Kaiser (1990/91:194-200).
- 9 See the documentation of the Caucasus talks *Europa-Archiv* 45, 18 (1990): D 479-90.
- 10 Text of the London Declaration *Europa-Archiv* 45, 17 (1990): D 456-60.
- 11 Text in: Presse- und Informationsamt der Bundesregierung (ed.): Bulletin no. 123 (17 October 1990): 1281-3.
- 12 *Ibid.*, 1284-300.
- 13 Text in: Presse- und Informationsamt der Bundesregierung (ed.): Bulletin no. 133 (15 November 1990): 1379-82.
- 14 *Ibid.*, 1382-7.
- 15 Presse- und Informationsamt der Bundesregierung (ed.): Bulletin no. 134 (16 November 1990): 1394.
- 16 On this point see Kaiser (1990/91:204).
- 17 Stent (1990/91:62).
- 18 Cf. Gallis and Woehrel (1991).
- 19 *Ibid.*, 6.
- 20 Cf. on this point the Alastair Buchan Memorial Lecture of Jacques Delors, President of the European Commission, delivered on 7 March 1991 in London, reprinted in *Survival* XXXIII, 2 (March/April 1991).
- 21 Concerning the domestic background and some of the international macroeconomic consequences of German unification see Lipschitz and McDonald (ed.) (1990).
- 22 For details see Kommission der Europäischen Gemeinschaften (ed.): *Bulletin der Europäischen Gemeinschaften*, Beilage 4/90 ('Die Europäische Gemeinschaft und die deutsche Vereinigung'); Deutscher Bundestag, 11. Wahlperiode,

NEGOTIATING THE UNIFICATION

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THE TRANSFORMATION OF ECONOMIC SYSTEMS: THE GERMAN EXAMPLE

Egon Tuchtfeldt

EVOLUTIONARY AND REVOLUTIONARY TRANSFORMATION PROCESSES

The discussion of the transformation of economic systems that has been triggered by the reunification of Germany and the collapse of the communist-bloc countries often seems to give the impression that this transformation involves revolutionary processes. The centrally planned economic system of the Stalinist type (characterized by collective ownership of the means of production and central quantity-based planning of the economic process) is being replaced by a Western-style market economy (characterized by private ownership of the means of production and the decentralized orientation of the economic process toward free price formation). The Unification Treaty of 1990, pursuant to which the former German Democratic Republic (GDR) adopted the West German economic, social, governmental and legal systems, could indeed be interpreted as a revolutionary transformation of the system. But the general thrust of the transformations in some of the other communist-bloc countries are rather to be interpreted as reforms within the respective systems, as is especially the case with *perestroika* in the Soviet Union. Poland did not collectivize agriculture at the end of World War II. After the rebellion in 1956, Hungary began to slowly reform the system in many small steps. It had already reformed its civil laws by 1959. In 1988, and hence before the collapse of the communist bloc, it enacted new company laws that applied to Hungarians as well as foreigners and that have since been improved in various ways. Thus the reforms within the system had already prepared the system for transformation. Perhaps historians will someday know more about why it was Hungary, of all countries, that started the events rolling that inevitably led to reunification of Germany. Even as late as the mid 1980s, practically no one, neither in the West nor in the East, seriously considered reunification possible. Politicians on both sides took it for granted that the two Germanies would continue to coexist as separate countries for some time to come.

POSSIBILITIES OF TRANSFORMING ECONOMIC SYSTEMS

The reunification of Germany resembled a one-way street that led directly, almost as if it were a textbook example, from a centrally planned economy to a market economy. Since similar processes are taking place in other communist-bloc countries, it is often overlooked that the transformation of economic systems can occur in both directions. Market economies and centrally planned economies are extreme cases, constructs using 'chemically pure principles' that are best suited to serve didactic purposes. The comparison, which we all know from the field of microeconomics, of the model of perfect competition and that of the pure supply monopoly is analogous in this respect (the assumptions underlying these models, namely perfect information, perfect adjustment speed, the perfect adjustment of labour and capital, etc., demonstrate that they are extreme cases).

The real world, in all its complexity, is continuously evolving, is never in equilibrium, sometimes leaning more to one side (toward the perfect-competition model), other times leaning more to the other side (toward the monopoly model). Numerous phenomena, such as competition, innovation strategies, governmental policy, etc., influence economic dynamics. Markets and business branches are continuously involved in transforming themselves.

Economic systems are transformed in a similar way. In a market economy, every change in the constitution, every law, every regulation and every new government office provokes further evolution, usually in the direction of increased centralization (and thus in the direction of diminished efficiency). Conversely, re-privatization and deregulation bring about a loosening of administrative restraints and thus lead to a greater degree of freedom in the economy.

Especially as concerns the contemporary narrowing of the concept of transformation, it would appear to be necessary to define the basic types of transformation—especially as concerns the question of what one could have done differently or better. The transformation of economic systems can be seen from two fundamental points of view, namely (1) which direction is it going (from a market economy to a centrally planned economy or vice versa), and (2) at what speed is it occurring (gradually or with a sudden shock). If one looks at the economic history of the Industrial Age from these two points of view, it becomes evident that, contrary to the present situation (the sudden transformation of the centrally planned economy in the GDR into a market economy), both directions and both speeds occur. If we limit ourselves to the most important transformation processes, the following examples can be mentioned:

- 1 Mercantilism (seventeenth-eighteenth century): the gradual establishment of relatively primitive territorial states and nation-states that can be considered simple centrally planned economies.
- 2 Stein-Hardenberg reforms (1808–1820): the gradual establishment of a market economy as a reaction to the collapse of Prussia after the Napoleonic wars.
- 3 Lenin's War Communism (1917–1921): the sudden establishment of a primitive centrally planned economy, which resulted in a drastic decrease in production, so that from 1921 to 1928 the establishment of this system had to be temporarily interrupted by the New Economic Policy (which even allowed foreign investments in Russia).
- 4 Stalin's five-year plans (beginning in 1928): the gradual establishment of a modern centrally planned economy, which was accelerated during World War II.
- 5 The war economy of World War II (especially in Germany): gradual establishment of a loose centrally planned economy while reducing the production of non-military goods and maintaining the private ownership of the means of production.
- 6 The currency reform of the Allied Powers in West Germany: sudden, in conjunction with Ludwig Erhard's largely sudden abolition of commodity controls (except in some consumption-sensitive branches) in order to establish a market economy.

Further examples can be ignored here (especially those to be found in the Third World), since these examples pertain to changes that usually did not last long or were constantly subjected to reforms.

Whether the transformation of an economic system takes place in one direction, or the other, depends on the balance of power in a particular country. Whether it takes place gradually or suddenly is a question of the respective suitability. It is remarkable that all of the above-mentioned examples were preceded by a more or less extensive period of theorizing about the problems at hand. Politicians (or at least their advisers) were well acquainted with the theoretical literature. This is where the sudden establishment of a market economy in the GDR and the consequences thereof differ decisively from the examples. An extraordinarily extensive literature was ignored, the establishing of a market-economy system was carried out in a frantic rush and unscrupulous election promises were made—all of which resulted in the old system in the GDR being abolished before the new system in the Federal Republic of Germany (FRG) was operational.

THE INTERDEPENDENCES WITHIN THE FRAMEWORK OF THE TRANSFORMATION PROCESS

Walter Eucken (1952) formulated a view of the interrelatedness of the organizational forms of human societies that has since become known in the literature as the *Interdependenz der Ordnungen*. According to this view, economic systems must be seen in the context of the organizational forms of the societies, the governments and the legal systems within which they operate. Many transformation processes have not been successful because economic reforms were implemented without changing social, governmental and legal systems appropriately. The establishment of a market economy urgently requires that forms of society become more open, and that a pluralistic democracy be established, and that corresponding changes in the legal system be made (including, above all, new laws that define and protect private property as well as redefine the financial circumstances). Gorbachev failed because he did not recognize (at least not sufficiently) that all human forms of organization are interdependent and together constitute one integrated organizational structure. His ideas were a recollection of Lenin (Gorbachev 1987:27) mixed with a multiparty system and democratic elections, which was as inconceivable as doing away with the *nomenklatura's* privileges or enacting a rule of law for all. These were reforms within the system rather than a reform of the system. A genuine transformation, therefore, never had a chance. This fundamental context for transformation processes is shown schematically in Table 2.1.

Table 2.1 Interdependence of human organizational systems

<i>Economy</i>	<i>Market economy (workable competition)</i>	<i>Centrally planned economy (quantity planning)</i>
Society	Open society (upward and downward mobility based on personal performance)	Closed society (privileges for the <i>nomenklatura</i>)
Government	Pluralistic democracy (government = provider of services to the population)	One-party system or dictatorship (government = apparatus for dominating the population)
Legal system	Rule of law	Rule of men

This schematic representation shows that a system that has become entrenched over decades cannot be transformed suddenly (in a revolutionary or shock-like manner). Instead, transformation must occur in a well-planned and incremental manner (gradualist manner). Thus, the

plan that Chancellor Kohl presented in his inaugural speech on 28 November 1989 (the ten-point plan) was a very constructive plan. According to this plan, the two Germanies would have developed a confederate system that could have been expanded incrementally and that would have allowed them to coalesce institutionally over time. It would have allowed the GDR to continue to exist and, with assistance from the West, the organizational systems in the GDR could have slowly assimilated to the systems in the FRG. The opinion of the majority at that time, namely that a currency reform should only take place after corresponding changes in the economic, social, governmental and legal systems had been effected, would have been heeded. Measures for supporting social welfare would have helped to revitalize individual areas and a number of problems would never have occurred in the first place. The catastrophic transformation crisis in the GDR could largely have been avoided. Of course, the question remains as to whether and to what extent the powers-that-were in the GDR at that time would have accepted such a solution. There are indications that they hoped they would be able to make use of generous financial aid provided by the FRG to make their system of central planning more functional. But this hope would have remained unfulfilled if only because of the interdependence of the various organizational systems.

Which factors were decisive in the end in precipitating the rush to reunify is a matter for historians, and they may discover some remarkable things. The hurried effecting of the currency union, as a type of shock therapy as it were, the unrealistic exchange rates on top of that, which were in no way related to productivity in the GDR, and the reunification treaty with its numerous loopholes, as well as the Stasi problems, which first became obvious after reunification and which will poison relations in Germany for years to come, at least leave some questions open.

IGNORING THE RESEARCH ON THE GDR

As a result of the transformation crisis taking on ever greater dimensions, many of the western German politicians have started making use of the 'protective claim' that no one had really realized how bad the economic situation in the GDR actually was. This argument has been put forward since 1990 and found increased use in 1991. Various representatives of the mass media who at least were cognizant of the fact that research on the GDR existed even maintained that this research had failed to provide correct information. Hence, the currency reform in the GDR in 1990 was compared to the currency reform in Germany in 1948—which from an informed point of view is a completely improper comparison.

Yet, the FRG had been intensively involved in conducting research on the GDR, research that understandably enough dealt with the division of Germany and the experiments with various economic frameworks, and

this research was presented at numerous conferences, in hundreds of books and in thousands of articles.

Initially, the Research Committee for Reunification at the Federal Ministry for All-German Affairs (later, for Domestic German Relations) played an important role. It was comparable to the expert advisory councils in the other federal ministries and had dealt with a number of problems. In 1975, the social-liberal coalition dissolved the committee, without providing any sort of replacement, because it was deemed to be putting a strain on the *Ostpolitik*. The committee was not set up again even after the 'change of direction' in 1982.

The high point of all the research on the actual conditions in the GDR is the more than 800-page volume entitled *Materialien zum Bericht zur Lage der Nation im geteilten Deutschland*, which was published by the Federal Ministry for Domestic German Relations in May of 1987. It is difficult to find a single one of the many current problems for which there are no statistics or analyses in this volume.

REMARKS ON TRANSFORMATION CRISIS IN THE FORMER GDR

If the politicians responsible for reunification had been acquainted with that volume, the hectic rush and (seen from a historical perspective) irresponsible calculated optimism that were used to force reunification in 1990 without first considering the facts would not have come into play. Wrong decisions that had been made on a grand scale were covered up with official calculated optimism. The currency union, which did not take into account the different levels of productivity and lack of purchasing-power parity, was intended to stop mass migration from the GDR to the FRG, while at the same time, and with an eye toward the next elections, going easy on the savings accounts of the population in the GDR.

The 'buying spree' in the GDR that resulted from having had to do without quality products for decades, and the freedom of the population there to finally spend holidays in countries other than communist-bloc countries, soon threatened to exhaust the GDR population's stocks of deutschmarks. The collapse of the GDR's traditional export markets, namely the Comecon markets based on the transfer rouble, resulted in a drastic decrease in the production of exportables.

The investments in eastern Germany which the politicians had forecast were limited for the most part to the service sector, which was very small in comparison to that of western Germany. The *Treuhandanstalt* took charge of the nationally owned firms, especially those in industry. Most of these firms were oversized, suffered from the overmanning so common in the communist-bloc countries and had to lay off hundreds of thousands of workers. Unsolved problems with property rights

(restitution rather than compensation), excessive debts, pollution, etc., soon proved to be grave hindrances to investment. The state of telecommunications, railway and highway systems, obsolete production facilities, insufficient energy supplies, the lack of personnel trained in modern public-administration methods (for example, in land register offices) and many other problems belied the calculated optimism of the politicians. The state of the housing sector, the lack of efficient management and the absence of concrete plans for the future caused the euphoria over reunification to turn into pessimism and despair in 1991. The fear of becoming unemployed is present everywhere. The uncovering of the Stasi's activities, which will burden interpersonal relationships for years to come, and the ever increasing estimates of the capital investment needed in order to assimilate to western Germany (now estimated to amount to DM 2,000 billion by the year 2000) have resulted in a feeling of transformation crisis among the people that will probably lead to increased migration to western Germany (Felderer, B. 1990:394). Since the coming down of the wall, approximately a million skilled workers have already migrated to western Germany. Some are already speaking of the 'administration of a bankrupt estate by means of social plan'. 'The mistakes and failings of the economy policy are so grave that one must expect lasting consequences for the peace of German society if a rethinking does not occur soon' (Sinn, G. and Sinn, H.-W. 1991:VII).

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GERMAN-GERMAN MONETARY UNION: MAIN OPTIONS, COSTS AND REPERCUSSIONS

Rolf Hasse

'HISTORICAL' BACKGROUND

All of Europe is in political and economic transition. The European Community (EC) is seriously inclined to complete the Single Market by the end of 1992. Moreover, a new and seemingly more promising attempt was launched in Maastricht (10 December 1991) to establish a European Monetary Union. Parallel to it, the second inter-governmental conference finished its negotiations about a European political union.

The second even bigger change occurred in Eastern Europe. It is now a matter of fact that the political structure of Eastern Europe and of the former Soviet Union is in complete transformation. And it seems to be an irreversible change of all political, economic and security conditions. During the meeting of the Conference on Security and Co-operation in Europe in Paris (30 May–23 June 1991) the members declared the end of the Cold War.

This big bang in East-West relations occurred in 1989, but despite the only short span of time since then it has been changing political positions far beyond Europe. Old patterns of coalitions, options of bargaining and the validity of socialist ideas and centrally planned economics all of a sudden were heavily shaken and smashed. After an interim period of embarrassment people realized that nearly everywhere more doors were pushed open to the twins 'political freedom' and 'economic liberty' than ever expected only some years ago.

Germany had been a centre and a frontier-state of the East-West conflict. Its successful political and economic performance had been a permanent challenge to the ideological basis of all Comecon states. After forty-five years Germany is now reunited

economically since July 1, 1990;

politically since October 3, 1990;

and definitely since the all-German election of December 2, 1990.

We have to keep in mind that we have been still witnessing a peaceful political and economic revolution. We have also to keep in mind that this outburst and the accelerated process of transformation in Eastern Europe has not lasted longer than three years. And Germany is again a centre of this evolution: the German government is redirecting great amounts of funds and personnel to revitalize the economy of eastern Germany; many of the decisions taken and institutions established in eastern Germany are being taken as examples by other Eastern European governments and maintaining economic and political stability in Germany will be the core problem for a successful process of changes in Western and Eastern Europe.

AREAS OF EXPECTED REPERCUSSIONS

When the reunification of Germany began to take shape in spring 1990, repercussions of various kinds were expected. We can distinguish at least two sets of fears and probable repercussions:

- 1 During the first stages of the process of reunification, one could recognize a reorientation primarily of political tactics and strategies. Some European countries, or their governments, began to blame Germany for aiming at an increase in political power and for neglecting the integration of the EC. They claimed that the German government should prove its irreversible orientation towards the EC. They proposed an earlier beginning for the two inter-governmental conferences on monetary and political union to accelerate the European economic and especially monetary integration. After only a short period of embarrassment, these fears vanished and the German government surprisingly took the lead in European integration, combining the economic and the political aims.
- 2 A variety of economic repercussions were expected:
 - Fears that the dynamics of the economic and monetary European integration would be negatively influenced because German funds and minds would be preoccupied with the problems emerging from the east.
 - Depending on the means and ends chosen to establish a German economic and monetary union there were fears and expectations of a higher inflation rate, higher interest rate and a devaluation or revaluation of the deutschmark. Each option would have external effects on the European countries and via the international markets on all other countries as well, because the German economy is a dominant economic power in Europe and the deutschmark, being an international reserve currency with an increasing share—18.9 per cent in September 1989 (Hasse 1984; Tavlas 1991)—exercises worldwide effects.

- Fears of a massive reorientation of financial funds. The Mediterranean countries of the EC will be in trouble if the regional fund is not furnished as generously as the Delors Committee designed, as a part of the policy of cohesion inside the EC (Hasse 1991). The outcome could be—according to their argument—that the countries of the European periphery would not be able to cope with the dynamics of Central Europe in an economic and monetary union.
- Countries in Africa and Latin America were worried that the international savings funds would be redirected to the countries of Eastern Europe. If these reforming countries succeed in establishing market economies, then they will offer good opportunities for investments, lesser risks, higher real interest rates and higher yields. This better credibility may cause a crowding out of these developing countries in the financial markets.

OPTIONS FOR A GERMAN MONETARY AND ECONOMIC UNION

The controversy between politicians and professional economists

As soon as the economic and monetary integration of the two German states became a realistic option in December 1990, when plans for a ‘confederation’ and an ‘association on treaties’ were launched, a vivid discussion emerged about the optimal ways and means of co-operation and integration (see, for example Nölling 1991; Willgerodt 1990; Lipschitz and McDonald 1990).

The main characteristic of the discussion in the early stage of the process of reunification was a severe gap between the opinions of the politicians (in office and opposition) and the majority of the professional economists outside the government. But even inside the government and between the federal government and the Deutsche Bundesbank, we can recognize severe differences of opinion in the period until the final decision in favour of a sudden monetary union was taken.

The economists preferred a progressive integration strategy, whereas the politicians very early on favoured shock therapy. Despite their normal preference for shock therapy, the economists were very reluctant. They believed that the task of transforming and integrating the East German economy in one big leap would not be feasible and/or too costly. They pleaded for an exchange-rate union and a longer transitional period¹ or for a strategy of parallel currencies,² partly to find the appropriate exchange rate, partly to insure the dominance of functional integration.

On the other side, several politicians changed their mind early on and favoured an immediate step to a complete monetary union. Seeing that

the intermediate actions to provide the East German citizens with the deutschmark after the opening of the Wall³ did not stop the massive influx of East Germans, they backed the idea of a monetary union to reduce migration and the problems and conflicts emerging from its three sources—those of German origin coming from Eastern Europe and the Soviet Union (*Aussiedler*), those coming from East Germany (*Übersiedler*)⁴ and those asking for asylum.

The first proposal for a monetary union was presented by the former Social Democratic Party (SPD) mayor of Hamburg on 21 December 1989.⁵ The period in which a monetary union was seriously considered was the time span from 19 January 1990⁶ until the sudden official proposal issued by chancellor Kohl on 7 February 1990. All contributions demonstrated the following facts: a considerable lack of clarity concerning the data on the east German economy and the economic repercussions of a sudden economic and monetary union; a great lack of co-ordination inside the federal government⁷ and clear pressure coming from the newly established parties in the German Democratic Republic (GDR), and from the citizens who formulated the slogan: 'If the deutschmark won't come, we will come.'

The bundle of aims of the politicians changed from the short-run interest—stabilizing the economic breakdown of the East German economy and stopping migration—to the genuinely political target of reunification. Becoming aware that the strategy of the Modrow government in East Berlin of only reforming the socialist economy ('socialism with a human face') was rejected by the citizens, the majority of whom asked for a complete political and economic transformation, the federal government in Bonn recognized in January 1990 that no solution based on two German governments would be feasible. Chancellor Kohl initiated the strategy for realizing the political aim of reunification; the economic scenarios and solutions had to be adjusted to this objective.

The main implicit assumption of the economists was that two German governments would remain in existence. On this basis, they analysed the aims and means of the long-term feasibility of an economic union and the short-term costs of a sudden monetary union with fixed exchange rates or the deutschmark as the single currency.⁸ The opinions and plans did not converge until politicians and economists started to discuss on the basis of identical political aims and economic conditions.

Irrespective of the differences concerning their strategies, both sides agreed that both options could only be successful if a far-reaching restructuring of the East German economy could be brought about. As necessary means they both proposed:

- all institutions, authorities and instruments of the mechanism of central planning to be abolished;

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Table 3.1 Class-oriented taxes in the German Democratic Republic: income tax as a percentage of income

<i>Income</i>	<i>Employees</i>	<i>Private entre- preneur</i>	<i>Free traders</i>	<i>Craftsmen in a co- operative</i>	<i>Private craftsmen</i>	<i>Other private entre- preneurs</i>
5,000	10.1	10.1	10.1	35.0	11.0	18.6
10,000	18.7	18.7	18.7	45.0	19.0	29.1
15,000	20.0	20.0	20.0	45.0	24.0	35.7
20,000	20.0	23.7	20.0	45.0	28.0	44.0
25,000	20.0	29.4	20.0	45.0	32.0	51.2
30,000	20.0	34.2	20.0	45.0	35.0	56.0
35,000	20.0	37.9	26.0	45.0	38.0	60.0
40,000	20.0	41.0	30.0	45.0	41.0	63.0
45,000	20.0	44.0	34.4	45.0	44.0	65.8
50,000	20.0	46.6	38.0	45.0	46.6	68.0

Source: *Informationsdienst des Instituts der Deutschen Wirtschaft*, 16, 7:5; 16, 8:15.

- a total price reform, introduced immediately for consumer goods (abolishing the high subsidies), for manufactured goods and in the main parts of the service sector;
- a reversal of the property order from 'socialist property' to dominantly privately owned assets and land;
- a complete change of the ideologically designed and enforced taxes, laws and the welfare system (Table 3.1).

In order to get an impression of the task and of the reasons for the astonishing initial reluctance of the professional economists, it is recommendable to have a look at the state of the East German economy at the beginning of 1990. These figures can be taken later as the reference level for assessing the developments so far since July 1990.⁹

- 1 The price system was internally oriented and without any contact with international prices. The structure of the economy had been designed according to internal political preferences and the needs of the Comecon member countries, but it did not comply to international comparative costs.
- 2 Money was only of minor importance in the GDR and a monetary policy as known in market economies never existed.
- 3 As money and prices were only internally oriented and as its amounts and relative terms were determined by political preferences, no economically efficient exchange rate existed. But an exchange-rate union or a monetary union is based on an exchange rate or a conversion rate that has to be chosen. For this choice a variety of options existed.

GERMAN-GERMAN MONETARY UNION

- One option could have been the *Devisenrentabilität* (foreign-exchange profitability) used by the GDR planning authorities as a yardstick for the profitability of exports and as an internal conversion rate. This rate was calculated by dividing the total export revenue in deutschmarks by the value of the aggregate GDR exports to West Germany in (East German) marks (M). The last rate between the deutschmark and the mark, in 1989, was 1:4.4.
- Another option was the official exchange rate between the deutschmark and the mark of 1:1, used in the intra-German trade (*Interzonenhandel, Innerdeutscher Handel*). But this rate was like all official exchange rates of the member states of Comecon, an arbitrary rate chosen for political prestige and used only as an accounting unit in the internal and foreign procedures of balancing. In reality, the GDR exercised a system of multiple exchange rates with implicitly flexible exchange rates. Being a price taker, its supply prices had to be adjusted to all price developments in Western foreign markets and to all different official exchange rates.
- A third option as a rate to refer to could have been the exchange rate registered mainly in West Berlin. It was a market for foreign currency only and without interventions. It was a market with irregular demand and supply and without any normal arbitrage on the goods markets and on financial markets. Before the opening of the Berlin Wall, the mark was exchanged by old-age pensioners from the GDR who were allowed to cross the border and by citizens of the Federal Republic of Germany (FRG) coming back from the GDR—but exporting the mark was illegal. On the other side demand for the mark stemmed mainly from citizens of the FRG travelling to the GDR—but this import of the mark was illegal, too. The interest for suppliers and demanders emerged from the exchange rate, which increased from 1985 to 1988 (DM:M) from 1:5 to 1:7.8. Those going to the GDR and being forced to exchange deutschmarks to marks at the official rate of 1:1 could save a lot but they took the risk of illegally importing marks. Those coming to the FRG were able to buy goods they could not purchase in the GDR.
- The DM-M rate rapidly changed in 1989 shortly before and after the opening of the Berlin Wall. During the months of June to December 1990, the supply of marks surged due to those citizens who were exchanging their savings because they had migrated to the FRG (*Übersiedler*)¹⁰ and due to those citizens who only wanted to buy goods in the FRG and West Berlin. The DM-M rate plunged down to 1:20 (November 1989). It recovered in 1990 due to the increasing demand for marks from tourists, from persons buying the highly subsidized consumer goods in East Germany and because of the speculative hoarding of the mark. The rate gradually approached

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Table 3.2 Manufacturing in the German Democratic Republic: the process of concentration 1971–87

<i>Employees per company</i>	<i>Number of companies</i>		<i>Share of the manufacturing production (%)</i>	
	<i>1971</i>	<i>1987</i>	<i>1971</i>	<i>1987</i>
25 and under	3,864	120	1.8	0.1
26– 100	4,371	552	6.6	1.1
101– 500	1,992	1,380	16.5	10.1
501– 1,000	405	558	9.9	10.9
1,001– 5,000	539	748	37.3	45.1
5,001–10,000	62	74	16.4	20.7
above 10,000	20	21	11.5	11.8
Total	11,253	3,453	100.0	100.0

Source: *Informationsdienst des Instituts der Deutschen Wirtschaft*, 16, 7:5; 16, 8:15

the official rate of 1:3, and then the conversion rate of 1:2, which was announced on May 2, 1990.¹¹

- The UN calculated a ‘trade conversion factor’ for the mark and the US dollar of 1:2.8, which experts in the GDR judged as too favourable. According to calculations in West Germany, a DM-M exchange rate somewhere between 1:2 and 1:3 would have been appropriate, which would have meant a conversion factor of 1:3.4 to 5.1 for the US dollar.
 - To sum up, none of these exchange rates was appropriate for use as a market rate. Moreover, it was also impossible to calculate an ‘equilibrium exchange rate’ by using the purchasing-power approach or one of the structured exchange-rate models. The non-market allocation process in the centrally planned economy of the GDR led to relative prices and asset values that were highly inconsistent with the marginal scarcities of goods and resources (Wolf 1985).
- 4 Privately owned assets were nearly non-existent. A policy of permanent disincentives to private enterprises had been an integral part of the economic policy of the GDR government since 1949. The number of private enterprises with up to ten employees—which was the legal ceiling for the size of a privately run enterprise—had been declining from a high of 2,304 million in 1946 to only 182,000 in 1988. The tax laws permanently and heavily discriminated against the income of private craftsmen and entrepreneurs (see Table 3.1). Moreover, the concentration of enterprises was deliberately brought about as a means of improving central planning (see Table 3.2).
- 5 A system of civil laws comparable to those we are accustomed to in market economies existed only in a very inadequate fashion, and the same deficiency held for public laws and the laws for enterprises.

- 6 The productivity of the GDR was estimated to range between 30 and 80 per cent of the level of the FRG; the average was calculated to be slightly below 50 per cent. But even this level proved to be too high. The real productivity was only 30 per cent of the chosen reference level.
- 7 Despite all the research work conducted on the GDR, knowledge of its real state remained very limited due to the distorted price structure, due to incomplete statistics, due to officially 'managed' statistical data and due to deliberate lies in the statistics, which were acknowledged by the former head of the GDR Planning Committee, Gerhard Schürer (Bencard and Steingart 1990:14f.).
- 8 The accumulated savings in money of the citizens of the GDR amounted to some 160–180 billion marks. Even converted at a rate of 1:1 this amount is lower than the annual increase in savings in the FRG (in 1990 about DM 210 billion). The average income in East Germany was—calculated at a conversion rate of 1:1—about one third of the level in West Germany. The potential output of the East German economy ranged—depending on the assumptions made about the productivity—from 10 to 13 per cent of the West German economy.
- 9 The obstacles emerging from the public administrative and legal systems are often underrated in discussions about reforming and transforming planned economies. The transformation of a centrally planned economy to a market economy requires that the legal and administrative systems are nearly totally reserved: civil law; public law; tax laws; the organizational structures of enterprises, of public administrations and of markets, all of these have to be adjusted to an entirely different economic, social and political order. This is one of the major reasons why the introduction of the market economy in West Germany in 1948 cannot be compared with that of the present transformation of the East German economy. First, the period since the beginning of some central planning in 1936 was shorter; second, nearly all civil and public laws of vital interest for the economy remained formally in force after 1936; property rights and the organizational structures of the enterprises were not abolished but rather eroded as a result of limiting all rights to dispose of these resources, e.g. by fixed prices. Third, entrepreneurs with experience in market economies before 1936 were still alive in 1948. Thus, the background for a successful economic reform and a self-sustaining adjustment was more favourable in 1948, once the appropriate measures were implemented (abolishing the liquidity overhang and abolishing the system of fixed prices) (Willgerodt 1991).

The strategy of introducing an exchange-rate union should help to avoid a sudden breakdown of the East German economy and should help to offer a smoother path of adjustment. For the case of a sudden monetary and economic union with a conversion rate of 1:1 for all prices

professional economists forecasted that the majority of the East German enterprises would immediately lose their competitiveness in Western markets. Only those enterprises would be better off which traded predominantly with former Comecon countries. The consequences of the collapse caused by a sudden monetary and economic union would be high unemployment and huge amounts of fiscal support. According to their strategies these economists favoured an exchange-rate union and proposed exchange rates between 1:2 and 1:5 or flexible exchange rates. The optimal choice was seen in a slight undervaluation of the mark at the beginning of the integration process in order to attain some more price competitiveness and to attract capital imports by creating expectations of rising productivity, increasing profits and a revaluating mark. Inside this group there existed differences of opinions whether and to what extent barriers for trade and capital movements should be implemented (literature compiled by Thomsen 1990-).

This seemingly optimal economic strategy had some serious flaws—economic and political ones. Exchange rates only work as a means of adjustment when immobility of labour (exchange-rate illusion) exists. This precise requirement did not exist at all. The politicians did not argue like this in order to explain their option in favour of an early monetary and economic union. They were at first worried about the high number of East Germans pouring into the FRG; then they intuitively recognized the political opportunity to reunify.

All the conditions for an exchange-rate union either did not exist or vanished. For an exchange-rate union you need a government that is reliable internally and externally. None of this could be established by the Modrow government in the GDR. Its strategy of only modernizing socialism was rejected by the majority of the citizens. This government rather increased the pressure inside the GDR to change the whole system and to integrate into the FRG. This process was backed by the rules of the constitution of the FRG, the Basic Law. According to this constitution, all citizens of the GDR were quasi-citizens of the FRG. When they moved to the FRG they immediately received full citizenship and were entitled to draw on all welfare funds. An exchange-rate union with an exchange rate of 1:3 would have cut the average real income of the East Germans in deutschmarks to 11–12 per cent of the average real income of the West Germans. This great gap in real income would have increased the mobility of labour. Moreover, the purely economic strategy overlooked the fact that the East German government had the autonomous right to declare its entry to the FRG according to article 23 of the Basic Law. The conclusion of these socio-political conditions in Germany was that at the state of transformation attained in January/February 1990 there no longer existed a realistic chance for an exchange-rate union. The economic and monetary union was partly a desired and

partly a forced outcome of the *political* process. The economic conditions and strategies had to be adjusted.

The Treaty on the Creation of a Monetary, Economic and Social Union

The Treaty on the Creation of a Monetary, Economic and Social Union between the Federal Republic of Germany and the German Democratic Republic was negotiated in a period of only six weeks and signed on 18 May 1990. The complete integration or legal reunification was brought about by the Unification Treaty signed on 31 August 1990 and was approved one month later on 20 September 1990 by both parliaments just before the GDR became part of the FRG on 3 October 1990 according to article 23 of the Basic Law. The process of political reunification was completed by the all-German election of 2 December 1990 which established not only an all-German parliament but also the five new states.

This treaty settled not only the question of the conversion rate. It is a blueprint about the ways and means of achieving the intended economic integration and the transformation of the East German economy. Moreover it is also a manifesto of the German economic system referred to as the 'social market economy'.¹² The main topics of the treaty are:

- 1 With great emphasis it is expressed in article 1 that the economic system in Germany will be a social-market economy. All elements of this concept are put into a legal frame which is clearer and better than all references to this concept in the other laws of the FRG.¹³ That is why the treaty includes the social union, too; but it is necessary to keep in mind that 'social' means more than welfare policy (Stützel *et d.* 1982).
- 2 As the basis of the monetary union, the deutschmark will be the only currency and the Deutsche Bundesbank the only central bank (article 1, sect. 2). The responsibility of the Deutsche Bundesbank for monetary policy, day-to-day exchange policy, price stability and its independence is confirmed (article 10).
- 3 All civil, commercial and public laws of the FRG were transferred to the GDR.
- 4 With some exemptions, the fixed prices of the GDR were abolished.
- 5 A 'Trust Fund' (Treuhandanstalt) was established to help privatize the state-owned enterprises: to privatize them, to break them up, to sell them and to support them temporarily if they have a chance of surviving.
- 6 The most intricate task was the choice of the conversion rates, which were a mixture of economic rationality, distributional aspects and

political promises. The final average rate, according to the calculations of the Deutsche Bundesbank, is 1:1.81 (see Table 3.3). The main conversion rates chosen were:

salaries, retiring pensions and housing rents	1:1
credits of enterprises and individuals	2:1
liabilities of enterprises and individuals	2:1
savings of citizens of the GDR according to their age and the amount at different rates:	
born after 1 July 1976:2,000 M	1:1
born between 2 July 1931 and 1 July 1976:4,000 M	1:1
born before 2 July 1931:6,000 M	1:1
all savings above these ceilings and cash	2:1
claims of individuals living outside the GDR	3:1

A FIRST ASSESSMENT OF THE ECONOMIC CONSEQUENCES OF GERMAN REUNIFICATION

Main fears, troubles and expectations

The process of integration was started under nearly ideal conditions:

- the economy of the FRG was still growing, and employment had been increasing;
- price stability was maintained despite the lasting upswing.
- incomes and savings were very high and fiscal deficits so moderate that they did not cause crowding-out effects;
- the balance of trade and the balance of current account both showed a considerable surplus.

The economic problems concerned the terms of converting the values of the GDR economy. This decision had to consider a potential overhang of liquidity, the level of productivity, the completely distorted prices of the system of central planning, the great lack of credible data about the GDR economy, the spending behaviour of the eastern Germans after obtaining the deutschmark, the competitiveness of the GDR economy, the amount of fiscal transfers and how to finance them.

The fears of the economists were concerned with two possible repercussions: an increase in inflation and an increase of interest rates.

An increase in inflation could be the outcome of a too generous endowment of eastern Germany with deutschmarks, of an increase in prices due to the abolition of subsidies on food in eastern Germany, and of a buying spree if the citizens of eastern Germany decided to spend the greater

part of their converted savings of about DM 160 billion. These effects would lead to a devaluation of the deutschmark which might foster further increases in prices or which might lead to a restrictive monetary policy in order to maintain price stability. Both options implied dangerous repercussions for the economy and the means of financing private investments and the foreseeable fiscal deficits.

An increase in interest rates in Germany would hurt the German and foreign economies. This increase could be the result of expectations about rising inflation, the effect of a sharp rise in public demand for capital to finance public transfers and public investments in East Germany, and, as mentioned above, it could be the ultimate rationale of a restrictive monetary policy in the case of rising inflation and the devaluation of the deutschmark.

In contrast to these worst scenarios, the best scenario for the adjustment process would be:

- no increase in inflation;
- higher real interest rates to attract the necessary amount of capital in Germany and from abroad;
- a revaluation of the deutschmark which would help reduce the increase in the interest rate and tendencies for higher prices.

Above all, a revaluation would help cut the surplus in the balance of current account and redirect the export of goods and capital to eastern Germany. Such a swing would help stabilize the business cycles in foreign countries; because the German economy producing at its capacity would limit a demand increase and/or a revaluation would induce imports.

The performance of the adjustment process

Conversion rate and its inflationary impacts

As outlined above, none of the existing exchange rates could be taken as the conversion rate for the monetary, economic and social union. The choice of the rates was hotly contested and the recommendations ranged from 1:5 to 1:1 (Nölling 1991:12ff.). The Deutsche Bundesbank was consulted by the government and on 29 March 1990 it proposed an average conversion rate of 1:1.9 (variant B).¹⁴ The government altered this proposal and converted the savings more generously, the average conversion rate rose to 1:1.81.

The calculations behind these rates were based on assumptions about the potential output of the GDR economy and the adequate money aggregate, about the probable behaviour of the citizens of the GDR and the adequacy of first endowment of enterprises with deutschmarks. A common result of all monetary analysis was that no dangerous liquidity overhang existed in the GDR. Some calculations for a non-inflationary

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Table 3.3 Conversion rates demonstrated for the aggregated data in the consolidated balance sheet of the banking sector of the German Democratic Republic; key date 31 May 1990

<i>Part 1 Credit</i>	<i>Billion M</i>	<i>Conversion rate</i>	<i>Billion DM</i>
1 Credits to the domestic economy	397.4	—	180.7
Government	60.6	2:1 ¹	12.3
Firms	231.7	2:1	115.8
Housing and construction	102.6	2:1	51.3
Personal loans (excluding house-building loans)	2.5	2:1	1.3
2 Foreign assets	45.0	—	36.3
Comecon countries	17.4		8.7
Western developed and developing countries	27.6	²	27.6
3 Shares	1.1	1:1	1:1
4 Other assets	3.1	2:1	1.5
Total	446.6	—	219.6
Balancing claims	—	—	26.4
All items	446.6	1.81:1	246.0
<i>Part 2 Debit</i>	<i>Billion M</i>	<i>Conversion rate</i>	<i>Billion DM</i>
1 Domestic deposits (non banks)	249.9	—	156.6
Government	10.8	2:1	5.4
Firms	57.0	2.05:1 ⁵	27.8
Private persons - deposits on current accounts and savings accounts	182.1	—	123.4
residents	165.6	1.44:1 ⁴	115.2
foreigners	2.3	2.05:1 ⁵	1.1
life insurances	14.2	2:1	7.1
2 Foreign liabilities	152.5	—	55.6
3 Currency (without banks' cash holdings)	13.6	2:1	6.8
4 Accumulated profits, reserve funds, guarantee funds	23.4	1:1	23.4
5 Other liabilities	7.2	2:1	3.6
Total	446.6	—	246.0
Balancing debits	—	—	—
All items	446.6	1.81:1	246.0

¹ Conversion of a balance of M 24.5 billion. This amount is the result of offsetting the lendings from the revaluation of external liabilities (M 31.2 billion) and the claims arising from the initial endowment of banknotes and coins in 1948 (M 4.9 billion) against provisions for external liabilities (*Richtungskoeffizient*) to the same amount.

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- ² External claims are still valued at the accounting rates of the end of 1989. The market rates of 30 June 1990 will be used for the final conversion. The amounts shown will then presumably be lower.
- ³ Conversion rates for balances of non-residents arising after 1 January 1990 will be 3:1, otherwise 2:1.
- ⁴ Conversion rates: 1:1 for M 2,000×3.2 million=DM 6.4 billion; M 4,000×10.1 million=DM 40.4 billion; M 6,000×3.0 million=DM 18 billion; subtotal: DM 64.8 billion; the remainder of M 100.8 billion was converted at a rate of 2:1.
- ⁵ Balances at the end of 1989: M 2.1 billion were converted at a rate of 2:1, the remainder at a rate of 3:1.

Table 3.4 Conversion rates on the basis of a non-inflationary money stock for the German Democratic Republic (GDR), basis 1989

	<i>Actual values</i>		<i>Non-inflationary values for the GDR</i>		<i>Conversion rates</i>	
	<i>GDR¹</i> <i>(M</i> <i>billions)</i>	<i>FRG</i> <i>(DM</i> <i>billions)</i>	<i>A²</i> <i>(DM billions)</i>	<i>B³</i>	<i>A²</i>	<i>B³</i>
Currency	17.5	146.9	19.5	14.7	1:0.9	1:1.2
M1 ⁴	146.6	450.6	59.9	45.1	1:2.4	1:3.3
M3 ⁵	252.0	1255.5	167.0	125.6	1:1.5	1:2.0
L ⁶	252.0	2738.3	364.2	273.8	1:0.7	1:2.0

¹ Values of the GDR include deposits of enterprises and households with the banking system.

² Assuming that GDR potential output is 13.3% of Federal Republic of German (FRG) output.

³ Assuming that GDR potential output is 10% of FRG output.

⁴ Currency in circulation and domestic non-banks' sight deposits.

⁵ M 1 plus non-banks' time deposits and funds borrowed for less than four years plus savings deposits at statutory notice.

⁶ M 3 plus savings deposits at agreed notice, long-term time deposits, bank savings bonds and other financial instruments held by private households and enterprises with banks.

Source: Deutsche Bundesbank monthly reports; annual report (1989) of the Staatsbank of the GDR.

money stock conducted at that time are summarized in Table 3.4, which shows how sensitively the conversion rate reacts to the assumptions.

The final monetary calculations of the Deutsche Bundesbank were based on the following premises. The potential output of the GDR is 9.5 per cent of the FRG potential output, and M3 would be an adequate money aggregate for both parts of Germany to mirror the monetary expansion. Variant B proposed a conversion rate close to 1:2. This would have led to an increase of total M3 (in February 1990, DM 1,230 billion) of DM 149 billion or 12 per cent. As the potential output was estimated to be only 9.5 per cent of the potential output of the FRG, an excessive provision of some DM 33 billion would have been the outcome. In this case a non-inflationary development depended on very conservative portfolio adjustments by the citizens of the GDR.

The lowering of the conversion rate and the uncertainties in calculating and forecasting the potential output of the GDR economy led to a considerable liquidity overhang and potential for inflation which can be estimated to be some DM 60 billion. The first endowment of the GDR with deutschmarks amounted to DM 180 billion (see Table 3.3) or 15 per cent of the M3 of the FRG. If one assumes that the potential output of the GDR is about 10 per cent, then an adequate first endowment would have been DM 120–125 billion. This excessive provision is 50 per cent of the M3 amount of the GDR; with respect to the total German monetary union it is an excessive M3 amount of only 4.8 per cent.

The danger of an inflationary impulse increased as a result of collapse of the GDR economy. The potential output has decreased considerably since January 1990 (see Tables 3.5 to 8). The main reasons for this decline in the net output of manufacturing were the huge revaluation effect of the introduction of the deutschmark, the unexpected breakdown of trade relations with the former Comecon countries, the strategy of the trade unions to increase the wages in eastern Germany irrespective of the development of productivity, and great deficiencies in the enterprises' ability to adjust to the new conditions of doing business in competitive markets.

These elements widened the gap between the appropriate endowment with deutschmarks and the disposable amount of deutschmarks. Despite these developments, the inflation rate increased only slightly to a level of above 3 per cent, which is, nevertheless, too high for the German standard of price stability. This fortunately modest rise was due to:

The cautious spending behaviour of the people in eastern Germany. The spending spree did not occur. The people behaved like real Germans; they spent and saved at the same time, which seems to be a very realistic attitude in times of uncertainty about employment and income. During the initial period of July to December 1990 the money aggregate M3 decreased in eastern Germany by DM 16 billion, and the savings at statutory notice increased by DM 13 billion, both absorbing nearly half of the initial liquidity overhang. The 'pull effect' of the internal demand on imports which was reinforced by a stable and revaluating deutschmark (see page 46).

Nevertheless, the rescue action of the Deutsche Bundesbank on 20 December 1991 signalled the problems of 1992: declining growth, surging wage-increase demands, a planned rise of value-added tax (VAT) and an expansion of M3 during the second half of 1991 which was beyond the money target—a bundle of inflationary impulses.

*The impact on the economy of eastern Germany and on the public budgets
of western Germany*

The economy of eastern Germany is showing the expected impact of the shock therapy. It is now in the process of adjusting to more competitive structures. The impact is larger than estimated and forces the forecasts to be adjusted (see Table 3.5) and urges the public authorities in West Germany to pump more transfers into eastern Germany.

The production in manufacturing started to decline in May 1990. This development accelerated after June/July 1990, just before and after the abolition of all economic barriers to the west, when the deutschmark was introduced and the collapse of the trade relations among the former Comecon countries followed. Production is now down to about 50 per cent of its level in January 1990. The same reduction can be recognized in the development of retail sales at current prices (see Table 3.6). Parallel to these declines, unemployment increased, which was cushioned by various actions: short-time working, public-works programmes, paid leave for those awaiting redundancy and retraining. The potential of the labour force fell to below half of its 1989 level. Including all those individuals who were unemployed, working short time (two-thirds less than 50 per cent of the working week), those who were 'employed' because of actions taken by labour-market policy and the hidden manpower reserve, the unemployment rate surged to about 40 per cent.

Germany has two completely different business cycles. A growing economy in its western part and a depression in the eastern economy due to the necessary restructuring. The downturn in the former GDR economy is greater than expected because productivity is lower than assumed, wages have increased beyond productivity, the Comecon markets are in complete disarray and the abolition of the former system of central planning proves to be more complicated and time consuming than expected. The decline is cushioned by huge transfers of resources from public budgets, causing a double fiscal strain. First, the public deficits surged to extreme amounts and it has demanded great political efforts to consolidate the public budgets by increasing taxes and cutting expenditures, especially subsidies (see Table 3.9). Second, the structure of the transfers to eastern Germany is unfavourable for the economic restructuring of the economy. In 1991 nearly two-thirds of all private and public expenditures in eastern Germany were financed by public transfers. The main part of these transfers were still spent on social welfare and only about 35 per cent was used for public investments to improve the infrastructure or designed as incentives for private investments (see Table 3.10). Fortunately, public financing was consolidated during the 1980s. The absorption of money savings for financing public

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Table 3.5 Forecast by the five economics institutes of the main economic indicators for the Federal Republic of Germany

18 October 1990	Western Germany		Eastern Germany		Federal Republic of Germany, total	
	1990	1991 ¹	1990	1991 ¹	1990	1991 ¹
Employed persons (1000s)	25,360	25,860	8,420	6,500	33,780	32,260
Unemployed (1000s)	1,900	2,000	250	1,400	2,150	3,400
Short-time workers (1000s)	60	80	830	1,750	890	1,830
Deficit of all public authorities ² (DM billions)	-58.0	-83.0	-14.0	-8.0	-71.0	-90.0
Balance of current account (DM billions)	110.0	93.0	-52.0	-77.0	58.0	16.0

25 April 1991	Western Germany		Eastern Germany		Federal Republic of Germany, total	
	1990	1991 ¹	1990	1991 ¹	1990	1991 ¹
Employed persons (1000s)	25,445	25,170	8,605	6,580	34,050	32,750
Unemployed (1000s)	1,883	1,680	240	1,200	2,123	2,880
Short-time workers (1000s)	55	1,000	775	1,800	830	1,900
Deficit of all public authorities ² (DM billions)	-51.0	-79	-31	-34	-82	-114
Balance of current account (DM billions)	—	—	—	—	+72	-5

17 October 1991	Western Germany			Eastern Germany			Federal Republic of Germany, total		
	1990	1991 ¹	1992 ¹	1990	1991 ¹	1992 ¹	1990	1991 ¹	1992 ¹
Employed persons (1000s)	25,470	26,260	26,600	8,530	6,560	5,510	34,000	32,820	32,110
Unemployed (1000s)	1,883	1,700	1,700	240	950	1,400	2,123	2,650	3,100
Short-time workers (1000s)	55	130	150	758	1,630	750	813	1,760	900

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Table 3.5 Continued

17 October 1991	Western Germany			Eastern Germany			Federal Republic of Germany, total		
	1990	1991 ¹	1992 ¹	1990	1991 ¹	1992 ¹	1990	1991 ¹	1992 ¹
Deficit of all public authorities ² (DM billions)	—	—	—	—	—	—	80.4	-90	-95
Balance of current account (DM billions)	—	—	—	—	—	—	77.4	-35	-25

¹ Forecast.

² According to the system of national accounting.

Source: Die Lage der Weltwirtschaft und der deutschen Wirtschaft im Herbst 1990/im Frühjahr 1991/im Herbst 1991' *Wochenbericht des Deutschen Instituts für Wirtschaftsforschung*, various issues.

deficits was reduced from 30.7 per cent in 1980 to 13.4 per cent in 1989. Especially in 1989 the increase in public debts slowed considerably because the states cut their deficits from a total of 20.2 (1987) via 18.0 (1988) to 7.3 (1989).

The forecasts had to be adjusted several times because all optimism about an early economic recovery was destroyed time and again (see Table 3.5). The most recent figures for the producing sector now show that manufacturing and especially construction are realizing sustainable increases in output and new orders. But, the process of dismissals has not stopped yet (spring 1992).

Despite the generous transfer of public funds there still exist various impediments to a broad, self-sustainable recovery: unsolved problems concerning old and new property rights to enterprises and land; uncertainties about the costs of old environmental damage; deficiencies in the infrastructure and a lack of co-ordinated actions in this field; uncoordinated systems of investment incentives; a shortage of land upon which to erect buildings and space to establish offices; an administration which is not efficient enough and is still learning to apply the very sophisticated civil and public laws; a growth in wages that is completely unrelated to the increases in productivity and a 'capitalistic spirit' that is not so vigorous as hoped for. All these are barriers to the creation of an efficient social-market economy as well. Today the emphasis of the policies lies too much on 'social' and not decisively enough on the second part of this economic order: market economy. The level of subsidization and of incentives for investments is high. The government 'must avoid fostering a mood of rent-seeking among the enterprises (subsidies, tax redemptions), among employees (generous unemployment payments) and among the trade unions (too high wage increases and demands for

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Table 3.6 Main economic indicators for the producing sector and retail trade and prices of Eastern Germany up to January 1990

	<i>Net output in manufacturing</i>			<i>Retail trade at current prices¹</i>	
	<i>1985=100²</i>	<i>Change from previous year</i>	<i>3rd quarter³ 1990=100</i>	<i>in Bill. DM</i>	<i>3rd quarter 1990=100</i>
1990					
January	105.6	-5.0		9.8	
February	108.0	-4.4		10.9	
March	109.3	-4.1		11.8	
April	108.5	-3.9		10.8	
May	103.0	-9.0		11.3	
June	96.2	-15.5		9.9	
July ¹	62.6	-42.1	108.5	5.9	
August	53.5	-50.8	100.7	6.2	
September	54.7	-51.1	90.8	5.8	
October	55.3	-50.8	90.6		107.4
November	56.9	-48.4	98.3		107.1
December	50.9	-3.3	80.5		120.1
1991					
January			66.6		95.2
February			60.6		86.6
March			63.1		95.2
April			59.4		93.2
May			60.4		
June			63.3		
July			63.7		
August			60.4		
September			65.5		
October			66.7		

¹ Inception of the monetary, economic and social union.

² Not comparable with statistical methods used for data collection in Western Germany.

³ Index for kinds of activity units, per calendar month.

⁴ In DM since July 1990.

Source: Deutsche Bundesbank, monthly reports.

subsidizing enterprises). The government will have to cope with the hydra of subsidies in both parts of Germany. If it wins this conflict, only then will the German economy become healthier and stronger. The transformation will become easier because old and new subsidies will not unduly postpone the necessary adjustment and modernization of capital stocks.

External repercussions and adjustments

The immediate impact of the opening of the Hungarian border to

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Table 3.7 Main economic indicators for Eastern Germany: development of unemployment and short-time working since January 1990

	<i>Unemployed</i>			<i>Short-time workers</i>	
	<i>Total number</i>	<i>Change from previous month (%)</i>	<i>quota of unemployment</i>	<i>Total number</i>	<i>Change from previous month (%)</i>
1990					
January	7,440		0.1		
February	10,994	47.8	0.1		
March	38,313	248.5	0.4		
April	64,948	69.5	0.7		
May	94,807	46.0	1.1		
June	142,096	49.9	1.6		
July ¹	272,017	91.4	3.1	656,277	
August	361,286	32.8	4.1	1,499,872	128.5
September	44,856	23.1	5.0	1,728,749	15.3
October	536,800	20.7	6.1	1,703,782	-1.4
November	589,178	9.8	6.7	1,709,899	0.4
December	642,182	9.0	7.3	1,794,032	4.9
1991					
January	757,162	17.9	8.6	1,840,639	2.6
February	786,992	3.9	8.9	1,947,059	5.8
March	808,349	2.7	9.2	1,989,815	2.2
April	836,940	3.5	9.5	2,018,907	1.5
May	842,285	0.6	9.5	1,968,477	-2.5
June	842,504	0.0	9.5	1,898,937	-3.5
July	1,068,639	26.8	12.1	1,610,775	-15.2
August	1,063,237	-0.5	12.1	1,448,847	-10.1
September	1,028,751	-3.2	11.7	1,333,362	-8.0
October	1,048,527	1.9	11.9	1,199,539	-10.0
November	1,031,000	-1.7	11.7	1,103,000	-8.1

¹ Inception of the monetary, economic and social union.

Source: *Deutsche Bundesbank, monthly reports*

Austria on 11 September 1989 and of all other events in Germany (opening of the Berlin Wall, 9 November 1989, discussion about a confederation and about reunification) was an increase in the short-term and long-term deutschmark interest rates (see Figures 3.1, 2, 3 and 4). The fear of inflation and a weak deutschmark pushed the interest rates up and reduced the interest differentials with respect to the European-Monetary-System (EMS) countries and widened it with respect to the United States.

