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The mixed blessing of labour shortage: German overemployment in the 1960's

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Working Paper No. 332

- The Mixed Blessing of Labour Shortage -
German Overemployment in the 1960's*

by

Karl-Heinz Paqué

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I. Introduction

In German post-war historiography, the 1960s are usually viewed as a time of political and economic transition. Politically, the period marks the watershed between the paternalistic conservatism of the Adenauer era and the full-scale social democracy of the early seventies, with the so-called 'grand coalition' government of the late sixties being the tangible incarnation of transition. Economically, the period figures as a bridge between the German miracle of the fifties and the slow-down and stagnation of the seventies and eighties, with national income growing at a rate which was still remarkably high by historical standards, but not more than average by the international standards of the time. In one respect, however, the 1960s do unambiguously figure as a peak of German history after World War II and even in this century, namely in terms of labour shortage.

If, for the moment, we take a state of labour shortage or overemployment to mean a jobless rate of less than or equal to 1.5 %, then the time span from 1960 to 1973 is the only one in the German history of this century which qualifies as a prolonged period of overemployment, briefly interrupted only by the short and sharp recession of 1967, when the unemployment rate temporarily rose above 2 %. No other peacetime period of this century comes close to this record: Before World War I a state of virtually permanent full employment prevailed, with an unemployment rate of about 2.5 % on average;¹⁾ still then, a casual glance over the (admittedly sketchy) statistics of the late 'Kaiserreich' is sufficient to show that the labour shortage of that time did not reach any such dramatic dimensions as in the 1960s.²⁾ The years of the Weimar Republic after the currency reform in 1923 and the Nazi period until 1936 were times of chronic unemployment, with the jobless rate not falling below 8 % except for a very short boom in 1925, when it touched 6.7 %. The 1950s were a period of rapid and sustained reduction of unemployment from a level of 10.2 % in 1950 down to 3.4 % in 1957 and 2.4 % in 1959, levels which may be called full, but not yet overemployment. And the 1970s and, even

more so, the 1980s have been periods of chronic unemployment, just like the time of the Weimar Republic.

In this paper, we shall enquire into the causes and the consequences of this unique experience of extreme labour shortage. In Section II, we present a quantitative profile of the phenomenon in question. In the remaining parts of the paper, we give a brief account of why overemployment came about (Section III) and what it implied for growth and structural change at the time and in later periods (Section IV). Just as the policy debate of the time, we shall lay the emphasis on the consequences of labour shortage rather than its causes which, at least with the benefit of hindsight, look fairly uncontroversial.

II. A Quantitative Profile of Overemployment in Germany 1960-73

Table 1 presents three complementary measures of the state of the labour market in the Federal Republic of Germany, the unemployment, the vacancy and the so-called search rate.

In the relevant period 1960-1973, the unemployment rate was extremely low: in 12 out of 14 years (1960-66; 1969-73) it remained well below 1.5 %, in nine years (1961-66; 1969-71) even below 1 %; in four years it reached an all-time low at 0.7 %. As a five-year average of three subperiods (1960-64; 1965-69; 1970-74), the unemployment rate gently rose from 0.9 to 1.3 %, still a level which contrasts sharply with the dimension of unemployment in earlier and later years. Looking over the whole postwar period, one may say that the sixties and early seventies make up the bottom of a U-shaped curve of unemployment.

An analogous pattern emerges from the movement of the vacancy rate: all over the period 1960-73 (except the recession year 1967) it remained above 2 %, reaching an all-time high in the late sixties.³⁾ The respective five-year average of the vacancy rate

Table 1: Aggregate Labour Market Statistics for Germany 1950 - 1986¹

Year	Unemployment Rate ²	Vacancy Rate ³	"Search Rate" ⁴
1950	10.2	0.8	.
1951	9.0	0.8	.
1952	8.4	0.8	.
1953	7.5	0.8	.
1954	7.0	0.8	.
1955	5.1	1.1	0.9
1956	4.0	1.2	0.8
1957	3.4	1.2	0.7
1958	3.5	1.1	0.6
1959	2.6	1.4	0.6
1960	1.3	2.2	0.6
1961	0.8	2.4	0.5
1962	0.7	2.6	0.5
1963	0.8	2.4	0.5
1964	0.8	2.8	0.5
1965	0.7	3.0	0.5
1966	0.7	2.3	0.5
1967	2.1	1.4	0.6
1968	1.5	2.2	0.6
1969	0.9	3.7	0.6
1970	0.7	3.6	0.6
1971	0.8	2.7	0.6
1972	1.1	2.4	0.7
1973	1.2	2.5	0.8
1974	2.6	1.4	0.9
1975	4.7	1.1	0.9
1976	4.6	1.1	1.1
1977	4.5	1.0	1.1
1978	4.3	1.1	1.2
1979	3.8	1.4	1.1
1980	3.8	1.4	1.2
1981	5.5	0.9	1.4
1982	7.5	0.5	1.4
1983	9.1	0.3	1.5
1984	9.1	0.4	1.8
1985	9.3	0.5	2.0
1986	9.0	0.7	2.3
1950-54	8.4	0.8	.
1955-59	3.7	1.2	0.7
1960-64	0.9	2.5	0.5
1965-69	1.2	2.5	0.6
1970-74	1.3	2.5	0.7
1975-79	4.4	1.1	1.1
1980-84	7.0	0.7	1.5
1985-86	9.2	0.6	2.2

Notes: ¹From 1950 to 1958 excluding, from 1959 to 1986 including Saarland and Berlin

²Defined as share of unemployed in labour force; annual average; in p.c.

³Defined as share of vacancies in labour demand (employment and vacancies); annual average; in p.c.

⁴Defined as share of persons who search for alternative employment without being unemployed, in total employment; annual average; in p.c.

Source: Bundesanstalt für Arbeit (before 1954: Bundesministerium für Arbeit), Jahreszahlen zur Arbeitsstatistik, various issues

stayed constant at 2.5 % in the three subperiods, way above earlier and later levels.

