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Some Reasons for Low Unemployment in Austria

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Some reasons for low unemployment in Austria

I. Introduction

The general deterioration in economic performance since the early seventies, which is at the roots of the reappearance of high unemployment in the industrialized world of today, is usually explained by a number of interrelated worldwide events. But while all industrialized countries were confronted with these changes in economic environment more or less to the same degree, some countries fared economically better than others. Austria is one of the countries with an above average macro-economic performance since the early seventies. Although unemployment and inflation increased also in Austria in the last decade, the rate of unemployment and inflation remained lower and the rate of economic growth higher than in most industrialized countries. This development cannot plausibly be explained by economic factors alone. This paper argues that the institutional and political conditions in Austria favoured a consensus on economic policy in general and on labour market policy measures in particular, enabling Austria to pull through the recent period of economic recession with a comparatively small although, for Austrian standards, large rise in unemployment.

In the following chapters we first point out the actual development of unemployment in Austria from the sixties until today and compare it with the United Kingdom. Then we examine some of the labour market policy measures which affected the supply side of the labour market. In a further step we explain the system of the Austrian social partnership which plays a central role in the wage setting mechanism.

II. Long-run labour market developments in Austria vis-a-vis the UK

1. Unemployment in Austria and the UK

During the sixties unemployment in Austria was relatively low by international standards. The annual unemployment rates amounted to 2.0 percent on average and were thus only slightly higher (+0.3 percentage points) than in the UK.1) The differential between Austria and Great Britain vanished around 1968 and opened up in reverse order in the early seventies when British unemployment rates continued their long-run increase while Austrian rates decreased till 1973. During the recession 1974/75 unemployment in the UK rose considerably faster than in Austria, thus widening the differential of unemployment rates to 2.2 percentage points in 1975. British unemployment continued to rise until the end of 1977 and declined very little during the economic recovery of 1978/79. In Austria the unemployment rate remained fairly constant between 1975 and 1980. The differential in 1979 amounted to 3.4 percentage points.

During the second oil shock the British economy moved earlier into the recession than the Austrian. Unemployment began rising steeply in autumn 1979 and reached 13.2 percent by 1985. In Austria unemployment started to increase in autumn 1980 and reached 4.2 percent in 1985. The differential between Austrian and British unemployment rates thus reached 9 percentage points in 1985.

Chart 1: Standardized unemployment rates for Austria and the UK 1960 - 1985

Table 1: Standardized unemployment rates (percent of labour force) for selected time periods

The difference in the level and development of unemployment in Austria and the United Kingdom is attributable to differing demand and supply

