

## **Migration from East to West: A Net Gain for Germany?**

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### **Summary:**

This case has been written to address the issue of migration within the context of an undergraduate course in international economics. It may also be useful in courses on the European Community or on political economy. An introductory course in microeconomics will be useful to the students. Some of the most interesting facets of the case are unveiled through simple regression analysis.

This case is designed to bring into play the students' knowledge of theories of international migration that they had studied in previous, more theoretical, readings for the course. They are given sufficient information to decide which "model" of migration is more applicable to the German case, and to calculate the responsiveness of migration in the recent past to various possible incentives. I expected them both to analyze the present situation and to provide policy advice for future discouragement or channeling of migration flows consistent with economic theory.

### **Contents:**

Case Study  
Instructor's notes

### **Note from the author:**

I am pleased to be able to distribute this case study on the Internet, and have no objection to faculty use of the case in educational settings. I ask two things: (1) that the cases not be resold to students, and (2) that you contact me at the above address with an evaluation of the case study and your success with it in the classroom.

The administrators and fellows of the Pew Faculty Fellowship in International Affairs have been a continuing source of inspiration to me as I have developed this and other cases. Thanks to all of them for their support.

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### **Introduction.**

West Germany had a long-standing tradition of hospitality and use of migrant labor in its productive sectors. It used this pool of largely low-skilled labor quite effectively throughout the post-war period to stabilize the income and employment of its citizens, although tensions and resentment rose from time to time during periods of recession or slow growth. The unification of the two Germanies in 1990 represents a new chapter in migration, however -- now the migrants are citizens too!

The Berlin Wall was a symbol of the separation of East and West Berlin, and more broadly East and West Germany, from its establishment in 1949. On November 9, 1989 the Berlin Wall was pulled down and the borders of East Germany (the German Democratic Republic) were opened to travel to West Germany (the Federal Republic of Germany). On July 1, 1990 German economic, monetary and social union occurred: East Germany's currency was retired, exchanged for the Deutsche Mark of West Germany. East Germany adopted all of West Germany's legal, tax and social insurance programs, and trade barriers were lifted. On October 3, 1990 the five states of the East German command economy were reunited with the states of West Germany in union. With this final unification all barriers to labor movement were removed. During this period there has been a flood of migrants from the Lander (states) formerly of East Germany toward the states formerly incorporated in West Germany. Resentment is rising once again.

A recent IMF report indicates that "immigration from Eastern European countries is expected to continue at a high level over the next few years as it has been estimated that there are 3-4 million people in these countries who are of German descent. There could also be a sizeable further immigration from east Germany during the time of structural change and adjustment to a market economy." (Lipschitz and McDonald, p. 130)

As representatives of the German Labor Ministry, you have been asked to defuse this potential crisis. To proceed, you must (1) identify the historical causes of migration and (2) recommend policies for the German government to limit or channel more smoothly the flow of migrants. The following information should be of use to you in preparing your report.

### **Population and Internal Migration Trends in West Germany**

West Germany, with 61,400,000 people and an area of 249,000 square kilometers, was one of the most densely populated countries in Europe. Unlike most European countries, it does not have one dominant economic center, but rather has several large economic centers which are spread evenly across the entire country. Metropolitan areas such as Frankfurt, Hamburg, Munich, and Dusseldorf provide important roles in government, financial, and cultural activities. Table 1 illustrates Western Germany's 11 states in terms of population and area, and Figure 1 provides their geographic position.

Information is available for migration within West Germany during the period 1987-1989; it is summarized in Table 2. The states of Bavaria, Bad-Wurttemberg, West Berlin, Hesse, and Schleswig-Holstein showed large internal migration gains, while Lower Saxony, Saarland, and North Rhine-Westphalia suffered large migration losses.