The empirical picture is rounded off by the search rate which may be viewed as an aggregate measure of discontent of the employed with their jobs. Clearly, in times of labour shortage, one would expect the search rate to be low: as job offers abound, it should be comparatively easy for any worker to match his employment taste by changing jobs without enrolling as a "job seeker" at the labour office. Not surprisingly then, the search rate was at its lowest (0.5-0.6 %) from 1958 to 1971, which by and large corresponds to the period of low unemployment and high vacancy rates.

Given this general pattern, there is no doubt that the sixties and early seventies have been the time of the tightest labour market conditions in the history of the Federal Republic of Germany. However, the question remains whether it was a time of full employment, with the labour market just clearing at the given real wage level, or whether it should rather be regarded as a time of over-employment, with labour demand being rationed by labour supply.

To answer these questions two facts stand out. Firstly, the period 1960-73 is unique in the sense that the vacancy rate surpassed the unemployment rate (again with the exception of the recession year 1967). As we know from theoretical labour economics, the number of unemployed and the number of vacancies depend on the optimal search behaviour of workers and employers respectively so that, even in labour market equilibrium, one should not expect the two rates to be equal.⁴⁾ Still then, the sharp and persistent level shift of both rates in 1959/60 and 1973/74 and the extremely high ratio of vacancies per unemployed - about 3 to 4 in the years 1961-66 and 1969-71 - do point to some underlying regime shift from a buyers' (or temporarily equilibrium) labour market to a sellers' market in the late fifties and vice versa in the early seventies.

Secondly, the period 1960-73 is characterized by a strong influx of foreign labour, mainly from southern Europe, the so-called guest-workers ("Gastarbeiter"). Table 2 summarizes some aggregate statistics on foreign labour in Germany. From 1959 onwards, the share of foreigners in the German labour force grew from about 0.5 % up to 4.9 % in 1966, and then again from a sharply reduced level of 3.8 % in 1967 to 9.6 % in 1973, the highest reached so far; starting with the 1974-75 recession, the share gradually declined to 5.7 % in 1985, with only one slight recovery in the modest boom years of the late seventies. A similar pattern emerges from the share of foreigners in total employment which reached a peak of 10.9 % in 1973. Looking separately at the absolute annual change of employment of both Germans and foreigners, it becomes evident that from about 1963 until 1973 the influx of foreign labour was the main source of labour supply elasticity. After the expellees from the former eastern provinces of Germany had finally been absorbed by the labour market in the late fifties, a last surge of new "German" employment (on balance one million new jobs) occurred in the boom period 1959-61, when the wave of refugees from East Germany reached its peak before the Berlin Wall was built. After this political seizure, the supply of German surplus labour dried up; with declining participation rates (due to an unfavourable, war-distorted age structure) and with most other "quiet reserves" (stille Reserven) mobilized, the German labour supply turned inelastic and even began to shrink.⁵⁾ Hence, the business upswing of 1963-65 was the first one to rely mainly on the employment of foreign labour, with almost 70 % of the employment expansion being due to the influx of foreigners; in the long boom period 1969-73 when - on balance - 1.7 million new jobs were created, this share rose to 85 %. Similarly, the sharp recession of 1967 led to a net outflow of about 230,000 foreign workers (largely due to the fact that many guest-workers did not return to Germany in 1967 after having spent the winter at home!) and virtually no net immigration in the year ahead when the labour market still had to absorb the large number of Germans laid off during the recession.

Table 2: Foreign Labour in Germany 1955-1985¹

Year	Share of Foreign Labour in Total Labour Force (%) ²			Share of Foreign Employees in Total Employment (%) ³	Absolute Change in Employment from Previous Period ('000) ⁴	
	total	male	female		Germans	Foreigners
1954	0.3	.	.	0.5	.	.
1955	0.3	.	.	0.5	+ 865	+ 7
1956	0.4	.	.	0.6	+ 624	+ 19
1957	0.4	.	.	0.6	+ 500	+ 9
1958	0.5	.	.	0.7	+ 177	+ 19
1959	0.6	0.8	0.3	0.9	+ 283	+ 40
1960	1.1	1.4	0.4	1.4	+ 387	+ 112
1961	1.9	2.4*	0.7*	2.4	+ 245	+ 228
1962	2.4	3.2	1.2	3.0	+ 180	+ 122
1963	3.0	3.8	1.7	3.6	+ 85	+ 144
1964	3.5	4.2	2.1	4.2	+ 94	+ 129
1965	4.3	5.2	2.7	5.1	+ 56	+ 217
1966	4.9	5.7	3.4	5.7	- 117	+ 125
1967	3.8	4.2	3.1	4.8	- 481	- 230
1968	3.9	4.3	3.2	4.8	+ 124	+ 5
1969	5.1	5.7	4.2	6.3	+ 222	+ 347
1970	6.7	7.4	5.5	8.1	+ 53	+ 441
1971	7.9	8.8	6.3	9.4	+ 39	+ 321
1972	8.5	9.4	6.9	10.1	- 130	+ 157
1973	9.6	10.6*	7.8*	10.9	+ 60	+ 213
1974	8.7	9.5	7.3	10.5	- 149	- 117
1975	7.8	8.5	6.7	9.4	- 306	- 320
1976	7.4	8.1	6.2	8.8	+ 61	- 136
1977	7.2	8.0	6.0	8.5	+ 143	- 53
1978	7.1	7.9	5.9	8.3	+ 250	- 15
1979	7.2	8.0	5.9	8.5	+ 332	+ 67
1980	7.6	8.4	6.2	8.8	+ 252	+ 94
1981	7.0	7.9	5.6	8.4	- 34	- 106
1982	6.6	7.4	5.3	8.0	- 308	- 125
1983	6.2	7.0	5.0	7.7	- 286	- 93
1984	5.8	6.5	4.6	7.3	+ 125	- 85
1985	5.7	6.4	4.5	7.0	+ 218	- 41
1954-59	0.4	.	.	0.6		
1960-64	2.4	3.0	1.2	2.9		
1965-69	4.4	5.0	3.3	5.3		
1970-74	8.3	9.1	6.8	9.8		
1975-79	7.3	8.1	6.1	8.7		
1980-85	6.5	7.4	5.2	7.9		

Note: ¹From 1950 to 1959 excluding, from 1960 to 1985 including Saarland and Berlin

²Annual average

³Annual average, excluding self-employed

⁴Changes of annual averages

*Own estimates

Sources: Bundesanstalt für Arbeit, Jahreszahlen zur Arbeitsstatistik, various issues; Statistisches Bundesamt, Volkswirtschaftliche Gesamtrechnungen (tape of the Institut für Weltwirtschaft) and Statistisches Jahrbuch für die Bundesrepublik Deutschland.