STANDARDIZED UNEMPLOYMENT RATES

FOR AUSTRIA AND THE UNITED KINGDOM

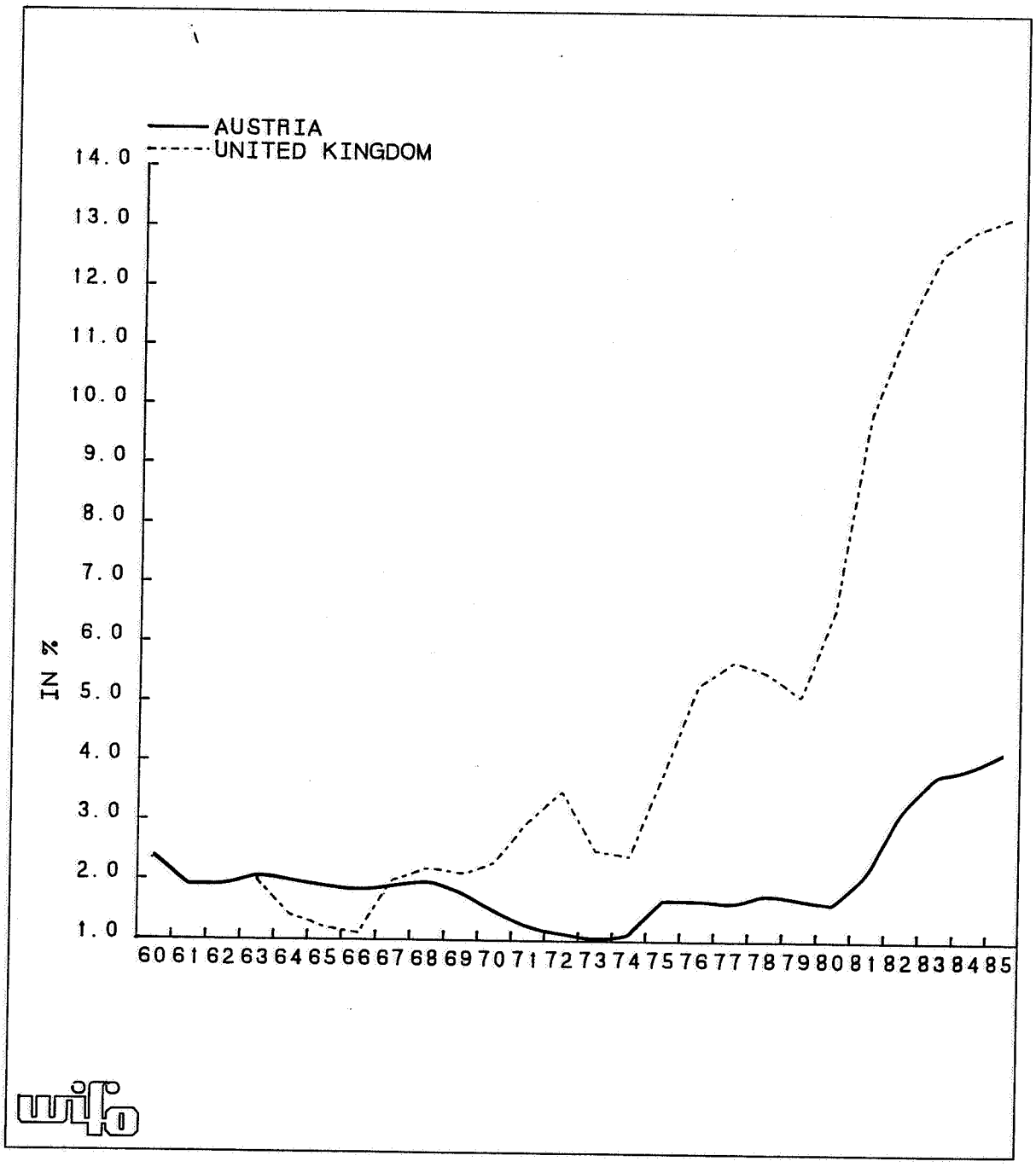

Table 1

Standardized unemployment rates (percent of labour force) for selected time periods

	United Kingdom	Austria
Ø 1960/1969	1,7	2,0
Ø 1970/1973	2,8	1,2
Ø 1974/1976	3,8	1,5
Ø 1977/1979	5,4	1,7
Ø 1980/1985	10,9	3,1

Source: Labour Force Statistics, OECD, Challenge of unemployment, OECD, 1982, Austrian Institute of Economic Research.

conditions as well as a different institutional setting. As a first step we examine the differences in the labour supply and demand developments in the two countries, pointing out the effect of explicit policy measures on unemployment in Austria.

2. Labour supply

Throughout the sixties labour in Austria was a scarce factor of production, thus limiting economic growth, but at the same time facilitating productivity improvements. Even though indigenous labour was increasingly supplemented by foreign labour, total labour force growth was negative in the course of the sixties. It was not until 1970 that the labour force increased, rapidly at first, then at a more modest rate; during the seventies the annual growth rates of the labour force averaged some 0.6 percent. In the first half of the eighties labour force stagnated.

The rise in the labour force in the early seventies was mainly due to the intake of foreign workers. From the recession of 1974/75 onwards until 1984 the number of foreign workers declined; thus, the increase in the labour force after 1975 was wholly due to a rise in indigenous labour, a result of rising labour force participation of women and entry of the baby boom generation into the labour market.

The stagnation of the size of the labour force in the first half of the eighties, is due to the reduction of the number of foreign workers and, more importantly, to a decrease in labour force participation of older men as a consequence of early retirement schemes. In contrast to the Austrian experience labour force growth in Britain was strong in the early sixties, flattened off in the late sixties and early seventies, resumed again after 1973 and accelerated in the late seventies. In the second half of the seventies labour force growth in Britain was about as high as in Austria; in contrast to Austria, it continued to increase in the first half of the eighties, however.

Chart 2: Labour supply growth in Austria and the United Kingdom

Table 2: Labour force growth in Austria and the United Kingdom (average annual growth rates for selected time periods)

Obviously the weaker labour supply growth in Austria in the eighties facilitated a more favourable unemployment development, since, at a given demand level, unemployment can rise due to a rise in labour supply. The actual development of the labour force in Austria was to some extent the result of explicit policy measures. In the following some measures and their quantitative impact on labour supply are described:

a) Foreign workers

During the recession 1974/75 employment of foreign workers was reduced more than proportionally, but only 18 percent of the those who lost their jobs were registered as unemployed in Austria. Since foreign workers normally only get annual work permits, foreign worker recruitment represents a very flexible instrument of labour supply adjustment in the short run2). As a consequence, part of the economic impact of the recession on unemployment does not show up in the unemployment figures of Austria. In order to evaluate the full impact of the recession on the labour market, as well as for easier comparability with countries which lack this sort of "flexibility", an estimate of the "export" of unemployment due to foreign worker reduction shall be given.