**Historical Evidence of Migration into West Germany**

Intra-European migration has been commonplace throughout this century. West Germany has historically been a host country to migrants. These workers are divided into two groups by the existence of the European Community. The Treaty of Rome in 1951 established the right of free migration among the members of the European Economic Community (EEC); in Article 7 it forbade the general discrimination in employment on the basis of nationality. (There were relatively few exceptions -- one prominent exception was the right to discriminate among nationalities in filling public-sector positions.) For non-EEC citizens, migration into West Germany was governed by a guest-worker (*Gastarbeiter*) system of temporary work permits. By controlling the number of permits, the government could adjust the flow of migrant workers in response to changing economic conditions.

During the period prior to 1973, this system worked quite effectively. West Germany was expanding its production rapidly, and migrants from each group flowed in. After 1973 slower economic growth eliminated the demand for migrant labor, and generated feelings of resentment to the remaining migrants (*Ueberfremdung*). These "temporary" migrants were encouraged to return to their countries of origin through (1) cash payments to returning migrants, (2) subsidies for professional training in their countries of origin, (3) development projects begun in countries of origin, and (4) direct personal aid for setting up businesses in countries or origin. Those programs were successful in reducing the number of migrants. This expansion and then reduction in migrant employment stabilized the income and employment opportunities of the citizens of West Germany.

In 1980 the guest-worker force remained a large proportion of the West German labor force. Many of these workers on "temporary" work permits had been in the country for a generation. Their children had grown and entered the work force knowing only West Germany as their home.

**Foreign Labor Force in West Germany  
(in thousands, and as a percent of labor force)**

	Foreign labor force	Percent of total
1960	461	2
1970	1727	6
1973	2519	11
1980	2072	9

Source: Molle.

These migrants retained ties with family in their countries of origin. One measure of these ties is the quantity of remittances sent back to the country of origin by migrants. Turkey, one of the major sources of migrant labor to West Germany, was heavily reliant upon that source for foreign exchange as well as for jobs.

### Turkey: Contributions of Emigration

	Emigrants as percent of non-agricultural employment	Remittances as a share of total imports
1965	5.5	12.2
1970	10.3	28.8
1975	13.7	25.1
1980	13.6	26.2
1984	14.9	17.5

Source: Conway (1987).

Note: these are emigrants to all host countries, not just West Germany.

#### **The West German Labor Market.**

Collective bargaining is an essential labor market institution in West Germany. German unions are generally organized nationwide along industry lines. The largest German labor union is the Deutscher Gewerkschaftsbund (DGB), an umbrella organization including 17 industry unions. Roughly 80 percent of all unionized workers are members of the DGB. Employers either bargain with the DGB member unions directly or are members of a nationwide employer association that bargains on their behalf. The employer associations are also organized along industry lines. Although wage contracts are ultimately negotiated at the state or plant level, the national unions publicize their wage demands, which then become a standard for other negotiations.

A significant feature of the West German system is that it is possible for collective bargaining agreements to become generally binding for all employees and enterprises in an industry, regardless of whether they belong to the labor union or employer association. Either party in a collective bargaining agreement may petition the labor minister in the Lander to extend the contract to non-union enterprises if more than half the employees in the relevant industry are employed by firms that were a party to the negotiated contract. Although only about one-third of German workers are union members, collective bargaining may affect as many as 90 percent of German workers because of contract extensions and spill-overs.

#### **Population, Employment and Migration Trends from East Germany.**

East Germany was a highly industrialized country of 16.4 million people in an area of 108 thousand square kilometers. For a century there has been a sharp contrast between the northern and southern parts of this area; the south is highly industrialized while the north is more agriculturally oriented and less industrialized. As a result, the south is more developed and densely populated. There are two main agglomerations: the districts of Halle, Leipzig, Dresden, and Karl-Marx-Stadt in the states of Saxony and Saxony-Anhalt; and the urban area surrounding and including East Berlin. The states of Mecklenburg and Brandenburg, in the North, are more agricultural in structure.