These statistics convey the picture of a German economy which was on an overemployment growth path with no domestic labour reserves left over for exceptional boom periods. The labour shortage led to waves of foreign workers filling a good part, but by far not all vacancies on offer. In the brief recession interlude of 1967, the labour supply of foreigners served as a buffer stock which helped to alleviate the negative impact of the labour demand shortfall on domestic employment.

Of course, the labour shortage was not uniform across sectors of economic activity and regions, since structural change naturally leads to different degrees of labour scarcity. As to sectors, the general pattern of structural change in the period 1960-73 is apparent from Table 3: there was a dramatic shrinking of employment in the primary sectors of agriculture, forestry and mining, a moderate growth in manufacturing, construction, trade and transport, and a rapid growth in most branches of services, including the government sector. Compared to the time after 1973, two facts are worth noting: firstly, the rapid shrinking of agriculture and mining and, in the same vein, the rapid growth of services; secondly, the moderate but still significant growth of manufacturing and construction, which is unusual for a highly industrialized country like Germany in the sixties. To get a clue to these peculiar features, it is important to sort out the sectoral change of guest-workers' employment in the relevant period:⁶⁾ Table 4 shows that, on balance, about 80 % of all foreign labour (about 1.4 million people) moved into manufacturing and construction; in both sectors foreigners apparently replaced Germans who switched over to service sectors like trade, banking and insurance, and, most of all, the government. In manufacturing, this substitution covered about one million people in twelve years, leading to a share of foreigners in total employment of almost 15 % in 1972.⁷⁾ This may help to explain why employment in services, which are less open to foreigners than manufacturing and construction due to the required language skills and institutional barriers, drastically increased at the expense of the primary, but not at the expense of the secondary sector.

Table 3: Average Annual Change of Employment by Sectors in the Periods 1960-73 and 1973-86 (in p.c.)

Sector	Employment (incl. self-employed)		Employment (excl. self-employed)	
	1960-73	1973-86	1960-73	1973-86
Agriculture & Forestry	-4.7	-2.7	-5.1	0.0
Mining & Utilities	-2.8	-0.4	-2.8	-0.4
Manufacturing	+0.2	-1.3	+0.4	-1.3
Construction	+0.8	-2.2	+0.8	-2.3
Trade & Transport	+0.4	-0.4	+1.1	-0.3
Banking & Insurance	+4.5	+1.3	+4.5	-1.3
Miscellaneous Services	+1.6	+2.0	+2.5	+2.6
Government	+3.7	+1.6	+3.7	+1.6
Private Households	-0.7	+2.5	-0.7	+2.5
Total	+0.2	-0.4	+1.0	-0.1
Total (private)	-0.2	-0.7	+0.6	-0.5

Source: Own calculations from Statistisches Bundesamt, Volkswirtschaftliche Gesamtrechnungen

Table 4: Absolute Change of Employment by Sectors (1961-72)

Sector	Total ¹ (in '000)	Foreign Employees ² (in '000)
Agriculture & Forestry	- 190	+ 12
Mining & Utilities	- 191	+ 12
Manufacturing	+ 150	+1120
Construction	+ 221	+ 288
Trade & Transport	+ 419	+ 142
Banking & Insurance	+ 250	+ 8
Miscellaneous Services	+ 412	+ 170
Government	+1031	+ 29
Private Households	- 50	+ 21
Total	+1985	+1803
Total (private)	+ 954	+1774

Notes: ¹ Change of level of annual average employment (excl. self-employed) between 1961 and 1972.

² Change of level of employment (excl. self-employed) at the end of September between 1961 and 1972.

Source: Own calculations from Institut für Arbeits- und Berufsforschung, Arbeitsmarktstatische Zahlen in Zeitreihenform - Jahreszahlen für Bundesländer und Landesarbeitsamtsbezirke - Ausgabe 1974.

As to regions, Table 5 gives some measures of the mismatch of unemployment (or, for that matter, labour shortage) between the nine German state labour districts from 1950 to 1986. As is well known, the high level of unemployment in the early fifties (1950-54) had a pronounced regional element, with the rural refugee-crowded areas (Schleswig-Holstein/Hamburg; Lower Saxony/ Bremen; Northern Bavaria) being much more affected than the more urbanized and industrialized states of North-Rhine-Westfalia, Hessa and Baden-Württemberg.⁸⁾ (We exclude Berlin from consideration because the city found itself in a very unfavourable economic climate due to the political circumstances of the Cold War.) Despite the subsequent fall of unemployment, this pattern basically survived the fifties: in the first half of the sixties, the rural areas had rates of 1-1.5 %, the urbanized states rates of 0.2 (!)- 0.6 %. Hence different degrees of labour shortage were clearly recognizable at the time. From the mid-sixties on, this pattern began to change, with Schleswig-Holstein/Hamburg, Southern Bavaria and - somewhat later - Northern Bavaria gaining and North-Rhine-Westfalia losing ground. This gradual realignment brought about a temporary convergence of unemployment rates which reached a peak in the seventies when - apart from the notoriously superior performance of Baden-Württemberg - the jobless rates of all states lay in a very narrow range (1.1-1.8 % in 1970-74 and 3.9-5.2 % in 1975-79). However, as the decline of North-Rhine-Westfalia - now joined by Schleswig-Holstein/Hamburg and Lower Saxony/Bremen - and the rise of Bavaria continued, the by now familiar north/south imbalance of unemployment began to emerge by the early eighties. Not surprisingly, an aggregate measure of the regional component of unemployment (across state labour districts), the Jackman-Index, indicates a gradual and sustained decline from the fifties to the seventies and a rise thereafter.⁹⁾ Hence, in comparative static terms of regional unemployment, the sixties and early seventies should be viewed as a time of convergence between rural and industrialized regions.