A cautious estimate would be to take 60 percent of foreign worker reduction not accounted for in the Austrian unemployment figures as the "real" increase in unemployment3). The percentage is, of course, arbitrary but somewhat higher rates do not influence adjusted unemployment rates significantly. (The whole outflow of foreign workers cannot be taken as an export of unemployment since some of the foreign workers returned for personal reasons and of their own free will.) The

LABOUR SUPPLY GROWTH IN AUSTRIA AND THE UK

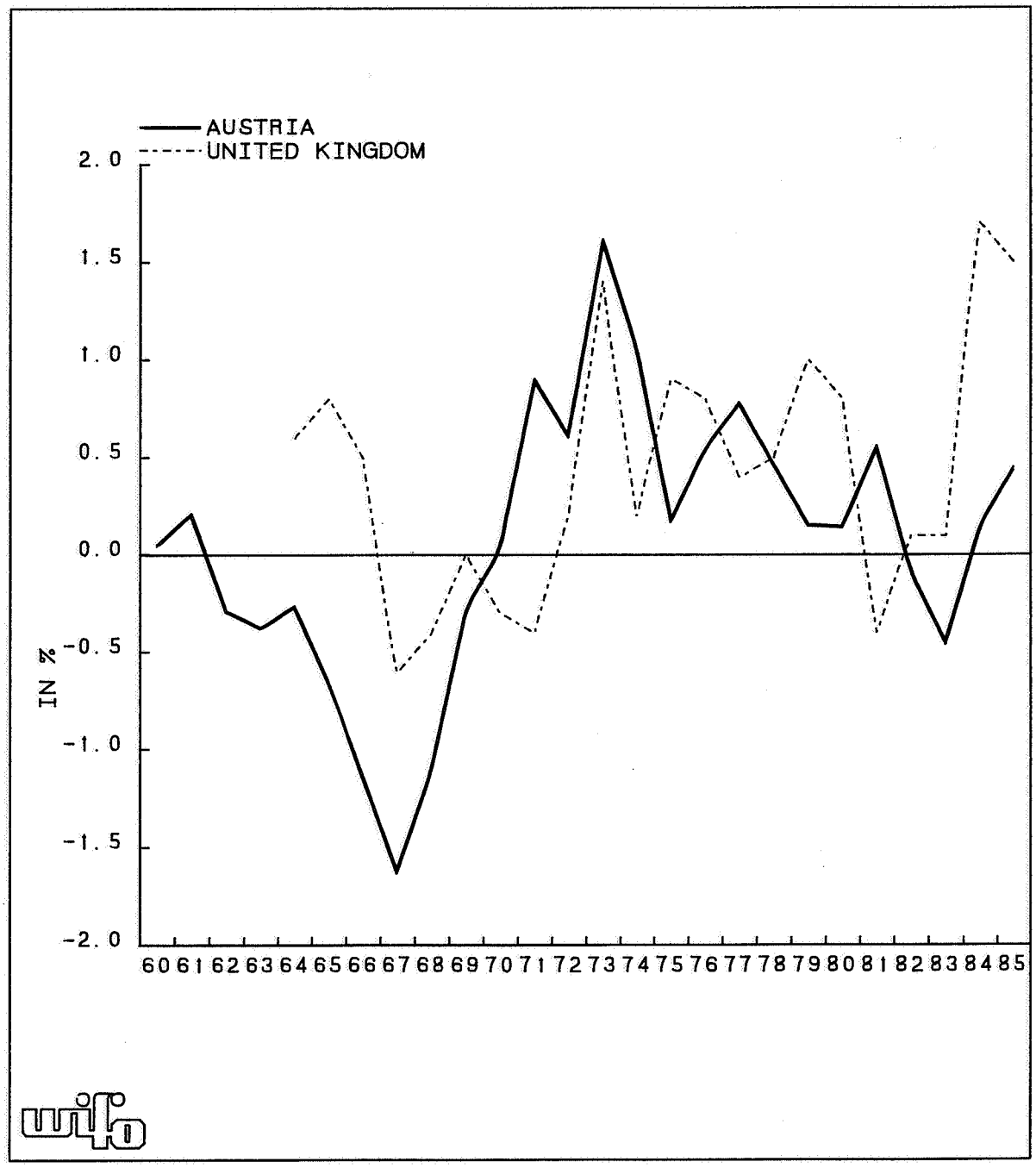

Table 2

Labour force growth in Austria and the United Kingdom

(average annual growth rates for selected time periods)

	United Kingdom	Austria
1960/1969	+ 0,4	- 0,6
1969/1973	+ 0,2	+ 0,8
1973/1976	+ 0,6	+ 0,6
1976/1979	+ 0,7	+ 0,5
1979/1984	+ 0,4	+ 0,1

Source: OECD - Labour Force Statistics for the United Kingdom,
Austrian Institute of Economic Research for Austria.