The population of East Germany has declined in absolute terms since 1950 -- the only country in the world to experience this. External migration was an important factor in that population decline. According to the United Nations, "Since 1950 approximately 4 million people have left East Germany, of which 343,854 during 1989 alone". The 1989 exodus alone represented over two percent of the population. East Germany had restrictive external migration policies, but these eased somewhat towards the end of the 1980s.

Table 2 illustrates the populations and growth trends in different states of East Germany in 1989. East Germany's internal migration policies had always allowed its citizens to choose their place of residence and work, leaving development policies to stimulate most of the internal migration. Saxony-Anhalt and Mecklenburg had the highest negative internal migration rate per 10,000 residents. East Berlin attracted many internal migrants, but also possessed the highest external migration rate per 10,000 residents. Saxony, the most populous state, also had a high external migration rate.

### **Product and labor markets in East Germany prior to unification.**

East Germany's economy in the four decades prior to reunification was under tight central political control and participated little in the international division of labor. The state owned the means of production, and output was determined by central planning. Industry was organized into Kombines, firms that were vertically and horizontally integrated. In manufacturing, 126 federal Kombines and 95 regional Kombines accounted for 95 percent of the net material product in 1989.

East Germany had a small private sector in light industry, trade and crafts, but high taxation gave little incentive to operate. Prices bore little relation to cost; luxury goods were highly taxed, while basic goods such as food and housing were highly subsidized. Only a small number of telecommunications facilities were available, organized around government Kombines, rail lines were dense because coal was in use as the fuel of choice, and road networks were limited because time was not a cost in production.

East German plants were typically much larger than those in West Germany. The capital stock of East Germany was outmoded; fifty percent of the capital stock was more than eleven years old. (This can be compared to the analogous 29 percent in West Germany.)

Only six broad compensation groups existed for production workers. Wage levels for these groups varied, however, by industry. Even within the wage groups there was extensive variation. Much of the unplanned variation comes from bonuses, which accounted for 6 percent of compensation, on average, in East Germany. Enterprises had more discretion over bonuses than over the base wage. East German workers were free to work for whichever firm they chose, but rationed housing may have limited mobility.

### **The impact of unification on the East German economy.**

Currency union led to a tremendous price-cost squeeze in East Germany. Depression set in as industrial output contracted and unemployment and short-time soared.<sup>1</sup> Analysts suggested two reasons for this squeeze: falling demand for East German goods, given the freer access to West German products, and the inability to cover short-run variable costs by selling their goods at market prices. The government policy response was to take the "big bang" approach: this was defined by the OECD as a plan to subject "the whole economy immediately to world market prices, setting right from the start the appropriate price signals for resource allocation". The industrial sector took the first blow, with a decline in output of 35 percent in the first month. In December 1990, industrial output was 46 percent of its 1989 levels. By February 1991 the aggregate unemployment rate was 8.9 percent and the short-time rate was 21.5 percent. Akerlof, et al. (1991, p. 27) estimated that only 8.2 percent of the East German workforce was employed in viable firms that can

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<sup>1</sup> Short-time is a system defined by Eschweiler where "the beneficiaries retain jobs but work drastically fewer hours while drawing unemployment compensation covering up to 90 percent of full time pay."

cover short-run average variable costs. These firms are thus in danger from foreign and intra-German competition following the "big bang".

Wages in East Germany rose after currency union: with the conversion of wages at par, nominal wages in industry increased 42 percent between early 1990 and October 1990, thus leading to the tripling of real product wages in East Germany. A large differential remained between wages in West and East Germany.

**Average Gross Monthly Wages of Industrial Employees  
in Deutschemarks**

	West Germany	East Germany
1/1990	3809	1184
4/1990	3873	1168
7/1990	3983	1350
10/1990	4021	1588

Source: Statistisches (1991), p. 574

Tremendous variance remains in the wage differential from East to West across industries. For example, cleaning services in East Berlin pay 100 percent of the West Berlin level, while the textile industry in the East pays 43 percent of the West level. The exaggerates the relative size of take-home pay in the East, moreover, because bonuses and fringe benefits are much lower or non-existent in the East. Furthermore, work hours are longer in the East and vacation time is shorter. One analyst calculated that metal workers in Saxony earn 44.8 percent of the hourly wage of Bavarian metal workers, although the base wage is formally set at a 58.6 percent ratio. (Bispinck, et al.)