The fear of a devaluation of the deutschmark vanished when the financial markets recognized that the Deutsche Bundesbank had

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Table 3.8 Balance of the labour market in Eastern Germany, 1989–92 (1000s)

	1989	1990	1991 ¹	1992 ¹	December 1991 ⁵	January 1992 ⁵
Population	16,600	16,200	15,900	15,700		
Potential of labour force (1988)	(9,950)	(9,950)	(9,950)	(9,950)		
<i>Changes to 1988</i>						
Intra-German mig- ration (labour force only)	90	440	600	700		
Departing foreigners	—	30	60	90		
East Germans work- ing in West Germany	—	50	310	425	500	
Early retirement	—	250	500	455		
<i>Stock</i>						
Potential of labour force	9,860	9,150	8,480	8,280		
Labour force	9,860	8,850	7,030	6,020	6,400	
ABM ²	—	5	200	450		
short-time working waiting arrange- ments	—	760	1,630	750	1,035	1,340
Unemployed (registered)	—	50	175	0		
Unemployed (registered)	—	240	950	1,400	1,040	520 ⁶
Unemployment per- centage		2.6%	11.9%	18.9%	11.8%	16.5%
Retraining		20	300	500		
Hidden reserve		40	200	360		

¹ Forecast.

² *Arbeitsbeschaffungsmassnahmen*: special arrangements to foster employment in public and private enterprises. ³ Special arrangements for civil servants before their dismissal.

⁴ Registered unemployed of labour force and unemployed.

⁵ Actual figures.

⁶ Expiration of short-time working arrangements.

Source: 'Die Lage der Weltwirtschaft und der deutschen Wirtschaft im Herbst 1991 (17. Oktober 1991)', *Wochenbericht des Deutschen Instituts für Wirtschaftsforschung*, Nr. 42/43–1991 of 24 October 1991, S.601; Bundesanstalt für Arbeit, 5 February 1992.

confirmed its aim of preserving price stability. The deutschmark regained its strength. The danger of starting a vicious cycle of inflation and devaluation disappeared and an adjustment process started which looked as if it had been designed for a textbook model. The higher interest rate hit the European countries hard but the German economy worked like a locomotive on the demand side. The introduction of the deutschmark

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Table 3.9 Development of public budgets in Germany, 1990-5

<i>Expenditures/revenues/balances in DM billions</i>	1990	1991	1992	1993	1994	1995
Expenditures						
Federal budget	380.2	410.3	422.5	428.5	439	449
States (west)	299.1	315.5	330	341.5	354	366.5
Municipal authorities (west)	207.8	220.5	230.5	240.5	250	260
Unification fund	22.0	37.0	38	32.5	24	9
States (east)		96.5	91.5	89.5	92.5	93
Municipal authorities (east)		49.5	52	55	61	62.5
Total ¹	815.3	987.5	1,028	1,062.5	1,107	1,161
Revenues						
Federal budget	332.1	342.9	371.5	382.5	407.5	423
States (west)	279.2	293.5	307.5	320.5	338.5	361
Municipal authorities (west)	204.2	218.5	229.5	238	248	259.5
Unification fund	2.0	6.1	14	17.5	19	9
States (east)		77.5	76	68.5	64	54
Municipal authorities (east)		46	45	45.5	47	47.5
Total ¹	721.5	830.5	898	940.5	1,006.5	1,072.5
Balance						
Federal budget	-48.1	-67.4	-51	-46	-31	-26
States (west)	-19.9	-21.5	-22.5	-21.5	-15.5	-5
Municipal authorities (west)	-3.6	-2	-1.5	-2	-2.5	-0.5
Unification fund	-20.0	-30.9	-24	-15	-5	0
States (east)		-19.5	-15.5	-21	-28.5	-38.5
Municipal authorities (east)		-3.5	-6.5	-9.5	-14	-15
Total ¹	-93.7	-157	-130.5	-122	-100.5	-88.5

¹ Burden equalization fund (LAF), transfers to European Community, ERP funds and Kreditabwicklungsfonds.

Source: Press reports of the budget planning council (Finanzplanungsrat) of 9 July 1991.

and the transfer of large resources to eastern Germany caused a demand-pull effect that met with fully utilized capacities in western Germany and a declining utilization of output capacities in the European countries and in the United States. The demand increase and the stable and slightly revalued deutschmark helped cut and redirect the surplus in the balance of trade and of current account to eastern Germany. Moreover, the other countries took their chances to export their 'surplus' production. The German balances of trade and of current account turned from a great

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Table 3.10 The structure of public transfers, planned and estimated, to East Germany, 1992, in DM billions

	<i>Transfers</i>	<i>Main use</i>	
		<i>Social welfare</i>	<i>Investments</i>
Federal Government			
All ministries, including the programme 'Impetus East'	61.0-65.0	31.0-33.0	30.0-32.0
Tax remissions (federal part)	3.3	—	3.3
'Länder'/municipalities			
Personnel and technical help	1.0	1.0	
Cuts in the value-added tax	5.5	4.0 ¹	1.5 ¹
Tax remissions (states' share)	4.2 ²	—	4.2 ²
German unification fund	33.9	23.9 ¹	10.0 ¹
Trust fund	32.0	21.0	11.0
Federal Institute for Labour	19.5	19.5	—
Social insurance, west	10.0	10.0	—
Transfers, total	170.4-174.4	110.4-112.4	60.0-62.4

¹ Partition according to the five new states of East Germany; part of the planned investments of total expenditures—30 per cent.

² Without the contribution of the five new states.

Source: Winfried Fuest and Rolf Kroker (1991) 'Transferzahlungen an die neuen *Bundesländer*; eine Schätzung für 1991', *IW-Trends*, April: D-37.

surplus in 1989 (+134.6 and +107.6 billion DM respectively) into a deficit in the balance of current account for 1991 (January-November) of about DM 30 billion. This remarkable general trend and the different amounts of bilateral swings in foreign trade show that European countries especially benefited from the German demand-pull (see Tables 3.11 and 12). The figures also show that some countries spurred their exports to Germany on a two-digit basis whereas other countries improved their trade balances by increasing their exports to and by a decrease of their imports from Germany (Japan, Sweden, United Kingdom, United States). The goods structure shows that Germany imported mainly food (oranges, bananas) for eastern Germany and finished goods (see Table 3.13): it demonstrates that the imports increased the lack of free supply capacity in western Germany. Thus, the demand-pull could be nearly non-inflationary, because the east Germans were buying. On the other hand, the demand-pull helped stabilize the business cycles and employment in these OECD countries. The balance of the developing countries does not look so favourable.

The impact on international private and public funds

I intend to focus the analysis on only one international repercussion. This economic repercussion deals with the redirection of private and

public funds. The higher interest rate in Germany did not seriously hit the European countries which were linked to the German interest level because the deutschmark is the 'anchor currency' of the exchange-rate mechanism of the EMS. This increase (see Figures 3.1 and 2) was accompanied by a demand-pull that offered new trading and investment opportunities; therefore, it was not the result of an excess of money supply. But the higher interest rate reinforced the redirecting of flows of international capital. The concentration of these funds on industrialized countries and on semi-industrialized countries introducing market economies will especially force those developing countries (LDC) with high foreign debts and/or poorer investment opportunities to resort to the International Monetary Fund (IMF) and public grants and credits. If a market economy is implemented in Eastern Europe and in the near future in the successor states of the former Soviet Union in a way that is considered irreversible and well founded, these countries will offer good opportunities for investment of international private capital. In the meantime, the great bulk of public aid will be collected and offered to these countries to overcome the hardships of a 'transformation crisis'. These countries attract public funds more easily because they are of greater global and regional political importance than the majority of the LDCs, especially those in black Africa.

This development may also hit some European countries, i.e. Greece. On the one hand it will suffer from it, on the other hand it may benefit from it. The needs for public funds have surged but the international savings have not increased similarly. This shortage is growing and so is the competition to obtain such funds. Only countries offering the expectations of an efficient use of such funds will cope with this situation. They have to accept this new challenge and to reform their economic order so that there is more market allocation and less state intervention. This reorientation will help these countries and at the same time it will help rationalize scarce international public funds.

SOME INTERIM CONCLUSIONS

Since 1989, Europe has been experiencing a series of historical changes which all create a demand for huge private and public funds. Germany is in the centre of this process of transformation with all its strains. Now, after a period of less than three years, the strategy of economic reunification and its first results can be evaluated.

The decision in favour of a sudden monetary and economic union was necessary due to political conditions. The strategy of an exchange-rate union proved to be politically unfeasible and whether such a strategy would have lowered the adjustment costs is questionable (Willgerodt 1991).

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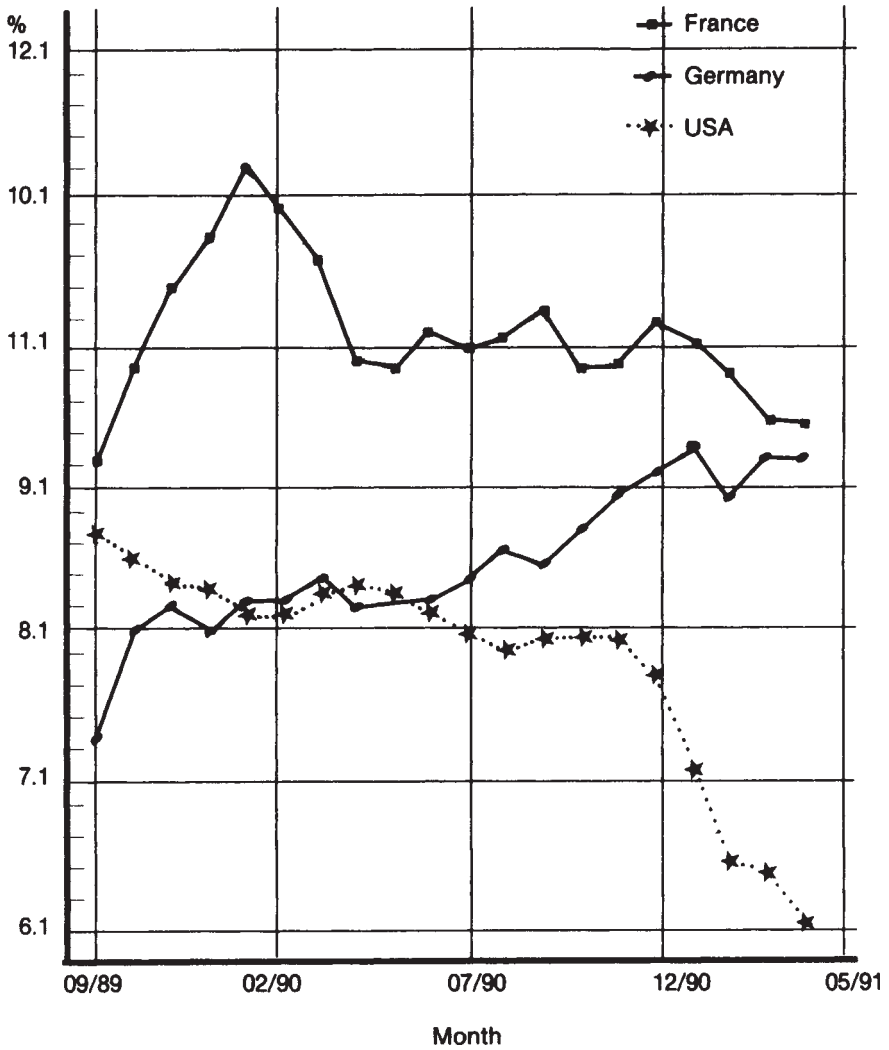


Figure 3.1 Short-term interest rates (nominal) September 1989–April

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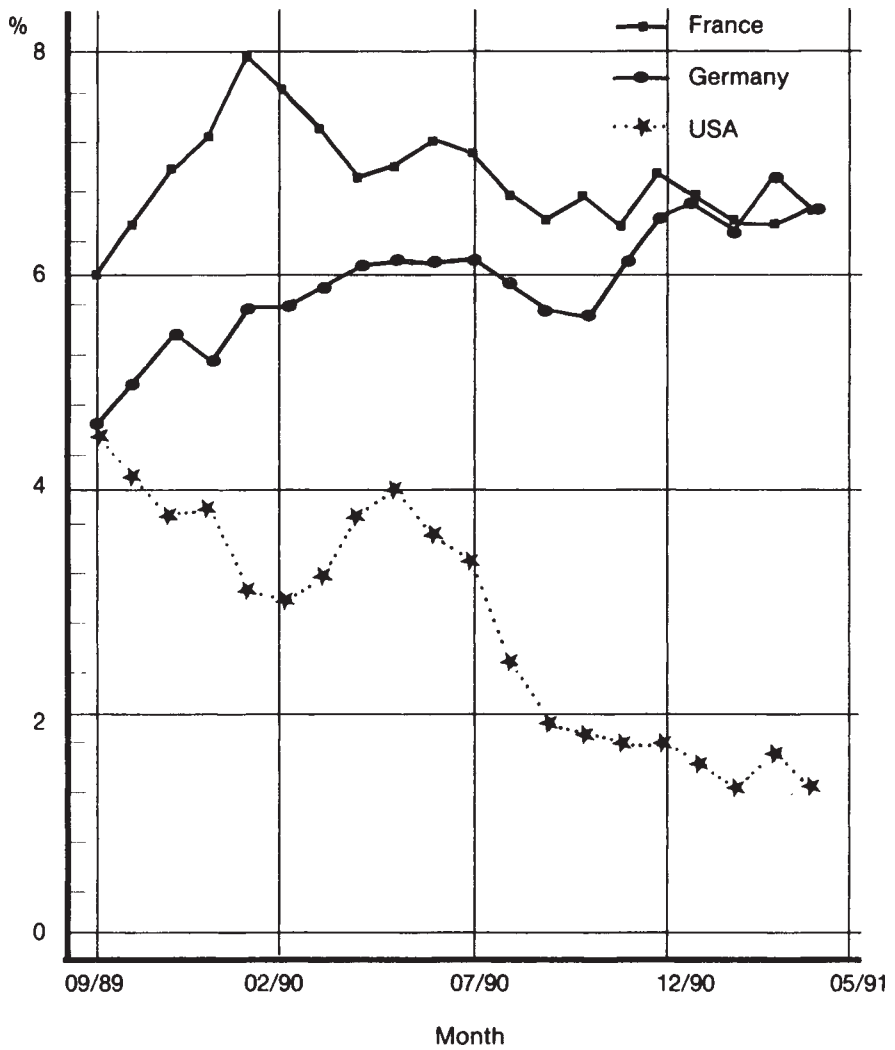


Figure 3.2 Short-term interest rates (real) September 1989–April 1991

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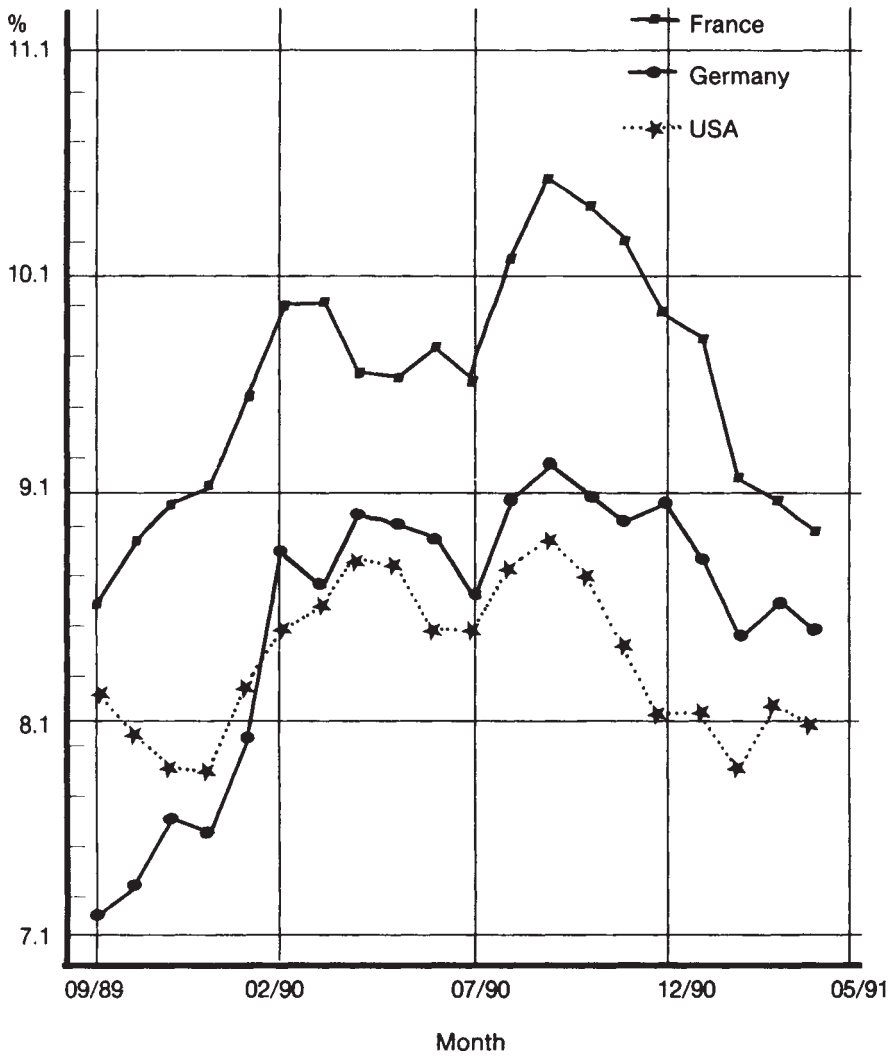


Figure 3.3 Long-term interest rates (nominal) September 1989–April 1991

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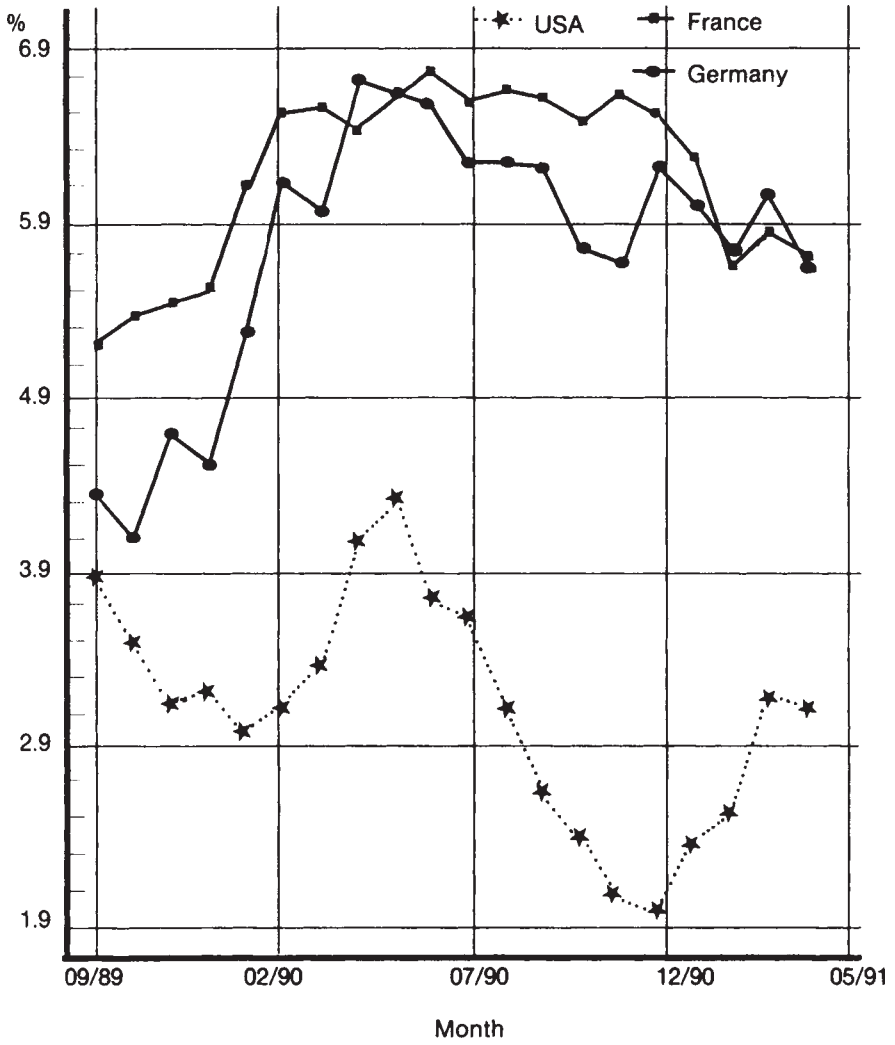


Figure 3.4 Long-term interest rates (real) September 1989–April 1991

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Table 3.11 Development of the Federal Republic of Germany's trade balances, including transactions of the former German Democratic Republic, with selected countries or groups of countries, 1989–June 1991 in DM billions (imports c.i.f., exports f.o.b.)

<i>Countries</i>	<i>1989</i>	<i>1990</i>	<i>1990 Jan.–June</i>	<i>1991 Jan.–June</i>	<i>Total swing Jan. 1989 to June 1991</i>
European Community, total	+94.0	+64.2	+43.2	+10.4	-83.6
Belgium/Lux-emburg	+11.0	+8.1	+5.2	+0.6	-10.4
France	+23.9	+18.8	+11.6	+3.5	-20.4
United Kingdom	+24.7	+17.8	+10.9	+4.4	-20.3
Italy	+14.6	+8.2	+6.6	+0.6	-14.0
Netherlands	+2.5	-1.6	-0.8	-3.7	-6.2
Portugal	+1.6	+1.2	+0.6	+1.2	-0.4
Spain	+11.3	+9.8	+5.5	+4.1	-7.2
Canada	+0.8	+0.2	+0.2	-0.01	-0.8
United States	+8.4	+9.9	+4.7	-1.94	-10.3
Japan	-16.9	-15.5	+6.1	-11.8	+5.1
All countries	+134.6	+105.4	+64.8	+4.9	-129.7

Source: Statistical supplements to the monthly reports of the Deutsche Bundesbank, Series 3, balance-of-payments statistics, October 1991

The result of the shock therapy is that Germany has a split economic performance. West Germany's economy continued to grow through 1991, whereas the eastern German economy is in a transformation crisis. Manufacturing has decreased to a half of its output potential in 1985. The first signs of a recovery can be seen in the manufacturing and construction sectors. The dismissal of employees has not stopped yet. The labour force has halved. A huge effort has started to introduce incentives for private investments, to cushion unemployment, to offer retraining facilities, to improve public administration, to privatize the enterprises, and to enforce the western German legal system. The fiscal deficits of the federal government reached the greatest amount ever. During 1991 about two-thirds of all private and public expenditures in eastern Germany were provided by the public authorities of western Germany.

The transition will take more time than estimated in 1990. There still exist numerous impediments to a full deployment of the market forces: property rights, environmental damage, lack of capitalist spirit, deficiencies in public administration, excessive increases in wages and incomes. A realistic forecast for the time period till the beginning of a sustainable recovery which will cause a steep net increase in employment may be 1994 at the latest.

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Table 3.12 Changes (%) in the Federal Republic of Germany's foreign trade, including the transactions of the former German Democratic Republic, with selected countries or groups of countries, July 1989-June 1991

<i>Countries</i>	<i>Imports</i>	<i>Exports</i>
European Community, total	+23.0	+ 8.5
Belgium/Luxemburg	+35.6	+13.0
Denmark	+29.6	+ 9.5
France	+20.6	+10.2
Italy	+24.3	+ 9.6
Netherlands	+13.1	+11.0
Portugal	+22.0	+25.6
Spain	+34.0	+18.2
United Kingdom	+24.5	- 7.1
Austria	+18.5	+15.9
Norway	+11.9	+12.7
Sweden	+26.6	- 0.2
Switzerland	+2.2	+ 1.9
Canada	+41.1	+ 9.0
Japan	+27.4	+ 0.5
United States	+54.8	-16.3
LDCs without OPEC	+24.2	+23.2
All countries	+26.0	+ 4.2

Source: Statistical supplements to the monthly reports of the Deutsche Bundesbank, Series 3, balance-of-payment statistics, October 1991.

Table 3.13 Development of the Federal Republic of Germany's imports (c.i.f.) by main categories of goods in DM billions 1989-91

	<i>Food</i>	<i>Raw materials and semi- finished goods</i>	<i>Finished goods</i>	<i>Goods returned and replaced</i>	<i>Total</i>
1990					
1st quarter	14.0 ₁	23.5	92.7	1.8	132.0
		22.2	92.2	1.9	130.9
3rd quarter	14.1	22.5	94.1	2.0	132.7
4th quarter	16.5	27.5	109.0	2.0	154.9
1991					
1st quarter	16.2 ¹	24.5 ¹	113.2 ¹	1.9 ¹	155.8 ¹
	16.3 ²	26.3 ²	114.5 ²	1.9 ²	159.0 ²
2nd quarter	17.2 ¹	24.5 ¹	117.7 ¹	2.0 ¹	161.4 ¹
	17.4 ²	25.8 ²	118.9 ²	2.0 ²	164.1 ²

¹ Excluding the transactions of the former German Democratic Republic.

² Including the transactions of the former German Democratic Republic.

Source: Statistical supplements to the monthly reports of the Deutsche Bundesbank, Series 3, balance-of-payment statistics, October 1991.

The international adjustment started under nearly ideal conditions and worked like a textbook model: almost no inflationary movements as a result of the introduction of the deutschmark in eastern Germany; an increase in real interest rates; a slight revaluation of the deutschmark that helped shift the goods and capital to eastern Germany. The balances of current account changed from a huge surplus of DM 105 billion in 1989 to a considerable deficit of about DM 30 billion in 1991. The German economy became the locomotive of the European states. Its troubles (inflation, wage and cost increases) are home made: the rate of expansion of money was too high in the second half of 1991, leading to the 'rescue decision' of the Bundesbank in December 1991. The wage-increase demands of the unions for 1992 are beyond all economic feasibility and rationality and may impede the economic performance in western Germany and the recovery in eastern Germany as well.

NOTES

- 1 The Council of Economic Advisers pleaded in a letter to Chancellor H.Kohl on 9 February 1990 not to use the monetary union as an initial step. Letter reprinted in Nölling (1990:67).

The president of the Kiel Institute of World Economics, Horst Siebert, warned that a monetary union is not a charm; it needs time and demands the loss of the exchange rate as an adjustment variable: See *Frankfurter Allgemeine Zeitung*, 17 February 1990.

The chairman of the Scientific Advisory Council to the Federal Ministry of Economics, C.Watrin, in January 1990 compared the introduction of a monetary union with climbing the north face of the Eiger in winter.

See also Kronberger Kreis (1990a and 1990b).

- 2 Schäfer (1990).
- 3 The legal allowance for GDR travellers was DM 15 per year. To give these citizens more freedom to travel and consume and thus to persuade them to remain living in East Germany, the FRG government offered immediately after the opening of the Wall (9 November 1989) 'welcome money' (*Begrüßungsgeld*) of DM 100 per person per year. Several municipalities added grants of different amounts to visitors to their townships. Already by 5 December 1989, the two German governments had agreed to establish a 'travel-currency fund' (*Reisedevisenfonds*) which would replace the *Begrüßungsgeld* on 1 January 1990. Parts of this agreement were: the mandatory exchange of DM 25 for German visitors to the GDR was lifted as well as the obligatory visa. All citizens of the GDR could obtain DM 200 by exchanging their currency as follows: DM 100 (children up to 14 years DM 50) at a rate of 1:1; the second DM 100 (children up to 14 years DM 50) at a rate of 1:5. The average 'exchange rate' for this procedure was 1:3, an exchange rate which then determined the exchange market during the first months of 1990. The *Reisedevisenfonds* was abolished with the full introduction of the deutschmark on 1 July 1990. The fund was used only during the two first months (DM 2.17 billion) and vanished when the option of a monetary union and a more favourable conversion rate began taking shape. (Deutsche Bundesbank July 1990: annex 1.)

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- 4 The main problems were housing and employment. The inflow of individuals from the GDR from October 1989 to January 1990 amounted to some 300,000; the inflow then constantly diminished.

1989	October	57,024
	November	133,429
	December	43,221
1990	January	73,729
	February	63,893
	March	46,241
	April	24,615
	May	19,217
	June	10,689

Since the establishment of the currency union in July 1990, migration has been treated as internal movements. Since July 1990 the number has been around 10,000 per month. (Bundesanstalt für Arbeit 1991: table 5.)

- 5 Dohnanyi, K.v. 'Die Einheit ist vor allem ein soziales Problem', *Stern*, 52, 21 December 1989:31. He was convinced that a monetary union would work after a 1:5 depreciation of the mark.
- 6 The speaker of the SPD for budgetary affairs, Mrs Matthäus-Maier, published a proposal for a full monetary union. She proposed a reduction of the monetary overhang at a rate of 1:5. (Matthäus-Maier, I. 'Signal zum Bleiben', *Die Zeit*, 19 January 1990:23.)
- 7 The following examples may clarify this hectic period. 2 February 1990: the Minister of Finance announced, that it might be necessary to introduce the deutschmark directly as legal tender. 6 February 1990: the Minister of Economy presented a three-stage plan aimed at a longer transitional period and an exchange-rate union with a monetary union only as a long-term option. 6 February 1990: the chairman of the parties forming the coalition, Kohl, Waigel and Lambsdorff, decided to propose a monetary union. 7 February 1990: the cabinet approved this proposal, which then was formally published on 13 February 1990. The government did not consult the Deutsche Bundesbank and surprised its president, Pöhl. He had a conversation with Chancellor Kohl and the Minister of Finance, Waigel, on 5 February, receiving no hint of the proposal for a monetary union that these two politicians launched the next day. President Pöhl attended the meeting of the cabinet on 7 February accepting the political decision, but expressed his opinion in a special press conference on 9 February in Bonn: the monetary union is premature; it is only acceptable as part of reunification. He demanded the full responsibility for the monetary policy be given to the Deutsche Bundesbank. (Nölling 1991:12ff.)
- 8 The Deutsche Bundesbank preferred a multiple-stage plan and established an internal working group in November 1989. In January 1990, the Bundesbank started considering a one-step monetary union, provided that the GDR would agree to transfer all monetary authority to the Bundesbank. (Tietmeyer 1992.)
- 9 For more details about the economic system of the GDR, its structures and its performance see Lipschitz and McDonald (1990); OECD (1990/1); Akerlof *et al.* (1991), and the sources quoted there; Council of Economic Advisers (1990).
- 10 See note 4.

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- 11 The market rate developed in 1990 as follows (monthly average of the bid and ask rate):

January	1:7.0
February	1:5.7
March	1:5.0
April	1:4.0
May	1:3.6
June	1:2.9

The first official exchange rate of 1:3 was introduced by the government of the GDR for Western visitors on 2 January 1990. This exchange rate corresponded to the 'mixed' exchange rate of the 'travel-currency fund' introduced by both German governments, which offered deutschmarks to the citizens of East Germany from 2 January 1990. See Deutsche Bundesbank (1990: annexes 1 and 2).

- 12 For more details about the theory and performance of the economic order referred to as the 'social-market economy' see Stützel *et al.* (1982).
- 13 These elements are: competition, freedom of contracting, fostering improved working and living conditions, private property, social insurance, welfare aid, price stability, responsibility towards the environment.

The preamble of the treaty emphasizes (own translation): 'In the common will to introduce the social-market economy in the German Democratic Republic, too, as the basis for further economic and social development with a social balance and a welfare insurance and with the responsibility towards the environment as a means of permanently improving the living and working conditions of the people.'

In article 1 both parties declare: 'The basis of the economic union is the social market economy as the common economic order of both contracting parties.'

- 14 Variant A was the proposal of the GDR. It recommended a rate of 2:1 for all credits and liabilities of enterprises and a rate of 1:1 for all private and public savings and cash. Variant B reduced the rate of 1:1 to savings of M 2,000 per capita.

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WAGES, PRODUCTIVITY AND EMPLOYMENT IN EASTERN GERMANY

Klaus-Dieter Schmidt and Birgit Sander

The economic consequences of merging both Germanies are turning out to be far more dramatic than even sceptics may have feared. The volume of goods and services produced in the former German Democratic Republic (GDR) came down to two-thirds of the previous level and until now one-third of the working population has lost its job. The deplorable state of eastern Germany's economy reflects the core problem of all former socialist planned economies—which proved incapable of efficiently allocating productive resources. Hence productivity and wages had been low—the wage level in the former GDR only reached one-third of the West German level. Any two economies to be merged could have hardly been more different from each other: on the one hand there is an internationally competitive and prosperous economy with a high standard of living, and on the other hand an economy whose specialization ran counter to its competitive advantages and whose capital stock, characterized by outdated technologies, was so obsolete that it was not even possible to meet basic needs satisfactorily.

The challenge ahead is to close this productivity gap as soon as possible. Ordinary people in the East are demanding the same prosperity as their Western compatriots. They are not willing to accept that for a long period a wage gap between eastern and western Germany has to remain much larger than wage differentials between poorer and richer regions within West Germany which do not exceed—in real terms—10 per cent. But the trouble is that every percentage point of wage increase which is not matched by increasing productivity will unavoidably cost additional jobs.

THE KEY ISSUES: GEMSU, THE WAGE EXPLOSION AND THE EMPLOYMENT DISASTER

Economic unification of the two Germanies was instituted by the Treaty on German Economic, Monetary and Social Union (GEMSU) of 1 July

1990. Against manifold economic advice, unification has not been generated by allowing for a several-year period of transition during which eastern productivity and wages could have been brought up to western levels.¹ Rather, policymakers opposed any gradualist strategy. They decided to effect economic unification in one big leap, to open the borders and to immediately establish a comprehensive market-type economic system in East Germany. Certainly they did well to do so. Unlike Poland, Czechoslovakia or Hungary, where political and cultural borderlines prevent workers from emigrating and will doom them to remain poorly paid for years, East Germany has not had the option of holding millions of skilled craftsmen, technicians and doctors in their jobs at low wages. A nurse in East Berlin, for example, can easily find a hospital nearby in West Berlin which offers much better pay for the same job. Politicians in the West were facing the threat of a mass exodus from the East, which would have destabilized the political and economic order in the former GDR.

The most important decision was to introduce the deutschmark into East Germany. The idea was to bring good money to the east in order to prevent the East Germans from moving towards good-western-money. All prices and all contracts on current income were converted from (east) marks into deutschmarks. Since then, firms in East Germany have had to make their wage payments in a currency they have to earn under the rules of fierce international competition. The problem at hand was to determine an adequate conversion rate for wages previously paid in East German marks (M). From an economic point of view it would have been advisable to delegate the decision to the market: firms could have negotiated wage agreements with their workers according to their competitiveness. But in fact, there was strong political and psychological pressure to fix a conversion rate of 1:1. After the fall of the Berlin Wall, most East Germans had the opportunity to compare their own poor living conditions with those of people in the West. With their enthusiastic vote to reunify the two Germanies they were indeed vigorously voting for a rapid improvement in living conditions.

At first sight there was some reason for a rate of 1:1. In 1989 both productivity and wages per working hour, assuming an exchange rate of 1:1 for the two currencies, came to no more than roughly one-third of the West German level (Figure 4.1). However, this relation reflected the economic state of affairs under the conditions of autarky where people had only limited access to western goods and where enterprises were not under the competitive pressure of the world markets. After converting wages at a rate of 1:1, most products produced by East German firms were no longer marketable. Put differently, under the conditions of international competition, the average DM wages would have had to have been reduced to a level much below the previous M wages. Therefore,

most economists would have preferred a rate of 1:2 or even 1:3. They argued that opening up the East German economy to the world market at a conversion rate of 1:1 and existing wages, significant parts of the East German industry would have to close down immediately. But with a conversion rate significantly below 1:1, which would have been necessary to render East German firms viable, eastern wages would have made up for even less than one-third of West German wages. In the case of conversion at a rate of 1:2 the gap between relative and nominal wages would have been 1:6. West German wages then would have had a magnetic effect on mobile East German labourers to emigrate westwards.²

While a conversion rate of 1:1 reflected—at best—the relative strength of East German firms producing local goods, it was far from the rate at which exports took place. Data on domestic-resource costs in East German marks suggest that this rate was significantly higher than 1:1. Domestic-resource costs are the amount of domestic resources which have to be spent in order to earn one deutschmark with exports of eastern goods to western markets. In 1989, for the average of 116 industrial *Kombinate*, domestic-resource costs, the so-called *Richtungskoeffizient*, were at 3.73. Thus, only a modest conversion rate would have prevented the collapse of firms in the tradeable sector.

Though the competitiveness of East German firms has deteriorated not only because of an overly high conversion rate but also because of fierce distribution conflicts leading to exploding real-wage costs. Even before the establishment of the GEMSU, in anticipation of the favourable terms of conversion, hourly wages had been raised significantly. In the second quarter of 1990 they already exceeded the level of the fourth quarter of 1989 by 20 per cent. After abandoning central planning and dissolving the *Kombinate* (the co-operative groupings of works in the former GDR), the old management now became relatively independent. Without being responsible for financial consequences, i.e. losses, managers used this as an opportunity to raise both their own salaries and the workers' wages. In wage bargaining there was virtually nobody who represented the employers' interests.

Now the train has left the station and it looks as if nobody is able to stop it. Wage increases in eastern Germany are now entirely unrelated to the pace with which productivity is growing. In the fourth quarter of 1991 hourly wages were already approximately 75 per cent higher than in the second quarter of 1990, when the GEMSU was established. Thus, the gap between the eastern and western wage level is closing rapidly and in the labour market the 'Law of One Price' is coming into force much faster than most experts have expected. In some important branches such as metallurgy, electrical engineering or retail trading, phased plans have been designed which are supposed to lead to equal pay and equal working conditions within three to four years.

The other side of the coin is a speedy loss of jobs. The wage-

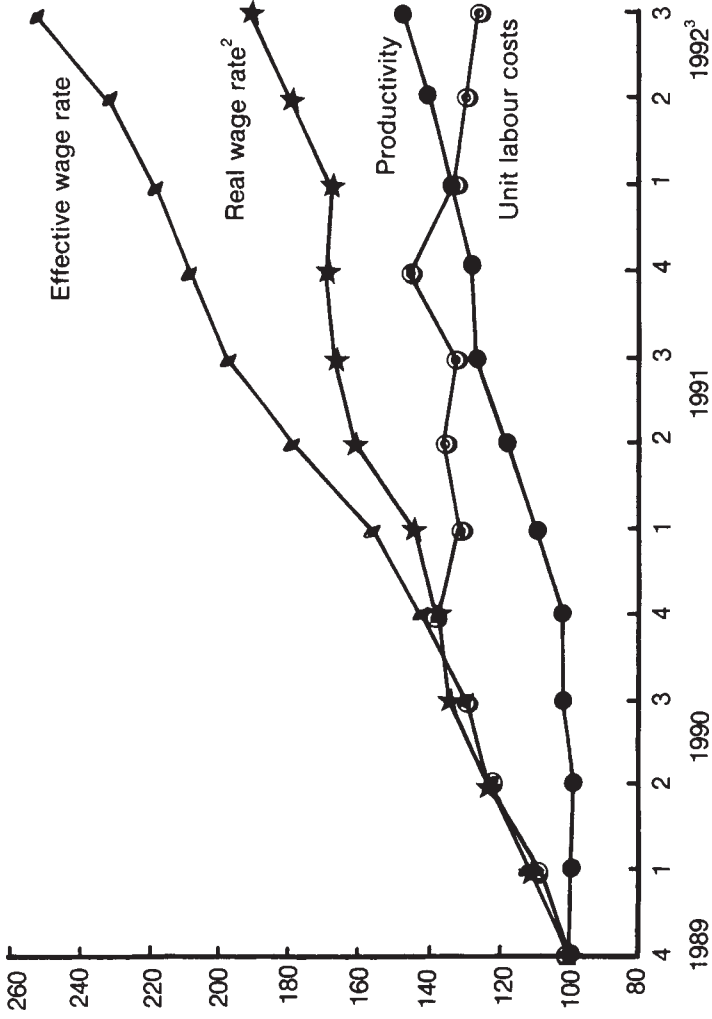


Figure 4.1 Wages, productivity and unit labour costs in East Germany 1989-92 (1st quarter of 1990=100)¹

¹ Moving 3-quarter averages.
² Real wage rate/productivity.
³ Forecast.

Source: Deutsches Institut für Wirtschaftsforschung, Berlin.

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Table 4.1 Registered and hidden unemployment in East Germany in 1000s.

Year and quarter	Total ¹	Registered unemployed	Short-time workers	Persons in		Early retirement
				Pro-gramme work	Retrain-ing ²	
1990 1	.	57	—	—	—	—
2	.	83	—	—	—	235
3	.	309	1,295	—	20	270
4	1,720	557	1,736	12	35	315
1991 1	2,295	757	1,926	41	60	400
2	2,640	835	1,962	101	95	509
3	2,780	1,023	1,464	234	130	564
4 ³	2,910	1,050	1,200	360	155	665

¹ Registered unemployed, short-time workers (adjusted by working hours), persons on programmes, retraining, early retirement.

² Full-time only.

³ Estimated.

Source: Bundesanstalt für Arbeit.

productivity gap defines that rate of employment reduction which is necessary to make eastern German firms competitive. Due to the wage-cost explosion they do not have the option of maintaining jobs that otherwise, i.e. with lower wages, would at least temporarily have been profitable. Trade unions do not fully consider the dependent relationship between wages and employment. Especially they disregard the trade-off between both, which—at any given level of productivity— forces the choice between higher wages with lower employment or lower wages with higher employment. Trade unions refuse the latter option. They argue that keeping wages low will first and foremost feed into enterprises' profits rather than make additional employment profitable.

In fact, the situation on the labour market has worsened dramatically—since the establishment of the GEMSU more than 3 million workers have lost their jobs (Table 4.1). The figure for the registered unemployed conceals the real extent of unemployment. Short-time workers, for instance, many of them with zero hours of working time, are counted as employed. Equally, persons in public-works programme and former civil servants suspended while awaiting political investigation appear statistically as employed. Others do not appear as unemployed either because they are 'parked' outside the active labour force, i.e. they have been sent into retraining programmes, or because they have been sent into early retirement. The real rate of unemployment can be estimated to be close to 30 per cent. Without the massive government support currently given to producers it would be even higher.

In the first instance the dramatic decline of employment is nothing but a reflection of the backwardness of a former socialist planned economy—backward with respect to production techniques, product quality and specialization. In all sectors of the economy there was enormous overstaffing. Although the former GDR economy seemingly suffered a shortage of labour, it actually experienced a considerable surplus: labour participation of women of working age was close to 90 per cent, higher than in every Western industrialized economy. Notwithstanding these qualifications, the wage-cost explosion undoubtedly accelerated the economic decline. It can be argued that with a more modest growth of wages the opportunities for—at least temporarily—preserving old jobs would have been much better. Firms would have won time and many of them would have had the chance to install new technologies, to replace old products with new ones and thus might have survived. Now, however, many of the existing firms are forced to give up their old production lines—though without being able to substitute new ones. Last but not least, lower wages would have been conducive to the creation of new, small businesses and local firms and to the expansion of employment there.

THE PROSPECTS: TWO-DIGIT PRODUCTIVITY GAPS WITH ZERO WAGE GAPS?

Wage policy in eastern Germany is caught in the following dilemma: on the one hand, only slow wage increases accompanied by fast productivity increases would stop or decelerate the collapse of firms and the loss of jobs—at least temporarily. Firms themselves could control the time they require for restructuring. On the other hand, in a relatively homogeneous and small economy like the German one wage differentials in the range of 50 per cent cannot persist for long. Such large differentials are bound to be eroded by the movement of east German workers to the West.

In the theoretical model of a free-market economy the narrowing of wage differentials would be achieved by westward migration of eastern labour as well as by eastward movement of western capital: the eastern labour supply would rapidly undercut high western wages and bring them down, while western capital would push productivity growth in the east and would allow eastern wages to rise. But as a matter of fact these mechanisms do not work in reality:

It is no surprise to find the ‘Law of One Price’ violated in the highly regulated German labour market, where the downward flexibility of wages is very low. Recent wage negotiations in western Germany have not resulted in lower wage increases for the already prosperous western workers. Rather the contrary is true. Wage

increases in the west have even accelerated. And automatically high wage increases in the west are being followed by high wage increases in the east. Trade unions have refused a wage strategy that assumes responsibility for the eastern level of employment. And there are not even modest signs that their position is beginning to soften.

Less surprisingly even, the flows of private western capital to the east have been disappointingly weak until now, according to the requirements. There are still a number of severe obstacles for investors. Perhaps the single most important one is the low speed of privatization; it has proved to be extremely difficult to find workable solutions for the ownership problem. Further important obstacles are bottlenecks in the administrative body.

In reality thus, things are going worse than they might have done otherwise. The wage gap between east and west is closing rapidly while closing the productivity gap needs time. Consequently, the prospects for many eastern German firms will remain gloomy. They will be under permanent pressure to economize costs by laying off labour. In this respect the transformation in eastern Germany is quite different from that in the other post-socialist economies. In eastern Germany real wages are rising steeply, while employment is going down dramatically. In Poland, Czechoslovakia or Hungary, however, real wages are decreasing, which enables firms to maintain employment on a relatively high level.³

As long as negotiated wages are that far above the equilibrium wage level, unemployment in eastern Germany will be much higher than in western Germany. And even worse, unemployment will concentrate on certain groups—such as women, and elderly and disabled persons—who are not mobile enough to emigrate or to commute. It is doubtful whether east-west wage differentials matching the presently existing differentials in productivity and scarcity of labour can be agreed upon in collective wage bargaining. The crucial question is: what can policymakers do in this intricate situation?

THE POLICY OPTIONS: A CASE FOR WAGE SUBSIDIES?

A conceivable way to bridge the wage-productivity gap is to pay support in form of wage subsidies. Proponents of wage-subsidy proposals argue that it would be better to finance wages for productive work rather than to pay unemployment benefits. There are growing numbers of economists in Germany who favour public assistance in order to make eastern German labour competitive. Ailing industries and firms are often

Table 4.2 Employment trends in East Germany (1000s) by year and quarter

	1989				1990				1991			
	1	2	3	4	1	2	3	4	1	2	3	4
Total	9,754	9,565	9,125	8,661	8,037	7,582	7,223	6,828	6,480			
Agricultural	956	940	840	775	720	660	580	500	400			
Mining and manufacturing	3,613	3,546	3,385	3,070	2,750	2,452	2,328	2,093	1,910			
Construction	588	571	481	465	442	403	403	420	465			
Services	2,126	2,044	1,970	1,946	1,860	1,790	1,760	1,720	1,700			
Public sector ¹	2,471	2,464	2,449	2,405	2,265	2,277	2,152	2,095	2,005			
Change (compared with 1st quarter of 1989)												
Total		-189	-629	-1,093	-1,717	-2,172	-2,531	-2,925	-3,274			
Registered unemployment		-57	-83	-309	-557	-787	-835	-1,023	-1,050			
Emigration		-129	-166	-218	-299	-381	-439	-475	-509			
Commuting		-16	-30	-101	-170	-227	-286	-336	-386			
Early retirement		-	-235	-270	-315	-400	-509	-564	-665			

¹ Including persons in 'waiting positions', awaiting political investigation.
Source: Statistisches Bundesamt; Bundesanstalt für Arbeit; own estimates.

regionally concentrated and employment problems are exerting equally strong political pressure for public support.

Discussions on wage-subsidy proposals have been initiated by Akerlof *et al.* (1991) who calculated that—measured by domestic resource costs—only 8 per cent of the industrial workforce was employed profitably when the GEMSU was introduced in July 1990. With a 75-per-cent wage subsidy, they argued, the share of viable firms could be raised to such an extent that profitable employment would reach 77 per cent of eastern Germany's industrial workforce. This wage subsidy could be fully financed by saving benefit payments for unemployed and short-time workers and by the proceeds resulting from accelerated privatization. The wage subsidy should diminish and finally disappear as and when the productivity of eastern German industries increases, and because eastern German wages will be approaching the level of western German wages. Therefore, the subsidy scheme of Akerlof *et al.* has been labelled 'Self-Eliminating Flexible Employment Bonuses' (SEFEB).

The Akerlof proposal has recently been taken up by one of the five leading economic institutes, the *Deutsches Institut für Wirtschaftsforschung* (DIW, German Institute of Economic Research), Berlin. The DIW (1991) has argued that temporary wage subsidies are the necessary complement to capital subsidies, which in eastern Germany are granted on a large scale.⁴ The crucial point is that investments in new production need time to create profitable employment opportunities and to translate into labour-market demand. The DIW considers wage subsidies to existing enterprises to be a means to bridge this time. It proposes granting degressive wage subsidies of initially 50 per cent of tariff wages over a period of three to five years. The wage subsidy should be made contingent on the contribution of private investors. Their readiness to participate in risk bearing should indicate that the investment under consideration will be profitable.

Although wage-subsidy proposals are welcomed by trade unions, popular among economic policymakers and increasingly accepted by economists, there are a lot of objections to them. Exposing these proposals to critical examination reveals at least three major deficiencies of wage subsidies as an instrument for supporting the adjustment process. Wage subsidies

- discriminate against viable and competitive enterprises;
- do not give adequate incentives for adjustment, thus introducing allocative distortions, causing inefficient structures of production;
- can easily degenerate into a self-perpetuating mechanism that leads to permanent intervention into the labour market.

These three objections should be subjected to closer scrutiny.

First, wage subsidies discriminate—though not enough. Subsidies granted

to enterprises whose productivity is too low to be competitive at the existing wage rate discriminate against non-subsidized enterprises that are already productive enough to pay market wages. This especially hurts small and newly created enterprises. Among the supported ones a subsidy instrument is not able to discriminate between those that have a chance to become competitive by restructuring and those that do not have such a chance. Government bodies lack the necessary knowledge to make such a distinction administratively and in advance. Further, uniformly granted subsidies do not match the specific needs of individual enterprises. For most enterprises, the subsidy volume will be either too high or too long and the period of support will be either too long or too short.

Second, wage subsidies are afflicted with incentive problems. They—passively—reduce the pressure for adjustment and restructuring rather than—actively—giving sufficiently strong incentives for investment and innovation. Employees at non-profitable subsidized working places lack the incentive to retrain and/or to look for new, profitable jobs. Thus, wage subsidies pretend to buy time but ultimately may turn out to waste time: they are delaying the process of adjustment rather than accelerating it. Further, reducing labour costs by wage subsidies—in the absence of capital subsidies—distorts the production structure, as it favours investment into relatively labour-intensive production. This represents an allocative distortion and threatens the future competitiveness of the subsidized enterprises when the subsidy payments are discontinued. Taken together, under the perspective of long-term welfare considerations, the instrument of wage subsidies is not adequate to efficiently or even effectively promote the adjustment process.

Third, wage subsidies open up the way for moral hazard in the sense of claiming and pushing through overly high wage increases, as the responsibility for full employment shifts from the market participants, namely employers and trade unions, to the government. If the government is left with the responsibility for full or high employment while restructuring advances only slowly, wage subsidies will degenerate into an instrument of permanent intervention. The great number of measures already supporting employment in eastern Germany, as well as the increase in producer subsidies and unemployment benefits, justify these concerns. Government assistance enables and even encourages both union and employers to pursue a wage policy that completely ignores the need for relatively low wages in order to render the eastern German economy competitive.

In order to solve the eastern German labour market problems, both changes in the behaviour of labour-market participants and changes in the design of the labour-market constitution should be envisaged. Wage policy should undergo a fundamental reorientation. Since the establishment of the GEMSU, collective bargaining has mainly been

directed towards narrowing the wage gap between eastern and western Germany rather than keeping employment as profitable as possible.

Basic guidelines for a wage policy supporting restructuring as well as allowing a high degree of employment to be regained are that wage increases have to be in line with the productivity increases of eastern German enterprises and with relative scarcities on the eastern German labour market. The first criterion holds for cautious, moderate overall increases of real wages, while the second one calls for intensified wage differentiation with respect to regions, sectors, enterprises and qualification (Donges 1991). The eastern German labour market is far from being uniform—there is not only a surplus but at the same time a shortage of labour: unskilled workers, for example, are plentiful while skilled workers are scarce. Obviously, this pattern requires wage differentiation with respect to profession and industry. According to these arguments, the *Sachverständigenrat zur Begutachtung der gesamtwirtschaftlichen Entwicklung* (Council of Economic Advisers) (1991) has proposed increasing eastern German real wages over a period of three to five years at the same pace as real-wages increase in western Germany. With an identical real-wage increase in eastern and western Germany, the real-wage gap will remain constant in the near future rather than narrow or disappear. The advantage of this strategy is that it relieves the strain that wage costs are exerting on enterprises' profits, and thus

- strengthens investment;
- allows the dismissal of employees to be slowed;
- gives leeway for wage differentiation, especially for wage payments that exceed the collectively agreed wages faster productivity increases make possible.

Wage differentiation that leads to enterprise-specific wage agreements does not easily fit into the German system of collective wage agreements. Rather, such a proposal calls for a reform of collective bargaining as well as for deregulating and liberalizing the labour market. In particular, measures such as:

- abolishing the state monopoly in placement services;
- giving up the general binding nature of collective agreements;
- reducing long-term protection against dismissal in the context of enterprise privatization;
- enhancing the possibilities for fixed-term contracts and part-time work

could help to bring labour supply and labour demand better into line with each other.

The only way to solve eastern German employment problems quickly is to reform the existing system and policy of collective bargaining. The

labour market should be regarded as a normal, market-oriented subsystem of a competitive economy with individual freedom of contract and wage flexibility as its characteristic features. Why should eastern German workers not be allowed to choose between having a job that is temporarily lower paid than in the west or having no job at all?

NOTES

- 1 In the months before the GEMSU it was argued that a step-by-step economic unification together with separate currencies in both parts of Germany would be preferable to the option of immediately establishing a currency union. In this case, it has been argued, East Germany could use the exchange rate as a shock-absorber, first, to protect domestic producers against international competition and, second, to improve productivity and to make firms competitive over time (Siebert 1990). An excessively high exchange rate though would have been nothing else but a substitute for a soft budget constraint allowing firms to become competitive without adjusting (Schatz and Schmidt 1991). Furthermore, it would not have stopped emigration of qualified labour to the West. However, the idea of a transitional process was dead at the latest on 3 October 1990, when the two Germanies were politically united.
- 2 There was also a psychological barrier against a conversion rate diverging from 1:1. In East and West Germany the name of the currency unit was 'mark'. Although the purchasing powers of the two marks differed, like the Egyptian and the British pounds, many people, especially the elderly who had been adults before Germany was divided after World War II, took it for granted that one mark should be one mark.
- 3 This has mostly been due to the strong devaluation of the currencies of these countries, which has accelerated internal inflation.
- 4 Actually, single investment projects can be supported up to 50 per cent by public funds.

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TAXES AND TRANSFERS: FINANCING GERMAN UNIFICATION

Michael Hüther and Hans-Georg Petersen¹

INTRODUCTORY REMARKS

Since October 1990 Germany has been unified; after a short period of numerous celebrations the sobering phase has begun. The voters in the former German Democratic Republic (GDR) are not only confronted with the bankruptcy of the majority of state-owned firms but also with the total collapse of the former political system. While several theoretically oriented economists are discussing the problems of the transformation period, in reality such a transitional phase does not exist; because of the breakdown of the economic and political system a total reconstruction is necessary and hardly any element of the socialist system will survive.