Of course, in times of strong immigration, this static convergence may conceal regional disparities in employment growth which are

Table 5: Regional Mismatch of Unemployment, Germany 1950-1986*

Period**	Jackman-Index ¹		Unemployment Rate (in p.c.) in State Employment District ²								
	incl. Berlin	excl. Berlin	SH/HH	NS/BM	NRW	HS	RP/SA*	BW	NBY	SBY	BL
1950-54	.	.	<u>16.6</u>	13.5	4.1	8.0	6.9	<u>3.6</u>	11.1 ⁺	11.1 ⁺	23.5 ⁺
1955-59	0.35	0.33	<u>6.0</u>	5.6	2.1	3.6	3.8	<u>1.6</u>	5.6	6.0	10.5
1960-64	0.29	0.28	1.1	1.2	0.6	0.6	0.9	<u>0.2</u>	<u>1.5</u>	1.5	2.0
1965-69	0.21	0.21	1.1	1.6	1.2	0.9	1.5	<u>0.3</u>	<u>2.0</u>	1.5	1.0
1970-74	0.15	0.15	1.3	<u>1.8</u>	1.4	1.1	1.5	<u>0.6</u>	1.5	1.5	1.1
1975-79	0.13	0.13	4.5	<u>5.2</u>	4.9	3.9	5.0	<u>2.9</u>	5.1	4.1	4.1
1980-84	0.18	0.19	7.8	<u>8.9</u>	8.2	5.7	7.3	<u>4.4</u>	7.3	5.5	7.9
1985-86	0.21	0.22	11.7	<u>12.2</u>	11.0	7.0	9.6	<u>5.3</u>	8.3	6.7	10.3

Notes: * From 1950 to 1958 excluding, from 1959 to 1985 including Saarland

** All numbers given are period averages of respective annual averages

+ own estimate

¹ Jackman-Index (J) defined as $J = 0.5 \cdot \sum_i |U_i/U - V_i/V|$, with

$U_i(V_i)$ = number of unemployed (vacancies) in state employment district i;

$U(V)$ = number of unemployed (vacancies) in Germany (including/excluding Berlin)

SH/HH: Schleswig-Holstein/Hamburg; NS/BM: Lower Saxony/Bremen;

NRW: North-Rhine-Westfalia; HS: Hessia; RP/SA: Rheinland-Pfalz/Saarland; BW: Baden-Württemberg; NBY: Northern Bavaria; SBY: Southern Bavaria; BL: Berlin

Sources: Own calculations from Bundesanstalt für Arbeit (before 1954: Bundesministerium für Arbeit), Arbeitsstatistik-Jahreszahlen; various issues.

not necessarily reflected in changes of the unemployment rates. Table 6 indicates that, in terms of employment growth, the picture is indeed somewhat different: while as before North-Rhine-Westfalia shows a bad and Southern Bavaria a good performance, the employment growth in Schleswig-Holstein/Hamburg is well below average, even if the fast shrinking primary sector is excluded. In general, it is quite evident from the numbers in the table, that it was the southern industrialized regions of Hessia, Baden-Württemberg and newly rising Southern Bavaria which performed best in terms of employment growth, no matter whether the primary sector is included or not. These are precisely the regions which sucked in the bulk of foreign workers: in 1972, the share of foreigners in employment was highest in Baden-Württemberg (16.7 %) followed by Hessia (13.7 %), Southern Bavaria (13.3 %) and, as a poor fourth, highly industrialized North-Rhine-Westfalia (10.9 %); at the end were the more rural areas of Lower Saxony/Bremen (6.0 %), Schleswig-Holstein/Hamburg (6.5 %), Northern Bavaria (7.0 %) and Rhineland-Pfalz/Saar (7.1 %).¹⁰⁾ Apparently, the labour shortage showed up most forcefully in the southern industrialized centers, and the mobile guest-workers willingly moved there to fill the emerging vacancies. In this sense, they served as a substitute for internal migration to alleviate interregional disparities in labour shortage. In fact, the statistics on intra-national migration in Table 7 indicate that the overall level of migration declined from the fifties to the sixties although it did not yet reach today's much smaller dimension. Most visibly, the share of systematic inter-state in total inter-state migration (i.e., loosely speaking, the share of one-way inter-state migration!) fell from 32.8 % in the early fifties and 12.1 % in the late fifties down to 5.3-6.2 % in 1960/74; not before the eighties did it rise again significantly. Hence, while the large regional disparities in the fifties induced an extensive one-way migration from rural to urban centers, the less dramatic regional differences of labour shortage in the sixties were mostly handled by the flexible guest-worker movements from abroad right into the southern industrialized centers.

Table 6: Interregional Dispersion of Employment Growth Rates 1960-72

	All sectors		All sectors excluding Agriculture & Forestry		Agriculture & Forestry	
	(1)	(2)	(1)	(2)	(1)	(2)
Germany	+0.2	+0.9	+0.7	+1.0	-4.6	-4.9
SH/HH	0.0	+0.3	+0.2	+0.5	-3.6	-7.0
NS/BM	+0.1	+0.9	+0.9	+1.2	-4.5	-6.5
NRW	-0.2	+0.2	+0.1	+0.3	-5.2	-4.3
HS	+0.7	+1.7	+1.4	+1.8	-5.9	-4.2
RP/SA	-0.2	+1.2	+0.8	+1.2	-6.4	-2.2
BW	+0.6	+1.6	+1.4	+1.7	-5.2	-3.4
NBY	0.0	+1.1	+0.8	+1.2	-3.7	-3.6
SBY	+0.9	+1.9	+1.7	+2.1	-2.8	-5.7
BL	-0.8	-0.5	-0.8	-0.4	-5.6	-8.3

Notes: (1) Average annual growth rate of employment (incl. self-employed) 1960-72

(2) Average annual growth rate of employment (excl. self-employed) 1960-72

Source: Own calculations from Institut für Arbeitsmarkt- und Berufsforschung, Arbeitsmarktstatistische Zahlen in Zeitreihenform - Jahreszahlen für Bundesländer und Landesarbeitsamtsbezirke - Ausgabe 1974.