**Evidence on Migration into West Germany.**

In the 1950s, 2.6 million people migrated from Eastern Europe, including East Germany, to West Germany. This trend has continued up to the present. Table 4 provides statistics on recent immigration of ethnic Germans into Western Germany. These people of German descent resided in Eastern Europe, including East Germany, and migrated to Western Germany from 1988-90. The total in-migration for these years is given as a value per 100,000 residents in each state. West Berlin drew in the largest number of migrants per capita. Bavaria, Lower Saxony, Hesse, and Bremen also had large immigrations of ethnic Germans. The most populous state, North Rhine-Westphalia, received a large number of migrants but because of its large population the per capita rate was small. (North Rhine-Westphalia contains the Rhine-Ruhr agglomeration, one of the largest, most industrialized regions in Europe.) According to Koch and Gatzweiler (1980, p. 16), "All workers, in fact, assume that better working conditions and higher incomes are available in regions with large metropolitan centers, such as Hamburg-Bremen, Dusseldorf-Cologne-Bonn, Frankfurt-Wiesbaden-Mainz, Stuttgart, Nuremberg, and Munich". The majority of the migrations occurred in late 1989, before reunification was certain; according to Akerlof et al. (1991, p. 44) migrants were seizing an "open window of opportunity".

### Migration from East to West Germany Prior to Reunification

1989			1990	
January-March	15306		January	73729
April-June	28957		February	63893
July-September	65917		March	46241
October	57024		April	24615
November	133429		May	19217
December	43221		June	10689
TOTAL	12 months	343854	6 months	238384
		(2.09 percent of population)		(1.45 percent of population)

Source: Lipschitz, p. 133

The average East German who works in West Germany earns 2990 DM per month, which is 83 percent more per month than the average in East Germany but about 15 percent less than the average West German. The relatively small gap in earnings between East and West Germans in West Germany is noteworthy because the migrants (or commuters) have extremely low tenure and lack other observable characteristics that are particularly highly rewarded in the West German labor market. Table 5 presents weekly and monthly wage figures for the states of West Germany during 1987-1990.

Even before the monetary union, West German unions aggressively organized East German workers. In early 1990 the West German unions achieved remarkable success in organizing East German workers, in part because the old East German Communist unions were completely discredited. The structure of unions in East Germany is now similar to that in the West: unions organize and bargain along Land/industry lines, although some contracts were negotiated for all new Lander simultaneously. The first round of bargaining in the summer of 1990 yielded mostly lump-sum wage increases. However, in some industries (e.g., chemical) large percentage base wage increases were negotiated. The construction industry immediately tied wages in the East to about 60 percent of the level in the West. Contracts were generally written for short time periods. Like in the West, the unions in the East have sought to prevent contract wages from varying with the performance of individual firms.

#### **Factors influencing Migration into the former West Germany**

Aside from the wage differential, little systematic evidence exists of the disparities between living conditions in the areas of the former two Germanies. The following information may be of some use in your analysis.

**Unemployment:** The unemployment picture in East and West Germany followed widely disparate paths in 1990 and 1991. Table 6 provides some detail on aggregate unemployment in the two regions.

**Housing:** Before the unification of the two Germanies, housing was believed to be in surplus. However, according to the OECD (1990, p. 19), in East Germany "over 1 million apartments existed only on paper and another million were in such a run-down state that they were uninhabitable. Demand for state-owned

dwellings exceeded supply and in 1989 there were 470,000 people on waiting lists, a situation that reduced potential worker mobility". Table 7 provides official estimates of housing stock in the two Germanies in 1989, and indicates that East Germany had a slightly less extensive stock per population in comparable areas.