For the evaluation of the growth potential in eastern Germany it is particularly interesting to have a short look at the quantity and quality of the productive factors. As to the real assets, one short visit is enough to make one aware of the current malaise: nearly half a century of socialism was a phase of incredible wealth destruction. Neither in the area of public infrastructure nor in the sector of state-owned firms did any positive net investment take place; the leading position of the GDR within the socialist hemisphere was due to a comparatively favourable initial endowment with infrastructure and capital resources and continuous subsidies from the West German budget. With the passage of time this public property has been consumed, with the result that today we are confronted with a disastrous situation, especially in the housing sector and in the field of transport (road and railway) and communication.

The economic diagnosis is obvious: the capital demand is tremendous but because of the legal uncertainties, which are principally connected with real estate, the willingness to invest from abroad is only poorly developed. Therefore we are confronted with the typical situation of capital shortage, especially in the case of productive assets.

As to the labour force, the impression was that in the former GDR the

human capital was highly qualified; but this proved to be an illusion. The ideological education as well as the lack of self-responsible behaviour are the main obstacles to a quick realignment and the inter- or intrasectoral mobility of workers. One only has to mention the enormous number of employees in the wide field of security services.

Immediately after World War II, the Federal Republic of Germany (FRG) and the GDR had the same legal status; the socialist government then introduced some more or less substantial changes; however, the tax law in the GDR, for example, remained—with the exception of some slight modifications in the income-tax system—nearly the same as before World War II. In the process of socialization and along with the spreading influence of the Socialist Party a continuous erosion of the legal status could be observed. The political infiltration of the administration has led to the ridiculous situation that in the heart of former Prussia today no competent bureaucracy is available; the fiscal administration, especially at the local level, was nearly totally destroyed. Therefore there is an extreme lack of well-educated fiscal officials, which is the main hindrance to the application of the western German tax law. All this involves far-reaching consequences for tax revenue in eastern Germany.

In the current economic situation, an excess demand for private goods and services can be observed in the former GDR. Because of bad experiences with their own products and shortages experienced in the past, demand today is mainly for goods that are produced abroad. This has led to a real boom phase in western Germany and further economic decline in the east. Summing up, we could say that in the former GDR we are confronted with a serious supply-side problem; on the one hand there is a capital shortage, on the other hand the structure of the labour supply is not in line with labour demand and the latter is much too low. The labour market therefore is in disequilibrium, while the causes for unemployment are more in correspondence with classical than with Keynesian arguments.

Because of the still increasing number of unemployed, there is no time for theoretical reasoning; instead practical solutions are needed. Hence in the following sections we will strive for relevance rather than theoretical elegance and discuss the solutions which can be realized within the public budgets, especially in our tax and transfer system. It is quite obvious that these solutions have to be in accordance with our diagnosis, i.e. that capital formation in eastern Germany has to be promoted.

CONSEQUENCES OF THE UNIFICATION: FEDERAL AND STATE BUDGETS AND THE SOCIAL SECURITY SYSTEM

After our presentation of some introductory impressions about the current political and economic situation within unified Germany we will restrict our arguments to the tax and transfer policy. We start with an

overview of the German-German treaties and the other agreements of 1990. Then we will give a description of the budgetary situation as well as of the medium-term development trends and finally the situation within the social-security system.

The legal regulations for the tax and transfer policy in connection with German unification

The main contents of the first German-German treaty of 18 May 1990 was the introduction of the deutschmark into the former GDR on 1 July 1990. For the creation of a unitary trading and currency area, the GDR was under the obligation to put into force numerous West German statutory provisions (e.g. the Bundesbank law, antitrust law, enterprise law) and the basic rights of economic liberty (contractual liberty, liberty of trade, occupational franchise, liberty of movement, etc.). To achieve the purpose of a social union labour laws (freedom of association and wage autonomy) as well as the social-insurance systems had to be harmonized. Finally, the arrangements for the public budgets and tax system for the second half of 1990 were laid down by that treaty. The budgetary process (fiscal constitution, budget principles) was adapted to West German standards and public deficits restricted. For that purpose subsidies were to be abolished and personnel expenses substantially reduced. Beyond that grants were to be paid out of the federal budget and the social-security system.

With the implementation of the first German-German treaty the basic decision in favour of the introduction of the western German tax and transfer system in the GDR had already been made. Therefore, the second treaty of 1 August 1990 had only to settle the problem of revenue sharing and fiscal equalization in the field of the tax and transfer system. But within the first treaty some commitments of principle had been made which could be put down to agreements between the federal government and the eleven states of the old FRG of 16 May 1990. With these agreements, the contribution of the old West German states to finance German unification was limited to a borrowing obligation of DM 47.5 billion for the period 1990 to 1994 within the German unification fund. The revision of the state-revenue sharing system as well as of the federal grants system had only been planned to 1 January 1995. Up to that date the old fiscal equalization system will be in operation and the inclusion of the five new states of eastern Germany is not intended.

These commitments were the main cornerstones for the second German-German treaty because the federal government had explicitly agreed that the above-mentioned amount should be the only contribution of the old states in western Germany; all further necessary means had to be financed exclusively by the federal government. In principle, the

current fiscal constitution of the FRG (especially the articles 106, 107 of the German Basic Law) was adopted by eastern Germany, with some far reaching but temporary exceptions (e.g. no participation in state-revenue sharing for the new states until the end of 1994, special regulations for the distribution of value-added-tax revenue between the states and the share of the local personal income tax.) With German unification, at the latest on 1 January 1991, the West German tax and transfer system was introduced in the former GDR, whereas an efficient administrative realization of this system has not yet been achieved.

The situation of the public budgets at the turn of the year 1990/1

From the beginning of 1991 the public budgets were in extremely different conditions. Whereas the federal budget and the budgets of the old states were benefiting strongly from the considerably increased tax revenue caused by the demand boom in eastern Germany for western goods and services, the five new states were up against utter bankruptcy. So far, the situation within the public budgets was a reflection of the general economic outlook—here boom, there depression.

The revenue side of the federal budget in 1990 had been influenced by two important factors: on the one hand, we were confronted with revenue losses as a consequence of the 1990 income and corporation tax reform (reducing the marginal rates and increasing basic exemptions); on the other hand, revenue increases caused by the boom just mentioned occurred, especially in the case of the value added tax, due to the additional turnovers made with the 'exports' to the former GDR. The tax reform alone led to revenue losses of DM 32.5 billion.

The development on the expenditure side of the budget was mainly influenced by the necessary intergovernmental grants which had to be paid in favour of the GDR budget. The total amount paid by the federal government reached nearly DM 46 billion; because of a tremendous lack of information about the real situation within the GDR a reliable fiscal planning procedure was nearly impossible. Therefore three supplementary budgets had to be implemented: the first (with DM 5 billion) already in January, the second (with DM 4.75 billion) in May, and the third (with DM 36 billion) in November, because the financial needs in the GDR were much higher than estimated within the second German-German treaty.

The net public debt projected for the federal budget was about DM 67 billion; but in fact this amount will certainly be reduced to DM 49 billion because tax revenues were much higher than expected.² Including the deficits of the states and local government units, a net public debt of about DM 100 billion had to be financed in 1990. Hence the net public debt has more than trebled since 1989. In spite of the fact that in 1990

within the West German states, private savings, amounting to DM 217 billion as well as the saving rate of 14.3 per cent (1989:13.5 per cent) reached a new record level, the capital market came under serious pressure (e.g. the interest rate for mortgages rose by more than two percentage points).

After the introduction of the trading, currency and social union, the former GDR had to present a budget for the second half of 1990, under the conditions formulated within the first German-German treaty. The revenue side was estimated to be DM 72 billion, consisting of DM 18 billion of tax revenue (25 per cent) and DM 46 billion of grants out of the federal budget and the German Unification Fund (63 per cent). The lesser importance of tax revenue is due, on the one hand, to the comparatively low taxable base (especially with regard to the prevailing income tax) and special tax concessions, and on the other hand, to serious administrative problems caused by the lack of well-educated tax officials. The expenditure side was dominated by personnel expenses which were extremely high compared to the old FRG because of the oversized public sector and which, in the short run, were unavoidable. Only DM 6 billion were available for infrastructural investments. With regard to the grants given to the social-insurance system (DM 10 billion) a public deficit of DM 10 billion was within sight, which finally rose to DM 35 billion. In 1990 the GDR received grants amounting to DM 70 billion from the federal budget and the German Unification Fund.

In 1991 the consequences of the process of unification became more obvious: there was only one federal budget, the new states were obliged to exercise an autonomous budgetary process and West German tax law was applied to the full extent. As a basis for an evaluation of future development we have at present only the results of the tax estimation of November 1991, the budget estimates of the federal government for 1992, including the budgetary accounting until 1994,³ and the very preliminary budget work sheets of the states. Because the risks in fiscal planning—apart from the uncertainties caused by foreign affairs—are mainly involved in the budgets of the new states, their situation is put in the centre of the further discussion. The revenue for the new states will result from their own taxes as well as from grants from the German Unification Fund. The resulting picture is presented in detail in Table 5.1.

The low significance of tax revenue is symptomatic for the eastern German states and local authorities, whereas the estimated revenue can only be realized if a fully efficient tax administration is established as soon as possible. Unlike western Germany, the most important elements for taxation are indirect taxes, because income-tax revenue as a consequence of the low taxable base and the identical tax schedule (with only slightly increased basic exemptions) has only a low-yield elasticity; wage

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Table 5.1 Estimated revenue of new eastern German states in DM billions

	1991	1992	1993	1994
Grants from the Unification Fund¹	35.0	28.0	20.0	10.0
60% to the states	21.0	16.8	12.0	6.0
40% to the local authorities	14.0	11.2	8.0	4.0
Tax estimation, December 1990				
Eastern states including East Berlin	12.8	15.7	19.2	23.0
Eastern local authorities	3.3	4.5	5.8	7.1
Tax estimation, May 1991				
Eastern states including East Berlin	14.9	18.5	21.3	24.9
Eastern local authorities	6.4	9.0	10.9	13.1
Tax estimation November 1991²				
Eastern states including East Berlin	19.6	24.0		
Eastern local authorities	2.8	4.5		

¹ In order to improve the financial situation of the east German states and local authorities the federal government is ready to raise the fund by DM 6 billion in 1992, using payments which are at present given to the old states within a special programme (*Strukturhilfe*). But the western German states have objected to this.

² The tax revenue of the eastern states will be DM 5–6 billion higher in 1991/2 than estimated in May. The reason is the regular participation of the eastern states in the value-added-tax revenue introduced in this year.

Source: 'Gesetz zu dem Vertrag vom 18.5.1990', Art. 31, § 2, 1; 'Vertrag zur Herstellung der Einheit Deutschlands'; *Finanznachrichten*, 27/91:2.

earners stay mainly untaxed. Hence the potential public debt is limited to DM 14 billion by the first German-German treaty in 1991, the fiscal margin is extremely narrow for the new states and communities and they are all on the verge of bankruptcy as the first proposed budgets have shown. The Deutsches Institut für Wirtschaftsforschung (DIW—German Institute for Economic Research) in Berlin has estimated the budgetary gap within the eastern German budgets at about DM 30 billion based on Statistics of National Account or DM 20 billion based on the financial statistics. On 27 January the Minister of Finance made the following declaration: 'The public deficit in the new states will amount to DM 20 billion.' It has already become obvious that due to the current budgetary process a deficit of DM 50 billion is unavoidable, mainly or exclusively for current expenditures. The planned budget situation within the individual new states in eastern Germany is shown in detail in Table 5.2. Additionally, the local authorities in the east will have had a deficit of about DM 5 billion at the end of 1991. Actually the deficit in eastern Germany would be DM 12 billion (states and local authorities). Obviously they did not have enough time to use the total transfer from the west (DM 172 billion) in a satisfactory financial funding of the

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Table 5.2 Planned budgets for new eastern states (in DM billions)

	<i>Revenue (taxes, charges, grants)</i>	<i>Expenditure</i>	<i>Deficit</i>
Mecklenburg-Pomerania	9.3	11.5	2.2
Brandenburg	12.0	16.4	4.4
Saxony-Anhalt	14.0	16.3	2.3
Thuringia	11.6	14.2	2.6
Saxony	21.8	26.0	4.2
East Berlin	7.8	12.6	4.8
Total	76.5	97.0	20.5

Source: Süddeutsche Zeitung, 31 January 1991.

eastern authorities because the demand for public investment in infrastructure, etc., still exists.

The background for this alarming situation is the obvious lack of ability or willingness to undertake structural changes in the field of public expenditures. For instance, in Brandenburg the obligation originating from the first German-German treaty to reduce personnel expenses and budgetary subsidies has not been realized; similar observations can easily be made in the other new states. However, the hitherto existing measures for financing German unification are inadequate, if the reorganization of the new states is not to be jeopardized. Especially the contribution of the old states to the German Unification Fund is totally unsatisfactory; they are only burdened with interest and discharge payments, increasing from DM 1 billion in 1991 to DM 4.5 billion in 1994.

The situation within the social-insurance system

The process of unification has added a lot of new problems to the already existing ones.⁴ First of all, for all branches of the social-insurance system, the actual revenue from the employers' and employees' contributions in eastern Germany dropped below the revenue estimations previously made. For instance, in July 1990 the contribution payments for pension, health, and unemployment insurance were estimated to total DM 3.3 billion. In fact, the revenue amount was a little under DM 1 billion. With that difference the real problem becomes obvious: the incapability of eastern German administration and payroll accounting to secure the remittance of the insurance contributions. By using massive controls in the following months, revenue was substantially increased, and for 1991 a surplus of DM 1.4 billion was estimated. In the meantime, the pension

payments increased, by 1 January 1991, by 15 per cent and a further increase of 10 per cent is expected for June 1991, so that the estimated surplus will change into a deficit of DM 2 billion for 1991.

Besides the revenue problems one has to face another difficulty on the expenditure side, that of unemployment insurance. The forecasts for the employment situation in the former GDR have become increasingly pessimistic; recently the expected number of unemployed has risen from 1.5 million to 3 million and an even worse development might be possible. Already in the case of 1.8 million unemployed persons and 1.5 million short-time workers (the overwhelming majority of whom work zero hours), a deficit of about DM 26 billion (including a grant of DM 3 billion already paid by the federal budget) will arise, and this amount may only be the lower limit. In the former GDR, an enormous part of the population of working age will be dependent upon benefit payments from unemployment insurance. Of 6.3 million employable persons more than one-third will be unemployed or in short-time work. In the medium term perspective enormous payments out of the public-assistance system will be necessary. Because public-assistance payments—due to the German fiscal equalization system—have to be paid by local authorities, sooner or later those communities will be heavily burdened, thus producing further serious problems.

Another burden for the social-security system arises from the very different level of prosperity in western and eastern Germany, which induces migration to the west (at present more than 15,000 people leave the former GDR every month). The migration of highly qualified and contribution-paying employees to the west of the republic necessarily leads to a total paralysis of the social-insurance system, namely the insurance principle. Here, fiscal equalization payments between the individual social-insurance institutions at local level in eastern and western Germany, as well as between the government departments dealing with pensions, health and unemployment themselves, will become necessary.

PROSPECTS AND LIMITS OF REFORMING THE GERMAN TAX AND TRANSFER SYSTEM

Before individual reform measures are analysed, the requirements for major reform have to be discussed. If we consider the budgetary positions and situations on the eastern German labour market, the reform requirements are more or less obvious. As public debt has reached a critical level, tax rises seem to be unavoidable in the very near future. In principle, two solutions are possible: tax rises effected by increasing the tax-rate structure or by broadening the tax base.

Whereas marginal-rate increases, especially in the case of income taxation, would discourage taxpayers from working harder and would violate our aim of additional capital formation, the second solution would be much more promising. Our existing income-tax base has been heavily eroded over a long period due to influence of numerous interest groups. Therefore a move into the direction of a more comprehensive tax base by reducing old tax concessions would create additional tax revenue, thus strengthening the equity aspects without impairing the efficiency of the system. Not only a broader tax base but also a shift from an income- to an expenditure-tax base is frequently proposed, which again might promote capital formation because private saving remains untaxed under such a tax scheme.

The current malaise in the former GDR cannot be solved by merely creating greater efficiency; the problem of economic justice also has to be taken into consideration, especially with respect to the enormous number of unemployed in the former GDR. With regard to our prevailing social consensus, a public-assistance system with a warranted minimum income is indispensable. For several years we have been discussing a harmonization of our existing tax and transfer schemes, because, isolated as they are, these two systems together are producing absurd redistributive effects not intended by the politicians. Therefore we will call attention to minimum-income proposals (e.g. in the form of a negative income tax) as well as to integrated tax and transfer systems. Another argument for an integrated system is the special impact of unification on social insurance; as we have shown above the insurance principle has been almost totally destroyed. A logical conclusion is the exemption of social insurance from the employment contract and the introduction of a guaranteed minimum income.

To give some empirical impressions with regard to revenue effects and redistributive consequences we will use the method of microsimulation.⁵ The simulation models which have been developed as part of a research project financed by the Volkswagen-Stiftung since fall 1987 are flexible in their design and therefore it is possible to evaluate a wide range of reform proposals.⁶ The models are based on a special notion of incidence: the analysis is limited to the direct effects of institutional changes (first-order effects),⁷ and behavioural adaptations are not taken into consideration; the exclusion of indirect effects is justified, considering the current development level of behavioural simulation models and the availability of data. Because of the lack of time and space we will give some summarized results of simulations of a comprehensive tax base, an expenditure tax system and integrative reforms within our tax and transfer systems.

Broadening the tax base: revenue reserves in the German income tax

In order to increase tax revenues within the existing income-tax system, broadening the tax base has been identified as the optimal solution. Two possibilities are conceivable: the extension of the definition of taxable income, and the elimination of tax exemptions. Furthermore, a notable part of the national income is illegally excluded from taxation, i.e. tax evasion. The actual income definition, the existing tax exemptions and the real tax evasion are jointly responsible for the fact that only 50 per cent of the western German gross domestic product (GDP) is taxed.⁸ On the one hand wealth income is almost totally excluded and on the other casual income is often legally tax-free, because it is lower than the corresponding exemption or it is defined as untaxable income according to §3 of the German income-tax law, and in fact only 10 per cent of social pensions are taxed. In addition, we have to recognize that the total income of the informal sector (shadow or underground economy) is held as 'illicit cash' in order to conceal this income from the fiscal administration.⁹

Thus, without modifying the income-tax schedule, additional tax revenue can be realized if we achieve a broader tax base. To give some empirical evidence on the corresponding reform proposals, we report the results of a microsimulation model which was designed as part of our research project. If we are able to tax the total gross wage and wealth income, we will receive an additional tax revenue of nearly DM 100 billion a year.¹⁰ The main obstacle to such a reform is the possible reaction of the taxpayers: tax evasion or tax avoidance. It is quite clear that these consequences can only be prevented if the broadening of the base is combined with a lowering of the marginal-tax rates. An optimal combination of both aspects within the reform concept will have positive effects not only on the federal budget but also on the individual's effort.

The second possibility for broadening the tax base is to abolish several tax exemptions. In theory, all tax exemptions that are not directly associated with income—with the exception of professional expenses—could be abolished. These exemptions diminish taxable income by 20 per cent or DM 300 billion;¹¹ the effective increase in tax revenue which can be achieved by using these reserves can hardly be estimated because of its dependency on the average marginal rate of all taxpayers. If this rate is about 25 per cent, an additional tax revenue of DM 75 billion will result.¹²

All these results indicate that within the existing German income-tax system many possibilities exist to raise tax revenue, to reduce the federal budget deficit and at the same time to lower marginal-tax rates in order to reward increased effort. The introduction of a comprehensive income-tax base has unequivocal redistributive effects: the distribution of

disposable income becomes more equal. These consequences are evident because the taxation of all income sources concerns, above all, earners of high incomes, as well as the self-employed, who have the best opportunities to influence their tax base.

Promoting capital formation: the introduction of an expenditure tax

There are many different proposals for replacing the existing personal income tax with a personal expenditure-tax system.¹³ According to our notion of incidence, we assumed a substitution which would provide an equal yield from a comparable tax base. In our simulation models the tax base is primarily determined by our data base; we used a comprehensive tax base which deviates more or less from the theoretical ideal because of the limitations due to our data base. Another serious problem with respect to the expenditure-tax base is the treatment of durable consumer goods, the costs of which have to be spread over their useful lives (especially if progressive tax schedules are used). To this comprehensive tax base we applied two different tax schedules: (1) a flat-rate schedule and (2) a delayed progressive-expenditure tax schedule which, at a given expenditure function, leads to the same tax yield within single-income brackets as the income-tax schedule.¹⁴ According to our concept of incidence, the condition of equal tax revenue is nearly fulfilled.

The simulation of an expenditure-tax system as a substitute for the existing income tax requires a data base that quantifies the income-tax burden as well as the expenditure structures of private households. The EVS (Einkommens- und Verbrauchsstichprobe—income and expenditure survey)¹⁵ represents on the one hand the data for the expenditure function and on the other hand it is the basis for the analysis of the tax-schedule structure for different distributions in the German household sector (total distribution or different distributions of socio-economic characteristics). The income brackets for the households are established according to the monthly net income of all household members, which also includes transfer payments made to the household. The different income components are presented in detail so that it is possible to identify those parts that belong to the German income-tax base. The same holds true for incomes and expenditures that are needed under an expenditure-tax regime.

Following the proposals of Irving Fisher, the statistical expenditures for each income bracket are estimated indirectly by taking the differences between the total income of the single household and the taxes and contributions paid, and the part of income that was saved. These expenditures also comprise depreciation for consumer durables. After estimating expenditures on a yearly basis we ran a regression

analysis (simple least square method) to derive the expenditure function, with net income as the independent variable. We chose a linear type, where E represents expenditures (including indirect taxation), Y gross income, and T direct taxes:¹⁶

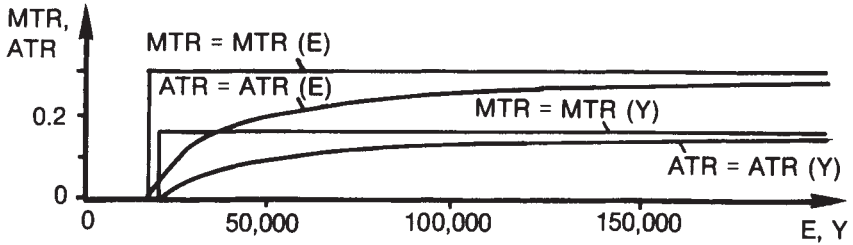
$$E=4,798+0.63(Y-T)$$

In order to simulate a flat-rate expenditure-tax schedule, the basic exemption of the 1990 income-tax schedule (DM 5,616) was adjusted by using the corresponding expenditure quota. The development of the average- (ATR) and the marginal-tax rates (MTR) of the expenditure tax as well as the income-tax tariff yielding an equal amount is shown in the upper part of the Figure 5.1. The respective parameter values are reported in Scheme 1 (Table 5.3). The flat rate amounts to 30.58 per cent in the case of a comprehensive expenditure-tax base and to 15.28 per cent in the case of an income tax with the same yield. In the lower part of Figure 5.1 the schedules of an income tax that is delayed progressive but estimated under the condition of our comprehensive tax base are confronted with an expenditure tax regime that is neutral with regard to the individual tax burden (i.e. the tax burden within the single-income brackets remains the same). The resulting equal-yielding marginal-income-tax rates are between 8 and 42 per cent; the derived expenditure-tax schedule which has the same yield and which produces the same distribution of tax burden ('distributive neutrality') has an initial marginal rate of 13 per cent, whereas the highest marginal rate amounts to 114 per cent, which is clearly above the 100-per-cent margin. The latter schedule also begins with a delayed progression, but in the second bracket an accelerated progression follows. When the highest marginal rate is reached, we are again confronted with a delayed progression (for details see Figure 5.1 and Table 5.3 Scheme 1).

If we take the total income of a household as an indicator for the ability to pay, one can make no objections to this derived expenditure-tax schedule because the parameters of the underlying total income-tax schedule deviate only slightly from the current income-tax law. However, the allocative consequences for individual consumption behaviour (especially in the case of high-cost consumer durables), which could be connected with marginal rates on expenditure payments of 100 per cent and more, depend on the awareness of such tax burdens: it might have quite another quality to know that an additional deutschmark earned is taxed 'only' with a marginal rate of 42 per cent, while an additional deutschmark consumed is taxed with a marginal rate of 114 per cent, whereas the individual tax burden is the same in both cases.

FINANCING UNIFICATION

Flat-rate schedules



Schedules under the condition of distributional neutrality

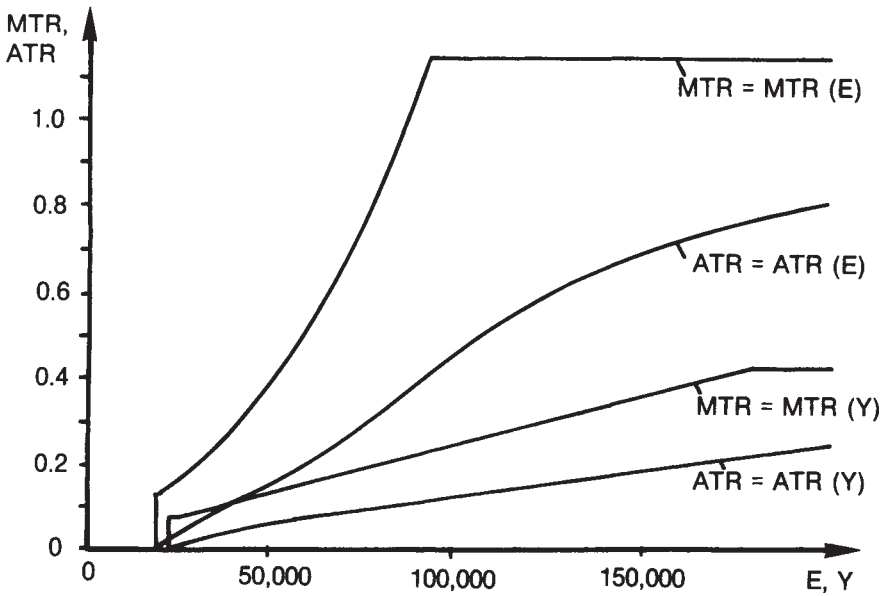


Figure 5.1 Tax schedules of expenditure and corresponding tax (marginal-tax-rate (MTR) and average-tax-rate (ATR) structure)

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Table 5.3 Scheme 1: tax schedules for a comprehensive tax base

<i>Flat-rate-schedules</i>	<i>Brackets</i>	<i>EVS (income and expenditure survey)</i>
Expenditure tax	$E < 17,564$	$t(E) = 0$
	$E \geq 17,564$	$t(E) = -5,372 + 0.3058.E$
Income tax	$Y < 22,619$	$t(Y) = 0$
	$Y \geq 22,619$	$t(Y) = -3,456 + 0.1528.Y$

<i>Schedule type, 1990</i>	<i>Brackets</i>	<i>EVS (income and expenditure survey)</i>
Income tax, delayed progressive	$Y < 22,619$	$t(Y) = 0$
	$22,619 \leq Y < 26,029$	$t(Y) = -1,719 + 0.0760.Y$
	$26,029 \leq Y < 179,648$	$t(Y) = -969 + 0.0184.Y + 1.1066.10^{-6}.Y^2$
	$Y \geq 179,648$	$t(Y) = 36,684 + 0.4160.Y$
Expenditure tax, distributionally neutral to a delayed progressive income tax	$E < 18,939$	$t(E) = 0$
	$18,939 \leq E < 20,909$	$t(E) = -2,492 + 0.1316.E$
	$20,909 \leq E < 93,325$	$t(E) = 451,185 - 1.5995.E - (1.0018 - 7.0802.10^{-6}.E)^{0.5}/2.2133.10^{-6}$
	$E \geq 93,325$	$t(E) = -68,282 + 1.1394.E$

Source: Own estimates

Improving distributive equity: guaranteed minimum income and integrated tax and transfer systems

The integration of tax and transfer systems has two dimensions. First, the external integration of both systems; this form includes the construction of the tax schedule and the choice and structure of the tax and transfer base. Second, the dimensions of internal integration within the transfer system, since its instrumental and conceptual diversity (in contrast to direct taxation) requires a special normative decision about the types of transfer that are to be included.¹⁷ Therefore an integrated tax and transfer system necessarily contains a minimum income standard. On the other hand it is possible to introduce a guaranteed minimum income without integration, but this can only be a first step in the direction of a substantial reform. After internal integration it is necessary to check the combined effects of the integrated transfer system and those aspects of the income tax which are motivated by social arguments (i.e. family equalization).

An integrated tax and transfer system basically consists of three parameters that determine the design. Besides the schedule and the basis of assessment (tax and transfer base), which effect the external integration, the basic income is of special interest. The basic income is defined as the maximum amount of transfer payment made to the individual or household with a zero market income (i.e. minimum income). The amount of this transfer is mainly influenced by the number of transfers that should be included in the integrated system and by the connected causes that are the precondition for public assistance as well as by the intended differentiations due to the individual circumstances of life. Therefore, the determination of the basic income depends, above all, on the normative foundation of social security,¹⁸ which is at present mainly influenced by the catastrophic situation on the eastern German labour market.

Current German income-tax law exempts nearly all eastern German employees, and the recent decision of the federal government for the next legislative period to grant them a special additional tax allowance (singles DM 600, couples DM 1,200) extends this for the next five years.¹⁹ At the same time we have to expect increasing unemployment with probably 1.6 million unemployed or short-time workers (by May 1992), and therefore a growing number of people in eastern Germany will be on welfare in the near future and a long-time deficit will be produced in the eastern German branch of the social insurance system.

In view of these facts, a guaranteed minimum income (GMI) which will replace all transfer payments from the social system, namely educational grants, rent allowances, child benefits, premiums on savings and payments from the public-assistance system, may be a possible and suitable solution. The GMI is paid independently of marital status and household situation; instead of child benefits and child exemptions within the income-tax system, a non-adult income is paid monthly to finance the basic needs of children. Current social-health insurance will be replaced by a compulsory insurance scheme with a uniform insurance premium guaranteed by the federal government. The existing social-pension system as well as the pension system for governmental officials is also replaced by the GMI, so that all persons beyond the retirement age will receive a uniform minimum income; people who want to obtain higher pension payments have to insure themselves additionally on a voluntary basis within the social-pension insurance scheme or the private life-insurance system.

To create an effective tax and transfer system it is also necessary to integrate the GMI system with income tax. Therefore the GMI has to serve as the basic exemption, and a single tax-transfer schedule and an identical (comprehensive) assessment basis are required. Our concept includes a constant integrated tax-transfer rate that is applied to all gross wages.

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Table 5.4 Scheme 2: guaranteed minimum income and complementary tax and transfer system

Guaranteed minimum income (GMI) per annum	
1 For all persons between 18 and 60 years, living permanently in the FRG	DM 9,600
2 For children up to 18 years	DM 4,800 (or 50% of GMI)
3 For every person above 60 years	DM 12,000 (or 125% of GMI)
Contribution to health insurance	DM 2,400 per annum
Integrated tax-transfer rate:	54%
Schedule:	T = -12,000
with 12,000 as GMI (including health insurance)	+ 0.54*X
X = taxable income	

For the simulation of integrated tax and transfer systems a data base is needed which quantifies on the one hand an adequate tax and transfer base and on the other hand the status quo distributions of tax and contribution yield as transfer payments. All these requirements are fulfilled only by the DIW statistics; these statistics are derived from different primary data sources (microcensus, tax statistics, wage statistics, housing samples, etc.) which are put into the context of the national account system. The functional income distribution serves as a basis for the estimation and transformation of personal incomes into the income of private households. By combining these data with information about population and demographic characteristics, the income distribution for different types of household is derived.²⁰

In this analysis we used the fiction of one central public institution, neglecting the current problems that are connected with a federal state and the fiscal equalization systems. Besides the simulated amounts of taxes and transfers connected with the integrated concepts, the corresponding 'saved' transfer payments as well as the abolished tax yields and social contribution payments are taken into consideration. Compared with the present-day German tax and transfer system, the GMI with an integrated tax-transfer rate leads to a negative financial remainder of nearly DM 70 billion, which will be the main obstacle to the introduction of such a system. In contrast to the present tax and transfer system the redistributive effects of the reform proposal are quite clear. Whereas the existing system produces absurd redistributive effects, integration leads to a distribution of income which is unequivocally more equal (the Gini-coefficient for disposable income after introducing the GMI is 0.301001, as against 0.326524 before).

CONCLUDING REMARKS

Our simulation results have proved that additional revenue sources do still exist; a move in the direction of a more comprehensive tax base seems to be especially promising because even a decrease in the marginal-rate structure could be possible, thus strengthening the efficiency conditions. A switch from an income-tax to an expenditure-tax schedule might improve efficiency as well as favour capital formation. But the strongly increasing marginal rates of an expenditure tax with distributive neutrality would impose a heavy burden on the consumption expenses of the eastern German population, which has a tremendous pent-up demand because of all the scarcities during the post-war period, and above all the demand for durable consumption goods (including housing expenditures) would be taxed heavily. Therefore redistributive arguments lead to a rejection of the introduction of an expenditure-tax scheme under the current circumstances.

The malaise of the eastern German labour market puts enormous pressures on the existing social-security system. A move in the direction of a minimum-income scheme is inevitable and has at least already been partly achieved in the east. If the existing social insurance and social-aid scheme are harmonized, such an integrated system could be financed even within the whole FRG. But then an already existing problem will be intensified further: under the conditions of free movement within the European Community after the introduction of the Single Market in 1993 and an extremely liberal right of asylum for refugees from all over the world, the FRG will face considerable difficulties.²¹ A minimum income which is higher than the average income in some member states of the EC and several times that of the living standard in developing countries will create strong incentives for economic refugees (from poverty areas) to immigrate into the FRG (especially if language and other barriers such as lack of information are overcome); sooner or later the financial limitations will become obvious. Because unlimited free movement endangers the existence of highly developed social-security systems, a reformulation of the right of asylum is necessary, i.e. to limit this right to political refugees; the real problem is that their status cannot easily be defined.

Within our economic and social system as well as our constitution there is an enormous need for several adaptations as a consequence of German unification. The federal government was very successful in the early phase of the unification process but has also made serious mistakes, especially with regard to financial needs; their current tax proposals (increasing the income-tax yield by 7.5 per cent for a certain period, raising the petrol tax by 25 pfennigs per litre) aim at curing symptoms rather than eliminating causes. Because the federal government needs the

support of the opposition in order to adapt the constitution, and even the opposition has not come to a firm conclusion, a phase of political instability seems to be likely, thus producing more half-hearted, short-term measures rather than substantial reforms as proposed above. But the challenge of unification is still there and will at least in the long run open new perspectives for the successful development of German society.

NOTES

- 1 This paper presents results of the research project 'Microsimulation of alternative tax and transfer systems for the Federal Republic of Germany'. The financial support of the Volkswagen-Stiftung is gratefully acknowledged.
- 2 See Federal Minister of Finance (1991:43).
- 3 See Federal Minister of Finance (1991:61-70, 90-5).
- 4 See Petersen (1989:234); Hüther (1991).
- 5 See Brunner and Petersen (1990).
- 6 See Hüther, Müller, Petersen and Schäfer (1990).
- 7 See Nakamura and Nakamura (1990:462).
- 8 See Albers (1988:175); Hüther (1990:196).
- 9 See Petersen (1987).
- 10 See Hüther (1990:194). The estimates, which were based on a 1983 data base, produced an amount of DM 80 billion in 1983. If we consider the average annual growth rate of the national income since 1983 and the noteworthy increase of tax revenues in 1990, the value DM 100 billion seems to be realistic.
- 11 See Albers (1988:178).
- 12 A further tax reserve is produced by the treatment of spouses' income (i.e. the total income of spouses is halved and the resulting tax yield then doubled). Petersen (1988:70) estimates the corresponding revenue loss in 1983 to be DM 46 billion.
- 13 See Rose (1990).
- 14 Hinterberger, Müller and Petersen (1991).
- 15 For more details about the problems of the EVS see: Hüther, Müller, Petersen and Schäfer (1990).
- 16 The variance of data is explained on a 99.1-per-cent level by this function.
- 17 See Hüther (1990).
- 18 For more details about the need for integration see Hüther (1991).
- 19 Steueränderungsgesetz 1991, see Federal Minister of Finance (1991:35).
- 20 For the necessary adaptations of the DIW statistics for simulation see Hüther (1990:172).
- 21 For the problems connected with the Common Market 1992 see Petersen (1990).

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THE SOCIAL ASPECTS OF GERMAN REUNIFICATION

Detlef Landua

INTRODUCTORY REMARKS ON THE SUBJECT

The unification of the two German states or, to put it more precisely, the accession of the German Democratic Republic (GDR) to the Federal Republic of Germany (FRG), is a historically unique event with far-reaching consequences for the future political and economic order of Europe, not least, however, for the 'new' Federal Republic of Germany itself. Although it is as yet impossible to detect many changes in the system of institutions and values of the 'old' Federal Republic of Germany, the incorporation of an alien—even largely contradictory—state form, with the resulting redistribution of resources and integration of 16 million people shaped by different values and behaviour, imply significant challenges and problems in the future.

But the unification of the two German states had much more far-reaching consequences for the former GDR and its citizens. The sudden dissolution of a state with its social and economic order, together with the attempt to bring about a fast and comprehensive reorganization of important social functions based largely on the western model, entailed major restructuring problems in the economic and social sector. Frequently, however, the existing and newly formed economic bodies and administrative units were overtaxed by the task of finding a solution to these problems. Moreover, every individual citizen found himself confronted with the changes in cultural and political values induced by the unification process, or with reorienting and adapting his or her behaviour to these changes. These social aspects of reunification should be given appropriate attention in addition to the serious economic consequences and great burdens imposed on the political system.

Thus, a central task of research based on public-opinion surveys is, for one, to make qualified data material available in order to systematically describe (in addition) the social aspects of the continuing process of transformation in eastern Germany and to explain them with regard to the

course they are taking and the results produced. The preconditions for this were met only recently; there are hardly any methodically precise and representative demographic data available from the 'unknown country' of the former GDR, and collecting them often proved to be a difficult project in the beginning.¹ The 1990 Basic GDR Survey (*Basiserhebung 1990 DDR*) by the Socioeconomic Panel (SOEP) and the 1990 Eastern Welfare Survey (*Wohlfahrtssurvey 1990-Ost*) were among the first representative polls. For years now, both surveys have proved to be successful tools—in western Germany—for the long-term observation of social change.²

This paper will attempt, within the scope of an all-German social report³ and with the help of data from these two surveys, to provide a picture of the social situation of the citizens of the former GDR and to document their perception of their living conditions, hopes and fears as well as their assessment of the future. Empirical results applying to several elements of the social structure of the former GDR and to the subjective well-being of the eastern German populace, i.e. their demands and subjective evaluations, will be presented in the form of an east-west comparison covering the last six months of 1990.

AN OVERALL PICTURE OF SOCIAL STRATA IN UNIFIED GERMANY

Not only does reunified Germany include two social systems that differ from each other in terms of many objective conditions of life,⁴ but the contours of individual elements comprising the 'old' Federal Republic of Germany's social stratification have also changed in a significant fashion. These changes will be elucidated by presenting in the following an overall picture of the social structure in the 'old' and 'new' Federal Republic of Germany (Figure 6.1). For this purpose, the adult population of the former GDR (1990) and FRG (1988) will be subdivided into individual social strata determined by employment status, sex, age (18 to 60/over 60) and occupational groups.⁵ In this description it must be remembered that the former GDR's approximately 16 million inhabitants accounted for only a fourth of Germany's total population, and striking changes in the basic social structure can therefore hardly be predominant for quantitative reasons alone. Nevertheless, a true-to-scale description based on a comparison of social strata yields a plastic picture of the different social structures in east and west Germany:

The GDR was a work society with a high employment rate, especially among women. The percentage of gainfully employed women (in proportion to size) in eastern Germany is much higher than in western Germany in nearly every employment group. On the other hand, large

THE ECONOMICS OF GERMAN UNIFICATION

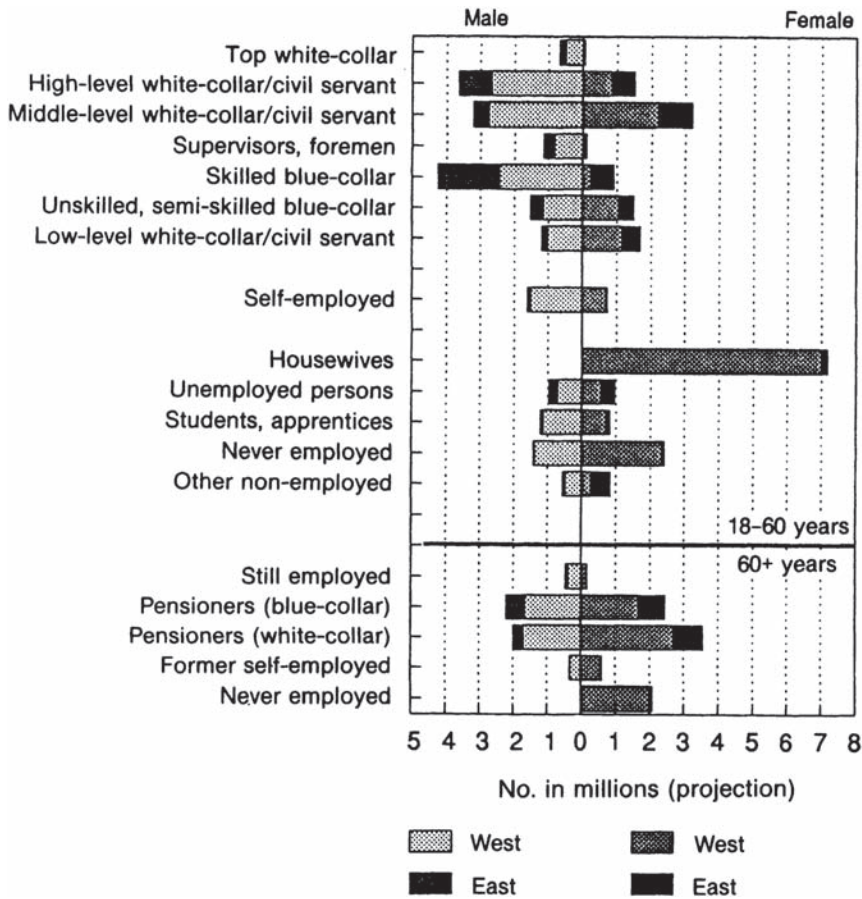


Figure 6.1 Social positions in western and eastern Germany
 Sources: *Wohlfahrtssurvey West* (1988); *Wohlfahrtssurvey East* (1990).

social strata with a high percentage of women (housewives, people who were never full-time employees), as is the case in western Germany, are more likely to be found among the marginal groups in the east. After reunification, the group consisting of self-employed persons (also relatively small in western Germany) initially received little influx from eastern Germany's potential manpower.

The GDR was a workers' society, to be more precise, a skilled workers' society, but with a not inconsiderable supervisory superstructure and simultaneous underutilization of skilled qualifications.⁶ The negative consequences of the socio-structural transformation process in the former GDR can also be recognized, for example, in the disproportionately large percentage of (largely female) unemployed persons.

The comparison makes it clear that the social structure of the old Federal Republic of Germany was visibly changed in only a few aspects after reunification. In summary, the social structure of Germany at the end of 1990 can be characterized by an overall higher employment rate, above all by higher female employment. The higher percentage of workers and the carry-over of cadres must also be noted as further new, substantial features. Many of these structural features will certainly not be permanent due to the accelerating restructuring process in eastern Germany. If the transformation goes mainly in the western direction, then currently effective and future sources of conflict will be short-time work; unemployment, especially female unemployment; dequalification of cadres and skilled workers. On the other hand, however, some of the workforce reserves required for the transformation to a modern service economy are also to be found in these processes.

WAYS OF LIFE AND FAMILY FORMS

The family is a central area of life; family life is of great importance to the individual for the satisfaction of emotional needs like love, affection and security. The family can provide an easing of tensions and an emotional retreat *vis-à-vis* demands and expectations from outside. Marriage and the family thus make important contributions to the subjective well-being of their members. A sequence of typical development phases can be seen with regard to the family: young adults in the premarital phase who still live with their parents or already live (alone) in a household of their own; young married couples who have no children, married couples with small children, school-age children, adult children; the post-parental companionship of married couples with children who have left their parents' household; finally, the phase that begins with the death of a spouse. There are also other ways of life and family forms: single persons who live together with a partner, single parents and, finally, the divorced and those who remain unmarried their whole life long.

Distributions of ways of life and family forms

A comparison of the distributions of these ways of life and family forms shows an astonishing number of parallels between eastern and western Germany, but also small though notable differences (Figure 6.2). In eastern and western Germany, marriage and the family represent the predominant forms in which people live together. But there are differences in the distribution of family forms, for one because of the (still) lower age of marriage in the former GDR. This corresponds to the lower eastern German percentage of young singles without partners or children who still live with their parents (first group) as well as a higher percentage of

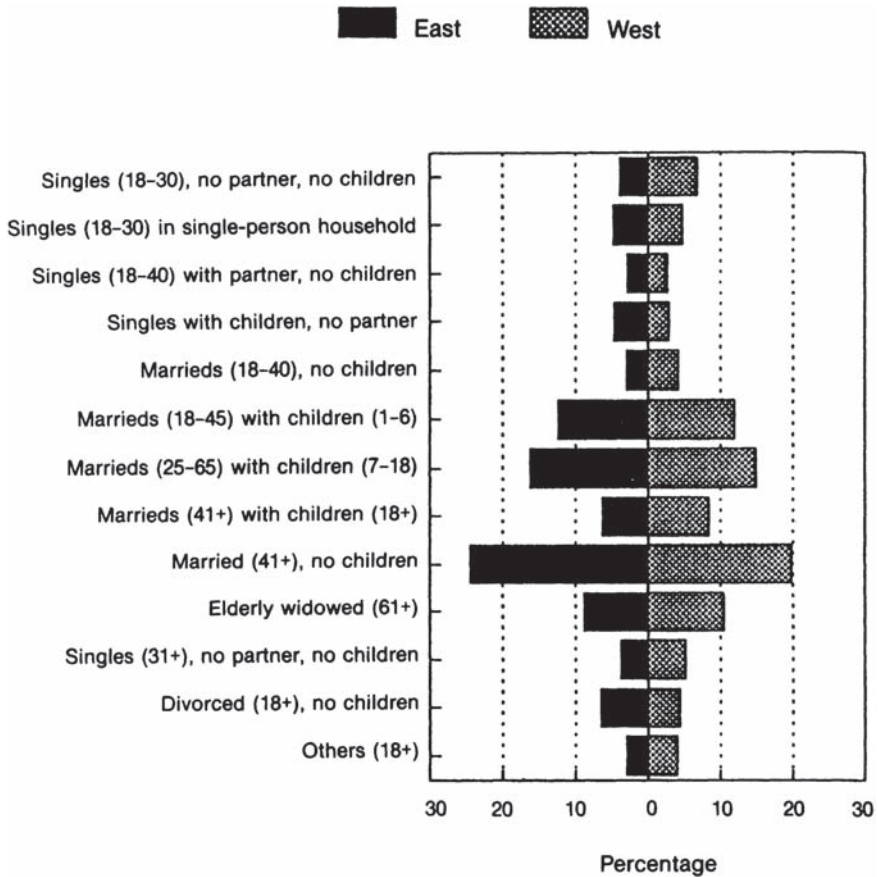


Figure 6.2 Life cycle and family stages in east and west Germany
 Sources: *Wohlfahrtssurvey* (1988); *Wohlfahrtssurvey East* (1990).

older couples without children. The disproportionate percentages of divorced persons and single parents in the eastern part of Germany indicate comparably high dynamics in GDR family relationships. This is a remarkable finding in view of the declared aims of the GDR's social and family policy, which aimed at stable families based on marriage.

Objective living conditions

In view of the overall quite similar distribution in western and eastern Germany, it should not be forgotten that each of the aforementioned

life-cycle and family stages is linked to specific, objective conditions of life (Table 6.1) and subjective feelings (Table 6.2). If the uniformly low percentage of non-employed women in the former GDR is looked at, one gains—at least superficially—the impression that the sociopolitical measures to promote women and young families, above all to make jobs and motherhood compatible, were very successful. Even the majority of married women with small children (62 per cent) pursue full-time employment. The average number of employed persons in the individual life-cycle and family stages are correspondingly higher than in western Germany. However, even this higher percentage of additional sources of income per household in the ex-GDR does not make it possible to fall in line with the corresponding western income situations. Instead, the existence of a second earner in the household has so far proved to be a downright economic necessity for families with small children. The situation of single parents in the eastern part of Germany must also be considered extremely difficult from a financial point of view. The average per capita household income of these (mainly female and divorced) persons is in the last place in the hierarchy of family forms and ways of life.

A declared aim of the old GDR leadership's housing-construction programme was to do away with the disproportions in housing conditions between social or demographic groups. But statistically reliable figures were not published on living space, the size of dwelling units inhabited by, for example, workers or individual types of families. In political argument, 'progress' was confirmed solely by the allocation practices of the state's local organs. The constant improvement in housing conditions in the old Federal Republic of Germany over the last few decades can be seen from the occupancy density of the dwelling units, which can be calculated from the ratio of household members to the number of occupied rooms: in 1988 there was an average of nearly 1.7 rooms available to every person; for many eastern German families the picture is in part a highly negative one in this respect. Although certain family forms and ways of life also existed in the former GDR with a quite suitable dwelling-unit occupancy density (the aged, singles), the overall occupancy density of 1.37 not only corresponds to the state of the old Federal Republic of Germany twenty years ago,⁷ but, in many eastern German families with children, several members have to share one room of the dwelling unit. Thus, in terms of an overall impression it is possible to see a distinct differentiation—comparable to that in western Germany—in the dwelling-unit occupancy density for individual family forms and ways of life in eastern Germany. The distinctive feature of the eastern German situation is the uniformly lower level of the living conditions there.

Table 6.1 Selected objective indicators within different life-cycle and family stages

	Total		Not employed		Employed per household	Number of rooms per person	Household income per person in household	DM
	(%)	(%)	men	women				
	(%)	(%)	Mean					
Young singles (18-30), no partner, no children, in multi-person household	8	39	45	45	2.22	1.48	1,120	
Young singles (18-30) in single-person household	4	5	45	45	2.41	1.03	788	
Singles (18-40) with partner, no children	6	47	27	0	0.62	1.89	1,382	
Singles with young children, no partner	3	6	26	24	0.90	1.37	1,064	
Young marrieds (18-40), no children	3	6	24	55	1.44	1.42	1,435	
Marrieds (18-45) with small children (1-6)	3	22	11	22	1.66	1.00	827	
Marrieds (25-65) with school-aged children (7-18)	5	0	11	11	0.94	1.59	1,143	
Marrieds (41+) with adult children (18+)	4	8	22	22	1.24	1.25	541	
Married (41+), no children	3	0	20	20	1.74	0.96	1,586	
Elderly widowed (61+)	12	10	72	72	1.82	1.12	900	
Older singles (31+), no partner, no children	12	1	38	68	1.71	0.85	834	
Divorced (18+), no children	15	3	68	161	2.11	1.25	552	
Total	16	1	12	74	1.88	0.98	641	
	9	23	74	22	2.61	1.46	1,115	
	7	13	22	80	0.66	1.06	733	
	20	59	80	64	0.94	1.84	1,355	
	25	49	64	99	0.10	1.45	772	
	10	100	99	100	0.02	2.68	1,500	
	8	89	100	75	0.67	2.39	656	
	5	20	75	45	0.69	2.53	1,675	
	4	4	45	72	0.76	1.89	1,101	
	4	23	72	55	0.69	2.13	1,512	
	7	23	55	70	1.26	1.99	904	
	100	32	70	46	1.35	1.66	1,217	
	100	23	46			1.85	733	

Note: 'Only household members in the age bracket 18-65

Sources: *Wohlfahrtsurvey West* (1988; N=2,144); *Wohlfahrtsurvey East* (1990; N=735)

Subjective well-being

The specific living conditions and burdens imposed by the radical change in 1990 are having an impact—at least in east Germany—on the subjective well-being of the people (Table 6.2). Thus, single parents, the divorced, elderly singles and, in particular, elderly widows and widowers in the east and west often feel unhappy or lonely. As would be expected, these subjective problems usually affect married couples to a below-average extent. In the eastern part of Germany, these symptoms can be seen comparatively more often in nearly all ways of life and family forms. The subjective stress and strain on these ways of life—also detectable in the west—and the lack of support by familial networks within the framework of social changes most likely cumulate primarily in the high degree of emotional damage to single parents, the divorced and the widowed in eastern Germany.

As an indicator, satisfaction⁸ with the division of labour in the household acquires its explosiveness, for one, from the different employment rates of married women in eastern and western Germany. Satisfaction with the division of labour at home is, all in all, quite high in both parts of Germany, but at the same time it is also possible to see a distinct, sex-specific satisfaction gradient in the west and the east. Women uniformly give the family division of labour at home a poorer rating than men. With regard to the burdens imposed by the household and children, women apparently find only limited support from their husbands; only a minority of men feel (co-)responsible for the housework. The state's provision of day nurseries in the former GDR was, above all for wives with children, a necessary measure to limit the multiple burdens imposed on women by their children, household and job. But these social-policy measures did not entail any substantial change in (private) notions about the sex-specific division of labour within the family.

The rating of marriage and partnership can be viewed as a central indicator of the state of a relationship. The respective degrees of satisfaction reported by those surveyed thus provide at the same time information on the state of one of the most important areas of private life. On the whole, marriage or partnership is rated very high in eastern and western Germany. Nevertheless, the level of satisfaction in different life-cycle and family stages varies in part considerably between men and women. Non-marital, long-term relationships are given a comparatively poor rating in the east and west, but the reason for this low level of satisfaction is mainly to be found, at least in the old Federal Republic of Germany, in the relatively low rating of men. Wives in western Germany are, on the average, in part less satisfied with their marriage in all familial phases than husbands, but the respective satisfaction gradient is not very marked. On the other hand, the difference in satisfaction

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Table 6.2 Selected subjective indicators within different life-cycle and family stages

		Often lonely	Un- happy	Satisfaction ¹ with:			
				division of household tasks		marriage/ partnership	
		(%)	(%)	men	women	men	women
				Mean			
Young singles (18-30), no partner, no children, in multi-person household	West	10	5	— ²	—	—	—
	East	20	11	—	—	—	—
Young singles (18-30) in single-person household	West	9	4	—	—	—	—
	East	8	0	—	—	—	—
Singles (18-40) with partner, no children	West	15	6	8.1	7.9	8.3	9.4
	East	20	3	8.3	7.8	8.2	8.2
Singles with young children, no partner	West	20	14	—	—	—	—
	East	42	34	—	—	—	—
Young marrieds (18-40), no children	West	12	1	8.6	7.2	9.0	8.7
	East	0	20	9.0	8.6	8.6	9.4
Marrieds (18-45) with small children (1-6)	West	9	1	8.5	7.7	9.2	8.9
	East	11	4	8.2	7.5	9.0	8.5
Marrieds (25-65) with school-aged children (7-18)	West	6	2	8.1	7.0	8.8	8.6
	East	15	11	7.9	7.0	8.7	8.6
Marrieds (41+) with adult children (18+)	West	7	2	8.4	8.1	9.0	8.8
	East	8	12	8.3	6.6	9.2	8.1
Married (41+), no children	West	10	3	9.1	8.7	9.1	9.0
	East	14	12	9.1	8.8	9.5	9.5
Elderly widowed (61+)	West	44	11	—	—	—	—
	East	71	33	—	—	—	—
Older singles (31+), no partner, no children	West	25	9	—	—	—	—
	East	27	8	—	—	—	—
Divorced (18+), no children	West	30	22	—	—	—	—
	East	40	40	—	—	—	—
Total	West	14	4	8.5	7.9	9.0	8.9
	East	21	15	8.1	7.7	9.0	8.8

¹ Mean values on satisfaction scale from 0-10 (0=completely dissatisfied; 10=completely satisfied).

