

# Peace Dividend in Germany; a Cost-Benefit Assessment

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## FORCE REDUCTIONS FOLLOWING UNIFICATION

As a consequence of the ratification of the treaty between the former two German States and the United States, the United Kingdom, France and the Soviet Union on the unification of Germany, the armed forces of the united Germany had to be reduced to the size of 370,000 soldiers in 1994.

This implies a reduction of approximately 295,000 soldiers compared to the size of the *Bundeswehr* (495,000) plus the former *Nationale Volksarmee* (National People's Army NPA) of the GDR (170,000). The number of civilian employees of both armies will shrink from some 270,000 in 1990 to 167,000 in 1994.<sup>1</sup> In the same timeframe, some 337,000 Soviet soldiers will leave the territory of the former GDR accompanied by some 163,700 family members and 44,700 non-military personnel. The Western allies of Germany will also reduce the size of their contingents deployed on the territory of the former FRG. At the end of 1995 only some 70,000 US troops will remain in Germany and perhaps 23,000 British and 15,000 French troops instead of 250,000, 66,000 and 44,000 respectively in 1990. Together with the withdrawal of Canadian, Belgian and Dutch contingents these reductions will cause a further loss of some 60,000 civilian jobs for German employees.

The total employment effects caused by the agreed, announced or planned reductions of foreign and national armed forces, plus the foreseeable losses of military dependent employment, add up to some 420,000 jobs. Since the reduction of soldiers serving in the *Bundeswehr* and the former NPA concerns for the most part conscripts, the real loss in employment amounts to some 300,000 or about 0.8 % of all German employees.

In 1989 an area of some 9,200 square kilometers in both German states was used by the *Bundeswehr*, the allied forces, the NPA and the Western Group of the Soviet Forces. (2,400 sq.km were used by the NPA, 2,770 sq.km by the Western Group, 1,480 sq.km by the allied Western forces and 2,530 sq.km by the *Bundeswehr*). The major part of these facilities is located in rural areas; more than 30 % of the total is used as training areas. Only 2,900 sq.km are situated in or near urban districts. In future years an area of some 2,500 sq.km in the new federal states but only 200 sq.km in the Western federal states<sup>2</sup> will be released for civilian use.



Table 1

Reductions of Major Weapon Systems<sup>3</sup>

<i>Systems</i>	<i>Bundeswehr 1990</i>	<i>NPA 1990</i>	<i>CFE- ceiling</i>	<i>Reduction</i>
MBT	4,726	2,274	4,166	2,834
AFV	3,103	5,817	3,446	5,474
Artillery	2,140	2,462	2,705	1,897
Combat-Helic.	207	51	306	
Combat Airc.	626	392	900	118

**REDUCTION OF MILITARY EQUIPMENT**

The reductions of the *Bundeswehr*'s equipment exceed the national limitation imposed by the Conventional Forces in Europe (CFE) Treaty. They result from the Treaty on the Final Settlement with Respect to Germany and the conditions made by the leadership of the former Soviet Union intended to ensure that the unification of both German states should not increase the military power of Germany. The formula  $1 + 1 = \text{less than } 1$  implies that the limitations for the Federal Republic before unification are valid even for the united Germany.

Table 1 shows that the FRG can fulfil the CFE obligations by first and foremost destroying Treaty Limited Equipment and Look Alikes of the former NPA's stockpile. Moreover, the *Bundeswehr* has no use for 80% of the former NPA's other matériel: 6,200 cars, 52,000 trucks, 25,000 trailers, 1,500 motor-cycles, 295,000 tons of ammunition, 1.2 million small arms, 4,500 tons of liquid missile propellant, and 760,000 kits of clothing, and further, 600,000 kits of personal equipment are to be destroyed or sold.

Moreover, the, 'build-down', of the *Bundeswehr*'s size and the related adjustment of the army's structure renders up to 30% of matériel superfluous.