**Education:** Table 8 indicates the distribution of primary and secondary schools in Western Germany. These are widely perceived to be of higher quality than their counterparts in East Germany.

**Health:** Table 9 indicates the distribution of doctors and health facilities in 1991 in the Western lander of Germany.

**Your task.**

The International Monetary Fund has warned our government to watch for continuing migration from Eastern Europe and specifically the former East Germany. Given the restive nature of our citizens, it is important to identify the causes of this migration and methods for halting the movement or channelling it into productive sectors. Please provide clear and concise options at the Cabinet meeting next week.

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This case draws heavily from the preceding sources. Rather than provide citations for each statement in the text, the sources for each section are provided here.

**Population and Internal Migration Trends in West Germany:** this information is drawn from Edmundson (1992) and Statistisches Bundesamt (various years).

**Historical Evidence of Migration into West Germany.** In addition to citations given, material is drawn from Molle (1990).

**The West German Labor Market.** This material is drawn from Krueger and Pisschke (1992).

**Population, Employment and Migration Trends from East Germany.** This is taken from Edmundson (1992).

**Product and labor markets in East Germany prior to unification.** Krueger and Pisschke (1992).

**The impact of unification on the East German economy.** Edmundson (1992) in addition to the others cited.

**Evidence on Migration into West Germany.** Edmundson (1992) and Krueger and Pisschke (1992) in addition to the others cited.

**Factors influencing Migration into the former West Germany.** Edmundson (1992) in addition to the others cited.

TABLE 1<sup>a</sup>

## Population Trends in East Germany in 1989

STATE	POPULATION	NATURAL INCREASE (thousand)	INTERNAL MIGRATION RATE	I.M.R. PER 10,000	EXTERNAL MIGRATION RATE	E.M.R. PER 10,000
E. Berlin	1,279,212	25.8	136,688	1069	-52,243	-408
Brandenburg	2,692,907	40.4	-17,407	-65	-49,790	-185
Mecklenburg	2,115,778	61.9	-34,008	-161	-21,308	-101
Saxony	4,863,715	-88.1	-27,730	-57	-154,373	-317
Saxony-Anhalt	2,985,937	-11.5	-56,910	-191	-40,428	-135
Thuringia	2,496,247	10.6	-633	-3	-47,608	-191

## Western Germany

ABBREV.	STATE	CAPITAL	AREA (*10 <sup>3</sup> km <sup>2</sup> )	POPULATION	POPULATION DENSITY (per Km <sup>2</sup> )
Sch-Hols	=Schleswig-Holstein	Kiel	15.7	2,584,343	165
Hamburg	=Hamburg		0.8	1,733,802	2302
L.Sax	=Lower Saxony	Hannover	47.4	7,265,539	153
Bremen	=Bremen		0.4	723,990	1793
N.R-W.p	=North Rhine-Westphalia	Dusseldorf	34.1	17,218,626	506
Hesse	=Hesse	Wiesbaden	21.1	5,576,082	264
Rhine-Pl	=Rhineland-Palatinate	Mainz	19.8	3,687,561	186
Bad-Wurt	=Baden-Wurttemberg	Stuttgart	35.8	9,226,239	258
Bavaria	=Bavaria	Munich	70.5	10,849,123	154
Saarland	=Saarland	Saarbrucken	2.6	1,103,325	430
W.Berlin	=West Berlin			2,034,366	

<sup>a</sup>Source: Edmundson (1992).