² Not defined.

Source: *Wohlfahrtssurvey* (1988; N=2,144); *Wohlfahrtssurvey East* (1990; N=735).

between eastern German married couples sometimes assumes remarkable proportions. Thus, in young marriages with children, for example, husbands give their relationship a much poorer rating and, vice versa, in marriages with adult children the wives are, on the average, much more dissatisfied with their relationship than the husbands. The absolute

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Table 6.3 Components of subjective well-being

	<i>Overall life satisfaction</i>				<i>Happiness</i>				
	<i>rather dissatisfied</i>		<i>completely satisfied</i>		<i>very unhappy</i>	<i>quite happy</i>	<i>quite happy</i>	<i>very happy</i>	
	<i>0-4</i>	<i>5-7</i>	<i>8-9</i>	<i>10</i>					
	<i>Mean (%)</i>	<i>(%)</i>	<i>(%)</i>	<i>(%)</i>	<i>(%)</i>	<i>(%)</i>	<i>(%)</i>	<i>(%)</i>	
West									
Germany	7.9	4	28	50	17	1	5	71	23
East									
Germany	6.5	13	50	32	6	2	14	73	11

Sources: *Wohlfahrtssurvey* (1988); *Wohlfahrtssurvey East* (1990).

rating level and existing satisfaction gradients between married couples certainly do not by themselves provide adequate explanations for the relatively high instability of eastern German marriages, but they do have to be taken into consideration as factors for an explanation of the high divorce rate in the ex-GDR.

SUBJECTIVE WELL-BEING IN EASTERN AND WESTERN GERMANY

Perceived quality of life

The quality of life is investigated at the subjective level with questions regarding satisfaction, happiness, worries and anomic symptoms. A summed-up rating of peoples' personal conditions of life with respect to their expectations, hopes and demands is expressed by the 'satisfaction' indicator. Happiness is more an affective state, the extent of which is influenced more directly by positive and negative experiences.⁹

Subjective well-being has been stable at a high level in the old FRG for the last ten years.¹⁰ In 1988 the average value of the indicator 'overall life satisfaction' was about 7.9 (Table 6.3). At a mean value of 6.5 the populace of the former GDR displays a much lower level. The percentage of dissatisfied people is three times as high as in the west (13 to 4 per cent). Similar differences can be seen in the assessment of emotional well-being. While roughly every sixth person polled in the east stated he or she was 'very or fairly unhappy', only every twentieth person did so in the west. All in all, these results indicate a much poorer sense of well-being in the former GDR. In the self-assessment of their circumstances, the populace in the east of Germany imparts a picture that is encountered in the west only in the case of typical problem groups (unemployed, people living alone, the lonely elderly, the chronically ill).

The comparatively greater impairment of the quality of life is also seen in the extent of anxiety and anomic symptoms (Tables 6.4 and 6.5). In the

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Table 6.4 Anxiety symptoms

Symptoms	<i>West Germany</i> 1988 (%)	<i>East Germany</i> 1990 (%)
Frequent spells of complete exhaustion or fatigue	44	52
Recurring frightening thoughts	19	29
Constantly keyed up and jittery	12	17
Usually unhappy or depressed	11	16
No symptoms	47	37

Sources: *Wohlfahrtssurvey* (1988); *Wohlfahrtssurvey East* (1990).

Table 6.5 Indicators of alienation

	<i>Social isolation</i> ¹		<i>Meaninglessness</i> ²		<i>Work-alienation</i> ³		<i>Indigence</i> ⁴	
	++ %	-- ⁵	++	--	++	--	++	--
West	6	54	3	61	4	56	— ⁶	—
East	10	54	12	25	8	53	34	6

¹ 'I often feel lonely.'

² 'Things have become so complicated today that I don't understand just what's going on.'

³ 'I don't really enjoy most of the work I do.'

⁴ 'I am not able to solve our present problems.'

⁵ ++: 'completely true'; --: 'completely untrue.'

⁶ Not defined.

Sources: *Wohlfahrtssurvey West* (1988); *Wohlfahrtssurvey East* (1990).

former GDR, the feelings of disorientation, senselessness, loneliness and anxiety are more widespread than in the west. But it should also be mentioned that more than one-third of those surveyed do not feel impaired by any of the anxiety symptoms—although this is a relatively small percentage of the population compared with the west (37 per cent in the east, 47 per cent in the west). The profound social changes affect individual population groups to different degrees, in both a negative and positive respect. Mainly women, the unemployed and those with a lower level of education display uncertainty. It must also be presumed that different strategies and resources for coping with the new conditions of life are expressed in this information.

Satisfaction with different areas of life

In the welfare surveys the question of satisfaction is used not only to obtain a summarized rating of the general conditions of life but also to assess various areas of life, such as the family, jobs, household income,

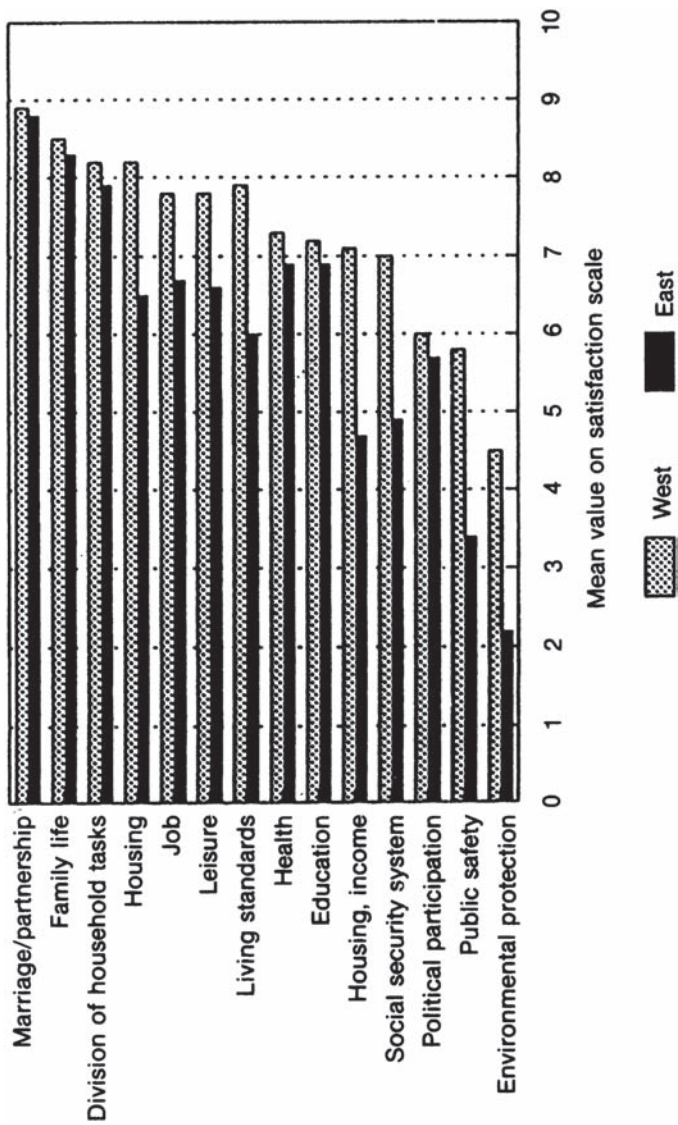


Figure 6.3 Satisfaction with different areas of life in west and east Germany
 Sources: *Wohlfahrtsurvey* (1988); *Wohlfahrtsurvey East* (1990).

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Table 6.6 Importance of different areas of life and concerns: percentage responding that a particular area is 'very important'

	<i>West Germany 1988</i>	<i>East Germany 1990</i>
Health	80	80
Family	73	83
Love and affection	68	71
Environmental protection	60	67
Work	36	60
Income	34	58
Leisure	31	35
Success	18	32
Faith	16	8
Political influence	9	10

Sources: *Wohlfahrtsurvey* (1988); *Wohlfahrtssurvey East* (1990).

health, political participation, public safety or environmental protection (Figure 6.3). In both parts of Germany, the private areas of the family, marriage/partnership and division of labour in the household occupy the top position in the hierarchy of satisfaction, while the public areas of environmental protection and public safety are given a highly unsatisfactory rating. These problem areas have only been clearly perceived in east Germany since reunification: it was customary for problems of environmental protection to be played down; and an obscure legal situation, a lack of authority and reports of rising violence led to a decline in confidence in the public security. But a great deal of pressure is exerted by problems to be found not only in these public concerns but also in private, material conditions of life: in household income, housing, standards of living and social-security measures.

It is worth noting that in eastern Germany dissatisfaction with the material conditions of life is still growing, as shown by the comparison of figures from the socioeconomic panel (June 1990) and eastern German welfare survey (November 1990). The tendencies can be clearly detected, despite the short period of time: satisfaction with income dropped from 5.5 to 4.7, on the average; with work from 7.2 to 6.7; with housing from 6.9 to 6.5; and in the environmental sector from 3.1 to 2.2.¹¹ Since it is still impossible to see clearly when the situation in the east will bottom out, this massive dissatisfaction will probably continue or even become more aggravated.

Attitudes and value orientations

When the assessments of what is important to those surveyed are interpreted, the demands made on individual life areas, the attitudes of

the eastern German populace are at first glance more demanding (Table 6.6). But the hierarchy of important matters displays an astounding similarity in the west and the east: the private areas involving the family and health are at the top, while faith and political influence are relatively insignificant for individual well-being. The public sector of environmental protection is considered to be very important. The high degree of sensitization to and the great pressure of these problems probably explain the high importance attached to them. In view of the earlier situation of gainful employment, the current economic crisis and job insecurity in the east, it is not very surprising that above all work, income and job success are classified by the eastern German populace as much more important.

In the old FRG, values and attitudes in the post-war period have changed in favour of pleasure, ecology, co-determination and a sense of justice as well as possibilities of personal self-determination.¹² Thus the percentage of citizens for whom work and leisure are equally important also rose (Figure 6.4). Those surveyed in the east document a much more marked orientation toward work, which can be interpreted in comparison to the west as a 'more traditional' value orientation. This result is not surprising to the extent that the emphasis on 'immaterial' values presupposes adequate material security, which is less the case at the moment in the former GDR. Moreover, in this case the former GDR's ideological premise of turning labour into the 'primary necessity of life' must be taken into account as the decisive social background for the high standing of work. In the west, a comparison of men and women shows that the orientation toward work is equally widespread in the case of both sexes, with differences appearing in regard to a more or less marked orientation toward leisure. The high percentage of work-oriented men is especially striking in the east. It is also worth noting that the percentage of work-oriented women distinctly exceeds the western German figures, which expresses the attachment of eastern German women to the working world.

EXPECTED ADJUSTMENT OF LIVING CONDITIONS

Hardly any of those surveyed in the east of Germany expected at the end of 1990 that the political aim of bringing living conditions into line with the west could be achieved quickly (Table 6.7). Only 2 per cent of the adult population in the former GDR hope that this aim could be reached in one or two years. Nearly every third person even reckons that the process could take more than a decade. But considerable fluctuations within individual population groups can be recognized in this estimate. Thus, two-thirds of the young people surveyed (up to 29 years old) expect the adjustment process to take more than five years, while more than 50

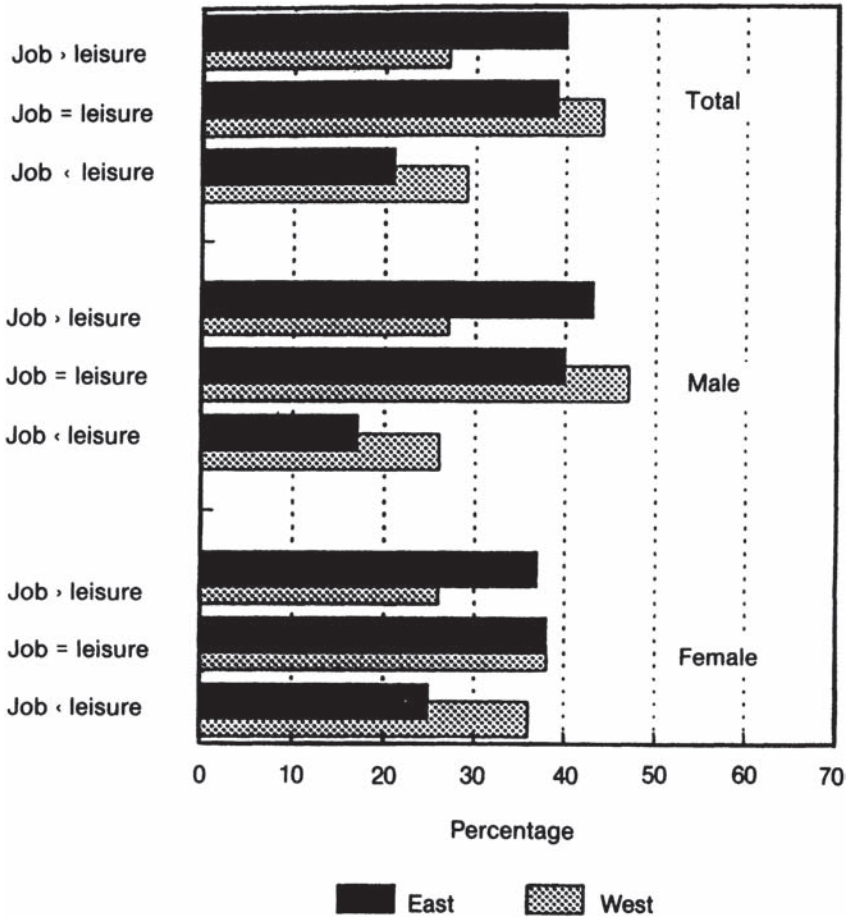


Figure 6.4 Comparison of job and leisure orientation in east and west Germany
 > more important than.
 =equally important to.
 < less important than.

Sources: *Wohlfahrtssurvey* (1988); *Wohlfahrtssurvey East* (1990).

per cent of those over 60 expect this aim to be reached within half a decade. The unemployed view the economic future in eastern Germany with special scepticism. Nearly half of them assumed that a harmonization of living conditions cannot be reached within a whole decade.

SUMMARY AND PROSPECTS

German unity was formally established after more than forty years. But there is still no 'uniform' distribution of central resources such as jobs,

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Table 6.7 Expectations of years needed for improvement in living conditions to take place

	1-2 years (%)	3-5 years (%)	6-9 years (%)	+10 years (%)	Mean
Total	2	43	26	30	7.2
Age					
29 and under	1	34	29	37	7.7
30-59	1	45	25	30	7.3
60+	4	48	24	24	6.4
Status of occupation					
Employed persons	1	42	28	29	7.2
Pensioners	3	48	22	28	6.9
Unemployed persons	0	34	19	47	7.9

Source: *Wohlfahrtssurvey East* (1990).

income, housing, etc., to be seen between eastern and western Germany. The still existing deficits in the concrete conditions of life are echoed in the largely negative subjective appraisals of the eastern German citizens.

There are, of course, dissatisfied and unhappy people in the affluent society of the old FRG. Nor are worries and orientation problems rare individual phenomena. On the other hand, many people in the former GDR are quite satisfied with their life—all in all—and, certainly, the overall extent of dissatisfaction and emotional afflictions cannot be explained exclusively by the transformation process in eastern Germany.

Regardless of these (necessary) remarks, however, the overall finding remains the following. The former GDR was and still is—compared with the old FRG—a different society with a different welfare structure, not only with regard to the objective living conditions of the citizens but also with regard to the demands, orientation and assessments of those concerned. The level of satisfaction with individual areas of life or life in general is impressive in a (dramatically) negative sense in eastern Germany. The appraisals given by the eastern Germans are not only below the western level in practically every area, but a differentiated, sociostructural look at individual social strata additionally shows that the figures for even high-ranking professional groups in the east are reached in the west only by typical problem groups such as the unemployed—and the changes of the last six months of 1990 even point in the direction of yet greater dissatisfaction.

However, for the further development of, in particular, the social aspects of German reunification, the thesis represented here is that the welfare gradient in the objective conditions of life between the two parts of Germany may be of outstanding importance in the incipient process of

transformation, but subjective components could come more to the fore in the medium term. Political measures can and will help to gradually bring the conditions of life into line with each other. But there is room for doubt as to whether this will already provide the potential for growing together: forty, years of GDR history have not only created different conditions of life but also produced different values, attitudes and demands that cannot be transformed into the western German system of values in a seamless fashion. Specific problems and the potential for conflicts in further developments might be found not only in the economic-political realm but also in this subjective dimension.

NOTES

- 1 An overview of the first 'western' polls in the former GDR is to be found in Habich, Landua, Seifert and Spellerberg (1991, footnote 1). For the concrete methodical difficulties in the implementation of the 1990 welfare survey in the east see Landua (1991).
- 2 The welfare surveys have been carried out at regular intervals since 1978—as a project of the *Sonderforschungsbereich 3* (Sfb 3) at the Universities of Frankfurt and Mannheim. The surveys of the SOEP were developed within the same institutional framework starting in 1984; in the meantime, the panel is being continued by the Deutsches Institut für Wirtschaftsforschung (DIW). Information on the organization and the first comparative results between the 1990 eastern welfare survey and the basic survey are to be found in Projektgruppe 'Das Sozio-ökonomische Panel' (1991). For detailed evaluations of the 1990 eastern German welfare survey, see especially Habich, Landua and Priller (1991); Landua, Spellerberg and Habich (1991). The following remarks are based largely on these evaluations.
- 3 A comprehensive overview of this approach to welfare research is provided by Habich and Zapf (1991).
- 4 Some selected basic data on these differences are documented in Habich, Landua, Seifert and Spellerberg (1991:17ff.).
- 5 The concept of 'social stratification' constructed in this fashion is documented for the 'old' Federal Republic of Germany for the first time in Zapf (1989). For more detailed descriptions of results for the former GDR, see Landua and Zapf (1991).
- 6 Results relating to the qualifications of 'skilled workers' should not be overrated in an east-west comparison for reasons of content. In this description, however, it is not a matter of qualifications but occupational standing. Naturally, the civil-servant categories were not presented for the east.
- 7 See Statistisches Bundesamt (1989:129).
- 8 Satisfaction is measured on a scale of 0 to 10 for every subject area queried (0='completely dissatisfied', 10='completely satisfied').
- 9 For more details, see Glatzer and Zapf (1984, chapter 9).
- 10 A comprehensive presentation of results is to be found in Statistisches Bundesamt (1989, part II).
- 11 For a more detailed and tabular documentation of these results see Habich, Landua and Priller (1991).

- 12 In the GDR, too, it was sometimes possible to observe a rising need for individuality and self-realization. But the thesis of Thomas Gensicke, who even conjectures attitudes in the GDR are in part more progressive than in the west, appears questionable (see Gensicke (1991:268ff.)). Noelle-Neumann (1991), on the other hand, confirms a more conservative attitude on the part of the eastern Germans.

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GERMAN UNIFICATION AND THE EUROPEAN COMMUNITY TRADE ASPECTS

A.Ghanie Ghaussy

THE EUROPEAN COMMUNITY AND THE GERMAN UNIFICATION TREATY

Immediately after the first free election in the former German Democratic Republic (GDR) and the decision of its people to be reunited with the Federal Republic of Germany (FRG), the European Council in its meeting of April 1990 in Dublin welcomed German unification under the ceiling of Europe. The European Council decided that the economic integration of the former GDR in Europe should take place as soon as German unification occurred. The transitional arrangements of the treaty of unification between the GDR and the FRG should be accordingly considered. The full integration of the former GDR into the European Community (EC) should be realized without new alterations of the treaties. This assessment was underlined again in the resolution of 17 May of the European Parliament.

With the transition of the former GDR into five new states (Brandenburg, Mecklenburg-Pomerania, Thuringia, Saxony and Saxony-Anhalt) and their accession to the Federal Republic on 3 October 1990 according to article 23 of the Constitution of the FRG and especially since the unified election of 2 December 1990 the whole area of the former GDR is a fully integrated part of the European Community. The transitional regulations of the Unification Treaty (*Einheitsvertrag*) should be accordingly respected by European institutions. The treaty of unity of both German states covers primarily the Economic Union, the Currency Union, and the Social Union. According to the Economic Union, the former GDR accepted the introduction of the market economy, private property rights, the free negotiation of wage contracts, etc. The Currency Union introduced the deutschmark into the former GDR on 1 July 1990. The sovereignty of the whole monetary and currency policy was transferred to

the Deutsche Bundesbank. According to this Union the East German mark was generally converted in deutschmarks with a rate of 2:1, whereas special regulation allowed a conversion rate of 1:1 in order to avoid hardships.¹ Finally, according to the Social Union the FRG's systems of social security (pension system, health and invalidity insurance system, the system of workers' unemployment insurance, etc.) were introduced into the former GDR. The complicated system of regulation for industrial laws (*Arbeitsrechtsordnung*) of the FRG was taken over by the former GDR.

Further requirements of the unity treaty covered financial matters such as transfer payments from the FRG to the budget of the former GDR, regulation of the budget and credit ceiling of the GDR along the lines used in the FRG, introduction of the FRG's taxation systems to the GDR and setting limits to the debt burden of the GDR. Subsidies for the agricultural sectors should be gradually abolished.

Apart from such measures that unified the different regulations of both German states (or primarily adjusted the regulations of the GDR to those of the FRG) some supporting measures that should be taken both by the FRG as well as by the GDR have to be mentioned. The FRG, for example, agreed to set up a unification fund from which the GDR should be financed. The volume of this fund amounts to DM 115 billion for the years 1990-4 (five years). This fund should be financed partly by reducing budget expenditures of the federal and state government, but mainly by the capital market via issues of new federal and state bonds (DM 95 billion). In turn, the former GDR introduced a 12-per-cent premium for new investments in the area of the GDR for the limited period of 1990-1. This premium will be reduced to 8 per cent for the following years. It was accepted that a few important sectors of the economy of the GDR such as housing, energy, and transportation should receive large subsidies enabling the gradual restoration of the infrastructure, which has been greatly neglected during the last forty years of the socialist economy. Despite the formal and legal unification of both German states, some special regulations of the unity treaty will remain in force for a transitional period of at least five years.²

It should be noted that the European Commission took direct part in the process of negotiation and formation of the unity treaty. Such participation enabled all three parties (the FRG, the GDR or the five new states, and the EC) to formulate regulations that should not contradict the laws and regulations of the Community. At the same time the application of the laws and regulations of the EC was made clearer for the Federal Republic. Accordingly, the provisions of transitional regulations of the unity treaty was also accepted by the EC.

Since the Unification Treaty encompasses a wide range of very different matters that also relate to the EC, in the following paper only the internal and external trade aspects of German unification will be

discussed. This aspect is very important because some main elements of external trade of the EC member countries are transferred to the European Commission. With the unification of Germany the former GDR is also integrated into the EC from which some consequences will result to the external trade of the EC as well as to unified Germany.

THE EXTERNAL TRADE OF UNITED GERMANY IN EUROPEAN AND INTERNATIONAL CONTEXT

The internal and external trade aspects of the unification of Germany have some special characteristics which are also important for the European Community and its relations to third countries. These special characteristics should be discussed as follows:

- 1 Intra-German trade between the former GDR and the FRG has been considered in the Federal Republic as a trade relation of a special kind. It resulted from the unsolved political situation of Germany. The FRG did not accept the GDR as a foreign country: therefore, trade between the two German states was considered as intra-German trade and not as foreign trade. On the other hand, the GDR always considered its trade with the FRG as foreign trade. According to the intergovernmental agreements³ both countries established clearing accounts at their central banks (the Deutsche Bundesbank for FRG and the Staatsbank for GDR) respectively. Payment transaction for imports and exports should be exclusively transacted from these accounts. A 'swing' (a credit without interest charges) was arranged in order to cover balances.⁴ The protocols of intra-German trade were accepted on the other hand as a supplement to the Treaties of Rome.⁵ Therefore, it was made an integral part of the Treaties of Rome, which means that the special relationship of both German states was accepted by the treaties of European Community. The intra-German trade protocol provided further that: (a) The FRG should avoid damage which might be caused by the intra-German trade protocols to the other states of the European Community. (b) These states are allowed to take protective measures in case of damages that might be incurred by them due to intra-German trade. The idea of these provisions (items 2 and 3 of the supplements to the Treaties of Rome) was to avoid imports from 'third countries' via the GDR and accordingly via the FRG into the European market. The FRG therefore introduced a regulation demanding certificates of origin for imports of goods from the GDR. It must be mentioned further that the agricultural products of the GDR were excluded from the European market regulation for agricultural products. Although intra-German trade was accepted by the EC, the provisions of Article 2 and especially Article 3 of the

protocol protected the other EC member countries from being flooded by exports from the GDR or possibly by exports from the Eastern-Bloc countries with whom the GDR had special ties. These ties will be discussed later. But it should be emphasized that due to the barter-trade character of the intra-German trade and due to strict currency regulations of the GDR, there was no substantial trade from the GDR to EC member countries and hardly any re-exports of its goods through the FRG into Western Europe. The same was true for GDR's imports from the FRG because the export proceeds of the FRG could only be used in West Germany and for barter purchases from the GDR. In fact, the Western European countries had a preference for exporting to the former GDR because their exports were not taxed by the GDR government, while exports from the FRG to the GDR were subject to taxation. Western European countries could, therefore, supply their products—especially agricultural products—to the GDR at more competitive prices.⁶ This was the main reason for the fact that the items 2 and 3 of the intra-German protocol could not be put into force during the whole period previous to German unification. With unification neither the provisions of Articles 2 and 3 of the protocol nor the regulations about the certificates of origin have survived, while the obligations of the former GDR toward third countries still exist. This aspect will be discussed in the following chapter.

- 2 The centrally planned economy of the former GDR was integrated into the economy of the Comecon countries. It had long-term trade agreements with the members of Comecon. These were supplemented by annual protocols. Furthermore, trade agreements with a large number of countries were either multilateral or bilateral agreements. Considering the trade ties of the GDR with the Eastern Bloc, some 65 per cent of the whole trade volume of the GDR (in the year 1989 amounting to \$58.7 billion) was with the Comecon countries, from which 55.4 per cent was trade with the Soviet Union (SU). The remaining 35 per cent consisted of trade between the GDR and the rest of the world. Here again, 30–50 per cent of GDR trade volume was trade with the FRG.⁷ These figures show the relatively higher degree of integration of the former GDR within the Eastern Bloc, especially with the Soviet Union. While the GDR exported primarily manufactured products to the SU, it imported from the SU raw material and energy. For example, 100 per cent of its demand for oil, natural gas, lead, wood, and phosphate was supplied by the Soviet Union. Compared to any other Western European country the amount of its trade with the rest of the world was very low (only 1 per cent of world trade, while the share of the Federal Republic amounted to some 12 per cent). Forty years of ties with Eastern Bloc countries and a socialist economy turned the production and export structure of the

former GDR into a 'compensatory function' of Comecon. The GDR was not able to compete with any other world-market-oriented countries of Western Europe. The unification of Germany and its integration into the European Community will undoubtedly change the whole production and export structure of the five new states of the now considerably larger Federal Republic. The introduction of the deutschmark as the new currency in July 1990 and of the market economy initiated shifts in the production and trade of the five new German states, diverting the international trade of the former GDR towards Europe and the West, although the years 1990-1 showed, for example, considerable decreases of the intra-Comecon trade of the former GDR, based on the fact that the economy of GDR was in a phase of complete reorganization. Because of experiences of the former GDR with Eastern Bloc countries and in view of the reform policies in Eastern Europe, the potential for trade of a united Germany with Eastern Europe might substantially increase, giving the enlarged Federal Republic vast opportunities for trade and investment in Eastern Europe. With the unification of Germany and the economic integration of the five new members of the Federal Republic as part of European Community, the provision of the joint custom tariff of the EC toward third countries came into force. This means, first, that the regulations and legal norms and standards of the EC as well as those of the General Agreement on Tariffs and Trade (GATT) have been extended to the area of the former GDR. Second, the five new states can no longer enjoy the zero tariff for their exports to the Comecon states as they did before as a member of this Eastern Bloc institution. The consequences are a clear deterioration in export possibilities in Eastern Europe for the five new states with the exception of exports of those goods where the former GDR had reached a monopolistic or semi-monopolistic position. In order to keep the volume of exports at its former level or possibly increase it, these exports must be subsidized. On the other hand, the integration of the five states into the European Community will force them to modernize their industries and to change the range of their production and export goods in order to compete with other members of the European Community. Such modernization will require huge investments in the five new states of Germany, for which sufficient capital mobilization is lacking. Investments from the remaining states of the Federal Republic of Germany, from other member countries of the EC, or from foreign sources require the improvement of the currently weak infrastructure of the five new states. It will take a few years until favourable conditions for investments from West Germany or from abroad are created in East Germany. The adjustment processes may cause a decrease of exports, negative growth, and unemployment effects.

Figures for the year 1990 show that the unemployment rate in Eastern Germany increased from 1 per cent in January to 7.3 per cent in December. Imports and exports both decreased considerably. Other factors could be added here: the negative effect of half-hearted economic reform processes, the collapse of the Comecon system, the non-convertibility of Eastern European currencies, lack of growth, etc. For example, total exports from the GDR amounted in 1989 to DM 41.1 billion, out of which DM 28.9 billion (=70.3 per cent) went to the former Comecon countries. In 1990 the total volume of exports from Eastern Germany (the former GDR) decreased by 7.4 per cent. This change was mainly caused by the decrease of exports of Eastern Germany to the industrial economies of the West (26.2 per cent) as well as to developing countries (8.0 per cent). However, dramatic changes occurred in the import sector. While the total imports of the former GDR amounted in 1989 to DM 41.1 billion it decreased in 1990 to DM 22.8 billion (=44.5 per cent).⁸ Such negative changes consequently show that the present pattern of production and export of Eastern Germany cannot be maintained. The unification of Germany and the integration of East Germany as an enlarged area of the EC will undoubtedly lead to fundamental structural changes which again will be accelerated by economic-reform processes and structural changes in Eastern Europe. Such changes will to some extent also influence the whole European trade flows. The unification of Germany already shows that the huge West German trade surpluses decreased due to the additional demands of the five new East German states.⁹ Because of the tightness of domestic production capacities a large part of the total domestic demand was satisfied by increasing imports from abroad, especially from EC-member countries.¹⁰ While West German exports to the EC countries fell from DM 352.6 billion in 1989 to DM 350.2 billion in 1990, its imports rose from DM 258.6 billion to DM 286.6 billion respectively, cutting the trade surplus by DM 30.4 billion in 1990. According to OECD projections, the current trade surplus could turn out to be reduced from a peak of almost 5 per cent of gross national product (GNP) in the first half of 1989 to just 0.25 per cent of GNP in the second half of 1992.¹¹

- 3 Although with German unity the regulations of the EC have been extended to the five new states of the Federal Republic, the EC has to take some adjustment measures for a transition period because of former long-term commitments of the former GDR to Eastern European countries. These commitments should be fulfilled. Altogether, these measures must first, only apply full EC trade-policy measures to Eastern Germany after a transition period. Second, the effects of such policy measures on the economy of Eastern Europe must be considered and, third, structural changes in the economy of

the eastern part of Germany as well as in Europe must be promoted.¹² These measures especially relate to Germany's imports from Eastern Europe for which the former GDR enjoyed special preferences (duty-free imports). The problem here is how to consider the contractual commitments of Eastern Germany towards East European countries and how to adjust them to the Community regulations. With the goal of the creation of a single European market at the end of 1992, the EC is inclined not to endanger the realization of the internal market. Therefore, exemptions from joint EC trade policy for imports from Eastern European countries were accepted by the EC for a range of import items until the end of December 1991. These exemptions could be extended until December 1992. During this transition period new negotiations between the EC and the affected countries of Eastern Europe should take place in order to arrange new trade instruments for the importation of goods from Eastern Europe. These measures relate to import quotas for finished goods, especially textiles and clothing for which a maximum import quota is fixed in the EC, agricultural imports, antidumping instruments, norms and standards regulation, etc. Since these measures imply preferences that might contradict the GATT regulations they could only be accepted for a short transition period and the GATT should be informed accordingly. The GATT rule of liberalization of trade must be considered in new trade agreements with Eastern Europe.

GERMAN UNITY AND THE GLOBAL EUROPEAN TRADE POLICY

The goal of realizing the European internal market forces the EC and its member countries to follow a uniform external-trade policy. The aim of such a policy was formulated in the Cecchini report. It was proposed here that the trade policy of the EC countries should be such that third countries should not enjoy gains from the creation of a larger European market without themselves making concessions to the EC.¹³ Although the protectionist character of the EC internal market is clearly emphasized in that statement, it must be mentioned, however, that the real trade policy of the EC is mainly formed by the ideas, interests, and practice of the national EC members and their institutions. On the other hand, according to Article 36 of the EC treaty the EC member countries are committed to the 'joint tariff' and 'joint trade policy' of the EC and the Commission has sole responsibility for European tariff and trade policies. Moreover, the joint tariff and the whole range of European trade policies are mentioned in Article 113 of the EC treaty. This article authorizes the EC to change tariff rates, to conclude tariff and trade agreements, to unify European

trade-liberalization measures, to define export policies, and to set protective measures, for instance, in case of dumping and of subsidies.¹⁴ Thus the EC is authorized to take autonomous legal measures as well as to conclude agreements with third countries.¹⁵ The European Council, which is mainly responsible for the joint tariff and trade policies of the EC, consists of representatives of the European member states, each one also following its national interests.¹⁶ These interests at times contradict those of the EC on historical and actual grounds. Therefore, in practice, the joint trade policy of the EC is decided by the power constellation of the qualified majority of the ruling powers in the European Council (according to Article 148).

The Federal Republic is an external-trade-oriented country. The share of trade volume (exports+imports) in its GNP is about 63.2 per cent.¹⁷

The former GDR followed—as did other socialist countries—a more closed and autarchic-oriented trade policy. But its trade volume quota of 8.9 per cent¹⁸ is, in comparison with other socialistic countries, still relatively high. It is too early to speculate whether the accession of the former GDR to the FRG may have a decisive influence on the formulation of a new German trade policy. But the fact is that, first, the unified Germany has accepted a free-trade policy which is emphasized in the Unification Treaty. Second, despite the present lack of competitiveness of the industrial enterprises in Eastern Germany, the potential of its raising productivity and competitiveness is clear, once the infrastructure is established and new investments begin to yield. Apart from Germany only Denmark and the Benelux countries have similar international trade structures. Their industrial enterprises are more competitive compared to the rest of other European countries. These four countries as a group favour a free internal-trade policy for the EC. In contrast to this group, the three other industrially important members of the EC, France, Great Britain and Italy, favour a more protective policy, while the rest of the EC—Greece, Ireland, Portugal and Spain—is more domestically oriented and favours state intervention in the external-trade sector as well.¹⁹ This grouping could be underlined by facts and figures which show the degree of protection in EC member countries, according to Article 115 of the EC Treaty. This article allows each individual EC member country to protect its market against imports from third countries if such imports lead to destruction of the domestic market of the respective country. While, for example, no application for protective measures was submitted by the Federal Republic to the EC in the last five years (1985–9) the average rate of approval of protective measures to the Benelux countries and Denmark was very low, e.g. 0.9 and 0.2 per cent respectively. In contrast to this the average approval rate of protective measures was for Italy 15 per cent and for France 50.6 per cent in the same period.²⁰

Considering this grouping of different attitudes of the EC member countries towards the external trade policy of the EC, the question arises

whether the more liberal members of the EC could be able to guide the EC in the direction of a freer trade policy.

As previously stated, the formulation of the external trade policy of the EC is based on Article 113 and for decision making on Article 148 of the Treaty of European Economic Community. This article states that if it comes to a vote, the qualified majority has to be respected. This rule gave the more free-trade-oriented group a greater power during the formulation of the treaties. But considering the enlargement of the EC after 1970 and especially the enlargement of the EC to the south through the entrance of Greece, Portugal, and Spain, the second and third groups (more protection-oriented EC members) receive a clear majority of the votes. The free-trade-oriented members no longer form even a blocking minority. The consequences are that countries such as France and Italy could easily achieve their protectionist trade-policy goals in a package deal with the southern members of the EC. This means that the position of Germany in decision making for European trade policy is deteriorating. In this respect German unification has not changed much. There are many examples in which the trade position of Germany has been overruled by the majority of other EC members, for instance, in the case of protective customs duties for electronic industries.²¹

THE GERMAN TRADE-POLICY DILEMMA. TRADE INTERESTS WITH EUROPE VERSUS WORLDWIDE TRADE INTERESTS

The Community of six EC members with Germany as a leading trade member contributed considerably—together with other major trading countries such as the United States of America (USA)—to the liberalization of the world trade. Important examples of such liberalization were the performances of the Kennedy Round, in which the main trading countries, especially the two major trade blocs such as the EC and the USA, arranged to reduce their customs duties for industrial goods. Since the Tokyo Round of the GATT there has been no major progress toward liberalization of world trade.

In the late 1970s and especially in the 1980s protectionist trade policies in various forms were increasingly adopted by major partners in world trade. New protectionism was eroding the GATT principles of free world trade. In this period the EC concluded preferential agreements with the 66 African, Caribbean and Pacific states, signed financial and economic co-operation agreements with Southern and Eastern Mediterranean countries, and established a range of agreements according to the general preference system (GPS) with other countries. Some of these agreements were in contradiction with the 'most favoured clause' of the GATT.

With an increasing tendency towards new protectionist policies in world trade by major economies (USA) and due to the trade deficits of the EC as a whole, the tendency for a protectionist trade policy of the EC increased during the late 1970s and the first half of the 1980s. Apart from Article 115 of the EC Treaty, in the 1980s a number of protective measures were passed by the EC, for example Decree No. 2881/82 on joint import regulations, Decree No. 2176/84 on protection against dumped or subsidized imports from countries not belonging to the EC, and Decree No. 2641/84 on strengthening the joint trade policy and especially protection against forbidden trade practices.²² The last decree which provided the use of 'new trade instruments (NTI)' of the EC was implemented on the initiative of France, which suffered chronically from large trade deficits. The argument that the EC should be equipped with the same trade-policy measures as the other countries (USA, Japan) increasingly found the support of the overwhelming majority of the EC member states. According to these protective new trade instruments, each individual firm can ask the EC to adopt protective measures against illegal trade practices of foreign countries, such as 'retorsion duties' or 'import contingencies', etc. The decree allows the EC to use a wide range of protective measures.²³ Although Germany and the Netherlands were against this strongly protective decree—Germany even voted against it—they did not veto the decree on the possible ground that it might injure the 'vital interests' of their respective countries.²⁴

However, each individual application of the member country to adopt protective measures must be approved by the EC. In the last five years, there have been submitted some 891 applications from EC member countries to the EC Commission according to Article 115 of the EC Treaty, out of which 575 applications were related to the textile sector. The average rate of approval of the application by the EC was 80 per cent p.a., those for the textile sector 85 per cent.²⁵

Apart from the agricultural-market regulation (*Europäische Agrarmarktordnung*) of the EC, which has undoubtedly a very strong protective character, the protective-trade policy decrees of the EC led to strong criticism of European trade policy at home as well as in trading-partner countries. The danger that Europe might adopt an even more trade-restrictive policy after the completion of the internal market at the end of 1992 has increased with the southern enlargement of the EC. Thus widespread criticism that Europe might turn to a giant fortress hampering negotiation of GATT, and endanger the efforts of the Uruguay Round and consequently the development of free trade in the world cannot be rejected. In this situation Germany finds itself in a peculiar trade-policy dilemma. The philosophy of German trade policy is 'more free trade': free intra-European trade as well as free world trade. This philosophy arises from the fact that Germany's share in world trade

as well as in intra-European trade is very high. For example, Germany (without the former GDR) exported DM 642.7 billion in 1990 of which DM 350.4 billion (=54.52 per cent) went to the EC member countries. Germany's share in world exports in 1989 was 11.8 per cent. In contrast to this, the share in world trade of the two more protective countries, Italy and France, is small (4.8 and 6.2 per cent), although both of them have a relatively large share in intra-European trade (52.3 and 64.4 per cent respectively).²⁶ Thus Germany's interests suggest, on the one hand maintaining free-trade flows within Europe, forcing the EC to adopt a more free-trade policy worldwide, while the EC itself is following a more restrictive trade policy, and on the other hand, they also suggest greater liberalization of its non-EC world trade. For this reason, Germany feared that the protective policy of the EC that contradicts the GATT principles might lead other trade blocs to adopt counter-measures and impose restrictions on EC exports or practise other retaliatory trade policies. Such measures would undoubtedly affect Germany's international trade position with non-EC countries. Germany also had to consider the steadily growing importance of EC member countries for its trade in order not to provoke such countries as France, Italy, and Great Britain²⁷ and not to block more free trade and the creation of European internal market in 1992. Therefore, the strategy of Germany in the EC trade-policy negotiation was to neutralize the dangerous poison of protectionism,²⁸ e.g. to try to clarify the imprecise formulation of the articles of the decrees in order to hamper a unilateral decision, to weaken or to minimize the critical points of the articles, to extend the negotiation as long as possible to seek new allies to make a general consensus possible, and to avoid a vote in order not to be isolated. These measures are, of course, not enough for an economically stronger, united Germany to solve the clash of interests resulting from German EC interests versus German worldwide trade interests. In view of the structural changes in Eastern Europe and Germany's role as a supplier of goods, services and capital to them, it has to make concessions to the EC in order to get the support of the other EC countries for its efforts to modernize the economy of its five new member states and for its engagements in Eastern Europe. There are also a few other fields of domestic policy that force the enlarged Federal Republic to seek European co-operation for realization of its national goals, that are related to the immense macroeconomic problems of the five new states resulting from the Economic and Currency Unions with the Federal Republic as well as from their integration into Europe. The transformation of the former GDR from an inefficient centrally planned economy to a competitive market economy necessitates a complete restructuring of production and trade of the five new states of the Federal Republic for which European investment and co-operation must be attracted.

NOTES

- 1 For children (0–14 years) DM 2,000, for adults (15–60 years) DM 4,000, for seniors over 60 years old DM 6,000.
- 2 See Deutscher Bundestag (1990:5–6).
- 3 Based on the Berlin Treaty of 20 September 1952. Some provisions of this treaty were supplemented or changed in the Treaty of Frankfurt dated 16 August 1960.
- 4 In reality it served as a credit instrument of the FRG to the government of the GDR.
- 5 EC (1957) *Die Verträge von Rom zur Gründung der Europäischen Wirtschaftsgemeinschaft (EWG) und der Europäischen Atomgemeinschaft (EURATOM)*: 210.
- 6 For details see Plötz, P. and Bolz, K. (1987).
- 7 See Deutscher Bundestag (1990:28).
- 8 See Statistisches Bundesamt (1991:182, 189).
- 9 The balance of trade account fell from DM 134.5 billion in 1989 to DM 105.3 billion in 1990, the balance of trade, services and transfers from DM 104.0 billion to DM 71.9 billion respectively. See Deutsche Bundesbank (1991 March: 75).
- 10 See OECD (1990:60).
- 11 See OECD (1990:64).
- 12 See Deutscher Bundestag (1990:33–4).
- 13 See Cecchini, P. (1988).
- 14 See text of the EC treaty.
- 15 By majority decisions of the European Council with proposals and recommendations of the Commission.
- 16 The institutional and legal aspects of this problem cannot be discussed here. For details see Bourgeois (1987) and Beutler *et al* (1987).
- 17 The FRG exported DM 642.6 billion and imported DM 550.5 billion in 1990. Some 55 per cent of its exports went to the EC member countries. Deutsche Bundesbank (1991 March: 76).
- 18 See Deutsche Bundesbank (1990:10).
- 19 See Schumann and Mehl (1989:42). Further Koopmann (1989:431).
- 20 See EC-Commission (1990: I-C2).
- 21 See Koopmann (1989:431). See further Röhren (1990:141–57).
- 22 See Berg, H. (1990:3).
- 23 See Berg, H. (1990:3).
- 24 See Schumann and Mehl (1989:43).
- 25 See EC-Commission (1990: I-C3).
- 26 See OECD (1991:12, 44–5).
- 27 Germany's exports to France amounted to DM 84.3 billion, to Italy to DM 59.8 billion and to Great Britain to DM 59.4 billion in 1989. See Deutsche Bundesbank (1991 January: 76).
- 28 Schumann and Mehl (1989:45).

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GERMAN UNIFICATION AND THE EXTERNAL VALUE OF THE DEUTSCHMARK

Wolf Schäfer

INTRODUCTION

German unification has many economic consequences which are of great importance not only for Germany itself but also for European as well as non-European countries. One central issue concerning the external economic relations of the united Germany should be addressed: how will the process of integration of the two parts of Germany affect the external value of the deutschmark? This question has a short- and long-run dimension. In particular, the long-run development of the exchange rate of the deutschmark is essential for Germany's future competitiveness, and thus, for the development of the current account. It is also important for forming (more or less) rational exchange-rate expectations which influence the direction and volume of capital flows to and from Germany and, thus, affect the capital account. Last but not least, the future development of the deutschmark will not be without influence on the European Monetary System (EMS) and on the integration process towards a European Monetary Union (EMU).

The analysis is based on the following line of reasoning. German unification constitutes the integration of two national economies with different sectoral structures and a divergent level of development. Thus, there is a tremendous structural change, especially in the East German economy, but to some extent in West Germany, too. Structural change implying adjustments in the real sector of the economy will necessarily affect the real exchange rate of the deutschmark. As a result of the previously misdirected structuring of production and trade in the former German Democratic Republic (GDR), especially the relationship between tradable and nontradable goods will be subject to sectoral shifting. The basic concept of tradables and nontradables would, therefore, provide a suitable framework for analysing the effects of integration on the external value of the deutschmark.

If one uses a functional distinction between tradables and nontradables, then goods are to be assigned to the foreign trade sector if they are directly subject to international pricing. This means the prices for tradables are determined basically by price levels on the world market, whereas the prices for nontradables are determined by the domestic supply and demand situation. As a result of sectoral structural change accompanying the unification of Germany, it is thus to be expected that there will be considerable shifts in the output and price relations between tradables and nontradables. The question that poses itself is therefore what effects such structural shifts could have on the real and nominal exchange rate of the deutschmark.

THE REAL EXCHANGE RATE

There are a number of alternative definitions of real exchange rates in the international economics literature. It is not necessary to review these because in most modern theoretical works the real exchange rate (e) is defined as the domestic price of tradables (P_T) to nontradables (P_N):

$$(1) e = \frac{P_T}{P_N} = \frac{EP_T^*}{P_N}$$

where P_T^* denotes the foreign price of tradables and E the nominal exchange rate.¹

In describing the determination of the prices of tradables and nontradables on a markup-pricing basis we obtain

$$(2) P_T = \frac{g_T w_T}{\pi_T}$$

$$(3) P_N = \frac{g_N w_N}{\pi_N},$$

where $g=(1+g^?)$ denotes an expression for the mark-up on unit labour costs, w is the nominal wage rate, and p is the labour productivity, each in the individual sectors. Thus, the real exchange rate is

$$(4) e = \frac{g_T}{g_N} \cdot \frac{w_T}{\pi_T} \cdot \frac{\pi_N}{w_N}.$$

Apparently, the relationships between wages, productivities, and markup in the tradables and nontradables sectors are of decisive importance for the determination and development of the real exchange rate. Whereas wage increases in the tradables sector which exceed productivity growth therefore cause a real devaluation, this leads to a real appreciation if this is the case in the nontradables sector. Whether wages (especially) in the former GDR will develop sector-specifically in line with productivity² is thus important to answering the question of how German unification will affect the exchange rate for the deutschmark.

WAGES, PRODUCTIVITIES, AND THE REAL EXCHANGE RATE

The role of wage rates—and this is true especially in East Germany—seems to be threefold. First, the wage rate should be in line with the increase in labour productivity. Second, it should be high enough to prevent workers from emigrating to West Germany. And third, it should take over the role of the exchange rate in order not to cause further deterioration to the East German firms' competitiveness, already adversely affected by the wage conversion rate of 1:1 on 1 July 1990. But, of course, this is too much of a task for one price variable. Therefore, in the long run, the productivity rule is the only viable option.

But what is the East German reality like? A crucial problem manifests itself here, one that represents a labour-market policy dilemma. Wages in the former GDR are not in line with labour productivity; they are higher and seem to be losing touch with productivity to an ever increasing extent. This can be explained by the fact that wages that match productivity obviously are not compatible with the conditions causing the migration of labour from the eastern part of Germany to the western part. Whereas the demand side of the labour market is calling for productivity-linked wages so that jobs will either be preserved or created, the supply side expects 'stay-put' wages that, from the point of view of incentives to migration and the social acceptance of regional wage differentials, are not very much lower than the wages in the older part of the Federal Republic of Germany (FRG).³ This aspect of the problem is what is causing the pressure to adjust the nominal wages in the eastern part of Germany to those in the western part, a pressure that is increased by expectations in areas of employment, such as the civil service, in which wage levels are not primarily determined by market forces anyway.

While one can thus expect that the short- and medium-term development of productivity in the new states will, on average, not keep pace with wage increases, it is nevertheless to be expected that in this respect there will be sector-specific differences. In light of the international orientation of competition in the tradables sector, it would seem realistic to assume that productivity in this sector will grow faster and more intensively than in the nontradables sector. If, however, the nominal wages do not tend to adjust to levels in western Germany in a sector-specific manner, then the gap between wage levels and labour productivity will increase especially in the nontradables sector—to a lesser degree, by comparison, in the tradables sector. An increase in the prices for nontradables could then go hand in hand with a mark-up increase in the nontradables sector. Since the prices for tradables, on the other hand,

cannot change, or can only change marginally, due to their linkage with international price levels, productivity levels that do not keep pace with wage increases imply a reduction of profits in the tradables sector.

However, one has to take the following into consideration: whether, and to what extent, increases in productivity are realized depends greatly on the success of efforts to stimulate capital imports into the former GDR, especially private capital imports that incorporate technical knowhow and modern management techniques, and can thus increase labour productivity.⁴ Since the capital stock, as well as production, was previously oriented, for the most part, towards conditions in the Comecon countries, the result of which was a misdirected specialization that grew out of a decade-long disregard of the basic principles of the international division of labour according to comparative cost advantages, private capital imports are just what is needed to bring about a restructuring of the capital stock appropriate to the conditions of international competition.⁵ Because of its orientation toward the international market, this is especially important for the tradable sector, whose production, compared to the nontradable sector, is therefore (necessarily) relatively capital intensive. An inflow of capital into Germany results in a greater increase in productivity in the tradables sector than in the nontradables sector.⁶ Hence, a relative increase in productivity in the tradables sector *vis-à-vis* the nontradables sector can also be deemed realistic from a capital supply-side perspective. This capital-induced increase in productivity aids in mitigating the above-mentioned wage-policy dilemma of 'productivity-appropriate wages versus "stay-put" wages'. To put it simply, if capital flows in, the work force does not migrate out.

These considerations provide the basis for a further analysis of the effects of the unification of Germany on the exchange rate for the deutschmark. Because of the backlog of demand in the population in the former GDR, the transfer of income to this region and the increases in factor income that will occur there in the medium and long term, the demand for tradables, and especially for nontradables (i.e. services), will increase. This increase in demand will, in turn, increase the internal absorption. If price controls are abolished or gradually relaxed, as is already the case for the most part, such an increase in absorption will bring about an increase in prices. Whereas tradables, however, are basically subject to international price levels, which do not change, or change only slightly, as a result of absorption, prices for nontradables will rise. Thus, apart from there being an absolute increase in the price of nontradables, there is also a relative price increase *vis-à-vis* tradables.

Therefore, the following overall result can be derived from equations (1) and (4):

$$(5) \left| \frac{de}{dP_T} \right| < \left| \frac{de}{dP_N} \right|$$

which means that the real devaluation effect produced by the tradables sector is overcompensated by a real upward revaluation effect produced by the nontradables sector, so that the deutschmark on balance experiences a real appreciation as a result of the relative price increases for nontradables.⁷ For the medium term, it appears realistic that the unification of Germany and the sectoral adjustments it induced (in the form of a demand shock) will bring about a real appreciation of the deutschmark.⁸

There is an opposite view to the appreciation hypothesis.⁹ This view is based on the argument that Germany will accumulate foreign debt to finance the new infrastructure in East Germany. As this debt has to be (re)paid, Germany needs to have a surplus in the current account which can only be generated by a real depreciation. But even if capital inflow is not the main source of financing investment in East Germany and external debt is, therefore, not accumulating, the intertemporal mechanism of stocks should be operating: with a reduced current-account balance, the stock of foreign direct investment and of German portfolio investment is reduced. Thus, if there is a tendency for the deutschmark to appreciate, it should, at least, be weakened.

One can point out¹⁰ that this depreciation hypothesis is valid only on the assumption that the West German production function will be relevant in all of Germany. It neglects the gains from integration and the effect on production from new technology and organizational skills through investment in East Germany. This part of Germany has the chance to get a more modern infrastructure than West Germany's and to enjoy the advantage of being a latecomer—as did West Germany after World War II. All this stands behind the assumption of sector-specific productivity increases as shown in equation (4). In addition, the integration may increase the variety and product quality so that exports in areas of inelastic demand could be stimulated to prevent negative terms-of-trade effects. To this extent an appreciation of the deutschmark seems realistic.

THE NOMINAL EXCHANGE RATE

The question is how this real appreciation trend will influence the nominal exchange rate for the deutschmark. This question is important especially with respect to Germany's membership of the EMS, as well as with respect to the process of currency integration leading up to the EMU as envisaged and already partially implemented according to the three phases of the Delors Plan. These circumstances are important for this analysis because the EMS fixes the nominal, rather than the real, exchange rates and because the parity-change proviso in the first two phases of the Delors Plan¹¹ stipulates that change is to be successively

limited as early as possible, so that it may be completely eliminated by the time the third phase is reached.

But how can a real appreciation trend for the deutschmark be reconciled with the more rigid pegging of the nominal exchange rate for the deutschmark that is occurring because of the process of monetary integration? The analysis presented here gives rise to the following consideration.