**REDUCTION OF DEFENSE EXPENDITURES<sup>4</sup>**

The defense expenditures of the Federal Republic are composed of all the expenditures shown in the Defense Budget (*Einzelplan 14*), in the Budget for Defense Expenditures in Connection with the Stationing of Foreign Armed Forces (*Einzelplan 35*) and in the Budget for Civilian Defense (*Einzelplan 36*). Other expenditures can be found in the related *Kapitel* of the Foreign Office's budget (*Einzelplan 05*), of the Budget for Public Assistance (*Einzelplan 33*) and the Budget for General Financial Administration (*Einzelplan 60*).

The defense expenditures in connection with the stationing of foreign armed forces in the Federal Republic amounted to DM 1.8 billion in 1989 and 1990 and decreased to DM 1.4 billion in 1991 and DM 1.2 billion in 1992, 1993 and 1994. A further decrease to DM 400 million in 1997 is expected in the wake of the announced troops withdrawal.

The expenditures for civilian defense amounted to some DM 870 million in 1989, rose to some DM 900 in 1990 and the following years and are decreasing to DM 770 million in 1993 and to DM 670 million in 1994.



Table 2

Defense Budget in billion DM						
Year	1989	1990 <sup>s</sup>	1991	1992	1993	1994
Salaries	23,4	27,6	25,6	25,9	25,7	25,0
O&M	4,8	5,2	5,1	5,0	4,8	4,6
Other operational	7,5	9,3	7,8	7,9	7,9	8,4
R&D	2,9	3,4	3,1	2,9	2,5	2,5
Procurement	11,4	12,8	9,5	7,7	7,0	5,7
B&C	2,4	2,9	2,1	2,1	2,2	1,9
Other investment	0,2	1,9	0,2	0,2	0,2	0,2
Global reduction		-1,2	-1,0		-0,7	
All operational	36,6	42,2	38,5	38,9	38,5	38,1
All investive	17,2	21,3	15,0	13,1	11,9	10,4
Total	53,2	62,2	52,6	52,1	49,8	48,6

The defense-related expenditures in the budget of the Foreign Office total DM 320–400 million per year. The most important are NATO defense assistance (some DM 160m), equipment assistance (some DM 60m), special armaments assistance (DM 50–70m), contributions to NATO (civilian budget), WEU and CSCE (some DM 45m) and payments for UN peacekeeping operations (\$76m in 1989, \$39m in 1992, \$127m in 1993). But even the payments (DM 200m in the years 1991–94) for the retraining of returning Soviet/Russian soldiers could be counted as defense-related expenditures.

The related *Kapitel* and *Titel* in the budget for public assistance comprising expenditures for pensions, transition and compensation payments for the *Bundeswehr*'s soldiers are as follows:

*Einzelplan 33, Kapitel 3304 in billion DM*

Year	1989	1990	1991	1992	1993
Total	2,8	3,3	3,4	3,8	4,3

Since the Gulf War, defense-related *Kapitel* were introduced into the budget for general financial administration. *Kapitel 6007* covers the expenditures for measures in connection with the Gulf War. It shows expenditures of DM10.5 billion for the 1991: DM8.7 billion for the military engagement of the USA, DM800 million for the United Kingdom and DM300 million for France. Further, DM285 million were earmarked for the replacement of the *Bundeswehr*'s equipment, which was left to the Coalition forces. DM375 million was spent for the procurement of defense systems for Israel. The related expenditures of this *Kapitel* decreased to DM569 million in 1992 (394 million for replacement, 175 million for deliveries to Israel) and DM585 million in 1993 (400 and 185 million respectively).

*Kapitel 6004* "Special Payments by the Federal Republic" contains a group of *Titel* concerning the costs in connection with the stationing and withdrawal of the Soviet Forces Western Group from Germany. For 1991 some DM1.8 billion, for 1992 some DM2.17 billion and for 1993 DM1.7 billion Marks were earmarked for that purpose.