Table 7: Migration Statistics for Germany 1950-1985*

Period**	Migration Quota			Share of Systematic Inter-State in Total Interstate Migration
	Total (1)	Intra- State (2)	Inter- State (3)	
1950-54	6.4	4.6	1.8	32.8
1955-59	6.4	4.6	1.8	12.1
1960-64	6.1	4.3	1.8	5.3
1965-69	6.1	4.3	1.8	6.2
1970-74	5.9	4.2	1.7	6.0
1975-79	4.8	3.5	1.3	6.5
1980-85	4.5	3.4	1.2	8.3

Notes: *From 1950 to 1958 excluding, from 1959 to 1985 including Saarland and Berlin

**All numbers given are period averages of respective annual averages
(1) Number of intra-national (i.e. intra-state plus inter-state) migration cases as a percentage of the West German population

(2) Number of intra-state migration cases as a percentage of the West German population

(3) Defined as $\sum M_i / P$ (in p.c.), with M_i being the number of immigration cases in state i and P being the size of the German population

(4) Defined as $0.5 \cdot \sum |M_i - E_i| / \sum M_i$ (in p.c.), with M_i being the number of immigration and E_i the number of emigration cases in state i

Source: Own calculations from Statistisches Bundesamt (ed.), Wanderungen (various issues) and Statistisches Jahrbuch für die Bundesrepublik Deutschland (various issues).

To sum up, the sixties and early seventies were a period of general labour shortage or overemployment, with foreign workers figuring as the elastic part of the aggregate labour supply in both times of boom and bust. Structural change was accomplished by Germans moving from the primary and secondary into the tertiary sector, with foreign workers filling the gaps left in manufacturing and construction, but not in agriculture and mining; regional disparities were evened by foreign workers moving right to those places, notably the southern industrialized centers, where employment opportunities opened up.

III. The Causes of Labour Shortage

Overemployment may be due to cyclical demand or secular supply factors. In the sixties and early seventies business cycles were powerful indeed: cyclical overheating of demand was responsible for some particularly dramatic episodes of labour shortage in the boom periods around 1960, 1965 and 1970; conversely, the sudden rise of unemployment in 1967 was the outcome of a temporary contraction of demand. However, the cyclical demand fluctuations merely superseded an overemployment growth path which calls for an explanation in terms of long-run trends on the supply side.

On long-run neoclassical grounds, a state of overemployment can only persist if the marginal productivity at full employment is and remains higher than the real wage; thereby the term "full employment" denotes a state in which the domestic (i.e., non-foreign stock of labour) is fully utilized, with no net inflow of foreign labour. Unfortunately, the marginal productivity of labour cannot be measured directly; hence we have to confine ourselves to data on average labour productivity and the wage level. Taking the time around 1959/60 as a full employment bench-mark and disregarding cyclical fluctuations of productivity and wages, all relevant statistics indicate that until the late sixties wages increased at about the pace of actual average labour productivity: e.g., the adjusted labour share (i.e., the share of wages and salaries in

national income or value added corrected for shifts between self- and dependant employment) and the contract income share (covering both wages/salaries and a wage equivalent income of the self-employed) remained virtually constant from 1960 to 1969.¹¹⁾ This is remarkable since the large influx of - mostly low-skilled - guest-workers *ceteris paribus* pulled down the growth of (marginal and average) productivity just as in the seventies and eighties the sharp rise of unemployment is likely to have pushed up the average productivity of the employed since the least productive were laid off. Hence, until the late sixties, unions acted in collective bargaining as if they had an interest in the well-being not only of German union members, but also of potential guest-workers. Despite the early visible indications of a labour shortage, they did not press for real wage increases above actual productivity growth. Thus the labour shortage of the early sixties was simply carried over to later years, with no substantial correction of unit labour costs until the late sixties. As actual labour productivity grew fast - in 1960-73 4.1 % p.a., in manufacturing even 5.0 % p.a. - a drastic and, in absolute terms, increasing influx of foreign labour was the natural consequence. Not before the first half of the seventies did a wage explosion set in, which led to a definite upward correction of the labour share.¹²⁾

But why did labour productivity grow so fast? To answer this question, two facts stand out: firstly, there was plenty of scope for realizing productivity gains from international trade in the traded goods sector, i.e., mainly in manufacturing. Exports grew very rapidly in the period 1960-73, in real terms at a rate of 7.5 % p.a. compared to real domestic absorption, which increased at 3.6 % p.a.. In turn, the growth of exports was favoured by a series of steps towards trade-liberalisation within the European community and by the apparent undervaluation of the German currency in terms of domestic production costs which made the German trade balance the only one of all industrialized countries that was in sizeable surplus all over the period (in the later years joined by Japan). Secondly, the capital stock grew very fast, too, in real terms at

an annual rate of about 5.5 % p.a., in manufacturing even at 6.5 % p.a. in the period 1960-73. Of course, capital stock growth is determined by net investment, and net investment by profit expectations; they, in turn, depend on the price of the complementary factors, notably labour, and the expected levels of future product demand (accelerator principle). Apparently, there was reason for optimism in both respects: the longer labour restrained its wage demands, the more confident firms could be in expecting the celebrated social peace to continue without paying too high a price for it in terms of wage concessions; the longer the export surge continued, the brighter the future growth of demand looked for German goods in a rapidly expanding world market, since the demand for German goods seemed to be highly income elastic. Hence, capital stock growth, which was largely taken for granted at the time, must itself be regarded as a function of the supply spurts initiated by the low unit labour costs and the moves towards trade liberalisation; however, it added a vigorous element of accelerator dynamics which - with the benefit of hindsight - makes the growth process of the time look like a self-perpetuating virtuous circle.

This virtuous circle was broken by the sudden and substantial revaluation of factor prices and the German currency in the early seventies which, with expectations still fixed on experiences of the happy past, led to a serious supply-side crises in the mid-seventies. Whether this crisis and the onsetting slack of growth could have been avoided or at least mitigated leads right to the question whether the economic growth of the sixties and early seventies did not already have a distorted and unhealthy shape. This brings us to the consequences of labour shortage.