Apart from equation (1), the real exchange rate is also defined as

$$(6) e = \frac{EP^*}{P}$$

where P^* denotes the foreign and P the domestic price level.¹² If it is assumed that P and P^* are geometrically weighted averages of tradable and nontradable prices, it is possible to write

$$(7) P = P_N^\alpha P_T^{1-\alpha}, \quad \alpha > 0$$

$$(8) P^* = P_N^{\alpha^*} P_T^{1-\alpha^*}, \quad \alpha^* > 0.$$

Because of (2), (3), and (6)–(8), and assuming that the foreign price level is fixed and equal to 1, we get for the real exchange rate:

$$(9) e = \frac{E}{\left[\frac{s_N w_N}{\pi_N} \right]^\alpha \left[\frac{s_T w_T}{\pi_T} \right]^{1-\alpha}}$$

Equation (7) shows that absolute and relative price increases for nontradables, which indeed cause the real appreciation effect, should bring about an increase in the general domestic price level. Should such a general increase actually occur, this then implies that the real upward revaluation of the exchange rate can only take place if the nominal exchange rate remains constant (see equations (6) and (9)). A real appreciation of the deutschmark would go hand in hand with an increase in inflation. The fundamental precondition for such a process, however, is that it is accommodated by monetary policy. But if domestic monetary policy is oriented towards maintaining price-level stability, then there is no room for monetary policy to support price increases. In this case, a relative increase in prices for nontradables can only succeed if there is a simultaneous decrease in prices for tradables.¹³ This could be brought about by a decrease in the nominal exchange rate, i.e. a nominal appreciation of the deutschmark.¹⁴ The nominal appreciation would function as an adjustment mechanism that implicitly brings about an absolute and relative reduction in the price of tradables. Hence, it is clear that the more persistent the German Bundesbank is in pursuing its stability objective, and the more it intends to maintain its reputation by doing so,¹⁵ the greater the pressure will be for a nominal appreciation of

the deutschmark that could satisfy the need for a real appreciation. This monetary-policy dimension leads directly from a supply-theoretic to a demand-theoretic corroboration of the hypothesis of the appreciation of the deutschmark. The basis for this is to be found in the present and presumably ongoing policy mix in the FRG, which in a similar form has already caused the interest rates to rise once in the past, namely, in the US after 1982. This policy mix is a combination of expansive fiscal policy and a (restrictive) monetary policy oriented towards maintaining price-level stability. The high capital requirements of the German public purse for financing the creation of a new infrastructure in the former GDR, together with the relatively strict monetary policy of the Bundesbank, are generating an upward pressure on the real and nominal interest levels in Germany. This upward trend in the interest rates will tend to stimulate the demand for the deutschmark on the foreign-exchange markets and, thus, will exert an upward pressure on the deutschmark. Hence, medium-term expectations for an appreciation of the deutschmark can be substantiated not only from a supply-side but also from a demand-side point of view.¹⁶

There is also an additional factor that could stimulate the demand for the deutschmark and that, thus, should also be considered here. If one looks at the developments in the countries in Eastern Europe, it would seem realistic to assume that Germany will probably become Eastern Europe's most important trading partner and, at the same time, its most important lender. There are a number of indications that the Eastern European countries will increasingly use the deutschmark as their invoicing currency after Comecon switched over to a convertible currency early in 1991. As long as the currency in these countries is not completely convertible, it seems to be a reasonable assumption that the deutschmark, along with the dollar, will be used for intra-Comecon commerce. Further, it is to be expected that, because of these countries' already existing interdependence with Germany, the required transfer of resources to Eastern Europe will increasingly take place to a large extent via German financial markets.

EFFECTS ON MONETARY INTEGRATION IN EUROPE

The question poses itself whether and how the above-mentioned consequences of German unification on exchange-rate policy affect progress towards European Monetary Union as set forth in the Delors Plan and effected in its first phase on 1 July 1990. Of special interest here are the parts of the plan that are relevant to exchange rates. Whereas parity changes, according to the EMS parity-change proviso, are still possible during the first phase,¹⁷ in the second phase the proviso allows only exchange-rate adjustments in exceptional situations and,¹⁸ at the

same time narrows the official spread. The third and last phase of the currency integration begins with the exchange rates being fixed irreversibly and ends with national currencies being replaced by a uniform European currency.

The nominal exchange rates are thus to be fixed as soon as possible by means of a successive limitation of the parity-change proviso, that is, the exchange rates as an adjustment variable are to be obsolete within the EMS at the earliest time possible. Such a strategy is clearly at odds with the tendency of the deutschmark towards a real upward revaluation, while the Bundesbank is maintaining a policy of stability, which it is doing because it sees the deutschmark as the anchor of stability in the EMS. This must necessarily put a strain on relations among members of the EMS in that pressure is created for a nominal upward revaluation of the deutschmark against the other EMS currencies. This will have the following consequences.

Should the appreciation of the deutschmark not occur, the other EC countries would be forced to raise their interest rates which would tend to cause a decline in production and employment in these countries. In other words, with fixed exchange rates, the other EC countries would carry costs of German unification by suffering a reduction in growth and employment levels. These costs would also be increased due to the floating of EMS currencies as a bloc against non-EC currencies, such as the dollar or the yen. The tendency of the deutschmark towards a real appreciation and the increase in interest rates induced by the trend would bring about, in turn, an upward revaluation of the EMS currencies *vis-à-vis* non-EC currencies, or in other words the deutschmark would push up the other currencies in the EC exchange-rate group. This would tend to worsen the competitiveness of these countries.¹⁹ On the other hand, an appreciation of the deutschmark within the EMS could relieve them of such costs of German unification as these. The basic dilemma of prematurely fixed exchange rates is that those countries that are pushing forward the process of institutional monetary integration would at the same time have to be prepared to take over the costs of German reunification. And it is doubtful whether they would, or whether their doing so could even be considered a reasonable option. If they were to take over these costs, this would surely lead to their demanding compensation payments, which would reinforce the development of the intra-community transfer-payment system (structure funds) already provided for in the Delors Plan. This would mean that necessary exchange-rate adjustments that remained to be effected would have to be transformed into transfer payments. Such a transformation would not be allocatively optimal.²⁰ If the upward pressure on the deutschmark were to lessen, then the other EC countries would tend to be able to improve their balance of payments on current account *vis-à-vis* Germany because

this would stimulate their exports and reduce their imports. This adjustment via the exchange rate would be allocatively efficient and would bring about an increase in production and employment in these countries.²¹ One must ask whether these relationships are being given enough attention in the debate about the European Monetary Union, now that after German unification politicians are pressing forward with the creation of the union. If the second phase of the Delors Plan is to go into effect by 1 January 1994, and, according to the Maastricht resolutions of December 1991, the European Monetary Union with one single European currency will be realized not later than 1 January 1999, then it would appear that the politicians' time-preference rates for European integration are far too high in view of the fact that the structural changes that the 'supply shock' of German reunification²² has set in motion within the EC require a more flexible application of the parity-change proviso rather than a force limitation. Steps toward irreversibly fixing the exchange rates should thus not be accelerated. On the contrary, they should be retarded.

NOTES

- 1 There has been some discussion on whether the real exchange rate should be defined as P^T/P^N or P^N/P^T . The International Monetary Fund (IMF) has adopted the latter definition. Both approaches have their pros and cons. The IMF definition is appealing because in that case a real appreciation is reflected by an increase in the real exchange-rate index, while a decline represents a real depreciation. The definition according to equation (1) is particularly appealing because in this case both nominal and real depreciations/appreciations will result in increases/decreases of the respective indexes.
- 2 The reason for the emphasis in the following on the former GDR is that the relation of wage trends to productivity is the most problematic in this part of Germany. The real exchange rate of the deutschmark is, of course, determined by wages and productivity in all of Germany, but these are in turn affected by the situation in the former GDR.
- 3 Hence, the dilemma is that employment in the former GDR is thus not solely determined by real wage levels nor by nominal wage levels. This situation (*mezzogiorno* problem) plainly demands that new approaches be taken by wage policy. For proposals concerning this, see Donges *et al.* (1990:19f.). Subsidizing labour to reduce the wage costs for the firms (see Akerlof *et al.* 1991) is no solution to the problem because this means, among other aspects, conserving the structural status quo in East Germany and inviting the trade unions to moral-hazard behaviour, while the government has to take over a heavy financial burden.
- 4 How necessary capital inflow is is clear in view of the fact that approximately 76 per cent of the industrial plants in the former GDR are more than 5 years old, approximately 55 per cent are more than 10 years old, and approximately 21 per cent are more than 20 years old. See Siebert (1990:12).

- 5 Increased capital imports require that the marginal productivity of capital, or the real interest level in Germany, is attractive for foreign investors. This means that real interest rates must rise rather than fall.
- 6 This effect has already been demonstrated by Rybczynski (1955). With a linearly homogeneous production function in the tradables and nontradables sector, the marginal rate of substitution remains constant in the production of both commodities if the factor 'capital' is increased, but nonetheless the transformation curve for the tradables and nontradables does shift.
- 7 The extent to which a relative price increase for nontradables *vis-à-vis* the tradables can take place also depends, of course, on the income elasticity of the demand for tradables and nontradables: the greater the relative elasticity for nontradables, the greater the real appreciation.
- 8 In the long term, it is to be expected that noticeable increases in productivity will occur also in the nontradables sector, which will then counteract the trend toward real appreciation.
- 9 See, e.g., Wyplosz (1991), Méltz (1991).
- 10 See Siebert (1991:87f.).
- 11 See *Report on Economic and Monetary Union in the European Community* (1989), hereafter cited as *Report*.
- 12 This definition is widely used especially by policy makers and practitioners because it does not involve the difficulties encountered in measuring the relative price of tradables to nontradables. It is often referred to as the 'PPP definition' of the real exchange rate (see Edwards 1989:6).
- 13 See also Schäfer (1990:359).
- 14 This implicit reduction in the price of tradables via a nominal appreciation would take place without the otherwise necessary increases in productivity, or reductions in wages and profit markup.
- 15 The credibility of the Bundesbank very much depends on whether the monetary expansion sticks strictly to the increase in the production potential in Germany, irrespective of the behaviour of trade unions and fiscal-policy makers. It shows the advantage of sticking to a rule excluding the strategic behaviour of other players and, furthermore, of moral-hazard problems
- 16 These appreciation expectations fit into the scenario, which gives reason to expect that the trend will be towards a reduction of the balance-of-payments surplus on current account, which is a result of increased imports and reduced exports (because they were diverted to the former GDR).
- 17 Each country is to make an effort to make other adjustment mechanisms function better. See *Report* (1989), Paragraph No. 52.
- 18 *Report* (1989), Paragraph No. 57.
- 19 Also the European Currency Unit (ECU) will be pushed up against non-EC currencies, thus reducing the competitiveness of ECU-area exports to the non-ECU currency area.
- 20 Apart from bureaucratic costs, the costs accompanying the transfer payments imply allocative distortions, a reduction of incentives and rent-seeking costs. See Issing and Masuch (1991:29).
- 21 In recent years, Germany's trade surplus and balance-of-payments surplus on current account have become increasingly larger in relation to the other EC countries, which has caused some criticism within the EC. If, as a result of reunification, the reduction in Germany's export surplus leads to an increase in exports from other EC countries, then this export pull will, opportunely enough, come at a time when the trend in the other EC countries is towards a slowdown. To this extent Germany will play the role of a locomotive.

22 The sweeping changes in Eastern Europe will serve to intensify this shock.

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ENERGY POLICY IN EASTERN GERMANY

Helmut Gröner

German unification came to pass on 3 October 1990. Although the economic integration of eastern Germany was already under way at that time, the growing-together of the two Germanies is dragging along and continues to be subject to major problems of transition and adjustment. Against this background, the energy industry is one of those sectors that will have to undergo considerable reorganization and economic reorientation.

THE HERITAGE OF THE GERMAN DEMOCRATIC REPUBLIC (GDR) IN THE FIELD OF ENERGY POLICY

Compared to its counterpart in former West Germany, the energy industry in eastern Germany has undergone a highly different development.¹ Table 9.1 gives a good survey of the conditions to be found in the field of energy policy in western and eastern Germany.²

As a result, today's structures diverge with regard to all criteria.³ In eastern Germany, solid fuels account for some 70 per cent of the primary energy consumption (PEC), with lignite alone accounting for about two-thirds of the PEC. By contrast, the consumption of mineral oil accounts for clearly less than 20 per cent. Its usage is confined to the transport business and the non-energy consumption of the industrial branches. The share of natural gas (town or coal gas is used almost exclusively) in the PEC is extraordinarily low (less than 10 per cent). Nuclear energy contributes some 3 per cent. Hydroelectric power and the remaining sources of energy are of no significance. Not counting nuclear energy, this structure of the sources of energy is very similar to the situation in West Germany in the 1950s. Consequently, it is not at all surprising that some 80 per cent of the electricity is being generated from lignite. Here, nuclear energy has a share of 10 per cent with all the other sources of energy forming the remaining 10 per cent.⁴ Moreover, it is noteworthy that almost 25 per cent of all houses were heated by district heating and 65 per cent by lignite firing.⁵

ENERGY POLICY IN EASTERN GERMANY

Table 9.1 Evolution of primary energy consumption in Germany

	<i>West</i>		<i>East</i>		<i>Total</i>		
	<i>Germany</i>	<i>Germany</i>	<i>Germany</i>	<i>Germany</i>	<i>Germany</i>	<i>Germany</i>	
<i>Millions of tons of coal units</i> ¹	1989	1990	1989	1990	1989	1990	
Mineral oil	153.2	159.0	17.4	18.0	170.6	177.6	
Pit-coal	73.3	73.5	5.3	3.3	78.6	76.8	
Lignite	32.5	32.1	87.7	72.0	120.2	104.1	
Natural gas	65.6	68.0	11.9	9.0	77.5	77.0	
Nuclear energy	48.2	47.3	5.3	2.2	53.5	49.5	
Hydroelectric power ²	5.4	4.5	0.4	0.3	5.8	4.8	
Others	4.6	4.6	0.2	0.2	4.8	4.8	
Total	382.8	389.0	128.2	105.0	511.0	494.0	
<i>Market shares in percentage terms</i>							
Mineral oil	40.9	40.9	13.6	17.1	33.4	35.8	
Pit-coal	19.2	18.9	4.2	3.1	15.4	15.5	
Lignite	8.5	8.2	68.4	68.6	23.5	21.1	
Natural gas	17.1	17.5	9.3	8.6	15.2	15.6	
Nuclear energy	12.6	12.2	4.1	2.1	10.5	10.0	
Hydroelectric power ²	1.4	1.1	0.3	0.3	1.1	1.0	
Others	1.2	1.2	0.1	0.2	0.9	1.0	
Total	100.0	100.0	100.0	100.0	100.0	100.0	
<i>Specific energy consumption Unit</i>							
Per-capita PEC	tons of coal units	6.1	6.1	7.8	6.6	6.5	6.2
PEC per unit of the GNP (not inflation-adjusted)	kilograms of coal units per DM 1,000 of the GNP	169.0	159.0	449.0	451.0	201.0	184.0

¹ million tons of coal units is the equivalent of 29.3 petajoules (1 petajoule=10¹⁵ Joule).

² These figures include the balance of international trade in electricity.

Source: Schiffer (1991:155).

This structure of the energy industry was the logical consequence of the search for autarky, which, indeed, was the primary political goal of the GDR government in the field of energy policy. Apart from lignite, the former GDR was a country virtually devoid of natural resources. As a result, reducing its dependence on imports could only be accomplished by intensifying the extraction and the utilization of lignite. It is important that, after the second oil crisis of 1979, the real terms of trade for imports of energy (mineral oil, natural gas) were supposed to decrease by 50 per cent, whereas an increased utilization of lignite was expected to 'cost' only 30 per cent more.⁶ As a result and in accordance with the planned

target, lignite extraction was increased by more than 20 per cent during the 1980s. This, however, put a great strain on the East German economy, because investments in the energy industry amounted to almost 25 per cent of all industrial investments. In addition, the industrial branches had to invest considerable sums to cover their energy needs. Both the performance and the flexibility of the entire economy were affected adversely by these expenditures. The GDR tried to import as much of the remaining indispensable energy as possible from the other member countries of the Comecon in general and from the USSR in particular.⁷ Moreover, the low degree of diversification, to be observed in the energy sector in the GDR led to an extremely modest distribution of risks, thus rendering it very susceptible to all kinds of failures.

Apart from the priority of lignite over the other sources of energy, the East German energy policy suffered from the usual, inevitable shortcomings inherent in a centrally controlled economy, although power supply was indeed one of the sectors which received preferential treatment. All this resulted in the poor performance of the energy sector in the former GDR:⁸

1 The per capita consumption in energy of the former GDR was one of the highest in the world, exceeding the West German level by more than 25 per cent. The per capita income, however, amounted to only 50 per cent of the western level, automobile traffic was much less dense, the supply of consumer durables was rather modest and the available living space per person was conspicuously smaller. As a result, energy efficiency—which indeed reflected all these variables—was remarkably low. It should be noted, however, that this truly poor energy efficiency is both the very key for the realization of potential gains and a good indicator for the scope of improvement that can be obtained through a reorientation of energy policy.

2 Lignite mining—which was the cornerstone of the East German energy policy—was characterized by an extremely low level of productivity (some 50 per cent lower than in the West German mining districts⁹). In the four extraction sites of the mining districts east and west of the Elbe, lignite was being extracted from many (and even very small) deposits. However, no clear plan for the strip mining of coal could be observed.

3 This priority for lignite, of course, went hand in hand with an enormous demand for transport capacities. About one-third of the available capacities of the East German railway system was required.¹⁰

4 The extremely low level of energy efficiency was primarily caused by extraordinary mains losses and those losses that occur in the process of converting energy. In particular, the efficiency of the power stations is markedly lower than it is in west Germany¹¹ and coincides with the

disproportionately high level of energy consumed by the energy industry itself. Moreover, all the production facilities—and this is particularly true of the thermal power plants in eastern Germany—are technologically obsolete. Therefore they are very susceptible to failure, the more so as no satisfactory technical maintenance is available. Except for the power stations, a satisfactory utilization of the capacities of the energy industry was impeded by all kinds of shortcomings and the inherent planning problems.

- 5 The nuclear plants in the GDR did not meet west German safety standards and were shut down for this reason.
- 6 The energy industry, as well as many other sectors in the eastern German economy, suffered from considerable overmanning, too.
- 7 The GDR did manage to reduce its consumption of mineral oil, but failed to do so with respect to the overall consumption of energy.¹² The promotion of energy conservation, a generally acknowledged objective of today's energy policy, was clearly neglected. Although several attempts were made in this area, these were exclusively aimed at enterprises—private households were exempted! But given the limited technical know-how, the persistent shortage of investment capital, the lack of motivation in combination with the widespread wish to conform, these efforts were doomed to fail from the beginning. The so-called concept of 'rational energy utilization' was limited by the fact that it was based on the highest possible utilization of domestic energy resources.¹³ Finally, heat insulation is insufficient and the necessary equipment for measuring heat loss is in short supply.¹⁴
- 8 The energy consumption of private households was and is highly subsidized. Although the exact amount of these subsidies cannot be given for lack of any informative and meaningful standard of comparison, the fact itself is undisputed. Consequently, there are no built-in incentives for private users to cut down on their consumption of energy. It has to be taken into account that private efforts to save energy are rendered impossible by the lack of the meters and thermostats essential for this purpose.
- 9 The major cause of the extraordinarily high level of energy consumption in the GDR was the total domination of the industrial structure by energy- and electricity-intensive sectors.
- 10 The low level of energy efficiency goes hand in hand with excessive environmental pollution. CO₂ emissions in eastern Germany are twice as high as in western Germany, sulphur-dioxide emissions are even ten times higher and nitrogen-dioxide emissions are some 20 per cent higher, although the traffic density is considerably lower in the east. In addition, tremendous dust pollution can be observed. The most difficult problem to be solved, however, is the dire state of the land surface and the soil caused by the extraction of lignite, which

inevitably requires vast spaces. Consequently, exploited areas have to be recultivated, which, by the way, has been compulsory in Germany since the 1920s. Very frequently, however, the GDR did not do so. The underlying reason is that the mining techniques used in eastern Germany 'are very hard to integrate into a consistent recultivation programme'.¹⁵ All sorts of waste from the energy sector are dumped into exploited lignite pits (e.g. the waste that was left over from the process of gasifying lignite). Taking into account this enormous environmental pollution, too, the productivity gap between the energy sector in west Germany and east Germany is even wider.

The inherent weaknesses of the former East German planned economy put their stamp on the energy industry, turning it into an inefficient and unreliable supplier of energy.

THE TRANSITION TO A FREE MARKET ECONOMIC ORDER

Cornerstones of a new energy policy

The major task of a free-market energy policy will be to end the suppression of market processes to allow free-market prices and to strengthen the forces of competition. As proven by past West German experience, energy prices that reflect scarcity are not only a prerequisite for market co-ordination but are also the most effective stimulus for energy conservation. Undistorted energy prices that include the cost incurred for environmental protection are an adequate incentive for private, public and industrial consumers of energy to use it economically. Consequently, this also requires that no subsidies be granted to freeze energy prices at unrealistically low levels. Fortunately, the first steps have already been taken. Free-market prices have been introduced for mineral-oil products and for the supply of electricity and gas to commercial consumers. Price subsidies for supplying electricity to the industrial sectors have been abolished too. The former ceiling prices for electricity and gas consumed by households expired at the end of 1990. However, this does not mean prices have been completely decontrolled; rather, the ceiling prices were replaced by the federal price regulations. Government regulations for private-household heating energy remained effective. In this case, low ceiling prices were introduced but were designed to phase out gradually later in 1991.¹⁶ As a type of compensation, the suppliers involved will be entitled to receive a subsidy that is to be paid by eastern Germany. This subsidization is very likely to be a costly experience, given the proposed administrative procedure of handling it.¹⁷

Certainly, any abrupt adjustment of the prices for heating energy may

indeed increase the cost of living considerably and may even lead to cases of hardship. These, however, ought not to be 'cured' by means of a general price subsidy.¹⁸ Following such a strategy, all households would indiscriminately be supported alike. But with respect to the weak financial position of eastern Germany, any financial compensation should be confined to a narrowly defined group of low-income households. As almost all sectors of the Eastern economy are affected by the most difficult problems of structural adjustment, it would be a tremendous political and economic mistake to try to assist in this process by reducing energy prices artificially.¹⁹ Such a strategy would not at all solve the adjustment problems to be overcome by the industrial sectors, but would impede the restructuring of the energy sector if it were not granted an adequate compensation. Thus the inevitable problems of structural adjustment would not be solved but only shifted. But even if a financial compensation were paid, the adjustment process would in the end still have to be borne by all those having to raise the necessary financial resources.

Consequently, prices should be decontrolled without any preconditions and should not be subject to any other dubious kind of fixing. In this context, it is frequently argued that energy prices should be cost-based.²⁰ Cost-based prices are deemed to prevent monopolistic abuse. However, the principle of cost-based pricing is an inadequate yardstick for the economic analysis of prices. Past experience has shown that cost-based pricing will inevitably lead to X-inefficiency. What is more, today's cost patterns are not a reasonable indicator of future performance. It is wrong to suppose that the principle of cost-based pricing automatically results in economically 'correct' prices, because only highly competitive market processes are capable of encompassing all relevant factors without arbitrarily emphasizing a particular price determinant. For this reason, cost-based prices hardly ever coincide with undistorted market prices. Given the insistence of the Federal Government of Germany (FRG), the application of the cost-based pricing principle for energy prices which was adopted from the FRG cannot be thwarted for the time being. Its application, however, should by no means be extended beyond the current scope.

It would be misleading to analyse energy pricing from the customers' perspective only. With regard to the suppliers of energy, decontrolling prices is intended to make competition work as a system of incentives and checks. This, in turn, is a necessary precondition for coping with the extensive investment projects that are required for the technical and economic restoration of the east German energy sector.²¹ Cost estimates start at 100 billion deutschmarks for the renovation of the supply of electricity, gas and district heating alone.²² This figure does not even include the billions to be spent on the restoration of the lignite-mining

industry and the development of the mineral-oil sector. Although it is impossible, of course, to realize these investments overnight, no time should be wasted, given the considerable backlog of investment projects. A short look at the *Grossfeuerungsanlagen-Verordnung* (regulations governing industrial combustion plants)²³ clearly demonstrates that the matter allows no further delay: the environmental standards set by this regulation will have to be met by 1 July 1996 by all those old facilities that are to remain in operation. Consequently, their immediate overhaul is necessary. Thus it is vital for the energy sector to avoid or to remove all possible obstacles to investments.

The reorganization of the energy sector

The transition to a free-market economy is taking place rather slowly in the eastern German energy sector. Leaving out here the peculiarities of pit-coal policy, the rules for this adjustment are fixed by the western German legal framework regulating the supply of energy. Therefore, it is almost impossible to make general statements about the energy-producing industry as a whole, since current regulations differ in each sector.²⁴

In eastern Germany it should not be difficult to introduce free-market conditions in the mineral-oil products sector quickly and almost without any friction²⁵ because there are hardly any regulations which would have to be implemented. Although almost everything points to the fact that this is exactly what will happen, it is still uncertain whether the western German structure in the mineral-oil sector will finally spread into the east. Competitive market conditions are most likely to develop in those regions where no supply networks have existed so far and the necessary investments still have to be made. The future competitive structure of the mineral-oil markets could be influenced positively by granting outsiders access. To achieve this, these firms must be allowed access to real estate on exactly the same footing as their bigger, established competitors. Moreover, there should be no bureaucratic discrimination. It will be extraordinarily difficult and perhaps even impossible to correct any failure of today's competition policy in the future. This is particularly true for the market for filling stations. The existing network of filling stations comprises some 1,300 units which frequently are technically obsolete and a major (potential) source of environmental pollution. Given the rapid process of motorization under way in eastern Germany, a total number of 3,000 filling stations may be needed before long. This figure shows the huge potential for competitive-market processes. However, it can only be realized if the privatization of the existing network of filling stations, currently controlled and operated by the MINOL Mineralölhandel AG, does not mean that these will be taken over by a single successor organization. But the Treuhandanstalt²⁶ seems to be

willing to make only limited use of that opportunity, since it is pursuing the objective of 'privatizing MINOL with its current structure mostly intact' (although some changes concerning the network of filling stations are planned).²⁷ However, the co-operation between MINOL and ARAL, and between DEA and AGIP, which was sealed in 1990 and approved by the German federal cartels office²⁸ as a transitional solution only, will not be continued. The market for fuel oil is very likely to go through a phase of rapid development because there is no need to spend a lot of time installing a network for the sale of light fuel oil. Existing central heating facilities can easily be converted from lignite to fuel oil. Moreover, fuel oil can be used for individual heating/firing, a very common method in the west in the 1950s. What is more, heavy fuel oil might sooner or later be used to replace lignite in the field of energy generation or in industry. Furthermore, the existing lignite distribution network may prove to be a reasonable basic unit for the implementation of a universal fuel-oil distribution network—provided that it is sufficiently deconcentrated and decentralized first. As for processing, the only efficient refinery was privatized in 1991. It was not sold to one of the big international oil companies but to a consortium that consists of VEBA, DEA, Elf Aquitaine, TOTAL and AGIP.²⁹ It remains questionable whether this approach can be considered an incentive for more competition in the oil sector because VEBA and RWE (Rheinisch-Westfälisches Elektrizitätswerk AG)³⁰, the owner of DEA, are energy trusts which are represented in all German energy markets and which hold a dominant position in these markets already. By contrast, the future of the refineries in Saxony-Anhalt still remains undecided.

The framework for coal policy is very different, particularly in the field of lignite mining. It is widely assumed that there is a viable competitive core in the east German lignite-mining industry, even when effective environmental regulations have to be met. However, this implies a 50-per-cent reduction of output with regard to today's levels.³¹ Given the extraordinary environmental problems involved in the utilization of lignite, it was a major objective of the GDR government to reduce its extraction. This political reorientation was inevitable because the only feasible way of effectively fighting the pollution caused by lignite was to reduce it directly in the power stations (for technical reasons, such a strategy is not successful with regard to gasification and domestic fuel, and is only slightly more promising as concerns industrial consumption). As a result, even the remaining lignite mining facilities will only be sustainable in the long run after radical reorganization and restructuring has occurred. This process should be undertaken within the framework set by west German standards, and some assistance from the western German lignite-mining industry is under way already. However, such an approach will unavoidably result in a market structure that is as highly

concentrated as can be observed in the west, the more so as RWE, the parent company of the western German lignite-mining industrial group, is going to take over the supply of electricity there, too. By contrast, deconcentrating the eastern German lignite-mining industry would probably result in a more competitive market structure.

At first sight, pit-coal policy seems to be the least problematic area because there are no such deposits and no pit-coal mining industry to be found in the former GDR. Moreover, the Unification Treaty³² stipulates that none of the measures taken in western Germany to protect the coal industry, including laws concerning electricity generated from coal (*Verstromungsgesetze*),³³ the consumer levy (*Kohlepfennig*)³⁴ and import restrictions on pit coal, are to be effective in eastern Germany. In this respect, eastern Germans will not immediately participate in the financing of the questionable subsidization of coal. Consequently, and with regard to their future economic development, they ought not to give up the considerable advantages that the utilization of cheaper imported energies would bring about. However, a firm political stance and a lot of endurance will be required in order to preserve this favourable situation, because leading representatives of the coal industry have lost no time expressing their objections.³⁵ They consider such a split coal policy unacceptable and base their arguments on the familiar idea of a reliable energy supply, without being able, however, to prove whether this concept truly holds. For this very reason, exempting eastern Germany from the stringent system of interventions in the field of coal policy should not be considered an inconsistency, but an encouraging and necessary first step towards a reorientation of energy policy in the direction of more free-market competition.

All regulations of markets existing in the old FRG were automatically introduced in eastern Germany in the wake of unification.³⁶ Since comprehensive deregulation is overdue in most of these areas, these obsolete and inefficient regulatory regimes will turn out to be a clear disadvantage to the eastern German economy.³⁷ The consumers' freedom of choice will be restricted and, even worse, the competitive position of eastern Germany in the locational competition brought about by the completion of the European Internal Market will deteriorate. All the sources of energy reliant on mains networks (gas, electricity, district heating)³⁸ are now subject to the same regulatory regime that is effective in west Germany. Not surprisingly the considerable barriers to entry inherent in this sector raised the west German energy suppliers' interest in expanding to the east at a very early stage.

District heating, one of these energy resources, is characterized by very severe adjustment problems. First, a good portion of the existing centralized heat generation—and maybe even the entire system—must be converted from lignite to other power sources. In addition, the network

and the equipment installed inside houses will have to be repaired or even replaced. This may involve investments of more than five to seven billion deutschmarks.³⁹ There is widespread consensus that this cannot be done without a considerable amount of public subsidy. If, however, district heating proves to be too expensive to compete successfully with other heating energies, its uncompetitive segments should be removed from the market. Only the cost of repairs and the operating costs should be included in this calculation; sunk costs, however, should not. At least for some time, this might result in quite a favourable market position for district heating.

As for the gas sector, no specific market structure has evolved so far.⁴⁰ The eastern German gas-supply system comprises three clearly distinct supply stages:

- gas production (some domestic natural gas, town gas),
- interregional gas transportation (regularly linked to gas imports),
- gas distribution.

In privatizing the gas industry, the Treuhandanstalt intends to create a market structure similar to the one existing in western Germany but which is to consist of two activities (long-distance supply and distribution). The most interesting fields for entrepreneurial activities are the operation of the interconnected distribution system and the wholesale import and export of gas. These activities are an important stepping-stone for any enterprise wishing to play a major role in the development of the gas business, an industry that will grow rapidly in the future, given the relatively few environmental problems involved and the absence of a universal supply system in the east. For this reason, intermodal competition brought about by other sources of energy—mineral oil and district heating in particular—will play an important role in the first market stage. To speed up the development, Ruhrgas and BEB acquired a 45-percent share in the VNG,⁴¹ the joint-stock company set up to run the gas grid, a transaction that would seem to indicate a promising entry into this market. The federal cartels office approved of this deal after the Treuhandanstalt had decided that the remaining shares be sold to enterprises and public authorities (Gebietskörperschaften)⁴² that had no commercial ties to Ruhrgas.⁴³ Even foreign gas suppliers are very interested in obtaining such a share in the long-distance gas-supply system. In this case, it is by no means a problem that foreign investors are involved. The major problem is the desire of gas suppliers to spread to other supply stages, namely to the interconnected grid system and even to the distribution stage. From the economic point of view, this attempt to push ahead vertical integration is extraordinarily dangerous, because it would paralyse competition. The authorities in particular seem

to be interested in acquiring shares in the long-distance gas-supply system. Such a strategy entails very similar problems for competition policy, because it would imply a vertical integration of the interconnected grid and distribution stages. As long as it is still possible for suppliers to agree upon regional supply monopolies, the structures of the natural-gas markets will become inflexible. Further, it must be noted that the extent of competition will increase in the German market for natural gas after the entry of financially strong Wintershall, a BASF subsidiary.⁴⁴ However, Wintershall's role as one of the owners of VNG will again reduce the pressure of competition, at least in the east. As for the distribution stage, the privatization of the Kombinate (state-owned integrated plants) charged with the distribution of gas still continues. Although the Treuhandanstalt some time ago selected potential buyers among the interested energy enterprises of western Germany and Western Europe, the process of privatization has come to a standstill, because the so-called *Kommunalfrage*, the problem of the extent to which municipal authorities should be involved in the field of gas supply, is still not settled. The mere transfer of ownership will nevertheless result in contractually guaranteed, regionally demarcated supply areas—a hotly disputed process. In the mean time, the Treuhandanstalt and the federal cartels office have agreed upon maintaining a strict separation between the supply of gas and the supply of electricity in the process of privatization now as well as in the future.

In a similar way to what happened in the gas sector, the reorganization of the eastern German electricity industry got under way rather early. In this case, the interests of the de-Maizière government in the field of energy policy coincided with the economic intentions of big western German power companies, the *Energieversorgungsunternehmen* (EVUs). The GDR government was looking for partners who would help entrepreneurially and financially to save and restructure all those parts of the lignite-mining industry that might be integrated into the generation of energy in the longer run. This was deemed an indispensable prerequisite for dismantling the other parts while giving adequate regard to social requirements.⁴⁵ The instrument chosen was the offer to take over the entire, fully integrated electricity-supply system including generation, interconnected grid and distribution. This proposal met the expectations of the big EVUs, which wanted to secure as comprehensive a share in the eastern German electricity industry as possible, thus simply imitating the western German structure of that market. The result coincides with the original intentions: the Kombinate that supplied electricity were transferred exclusively to the three leading EVUs, Bayernwerk, Preussen Elektra and RWE, in order to have them operated jointly by these utilities. Widespread criticism arose,⁴⁶ which was directed at the unclear role played by the local authorities in supplying electricity on the one

hand and at the dominating influence exerted by the 'big-three' EVUs and the extreme degree of vertical integration/concentration on the other hand. Moreover, the federal cartels office expressed some objections concerning the possible negative repercussions arising for the western German electricity industry. The cartels office supposed that the proposed consortium would reduce the remaining competition even further because of the group effect caused by that approach. It pointed out that the large-scale co-operation of the three biggest interconnected power companies might lead to less competition in performance on the borders of their regional supply areas. The third and the fourth revisions of the law prohibiting restraints on competition were intended to intensify that kind of competition by putting a deadline on demarcation and licence agreements and by synchronizing their terms. It is still undecided whether these expectations will become reality. But there is no doubt that the original design of the group solution would have considerably limited the extent and scope of this 'cross-border' competition. In addition, it must be feared that the joint extension of their supply activities will further increase the dominance of the three biggest EVUs, thus dissuading other EVUs more than ever from competitive activities directed at the market leaders. The aspired global solution will render it impossible for other power companies and regional enterprises to take on supply activities in some regional markets and to exert some competitive pressure on the adjacent supply areas occupied by Preussen Elektra and Bayernwerk. Whether competition in performance will prove effective is highly questionable indeed, because this form of competition depends exclusively on the power exerted by the cartels office's supervision which is an inadequate instrument for preventing abuse of dominant positions in the market.

Given these disadvantages, the *Stromvertrag* (basic agreement on power supply) was partly modified in order to make it possible for other EVUs to enter the eastern German electricity market, too. It now allows the three big EVUs to acquire a share of 75 per cent in the still-to-be-founded Vereinigte Elektrizitätswerke AG. This involves the interconnected grid system, including the non-nuclear power stations.⁴⁷ The remaining shares will be sold to other western German power companies. As for the distribution stage, it will be assigned to fifteen regional enterprises. The three leading power companies will have a majority share in eleven of them. The regional EVUs of the former East German districts of East Berlin, Dresden, Halle and Schwerin will be taken over by other western German EVUs. All the regional enterprises will be obliged by contract to purchase 70 per cent of the electricity they use from the new power companies for a period of twenty years. Thus, to a certain degree they will be free to choose their suppliers, a fact that will be very conducive to increasing competition. The share in the total supply volume assigned to

the independent regional EVUs (40 per cent) was intended to guarantee the three power companies the same share they now have in western Germany (60 per cent). This may indeed make sense as a bargaining compromise because it was deemed politically unacceptable for the take-over to fail, the more so as the leading power companies never ceased stressing that only a guaranteed sales potential would make it possible for them to solve the problems that lie ahead.⁴⁸ This approach, however, is not at all compatible with any free-market economist's minimum requirements concerning the areas of energy policy and competition policy. The situation offered the opportunity to introduce a more competitive supply structure by simply allowing more enterprises to enter the market.⁴⁹ Such an improved basis for competitive behaviour would undoubtedly have had a positive impact on the market conditions in western Germany, too. It would have been possible to go even further than that by simply preserving the old structure of the eastern German electricity industry, which—as mentioned above—was characterized by the distinct separation of the three stages of supply (generation, interconnected grid, distribution).⁵⁰

In the end, the kind of structural reorganization chosen by the politicians will prove to be a detour, since the primary objective of the European Community (EC) energy policy is to open markets for new competitors.⁵¹ In this context, the Commission of the EC stated very early that 'the restructuring of the electricity generating industry and of the mineral oil industry has to be continued in compliance with the EC competition rules'.⁵² The approach chosen in eastern Germany, however, definitely does not meet this requirement. This problem cannot be solved by giving foreign power companies—EdF in particular—the option to acquire a share of up to 15 per cent in the new *Verbundunternehmen* if, in return, German *Verbund-EVUs* were permitted to purchase shares in the foreign enterprise. If this were the basis for extending the exchange of electricity in the EC, we would witness a cartel solution instead of a competitive approach. To defend this competition-restricting approach, its proponents stress the priority of reorganizing the eastern German electricity industry. This line of reasoning pretends that such a time-tested structure would solve the existing transitional problems much better and that these must not be complicated by the inherent uncertainty of competitive market processes. For this reason, the preamble of the *Stromvertrag* explicitly prescribes 'a socially "cushioned" and controlled staff reduction', 'the consideration of regional and communal interests' and a guarantee for the generation of electricity from lignite. However, this line of argument again reveals the widespread and unjustified distrust in market forces: the 'built-in' adaptability of competitive-market processes is underestimated, whereas the 'technical' effectiveness resulting from restraining competition is grossly overstated—contrary to what past

experience has proved. Moreover, we are witnessing the repeated use of an essential tool of western German coal policy: the politico-economic instrumentalization of the structure of the supply of electricity. Maybe today's decision will not result in the kind of undesirable developments brought about by the West German pit-coal policy, but preventing them will be almost impossible.

Increased decentralization?

For the time being, the distribution stage of mains-supplied energy will be assigned to regional enterprises. So far, communal public utilities have not been involved in the process of reorganization. Instead, the municipal authorities in eastern Germany were supposed to buy a share of up to 49 per cent in the said regional enterprises.⁵³ The effective provisions, however, do not prevent them from founding new municipal public utilities. In accordance with the provisions stipulated by the Unification Treaty, the municipal authorities were granted the unrestricted right-of-way on 31 December 1991. But although the preamble of the *Stromvertrag* obliges the power companies and regional enterprises to take explicitly into consideration communal interests, to 'harness all available cogeneration potentials' and imposes on them the duty to integrate 'concepts of a decentralized energy supply', the municipal authorities nevertheless wish to improve their position in the energy supply market. Their efforts at doing so are supported by the law setting out the rights and duties of municipal authorities in the former GDR, passed on 17 May 1990,⁵⁴ which declares the supplying of water and energy to be the cornerstone of municipal autonomy (§2, paragraph 2).⁵⁵ In the meantime, the Treuhandanstalt and the power companies on the one side and the Association of Municipal Undertakings⁵⁶ and the Assembly of German Cities⁵⁷ on the other have reached an agreement⁵⁸ that gives the power companies the right to acquire a maximum share of up to 50 per cent in the (still-to-be-formed) municipal public utilities, but which also allows municipal representatives striving for a majority share for their cities to do so. What is more: 'A certain number of inhabitants should not be a criterion for justifying municipal public utilities'.⁵⁹

This activity in the energy sector—which, by the way, is indeed being encouraged by the Treuhandanstalt,⁶⁰ although privatization is the chief task of this institution—is defended on grounds of the following familiar lines of reasoning:

Although not necessarily expressed in their official declarations, the motive of the municipalities is their interest in securing revenues. The right-of-way is the proper tool for them not only to influence the supply structure but also to realize their financial targets by means of concession fees and profits from the quasi-monopolistic municipal

EVUs. Such a right-of-way, which does not consider the supply networks—including their transport services—an economic and functional part of the general use of the lines system, is clearly not intended to create a free-market-style regulatory framework. Rather, it is nothing but a secret means for direct structural interventions in markets. The reintroduction of concession fees has not been subject to legal obstacles for some time now.⁶¹ But it is very dubious whether this instrument will act as an effective brake on the desire of many municipal authorities to operate municipal public utilities of their own. This trend will be boosted additionally by the financial opportunities offered by cross-subsidization, which renders it possible for municipal authorities to keep money-losing supply activities alive, although this kind of bundling is highly questionable in terms of energy policy and competition policy.⁶²

As happened recently in the GDR, the supplying of energy locally is frequently declared a 'public service obligation' that is the explicit responsibility of the municipal authorities. This notion, however, is very vague⁶³ and must be kept under consideration as long as it remains unspecified. Moreover, a precise definition of the alleged specific obligations and tasks must be given, as well as a convincing explanation of how to fulfil them and why no other approach is adequate.

Decentralization of the supply structure is demanded because it would facilitate the implementation of energy-supply concepts, including energy conservation and the use of renewable energies. Past experience, however, has proved that municipal politicians misunderstand the economic considerations underlying the different concepts of energy supply. Instead they (ab)use them as instruments for all kinds of market interventions and for the discrimination in favour of certain sources of energy. This frequently results in a 'canonization' of relatively small enterprises without any generally accepted proof of their lower supply costs.⁶⁴ Certainly the new market structure, which was created by means of restraints on competition, cannot be expected to provide an optimal supply. Moreover, the degree of centralization may be too high. But there is little to be said for bringing about decentralization through municipalization. This strategy cannot be justified, either, by instrumentalizing restraints on competition that are aimed at promoting renewable energies (examples of such a policy include excessive, governmentally fixed minimum prices for feeding electricity generated in this manner into the networks⁶⁵).

The danger of an almost indiscriminate application of restraints on competition relating to the utilities system by interventions in the field of

energy policy or economic policy can be averted only by a clear decision in favour of introducing more competition in the energy-producing industry. Although a centralist economic order was overturned only very recently in the former GDR, it is indeed surprising to watch eastern German politicians having recourse to public enterprises and governmental interventions in specific markets and the economy as a whole—following the advice they were given by west Germany.⁶⁶

NOTES

- 1 General surveys of the energy industry in the German Democratic Republic (GDR) are presented by Jansen (1982); Stinglwagner (1985); Gruhn and Lauterbach (1986); Bethkenhagen (1990:68–85).
- 2 See IEA (1991). This report contains numerous comprehensive statistics covering the last two decades.
- 3 See Breuer (1987). Today's situation is described by Knieper and Schmidt (1990:29–40); Michaelis (1990:288–95); Riesner (1990a:198–205); Vogel (1990:139–41); Winje (1990:56–80); Grawe (1991b:1007–15); Schiffer (1991:154–73); Schieferdecker (1991:365–8).
- 4 For details see Riesner (1990b:661–8).
- 5 For details see Altenberger, Kretschmer and Retz (1991:370–7) as well as the extensive references given there.
- 6 See Bethkenhagen (1990:70–1).
- 7 However, the imports of mineral oil were not reduced in the same measure, as lignite was successfully substituted for mineral oil. Rather, the GDR began to trade in—alleged—import surpluses and sold them to Western countries in return for hard, convertible currencies. See Bethkenhagen (1990:77–80).
- 8 See Schmitt (1990:562–8, 562–5 in particular); Deregulierungskommission (1991:78–9).
- 9 For further details see Rheinbraun AG (1990).
- 10 See Institut der deutschen Wirtschaft (1990).
- 11 For details see Riesner (1990).
- 12 See Gruhn and Lauterbach (1986:152–69); Bethkenhagen (1990:80–5).
- 13 See Gruhn and Lauterbach (1986:153).
- 14 See Hamm (1990:11).
- 15 Rheinbraun AG (1990:3).
- 16 Bundesministerium für Wirtschaft (BMWi 1990a:6758).
- 17 See BMWi (1990b).
- 18 See also Sachverständigenrat zur Begutachtung der gesamtwirtschaftlichen Entwicklung (SVR 1990:247); IEA (1991:21, 34).
- 19 See also SVR (1990:247).
- 20 For the situation in eastern Germany see Deutscher Gewerkschaftsbund (DGB 1990:10). According to this report: 'Energy prices have to be sufficiently cost-based. Relevant social concerns have to be allowed for.'
- 21 See SVR (1990:247).
- 22 Institut der deutschen Wirtschaft (1990:16). One billion equivalent to thousand millions.
- 23 This regulation fixes the maximum allowable quantity of pollutants to be emitted. All types of heating and firing facilities must meet these standards, otherwise they will be shut down.

- 24 For a general discussion of strategies for introducing competitive market structures, see Monopolkommission (MK 1990:24-8); Schüller and Wentzel (1991); Krakowski (1990:99-104); Härtel, Krüger, Seeler and Weinhold (1991).
- 25 More details are given by Detharding (1990:406-8); Klaue (1990:137-9); Lefeldt (1990:858-64); Gundermann (1991:17-20).
- 26 Trust institution. Its major task is to privatize the state-owned enterprises of the former GDR.
- 27 Gundermann (1991:19).
- 28 *Bundes Kartellamt* (Federal Cartels Office).
- 29 See Gundermann (1991:18).
- 30 Rheinisch-Westfälisches Elektrizitätswerk AG is the biggest German supplier of electricity.
- 31 See Schmitt (1990:565-6).
- 32 This treaty stipulates all the rules by which the German unification process was supposed to take place.
- 33 Electricity from coal laws: The first such law was passed in 1965 and has been amended several times since then. They were intended to boost the market share of (German) pit coal in the generation of electricity.
- 34 Coal penny: The *Kohlepfennig* is a levy borne by the consumers of electricity. Its policy objective is to subsidize expensive German pit coal. The *Kohlepfennig* currently increases the price of electricity by 8 per cent on average. It is regionally differentiated and will be reduced to 7.5 or even 7 per cent in the near future.
- 35 See Gesamtverband des deutschen Steinkohlebergbaus 61990:60-2).
- 36 See Palm (1990:222-5).
- 37 MK (1990:27-8).
- 38 The German term is '*leitungsgebundene Energieversorgung*'.
- 39 See Gundermann (1991:17).
- 40 See Gundermann (1991:11-12).
- 41 Verbundnetz Gas AG (VNG). The literal translation of *Verbundnetz* is interconnected grid.
- 42 Central, regional and local authorities, i.e. Bund, Länder und Gemeinden.
- 43 The Treuhandanstalt intends to sell these remaining shares to Wintershall AG, Soviet Sarusbeshgaz, British Gas, Elf Aquitaine, Norwegian Statoil, German Erdöl-Erdgas Gommern GmbH. In addition the cities and municipal authorities of the new states will be offered 15 per cent minus one share. See Gundermann (1991:11-12).
- 44 For example see His (1991:18); Müller-Haeseler (1991:11).
- 45 See Kemper (1991:12-20, here 16).
- 46 For example see Kartte (1990:838-40); Kemper (1991); Zimmermann (1990:840-1).
- 47 Concerning the nuclear power plants, special arrangements will be made with the Treuhandanstalt.
- 48 See Kuhnt (1990:678-9).
- 49 See SVR (1990:248); Deregulierungskommission (1991:79).
- 50 See MK (1990:28); SVR (1990:247-8); Kartte (1990); Budde (1990:89-92).
- 51 For a summary see Emmerich (1990:581-96), which has comprehensive references.
- 52 Commission of the EEC (1990:102).

- 53 It is still controversial whether the municipal authorities have the right to have their former utilities returned or whether they are only entitled to hold shares in capital. For a survey concerning the legal situation as it is seen by the municipal authorities, see Weigt (1991:4–7). Recently those in eastern Germany have also demanded the return of their public utilities. See Püttner (1991); Schäfer (1991).
- 54 *Kommunalverfassungsgesetz der DDR*. See Gesetzblatt der DDR (1990:255–69).
- 55 This provision is more comprehensive than the corresponding west German rules. However, it must be stated that the West German rules proved to be completely ineffective. And it is still undecided whether eastern Germany will abide by today's version of this law.
- 56 Verband kommunaler Unternehmen (VKU).
- 57 Deutscher Städtetag.
- 58 VKU (1990:2). The *Wirtschaftsministerkonferenz* (Conference of the Ministers for Economic Affairs) also principally approved this agreement in the resolution passed on 20/21 March 1991. See: Wirtschaftsministerkonferenz (1991:14–15). However, the federal states of Brandenburg, Hamburg, Lower Saxony, Saarland and Schleswig-Holstein rejected the model of a basic agreement in so far as it boils down to

any compulsory or regular participation of the respective supplier of energy in the municipal public utilities,
 the renunciation of the ecological and economic advantages involved in the integration of the sources of energy in a municipal public utility, any commitment for the municipal public utilities to take delivery from the supplier of energy.

- 59 Ibid. Moreover, it was agreed that the municipal public utilities must procure at least 70 per cent of their demand for electricity from the regional enterprise of their 'district' for a period of twenty years. This provision is intended to protect the lignite-mining industry.
- 60 See Gundermann (1991:13–16).
- 61 Recently, the *Bundesverwaltungsgericht* (the Federal Administrative Court, which is the supreme court of appeal in administrative cases in Germany) declared the ban on the reintroduction of concession fees (§1 paragraph 1 KAO of 4 March 1991) null and void. See Bundesverwaltungsgericht (1991:182–4).
- 62 See MK (1986:197–200).
- 63 See Löwer (1989), and the extensive references included.
- 64 For details see Grawe (1990:1207–18).
- 65 See Grawe (1991a:71–7).
- 66 VKU (1990:1).

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TRANSPORT POLICY IN EASTERN GERMANY

Herbert Baum

FROM UNIFICATION TO A COMMON TRANSPORT POLICY FOR GERMANY

German reunification took place on October 30, 1991. The reunification is based on the Unification Treaty.¹

There are only a few mentions of transport.² This is not surprising, since the nature of this agreement does not focus on economic topics. For instance, the treaty does not prejudice alternatives with respect to growing traffic or other problems related to public transport, e.g. the railways.

Nevertheless, these and other economic aspects of uniting the transport systems were not overlooked. But there are three reasons, why the treaty lacks transportation regulations:

- Policy has to follow section 72.2 of the German constitution, the Basic Law. It postulates that all people—also those in former East Germany—should enjoy the same living conditions³ which also include the same regional supply of transport services. Therefore, a huge amount of resources has to be transferred from western to eastern Germany to satisfy the infrastructure needs. In other terms, the extent and direction of transport investment is already determined.
- German reunification has not created the principal economic and transport problems, but has made existing problems more obvious. For example, it is expected that the East German railway company (Deutsche Reichsbahn) is losing the battle against other forms of transport, resulting in rising deficits. This development will strain the public budget even more, since the West German railway company (Deutsche Bundesbahn) has also been facing deficits for a number of years. Therefore, existing plans to stabilize the situation have become more urgent.
- Finally, transport-policy jurisdiction has been transferred to the

European Community. National laws related to transport issues are losing their importance in respect of European agreements.

Considering these circumstances, the task for transport policy to equalize the transport conditions in Germany was predetermined. Thus the following arrangements can be concluded for transport policy:

- Measures to equalize the operational conditions of the transport industry in eastern and western Germany.
- Steps to help the population and industrial firms adjust to the structural changes in the transport system and to changes in the allocation mechanisms of the market economy. These steps should be taken to deal with the problems that have arisen from the structural shock of changing a socialistic economy into a free-market economy.
- Moves to integrate eastern Germany's transport industry into the evolution of the European Common Market. European integration will increase the intensity as well as the speed of adjustment in eastern Germany.

These arrangements will dominate transport policy for a long time. East Germany's priority for infrastructure policy will last longer than the regulation policy. In the long run, the adjustment processes will lead to a common transport policy for Germany, which will be integrated into the European transport-policy context.

THE TRANSPORT SECTOR AS A DETERMINANT OF ECONOMIC DEVELOPMENT

Economic welfare through specialization is based on the ability to ship intermediate products to the manufacturing industry and final products to the consumers. The extent of welfare increase resulting from the interregional and international division of labour depends on the ability to lower transport costs to a level below the profits from specialization. Transport possibilities establish markets and intensify competition by increasing availability.⁴

The economic distances depend on the quality of the transport infrastructure. Therefore, transport infrastructure is an input of production, like labour and capital. Its expanded or more efficient use lowers costs and effects higher economic welfare by increasing real income. Vice versa, an insufficient infrastructure hampers welfare gains and results in a weak position compared to countries with higher investments in infrastructure and therefore better conditions in the division of labour.

In addition to these losses there are transmission channels which increase economic costs and therefore lower economic wealth:

- Increased time requirements for transport leads to higher capital and

production costs. This results in a decrease in real income as well as in production and employment. The geographical range in which entrepreneurial skills can be exercised and the possibility of achieving economies of scale are reduced.

- Competition as a 'process of innovation' is narrowed by missing alternatives. Finding the best solution becomes more difficult, the speed of innovation decreases.
- External costs are increased by greater congestion, air pollution, noise and more traffic accidents.⁵
- Logistic services for increasing productivity (e.g. just in time) cannot be realized by road transport. In many cases substituting high-quality transport for other transport modes is hardly possible.
- Limitations on individual mobility impair labour-market opportunities. In a given area labour supply cannot be balanced with labour demand, and the danger of structural unemployment increases.

To secure and promote private investments, an appropriate infrastructure is a *sine qua non*. Conversely, every society allocates its economic growth and consumption of environmental resources via the extent and quality of the available infrastructure.