Table 3

Gross Calculation of Defense Expenditures (billion DM)					
Year	1989	1990	1991	1992	1993
<i>Einzelplan No.</i>					
<i>EP 14</i>	53,2	62,2	52,6	52,1	49,8
<i>EP 35</i>	1,8	1,8	1,4	1,2	1,2
<i>EP 36</i>	0,8	0,9	0,9	0,9	0,7
<i>EP 60</i>			12,3	2,5	2,3
<i>EP 05</i>	0,3	0,3	0,4	0,4	0,4
<i>EP 33</i>	2,8	3,3	3,4	3,8	4,3
Subtotal	58,9	68,5	71,0	60,9	58,7
<i>EP 09</i>			0,5	2,2	2,2
Total			71,5	63,1	60,9

An account for further expenditures in connection with the withdrawal of the Soviet Forces' Western Group remains in the budget of the Ministry of Economics (*Einzelplan 09*). *Kapitel 0902* shows that in the years 1991 to 1994 DM7.8 billion are earmarked for the housing program for soldiers returning to Russia. The costs for this program are distributed among the respective fiscal years as follows: DM500 million in 1991, DM2.27 billion in 1992, DM2.22 billion in 1993, DM2.8 billion in 1994.

NATO's figures for Germany in the yearly published statistics of defense expenditures of member countries do not include the last three mentioned groups of expenditures. But they include the expenditures of the Ministry of Interior for the border guards (*Bundesgrenzschutz*). *Einzelplan 06, Kapitel 0625* shows related expenditures of some DM1.9 billion in 1992 and DM2.1 billion in 1993 of which over 75 % is spent on salaries and wages. The following gross calculation does not include these and some other expenditures defined by NATO as defense-related.

The former GDR's expenditures for the National People's Army for the year 1989 amounted to 14.8 billion Marks.<sup>6</sup> Taking these expenditures at an exchange-rate of 1:1 into the gross calculation the total of the defense expenditures of the two German states in 1989 reached DM73.7 billion.

### A COST-BENEFIT ASSESSMENT

#### *Reduction of Armed Forces in Germany*

##### **Cost**

The main cost factor caused by the reduction of the *Bundeswehr's* size and the withdrawal of allied armed forces is the loss of some 300,000 direct military-related jobs in the years 1989-94. The reductions will furthermore have indirect effects on employment in the most affected regions.<sup>7</sup> In the light of the present economic situation, no compensation or substitution can be expected for the major part of these jobs. Because this loss of employment does not happen all at once, it is difficult to calculate the gross expenditures for the related unemployment paid



out of the budget of the Ministry for Labour and Social Affairs. An average of DM25,000 per year per unemployed person could be the basis for a calculation.

A second cost factor is the loss of purchasing power caused by the withdrawal of allied forces. A cost-benefit calculation of the economic effects of the presence of the United States armed forces in Germany shows that the benefit for the German economy amounted to some DM12 billion in 1988.<sup>8</sup> The allied forces together generated a foreign financed demand of some DM19 billion per year and a further employment of around 150,000 people. In some regions of West Germany up to 13% of the working population is affected by the ongoing cuts in the military.<sup>9</sup>

Another important cost factor is the financial contribution of the FRG to support the withdrawal of the CIS-Armed Forces Western Group from the territory of the former GDR. The "Treaty between the Federal Republic of Germany and the Government of the USSR on Some Transitory Measures" obliges the FRG to a payment of DM3 billion for the subsistence and the withdrawal of this Group, to provide a credit of DM3 billion without interest and a further contribution of DM1 billion to the costs for transportation. Furthermore, the FRG finances a construction program for housing for soldiers returning to the CIS to a total of DM7.8 billion.