IV. The Consequences of Labour Shortage

The secular labour shortage of the sixties and early seventies had two immediate effects: (i) it turned the domestic labour market into a seller's market; and (ii) it induced a heavy influx of foreign labour. Both effects had far-reaching economic consequences which will be discussed separately.

(i) From a first best welfare theoretic standpoint, a state of labour demand rationing, as it mostly prevailed in Germany 1960-73, can hardly be anything but suboptimal: at any point in time there remain opportunities for mutually advantageous contracts between employers and - predominantly foreign - potential employees, with the contract wage to be fixed somewhere in the disequilibrium range. However, from a more pragmatic second-best stance featuring the growth dynamics of the domestic economy, things may look somewhat differently:¹³⁾ given a fairly rigid relative wage structure as it has traditionally prevailed across regions, economic sectors and industrial branches in Germany, a less than equilibrium overall wage level may well yield better conditions than an equilibrium wage level to make market forces minimize frictions and mitigate structural distortions introduced by collective bargaining.

This is so for basically four reasons. Firstly, more scope remains for a demand-induced wedge between the actual wage and the standard wage set by collective bargaining (i.e., wage drift) in a state of labour shortage than in a state of equilibrium. To the extent that the wage drift not only recoups the disequilibrium wedge, but also removes structural distortions through greater wage differentiation, there is an efficiency gain. In fact, the sixties were a time of large (temporary) wage drifts which, in boom periods, helped to overcome severe bottlenecks in selected industries and regions.¹⁴⁾

Secondly, to keep labour motivated despite a relatively low standard wage, employers will be inclined to be generous in granting fringe benefits as a partial substitute for pay increases; as fringe benefits are usually subject to less collective bargaining regulations than their monetary equivalents, this is likely to add some flexibility to the labour market. In matters of labour mobility, this seems to be particularly important: incurring the cost of moving labour (including the provision of housing) is much more acceptable to the employer if the wedge between marginal labour productivity and the wage is not squeezed to zero by collective

bargaining; to the extent that receiving the monetary equivalent of this cost as a pay increase is not a feasible alternative, labour will see its opportunity cost of moving reduced so that structural change can proceed with less friction without any socialisation of mobility costs. No doubt the sixties and early seventies were a peak period in this respect, with employers being ready to carry moving expenses for labour as a kind of ex post compensation for wage moderation.

Thirdly, in a state of labour shortage employers have a strong incentive to take action to search for additional labour supplies and labour can increasingly rely on them to do so. To the extent that employers have lower search costs than labour itself - and, due to their profit motivation and their informational facilities, this is likely to be the case - one should expect the frictional costs of structural change to be further reduced. Obviously, the large-scale recruiting activities of German firms in southern Europe during the boom periods until 1973 are a good case in point.

Fourthly, if labour mobility becomes a binding constraint, firms will be ready to move capital into structurally disadvantaged regions where the labour shortage still has the least dramatic dimension. Thus, a general labour shortage may become a (private) substitute for (public) regional policy to promote backward regions. In fact, a good deal of the gradual reduction of regional imbalances in the sixties and early seventies may be due to such "spill-over effects", with the more rural areas of Lower Saxony, Rheinland-Pfalz/Saar and Northern Bavaria having a quite satisfactory performance of employment growth in industry and services at the expense of North-Rhine-Westfalia;¹⁵⁾ this equilibrating mechanism might have worked even more powerfully if there had not been the extremely elastic labour supply from abroad which was mainly carried into the southern industrialized centers.¹⁶⁾

To sum up, the relatively low labour costs and the consequent labour shortage allowed placing the burden of structural adjustment

mainly on the shoulders of the complementary factors of labour, i.e. on capital and on entrepreneurship. This in turn led to a climate of social peace in Germany which was the envy of most other European countries. For a smooth and frictionless process of growth and structural change, these were very favourable conditions.

(ii) As to the long-term consequences¹⁷⁾ of the labour influx from abroad, there are basically two distinct opinions, namely

- a positive one: meaning that guest-worker employment broke up important labour supply bottlenecks and smoothed the process of structural adjustment, thus improving the growth performance of the German economy;¹⁸⁾
- a negative one: meaning that guest-worker employment delayed structural adjustment and induced misguided investment, thus depressing growth in later years.¹⁹⁾

Both positions will be evaluated below.

Most advocates of the first view confine their argument to an elaboration of the fact that foreign labour served as a complementary mass - something like the Marxian industrial reserve army - which flexibly helped to alleviate the labour shortage whenever and wherever it showed up.²⁰⁾ True as this picture appears to be, it does not yet imply that the influx of foreign labour was necessarily beneficial to long-term growth, since it is not clarified what would have happened in the absence of an elastic labour supply. To make a sensible judgement one has to put the historical record against some relevant counter-factual development.

To do this, let us imagine the German economy of the 1960s as a stylized two-sector economy, with one sector being traded goods (called: manufacturing) and the other being non-traded goods (called: services). Let us further postulate that, due to long-term income elasticities of product demand and irreversible shifts

of the international division of labour, this economy moves away from the secondary into the tertiary sector in terms of both production and employment. For the time being, however, the economy is supposed to be in a process of rapid integration with other industrialized economies. Due to export-led growth, this economy reaches its capacity limits in terms of labour and capital. Now, two polar scenarios are to be analysed, one with a virtually inelastic labour supply (the counter-factual) and the other with a fairly elastic labour supply due to guest-worker immigration (the factual).

In the counter-factual scenario the labour shortage in manufacturing leads to a real wage push in this sector and - *ceteris paribus* - to a movement of labour back from services into manufacturing until the real wage increase has spread all over the economy. Clearly, this involves a structural shift against the long-term trend towards services. This shift will be all the more pronounced the less service producers are able to raise prices and, thus, to shift the burden of the labour cost increase onto service consumers; if service demand is fairly price elastic, the structural backward shift may be quite substantial. In addition, there will be a tendency in manufacturing to raise labour productivity through capital deepening so as to keep labour productivity growth in line with the wage increase.