TABLE 2<sup>a</sup>

## Migration Trends in West Germany from 1987 to 1989

MIGRATION TO	MIGRATION FROM										
	SCH-HOLS	HAMBURG	L. SAX	BREMEN	N.R-W.p	HESSE	RHINE-PI	BAD-WURT	BAVARIA	SAARLAND	W.BERLIN
Sch-Hols		59,728	30,807	2,888	23,052	7,259	3,352	8,955	8,286	705	6,445
Hamburg	48,537		34,866	2,572	13,269	5,196	1,843	6,152	6,348	413	3,653
L. Sax	24,930	30,237		35,095	81,083	22,454	7,323	21,818	20,187	1,627	15,366
Bremen	2,482	1,835	35,765		5,616	1,747	858	2,487	2,251	158	1,445
N.R-W.p	17,359	9,921	106,277	5,007		40,599	41,492	44,353	43,712	5,748	14,615
Hesse	7,509	5,000	41,644	2,595	56,087		34,565	40,535	34,691	4,285	7,342
Rhine-Pl	3,087	1,572	21,495	780	46,374	33,155		31,765	13,679	10,864	2,611
Bad-Wurt	12,246	6,459	52,041	3,337	68,183	42,056	38,891		85,413	9,969	10,813
Bavaria	11,461	7,147	45,893	2,856	71,195	42,998	18,797	94,293		5,011	11,815
Saarland	582	327	4,566	166	4,802	2,787	10,019	6,268	3,267		788
W. Berlin	8,239	4,609	22,295	2,224	25,419	9,559	4,949	15,110	16,684	1,304	

	MIGRATION FROM	MIGRATION TO	NET MIGRATION	PER 10,000 RESIDENTS
Sch-Hols	136,432	151,477	15,045	58.22
Hamburg	126,835	122,849	-3,986	-22.99
L.Sax	395,649	260,120	-135,529	-186.54
Bremen	57,520	54,644	-2,876	-39.72
N.R-W.p	395,080	329,083	-65,997	-38.33
Hesse	207,810	234,253	26,443	48.42
Rhine-Pl	162,089	165,382	3,293	8.93
Bad-Wurt	271,736	329,408	57,672	62.51
Bavaria	234,518	311,466	76,948	70.93
Saarland	40,084	33,572	-6,512	-59.02
W.Berlin	74,893	110,392	35,499	174.50

(Statistisches 1989-1991)

<sup>a</sup>Summarized in Edmundson (1992).

TABLE 3<sup>a</sup>Migration of Ethnic Germans to Western Germany In  
1988-90

TO	1988 TOTAL	# PER 100,000	1989 TOTAL	# PER 100,000	1990 TOTAL	# PER 100,000	88-90 TOTAL	# PER 100,000
Sch-Hols	859	33	13,333	516	11,062	428	25,803	998
Hamburg	1,074	62	9,066	523	5,295	305	16,020	924
L.Sax	2,766	38	35,883	494	40,658	560	79,839	1,099
Bremen	477	66	3,995	552	2,881	398	7,971	1,101
N.R-W.p	6,982	41	63,709	370	34,145	198	105,247	611
Hesse	4,027	72	35,407	635	21,184	380	61,325	1,100
Rhine-Pl	1,369	37	16,255	441	9,304	252	27,406	743
Bad-Wurt	7,005	76	55,549	602	19,679	213	82,911	899
Bavaria	6,155	57	67,878	626	43,735	403	118,451	1,092
Saarland	200	18	4,784	434	2,203	200	7,639	692
W.Berlin	8,918	438	37,995	1,868	6,552	322	55,771	2,741

(Statistisches 1991: 94)

<sup>a</sup>Assembled in Edmundson (1992).

TABLE 4<sup>a</sup>

Wages (in DMs)

	1987		1988	
	WEEKLY	MONTHLY	WEEKLY	MONTHLY
Sch-Hols	698	3494	725	3628
Hamburg	790	4149	818	4299
L.Sax	721	3646	747	3782
Bremen	769	3895	802	4046
N.R-W.p	728	3929	762	4057
Hesse	723	3958	749	4112
Rhine-Pl	710	3858	744	4039
Bad-Wurt	723	4021	744	4201
Bavaria	662	3766	693	3920
Saarland	727	3829	769	3955
W.Berlin	697	3904	723	4056
	1989		1990	
	WEEKLY	MONTHLY	WEEKLY	MONTHLY
Sch-Hols	746	3764	779	3929
Hamburg	848	4454	893	4670
L.Sax	779	3948	806	4119
Bremen	825	4198	860	4373
N.R-W.p	788	4212	824	4393
Hesse	774	4251	808	4463
Rhine-Pl	773	4201	799	4412
Bad-Wurt	773	4364	813	4574
Bavaria	716	4073	747	4262
Saarland	800	4100	830	4277
W.Berlin	745	4208	777	4413

<sup>a</sup>Source: Edmundson (1992).