Up to now it cannot be predicted how many billions of Deutschmarks the FRG will have to spend for the environmental clean-up of former Soviet installations. According to the "Treaty on the Conditions of the Limited Stationing and the Modalities of the Planned Withdrawal of Soviet Troops from the Territory of the Federal Republic of Germany", outlays for decontamination and environmental clean-up should be deducted from the value of these installations. During a visit of Chancellor Kohl to Moscow in December 1992 both sides gave up mutual claims.<sup>10</sup> The Commander-in-Chief of the Western Group, General Burlakov, estimated the value of related installations at DM10.5 billion. The related cost for decontamination and clean-up, meanwhile, was estimated at DM25 billion in June 1993.<sup>11</sup>

## Benefit

The Ministry of Defense calculates the savings through reducing the *Bundeswehr* from 496,000 in 1991 to 370,000 soldiers in 1994 at DM5.8 billion to the year 2000. The savings by reducing the *Bundeswehr* civil workforce (from 226,000 in 1991 to 188,000 employees in 1993 and further reductions to 167,000 in 1995 and 151,000 up to the year 2000) are calculated at some DM5.1 billion.<sup>12</sup> The greater part of these savings will be devoured by payments for pensions, transition assistance and compensation. *Kapitel 3304* in the budget for public assistance (*Einzelplan 33*) shows already extraordinary growth rates.

It is hardly possible to estimate the real value of former military real estate under the supervision of the Ministry of Finance. The value of these assets cannot be estimated at market prices as a German news magazine tried to do recently: selling half of the 383,000 hectares (used by the *Bundeswehr* and the allied forces) at DM200 per sq.m would realize proceeds of DM380 billion.<sup>13</sup> On the one hand the guidelines for releasing federal-owned real estate formerly used by the military



favour the federal states and communities. On the other hand the federal budget's guidelines oblige the Ministry of Finance to sell real estate at market-prices. This price in many cases is too high for the federal states or communities, even if reasonable concessions for social purposes are made. It has already been mentioned that the area and the installations used by the CIS-Western Group can only be sold after an expensive environmental clean-up. Perhaps this is one of the reasons why the Ministry of Finance recently decided to leave these areas without payment to the new federal states. The revenue of the sale of federal-owned real estate since the end of 1990 has amounted to some DM 1.7 billion.<sup>14</sup>

### *Reduction of Military Equipment*

#### **Cost**

The expenditures for the elimination and destruction of Treaty Limited Items, Look Alikes and the greater part of the former NPA's ammunition stockpiles are financed from the MoD's budget. *Kapitel 1409* Arms Control and Disarmament shows in *Titel 55302* related expenditures of DM 55 million in 1991, DM 148 m. in 1992, DM 220 m. in 1993 and DM 440 m. for the year 1994. *Titel 68501* in the same *Kapitel* cites expenditures of DM 85 million for the management and protection of related ammunitions depots. More than 4,600 employees (in the MoD's sphere) are concerned with the elimination and disposal of equipment and matériel: 186 in the *Bundeswehr's* administration, 3,575 in the military sector and 857 in federal-owned companies (MDSG, VEBEG).<sup>15</sup>

#### **Benefit**

Only a small part of the former NPA's matériel was taken into the *Bundeswehr's* service. Another part, in particular trucks, clothing, tools and medical supplies, were delivered to developing and CEE countries. Thirty thousand tons of ammunition and an unaccounted number of AFVs, small arms and machine guns were left to NATO-countries and Finland. In November 1992, 39 ships of the former National People's Navy were sold to Indonesia. The price is not known.<sup>16</sup> The earnings by the *Bundeswehr* are accounted in *Kapitel 1415* "Quartermaster" as income. They amounted to DM 142 million in 1991, DM 70 million in 1992 and DM 120 million in 1993.

The savings in operations and maintenance are hard to calculate. But definitely a part of the savings in the related *Kapitel* of the defense budget results from the reduction of equipment and matériel stockpiles.