TRANSPORT INFRASTRUCTURE IN GERMANY

The production structure of former East Germany was not only targeted at national autarky, but also, by integrating different steps of production, at the autarky of the individual firm. Because of the lower degree of division of labour important losses of welfare occurred. Therefore and also because of lesser extent of passenger traffic resulting from lower real income, the need for transport infrastructure was lower than in a highly industrialized economy. On the other hand, lower economic performance provided fewer opportunities for investments in infrastructure. The transport infrastructure remained on a low level.

To boost former East Germany to an international level in terms of productivity and income, and to increase the economic performance by private investments, it is necessary to supply the complementary input factor of transport infrastructure.⁶

The extent of the combined investments for expansion and reconstruction is shown in Table 10.1.

The values in the table only include repair of transport infrastructure and improvements in quality needed to reach western German standards. 'Normal' maintenance costs and additional investments to increase capacity that would be necessary to cover future traffic needs are not taken into account. Estimates of all necessary investments in transport infrastructure amount to DM 700 billion by the year 2000.⁷

THE ECONOMICS OF GERMAN UNIFICATION

Table 10.1 Transport infrastructure in eastern Germany: extension and maintenance needs

<i>Transport infrastructure</i>	<i>DM billions</i>
Federal infrastructure	76.1
Primary roads	12.7
Railway system	48.0
Waterways	8.0
Airports	7.4
Communal streets	92.6
District streets	15.5
Local public transport	12.0
Total	196.2

Source: Huber (1991b:1).

These extraordinarily high requirements for infrastructure go hand in hand with a high unchanging level of unemployment. It is a high priority on the political agenda to get the investments into place as soon as possible. Dynamic private investments in infrastructure should buy time⁸ to accelerate economic growth. Simultaneously, because of the relatively high labour coefficients in the construction industry, transport investments will stimulate employment; every investment of one billion deutschmarks creates between 10,000 and 15,000 jobs.⁹

Besides that, a significant high demand for infrastructure also exists in West Germany. Although the quantitative supply per inhabitant is good, during recent years the existing transport infrastructure has grown old because of declining real investments. Measured in per cent as net fixed assets to gross fixed assets, the road infrastructure is suffering from a loss in modernity of more than 10 per cent during 1970 to 1990. This fact is very important, since the vehicle kilometres on western German roads increased by about 96 per cent during the same period.¹⁰ This means that increased transport demands are increasingly out of balance with new investments and renewals in road construction.

FUTURE TRAFFIC DEVELOPMENT

The gap between the supply of infrastructure and the demand has already widened in recent years and has not yet narrowed. The following tendencies will especially induce new traffic and demand for infrastructure:

- the increasing extent of division of labour;
- the growth of real GNP and therefore also traffic growth;
- the obviously traffic-expanding effects of European Community (EC) liberalization;

TRANSPORT POLICY IN EASTERN GERMANY

Table 10.2 Forecast for freight transport in 2010
Traffic volume in ton-kilometre millions

	Railway		Road transport		Inland navigation		Total	
	1988	2010	1988	2010	1988	2010	1988	2010
Inland traffic	87,050	83,999	68,966	115,866	20,217	34,411	176,233	234,276
Western Germany	37,480	44,684	59,976	69,207	13,821	13,693	111,277	127,584
Eastern Germany	44,537	4,919	4,148	11,421	4,372	3,821	53,057	20,161
West-east	5,033	34,395	4,843	35,238	2,024	16,898	11,900	86,531
Dispatch/receipt	32,147	91,523	41,724	100,025	33,977	70,810	107,848	262,358
Transit	4,957	18,585	11,578	22,586	8,356	11,140	24,891	52,311
Traffic volume	124,154	194,107	122,268	238,477	62,550	116,361	308,972	548,945
Growth rates by 2010								
	(%)							
Inland traffic		-4		68		70		33
Western Germany		19		15		-1		15
Eastern Germany		-89		175		-13		-62
West-east		583		628		735		627
Dispatch/receipt		185		140		108		143
Transit		275		95		33		110
Traffic volume		56		95		86		78

Sources: Kessel and Partner (1991:11); own calculations.

- the structural effect of transport demand with a relatively high increase in road transport;
- the restructuring of traffic volume in Germany from north-south to west-east.

Although the forecasts of real development are very complex because of numerous interdependent and unfinished processes of adjustment,¹¹ first results for freight transport and passenger transport are available.

Freight transport

The further development of freight transport in Germany is characterized by the following circumstances (Table 10.2):

- The whole volume of traffic will increase by one-third by 2010. This increase will result from the growing trade relations with foreign countries, and increasing transit and expanding transport because of the reunification (although at present it still remains at a low level).
- Because of this development, the division between modes of transport

will change. The railway will have to face significant losses and the share of goods transported on roads will increase greatly.

Passenger traffic

Three developments in the area of passenger transport are noteworthy (Table 10.3):

- the continued significantly strong increase in passenger kilometres;
- the huge growth of passenger air traffic (although starting from a low level) will even intensify existing bottlenecks;
- the substantial high increase in private-car use.

Since the average car occupancy in private transportation will decrease from 1.33 (individual short-distance traffic) and 2.00 (individual long-distance traffic) to 1.21 and 1.82 respectively from 1988 to 2010, a progressive increase in vehicle kilometres can be expected.

Consequences for the infrastructure policy

From these traffic forecasts the following main developments can be identified in Germany:

- The volume of freight transport will increase by about 30 per cent and of passenger transport by about 42 per cent during the forecast period.
- Average mobility in western and eastern Germany will have been equalized by the end of the forecast period (the year 2010).
- A significant shift in transport usage in favour of the railway cannot be foreseen. Nevertheless capacity bottlenecks will be unavoidable in the rail sector.
- There will be a change of direction in traffic flows from north-south to west-east.

The dynamic development of infrastructure demand is offset by finance restrictions and is jeopardized by the significant transfers to former East Germany and the lack of budgetary economies. The priorities on the political agenda have changed in favour of the transport sector, e.g. an increase in the federal transport budget of 20 per cent during the period from 1990 to 1991 and simultaneous planning of further increases in investments of up to a new maximum of 62 per cent in 1994.¹² But in total the investment requirements, predicted to be about DM 310 billion for the 1990s, will not be covered by this. Instead a gap of about DM 100 billion is expected.

As a consequence, the reconstruction and/or maintenance of a viable transport infrastructure can only be achieved with a 'lot of money' or will not even be realistic. The latter represents no solution for Germany in

TRANSPORT POLICY IN EASTERN GERMANY

Table 10.3 Forecast for passenger transport in 2010
Traffic volume in passenger-kilometre millions

<i>Short-distance traffic</i>	<i>Individual traffic</i>		<i>Railway</i>		<i>Local public transport</i>		<i>Total</i>	
	<i>1988</i>	<i>2010</i>	<i>1988</i>	<i>2010</i>	<i>1988</i>	<i>2010</i>	<i>1988</i>	<i>2010</i>
Total	378.81	488.77	17.89	17.85	86.77	110.25	483.47	616.87
West Germany	317.71	393.77	14.38	14.65	69.47	84.05	401.56	492.47
East Germany	61.10	95.00	3.50	3.20	17.30	26.20	81.90	124.40
<i>Long-distance traffic</i>	<i>Individual traffic</i>		<i>Railway</i>		<i>Air traffic</i>		<i>Total</i>	
	<i>1988</i>	<i>2010</i>	<i>1988</i>	<i>2010</i>	<i>1988</i>	<i>2010</i>	<i>1988</i>	<i>2010</i>
Total	268.20	346.80	44.40	69.40	13.70	35.20	326.30	451.40
West Germany	244.20	265.20	27.50	55.20	13.10	25.60	284.80	346.00
East Germany	24.00	81.60	16.90	14.20	0.60	9.60	41.50	105.40
Traffic volume	647.01	835.57	62.29	87.25	100.47	145.45	809.77	1068.27
Growth rates by 2010								
	(%)							
Short-distance traffic		29.03		-0.22		27.06		27.59
of which								
west		23.94		1.88		20.99		22.64
east		55.48		-8.57		51.45		51.89
Long-distance traffic		29.31		56.31		156.93		38.34
of which								
west		8.60		100.73		95.42		21.49
east		240.00		-15.98		1500.00		153.98
Traffic volume		29.14		40.07		44.77		31.92

Sources: Intraplan Consult (1991:127, scenario H); own calculations.

respect of achieving European standards. It would show a tendency to become isolated from the international division of labour and thereby a renunciation of possible advantages stemming from specialization.

Especially because of the European Common Market, the perspective of an inadequate infrastructure would be a reason for real concern.¹³ First of all, the increasing positive effects from intensified trade and more competition could not be withdrawn from. Obviously, this development cannot be negated, as—contrary to the long-run tendency—German integration into world trade has decreased since the reunification.¹⁴

Second, the attractiveness of Germany as a target of investment capital from all over the world is declining, as demonstrated by the not so successful efforts to acquire direct investments. This situation has become even worse, since not only are foreign investors staying out of the German market, but German investors are also tending to do the same. This has multiplied the debt balance of long-term capital flows by the factor 10, to about DM 70 billion from 1983–1990.¹⁵

Germany—like all other countries—is competing for scarce capital. It seems, that it is only the politicians that have not realized the high sensitivity of the international capital flows to qualitative changes between different countries. Since capital transfers are attracted by the quality of transport infrastructure—among other factors—it would be dangerous to add another barrier to existing ones.

SOLUTION STRATEGIES

The need to buy time for the economic recovery in eastern Germany led to the question of how actions to improve the infrastructure projects could be accelerated. The importance of increased investments, in spite of the constraints of the public budgets, resulted in a further search for alternative financial instruments.

Acceleration of transport projects v. environmental risks

Periods of twenty years for planning and completing transport infrastructure projects in West Germany are common.¹⁶ In particular, the extensive rights of people to object to the infrastructure projects inhibit faster realization.

To wait several decades for the adjustment of eastern Germany to western German standards would not be acceptable. The social and economic reunification would be a fiction during this period. Instead of reunification, regional disparities and an enormous exodus would occur. Taking this into account, the Ministry of Transport at an early stage proposed laws on special investment projects and a general law to accelerate transport-infrastructure progress. Both include a significant lessening of the civil right to object and also allow planning services to be transferred to private consulting firms.

The latter law is intended to relieve public institutions of planning tasks. That is important at the moment, since public administration in eastern Germany is either not very effective or has not even been set up yet. This way allows the administration to concentrate on those remaining paramount tasks that cannot be delegated.¹⁷

Although from an economic point of view the acceleration of the planning procedure has to be agreed with, two problems do arise:

- First, the question arises whether limiting individual civil rights satisfies democratic basics. The acceleration law tries to evade this dilemma, since it was passed for only a temporary period to emphasize its extraordinary character. Also, it should be mentioned that securing economic progress helps to establish the democratic process in eastern Germany. In this way, the temporary suspension of some political participation guarantees it in the long run.
- Second, the priority of realizing projects quickly may interfere with other social goals. The shortened search for optimal traffic routes could harm the environment. On the other hand, efficient traffic routes can reduce bottlenecks. For example, significant savings can be obtained from bypasses and adding additional lanes to motorways. Therefore, it is not correct that expanding the infrastructure only results in harming the environment.

Taken together, the arguments for the acceleration of infrastructure projects seem to dominate. In fact, the relevant law was passed by parliament in November 1991.

Nevertheless, the discussion about accelerating the rebuilding of the transport infrastructure continues, since now the pros and cons of a neutral investment policy with regard to competition between modes of transport become the centre of interest. This means investment projects should be preferred that reduce environmentally harmful emissions. In the end, this would result in influencing the choice of modes of transport towards environmental goals. Following this way, two dangers could occur.¹⁸ First, the costs of differentiating between modes of transport by influencing the supply of infrastructure cannot be quantified, for example, in relation to (more efficient) environmental taxes. Without prices individuals are deprived of a basis on which to make decisions. Second, with a differentiated supply of infrastructure—directed perhaps against consumer needs—the sovereignty of the consumer erodes. This step would be basically dangerous in a market-economy system. The needs and interests of the people and the economy would be ignored. This political intervention could perhaps disturb the sensitive relationship of relative prices and might even provoke further, *ex ante* uncalculated actions. As a consequence, public regulations would increase even more. That would be contrary to the European movements towards liberalization. The proper balance between modes should therefore be achieved by internalizing external costs. A political manipulation of certain transport modes by discrimination in the supply of infrastructure would be the wrong way.

Financing infrastructure investments

Of course, an acceleration of infrastructure projects is compatible with an acceleration of the necessary financial funds. It is already obvious that the financial demand cannot be covered by traditional budgeting: further shifts towards the transport sector are not likely, closing the financial gap by increasing taxes is not on the political agenda and continued financing with debts would soon reach the economic limits. Only private financing is left as a reasonable alternative. Besides financing, temporary transfers of property rights to private infrastructure companies (e.g. leasing) have also been discussed.

The traditional legal objections have vanished meanwhile.¹⁹ Furthermore, besides there being no realistic alternative to using private capital for infrastructure projects, private property rights are basically welcome from a deregulation point of view. Provision of state-owned infrastructure does not make sense economically with respect to entrepreneurial initiatives. In particular, by excluding competition in the supply of infrastructure, efficient solutions might not be found and the pressure to innovate and rationalize might be diminished.

Although these arguments are strong, the practical arrangements for private investments are complex because they should not only relieve the public administration of a burden, but also should help save costs. In fact, the alternatives discussed differ in three ways:

- The distributional argument is directly targeted at the situation in former East Germany in terms of toll financing: the toll solution would put additional burdens on eastern Germans with low income, while the western Germans would enjoy their infrastructure at 'old' rates and almost free of charge. Tolls therefore would present problems from a social point of view. In addition, they could prevent a rational use, because profit-maximizing operating companies would fix the price at a level above marginal costs. Traffic would be hampered, and economic progress would be at risk.²⁰ In fact, these aspects excluded the toll approach from the catalogue of solutions very early on. On the other hand, mobility for those of low income could probably have been guaranteed by transfers and tax relief within such a financing concept.
- The economy of public budgeting can be affected by private financing. In general, a private investor expects an interest payment for his invested capital at market level. The leasing model (leasing rates) or the economically similar licence model²¹ would therefore especially strain public budgets even more than if the public had not granted these rights to private investors. In fact, German budgeting laws postulate that government spending has to obey the principles of efficiency and economy. Actually, these principles can be fulfilled in particular cases by

taking the efficiency advantages already mentioned of private investment into account. Also a growth of GNP and taxes that could not have been realized other than with private investments has to be considered.

- The argument concerning the need for the extent of public debts to be clear is targeted at the risky development of public indebtedness as a consequence of the German reunification. Besides the level of debt, the aspect of the lack of information about the level and the dynamics is becoming risky.²² But leasing and licence models especially contain financial burdens for the future which are not reflected in actual budgets. Because of this, the argument can be used against private leasing and licence models. Nevertheless, these alternatives have been accepted thankfully by politicians, because they avoid an open increase of public debts in the face of public reluctance to accept further debts.

In summary, because of the above-mentioned considerations there definitely will be private infrastructure investments in Germany, but, more than one year after German reunification, an ultimate decision has not yet been made.

REORGANIZATION OF THE TRANSPORT SECTOR IN EAST GERMANY

Transport policy establishes the extent and quality of the transport processes through the conditions for the supply of infrastructure. Furthermore, German reunification has created a significant need for a reform of regulation policy. With regard to the market philosophy, the transport sector in eastern Germany has to be totally reconstructed. Two main tasks have to be dealt with: first, the former publicly owned transport conglomerates (*Verkehrskombinate*) have to be privatized, meaning also that in the transport sector private property rights have to be established. Second, transport policy has to find a rational solution between national market regulation and the pressure from the EC to deregulate the market.

Privatization

The transport sector in the German Democratic Republic, as well as the other economic sectors, was highly concentrated. Because of the reunification, the former publicly owned conglomerates became the property of the Treuhandanstalt, which is to transfer these properties into private ownership.²³ Indeed, only 150 of 390 companies have been privatized so far.

By reducing extended vertical integration, that is, by concentrating on the individual core business, the Treuhandanstalt is trying to create companies that can be privatized or made viable. Simultaneously, the

Treuhandanstalt follows a policy of horizontal deconcentration, especially the breaking-up of existing regional monopolies. For example, the former 15 road transport conglomerates have become 170 independent companies.²⁴ The goal is to enhance the market supply in freight transportation by increasing the competition between the new lean companies.

Besides the slowness of privatization, the transformation, required by the Unification Treaty, of the local public transport services in communal ownership has become a severe problem. Because of their poor financial situation, the communes are not interested in taking on tasks that may lead to deficits. Although federal as well as state governments have spent significant financial resources on enhancing the performance of public transport,²⁵ the communes are obviously awaiting additional resources and are abstaining from necessary investments in reconstruction and rationalization. Accordingly, the attractiveness of public transport is decreasing, and this encourages the tendency towards private-car use.²⁶ Therefore transport policy is caught in a dilemma: either additional financial resources motivate the communes merely to profit from these resources, or shifts in the use of different modes of transport have to be accepted.

Market-regulation system for the freight traffic

In contradiction to the proposed EC liberalization, eastern Germany was still given the restrictive market regulation from western Germany.²⁷ Accordingly, the market entry into the road transport market is restricted by contingents and tariffs which are about 20–30 per cent above competition prices because of the regulation.²⁸ Despite these high economic costs caused by market regulation, its transfer to eastern Germany made sense because only this initial step in the ‘wrong’ direction gave eastern German transport firms the needed time to develop know-how for the market economy. Without the protection of the market regulation their first step towards a market economy would have probably been their last. Even with protection, they can hardly withstand the competitive pressure. In this sense, the argument of economic costs is relative with respect to time limits: in the long run, liberalized markets increase economic welfare by reducing costs, whereas protecting viable suppliers in the short run may be useful to allow them to recover from initial adjustment shocks. Nevertheless, there are some gaps between theory and practice:

- After a very short period of market entrance without contingents,²⁹ the granting of permits became extraordinarily generous. About 12,000 contingents were given to eastern Germany. But the estimated

need to satisfy demand is only about 2,000.³⁰ Thus, the protection offered by market regulation is eliminated by the allocation policy. As a result, prices and profitability come under pressure from the capacity surplus created and in fact this system differs from a free market only in its costs for administration and control.

- The rate of market concentration in road transport increased because of several takeovers by western German transport companies and West European countries.³¹ In this way, the aim of the market regulation to promote a competitive structure of medium-sized firms failed.
- The economic situation of most of the eastern German road transport firms is dramatic. On the one hand they have to suffer losses in transport volume because of decreasing industrial production and because of losses in market share to superior western German and foreign transport firms. On the other hand firms are suffering from low capital resources. Therefore, necessary investments can only be financed by credits, which, however, increase the financial risk for the firms. Simultaneously, firms are suffering from an explosion of costs, e.g. vehicle taxes, which have been raised to western German levels. If all these disadvantages are taken together, the smaller in particular among the newly founded firms will have to face insolvency.
- Within the transport industry, starting chances are not equal. Treuhandanstalt firms have much better possibilities of obtaining financial and technical support than the newly founded middle-sized firms.³² Since the political pressure on the Treuhandanstalt is growing to stabilize its firms first before privatizing them, the situation threatens to get bogged down. That means, the disadvantages of these middle-sized firms prevent them from reaching the goals of deconcentration and competitive market structure.

Obviously, the situation for the transport industry in eastern Germany seems to be very unfavourable. In the short run, those firms will only be able to compensate for their strategic competitive disadvantages with advantages that result from their location. In fact, they are not only handicapped as entrepreneurs but are also handicapped because of their infrastructure equipment. Economic policy should therefore help in terms of stability and structure to ease the process of adjustment for transport firms. Instruments could be, for example, temporary debt moratoria, only small increases in taxes, rapid expansion of transport infrastructure and, lastly, the offer of land for transport firms and transport centres.

Besides that, to establish a successful and fair liberalization of transport, the harmonization of the wide range of different transport-

specific taxes, social regulations and controls is a *sine qua non*. Compared internationally, the unequal relation of (neglected) harmonization and (realized) liberalization—resulting in a drastically increased transport volume and loss of jobs—would otherwise harm the eastern German transportation suppliers in particular. From a German point of view, the need to act has high priority. But the European partners have to agree that equalization, for example, of social and environmental standards, should not be based on a minimum level.

Although there will be severe problems in adjustment and harmonizing, the market regulations should not be effective—nor for eastern Germany³³—beyond 1994, when the liberalization of the national transport market will take place. Excepting East Germany (or even West Germany) from this in terms of competition would mislead other European countries into asking for further regulation too. That development could become very dangerous, because the whole liberalization of markets would be at risk. Furthermore, experience shows that protected industries do not use the time they gain to improve their economic efficiency.³⁴ Obviously, potentials for rationalization and innovation are only realized under conditions of competition. The decision for further regulation would probably simultaneously stipulate an eastern German deficit in productivity.

THE FUTURE OF THE RAILWAY IN REUNITED GERMANY

The Deutsche Reichsbahn, the former publicly owned East German railway, has become a part of the federal property of western Germany.³⁵ That has led to the curious situation in which one state operates two self-owned railways.

In institutional terms, the future of the German railways is decided. The opportunity to open both rail networks to each other, intending to let West Germany's Bundesbahn compete with the East German Reichsbahn, has not been realized. This solution was not realistic because of the weak personnel and material equipment of the Reichsbahn; it is not fit for competition yet. But in the medium term it is proposed to merge both German railways to profit directly from advantages that depend on the economies of scale (e.g. shared purchasing departments, co-ordination of operation).

At the present time the situation is becoming more and more dramatic for both companies. The total debts of the Bundesbahn and the Reichsbahn seem to be exploding and will become an enormous financial risk for the public budget.³⁶ What is known already from transport forecasts is that increasing revenues cannot be expected. On the other hand, rising costs will jeopardize the commercial scope for action.

Therefore, to expect economic stability for the railways as a result of their own efforts is not realistic.

Regarding this, the discussion about the future of German railways has intensified significantly. Initial moves have been brought about by a federal commission on the state of the railway (Regierungskommission Bundesbahn), which has developed fundamental proposals to reform the railway.³⁷

Though the diagnosis of the problem is commonly accepted, stabilization proposals are disputed. Their fundamental points to improve the situation are:

- The railway companies are to be transferred into a joint-stock company (DEAG—Deutsche Eisenbahn AG (German railway joint-stock company)). For this purpose, the German constitution has to be modified. The interests of the owners (profitability goals of the railway itself contrasted with the collective interests of the federal government) are to be divided to give economic needs priority.
- The federal government is to take over all debts from the DEAG to initiate a new commercial beginning.
- Following claims of the EC, a material separation of the railway network and operation is to be realized to establish competition between operating companies. The network will be financed by the federal government and the operators will have to pay utilization fees.

Since a fundamental reorganization of the railway depends on modifying the German constitution (section 87 of the Basic Law), the ideas of the commission are problematic. The necessary two-thirds' majority will probably not be forthcoming in the German parliament.

To take over all existing debts would coincide with a simultaneous explosive increase of other federal debts. Therefore it is not likely that the railway will be given a higher degree of budgetary priority. Although the federal government has to carry the debts of the railway 'in any case' (that is the status quo), following the ideas of the commission would put such an additional burden on the federal budget that politicians will probably not identify with this solution.

In terms of competition, the material separation of network and operating companies seems to be a step in the right direction because of considerations of principle. It would allow the railways to target their scarce resources on the most profitable goals. On the other hand, the problems that arise with such a material separation cannot be neglected. The case of Sweden, for example, shows that the network company did not focus sufficiently on the needs of the operating company in terms of the extent and quality of infrastructure investment. The implementation of efficient co-ordination mechanisms is therefore important.

EC regulation no. 7511/91, which goes beyond material separation by stipulating that operating companies must be competitive, has to be analysed further. Of course, competition among different operating companies can establish intramodal efficiency effects. On the other hand, there is no experience in terms of allocating slots in the timetable of different operators, nor of establishing an efficient network of interconnecting services, nor of financial regulations in case of disturbances to the network.³⁸ The danger is obviously that the supply of services in the regions might become worse and simultaneously a run might start on creaming off the attractive parts of the network.

To sum it up, the legal transformation of the railways into a private corporation will ease the realization of their commercial tasks. Getting the railway back into business is becoming urgent. This task cannot be fulfilled by policy, it has to be accomplished by the railway management. Furthermore, ownership is not crucial, but property rights are. From the railway management's point of view, these were relatively weakened by the unions and the shippers because of regional and social influences. To cure the railways, their demands should be refused in the future or replaced with a system of special compensation.

SOCIAL AND ENVIRONMENTAL RISKS OF TRAFFIC DEVELOPMENT

Mobility has increased very greatly in eastern Germany since reunification. As a result negative environmental and side effects have also occurred:

- Road traffic accidents with passenger injuries increased by about 46 per cent from 1989 to 1990 to 49,307.³⁹ The number of fatalities rose by about 76 per cent to 3,140. The annual comparison showed 209 per cent more injuries on highways. Also, if relative figures are analysed using accidents per vehicle kilometre, the number of accidents increased by 21 to 46 per cent.⁴⁰ This dramatic increase can be explained by several factors. After reunification the number of young, inexperienced drivers who suddenly had access to big powerful cars soared significantly. Simultaneously, controls and sanctions by the police decreased. Furthermore, infrastructural shortcomings also played a role. Therefore, an important task will be to educate people and to intensify traffic controls, but also to improve the infrastructure to reduce the number of accidents.
- The transformation of eastern Germany's transport sector into a market economy has gone hand in hand with distributive effects that contradict social policy. This applies especially to the tariffs of the local public-transport system. The structural relation of public to

private traffic was 40:60 in eastern Germany compared to 17:83 in western Germany.⁴¹ The large share of public transport was the result of a lack of private transportation and the inexpensive, highly subsidized tariffs (up to 600 per cent of the fares). After German reunification subsidies vanished. Initially, at the beginning of 1991, the fares were raised drastically from M 0.15–0.30 to DM 0.50. That resulted in great strains for a large proportion of the population because of their relatively low real income and therefore a loss of mobility. As a consequence, there are demands to stop raising the fares. To fulfil these aims would interfere with the profit goals of public transport (to realize an attractive supply) and the important goals of establishing a clear cost-accounting system. However, social-welfare policy is more than pricing policy: a satisfying range of transport services has to be secured for the population in sparsely populated areas. This criterion was fulfilled in former East Germany.⁴² To avoid a debasement of the supply, besides public financial support, additional enhancements of efficiency and attractiveness will be necessary.

- Traffic's contribution to total air pollution was relatively low in former East Germany. It accounted, for example, for 23 per cent of the nitrogen-oxide emissions and 3 per cent of carbon-dioxide emissions.⁴³ Since numerous industrial plants have been closed and heavily air-polluting power stations have been equipped with filters, the traffic proportion should have increased significantly. Furthermore, a continued increase in air-polluting emissions can be expected. Besides the shift in modes of transport to the disadvantage of public transport, as economic welfare increases, more powerful and energy-wasting vehicles will be used. But primarily, environmental quality will suffer from the dominating growth in mobility. At 7,000 vehicle kilometres per inhabitant mobility in eastern Germany will equal that in western Germany by the year 2000, while it amounted to only about one-third of West Germany's value in 1988. Nevertheless, there are some effects that protect the environment: the type of vehicles used in eastern Germany started changing after reunification, the trend being towards lower-emission cars from western Germany. Institutional and technical improvements were enforced by policy. Thus, for example, by accepting the regulations concerning the reduction of lead and sulphur in petrol the quality of the environment was improved.

Yet, all environmental-protection measures and developments have been cancelled out by the increase in mobility. Creating practical environmental policies from this situation becomes very complex. The expected further pollution reflects the elementary needs of the eastern German population for economic wealth and increase of productivity,

which are already standard in West Germany. Therefore, a restrictive policy towards transport demands in eastern Germany is not recommendable, especially because of the fact that the Basic Law stipulates that there should be equal conditions in the east and west.

WAS THERE REALLY A CHANCE FOR A 'NEW' TRANSPORT POLICY?

Together with growing economic activities and the increase in transport volume that results from such growth, a significant increase in environmental pollution can be expected in eastern Germany. It is often demanded that 'mistakes' that happened in the past in former West Germany should not be repeated in eastern Germany. Therefore, the establishment of a 'new' primary environmental transport policy should be considered. The federal government, with its market-economy tendency and huge investments in road construction, has been accused of wasting this chance.

An alternative to a market-economy-oriented transport sector would have been a structural-intervention approach. It has to be doubted that a more environment-friendly policy could have been established that way. Experience indicates the opposite. Obeying the public administrative regime of regulations in former West Germany has caused loss of motivation. As a tendency, it has worsened the environmental balance sheet, e.g. a want of pressure from competition, poor usage of productivity, unreasonable structure of the vehicle fleet in former East Germany. Protection of the environment can be realized in a market economy better than in a centrally planned or interventionistic system.

Nevertheless, it cannot be denied that a conflict arises between growth of the economy and mobility on the one hand and protection of the environment on the other. In the face of the elementary preferences of eastern German population, this argument is losing ground. With respect to traffic, economic growth should not be hindered. Economic growth needs access, productivity, the ability to compete and therefore a viable transportation system.

Had transport policy followed environmental considerations, their goals would have been neglected probably even more. On the one hand, for example, the modernization of the vehicle fleet would not have taken place because of lower growth and lower income. On the other hand, lower income expectations and simultaneous restrictions on mobility would have motivated people in eastern Germany to escape this situation by migrating to the already highly strained western Germany.

Following environmental goals, the primary plausible appeal to substitute train transport for road traffic would not have been realistic because of capacity bottlenecks during planning and construction as well

as the different possibilities of absorbing public investments.⁴⁴ The justifiable expansion of the railway in eastern Germany would cost about DM 100 billion and take about twenty years. The rapidly increasing transportation demand will therefore concentrate on the roads first, where expansion and modernization can be realized faster and more flexibly. These arguments give priority to road reconstruction in the short run to abolish the worst bottlenecks.

Since infrastructure investments need a long time and the mobility of the population and the economy cannot be neglected if economic growth is to be promoted, actions to achieve the efficiency of the transport system and to lower vehicle emissions must be taken. The backlog demand of the transport industry for logistics, rationalization and communication can be satisfied most effectively in a competition-style transportation market. The most important incentives in a market economy are the forces of allocation under competitive conditions and the institutional framework with which to internalize external costs as well as the correct information for the division of labour among the transport operators. This direction cannot be neglected if the transport industry in reunited Germany is to meet the requirements of the future European Common Market.

NOTES

- 1 Vertrag zwischen der Bundesrepublik Deutschland und der Deutschen Demokratischen Republik über die Herstellung der Einheit Deutschlands—Einigungsvertrag (*Bulletin* 1990).
- 2 E.g. article VI, Public Assets and Liabilities (§26, Sondervermögen Deutsche Reichsbahn), pp. 883 as also XI, Responsibilities of the Minister of Transport, pp. 1031 of the Einigungsvertrag.
- 3 Ronellenfitsch, M. (1991:6).
- 4 Voigt, F. (1973:8).
- 5 The external transport costs in Germany are estimated at about DM 30 to 90 billion per annum, see Planco Consulting (1990:1–9).
- 6 See the study of enterprises conduct by Nerb, G. and Städtler, A. (1991:3).
- 7 Deutsche Bank AG (1990:39).
- 8 Bericht und Vorschläge der Arbeitsgruppe (1991:5).
- 9 Baum, H. and Pfau, G. (1991:19).
- 10 Values compiled by Der Bundesminister für Verkehr (1991a:237, 239).
- 11 Kessel und Partner (1991:8) and Intraplan Consult (1991:35).
- 12 Huber, J. (1991b:352); increase in budget from 1991 to 1992=+13 per cent=DM 40 billion investment share=57 per cent, see *Deutsche Verkehrs-Zeitung* (1991c:1).
- 13 Willeke, R. (1990:63).
- 14 Integration measured as division of summed-up values from export and import in relation to the GNP in 1989 and 1990, see Deutsche Bundesbank (1991a:68, 76).
- 15 Deutsche Bundesbank (1991b:3, 32) and BDI (1991:14).
- 16 Der Bundesminister für Verkehr (1991b:48).

- 17 Bericht und Vorschläge der Arbeitsgruppe (1991:5-6); Sachverständigenrat zur Begutachtung der gesamtwirtschaftlichen Entwicklung (1990: Tz. 595).
- 18 Baum, H. (1991a:7).
- 19 Friauf, K.H. (1991); von Arnim, H.H. (1991).
- 20 Sinn, H.-W. (1991:498).
- 21 For the—in general only legal—differences between both financing instruments see Bericht und Vorschläge der Arbeitsgruppe (1991:17, 29). Nevertheless, there are good reasons to believe that leasing-financing is possible, but hampers an acceleration of reconstructing the infrastructure; e.g. a sectoral building of infrastructure projects would not be possible.
- 22 Sinn, H.-W. (1991:499).
- 23 Einigungsvertrag, Art. 25:883 (*Bulletin* 1990).
- 24 Matthies, H. (1991:453).
- 25 See *Verkehrsnachrichten* (1991:21).
- 26 *DIW-Wochenbericht* (1991:726).
- 27 Einigungsvertrag, §28, p. 1037 (*Bulletin* 1990); according to this the western German freight-traffic system as well as the regulations pertaining thereto are becoming effective in East Germany. See Aberle, G. (1990:15).
- 28 Deregulierungskommission, Berichte 1990 and 1991, Stuttgart 1991, Tz. 170; Sachverständigenrat zur Begutachtung der gesamtwirtschaftlichen Entwicklung (1991: Tz. 475); Monopolkommission (1990: Tz. 810); Baum, H. (1991b:27).
- 29 Moritz, W. (1990:17).
- 30 Zobel, A. (1992:10).
- 31 It is believed, that about half of contingents that were placed in East Germany, have been 'transferred' to West Germany. See Folker, B. (1991:13).
- 32 Zobel, A. (1992:14) and *DIW-Wochenbericht* (1991:7825).
- 33 See the 'Requirements by the Bundesverband des deutschen Güterfernverkehrs (Bdf)' and 'Ostdeutsche Unternehmen sind auf Marktordnung angewiesen', in *Deutsche Verkehrs-Zeitung* (1991 a and b: 2).
- 34 Monopolkommission (1990: Tz. 866).
- 35 See §26 of the Einigungsvertrag (*Bulletin* 1990).
- 36 It is feared that the total debts of both railway companies will exceed more than DM 400 billion by the year 2000.
- 37 Regierungskommission Bundesbahn (1991).
- 38 For pros and cons see Ewers, H.-J. (1991:35) and Gibtner, H. (1991:3).
- 39 Bundesanstalt für Straßenwesen (1991:5).
- 40 Values compiled by Der Bundesminister für Verkehr (1991a:463) and Bundesanstalt für Straßenwesen (1991:7).
- 41 *Verkehrsnachrichten* (1991:20).
- 42 *Ibid.* (1991:20).
- 43 Der Bundesminister für Umwelt, Naturschutz und Reaktorsicherheit (1990:24); Statistisches Amt der DDR (1990:146).
- 44 Klemmer, P. (1991:17).

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THE SERVICES SECTOR IN EASTERN GERMANY: AN ENGINE FOR GROWTH AND EMPLOYMENT?

Otto G.Mayer and Michael Krakowski

Great hopes were placed in the rapid development of the services sector in eastern Germany following the economic, monetary and social union of the two Germanies on 1 July 1990. Virtually all the German political parties expected this sector to grow rapidly and thus to provide relatively quickly a proportion of the jobs that are needed to compensate for the loss of those jobs that had become obsolete due to the reduction in the high concealed unemployment inherent in the system or due to the inefficiency and lack of competitiveness in the other industries in the former German Democratic Republic (GDR).

These hopes were based, first, on the apparent underdevelopment of the services sector and, second, on the expectation of rapid income growth in eastern Germany. Since Western experience had been that, due to the given income elasticities of demand, this sector grows faster than national income, it was concluded that the expected rapid growth of income would produce an additional stimulus to this sector in eastern Germany. Up to now, these hopes have not been fulfilled to the extent expected. This seems to be due partly to the fact that the assumptions on which these expectations were based were not correct, partly to the fact that the heterogeneity of the services sector was not taken adequately into account and partly also to the fact that the transformation process in eastern Germany has been accompanied by a greater upheaval and is taking longer than many had expected. But the further development of broad areas of the services sector is, in turn, dependent on the results of this transformation process and the way in which it takes place.

SERVICES GAP IN EAST GERMANY?

The thesis that the services sector in the former GDR was underdeveloped was based, first, on a simple comparison of sectoral employment statistics for East and West Germany before the events of 1989 (institutional comparison) and, second, on the obvious lack, or inadequacy—again

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Table 11.1 Employment in East and West Germany (%)

<i>Sector</i>	<i>Agriculture</i>	<i>Mining/ industry</i>	<i>Trade/ transport</i>	<i>Services, including government</i>
1987				
East	11	47	18	25
West	5	40	19	36
1967				
West	10	47	18	24

Note: Figures do not add to 100 due to rounding.

Source: Neubäumer (1991:102).

based on an east-west comparison—of the supply of services (such as negligible advertising, the lack of advisory jobs such as tax consulting, and so on) which was inherent in the system (functional comparison). This ‘services gap’ was explained ideologically, since according to the Marxist philosophy, services are not counted as a productive activity and are therefore, compared to the so-called productive sectors, paid little attention within planned economies, i.e. they received lower allocations of resources. According to this line of reasoning, the removal of Marxist ideology and the establishment of market economy relationships would lead to a rapid filling of the gap.

If we examine the sectoral distribution of employment in East and West Germany before the ‘revolution’, we see in fact that the producing sectors in the former GDR (primary and secondary sectors) absorbed around 57 per cent of those employed (see Table 11.1), and the services sector (trade, transport, banking, insurance, services in the narrow sense of the word, private and governmental organizations) 43 per cent, whereas in West Germany the relationship was the other way round (45 to 55 per cent). If we assume that the total employment remains unchanged and that the structure of the East German economy assimilates to that of West Germany, the necessary loss of jobs that this would entail in agriculture, mining and manufacturing would, arithmetically speaking, be almost entirely compensated for by the jobs required in the services sector (approximately one million).

Due to the low productivity of labour in the former GDR, however, national income per capita was considerably lower than that in the Federal Republic of Germany (FRG) before the end of 1989. In turn, however, the low level of income was—in addition to system-specific peculiarities and the GDR’s relative autarchy—a determining factor for the structure of the GDR economy. According to the three-sector hypothesis, as income rises, first the importance of the primary sector with regard to employment decreases and that of industry increases, and later

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Table 11.2 Range of sectoral employment: German Democratic Republic and eleven industrial countries (percentage of employed persons)

	<i>11 industrialized countries</i>				<i>GDR</i>
	<i>1970</i>	<i>1976</i>	<i>1980</i>	<i>1988</i>	<i>1989</i>
Agriculture	3.2-19.6	2.8-16.0	2.6-13.9	2.2-9.6	10.0
Industry	33.4-48.4	30.3-44.0	30.0-43.2	26.5-39.9	45.7
Services, government, military forces	40.9-62.2	46.6-65.9	49.2-66.5	54.5-70.6	44.3

¹ West Germany, United States, Japan, France, Italy, United Kingdom, Netherlands, Belgium, Austria, Switzerland and Sweden.
 Source: *Krakowski et al.* (1991:133).

the importance of manufacturing for employment decreases and that of services increases. It was therefore to be expected that the two former sectors—because of the low income in the GDR—were relatively more important than in the FRG. The sectoral structure of employment in the GDR corresponded in 1987 almost exactly to the percentages to be found in the FRG twenty years previously. Judged on this basis, two decades of development would have to be caught up on in order to put the services sector in eastern Germany on an equal footing with that in western Germany with regard to its standard and its size.

This comparison is, of course, inadequate. After all, even within western Germany there are large sectoral differences between the various regions, depending on their position in the national and international division of labour. Here, the structures in advanced Organization for Economic Co-operation and Development (OECD) countries should therefore be compared with those of the former GDR in order to illustrate the range that exists even among the industrialized market economies. On the sectoral level of the economy, however, even this comparison shows that at the end of the 1980s the manufacturing sector in the former GDR was larger and the services sector (including government) was smaller (measured by the number of employed) than in industrial market economies (see Table 11.2).

Similar figures to those for the GDR in 1989 were achieved in 1970 by the OECD countries examined. The relatively low per capita income in the GDR provides a largely adequate explanation for this. The last report on the structure of German industry by the HWWA Institute estimates per capita income in the GDR in 1989 at about DM 17,000 (*Krakowski et al.* 1991). This corresponds roughly to the income achieved in the FRG in the mid-1960s. At that time, the sectoral structures of eleven OECD countries showed similar figures to those achieved by the GDR in 1989.

The extremely small size of the 'other services' sector in the former GDR (circa 5 per cent) cannot, however, be adequately explained by the difference in income. This category refers to consulting, advertising, etc. The share of these services sectors in the OECD countries varies quite considerably, but the share in the former GDR lies clearly outside the range to be found in the OECD countries at the point in time at which their per capita income was comparable to that of the GDR in 1989. The small size of the independent services sector in the former GDR was determined by the economic system. Many of the services that are provided in market economies by independent businesses were provided in the GDR by the state or by producers, or were of no importance (advertising, marketing, etc.) due to the different way in which goods were 'distributed' in the system there.

DISTORTED STRUCTURE WITHIN THE SERVICES SECTOR?

From what has been said above, it could be concluded that—independent of the time required—the development of the services sector in eastern Germany, with regard to both its level and its sector share, decisively depends, first, on the development of per capita income and, second, on the increased separation of services functions from production enterprises, as well as on the creation of independent service firms.

The above comparisons have not, however, taken into account the extent to which productivity in the services sector in the former GDR also remained lower than in the countries under comparison, i.e. the extent to which there was concealed unemployment here, too, and the extent to which political interventions and goals distorted relations among the different services activities. The *Institut der Deutschen Wirtschaft* (IDW), for example, came to the conclusion in a study (IDW 1991) that the tertiary sector as a whole—measured as the number of employed per 1,000 population—was nearly equally as large, at around 250 service workers in both eastern and western Germany, with the consequence that the service sector for this reason alone cannot, arithmetically speaking, become an absorption area for those employees who lose their jobs in agriculture or industry. On the contrary the need for reform extends to changes in the structure of employment in the tertiary sector itself, since the individual service branches show quite different levels of employment (due to the nature of the system) than those in former FRG (see Table 11.3). We have, however, to take into account that the ratio of employment in the former GDR was higher than in the FRG. If that ratio is reduced at least to the western German level, but the density of services follows western German lines, there is a certain scope in the services sector for absorbing some of the workers previously employed in the primary and secondary sectors.

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Table 11.3 Density of services in East and West Germany in 1989 (employed persons per 1,000 inhabitants)

<i>Sector</i>	<i>East</i>	<i>West</i>
Trade/transport	89	80
Trade	53	55
Transport	31	17
Telecommunications	8	9
Banking/insurance	4	16
Banking	4	11
Insurance	NA	5
Government	55	55
Other services	91	98
Restaurants, etc.	7	18
Education, science, culture, etc.	45	27
Health, etc.	25	25
Residual	18	19

Source: IDW (1991:5)

Beginning with the assumption, as the IDW does, that, compared to the situation in 1989, eastern Germany, with a population of 15.5 million, will show the same density (employees per 1,000 population) in the individual service branches in 1995 as the old Federal Republic of Germany, possible restructuring processes within the services sector can, other things being equal, be deduced:

- The 'winners' could be banking and insurance companies, with a plus of 190,000 employees, of which a good 100,000 will fall to the credit institutes and about 80,000 to insurance companies.
- In transport, 244,000 jobs will have to be eliminated, while 31,000 new ones would be created in trading.
- In the remaining services (as mentioned above) eastern Germany probably has a large backlog of demand, since these comprise the branches, such as legal and business consulting, consulting engineers and advertising, that are also strongly expanding in the west. The IDW expects a gain in employment here of a good 140,000.
- Judged from its starting position, the signs also look good for the hotel and restaurant business. An increase of about 160,000 jobs can be expected here.
- The area of education, science, culture and publishing, on the other hand, is greatly overstaffed. This area can expect a reduction in jobs to the tune of about 330,000 by 1995.
- The health and veterinary systems are also overstaffed. Employment here will probably have to be reduced by approximately 30,000.

- The state plays a special role. Of its 900,000 employees in 1989 about 700,000 were employed in the so-called X-branch, i.e. in the Communist Party, the Stasi, the police and the National People's Army. Only 200,000 persons were engaged in purely administrative tasks. The organization of administration in communes, districts and states, however, requires an incomparably higher number of personnel. Requirements for 1995 are estimated at around 840,000. (The transfer of personnel into this branch is, however, not only a question of the further training of those who were until now public employees in the correct sense of the word, but is, above all, a political problem.)

The assumption that the sectoral structure of the eastern German economy is likely to develop in the direction of that in western Germany is widespread, but it is generally not very convincing. The great regional differences in sectoral structure that exist even in western Germany indicate that it is rather improbable that the structure of the eastern German economy will develop precisely towards the average of these western German regional structures. Much more important is the question as to the branches in which eastern German supplies find their place in the national and international division of labour.

The assumption continues to be relatively convincing, however, in various branches of the services sector, particularly in those which depend directly on the number of residents (administration, education, justice, health) or on local private consumption (trade, restaurants, the press) or on private savings (certain areas in banking and the insurance industry). In the case of production-related services, on the other hand, the IDW's assumption that demand is related to population figures makes little sense.

CURRENT TENDENCIES IN THE SERVICES SECTOR

If we, for example, compare the (arithmetically) possible developments described above with what has actually taken place, as far as the figures are available (up to mid 1991), it can be established that the process of structural change has begun, but that it has not always taken place to the extent expected, or in the direction hoped for. With regard to the share of the three sectors in the economy, eastern Germany had, purely statistically speaking 'developed into a service society' by mid 1991. The services sector at that time was responsible for more than 55 per cent of gross value added. The reason for this lies in the dramatic decline of manufacturing in eastern Germany. Its production has more than halved since 1989 (see Table 11.4). In spite of an absolute, but in comparison

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Table 11.4 Gross value added in East Germany

<i>Sector</i>	<i>Percentage change between 1st quarter 1990 and 1st quarter 1991</i>
Agriculture	-34.7
Mining/manufacturing	-60.0
Industry	-67.8
Skilled trades	5.2
Construction	-8.4
Trade/transport	-20.0
Trade	-23.0
Transport	-18.1
Services/government	29.0
Services	29.0
Government/private organizations	-12.2
Gross domestic product	-35.4

Source: DIW/IfW (1991:554).

to production small, decline in gross value added in the services sector, its share of the gross value added of all sectors therefore improved as a whole.

This is partly due to the fact that a significant share of the demand for services is dependent on the population number and private consumption. Private consumption was and is supported by huge transfers from western Germany. Secondly, a significant part of services is locally produced and consumed (e.g. the services of retail trade) and can be provided by other regions to a limited extent only. In this respect, services activities in eastern Germany did not suffer from western competitors as much as goods-producing firms.

If we examine the development of employment in the services sector in east Germany since 1989 (see Table 11.5), we see that jobs were lost in this sector, too, up to mid 1991, to the tune of almost 660,000. (There can therefore be no question of a restructuring within this sector alone.) The greatest loser was trade with 286,000 employees, followed by the state (-148,000) and transport and communications (-146,000). Other services also lost around 39,000 jobs in spite of a gain by the credit institutes of 17,000 and by insurance companies of about 10,000.

Nevertheless, positive trends have become discernable recently. According to the *Institut für Angewandte Wirtschaftsforschung* (IAW), these should be the dominant trends in 1992 (IAW 1991). Visible signs of expansion, with relatively large output effects and in part considerable employment effects, are to be found in the fields of banking and insurance, hotels, restaurants and tourism, as well as in the professions. Among the self-employed, for example, there were in the former GDR

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Table 11.5 Employment in the services sector in East Germany 2nd quarter 1989 and 2nd quarter 1991 in 1,000s

<i>Sector</i>	<i>1989</i>	<i>1991</i>
Trade	836	550
Transport	676	530
Other services	1,180	1,150
banking	38	55
insurance	12	22
Government	1,715	1,567
Private organizations	187	138
Total	4,594	3,935
Including service firms	2,692	2,238

Source: DIW/IfW (1991:567).

only about 400 doctors, barely 500 dentists, 26 pharmacies, 650 lawyers, 300 tax advisers and a handful of architects and engineers. Two years after the events of 1989 there were 13,000 doctors, 7,500 dentists, 27,000 lawyers, 500 notaries, 400 chartered accountants, 2,700 tax consultants, 1,300 architects and 3,000 engineers (*Frankfurter Allgemeine Zeitung*, 28 October 1991:17). It should, of course, be remembered when interpreting these figures that they mostly refer to persons who have left the health service or other sectors.

The often cited number of business registrations presented as evidence of the beginning of a boom in the setting-up of business (80 to 90 per cent of the more than 400,000 registrations fall to services) should be regarded with scepticism. It is apparent that fields are dominant in which the setting-up of an independent business is possible without large financial advances and in which only a low level of professional qualification is necessary. The snack bars, videotape libraries and copy-shops that have sprung up all over eastern Germany are a conspicuous expression of this. According to optimistic estimates, at best only half of these businesses can expect long-term success on the market.

PRODUCTION AND GROWTH IN THE SERVICES SECTOR

Once again, trends in eastern Germany show what the experiences of the West had already taught us, namely that growth in the services sector is, in the final analysis, dependent on the development of other branches. It must therefore remain weak as long as production and employment in industry are declining greatly. It is not in contradiction to this that—as stated above—there are also positive tendencies in evidence in consumer and household-related services. The use of such services depends mainly

on the disposable income of households and, of course, on the opportunity to spend it according to individual preferences. The level of household income has been maintained in eastern Germany despite the decline in production and in gross domestic product and has in fact even risen due to the high wage agreements. That this was only possible thanks to the enormous transfer payments from western Germany is in this context of minor importance. Thus, the direct transfers from western Germany meant that domestic expenditure in eastern Germany, at DM 143.2 billion, reached a figure in the second half of 1991 that was only marginally lower than the figure for gross domestic product in the second half of 1989 (DM 145.7 billion) although industrial production had fallen by more than 50 per cent (Krakowski *et al.* 1991). A decline in overall demand, at least, has therefore not taken place in eastern Germany. Although this has meant that individual service branches have, at first, profited because of the fact that households can now spend their income according to their preferences, further impulses for growth in this field are also likely to depend on further income trends in eastern Germany and thus on the overall development of production, if it is assumed that further massive increases in the transfer payments from western Germany are likely to be limited.

In short, if the expansion of many businesses in the services sector and the establishment of new businesses have until now been restrained, this has been due primarily to the unfavourable overall situation in the economy in eastern Germany. Service businesses operate chiefly on local markets; in many branches—with the exception of certain areas in transport and tourism in particular—long-distance sales play no role at all. Retail trade, restaurants and pubs, and service-rendering skilled trades draw the majority of their customers from the local population. While the respective firms thus do not have to cope with competition from producers from other regions, they also cannot reckon with a higher turnover until real incomes show a distinct increase.

Those branches that, as suppliers to industry, are dependent on demand from enterprises or the state are dependent on an increase in production and a corresponding increase in tax revenue as a result of the higher real income thus achieved. This is not only true for certain areas of transport services, which are dependent on a growing amount of transport traffic resulting from an increase in industrial production and division of labour. Much the same is true of trade and commerce, but also of credit institutions in so far as these wish to expand beyond financial services directed at private households. Although it is conceivable that certain self-employed professionals (e.g. consulting engineers) could orient themselves more strongly to the potential demand from the west, here too it is probable that—quite apart from the keen western competition—a stronger stimulus for growth will depend on the strength of the local production base in eastern Germany. Development that

is more independent from local production and income trends would be conceivable in the tourism branch to the extent that it is possible to attract a corresponding demand from the west with adequate offerings with regard to both quantity and quality. Here, it would be a question of compensating for the deficit in eastern German demand due to the income situation, but also due to competition from Western countries for eastern German holiday-makers now that the borders have been removed, as well as for the absence of holiday-makers from the former socialist countries (foreign-exchange problems).

THE DOMINANCE OF WESTERN GERMAN SUPPLIERS

The difficulties of local suppliers of services, particularly in those branches that primarily provide services for production purposes, arise not only from a poor orders situation. They are also caused by keen competition from western German suppliers, in so far as certain branches in eastern Germany are not already more or less dominated by western German enterprises:

- In retail trade, the pace and direction of structural adjustment are being decisively determined by the activities of western German firms (DIW/IfW 1991). In wholesale and foreign trade, the privatization or closing-down of state enterprises is progressing only slowly. Western German firms prefer to invest in new capacities at new sites because of the limited possibilities of putting the old plants to use. It is probably only a question of time before the old plants disappear more or less completely.
- Eastern German transport firms are also under heavy pressure to adjust. Altogether, the amount of transport has shrunk and it is switching from rail to road. To what extent eastern German haulage contractors have been able to profit from the latter development is not clear. Many have signed subcontracting agreements with western German haulage contractors (DIW/IfW 1991). This is an indication of difficulties in establishing a circle of regular customers, particularly in the west.
- Eastern German service-rendering skilled crafts are among the few branches of the economy that—regarded as a whole—are now expanding strongly. Nevertheless, this branch too is exposed to large structural changes. Besides branches such as the electrical trade or motor-vehicle repairs, which profit above all from changes in the consumption patterns of private households, there are also branches in which firms are fighting to survive. These include above all above all traditional crafts, whose *raison d'être* was to be found in the deficiencies and the isolation of the socialist planned economy.
- The credit institutes and insurance sectors are almost completely dominated by western Germany enterprises (Härtel *et al.* 1991). The

development of the banking structure along western German lines was favoured by the fact that in the former GDR a breakdown into commercial banks, credit co-operative and savings banks also formally existed (Dennig 1991). The approximately 200 eastern German savings banks were integrated into the western German savings bank system, and the 370 eastern German credit co-operatives, together with the Bank für Land- und Nahrungsgüterwirtschaft (Bank for Agriculture and the Food Industry), were integrated into the west German credit co-operatives sector. The commercial banks, in contrast, first had to set up their branch network, but the Deutsche Bank and the Dresdner Bank were able to fall back upon the branches of the Deutsche Kreditbank that had separated from the State Bank, and the Westdeutsche Landesbank was able to fall back upon the branches of the Aussenhandelsbank (foreign trade bank) for the former's newly founded subsidiary (Deutsche Industrie- und Handelsbank). Following the coup by Allianz, which took over the GDR's unified insurance at one fell swoop, all western German suppliers of insurance are, however, in the meantime represented in eastern Germany.

WESTERN–EASTERN GERMANY: CENTRE– PERIPHERY?

The dominance of western German firms can have an adverse effect on the further development of the services sector in view of the fact that development in the producing sector, particularly in the manufacturing sector, is decisively dependent on eastern German businesses being taken over by western German firms or on the latter's investments in new businesses. Under certain assumptions, a centre-periphery scenario to the disadvantage of east Germany can be derived relatively quickly by analogy to discussions in development economics and in regional economics. If we proceed from the results of the Germany reports on the structure of the economy for the old Federal Republic of Germany, then the following must be kept in mind with regard to the growth potential of the services sector (Meissner and Fassing 1989). In the past, private demand has not been primarily responsible for growth in the services sector. The reason for growth is, rather, to be found primarily in the demand for inputs within the services sector itself, and above all in the demand in the goods-producing sector. The question then, of course, is who makes the decisions regarding demand for inputs and regarding the choice of suppliers.