TABLE 5<sup>a</sup>

## Labor Market

	UNEMPLOYMENT RATE (%)		SHORT TIME WORKERS (,000)		SHORT TIME WORKERS AS % OF LABOR FORCE	
	WEST	EAST	WEST	EAST	WEST	EAST
1990 2 <sup>nd</sup> qt	6.6	1	49	0	0.171	0
3 <sup>rd</sup> qtr	6.4	3.5	30	1295	0.105	15.81
4 <sup>th</sup> qtr	6.1	6.3	46	1735.9	0.160	21.19
1991 1 <sup>st</sup> qt	5.7	8.6	121	1925.8	0.419	23.51
2 <sup>nd</sup> qtr	5.6	9.5	140	1962.1	0.483	23.95
3 <sup>rd</sup> qtr	5.7	11.6	136	1464.3	0.468	17.87
July	5.7	12.1	146	1068.6	0.502	13.04
Aug.	5.7	12.1	130	1063.2	0.447	12.98
Sept.	5.7	11.7	133	1028.8	0.458	12.56
Oct.	5.7	11.9	173	1048.5	0.596	12.80
Nov.	5.6	11.7	204	1030.7	0.702	12.58

(Monthly 1990-91)

<sup>a</sup>Source: Edmundson (1992).

TABLE 6<sup>a</sup>

## Housing Stock in 1989

WEST GERMANY			EAST GERMANY		
	TOTAL #	PER 1,000 PEOPLE		TOTAL #	PER 1,000 PEOPLE
Sch-Hols	1,139,609	441	Branden.	1,085,221	403
Hamburg	787,258	454	Mecklen.	760,329	359
L.Sax	3,006,162	414	Saxony	2,193,425	451
Bremen	323,533	447	Sax. Anha	1,244,244	417
N.R-W.p	7,260,228	422	Thuringi	1,100,048	441
Hesse	2,384,641	428	E. Berline	633,710	495
Rhine-Pl	1,544,551	419			
Bad-Wurt	3,940,020	427			
Bavaria	4,694,296	433			
Saarland	443,150	402			
W.Berlin	1,074,821	528			

(Statistisches 1989-1991)

<sup>a</sup>Source: Edmundson (1992).

TABLE 7<sup>a</sup>

Primary and Secondary Schools in Western Germany in 1991

	SCHOOLS	TEACHERS	STUDENTS	TEACHERS PER 100 STUDENTS
Sch-Hols	1,814	21,023	275,233	7.64
Hamburg	832	12,161	160,133	7.59
L.Sax	4,622	61,736	800,009	7.72
Bremen	431	5,926	67,810	8.74
N.R-W.p	7,398	135,611	1,917,472	7.07
Hesse	3,078	39,999	593,794	6.74
Rhine-Pl	1,788	26,654	385,596	6.91
Bad-Wurt	5,557	79,541	1,040,515	7.64
Bavaria	5,219	82,441	1,184,782	6.96
Saarland	533	7,638	103,329	7.39
W.Berlin	1,040	17,630	205,822	8.57

(Statistisches 1991)

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<sup>a</sup>Source: Edmundson (1992).