In the factual scenario the labour shortage in manufacturing is alleviated through an adequate influx of guest-workers; in the extreme, no wage increase is needed so that there will be no structural backward shift from services to manufacturing either. Following the long-term trend, the German labour force moves into services (including the government sector) while guest-workers take their places in manufacturing. As the wage level is kept relatively low, the profitability of investment in manufacturing will remain high, and so will the level of capital widening investment.

This model may be realistically extended by adding a two-sector vertical structure of employment; in an extremely simplified

picture of reality, we distinguish between low qualified workers (calling them "blue-collar") and highly qualified workers (calling them "white-collar"), with manufacturing assumed to employ a much higher proportion of blue-collar workers than services. Long-term structural change naturally favours higher qualified labour. the first scenario (the counter-factual) then implies an improvement of the terms of trade of blue-collar workers which again runs counter to the long-term trend. The second scenario (the factual) implies an undisturbed shift of the domestic labour force into white-collar employment, with foreigners taking over their blue-collar jobs. By this substitution, vertical mobility for Germans is achieved through an imported replacement supply of low qualified labour.²¹⁾

Given these scenarios, an advocate of guest-worker employment may legitimately conclude that importing foreign labour was the best feasible way out of a genuine dilemma between the demands of long-term structural change in favour of services and a medium-term expansion of manufacturing which was mainly due to the trade liberalisation within the EEC and the undervaluation of the German currency. The influx of guest-workers allowed the domestic labour force to continue or even to accelerate its long-term shift into the service sector and into higher qualified jobs. Closing the border for foreign labour would have come down to keeping German workers in the old business of fueling the export engine without regard to their long-term comparative advantage.

Critical voices on guest-worker employment would reply that this view underestimates the costs of the factual scenario. Their argument is threefold: Firstly, the inflow of guest-workers led to a wrongheaded process of capital widening in manufacturing, since it is precisely the newly created marginal jobs in mature industries like iron and steel, metal manufacturing, vehicles, textiles and clothing which have to be scrapped when competition from less developed countries (including the home countries of the guest-workers) increases. As the capital used to provide guest-workers with jobs is lacking for the purpose of raising the productivity

level of the domestic labour force through capital deepening, this amounts to a waste of capital, at least in a long-run perspective.²²⁾ Secondly, capital widening in manufacturing was particularly unjustified in the late sixties and early seventies since the German currency was undervalued in terms of production costs so that a kind of monetary protection wall kept German industry artificially competitive.²³⁾ And thirdly, the influx of foreign labour allowed a too rapid expansion of the public sector: with wages kept low through marginal guest-worker employment in industry, the opportunity cost for government to expand its administrative staff was below its true opportunity cost in terms of the value of domestic labour to the private sector. As long as wage increases remained moderate, the ensuing growth of public sector employment seemed to be tolerable; however, given the high level of job security in the public sector, a dramatic increase of public spending was bound to occur as soon as wage demands picked up. This finally happened in the first half of the seventies, just at the time when the growth of tax revenue slowed down due to the onsetting recession.

From a long-term growth perspective, all these points are well-taken. As an absolute yardstick, however, they miss the nature of the above mentioned dilemma, namely the conflict between the demand of long-term structural change within a world-wide division of labour and the medium-run boom in manufacturing under the constraints of a system of fixed exchange rates which conserved a substantial undervaluation of the German currency. With all domestic resources fully utilized, it was, in fact, hard to avoid some kind of capital misallocation which later could be identified as such. Grosso modo, the concept of imported flexibility²⁴⁾ through guest-worker employment may have been a quite rational implicit strategy, at least to the extent that the guest-workers remained a kind of buffer stock so as to flexibly supplement the German labour force. True, this strategy was likely to induce an excessive tendency towards capital widening, but, given the substantial productivity growth in manufacturing all throughout

the period 1960-73 (on average 5 % p.a.), one wonders whether this claim carries much empirical weight.

Nevertheless, there were at least three major policy failures in this period which should not be overlooked or unduly discounted; firstly, a hefty exchange rate adjustment was no doubt overdue in the late sixties in view of the divergent paths of monetary policies and inflation rates. If it had been made in time, it could have prevented the extreme export boom in the early seventies and the concomitant influx of foreign labour which on these grounds must be rated as excessive. In the same vein, investment in manufacturing at that time was boosted by extremely optimistic profit expectations based on an undervalued currency.

Secondly, wage policy tracked a very kinky path, with wage moderation prevailing all over the sixties and a virtual wage explosion happening in the early seventies. Clearly, a much more gradual adjustment of labour costs would have contributed to a more stable investment climate so that, in the early and mid-seventies, the head-on clash with soaring prices of the factors labour and energy after a boom period of high capital formation would have been avoided. However, in this respect, unions were themselves victims of a mysterious psychology which made them tame in the sixties and wild in the early seventies.

Thirdly, government growth went too far at a time when the rapid increase of tax revenue and the general political climate made authorities confident that an expansion of public services could be financed. A tighter labour supply constraint could have impeded the expansion of public employment. On the other hand, strong ideological forces in all major political parties were pulling away from classical liberal ideas towards a more comprehensive, Swedish style welfare state so that - given the usual primacy of ideology over sound economics - not all that much in terms of government restraint may have been gained by a rise in labour costs.

To sum up, the overemployment of the sixties and early seventies was a mixed blessing. It was a blessing in the sense that it allowed regional disparities to be abated, frictional costs of structural change to be reduced and the German part of the labour force to be reallocated according to long-term comparative advantages. The blessing was mixed to the extent that it involved a substantial growth of government and a boom in manufacturing which was to fade away as soon as factor prices and the exchange rate were adjusted and the dynamics of European integration came to an end. However, looking back from today's vintage point after twelve years of growth slack and chronic unemployment, one may be tempted to say that a mixed blessing of this kind is better than no blessing at all.