When firms are taken over and/or new subsidiaries or branches are established, many management functions for the entire company, such as marketing, advertising, financing, accounting, research and development,

as well as buying and personnel administration, are also taken over by the central office. The dependent enterprise is largely limited to the task of production (Schackmann-Fallis 1985). The few existing empirical studies on this show a wide range of results, however. Foreign companies will probably be less able to centralize the functions mentioned above, because they will be forced to give the enterprise more say in decisions due to the different languages, different laws, different mentality, etc., and also simply because of the greater distance involved (a further argument that speaks in favour of the Treuhandanstalt's making greater efforts to interest foreign investors and buyers in eastern German enterprises).

The buying behaviour of such dependent firms has indirect effects on other areas of the economy. As a rule, they purchase far less locally than independent firms located in the same region (Mieth 1991). This is probably due to the fact that they purchase more within the concern to which they belong, or that buying is done centrally. The qualitative structure of jobs in the region concerned is affected particularly strongly where it is a question of the purchase of higher-grade services. Some of the services required are supplied by the concern's central office, others are purchased by the central office from other firms, but those orders go mainly to service businesses in the domicile of the central office or to service providers with whom close business relationships already exist (Sommer 1989). This affects precisely those business-related services that—as the developments of the last twenty years in West Germany have demonstrated (Krakowski *et al.* 1991)—show an above-average growth rate, such as organization and tax consulting, banking services, advertising, design, etc.

In brief, it is difficult for higher-grade business-related services to establish themselves in a region that is dominated by externally dependent firms. The state can partially counteract this by paying at least as much attention to science and culture as it has done in west Germany and by locating federal offices and research institutes of supraregional importance (e.g. Max-Planck Institutes, Fraunhofer Institutes, etc.) in eastern Germany or even by transferring them there. In the long-term perspective, it is, however, decisively important to maintain independent industrial enterprises in eastern Germany or to establish new ones, so that these can form a basis capable of supporting the further development of the services sector in eastern Germany.

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AGRICULTURAL SECTOR IN EASTERN GERMANY

Günther Schmitt

THE 'DUALISTIC' NATURE OF UNIFIED GERMANY'S AGRICULTURE

Seen from an economic point of view, agriculture in western as well as in eastern Germany (the former German Democratic Republic (GDR) is of minor importance. Agriculture's share in the total active labour force in western Germany is only 3 per cent and in eastern Germany 11 per cent, whereas respective shares in gross domestic product (GDP) were 2 and 10 per cent in 1989.¹ Nevertheless, compared to industry the economic and social problems brought forth by the process of the integration of eastern Germany's agriculture as a result of political and economic unification are more severe. The main reason for such an assessment has to be seen in the fact that after the end of World War II, agriculture in eastern Germany was subjected not only to a formal and informal expropriation of the former farm owners² similar to the expropriation in industry and trade, but also to two fundamental and forceful reforms of the sizes and forms of organization of farms. In industry, however, similar reforms did not take place. Whereas in 1939, eastern German agriculture consisted of 573,000 mainly family farms with an average farm size of about eleven hectares,³ in 1951 that number was increased to about 789,000 smaller farms by land-reform measures in 1945. Larger farms of a hundred and more hectares were expropriated and farm land was distributed to farm workers, small farmers etc. However, in the 1960s the farms were collectivized, resulting in 1,243 big land-using farms with an average size of 4,742 hectares in 1989. These 'factory farms' were mainly organized as 'agricultural producer cooperatives'.⁴ State farms of a similar size,⁵ however, accounted for only about 15 per cent of all farms. With these land-reform measures—parcelling out larger farms, first, and, later on, collectivizing the small farms that had originally been formed—the German Democratic Republic imitated the Soviet Union and Stalin's model of collective agriculture executed in 1929, as did most other countries that became 'socialistic' after World War II.⁶ In western

Germany, average farm size in 1989 was about eighteen hectares, so that almost all farms are organized as family farms. More than half of these farms are part-time farms according to official statistics, implying that many farms are too small to provide the farm family with full employment and income comparable with the income of non-farm families. Therefore, active family members are engaged in off-farm employment.

Those figures reflect the fact that agriculture in newly unified Germany is of dualistic nature. Whereas western Germany is dominated by small family farms that are mainly deemed inefficient and, therefore, lacking competitiveness, eastern Germany is characterized by huge farms deemed more efficient and, hence, more competitive, at least in the future. However, for the time being the efficiency of these farm factories is extremely low, so that labour productivity is roughly estimated to be about half the labour productivity achieved in western Germany's agriculture, although West Germany's agriculture is deemed relatively inefficient according to conventional estimation methods.⁷ Many economists are convinced that the efficiency of socialist agriculture can be greatly increased by reorganizing these farms without changing their sizes because their lack of efficiency is attributed to the inefficient system of central planning established by socialist government.⁸ Therefore, it is assumed that by replacing the command economy by a free-market economy, these big farms will become more efficient and competitive, compared to small farms in western Germany and Western Europe in the short run. Therefore, it is often assumed that the large farms in the former GDR will outcompete small family farms in western Germany.

However, the prevailing dualistic farm structure in unified Germany also has to be evaluated with respect to the immense discrepancies in the structure of the prices relevant to the prevailing agriculture before unification took place. Roughly speaking, farm producer prices in the former GDR happened to be twice as high as in western Germany, whereas some input prices were subsidized and, thus, lowered for farms.⁹ Furthermore, factor prices were much lower, such as farm wages, but also land prices (rents) due to the ideologically based fact that farms did not have to pay any rents to landowners. In addition, the structure of producer prices differed greatly from those in western Germany.

With respect to the factor and farm-product price relations that prevailed in the GDR and the most relevant implications resulting from unification of the fundamental adjustment of producer prices and, to a smaller extent, of factor prices¹⁰ toward the level and structure of prices in western Germany almost over night, the following factors have to be considered. First, the level and structure of prices relevant to agriculture in the GDR were determined by administrative decisions rather than by markets. Second, administrative decisions concerning these price relations

were mainly guided by two political objectives, namely by the aim of achieving a high degree of self-sufficiency in food production and by the aim of covering the production costs of farming. Third, in order to achieve self-sufficiency even on a regional basis, farms were obliged by central planning authorities to produce farm products with little regard to comparative advantages.¹¹

Therefore, the necessary adjustment of eastern Germany's agriculture to the economic conditions for agriculture prevailing after reunification implies not only a far reaching reallocation of farm production and, hence, production factors, but also an adjustment in the structure of farms in order to become more efficient and competitive. However, the aspects of reorganizing and restructuring farm production which are to be expected cannot be analysed and discussed without taking additional factors into account. First of all, it should be kept in mind that agriculture in western Germany is subject to various interventions, restrictions, regulations, and subsidization within the framework of the Common Agricultural Policy (CAP) and on the part of the national government.¹² In addition, one should note that the German government provides special financial support for eastern Germany's agriculture which will affect that process of adjustment, although it is quite unclear, in what direction and at what speed.¹³

Second, as is well-known, at the present time, the Common Agricultural Policy, as it has been implemented in recent years and as it is to be applied to eastern Germany after reunification, is in the process of being reformed due to internal pressure caused by surplus production and corresponding financial burdens. Furthermore, the Common Agricultural Policy is under pressure within the context of the Uruguay round of the GATT negotiations aimed at liberalizing external agricultural trade. To meet both needs, the European Community (EC) Commission has put forward proposals concerning a far-reaching reform of the CAP, better known as the 'McSharry-Paper', named after the Agricultural Commissioner of the EC. These proposals pursue a strong reduction of the level of support prices of farm products in the Community, combined with direct payments to farmers in order to compensate for income losses due to lower producer prices, although not for all farmers. In the meantime the Agricultural Commissioner agreed on a reform of the CAP, but it is impossible at present to estimate the most likely effects of changes in farm policy on eastern Germany's agriculture because the effects of such policy changes are unknown due to a lack of any historical experience. With respect to eastern Germany, any conjecture concerning the effect of a reformed farm policy, in addition to the effects caused by the unification, is even more vague. However, it is certain that the uncertainties and risks confronting eastern Germany's agriculture will be very much increased by the at present

unknown outcome of negotiations concerning the future course of the EC's farm policy. Therefore, the necessary restructuring of eastern Germany's agriculture will most likely be delayed still further.

Third, historical experiences have taught that the speed and the direction of adjustment in agriculture is very much shaped and influenced by the prevailing macroeconomic conditions, such as employment, economic growth, inflation, etc. The better these conditions are, the more efficient agriculture will be adjusted structurally. Agriculture in eastern Germany is characterized by low resource productivity (as already explained) due mainly to excess labour employment and due to a lack of the capital needed for the modernization of production techniques and for the substitution of (surplus-) labour for capital by these modern techniques. Favourable economic conditions will certainly facilitate that process. However, the more than one million unemployed persons to be observed in eastern Germany demonstrate the present economic state and imply that at present external economic conditions for eastern Germany's agriculture are extremely unfavourable, although in the longer run a fundamental change of these conditions is to be expected. Therefore, the necessary adjustment is delayed further by the prevailing macroeconomic conditions in eastern Germany.

Fourth, the adjustment of agriculture depends, furthermore, very much on the quantity and, even more, on the quality of the prevailing 'infrastructure' in rural areas, including firms and agencies that supply agriculture with inputs and services (including know-how and other types of information) as well as the assembling, transporting, manufacturing and marketing of farm output. However, that infrastructure (communication, transportation facilities, banks, administrative organizations, etc.), as well as that of extra-agricultural firms, is at present in rather bad shape, although improvements are under way. Very much has to be done in this respect if the painstaking and time-consuming structural adjustment of eastern Germany's agriculture is to result in an efficient and competitive farm sector.

All the factors mentioned, including those referring to a lack of farmers' ability to act as entrepreneurs and, therefore, as pioneers stimulating other farmers to imitate them, make any reasonable conjecture concerning the future of eastern Germany's agriculture extremely difficult and vague. Therefore, I shall concentrate my analysis of the future implications of German unification for eastern Germany agriculture on, first, the prospects of restructuring agriculture as far as the form of organization of farms is concerned. As already explained, at the moment, agriculture in eastern Germany is still mainly organized as either state farms or as producer co-operatives. Whereas state farms have to be reprivatized according to the legal provisions of the Treuhandanstalt

in charge of firms and farms owned by the former GDR, collective farms may be reorganized as private farms either by breaking up, liquidation and foundation of small farms as producer co-operatives in accordance with the western German law concerning co-operatives (*Genossenschaftsgesetz*) or as corporations.¹⁴ The establishment of new farms, either by former members of the producer co-operatives who have been entitled to reclaim ownership of their land, or by farmers from western Germany and other EC-member states (mainly the Netherlands) who have rented the land of the former state or collective farms or have bought such land, has been rather slow to occur and, therefore concerns only a small number of farms: only 10,000 newly established farms, managing about 15 per cent of the agricultural land, were reported by August 1991. In analysing the problem of the future prospects of farm organization, the problem of future farm sizes is also discussed because farms organized by single farm families will, of course, be small farms, compared to the huge farms organized by producer co-operatives or as corporations. Therefore, I will, first, discuss the comparative advantages of family farming *vis-à-vis* large hired-labour farming and co-operative farming on a more theoretical base. Next, theoretically based conclusions concerning the comparative advantages of either of these forms of organization will be drawn with respect to the economic conditions and legal constraints prevailing in eastern Germany. Some further conclusions concerning eastern Germany's agriculture will be drawn and discussed in the final paragraph of this paper.

WILL EASTERN GERMANY'S FARM STRUCTURE SURVIVE? A THEORETICAL ANALYSIS

As already explained, eastern Germany's agriculture has been and still is dominated to a large extent by huge farms organized either as state farms that are presently being liquidated or by producer co-operatives that at present are mainly in search of a new form of organization in accordance with the legal provisions relevant to eastern Germany due to reunification. Western Germany's agriculture as well as the agriculture of other EC member countries and of most other non-socialist developing and developed countries is dominated by small family farms, although the size of these farms and their size distribution differs very much between these countries. However, almost none of these farms are of a size similar to those that were established by force in eastern Germany and other socialist countries, apart from some exceptions under specific economic, technical and political conditions. But even under such conditions, only a few farms are organized as producer co-operatives. In fact, producer cooperatives are almost unknown in Western countries. The only exception is that of *kibbutzim* in Israel.¹⁵

The establishment of huge farms in the Soviet Union during the collectivization campaign in 1929 was economically justified by Stalin because of the economies of size which were to be achieved using the most modern production techniques as prophesied by Karl Marx.¹⁶ The fact, however, that most of the farms established by collectivization in the Soviet Union and, after World War II, in most other socialist countries, were not organized as state farms, despite the fact that the land had been nationalized,¹⁷ but as producer co-operatives, is to be explained by the fact that Engels and Lenin's expectations that peasants would voluntarily join co-operatives offering them the right of codetermination and preserving their ownership of land were in the end not realized by Stalin.

With respect to the problem of the future of the organization and size of eastern Germany's farms, the question has to be answered whether these huge farms, be they organized either as hired-labour farms or as producer co-operatives, really realize and attain economies of size and, thus, are or will become more efficient and competitive *vis-à-vis* small farms organized by farm families. If a positive answer to that question, provided not only by Marx or Stalin but also by numerous agricultural economists, is correct, then, of course, huge farms in eastern Germany may be adjusted to western Germany's standards as far as their legal status is concerned but not restructured as far as their size is concerned. It follows further that in that case a quite different farm policy has to be pursued if structural adjustment is to be accelerated.

The most important question with respect to the farm policy to be pursued in eastern Germany and the other formerly socialist countries of Eastern Europe will be analysed by explaining with theoretical and statistical support the fact that agriculture in Western countries is dominated by relatively small family farms.¹⁸ I will discuss that question in two steps, beginning with an analysis of the comparative advantages of family farms versus large hired-labour farms, and next, by discussing the advantages and disadvantages of co-operative farming versus hired-labour farming.

In discussing the advantages of family farming versus hired-labour farming, eight different, but interrelated, aspects have to be mentioned:¹⁹

- 1 Economies of scale, size and scope in agricultural production favouring large (hired-labour) farms are rather restricted as compared to many, but by no means all, forms of production of non-farm goods and services. In analysing the 'relationship between average production costs and farm sizes', the Office of Technology Assessment of the United States Congress (OTA 1986:113) comes to 'two major conclusions: First, most economies of size are apparently achieved by moderate-size farms. Second, while the lowest average cost of production may be attainable on a moderate-size farm, average costs tend to remain relatively constant

over a wide range of farm sizes. Thus farmers have a strong incentive to expand the sizes of their farms.' However, official statistics reveal that moderate-size farms (in the United States of America), are almost exclusively family farms, although their share of all farms is very small, but still larger than the share of larger than moderate-size farms. Therefore, the question has to be asked whether the bulk of (family) farms is still smaller than medium-size farms producing at the lowest average costs and, furthermore, why are so few larger hired-labour farms providing higher profits according to OTA. The answer to these questions will be as follows:

- 2 Most technological innovations in agriculture are strongly biased toward increasing labour productivity and, hence, saving labour input.²⁰ Labour-saving technological advances, however, imply corresponding enlargements of the labour capacity of farm families, enabling them to obtain the economies of size of larger farms. Labour-saving effects of technological innovations have been seen as the major explanation of the fact that the size of farms has constantly increased, but without a transition from family farming to hired-labour farming.
- 3 However, enlargement of farms will take place only if the resources invested, such as labour, are employed more gainfully, compared to employment outside agriculture. If this is not anticipated, members of farm families will take up or expand off-farm employment (part-time farming). Therefore, part-time farming plays an important and increasing role in agriculture, implying that part-time farms are relatively small. Furthermore, the dominant organization of agriculture by family farms implies almost by definition that family labour is also engaged in household production, e.g. cheese-making, as an efficient use of that labour in addition to such allocation to farm and, very often, to off-farm production.²¹ It follows that the household production of farm families has to be seen as an element that strengthens the competitiveness of family farming *vis-à-vis* hired-labour farming, as especially Pollak (1985) maintains. It follows further that part-time farming by such families also contributes to the competitiveness of family farming.
- 4 Social security is provided by farm families to family members who are economically inactive due to age, illness, accident, handicaps or unemployment, especially as long as private insurance is seen to be expensive or subject to moral hazard and as long as compulsory collective-insurance systems are either absent or insufficient. Therefore efficient use of farm families' resources in farm, household and off-farm production is also favoured by the fact that the organization of farm families offers transaction-cost advantages *vis-à-vis* other forms of organization of farm production. Pollak (1985:591), therefore, maintains that 'the family farm can be regarded as an organizational solution to the difficulty of monitoring and supervising workers, who, for

technological reasons, cannot be gathered in a single location' as in industry. Efficient monitoring and supervising of (farm) workers are prerequisites of the solution of the so-called principal-agent problem (Stiglitz 1987) which arises because the principal, say, the employer (farm manager), pursues the objective of high profits, whereas the agent, say, the employee (farm worker), pursues a different objective, namely high income or utility. Therefore, an effective incentive system subordinating the agents' to the principal's interests has to be applied, but the actions of the agents have to be monitored and supervised, which also, of course, is subject to transaction costs. Due to technological reasons (farm activities vary in their nature, location and form and are affected by changing weather conditions), efficient monitoring and supervising of farm workers are difficult to achieve, so high transaction costs are linked to hired-labour farming, whereas family farming offers the transaction-cost advantages of 'small teams' (Gardner 1987).

- 5 The more efficient solution of the principal-agent problem by and within farm families is also favoured by further organizational advantages of families, such as their hierarchical structure, the prevailing altruism of and solidarity between family members, but much more by the effect of household production, a necessary accompaniment of the organizational unity of farms and farm households that characterizes family farming. A most important element of that household production concerns the provision of social security to household members (Pollak 1985, Eisner 1988). Social security has to be seen as a most effective incentive system stimulating the active family member's efforts to preserve the family (farm) as an efficient provider of that social security.
- 6 Household production by (farm) families is subject to advantages of low production costs due to low opportunity costs of labour and transaction costs which are similar to farm production by farm families. Therefore, household production, including the provision of social security, increases the welfare (real income) of farm families and their members,²² although imputed income achieved by household production is neglected by official statistics on (farm) households' income.
- 7 The transaction-cost advantages of farm families reflected in a more efficient solution of the principal-agent problem in agriculture enable farm families to allocate family labour to farm, off-farm and household-production efficiently and most flexibly according to prevailing but rapidly varying (due to fluctuating weather conditions and the seasonal nature of farm production) economic and technical conditions.
- 8 Farm households also respond to the varying economic conditions of farm and off-farm production not only by adjusting the allocation of family's resources to farm and non-farm production in the longer run, but also by adjusting the size and structure of farm households. In this

respect, it should be noted that the average size of farm families, similar to non-farm households,²³ is not only declining due to changing economic (increases of opportunity costs of child care) and institutional (obligatory social-insurance systems) conditions in the longer run, but also because changes in technological and economic conditions for farming also affect the size and structure of farm households. Thus family members doing off-farm work remain with the farm household they belong to, but very often leave that family by founding a new, but non-farm household. Thus the size and structure of the original farm household are changing in the shorter run: many (small) farms are often managed by households of only one or two, mainly elderly persons. These changes, however, reflect the flexibility of family organization of farm production, which, again, is an element of their competitiveness *vis-à-vis* other forms of organization.

So far, the competitiveness of family farming versus hired-labour farming is to be explained by the factor mentioned above, but not by the 'self-exploitation' of peasant farmers as many agricultural economists also still presume.²⁴ Therefore, large farms organized by agricultural producer co-operatives have to be seen as a form of organization subject to economic disadvantages similar to those of large hired-labour farms. Putterman, therefore, concludes that

if technological economies of scale can be captured by APCs (agricultural producer cooperatives), they can presumably also be captured by large-scale capitalist farms, and the more efficient of the two could perhaps bid successfully for both land and labour. If APCs performed with even the approximate efficiency...they might compete well, especially if farmworkers prefer cooperation, or if there exist...incentive effects providing an edge of advantage.

(Putterman 1989:334)

The question arises, therefore, as to whether and why co-operative farming may provide such 'an edge of advantage' *vis-à-vis* large-scale 'capitalist' (hired-labour) farms. By referring to these 'incentive effects', Putterman, of course, has the principal-agent relations between the APC's management and its members in mind. The conventional analysis of these relations assumes that as far as producer co-operatives are concerned, the principal is independent from his agents' decisions in making his own decisions. However, this is not the case. Producer cooperatives are characterized by the right of codetermination of the management's decisions by members ('one person, one vote') seen as the decisive element of democratic decision making in co-operatives. However, the dependency of management on the consent of the

members' majority compels management to behave opportunistically in order to gain support by that majority.

Such consent is most important for the managers' re-election, but also for all those decisions of the APC's management which are subject to the codetermination of members. Opportunistic decisions by the APC's management, of course, are counterproductive with respect to the efficiency and economic performance of co-operatives competing with other forms of organization of (agricultural) production.²⁵ For instance, decisions as to whether profits should be invested or consumed, or whether members should be released or engaged if prevailing economic conditions require such an adjustment, will not be made if these decisions are subject to codetermination by APC's members. In fact, such a democratic decision-making procedure favours opportunistic behaviour by the firm's management because managers are induced to follow the majority of members' votes. Therefore, the APC's principals are acting in the agents' but not in the firm's interest, thus favouring inefficiencies. In short, whereas democratic decision-making procedures are adequate as far as political decisions are concerned, when applied to firms acting in a competitive world, such organizations will certainly fail economically. This is the simple reason why agricultural producer co-operatives in the Western world have constantly failed,²⁶ and this, of course, is the reason why the APCs prevailing at the present time in eastern Germany will fail in the near future, even though these APCs are adjusting their legal form of organization to western German cooperative law, and even though the German government, as already explained, is financially supporting existing APCs.

STRUCTURAL ADJUSTMENT OF EAST GERMAN AGRICULTURE: A BROADER VIEW

As has been demonstrated before, based on purely theoretical foundations, a structural adjustment in eastern Germany's agriculture towards family farming is to be expected. Therefore, the prospects of agriculture concerning not only its future structure but also the volume and structure of its output and input, especially with respect to employment and income realized as well as its contribution to an economic recovery of eastern Germany, very much depend on the speed and effectiveness of such structural-adjustment processes. However, structural readjustment may be retarded or even accelerated by several factors, especially by farm-policy measures. To be more systematic, the following factors have to be taken into account:

- 1 Restructuring agriculture implies the introduction of organizational innovations. Such innovations are much more important than purely

technological innovations, such as new machines or new sorts of plants, etc. As is also the case with technological innovations, organizational innovations that are subject to risks and uncertainties are only introduced by those farmers who act as entrepreneurs, whereas, once introduced successfully by such entrepreneurs, other farmers are inclined to imitate such innovations, and so, the rate of adoption accelerates. However, in eastern Germany there is a marked lack of entrepreneurs due to the fact that most 'farmers' have actually been employed as farm workers by APCs or state farms. Therefore, many farmers starting new forms of organization such as family farms are coming from across the former border from western Germany, so that at the present time the process of restructuring is concentrated in the more advantageous regions and is still in its initial stage. Furthermore, whereas technological innovations are imputed in material capital investments, organizational innovations are ascribed to investments in human capital, which are more difficult to achieve.

- 2 On the other hand, those APCs in eastern Germany that are still in existence are in a severe situation financially. Their collapse has already occurred or is to be expected to happen in the near future despite heavy government aid.²⁷ However, the restructuring of these huge farms is being delayed by such government aid and by a lack of farmers willing to start up private farms. Furthermore, the prevailing labour-market situation reflected in about one million unemployed persons prevents outmigration of farm workers, thus forcing them to stay at state or co-operative farms, although at rather low wages. Furthermore, the founding of private farms is very negatively affected by the rather unfavourable farm-price situation as well as great uncertainties in the future farm policy of the EC.
- 3 Structural adjustment as it will happen in the future, therefore, is very difficult to predict. Future structural changes, however, are not only of importance and relevance as far as the structure of farm sizes and the form of their organization are concerned; structural changes will also affect the volume and structure of agricultural production in eastern Germany and, of course, the social and economic situation of the rural areas in this part of Germany. Before the end of World War II, eastern Germany (including those regions that now belong to Poland) was the granary of Germany, supplying western Germany with grain and other farm products. After World War II, farm policy in the GDR was directed mainly towards achieving self-sufficiency in food production, an objective which was by and large achieved, although by high economic costs reflected in high producer prices and large government expenditures in order to subsidize consumer prices. If agriculture in eastern Germany is reorganized efficiently by adequate farms having free access to the most modern production techniques, agriculture will

certainly increase its output and productivity of resources to (or, most likely, above) the level achieved in western Germany. However, whether eastern Germany's agriculture will become a more efficient sector of the economy will depend not only on the speed and direction of future structural changes but also and perhaps much more on the economic and farm policies implemented by the German government and especially by the EC as far as future farm policy is concerned. Therefore, it is also an open question whether and to what degree eastern Germany's agriculture will affect future supply and, thus, markets for farm products inside and outside the European Community.

NOTES

- 1 However, it should be noted that figures on agriculture's share in the labour force and in GDP are misleading for both regions. In western Germany, the farm labour force is overestimated due to the fact that farm labour is also engaged in off-farm and household production. Agriculture's share in GDP is, therefore, somewhat underestimated (see Schmitt 1989 and 1990a). In eastern Germany, the farm labour force is very much overestimated because a large share is engaged in the non-farm activities of state farms and producer co-operatives, such as construction and repairing of buildings and streets, etc.
- 2 For more information see, for example, Schinke (1990).
- 3 In western Germany in 1939 the average farm size was about seven hectares. However, the average size of farms in eastern Germany in 1939 obscures the fact that in some regions large, important estates were subject to reform measures in 1945.
- 4 In fact, the right of codetermination by a co-operative's members was, by Western standards, severely restricted in socialist countries by centralized decision making and corresponding obligations within central planning.
- 5 Farms organized as state farms were mainly established on land that had been expropriated in 1945. Whereas land that had been collectivized and organized by producer co-operatives still belongs to former landowners, the land of state farms cannot be transferred to the original landowners according to a decision of the German Supreme Court.
- 6 For more details see Wädekin (1990). In certain respects, the organization of agriculture in the GDR differed from the organization of Soviet and other socialist countries' agriculture. Farms in the GDR especially were much more specialized, with some specializing only in livestock or arable production. Both types of specialized farms co-operated by contractual arrangements. In 1989, 1,243 state and co-operative farms, having an average size of 4,732 hectares, using 92 per cent of total agricultural land, were specialized in crop production, whereas 3,250 farms with 1,671 animals per farm (in terms of 'animal units' similar to cows or horses), were specialized in livestock production.
- 7 As note 1 implies, a comparison of (labour) productivity achieved in agriculture in both 'Germanies' is difficult; thus the figures given above are rather shaky. Note 1 also implies that the measurement of (labour)

- productivity in western Germany is difficult because labour statistically attached to agriculture is, in fact, engaged in off-farm and household production to a certain extent. Therefore, official estimates according to which labour productivity in western Germany's agriculture is about half of that achieved in the non-farm economy are misleading. See Schmitt (1990a).
- 8 The view according to which the efficiency of resource use by large farms in socialist countries can be achieved by simply reorganizing 'the excessive centralization of the planning, control, and management of agriculture, inappropriate price policies and defective incentive systems' but without reprivatization of 'the primary means of production' is supported by Johnson and Brooks (1983:113, 198-204).
 - 9 As in most other socialist countries, high producer prices for farm products were subsidized in order to lower consumer prices. In 1988, the GDR agriculture's gross farm income was M 56,065 million but M 31,948 million were spent for food subsidies. Furthermore, agriculture was directly subsidized with M 1,236 million.
 - 10 Farm wages have not yet adjusted to the level in western Germany, whereas land rents and prices are much lower in eastern Germany than compared to western Germany.
 - 11 As compared to national accounts of the **GDR's** agriculture at current prices in marks (in brackets) and in DM prices of 1990, for the average of 1986 up to 1989, some main agricultural indicators are estimated as follows: gross farm income DM 20.1 billion (M 856.7 billion), gross value added DM 3 billion (M 28.8 billion), net value added at factor costs DM -0.3 billion (M26.2 billion), and net farm income DM -10.3 billion.
 - 12 For more details see the annual agricultural report of the German government (*Agrarbericht* 1991).
 - 13 At present, the German government has spent about DM 3 billion on aid for adjusting and keeping prevailing farms in eastern Germany liquid, DM 2.7 billion for financing market interventions and export subsidies (to Eastern European countries). Additional aid is provided for individual farmers intending to start up private farms, for early-retirement programmes for farm workers and for keeping 60,000 hectares in eastern Germany fallow.
 - 14 At the time being, about 30 per cent of agricultural producer co-operatives have already been liquidated or are expected to be liquidated in the near future. About 70 per cent have changed either to co-operatives according to the 'Genossenschaftsgesetz' (co-operatives law) or to corporations. However, most of them are seen to be in severe financial straits, so that their survival is considered rather doubtful.
 - 15 For more statistical data concerning the sizes and forms of organization of farms in Western countries, see Schmitt (1991).
 - 16 In fact, Marx's prophecy according to which peasant farming is doomed to vanish has stimulated the discussion of the 'Agrarian Question'. In 1929, when the first collectivization campaign had reached its climax, Stalin explained that huge grain-producing farms of 100,000 hectares would be the most efficient farms. Of course, Stalin did also pursue different, perhaps much more important objectives of collectivization, such as political ones—the control of private farmers, who were considered to be a rather unstable element of the socialist society—and administrative ones. The application of central planning to agriculture started in 1928 which was only possible with a reduced number of large farms instead of the 24 million peasant households still engaged in agriculture in 1928. Economies of huge farm sizes were

deemed by Stalin, according to Preobrazhinsky's theory, to be a prerequisite for a massive resource transfer from agriculture to industry, thus accelerating economic growth.

- 17 In socialist countries such as the GDR, the land of larger farms was nationalized, but the land of small farms was 'only' forcefully transferred to co-operative farms, but private ownership was not abolished officially. In other socialist countries, ownership of small farmers' land was also abolished.
- 18 However, it has to be kept in mind that family farming does not imply small farms, as, for instance, observed in western Germany and statistically measured in terms of prevailing average farm size (of about 18 hectares). In other countries, such as the USA, Canada or Australia, the average farm size is much larger (more than 150 hectares), although the majority of these farms (about 95 per cent) are organized as family farms. Due to the fact that even in these countries, a major part of these farms are small part-time farms, the average size of full-time family farms is still larger (in western Germany about 30 hectares).
- 19 For a more detailed discussion, underlying theoretical foundations and empirical evidence, see Schmitt (1988, 1989 and 1991).
- 20 In West Germany, for instance, labour productivity in agriculture increased 5.2 per cent annually in the last decade, but only 1.5 per cent in the non-farm economy.
- 21 The failure in estimating productivity (and income) of resource use in agriculture mentioned in note 1 is due to 'farm' resources, being allocated to household and off-farm production by farm households. With respect to eastern Germany, it should be noted that the majority of established farms are organized as part-time farms, with an average size of about 17 hectares, whereas newly established full-time farms have an average size of about 80 hectares.
- 22 Of course, this is also true for non-farm households or hired farm workers. However, the economic and institutional unity of that farm household implies that the welfare-increasing effects of farm household production affect the farm production of these households and not farm production by hired-labour farms.
- 23 Between 1970 and 1988, the average size of farm families in the USA declined from 3.77 to 3.19 persons, that of non-farm families from 3.61 to 3.17 persons. For an economic explanation of this long-run decline, see Willis (1987). However, due to the importance of one-person households, the average size of farm and non-farm households is smaller than that of families.
- 24 Of course, the concept of 'self-exploitation' as originally formulated by Marx and theoretically based by Alexander Tschajanow (1923) has been reformulated by economists by explaining that farmers do not pursue profit maximization and/or are subject to imperfect competition, especially with respect to rural labour markets etc. See Schmitt (1990b).
- 25 Agricultural economists, still familiar with the ideas of the German Historical School, were well aware of the failure of producer co-operatives as an efficient form of agricultural organization. For instance, Abel (1967:110) explains

that cooperatives engaged in agricultural production are expecting too much of human beings. They can neither solve the problem of management, nor that of lazy members who have the same voting rights as the more busy members. A large farm requires a decision-making authority which

may be restricted by the cooperative rights of workers but cannot be founded on these rights.

According to Aereboe (1928:188)

cooperative farming has been uncompetitive vis-à-vis private farms at a more advanced stage of economic development because of a lack of necessary incentives to stimulate the activities of members, a lack of flexibility and especially a lack of possibilities to use the members' interests as a machine similar to private farms. In an APC, whose members have to contribute to the collective, each member claims to be lazy at the cost of other members.

For further literature concerning the economic problems of APCs and their implications, see Schmitt (1991).

- 26 Abel (1967:111) mentions an analysis of APCs according to which of 262 APCs observed in the USA only 91 survived for up to 10 years, 59 up to 5 years, 50 up to 2 years and 32 only for one year.
- 27 See note 14.

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ECOLOGICAL TRANSFORMATION IN EASTERN GERMANY

Klaus Zimmermann

Until their reunification, the two Germanies not only had diametrically opposed social and economic orders, there was also a considerable difference in the care they took of their natural environment. The reasons for this are mainly to be sought in their respective ideologies, the outcome being that the united Germany now finds itself confronted with environmental conditions in the former German Democratic Republic (**GDR**) for which 'catastrophic' is the only fitting description. The first part of this paper will therefore be devoted to reappraising in retrospect some of the major environmental deficits that prevailed under the socialist system, before taking stock of the miserable environmental conditions that presently exist in the new federal states. With the special situation due to the collapse of the social and economic order there in mind, the next point will be a discussion of the problem of introducing a 'western German' type of environmental policy into eastern Germany. This policy will have to be 'western German' for two main reasons: first, given the desperate state of its economy, strict adherence to the polluter-pays-principle will just not be feasible there, so that the huge investments urgently required in the environmental sector will have to be paid for by the taxpayer in the 'old' Federal Republic of Germany (**FRG**). Second, one can assume, and official publications clearly bear this out, that western German-type environmental targets will also be adopted in the east, irrespective of whether the people there, stricken by unemployment and social deprivation, consider this to be one of their priorities. Finally, this interdependence of economic, social and ecological aspects will form the basis for speculation about possible future scenarios for socio-economic development in eastern Germany and their probable influence on the future demand for a 'better environment' there. The latter will then permit a conclusion as to whether the kind of environmental policy offered by western Germany does in fact meet demands or what chances

there are that it might do so in future, for an 'Environmental Union' will also have to be economically efficient.¹ That is to say, at an individual—or in this case regional—level, marginal utility must be proportional to what is offered (i.e. the marginal costs of achieving various degrees of environmental quality).

IN RETROSPECT: DEFICIENCIES IN THE ENVIRONMENTAL POLICY OF SOCIALIST SYSTEMS

Before dealing at greater length with the particular problems of creating an Environmental Union in Germany, it seems fitting to take a look back. In doing so, we will concentrate on a number of factors,² that must surely be seen as a *sine qua non* for a successful environmental policy and that differentiate between socialist and capitalist systems, centrally controlled and market economies, totalitarian and democratic systems.

- 1 Firstly, ideology is the factor that permits liberal, capitalist systems to cope with environmental challenges far more efficiently and successfully than currently existing socialist systems. In which system, one might ask has the manufacturing industry asserted itself against environmental targets? The answer is perfectly clear: according to Lenin, Communism is nothing more than 'Soviet power plus electricity', with 'electricity' being used as a synonym for an abundance of manufactured, material goods. For it is such an abundance that is necessary to bring about the transition from socialism to communism. Only when such an abundance is achieved can the problems of scarcity and distribution be overcome and the individual put in a position where he no longer participates in this abundance according to his performance but according to his needs. Such abundance is the very objective that all socialist systems have to pursue in order to create their ideal situation. To this end, they are prepared to use every means available under the system, enhanced with appropriate myths and symbols—even going as far as to deny environmental impacts while heading towards this Communist nirvana. The logical outcome, according to the Marxist labour-value theory, had to be a catastrophe. Obviously the ideological factor, translated into the objective of maximum industrialization, could hardly result in any comparative advantage of socialism in the fields of 'environmental protection' and 'environmental conservation'. On the contrary, the more pragmatic system of capitalism, neither having nor pursuing such eschatological ideas, is in a far better position to reconcile economic and ecological targets. Such reconciliation does not slow down the pace to nirvana because no such concept has been clearly defined or postulated.
- 2 Publicity is another major factor that differentiates between the two systems. Ecological problems are frequently characterized by a high

degree of complexity, while at the same time they are just as often beyond normal everyday experience, if they are perceptible to the senses at all. In liberal Western societies it is hence considered perfectly normal that committed scientists, publicists or journalists should play an instrumental part in the disclosure of existing or imminent environmental problems. Freedom of the press and freedom of information, therefore, have made large and thus politically relevant sections of the population aware of ecological problems in the first place. The absence of such freedoms in socialist systems, however, led to the negation or belittlement of home-made environmental problems—particularly in countries that were isolated from Western media by sheer distance or ‘artificial noise’. This led in turn to the all too obvious gap that no doubt exists between the East and the West regarding the importance attached to the subject of the environment in the media, but logically also regarding the concern and environmental commitment of the people. Freedom of the press and freedom of information, even if they only contribute to the setting of environmental priorities, are a vital factor; they are indispensable if an environmental movement is to be set up in the form of a lobby for nature and hence exert political pressure from below. Where such freedoms are lacking, people’s awareness of and concern with environmental problems are either non-existent, distorted or insufficient.

- 3 A decisive factor in differentiating between the two systems is the structure of their political system. Liberal democratic systems are based on the principle of separation of power, i.e. the power of political bodies is delineated and limited in the constitution. The same applies to pressure groups, due to their variety and their power-balancing effect. In addition, the state and politics are debarred from major areas of business activities, albeit to a varying degree depending on the time and spirit of the times, the extent of such debarment changing in practice with the ideological background of the parties that are in power. Furthermore, civil and human rights and liberties are, as a matter of principle, excluded from the regular democratic process, from everyday routine, so to speak—they are basic prerequisites, axioms of the system and political invariables. This depoliticizing of large areas in liberal democratic societies and the pluralistic wealth of interests and their respective organizations were seen by many theorists of socialism as the major obstacle to the successful solution of environmental problems in the West. This—in their view—was in stark contrast to the socialist states where uniform leadership by the party and collective ownership were supposed to have advantages that cannot be outweighed. While it is certainly true that the constitutions of all countries in the socialist block contained guarantees to protect the environment, it is quite wrong to suppose that this formally superior safeguard, including laws for the

protection of the environment such as also exist in the West, had any significant effect when it came to meeting people's demands for environmental improvements. Far too often, such laws and provisions were either not implemented at all or they were made ineffective by the granting of special permits and the lack of checks. The greater efficiency evinced by the Western states in controlling production and consumer processes in an environmentally far more compatible manner seems largely due to the fact that in those countries it has always been easier to turn ecological problems into political issues and implement relevant measures. The success of environmental policies increases with the 'degree of political independence of interacting political forces and institutions...and decreases under the conditions prevailing in systems with one-party rule ensuring "democratic centralism"' (Lübbe 1986). The reason why it is so much easier in pluralistic societies to turn ecological problems into political issues must be seen in the fact that, here, single-issue groups can put forward their demands in a radical manner without considering other subjects or objectives and hence without anticipating compromises. The fact that this often involves confrontation and sometimes, when the attitude taken is 'not in my backyard', even the violation of what is considered to be the 'public interest' seems a price worth paying if one considers the positive influence that emanates from such groups and their activities, the productivity of the factor 'political resistance', so to speak.

- 4 This close link between the economic efficiency of a system and its political capability to resolve ecological problems touches upon one of the major shortcomings of socialism: the absence of the profit incentive. Certainly, as far as the protection of the environment is concerned in our case, one may well argue against a purely economic approach, despite all the positive effects this has on the economy, and Jänicke (1979) definitely has a point when he maintains that the development of a special industry to protect the environment would amount to 'the industrial system profiting from its own shortcomings'. On the other hand, it would be going too far if the temporary existence of a profit-orientated eco-industrial sector were to be used to generally disqualify profit motivation. After all, it is just this prospect of making a profit that arouses business interests in environmental protection. Given a framework within which 'ecology' and 'economy' operate side by side (where the boundless profit motive is tamed ecologically, as it were) the motivation of those acting within this framework ideally would result in the low-cost and hence the most efficient production not only of all tradable private goods but also of the public good 'environment'. For the eco-industrial complex this would imply that, via individual profit motivation, economic interests can be mobilized to efficiently protect the environment, so that 'morals and interests are harmonized'.³ Of course,

there is no denying that socialist countries, too, have endeavoured to protect the environment at least to a certain extent. Yet, given insufficient resources and a general lack of public interest, the results could only be mediocre at best and were bound to be catastrophic at worst. We can conclude that it is mainly the capitalist's 'desire' for profit that safeguards the optimal supply of the population with private goods and that it is this same 'desire'—ecologically tamed and controlled—that also guarantees an optimal supply of public 'environmental' goods.

- 5 The problem of motivating wide sections of the population into standing up for 'nature' and the 'environment' brings us to another highly important factor: 'welfare elasticity' of the demand for an intact environment. A phenomenon that is demonstrated from analyses of 'willingness to pay' is that the willingness of an individual to contribute towards protecting the environment varies significantly with his general status in society, i.e. his education and notably his income. In other words, environmental demands increase in proportion to income. The welfare elasticity of the demand for an intact environment would therefore amount to measuring the percentage variation—and, we suppose, the rise in 'environmental' demand that results from a 1-percent increase in income.⁴ Or less formally put, one could say that awareness of and sensitivity to the environment increases proportionally to the extent to which there is no acute threat to the satisfaction of basic economic and social needs. In developing his 'mental accounts theory', Allen Kneese has managed to express this aspect in yet another way. His theory, which can be used to explain a wider range of phenomena than indicated here, makes it plain that once an economy and society have reached a certain degree of development, the people living within such a system seem to have more or less fixed mental accounts as to how they would divide their income between private or public commodities—the environment being one of these; the less money people need to spend on maintaining their basic social and economic standards during this development process, the more they apparently put into their 'environmental account' in particular.⁵

As long ago as 1973, Hansmeyer and Rürup⁶ drew attention to this 'law of environmental demand' and Lübke put it in a nutshell when he stated that 'the more economic wealth there is, the greater public awareness of the environment becomes'.⁷ This is only one side of the matter, however—the demand side. Viewed from the other side, i.e. the way resources are used within an economy, there is certainly no way round the fact that protecting the environment costs money, hence real resources have to be tapped from the production sector. Without doubt, such tapping of resources (so-called 'opportunity costs') is much less painful, the more affluent a particular society is, or the less benefit can be derived from any further increase in

that affluence. This fits in nicely with what Jänicke *et al.* (1986) found out in their empirical analysis of thirty-one socialist and capitalist countries: that it is not the extent or seriousness of environmental problems that determines the amount of money spent on preserving the environment in an individual country, but that it is rather the economic achievement and hence the level of affluence attained (the ‘push factor’ or affluence-related demand for environmental protection) that clearly outweighs the ‘pull factor’ (i.e. the acuteness of the environmental problems to be solved). However, this ‘environmental-policy function’, with its explanatory variable of a country’s affluence, is also directly dependent on the economic and social order existing there. In other words, while environmental protection, regardless of the system is a function of the affluence attained, this affluence in turn is a function of the prevailing economic and social order, be it a centrally administered socialist system or a free market, capitalist system of production. The extent, therefore, to which environmental policy can be successful becomes indirectly dependent on the efficiency of the respective system. And here we come to the crux of the matter: the obvious inefficiency of the socialist countries and thus the non-existence of affluence that could generate such an environmental demand. The factors governing this situation are numerous. Apart from the absence of the profit motive already referred to, the following should be briefly mentioned:⁸

- the problems caused by poor economic growth when capital is accumulated at the expense of technological innovation;
- inefficiency at the firm level caused by the absence of compulsion to minimize costs in view of the general lack of competition;
- the problem of inefficiency outside the firms, caused by allocation problems between sectors and all the other symptoms of shortage and scarcity typical of economies with quantity control;
- the problem, specific to the former GDR, of a one-sided emphasis on the export-oriented, raw materials sectors with their intensive use of resources and thus excessive exploitation of the environment.

In the aggregate, all these factors have led to a drop in the growth rate and in some cases even to economic stagnation and regression in the socialist countries. Even if policies and the order had remained constant, however, it would have taken increasingly longer to reach a level of affluence that would have served as a platform from which a demand on the part of the people for an environmental policy could have developed in a socially relevant manner—if such affluence would ever have been achieved at all.

Thus it became almost inevitable that the socialist countries came under pressure to reform. That this process was triggered in some countries by pressure from below, while in others reform was triggered via initiatives from above certainly was also a question of the cultures and traditions

involved. Yet it was just as much an indication that political and administrative structures were still intrinsically stable. However, there can be no way round the need to change these systems radically. That economic reform alone cannot succeed in the long run has been demonstrated by the Chinese example. This holds true especially with respect to the need for an ecological transformation, which, as we have seen, can only be brought about in conjunction with political and economic transformation, no matter how much discomfort and turbulence the latter, in particular, may cause. Yet, there just is no alternative or third course that offers even a chance of achieving economic wealth and ecological security. The citizens of the former GDR have taken this path and it has been a painful process for them, as in any major change in livelihood, and one that requires a lot of courage, albeit the courage of the desperate.

A BRIEF ASSESSMENT OF THE STATUS QUO: THE 'STATE OF THE ENVIRONMENT' IN THE FORMER GDR

There is no need to go into too much detail here because the environmental situation in the eastern parts of Germany has already been thoroughly evaluated by the Institut für Umweltschutz (Institute for Environmental Protection) in East Berlin in February 1990, on the basis of the data available then. And obviously this analysis was used to lay the foundation for the *Eckwerte* (basic targets) programme compiled by the Federal Minister for the Environment, Nature Conservation and Nuclear Safety in November 1990, on which the following brief description of the present environmental situation in eastern Germany is based.

Water pollution

Forty-two per cent of all watercourses and 24 per cent of all bodies of water are polluted to such an extent that the water is not suitable for treatment as drinking water, and 36 per cent and 54 per cent, respectively, require expensive and complicated treatment technology. A mere 3 per cent of all watercourses and bodies of water are still ecologically intact; 9.6 million people in the eastern Germany are temporarily or permanently supplied with drinking water of inferior quality. Both the offshore and inshore coastal waters are heavily polluted due to the discharge of organic waste. The inshore coastal waters in particular are only suitable for bathing and recreational activities to a very limited extent. The water resources of the former GDR, which were low anyway (540 cubic metres per annum and per capita compared to 1,890 cubic metres in the 'old' Federal Republic of Germany), are spent mostly on meeting private, industrial and agricultural demands. As concerns industrial effluents, more than 95 per cent are discharged into water without sufficient treatment, or even

untreated. The wastewater of 11.7 million people living in the former GDR is discharged into a sewage system that is in a state of almost total decay. Of a total of 1.4 billion cubic metres per annum, 12 per cent is not treated at all, 36 per cent is treated mechanically and 38 per cent is treated biologically before being discharged into waters, and the existing sewage plants are only partly in working order. Despite its high heavy-metal content, 65 per cent of the sewage sludge accumulated in the 1,100 municipal sewage plants is used for agricultural purposes, and there is no guarantee that the remainder is properly disposed of. Farming methods in the eastern regions of Germany are among the most intensive in the world as far as the use of slurry, mineral fertilizer and herbicides is concerned, which causes eutrophication and silting of rivers and lakes.

Air pollution

In 1988, 5,209 kilotons of sulphur dioxide and 2,199 kilotons of dust were emitted in the former GDR. Some 4.3 million people live in areas where dust precipitation exceeds the maximum limits allowed in the west. Some 6 million people are still exposed to sulphur-dioxide emissions that are above the limits. The chief culprit is the lignite-burning energy sector (93 per cent of all sulphur dioxide and 73 per cent of all dust emissions stem from that source) in conjunction with the extremely high per capita energy consumption (second only to that of the United States and Canada). Results show that sulphur-dioxide emissions per square kilometre in the former GDR are around 11.5 times as high as those in the 'old' FRG, dust emissions being around 8 times higher. There are very few desulphurization plants and of the dedusting plants that do exist, most are completely out of date technologically. A broad range of other air pollutants (hydrocarbons, sulphur compounds, chlorine and hydrochlorine as well as fluorides and carcinogenic substances) are also present in extremely high concentrations in some places and make the situation even worse. The recent occurrence of forest damage caused by air pollution is about twice as high in these parts of Germany as it is in the west.

Waste management

The refuse collected in the private sector in the former GDR amounted to 3.6 million tons per annum, 80 per cent of which consisted of household refuse. Hence the average amount of refuse per capita was about 175 kg per annum, which is around half that produced in the west. However, given the boom in consumption made possible by the currency union, the figure will probably have jumped to the 'normal' western level by now. Industrial waste amounted to 91.3 million tons in 1988, 36.4 million tons (or 39.8 per cent) of which was recycled and used as

secondary raw materials. However, this was due primarily to the foreign-currency shortage and the aspiration of the former GDR for autarky and less to any economical or ecological considerations. The basic form of waste disposal is to dump it on tips; for household refuse there are around 11,000 such sites, for industrial waste 2,000. In addition, there are an estimated 10,000 fly tips, where waste is deposited without any standards whatsoever being observed. Industrial waste sites are generally owned by the firms using them; 600 of those were licensed for industrial waste containing harmful substances, 200 for harmful substances and four for highly toxic substances. Often, however, dangerous toxic waste had also been deposited haphazardly on the actual premises of the firms producing it. Waste incineration constitutes only a small percentage (household waste 2.6 per cent; industrial refuse 0.12 per cent). Of the total of 56 incineration plants (55 of which are factory-owned) only three are fitted with flue-gas precipitation equipment, and this equipment is of dubious value.

Abandoned disposal sites

Failure on the part of the environmental authorities to take action, as well as ignorance, negligence and sloppiness in dealing with environmentally hazardous and toxic materials, have led to the massive contamination of soil and groundwater, posing a dramatic threat to both the people and the environment. According to the preliminary data available, there are 27,877 suspected abandoned dump sites in eastern Germany, 2,457 of which have already been officially classified as abandoned disposal sites, 196 of them having been given priority grading by the eastern German states themselves. According to estimates, however, this is only about 60 per cent of the total. In all, therefore, a total number of around 45,000 polluted sites of that kind seems likely. To these must be added the abandoned disposal sites and ammunition tips left by the Soviet troops stationed in the former GDR, about which no figures are available so far.

Soil contamination

Of the total area of eastern Germany approximately 57 per cent is used for agricultural purposes, 27.6 per cent of the area is forested, 9.9 per cent is built-up and 5.5 per cent is used for miscellaneous purposes. Ten per cent of the total area was or still is used by the military, i.e. the former People's Army and the Soviet troops that are still stationed there. Since there were neither political concepts nor administrative regulations in the former GDR that could have guaranteed soil protection, intensive farming methods, discharges from factories, lignite mining and the large-scale sealing of natural surfaces impaired the usability and the ecological

functions of around 40 per cent of the total area. This was mainly caused by the intensive kind of agriculture that was carried out in an attempt to compensate for the low natural yields and the scarce water resources available. Thus in the east the employment of mineral fertilizer is 10 per cent higher than in the west and 2.5 times the amount of lime fertilizer and twice the amount of herbicides were used. As a result the food produced is highly polluted and the excessive supply of nutrients and agrochemicals causes soil eutrophication. Also, the upper layers of soil have become extremely compacted. Erosion and deflation as well as the accumulation of heavy metals contained in the sewage sludge and ashes used for a short-term boost to fertility degrade the soils in the long run. During the forty years that the GDR existed, lignite mining affected an area of 1,280 square kilometres, i.e. 1.2 per cent of the total land area. Only 52 per cent of that area, however, has since been recultivated. Therefore, there are several hundred square kilometres of barren land in what used to be mining areas, and 260 former pits are currently being used either as municipal tips or as disposal sites for highly toxic waste from the fossil-fuel-burning and chemical industries and are an acute threat to groundwater quality.

Nature conservation

Agriculture on an industrial scale was mainly responsible for a dramatic impoverishment of nature. All animal and plant species—terrestrial and aquatic—are seriously threatened. Thus of a total of 40,000 species of fauna in the ex-GDR, between 15 and 20 per cent are now in acute danger of becoming extinct. In the case of the vertebrates the percentage is even higher (around 25 per cent). As far as plant life is concerned, there are around 6,000 different species. Of those, 27.5 per cent of all ferns and flowering plants and 25 per cent of all fungi and lichen species are considered to be at risk. While it is true that large areas of the former GDR were classed as protected natural sites (18.1 per cent), with many areas even being classified as ‘nature reserves’ (1 per cent), this was often only symbolic, since it was not possible for nature and landscape conservation interests to hold their own against other interests.

Radioactivity

Exposure to radioactivity is a problem especially for those people living where uranium ore is mined. Here, exposure to natural radiation generally seems to be far higher than in other regions, although acceptable levels are only exceeded in isolated cases. What is causing a problem, however, is the fact that indoor concentrations of radon and radon-related substances are far too high. Radon levels are beyond what

is considered to be acceptable in 50 per cent of all buildings. And since radon is known to be a highly carcinogenic gas, this is a cause of increasing alarm, not only among experts.⁹

Health and welfare

Recent epidemiological studies clearly indicate that there is a significant link between areas in the former GDR with especially high air pollution on the one hand and the frequency of illnesses such as chronic bronchitis, asthma and skin allergies on the other. What is more, food generally contains high concentrations of heavy metals due to soil contamination. Moreover, the most polluted areas are also the ones with the highest rates of infant mortality and the highest number of children born with deformities. All this, together with other social factors, explains why the average life expectancy in the former GDR is markedly lower than in the 'old' FRG (2.5 years less for men and 7 years less for women).

To sum up, one could say that it is perhaps quite symptomatic that the former GDR was renowned not only for its outstanding athletes, but also for the so-called 'Pirna-syndrome'—a feeling of fatigue caused by extremely high concentrations of hydrogen sulphides and carbon disulphides and accompanied by symptoms such as headaches, aching muscles, tiredness and dizziness. One cannot cease to be amazed at the haphazard fashion in which the former SED (Socialist Union Party of Germany) regime used the capital it had been endowed with by nature for production purposes and wasted it, seemingly with no scruples whatsoever and with total disregard for the needs of man and nature. With hindsight, therefore, it seems legitimate to say that socialist propaganda claiming the long-term superiority of socialism over capitalism was really no more than a pack of lies. Nobody who had even the slightest belief in such an alleged superiority could have treated his natural environment and the fate of future generations with such disrespect.