### *Reduction of the Defense Budget*

#### **Cost**

Table 2 indicates that the greater part of savings in the defense budget are charged to investment, especially to procurement expenditures. Many companies are not able to adjust to the rapidly decreasing demand. In the midst of an overall industrial crisis, strategies of diversification or substitution are difficult to implement. Without any support by federal adjustment programs, the arms industry is forced



to reduce its workforce: up to 50% of the related jobs will be lost by the year 1995. The industry calculates that it will have to spend some DM 7 billion for social compensation<sup>17</sup> No comparable calculations of the costs for necessary unemployment payments are known and, more important, up to now nobody has tried to assess the follow-up costs, especially for maintaining Germany's future defense industrial base.

### Benefit

Taking into the calculation that the former GDR spent some 14.8 billion Marks for defense in 1989, the reduction of both German states' defense budgets from 1990 to 1994 amounts to some DM 74 billion at 1989 prices. Regarding the inflation rate (2.6% in 1989, 3.4% in 1991, 4.5% in 1991 and 1992) the savings rise to DM 86 billion at prices of 1993. The greater part of these savings was spent for defense expenditures not covered by the defense budget. Since 1992, the figures in Table 3 indicate a real decrease of defense expenditures.

## CONCLUSION

In future years, the resulting savings in the short term will reach a considerable amount and can help to alleviate the transition period, which may even last some more years.

They are then followed by benefits as inputs are reallocated to the production of civilian goods and services, which provide the ultimate "peace dividend". Both the initial conversion costs and the ultimate peace dividend could be measured in financial terms or, even more appropriately, in real terms, as the real cost of the initial resource unemployment and reallocation and the real benefit of the ultimate additional civilian output. A "return of disarmament" can then be obtained as the implied social rate of return, taking explicit account of both the real costs and the real benefits of disarmament.<sup>18</sup>

The reallocation process in Germany up to now has lasted only a few years. This is too short to measure the effects of a reallocated input which can be estimated to be under 0.5% of GNP. Therefore, while in midst of transition, it is impossible to express the ultimate peace dividend in Germany either in financial or in real terms. Meanwhile a big decrease in defense expenditure indicates that the process of disarmament is accompanied by an increasing process of fiscal conversion.<sup>19</sup> Lutz Köllner introduced the term *fiskalische Konversion*. Analysing the different forms of fiscal conversion, he concluded:

However future research on fiscal conversion will develop, it is necessary to create a fundamental matrix of all possible processes of conversion inside economic cycles and growth processes. This matrix must be more than a simple "*tableau economique*". Moreover, a comparative input-output-calculation is necessary for the military sector which has to be converted and then converted for the non-military sector. This calculation can be part of sectoral and overall economic cost-benefit comparisons of different conversion processes.

Even if the input is rather small, the effects of the reallocation process can be measured in the years to come. Based on accurate data, it should be possible in the



long term to figure out the peace dividend not only in financial but also in real terms.