Notes

- 1) Own calculation from "The Economist", Economic Statistics 1900-1983, Table G.6., p. 9, which is based on the data provided by Mitchell (1980). Until 1925, Mitchell (1980) measures the unemployment rate in Germany as the share of union members who were unemployed.
- 2) Apart from the unemployment rate, the inflow of foreign workers gives a clue to the state of the labour market in the first decade of this century. In June 1907, the share of foreign workers in total employment was 3.9 %. As 1907 was a boom year and June a seasonal peak month, one may dare to conclude that the share of foreign workers did not exceed something like 4 % most of the time before World War I. This is a remarkably high level which does point to some acute labour shortage; still then, it is a far cry from the levels reached in the late sixties and early seventies which were well above 10 %. For details, see Merx (1967), pp. 89 ff.
- 3) Kühl (1970) argues that, relative to earlier periods, the vacancy statistics of the late sixties may be biased upwards for a variety of reasons, of which the most important one is the rising share of foreign workers in the labour force. Economically reinterpreted, his argument runs as follows: As the share of the labour force seeking employment in Germany through the intermediation of public labour offices is higher among foreigners than among Germans, public offices become particularly attractive brokers to employers in times when additional labour is mostly forthcoming through the inflow and the fluctuation of foreigners; hence the inclination of employers to notify vacancies to the labour office may rise in these times which - *ceteris paribus* - shows up in a higher frictional base of vacancies and thus a higher vacancy rate. - This argument is correct, but its empirical relevance remains unclear. Given the neatly inverse movements of the unemployment rate and the (possibly biased) vacancy rate, it is unlikely to carry much weight.
- 4) See e.g. Jackman & Roper (1986).
- 5) On the elasticity of the domestic labour supply, see the annual reports of the Council of Economic Experts (Sachverständigenrat), 1964 ff. (chapters on supply constraints).
- 6) As no proper data on the sectoral distribution of foreign labour is available for the years 1960 and 1973, the period had to be restricted to the years 1961-72.
- 7) See Bundesanstalt für Arbeit, 1972/73, p. 15, Table 9. Within manufacturing, there were also significant differences between industries, with some branches having a share of foreigners

close to 20 % (such as textiles and clothing). Viewed as a whole, however, the intra-sectoral differences were clearly less dramatic than the inter-sectoral ones.

- 8) For details about unemployment in the 1950s, see Paqué (1987).
- 9) For technical details of this index, see Jackman & Roper (1987). Economically, the index can be interpreted as the share of the unemployed who would have to move to another region to accomplish regional balance (defined as an equal ratio of unemployed and vacancies across regions).
- 10) See Bundesanstalt für Arbeit, 1972/73, p. 22. More detailed statistics show that the guest-workers were heavily concentrated in metropolitan areas and that, among these, more so in the southern than in the northern ones (see Bundesanstalt für Arbeit, 1972/73, pp. 25 ff.).
- 11) See Council of Economic Experts (Sachverständigenrat), Jahresgutachten 1987/88, p. 110 f. The ratio of profits to revenue in the private sector lay in the range of 6.1-9.5 % depending on the state of the business cycle; these were levels which have so far not been reached again after 1969. For details see Council of Economic Experts (Sachverständigenrat), Jahresgutachten 1987/88, p. 108.
- 12) See Council of Economic Experts (Sachverständigenrat), Jahresgutachten 1987/88, p. 110 f. Within the five years from 1970-75, the ratio of profits to revenue in the private sector declined from levels above 6 % to 3.6 %. See Council of Economic Experts (Sachverständigenrat), Jahresgutachten 1987/88, p. 108.
- 13) The following line of reasoning owes much to arguments made by Professor Herbert Giersch in private conversations with the author.
- 14) See Council of Economic Experts (Sachverständigenrat), Annual Reports 1964 ff., section on productive capacity and production.
- 15) In its annual report 1965 (Ch. 4, Sec. III, pp. 153 ff.) the Council of Economic Experts (Sachverständigenrat) provides some empirical evidence on the reduction of inter-state disparities of income levels in the early sixties. The Council explicitly argues that private firms were increasingly inclined to make investments in backward regions instead of industrial centers.
- 16) How far such a process of diffusion of a labour shortage can go in the absence of substantial immigration has recently been shown in New England. After the most successful restructuring of the economy of New England's heartland (i.e., Massachusetts, Connecticut, southern New Hampshire and Rhode Island) away from

declining textiles to modern service and high tech industries, an extreme labour shortage arose in and around the industrial and service centers; as a consequence, capital began to move up into the rural hinterland (northern New Hampshire, Vermont, Maine), thus spreading the labour shortage into the remotest and previously most depressed regions of the American northeast. See "The Economist", August 8, 1987, New England Survey, p. 12.

- 17) In the sixties and early seventies, the short-run buffer stock effects of the guest-worker movements were discussed as much as their long-term effects. As this paper focuses on long-run developments, we do not enquire into this matter. For a good summary treatment, see Merx (1972), Ch. IV, pp. 108 ff.
- 18) See Kleemann (1965), p. 82 f; Schmahl (1971), p. 62; Merx (1972), p. 14.
- 19) See Harms (1966), pp. 277 ff.; Rüstow (1966), pp. 35 ff.; Föhl (1967), pp. 119 ff. and, with a strong emphasis on structural change, Schatz (1974), pp. 205 ff. The literature of the mid-sixties contains additional arguments against guest-worker employment (e.g., the need for additional infra-structure investment, the large transfers of income to the home country, etc.). As these arguments have no substantial bearing on matters of economic growth, we will not consider them here. For a summary statement see Merx (1972), Ch. I.
- 20) See above all the elaborate study by Merx (1972), Ch. II and III.
- 21) The empirical results presented by Merx (1972), Ch. II on foreign labour employment clearly point to strong replacement effects between Germans and foreigners, both horizontally across sectors and vertically across employment status.
- 22) See Schatz (1974), pp. 205 ff. He also shows that among industries the share of guest-worker employment in 1969 was somewhat negatively correlated with human capital intensity, i.e., on average, foreigners moved more into branches where one should not expect Germany to have a long-run comparative advantage. See Schatz (1974), p. 209.
- 23) See again Schatz (1974), p. 215.
- 24) This term is due to Professor Herbert Giersch.

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