CAN 'WESTERN GERMAN' ENVIRONMENTAL POLICY BE TRANSFERRED TO EASTERN GERMANY?

The central issue of the *Eckwerte* (basic targets) paper outlined above in order to give an indication of 'environmental quality' in the former GDR is a programme of action for ecological improvement and development there. Moreover, its purpose is to offer a conceptual framework for a great number of activities by means of which the Federal Minister for the Environment and eastern Germany are initiating ecological renewal.¹⁰ In addition, the brief summary of the status quo can be seen as a guide to eastern Germany and the local communities there. It thus serves as an

informative basis and at the same time as input for implementing the political measures required by Article 34 of the Unification Treaty, which states that

the natural basis of human existence shall be protected through the application of the precautionary, polluter-pays and cooperation principles and by promoting the uniformity of ecological living conditions to a high level, i.e. a level that is at least equivalent to that already reached in the western part of the Federal Republic.

Also, in a kind of preamble to the *Eckwerte* paper the Minister for the Environment refers to the development of a ‘harmonious cultural landscape’—whatever that might be. And he stresses that ‘this can only be achieved if every man and woman, industry and commerce, local authorities and the Laender themselves actively co-operate along the lines of the subsidiary principle to help shape this ecological development process.’¹¹

As to the individual steps listed in the *Eckwerte* paper, these are set out in a logical order, with points 3 to 6 being of particular strategic relevance:

- 1 The paper sets out by describing the legal and organizational framework, and lists which pertinent regulations under western German environmental law—also in force in eastern Germany *Umweltrahmengesetz* (general law on the environment) was passed for the GDR on 1 July 1990—were provided with transition rulings, mainly changes in deadlines, exemption clauses, etc.
- 2 The paper lists all the immediate measures already taken in 1990 and their likely effects, primarily the closing down of particular environmentally hazardous plants.
- 3 The paper lists the measures that should be taken to avert threats to the health of the people. Those measures, in order to be effective, will have to be complemented by a full-scale programme of health-risk prevention.
- 4 Urgently necessary restoration projects are listed which, although they must be tackled immediately, will only have medium-term effects.
- 5 The paper paves the way for reorientation of environmental policy in other fields of politics, especially significant in this reconstruction phase.
- 6 Comprehensive proposals are made primarily concerning better implementation of and possibilities of financing environmental improvements.

It is beyond the scope of this paper to discuss in detail all the individual measures and recommendations concerning points 3 to 6. The details are far too complicated, more or less following the pattern outlined above. However, to sum it up, the *Eckwerte* paper is eminently suitable as an input for policies. In fact, it could be used as a sort of blueprint by all similarly ecologically run-down countries, especially in Eastern Europe. In the view of the Minister for the Environment, it is exactly this kind of 'aid' he has in mind as a major task for a united Germany when he talks about 'environmental partnership'¹² (*UTB* 1991:3).

The policy input contained in the *Eckwerte* paper of November 1990 was at least in parts soon transformed into policy output. Following Chancellor Helmut Kohl's inaugural speech in which he expressed his Cabinet's determination to instigate a 'national effort of solidarity', by February 1991 the Minister for the Environment had come forward with his Ecological Reconstruction Action Programme.¹³ While putting the emphasis primarily on issues 3 and 4 of the *Eckwerte* paper, this programme combines an enumeration of measures to be taken with estimates of what they will cost. Essentially, this programme consists of two parts. Part one deals with environmental measures that have to be taken immediately, as follows:

- instant steps to restore 196 of the 12,250 abandoned disposal sites that have been registered so far;
- examination of 248,000 hectares (2,480 square kilometres) of suspected sites that were hitherto under the control of the GDR People's Army and western group of the Soviet armed forces;
- construction or restoration of 35 municipal and 24 industrial sewage-treatment plants in the Elbe basin;
- construction of 27 sewage treatment plants near the Baltic Sea and in the basin of the Oder and Neisse rivers;
- construction of 6,200 kilometres of new sewers and modernization of 5,000 kilometres of old sewers;
- modernization of 278 registered outdated plants (including 10 lignite-burning power plants, 142 industrial power plants and 126 heating plants) that will have to be modernized by 1 July 1996 in line with the ordinance governing industrial combustion plants (*Grossfeuerungsanlagenverordnung*);
- modernization of another 6,735 air-polluting plants and installations according to the *TA-Luft* (Technical Instructions on Maintaining Air Purity) (also by 1 July 1996).

The measures contained in the second part of this document aim primarily at the creation of a suitable repair infrastructure, notably concerning abandoned disposal sites. They include:

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- organization of a world exhibition on modernization technologies in the Halle/Leipzig area to present innovative technologies in all fields of modernization, including the creation of 6 soil-treatment centres (at an estimated cost of DM 250 million each);
- establishment of 10 hazardous waste sites (at an estimated total cost of DM 1.5 billion);
- construction of two or three underground sites (at an estimated cost of DM 12-18 million each);
- building of five thermal units for the treatment of contaminated soils (at an estimated cost of DM 200 million);
- creation of a disposal centre for chemical warfare agents (at an estimated cost of DM 200 million).

These two concrete groups of measures are to be complemented on the personnel side by an ecological reconstruction drive to provide qualified support: as part of this programme the Ministry for the Environment, the Federal Environmental Agency, other ministries and also the private sector will form special ecological advisory teams to help compensate for the shortage of personnel and known-how in eastern Germany on a short-term basis. Specifically, such teams are to set up modernization companies, ecologically restore firms that are otherwise sound, initiate and prepare the construction of sewage plants and assist the local communities with regard to environmental protection in their town-planning, water-supply, waste-disposal and job-creation activities.

In order to finance this programme, loans and assistance totalling some DM 17 billion will have to be made available in 1991 alone. The money will be partly provided by the municipal loans programmes of public institutions, the European Recovery Programme to support commercial investments, the Joint Action for Improvement of Regional Economic Structures and the Loans Programme for the Improvement of Agricultural Structure and Coastal Protection. In addition, the anticipated proceeds from two special levies are to boost finances: a levy on hazardous waste already decided upon in the coalition agreement between the Christian Democrats and their partners.¹⁴ This levy is expected to yield some DM 5 billion per annum, 2 billion of which are to be set aside for cleaning up abandoned disposal sites in eastern Germany. There are also plans for a levy on carbon dioxide, which is also expected to yield around DM 5 billion annually, all of which will be used exclusively for improvement projects in eastern Germany. Even so, it is unlikely that sufficient financial resources can be raised by the public sector, and the Minister for the Environment is therefore banking on being able to mobilize private capital, assuming that private investors are only too willing to invest large sums of money in building and running facilities for environmental-protection purposes in eastern Germany. Certainly, this would also imply the privatization of water-supply and waste-disposal services

hitherto run by the local authorities, the first step towards which would be to establish a legal framework. This could include models for setting up private holding and operating companies, communal-property funds, granting concessions for the construction and operation of waterworks and drainage systems, etc.¹⁵

What the Minister for the Environment understandably considers very important in this context is the fact that all these environmental measures will have a very positive effect on the labour market. For instance, he expects that the immediate measures in the first part of the programme alone will help create around 200,000 new jobs in the east in the short term. Not to mention the huge demand for labour that would result if all the loans applied for by the communes and districts, which cannot yet be sufficiently funded by the Ministry for the Environment (totalling DM 2 billion), were to be granted.

If the jobs argument, which at least in the west seemed to have lost its bite some time ago but is now enjoying a revival in the east is left on one side, then this can certainly be called a concise programme. What is more, it is supported by a whole series of transnational and international activities, for instance, the recent passing of the text of the contract submitted by the Commission for the Protection of the Elbe etc., and although it is a national programme its effects will reach far beyond German borders. To name just one example:¹⁶ the former GDR used to be a recognized net exporter of sulphur dioxide (Norway/Finland/Sweden 128 kilotons per annum; Poland 450 kilotons, Czechoslovakia 120 kilotons, FRG 126 kilotons). Quite rightly, therefore, the Minister for the Environment considers the ultimate aim of an environmental partnership with the Eastern European countries a central principle of environmental policy in a united Germany.

At the same time, those responsible seem prepared to accept that environmental policy cannot be isolated from other fields, notably the economy and society. The Minister for the Environment, Mr Töpfer, does take a somewhat one-sided view of this link though, i.e. environmental policy and quality as an advance payment for economic and social progress, when he says:

Over the last twelve months we have systematically elaborated the foundations for the programme we have now submitted. In doing so, we were fully aware from the beginning that quite apart from causing major health problems, environmental pollution can also be seen as a major deterrent to investment and hence can also delay economic development. The programme we have now submitted will ensure rapid ecological improvements that will be a decisive precondition for rapid recovery of the economy in eastern Germany.¹⁷

While this may be true, it is only one side of the coin, for the standard and structure of environmental policy and the extent to which it is accepted by society as a whole are determined to a considerable degree by economic and social factors. Environmental policy can only succeed if integrated into other fields, if it is really intended to strive for the high aims stated in the preamble of the *Eckwerte* paper¹⁸ and if they are not just a symbolic expression of political will.

The question thus remains as to whether the kind of environmental policy supplied by the 'western Germans' really is demand oriented and whether allocation is efficient in the sense that there is a balance between the aggregated marginal utility or willingness to pay on the one hand and the marginal costs or supply of environmental quality on the other.

Concerning the supply side, the Minister for the Environment is hoping to raise DM 17 billion by the end of 1991 in loans and funds to promote environmental projects in the former GDR; a new study by the Ifo-Institute asserts that about DM 21 billion should be spent annually to close the environmental gap by the year 2000. Since it is important what is spent, and not what should be spent, the further considerations are based on the official figure.

Concerning the demand side, a recently published study of the IST-Institute¹⁹ shows that the population of eastern Germany would be prepared to spend an annual DM 8 billion on the improvement of their environment. In other words, the loss in utility that an improved environment would have provided amounts to around DM 8 billion per annum, while in actual fact DM 17 billion will have to be spent on improving that environment. Does this therefore imply that the costs are higher than the utility and is this therefore an inefficient allocation? At first sight, the answer seems to be 'yes'. Obviously, what the citizens of eastern Germany are both willing and able to spend on improving their environment is far less than what is really being spent. However, assessment of willingness to pay is always based on the assumption that the individual is prepared to set aside a certain amount of his income for a public purpose, if this is important enough to him. Hence willingness to pay in actual fact denotes willingness to make sacrifices. Western German money that is being spent to protect the environment in the east is, however, not really a sacrifice at all, since for the time being at least the Minister for the Environment has ruled out the application of the polluter-pays principle there. So it is quite a different matter whether the individual—depending on how highly he values a certain public good—weighs things up and consciously renounces the benefit of another public or private good, or whether the 'public good' is being given to him 'for free'. In the end, this implies that the donor will also be the one to decide how the money is spent. On second thoughts, therefore, 'no' seems to be the answer. After all, the DM-17-billion 'present' could also have been used

to finance other equally important public-sector works in the east. According to an IST poll, eastern German citizens would on average be prepared to spend 17.8 per cent of the initial financial aid granted by the west on the protection of their environment. Given the present total of DM 100 billion that are being transferred to eastern Germany annually from the west, this clearly reflects a remarkable balance between environmental supply and demand. If this sum were considerably higher, there would obviously be a deficit in the western German environmental offer to the east. Yet that is just what is going to happen if the forecast of the Institut für Wirtschaft und Gesellschaft (Institute for Economy and Society) is accurate, according to which next year alone transfer payments to support public and private budgets in the ex-GDR will total between DM 160 and 170 billion.²⁰

So does the supply of environmental policy in the former GDR meet the demand? 'Yes', with reservations it seems, if one is only talking about the quantitative aspect of the externally 'donated' public-good 'environment'. If it is true that there 'ain't no such thing as a free lunch', as the saying goes, things look totally different, however; people would actually be forced to choose and thus also to make sacrifices. Since this seems to be the only realistic assumption on which to base an analysis, we clearly have to conclude that any kind of purely 'western German' environmental policy will no doubt result in allocation inefficiencies in the east.

As a general rule and in the long term, environmental policy for the people can only be successful if it is supported by the people. To gain this support, however, one also has to accept a certain regionalization of environmental targets and instruments, or at least that this possibility could be desired by the citizens and should be tolerated. Far too often in environmental contexts, people are merely treated and instrumentalized as having a positive environmental awareness. Yet, the citizen is also an economic, social and political being and perfectly able to decide for himself what is good for him in his particular situation. This result and the reservations mentioned perhaps show that, with the present catastrophic state of the environment in the ex-GDR, such considerations may seem irrelevant at the moment. Yet, as environmental quality improves and 'environmental luxuries' become available, these considerations may well become something to be reckoned with in the future.

SCENARIOS OF SOCIO-ECONOMIC DEVELOPMENT AND THEIR POSSIBLE CONSEQUENCES REGARDING ENVIRONMENTAL POLICY

When the top candidates of the parties in government promised, amongst other things, in the period leading to the first all-German post-war general election that nobody would be worse off after reunification and,

what is more, led the citizens of the 'old' FRG to believe that unity could be achieved without any financial sacrifice on their part, they no doubt had the same end in mind as everybody who makes election promises: to win the election. It is hardly conceivable that anyone who has a knowledge of economics, in particular about the economic upswing of the FRG after World War II, and who was anything like properly informed about conditions in the GDR could have believed that unity and the deutschmark alone would be enough to bring about another economic miracle. Conditions were simply not comparable:

- With the opening of the borders and the more or less inevitable advent of a currency union on 1 July 1990, the former GDR economy—at a stroke—lost the protection it had enjoyed from Western competition. The free-market economy in the FRG, on the other hand, had developed gradually, for quite some time eased by the granting of tariffs and quotas, and parallel to the equally crippled post-war economies of the other Western European countries. Quite rightly, therefore, Wolfgang Kaden called this abrupt transition in the east 'a liberalization programme of the utmost brutality'.²¹
- For the East German economy the currency union amounted to a 300-per cent devaluation from one day to the next. As a result, East German products became unmarketable both in the east and in the west, since western imports almost completely ousted ex-GDR products from the market. In the post-war FRG, by contrast, after the currency reform of 1948, the deutschmark was undervalued for more than two decades, thus stimulating exports and reducing the competition from imports.
- The pressure for equal wages, with a tendency towards wage increases far above the actual productivity-growth rate, has begun to erode the one locational advantage the former GDR had: cheaper labour. This tendency is only possible because, for the time being at least, both sides of industry are probably right in assuming that the western German taxpayer will foot the bill for this luxury. Not even the argument that this creates purchasing power holds true in this case, since eastern German demand is mainly effective in the west. In the early days of the FRG there was no such compliant sponsor, so that wage settlements simply had to be moderate.
- Finally, in the post-war FRG one did not have to cope with major shortcomings regarding the institutional infrastructure. There was a properly working legal and administrative system, which is desperately lacking in the east at the moment. Nor did anyone then think about withholding investments because of pending ownership questions.

In the final analysis, it is irrelevant whether it was an election promise or whether it is now rightly claimed to be just a case of 'to err is human'—

the effect of the pledge that 'nobody will be worse off was the same: blindly believing such statements the new citizens of the Federal Republic of Germany—after forty years of one-party rule—found themselves confronted with the idiosyncrasies of western German party democracy—and were bound to feel disappointed and cheated. Thus another factor was added to the social and economic 'disaster', as the President of the Bundesbank, Pöhl, called it: and how else should one refer to an anticipated figure of 450,000 (or 29 per cent) unemployed in the Greater Berlin area when the interim provisions expired in 1991, a figure matched only by the figures of the Great Depression of 1929.²² In the long term this factor could prove more damaging in a socio-psychological sense, that is to say, in a general loss of confidence in the policy and competence of the federal government, perhaps even in the very mechanisms of the tried and tested democratic system. Moreover, such feelings might even persist in the future, irrespective of whether there is an economic upswing or not. After all, one must not forget that this has been the first practical experience the eastern Germans have had with the western democratic system so far.

Moreover, it cannot be ruled out that such a loss of confidence could also extend to policies in special fields, especially environmental policy, which is particularly dependent on the integration of a great number of economic, social and ecological processes in order to be accepted. Yet it cannot be ruled out that economic and social factors may negatively influence environmental policy, casting a shadow that may contribute to reducing the extent to which the people in the former GDR are prepared to make sacrifices for this cause as well. To make plausible predictions concerning this, it is necessary to briefly evaluate the short- and medium-term perspectives of the former GDR. Inevitably, some of this can merely be speculation.

- To begin with, it is a fact or a plausible projection that the number of people with jobs in the former GDR will have dropped from 9.644 million at the beginning of 1989 to 6.018 million at the end of 1991.²³ What is particularly alarming is the dramatic reduction in jobs in mining and the manufacturing industry (from 3.67 to 2.013 million). It seems likely, therefore, that by the end of 1991 the number of people out of work in the former GDR will have risen to more than 3.5 million, so that 37 per cent of the working population or every fourth citizen of eastern Germany will be unemployed. These figures were not even reached during the difficult, early years of the old FRG. In 1950, for instance, only every tenth member of the working population was out of work. Only recently the news magazine *Der Spiegel*²⁴ reported that there was a 'general view among experts' that 'at

the end of the eastern German downswing one in two employees will have become unemployed’.

- There can be no doubt that the advent of the free-market economy did not spark off the kind of ‘big bang’ which some expected it would. Neither, it seems, will the hopes materialize that flexible and dynamic medium-sized businesses would quickly seize their opportunities and act as a driving force to economic recovery. After deduction of cancelled registrations, 250,000 new businesses were registered in 1990, about half of which are non-labour-intensive trading or catering firms,²⁵ so that the number of jobs created was correspondingly low. According to the 1991 spring survey of the Association of German Chambers of Industry and Commerce, the economic situation was definitely rated as bad for eastern German businesses. Few investments were planned for 1991, due to a general shortage of money and official red tape. At the same time, however, the wind of change is being felt by businesses and firms in the west, too. Here, demand from abroad is no longer encouraging, so that domestic economic activity is the mainstay of the German economy and German competitiveness at an international level will deteriorate owing to the forecasted tax increases, erratic exchange-rate fluctuations of the US dollar and the Japanese yen and wage settlements far above the increase in productivity. Also, firms have become far more cautious in their personnel planning and investments have obviously passed their peak.²⁶ Visions of the western German economy’s stimulating economic development in the east could prove to be over-optimistic, irrespective of whether solutions to the ownership and abandoned-site problems are found or not. A more realistic picture of the future FRG in the next few years is therefore probably one of a country with extremely high budget deficits and a foreign trade gap, i.e. the current account will not be balanced.
- The population basis of the former GDR is beginning to crumble: according to HWWA (Hamburg Institute for Economic Policy) estimates, 240,000 of the working population emigrated to the west in 1989 and 1990. That is, over 3 per cent of the population in two years.²⁷ According to a poll commissioned by *Der Spiegel*,²⁸ the situation is really alarming: 5 per cent of all those questioned said they would ‘probably’ leave the former GDR and move to the former FRG, and 1 per cent were certain that they would. In other words, migration from the east to the west is likely to increase still further and, what is more, does not seem to be limited to those who are unemployed now or will be in the near future. Even 4 per cent of those who felt their job was safe nevertheless said that they wanted to leave the former GDR. This quota is even higher among young people (those up to 30 years of age): 11 per cent (300,000) in that age bracket said they were

determined to go and only 48 per cent definitely want to stay in eastern Germany. At the other end of the scale, the quota of those wanting to leave drops from 8 per cent (30 to 44 years) to zero per cent amongst pensioners. On the one hand, therefore, the younger, more flexible and more optimistic sections of the population will probably leave the former GDR in increasing numbers, while those stay behind who assume—probably rightly so—that the west offers them no chance of a new beginning.

- A comparison of the social situation in the former GDR and the old FRG reveals even more dramatic aspects: the number of former East Germans who consider themselves to be ‘second-class citizens’ in the ‘new’ FRG is still increasing. In February/March of 1991 around 85 per cent had this impression.²⁹ Other studies³⁰ concentrating on general satisfaction and satisfaction in individual spheres of life produce evidence of startling developments: general satisfaction with life (taken as a measure for individual well-being) of the eastern Germans is far below the level of the western Germans, where it has been stable over the last decade. Eastern German ratings here are equivalent to those of problem groups in the west, like the unemployed, old people, people with no families, families with a large number of children living in cramped conditions or the physically handicapped. At the same time, hopes in the future are extremely high among eastern Germans. They are higher by far than those among the western Germans; hence the probability of their being frustrated is correspondingly high. On the other hand, every third eastern German considers that he was better off five years ago, and these are not merely PDS (Party of Democratic Socialists) (the former SED) supporters but mainly the unemployed and elderly. As regards the comparison of the different spheres of life, as documented in the results of two opinion polls that were held in June 1990 and shortly after unification in October/November 1990, it is striking that in no single sphere of life did people note a change for the better. On the contrary, people have become aware of a drastic reduction in the quality of their life, especially in the spheres of income, environment, standard of living and housing.³¹

Has everything only become worse, then? Looking at things objectively this certainly is not true. F.K.Fromme in his leader in the *Frankfurter Allgemeine Zeitung*³² was surely right when he pointed to such positive developments as the liquidation of the state intelligence service, freedom of travel, freedom of the press and freedom of literature, or the possibilities which now exist of investing one’s savings or buying consumer durables. But he also made it plain that one certainly must differentiate between ‘abstract knowledge on the one hand and reality as

it affects the individual on the other'. Subjectively, therefore, it may well appear to the citizen of the former GDR that the Western world they had been dreaming of for such a long time is now depriving them of the only things they could be sure of under the old system: their jobs, their income and cheap housing. And it is in these very areas that there are considerable differences in the assessment of priorities between people in the east and in the west. While two-thirds of the former GDR citizens rate these items as 'very important', in the west only one-third has this priority.³³

Based on this data and these patterns, one can sketch two diametrically opposed scenarios of possible future economic and social development in the former GDR. In line with the requirement for integration of the various fields of policy, one can also analyse these two scenarios with regard to their ecological and environmental significance.

- The first scenario describes the Mezzogiorno development of the former GDR: this term describes the 'eternal problem of a regional policy which—without success—actively strives to bring about the economic recovery of a whole region'.³⁴ As far as the economic and social categories are concerned, it designates relative economic impoverishment and social deprivation. Obviously nobody can possibly want this. But there is a possibility that this may be the result: one only has to envisage a linear extension of the trends discussed above. There are quite a few experts who consider it likely that only about 20 per cent of all former jobs in industry in the former GDR can actually be saved, which would imply that every second person would become unemployed. As a consequence, those who are flexible, dynamic and sufficiently qualified would leave, the region would become over-aged at a low-income level and at best externally controlled industries and firms would settle in the region, offering only low-skilled jobs.
- The second scenario is one which would require a departure from traditional free-market policies (i.e. a basic reliance on the forces of the free market) and the adoption of tough industrial and structural policies instead. Even Donges *et al.* of the Kronberger Kreis—a group of experts that certainly cannot be accused of having any sympathies whatsoever for state interventionism—consider it 'brutal, undesirable and depressing' how at present in the former GDR every job is being destroyed that is not up to western productivity standards.³⁵ A rough indication of the shape that such policies could take in detail was recently given by de Weck.³⁶ His suggestions include: no return of estates to former owners but compensation payments instead; creation of incentives for western civil servants to work in the east; reorientation of public-sector purchasing policies towards the east; creation of local-content provisions, higher investment aid, putting firms on their feet again instead of

liquidating them, etc. Others, for instance Jeske,³⁷ also describe some of the negative aspects such a policy might involve. Yet this is not really the central issue here. What we can say, however, is that this kind of political approach appears to be the only suitable strategy which—while reducing the inevitable frictions caused by the adaptation process—could also bring about a socially compatible long-term improvement of the general standard of living, and it seems that the formation of the *Treuhandanstalt* and the creation of economic councils, etc., are important first steps in that direction.

Yet, even assuming that the second scenario were to apply and that in fact there was this kind of positive state interference, there should be no false expectations: it just cannot be ignored that since reunification the gross domestic product per capita in eastern Germany has fallen from around 33 to a mere 25 per cent of the gross domestic product in the west. While it is certainly true that starting off from present low levels, one would have impressive growth rates in the future, in absolute terms these results would still be rather modest. Projections of the Bonn Institut für *Wirtschaft und Gesellschaft* (Institute for Economy and Society)³⁸ have shown that—assuming an annual growth rate per capita of 1.7 per cent in net terms in the old FRG—the real growth rate in eastern Germany between 1991 and 2000 would have to be 9 per cent annually, if ten years after reunification the gross domestic product in the east were to reach a level that would then roughly correspond to about half that of western Germany. On those assumptions it would take twenty years before gross domestic products per capita were roughly equal in both parts of the country, and with a drop in the growth rate in the east in the medium term it would take correspondingly longer. The ominous figure of 9 per cent roughly corresponds to the growth rates in the old FRG during the 1950s, which also levelled off after that. Even under the circumstances that existed then, people could not sustain such a high growth rate for long, either physically or mentally. Achieving the same standard of living in the foreseeable future will hence have to remain an illusion: this is a process that will definitely take generations.

What then are the conclusions to be drawn from such scenarios for environmental policy in eastern Germany from the point of view of integrating economic, social and ecological processes? To make any valid statement here it is first necessary to establish to what extent the different trends in these scenarios influence the demand for environmental protection, i.e. people's willingness to pay for a clean environment. Recent studies,³⁹ but also some older studies,⁴⁰ have clearly demonstrated that to a significant extent this preparedness correlates positively to income and level of education on the one hand

and negatively to age on the other. Unfortunately, however, in the willingness-to-pay studies carried out for the Federal Environmental Agency (Holm-Müller), the regression functions of willingness to pay with these variables are not explicitly listed, and the data used by Schulz, and Kessel and Zimmermann are simply too old to still be of any relevance. Therefore, a quantitative assessment of the effects these two scenarios would have on environmental policy is just not possible, so that qualitative assessments and general trends will have to suffice.

If these patterns are assumed to be general human constants, so to speak, for the population of the former GDR, this would imply then that—in line with the first scenario—low or comparatively low incomes, lower educational standards and an older population (because of the loss of young and dynamic workers to the western part of the FRG) would on the whole mean a further decrease in the east in the willingness to pay for environmental protection. If the same curves are assumed for the cost of avoiding environmental damage, from an economic point of view this would be tantamount to saying that the optimum avoidance level of such damage would be lower in the east than in the west, that is to say, in the east people would be prepared to tolerate higher pollution levels. If—given such a situation—the stricter western standards were then enforced in the eastern part of Germany, this would inevitably cause higher costs which would then be imposed on the citizens there against their professed will. ‘Internality costs’ (Olson 1969) would then arise because the decision-taking level would be higher than the ‘optimal’ level. In the case of the first scenario this would seem to be a likely consequence, since, as the Minister for the Environment recently said, the legal preconditions have now been created to ensure ‘that the stringent environmental laws of the old FRG can also be successfully applied in the five new Laender’.⁴¹ Neither can it be argued in this case that the costs are borne by the wealthier countrymen in the west anyway, since the money could just as well have been spent on the ‘actual’ preferences of the citizens in the east, so that—under those conditions—it is but an involuntary transfer.

Problems would be far less dramatic in the case of the second scenario. With rising incomes and job-skill standards and the preservation of a reasonable age structure, the willingness to pay would gradually approach the western level so that the problems of internality costs and excess burdens would be reduced in this two-region model in the long run due to the equalization of values and would perhaps be eventually eliminated—provided, of course, the industrial and structural policies in the east actually live up to expectations. For reasons other than those already discussed, this must be viewed critically. Even if they did pursue an active industrial policy, why should large western German companies move headquarter functions to the east to

subsidiaries set up or firms purchased there; after all, the single European market will lie to the west of the former GDR and the countries of Eastern Europe are poor. The vital question is doubtless to what extent medium-sized firms—perhaps even with an explicit orientation towards eastern markets—will be brought forth by the ‘endogenous potential’ of the region itself.⁴² Yet after forty years of socialism, who would be prepared to make any predictions about the endogenous potential, let alone any kind of ‘entrepreneurial culture’ that may still exist there?

At present, the question must remain open as to which scenario is the most likely. There can be no doubt, however, as to which scenario will cause the least conflict and be the most beneficial for the environment—not just because it would be possible to start from scratch, as it were; as far as environmental technology is concerned the operative term is ‘integrated processes’. From an ecological angle, too, a positive economic and social development in the former GDR is the *sine qua non* of its success, particularly to gain the support and backing of the population. Complementary beneficial effects due to the closing of plants or the liquidation of firms are only temporary successes of environmental policy and politically irrelevant in the long term, just as any visions of transforming the former GDR into a kind of nature reserve and environmental technology park can only be called unrealistic at best and cynical at worst when applied to the future of an old industrial region and its population.

To ensure that matters develop favourably, a great number of both material and symbolic activities are necessary. While there were many possible arguments, both rational and emotional against Berlin’s being the capital of Germany at the centre of eastern Germany, these were bound to be outweighed in the end by the symbolic and psychological value Berlin has for the Germans in the east in their particular situation, considering themselves as they do to be second-class citizens. The decision in favour of Berlin, therefore, was also one in favour of a united people and environmental unity—albeit in the rather distant future.

NOTES

- 1 Tiebout, C. (1956).
- 2 Ryll, A. and Zimmermann, K. (1989).
- 3 Lübbe, H. (1986).
- 4 For details see Kessel, H. and Zimmermann, K. (1985a).
- 5 Kneese, A.V. (1985:479).
- 6 Hansmeyer, K.-H. and Rürup, B. (1973:26ff.).
- 7 Lübbe, H. (1986).
- 8 Gomulka, S. (1986), Kornai, J. (1982) and others.

- 9 *The Economist* (March, 16/1991:13).
- 10 Bundesminister für Umwelt (1990:6f.).
- 11 Bundesminister für Umwelt (1990:9).
- 12 *UTB-Umwelttechnik Berlin* (1991:3).
- 13 Bundesminister für Umwelt (1991).
- 14 The Minister for the Environment has hinted that this could be extended to include household refuse. See *Frankfurter Allgemeine Zeitung* (1991a:1).
- 15 *UTB-Umwelttechnik Berlin* (1991:4).
- 16 See the findings of the Institut für Umweltschutz (1990:13).
- 17 Bundesminister für Umwelt (1991:7).
- 18 Bundesminister für Umwelt (1990:9).
- 19 IST-Gesellschaft für angewandte Sozialwissenschaft und Statistik (1990).
- 20 *Frankfurter Allgemeine Zeitung* (1991b:11).
- 21 Kaden, W. (1991).
- 22 *Der Tagesspiegel* (1991:13).
- 23 DIW-data, cited in *Der Spiegel* (1991a).
- 24 *Der Spiegel* (1991b:51).
- 25 *HWWA Info* (1991:1).
- 26 *Frankfurter Allgemeine Zeitung* (1991c:17).
- 27 *HWWA Info* (1991:2).
- 28 *Der Spiegel* (1991b:50-7).
- 29 *Der Spiegel* (1991b:51).
- 30 *WZB-Mitteilungen* (1991:33).
- 31 *WZB-Mitteilungen* (1991:43).
- 32 Fromme, F.K. (1991:1).
- 33 *WZB-Mitteilungen* (1991:35).
- 34 Donges, J.B. *et al* (1990:16).
- 35 Donges, J.B. *et al* (1990:18).
- 36 Weck, R.de (1991:1).
- 37 Jeske, J. (1991:1).
- 38 *Frankfurter Allgemeine Zeitung* (1991b:11).
- 39 See, e.g., Holm-Müller, K.H. *et al* (1990).
- 40 Schulz, W. (1985), Kessel, H.K. and Zimmermann, K. (1985a and b).
- 41 *UTB-Umwelttechnik Berlin* (1991:3).
- 42 Fürst, D. *et al* (1986).

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- (1991c) 'Ein schwieriges Jahr für die Wirtschaft', 27 February 1991:17.
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SECURITY AFTER GERMAN UNIFICATION: THEORETICAL ANALYSIS AND ECONOMIC CONSEQUENCES

Dieter Fritz-Assmus

INTRODUCTION

The rapid change of the Soviet empire produced what the West had always wanted—an end to Europe's division, especially to the division of Germany; a conventional arms-reduction treaty, significantly reducing forces in Europe; and a receding Soviet threat with unilateral cuts under way and the abandonment of aggressive ideology and offensive military doctrine. But, as one analyst put it, 'the collapse of the Soviet empire also produced an entirely new Europe in which old security postures and concepts look increasingly obsolete and new ones have yet to be created.'¹

The old concepts and postures of western security were mainly based on the permanence of Soviet threat and of the division of Germany and Europe. Now that history has changed this basis, uncertainty and confusion in the current security debate arises, concerning not only military doctrines, the field of arms control and the weapons technology, but also such fundamental questions as the security consequences of the erosion of the bipolar power system, or even the possible replacement of the existing systems of alliances by a new security architecture. At the centre of this fast-changing security situation is, not only because of its special history and geographical location, but politically and economically, too, the unified German state,² which in addition complicates the security equation in profound but as yet unpredictable ways.

This article will examine the security situation after German unification and in particular the consequences of the new changes by using the Economic Theory of Alliances.³ The analytical foundation of this normative approach is based on the theory of public goods, which allows an inside look into the basic idea of alliance behaviour, especially into its formation, operation and cohesion. To explain the behavioural change concerning defence spending and questions like burden sharing and the free-rider problem theoretically and empirically the joint-product model, put forth by Sandier and others,⁴ will be introduced and applied.

Table 14.1 Potential determinants of demand for security

<i>Variables</i>	<i>Internal environment</i>	<i>External environment</i>
Economic factors	Income Economic stability Domestic arms industry	Dependencies on international trade and foreign resources
Political factors	Composition of government	International political pressure and commitments
Military factors	Own capability Military doctrine	Threat Alliance spillins

In a first step the primary attention will be focused on the demand issue of security in Europe before the end of the Cold War. An attempt is made to evaluate the influence of economic, political and military factors, and in particular the external environment, above all the Soviet threat and the NATO spillins (external effects). Second, based on these findings a model will be offered, which appears reasonable for the estimation of the defence-expenditure demand equations of selected European NATO countries. The empirical results for the period 1961 to 1988 will be discussed. Third, the relevant changes after German unification and after the end of the Cold War will be introduced and their impact on the demand equations and on defence spending in Europe will be investigated. Finally there will be a theoretical survey of economic consequences caused by the new security situation after German unification.

DETERMINANTS OF DEMAND FOR SECURITY

In the pursuit of national security most of the European countries have dedicated a large share of their nation's resources to the purpose of enlarging or maintaining their defence sector. It seems valuable to investigate now in detail the determinants of these spendings, which are directly connected with the country's and in sum with the European demand for security. To organize the discussion of this approach two significant dimensions have to be included: the decision-making process within the governmental system and the relative influence of the internal and external environment. As the purpose of this section is directed towards the demand analysis of defence expenditure, further investigation will be limited to the potential influences of the internal and external environment on the spending level and shares. Several factors will be hypothesized as explanatory determinants of the defence budgets and their changes over time.⁵ Not all of them can be eventually used for a testable theory of the demand for defence expenditure; nevertheless they show that defence spending is determined by a combination of economic, political and military variables.

Economic factors

Little expertise seems to be required to hypothesize that there is a positive relation between the national income and the defence spending. An explanation could be that the higher a country's level of income, the greater the threat of an enemy's attack. In conclusion it is obvious, that the national income and its growth rate represent important determinants of defence spending.

Economic stability is a second variable influencing the volume and composition of defence expenditures. In particular, fiscal constraints, caused by instability and accompanied by growing budget deficits, increase the political readiness and economic necessity to reduce or redistribute defence-spending funds. A first look at the data supports this expression; nevertheless the hypothesis remains preliminary.

Another factor frequently mentioned but never investigated in full is the influence of a domestic arms industry, which may develop persuasive power to influence decision-makers to agree to additional military expenditure. This seems to happen particularly during times of high unemployment or with the argument of international technological competition. However, the influence of the arms industry on defence spending, though definitely important in most western countries, unfortunately cannot be tracked down to a testable data set. The same problems occur with the external-factor dependencies on foreign resources and international trade. It seems very plausible that a high degree of international economic dependence may contribute to the level of defence spending.

Political factors

Defence spending has to be evaluated not only according to its economic impacts, but also with respect to its political impacts. Therefore a second set of variables for the explanation of the determinants of defence expenditure involves the political factors.

Probably the most important factor within the set of political determinants is the political preference for the composition of government. Whether a country's government is generally dominated by a left-wing or by a conservative party provides an important clue as to the relative degree of change in the size and structure of the defence budget.

Related to political preferences is the factor of interest groups and their influence on government decisions. Both political preferences as well as interest groups appear to have a strong influence on the level and particularly on the general structure of the public budget. One could expect that a change in the composition of the government would have noticeable impact on the allocation of the financial resources between different expenditure groups or even the overall budget level.

Another political factor, which seems to have the same important impact on defence spending, is the international political pressure and commitments. This factor is still very vividly remembered in connection with the war in the Gulf or with the German commitment to the Soviet Union to reduce its unified army to 370,000 by 1994. Unfortunately, this influence cannot be tracked down to a testable data set either, so it will not be considered in the modelling we are preparing.

Military factors

The most important influences on the demand for military expenditures derive from the military factors themselves. The principal dynamics behind the determination of the defence sector's endeavour for an optimal spending level is the evaluation of each state's security position. This position reflects a favourable or unfavourable balance between the expected threat on one side, and the country's own capabilities in combination with the spillins of possible allies on the other. It is likely that a discrepancy between the desired and actual position leads to the corresponding request for a modification in the present spending level. Taking the external environment first, we presume that the national-security decision-makers are analysing the international surroundings with the objective of defining a possible threat as well as the spillins they may expect from other countries. The first evaluation concerns other states' capabilities, the second, and maybe more important, tries to generate information on the intentions in terms of hostility as well as cooperation. The combination of these two critical elements is assumed to represent the perceived threat and spillin within the external environment directly influencing the calculation of the spending level. The strategic external environment generally depends on the power of the nations, the geographical positions and political commitments. For the European countries as members of the NATO alliance, the threat was for long clearly determined by the intentions and postures of the Soviet Union and in addition by the relation between the United States of America (USA) and the Soviet Union. The military spending of both these countries therefore influenced the defence spending of all European countries. Consequently, threat plays an important role, too, in evaluating the own capabilities. The traditional indicator of capability is a country's stock of arms, though it also depends on manpower, up-dated technology, readiness, training, morale, etc. Nevertheless the European defence sector primarily compared equipment and forces available to countries of the Warsaw Pact, at least as long as it existed, and to NATO, which plays an important role in decisions about deployment and procurement.⁶

These decisions have to be seen, of course, in the context of alliance spillin and existing military doctrine, as both elements do have significant influence on the behaviour of and demand for a country's spending level. In this connection particularly the burden-sharing debate and, associated with it the free-rider behaviour of allies relying on the defence spending of others are investigated by the economic theory of alliances. Before presenting a model for the estimation of the defence-spending demand equations of the ten most important NATO members, we can conclude that European demand for security depends on a variety of economic, political and military factors from both the internal and external environment.

ESTIMATION OF THE DEMAND FOR DEFENCE SPENDING IN SELECTED COUNTRIES

The analytical framework

The analytical foundation for estimating the demand for defence spending, which will later be used for the discussion of the economic consequences, is based, as mentioned, on the theory of public goods. All European NATO members share the pure public-good deterrence with its partners, which relies on a credible threat of retaliatory punishment against possible offenders. The benefits of good deterrence are non-rival in consumption, which means that additional allies can simultaneously share the deterrent umbrella without reducing the benefits to existing allies. The characteristic non-excludability, which determines the optimal provision of a good either by the private or public sector, applies whenever an attack on an ally inflicts unacceptable damage, for example, on the economic external environment of the ally providing the deterrence.⁷ In this situation deterrence has the quality of a pure public good, which induces free-rider behaviour in the sense that the larger allies would shoulder the defence burdens of smaller partners. As a result smaller allies contribute a suboptimal allocation towards defence. In addition it is even likely that an ally's increase of defence expenditures will cause a decrease of another ally's military expenditure. In particular this hypothesis will be tested in estimating the demand equations for European NATO members, in examining the degree and possible change of free riding and the actual influence on the defence-spending level, which seems to have been of some importance especially when relying on the doctrine of mutual assured destruction.

During the late 1960s a more flexible strategic concept was developed and adapted by NATO. The basic intention behind the new doctrine of flexible response is NATO's ability to deter and to counter

military aggression of varying scales in any region of the NATO area. This can be secured only through a wide range of forces equipped with a mixture of conventional, theatre nuclear and strategic nuclear weapons.⁸ To explain the behavioural change concerning burden sharing and the free-rider problem after the installation of the new doctrine, the joint product model will be used. This model implies that the weapons of an alliance are private, impure public and pure public outputs of defence expenditure. An alliance produces therefore private benefits, protection and deterrence, which has to be considered while analysing the defence-spending behaviour of an alliance's members.⁹ Earlier studies came to the conclusion that this doctrine has caused a major change in the NATO allies' demand for defence spending,¹⁰ particularly as the European allies have to be prepared to meet any aggression by themselves, maybe with certain reservations concerning the flanking allies. Consequently they can no longer rely primarily on nuclear deterrence by the NATO members, the USA, United Kingdom (UK), or in special cases France, but have to increase expenditures for their non-nuclear, conventional arsenals. Flexible response therefore causes a complementarity between nuclear and non-nuclear arsenals as they have to be deployed and used in conjunction, which reduces the extent of free-riding and thus influences the closing of the share gap between the defence burdens undertaken by the smaller and larger allies. If the hypothesis, that flexible response induces structural changes in the allies' defence expenditure pattern, this should be significant for the allies' demand equation of defence spending.

The model

The discussion of how defence spending is determined indicates that national security, translated into defence expenditure, depends on a variety of economic, political and military factors from both the internal and external environment. In view of the fact that not all of the analysed variables can be transformed into a testable form, the theoretical discussion yields the general form of each considered country's demand equation for defence spending with three primary variables:¹¹

$DS=f(\text{INCOME, THREAT, SPILLIN})$

The estimation of the response variable defence spending (DS) is based on the common nominal NATO data,¹² recalculated to annual real spending figures (1980 is the base year) expressed in billions of constant US dollars using the 1980 exchange rates.¹³ This approach, used for all monetary variables included, ensures that the variations in the nominal data are transformed to real changes, giving the opportunity of direct comparisons

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Table 14.2 Description of the variables

<i>Variable</i>	<i>Description</i>
DS	Each country's defence spending in 1980 prices converted to 1980 average-period exchange rate (\$bn).
GDP	Gross domestic product in constant prices (\$bn, 1980 = 100).
NATODS	Defence spending of a modified NATO, including Belgium, Canada, Denmark, Germany, Italy, Netherlands, Norway, UK, USA, with the exception of the analysed country. In 1980 prices and 1980 average-period exchange rates (\$bn), lagged one year.
SUDS	Defence spending of the Soviet Union, expressed in 1980 prices and in \$bn using the SIPRI conversion method, lagged one year.
D	Dummy variable for NATO change of strategy, zero for 1960-73 and one for 1974-1988.

with other countries' data. The gross domestic product (GDP) is used as a measure of the country's yearly INCOME. Concerning this measure it is assumed that GDP and DS are positively related, which means that the demand for DS is expected to rise with growing GDP.

The starting-point of every discussion about defence spending is usually the perceived THREAT. In our case THREAT is measured by the estimated Soviet military expenditure (SUDS), as the Soviet Union bore the main burden within the Warsaw Pact before it collapsed.¹⁴ We expect that there is a positive relationship between THREAT and the countries DS with the consequences that THREAT will lead to a reduced DS. The counterpart to THREAT in the framework of a state's security position is the perceived SPILLIN. For the analysed countries the spillin variables are measured by the defence spending of the NATO allies (NATODS), which includes the spending of the non-European countries, the USA and Canada. If a country is a free-rider, its defence spending should be negatively related to its allies' military expenditures, which implies that an increase in spillin causes a decrease in DS. To enable an optimal reaction time to the spillin and threat variations, all spillin and threat measures are lagged by one year. Spillin, therefore, is the allies' defence expenditure in the previous year. A negative coefficient on these variables would indicate free-riding behaviour on the part of the considered country. In addition to the spillin variables dummy variables (D) are added to identify statistically the predicted structural change of defence spending concerning the flexible response doctrine. D*SPILLIN is SPILLIN multiplied by zero before 1974 and by one after 1973, as 1974 is statistically identified as the best shift year. If the impact of the doctrine of flexible response is consistent with our assumption, a structural shift of spending behaviour should occur.

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Table 14.3 Empirical results of the demand equations, 1961–88

	<i>GDP</i>	<i>NATO-DEX</i>	<i>D*NATO-DEX</i>	<i>THREAT</i>	<i>Constant</i>	<i>R</i> ²	<i>D-W</i>
Belgium	0.006 (2.454)	-0.011 (-8.191)	0.000 (0.327)	0.025 (9.768)	2,345 (9.272)	0.97	0.818
Germany	-0.003 (-0.416)	-0.035 (-3.923)	0.005 (1.525)	0.164 (3.438)	14,250 (9.341)	0.93	1.247
Denmark	-0.001 (-0.120)	-0.002 (-3.719)	0.000 (1.975)	0.009 (3.389)	971 (9.445)	0.92	1.395
France	0.037 (3.880)	0.038 (3.500)	0.013 (3.628)	-0.165 (-2.977)	11,338 (6.924)	0.94	0.840
Italy	0.018 (5.939)	0.006 (1.693)	-0.002 (-1.196)	0.004 (0.326)	788 (0.950)	0.96	1.267
Netherlands	0.012 (2.898)	-0.003 (-1.905)	0.002 (5.177)	0.009 (1.266)	2,326 (11.884)	0.98	2.242
Norway	0.014 (4.055)	0.002 (4.814)	0.001 (2.535)	0.002 (1.743)	-66 (-0.799)	0.98	2.091
UK	0.012 (0.966)	-0.038 (-2.374)	0.005 (1.659)	0.052 (1.046)	20,497 (5.533)	0.77	0.806

Empirical results: 1961–88

From the pool of potential predictor variables the demand equation for defence spending can be written in the form:

$$DS_t = \beta_0 + \beta_1 GDP_t + \beta_2 NATODS_{t-1} + \beta_3 D*NATODS_{t-1} + \beta_4 SUDS_{t-1} + e_t$$

where *e* measures the error and the β s are coefficients estimated by applying^t ordinary least squares (OLS) to the model. Data have been prepared for the period 1961–88, giving 28 observations.¹⁵ The year 1988 was chosen as the year of the end of the Cold War and the last year of influence on defence spending before German unification.

Table 14.3 contains the regression coefficients (*t* ratios in parentheses) of the tested countries. Most coefficients are significant at the 0,1 level, the *R*² are with the exception of the UK high, and the Durbin-Watson is in a reasonable range.

Discussion of the major findings

The coefficients measure each country’s marginal responses to changes of each of the five selected variables. Surprisingly the coefficients for GDP are not for all countries as significant as expected. The results indicate

that for the three countries Denmark, Germany and the UK INCOME is not a significant determinant of their defence-spending behaviour. The UK's estimated coefficient for GDP implies, for example, that a 1,000-dollar increase in real GDP causes only a 12-dollar increase in real defence spending, holding all other factors constant. In the case of Germany there would even be a 6-dollar decrease. This confirms the impression that in these countries the policy of internal compensation for external economic shocks is colliding more and more with defence spending. Therefore in these countries national security will not be relieved of financial pressure even with growing GDPs and expanding public budgets. Nevertheless for the other countries GDP represents a remarkable determinant for their defence expenditures.

Remarkable, too, are the findings concerning the variable THREAT. With the exception of the so-called flanking allies Denmark, Germany and Norway, who transpose their perception of the Soviet defence expenditure into higher defence spending, THREAT is not significantly and positively related to the five other countries defence spending. This seems to be an indication that the two nuclear allies France and the UK in particular, as well as Italy and the Netherlands, change their defence budget's level more for economic or political reasons than for the reason of threat. However, in view of the problems of the Soviet data, this finding should be used with caution.

Other interesting results are given in the estimated SPILLIN coefficients. Most of the values of NATODS and D*NATODS coefficients are significant and provide evidence that structural changes in each country's response to allies' expenditure occurred after the adaptation of flexible response. The reaction since 1974 is calculated as the sum of the two corresponding coefficients. The values for Germany show, for example, that it reacted negatively during the mutual-assured-destruction period to allies' defence increase. The marginal response after 1973 indicates that during the flexible-response era Germany is less responsive to spillins. This means, that Germany, although being a non-nuclear flanking nation, reduced its free-riding behaviour concerning the alliance. Comparable results can be stated for Belgium, Denmark and the Netherlands. This evidence supports the hypothesis that the new doctrine reduced free-riding and induced complementarity. Nevertheless it is surprising that in particular France did not respond to this structural change, maybe because of the expanding costs of its nuclear forces and its overseas commitments. This established a new free-rider situation in Europe, supporting the hypothesis that there exists a European alliance within the alliance.¹⁶ At least the results discussed indicate that the growing French spillin, based on nuclear deterrence, facilitates a change towards free-riding behaviour on the part of several European countries as observed within other alliances.

IMPACT OF THE NEW SECURITY SITUATION ON DEFENCE SPENDING

The end of the Cold War and with it the end to German division changed the security situation in Europe in principle. In the first place this new situation produced uncertainty and a confusing debate about the future European security system. The confusion is marked by several factors, which again have far-reaching implications for the discussed demand equations and in consequence for defence spending and for the economy itself.

The most important factor, the rapid collapse of the Soviet empire for whatever reason—economic pressure, military reorientation or shifting domestic priorities¹⁷—was the spur to the new security development. It led to a reformulation of Soviet security interests, which released the East European countries from Soviet control and caused eventually the dissolution of the Eastern security system. Although the political climate can change rather rapidly, the Soviet threat is fading. The diminishing perception of the Soviet military threat will induce a growing and very influential political pressure in Europe to cut back military spending. Though deterrence does not seem to become superfluous, it is more and more difficult to explain to the public the logic behind military preparedness or the necessity and rationale for the maintenance of military expenditures. Considering the variable THREAT in the demand model it seems to be quite likely that the pressure to reduce defence spending indicated by threat will increase, particularly in the flanking nations Denmark, Germany and Norway.

A second factor in connection with the diminishing perception of threat to influence defence spending will be the proliferation of arms-control agreements. Although the first steps have already been taken in the area of arms control during the 1950s,¹⁸ the major break-through was achieved by the Intermediate Nuclear Treaty in 1987 to eliminate intermediate and shorter-range missiles, now supplemented by the conventional arms-reduction treaty, which will dramatically reduce forces in Europe. The future will probably see a continuation of the arms races, but with a levelling off, due, among other reasons, to further arms-control agreements and diminishing threat, reducing gradually but with significance the defence spending not only of the flanking nations but of all European allies.

The culmination of the changing security situation in Europe was clearly the unification of the two German states in 1990, which more than changed the framework of the European security structure. Although Germany's membership of the alliance is not in question any more, the German contribution to NATO will be not only restructured but markedly reduced. To assuage Soviet fears, Germany has agreed, for

example, to reduce its army to 370,000 by 1994, including the former manpower of East Germany. This is a major reduction in any consideration, which will influence the SPILLIN to its allies remarkably. In addition, the budget constraints created by the yet unpredictable but high costs of the East German adjustment processes,¹⁹ which absorbed at least one-fourth of the 1991 federal budget, will not leave any room for maintaining the defence-spending level during the years to come. In consequence Germany will therefore face even deeper cuts on the security side. Considering the alliance behaviour concerning the SPILLIN variable, this will initiate in a foreseeable space of time a comparable reduction of most European defence budgets, maybe with the exception of the nuclear ally, France.

In this connection there have to be finally considered the proposals and their consequences to expand the European Community's responsibilities for the Continent's security and defence, without reducing commitments to NATO at the same time. A rejuvenation of the Western European Union, a regional defence body, is being discussed, too. Both proposals might complicate US involvement in European affairs and accelerate the US tendency to disengage from the defence of Europe. Considering the impact on the demand for security in Europe, both the European proposals and the declining military presence of the US would induce, because of the SPILLIN factor, a higher commitment to security for the European alliance partners, nevertheless at a much lower level than during the pre-Cold War environment.

To sum up, the near future will see major cuts in military expenditure in Germany and Europe, due to a diminishing threat of war in Europe, further arms-control agreements, budgetary limitations imposing constraints on both sides, a new adaptation to the post-Cold War environment, and a growing political pressure to exploit the so-called peace dividend.

NOTES

- 1 J.Zielonka (1991:127).
- 2 See C.Bertram (1990:45).
- 3 From the seminal work of Olson and Zeckhauser in 1966, military alliances have been of increasing interest to economists. See Olson, M. and Zeckhauser, R. (1966). For a survey and new findings in this field see Fritz-Assmus, D. (1990).
- 4 See Sandier, T. and Cauley, J. (1975); Sandier, T. (1977); Sandier, T. and Forbes, J.F. (1980); Murdoch, J.C. and Sandier, T. (1984).
- 5 For a more detailed discussion of these factors see Fritz-Assmus, D. (1990:154-64); Fritz-Assmus, D. and Zimmermann, K. (1990:127-32).
- 6 In addition the tendency of defence bureaucracies to safeguard or expand their organizational scope, ensuring the interest of their members, has to be taken into account.

- 7 See Comes, R. and Sandier, T. (1986:261).
- 8 See Nato Information Service (1984:139).
- 9 See Sandier, T. and Forbes, J.F. (1980:425). For a detailed discussion of the joint product model see Sandier, T. (1977); Fritz-Assmus, D. (1990:138–41).
- 10 This has been discussed theoretically and empirically by Murdoch, J.C. and Sandier, T. (1984).
- 11 A similar demand equation based on the joint product model is more rigorously demonstrated in Murdoch, J.C. and Sandier, T. (1984). For a detailed discussion of the basic demand equations see Fritz-Assmus, D. (1990:166–73). A more detailed specification of German demand for defence spending was developed in Fritz-Assmus, D. and Zimmermann, K. (1990:135).
- 12 Data for all NATO countries are from the Nato Statistical Service.
- 13 For transformation into real figures each country's consumer-price index has been used. The basic data of CPI and the exchange rates of the NATO countries have been obtained from IMF, International Financial Statistics (various issues), and transformed to a standard series.
- 14 The SIPRI data are considered to be the best available, nevertheless they should be used with caution. See SIPRI (various years).
- 15 The data for DS, GDP and D cover 1961–88, the data for SPILLIN and THREAT cover 1960–87.
- 16 For a more detailed discussion particular of this finding and a closer look at French-German relations see Fritz-Assmus, D. and Zimmermann, K. (1990:136).
- 17 See C.Bertram (1990:46).
- 18 See Intriligator, M.D. and Brito, D.L. (1990).
- 19 See Hüther, M. and Petersen, H.-G. (1992), chapter 5.

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