## NOTES

1. A further reduction of 16,000 civilian jobs is planned up to the year 2000.
2. Data according to *Baulandbericht 1993* (Building Area Survey 1993) cited in Michael Möninger; "Drei Millionen Wohnungen"; *Frankfurter Allgemeine Zeitung*, 30 August 1993, p. 25
3. MBT = Main Battle Tank, AFV = Armoured Fighting Vehicle
4. Data on defense expenditures are compiled from *Bundeshaushaltsplan für das Haushaltsjahr 1989* (Federal Budget Plan for Fiscal Year 1989) and the years up to 1993. The German specification *Einzelplan* corresponds to *function* in the US budget, *Kapitel* to *subfunction* and *Titel* to *item*.
5. The figures in this column are based on calculations made by the Ministry of Defense. *Einzelplan 14* of the Federal Budget for 1990 comprises expenditures of DM 53.6 billion. The expenditures for the former NPA were integrated into the federal budget, part B in October 1990. The calculations of the MoD differed from those of the Ministry of Finance which figured out expenditures of some DM 60 billion for 1990 (see *Wehrdienst*, 25 February 1991, 1258/91, p. 3).
6. Defense expenditures according to *Statistisches Jahrbuch der DDRs* (Statistical Yearbook of the GDR). Taking the *Ausgaben für öffentliche Sicherheit, Rechtspflege und Sicherung der Staatsgrenze* (expenditures for public security, administration of justice and border security) into the calculation, the expenditures for the year 1989 grow up to DM 16 billion. See: Petra Opitz: *Rüstungsproduktion und Rüstungsexport der DDR*. (Arms production and arms export of the GDR), Berlin: Berghof Stiftung für Konfliktforschung, 1991, p. 21.
7. *Folgen von Truppenreduzierungen und Rüstungskonversion für den Arbeitsmarkt*. (Consequences of armed forces withdrawal and arms industry conversion for employment). Uwe Blien, Marianne Gersdorf u.a. *Institut für Arbeitsmarkt und Berufsforschung der Bundesanstalt für Arbeit*, Nürnberg, AB, 1992, p. 292.
8. Hartmut Bebermeyer; *Die wirtschaftliche Bedeutung ausländischer Streitkräfte in der Bundesrepublik und Konversionsprobleme bei ihrem Abzug*. (The economic importance of foreign armed forces in the Federal Republic and problems of conversion upon their withdrawal). In: *Abrüstung und Konversion*, L. Köllner, B.J. Huck (eds.), Frankfurt: Campus 1990, p. 340–59
9. See "The Economic and Social Impact of Reductions in Defence Spending and Military Forces on the Regions of the Community". Commission of the European Communities – Luxembourg: Office for Official Publications of the European Communities, 1992, esp. p. 96.
10. *Besuch des Bundeskanzlers in der Russischen Föderation. Gemeinsame Erklärung*, in: Bulletin, No. 139, 22 December 1992, p. 1265
11. This assessment is based on a study conducted by the *Industrieanlagen-Betriebsgesellschaft* (IABG) and is the result of an examination of 560 installations left by the CIS-Western Group. See; *Altlasten kosten 25 Milliarden D-Mark*. in *Frankfurter Allgemeine Zeitung*, 1 June 1993, p. 16
12. Figures given by the Head of the MoD's Budget Department, Adolf Fischer. See *Wehrdienst*, No.23, 7 June 1993, p. 3; they concern only the savings of personnel expenditures.
13. "Tränen in den Augen", in, *Der Spiegel*, No.34, 23 August 1993, p. 63; The MoD itself assessed the value of the territory used by the allied forces to DM 40 billion in 1983. Compare: White Paper 1983. The Federal Minister of Defense; Bonn, 1983, p. 127
14. Statement of the Minister of Finance, Jürgen Echter Nach. in "Militärgrundstücke im Schlußverkauf", *Frankfurter Allgemeine Zeitung*, 29 July 1993, p. 18. The related budget of the MoF shows revenues of DM 307 million in 1991, DM 180 million in 1992 and DM 380 million in 1993 (*Kapitel 0807, Titel 13101*) but even expenditures for the demilitarization of federal-owned installations: some DM 8 million in 1992 and DM 43 million in 1993 (same *Kapitel, Titel 53222*).
15. See *Wehrdienst*, No.3/1993, 18 January 1993, p. 3.
16. See the answer by the MoD's Secretary of State, Bernd Wilz, 11 May 1993 to the question of MP Dieter Schanz, in: *Deutscher Bundestag, Drucksache 12/4951*, p. 41
17. Calculation presented during a session of the Arms Economics Working-Group (*Rüstungswirtschaftlicher Arbeitskreis*). See *Wehrdienst*, No.22, 1 June 1993, p. 2.
18. Michael D. Intriligator, "The economics of disarmament as an investment process", in: *UNIDIR Newsletter*, No.19, September 1992, p. 7.
19. Lutz Köllner: "Formen fiskalischer Konversion", in: *Abrüstung und Konversion*, 7, p. 207.