TABLE 8<sup>a</sup>

## Health Facilities in Western Germany

	DOCTORS PER 100,000 PEOPLE	HOSPITAL BEDS PER 100,000
Bad-Wurt	299.9	1033
Bavaria	306.4	1114
Berlin	449.6	1358
Bremen	364.4	1109
Hamburg	433.1	991
Hesse	318.9	1201
L. Saxony	256	942
N.R-W.p	281.7	1024
Rhine-Pl	269.3	1050
Saarland	313.5	1123
Sch-Hols	293.1	1048

(Statistisches 1991)

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<sup>a</sup>Source: Edmundson (1992).

FIGURE 1

FIGURE 2

## **Migration from East to West: A Net Gain for Germany?**

### Instructor's Note

This case has been written to address the issue of migration within the context of international economics. It may also be useful in courses on the European Community or on political economy.

#### **Task of case study.**

I hoped through discussion of this case to bring into play the students' knowledge of theories of international migration that they had studied in previous, more theoretical, readings for the course. They are given sufficient information to decide which "model" of migration is more applicable to the German case, and to calculate the responsiveness of migration in the recent past to various possible incentives. I expected them both to analyze the present situation and to provide policy advice for future discouragement or channeling of migration flows consistent with economic theory.

#### **Relevant economic theory.**

Here the focus is on three views of international trade and migration: the traditional approach reliant upon the Heckscher-Ohlin framework, the segmented labor markets approach, and the "guest worker" approach of temporary migration in response to business cycles. Background readings provide the theory. The case study provides background on West Germany's "guestworker" policy of the past 40 years as well as an introduction to the migration flows following the opening of borders with former Communist countries.

I try to lead the students to a recognition that these two periods can be separated, and ask them to debate which economic theory is more applicable in each case.

#### **Incentives to migration**

The theories of migration speak quite generally of the wage incentives to migration. I ask the students to examine the possible incentives to migration offered by the West German case. Wage differential is one, but health facilities, housing and education facilities provide other possibilities.

Using the data provided on migration of ethnic Germans to the Lander of West Germany in 1988-90 (Table 4), the students can derive the correlation of Lander-level migration with differentials in these various incentives to migrate. I provide an example in the attached Figure 1. Fascinatingly, the wage differential is not positively correlated with migration. This can motivate a comparison of correlation vs. causation in data, as well as the possibility that these variables are themselves proxies for others. The sharpest students will note that other factors have not yet been controlled for -- in this instance, propinquity to East Germany. Once this is done, the expected results emerge. In Figure 1, those laender adjacent to East Germany are denoted with capital letters, while those not adjacent are denoted with lower-case letters. A single regression line through all slopes down, while two lines through the two subgroups both slope up. Those adjacent receive greater numbers of immigrants, other things equal.

#### **Policy options.**

Once incentives are identified, it is a short step to discussion of policies that utilize those incentives to stop or channel migration. This leads to an analysis as well of the historical ability of the West German state to enforce its "guest worker" migration status.

FIGURE 1<sup>a</sup>

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<sup>a</sup>Source of data: Edmundson (1992).

East-West Migration in Germany: Partial Correlations

Variables:

- Immig: In-migration per thousand to West German land.
- Contig: 1 if contiguous to East Germany; 0 otherwise
- Wwage: weekly wage in land.
- Hous: Housing availability per thousand.
- Hosp: Hospital beds per thousand

Dependent Variable: IMMIG

Analysis of Variance

Source	DF	Sum of Squares	Mean Square	F Value	Prob>F
Model	3	90035.30861	30011.76954	5.301	0.0321
Error	7	39631.23684	5661.60526		
Total	10	129666.54545			
Root MSE		75.24364	R-square	0.6944	
Dep Mean		332.63636	Adj R-sq	0.5634	
C. V.		22.62039			

Parameter Estimates

Variable	DF	Parameter Estimate	Standard Error	T for H0: Parameter=0	Prob >  T
INTERCEP	1	-679.173748	723.18145033	-0.939	0.3789
CONTIG	1	253.976845	66.69627415	3.808	0.0066
WWAGE	1	1.519670	0.82950456	1.832	0.1096
HOUS	1	-0.772532	0.75824420	-1.019	0.3422