"adjusted", economically relevant, unemployment increase between 1973 and 1975 amounted thus to 1.5 percentage points and not, as in the official data, to 0.7 percentage points (adjusted unemployment rate 1975: 2.5 percent and not 1.7 percent). Thus the economically relevant unemployment differential between Austria and Great Britain amounted to only 1 1/2 percentage points in 1975 (and not to 2.2 percentage points as in the official data).

In the second half of the seventies and early eighties foreign worker policy in Austria continued to be very restrictive. As a result the share of foreign workers in total employment fell from 7.2 percent in 1975 to 5.1 percent in 1985. Using the above method for the real effect of foreign worker reduction on unemployment the unemployment rate 1985 would have amounted to 5.7 percent instead of the observed 4.2 percent. The differential of unemployment between the United Kingdom and Austria without the foreign worker effect would thus have amounted to 7 1/2 percentage points in 1985 (instead of the observed 9 percentage points).

b) Early retirement and invalidity pensions

Other social- and labour market measures, which had a reduction of labour supply growth as objective, were early retirement schemes and the facilitation of invalidity pensions. Through these measures total labour supply between 1980 and 1985 was reduced by 2 1/2 percent; two thirds of the reduction are attributable to early retirement schemes, which covered above all workers in the iron- and steelproduction and metalindustry.

The provision of pensions had a dampening effect on participation rates of older men (over 55). Participation rates for this age group have traditionally been lower in Austria than in Great Britain. Encouragement to retire due to invalidity brought the participation rate of men between 55 and 60 down from 77.2 percent in 1981 to 73.0 percent in

1984. In the same time period the activity rates of 55- to 60-year-olds in Great Britain also decreased but slightly less than in Austria. Early retirement schemes in Austria reduced the participation rates of 60- to 65-year-olds from 24 percent in 1981 to 19.1 percent in 1984. This age group has now one of the lowest activity rates in Europe. The participation rate of men between 55 and 60 is lower than in the United Kingdom but corresponds to the German rate.

Table 3: Participation rates of older men in Austria and the UK

c) Youth labour market

If one looks at the flow-data of unemployment one can discern a marked increase of inflows into unemployment since the mid seventies, even though after 1975 no net reductions in employment took place anymore. Increased inflows into unemployment were above all due to the rising supply of labour, particularly of youth. The stock of unemployed remained constant, however, in the second half of the seventies, since the average duration of unemployment decreased, partly as a consequence of more youth entering the labour market and young people generally having shorter spells of unemployment than adults. With the onset of the economic recession in 1981 firms in cyclically sensitive branches started to sack labour, recruitment stops were generally enforced. This led to a rapid rise of inflows into unemployment, which was not offset by a parallel increase in outflows, thus raising the average duration of unemployment. During 1980 an unemployed person in Austria was on average 7.3 weeks unemployed, in 1985 it took a person on average 13.5 weeks to find a job. A comparison with the United Kingdom shows that the major reason for higher unemployment in the UK is a longer average duration of unemployment. In 1979 for example, when the British unemployment rate was only slightly higher than the Austrian rate in 1985, duration of unemployment was longer by one third4).

Table 3

Participation rates of older men in Austria and the UK

	UK	Austria	UK	Austria	UK	Austria
	1971		1981		1984	
55 - 59	93,3	83,8	88,5	77,2	83,2	73,0
60 - 64	83,2	44,9	68,2	24,0	55,9	19,1
65 and over	19,4	8,0	10,3	3,8	7,8	3,6

Source: UK: Labour Force Statistics, OECD, Paris 1985

Austria: Population Census for 1971, 1981; 1984

Estimate of the Austrian Institute of Economic Research

The turnover of unemployment in Austria is very high by international standards, which is partly due to comparatively strong seasonal fluctuations of employment. During 1985 34 percent of the stock of unemployed entered and left the register each month; in England, on the other hand, the rate of inflow and outflow of unemployed in 1979 (at a roughly comparable unemployment rate) amounted to 22 percent.5)

Chart 3: Stocks and flows of employment and unemployment in Austria

Labour force participation of youth in Austria is just as strong as in the United Kingdom. The importance of apprenticeship in the Austrian youth labour market explains why youth was relatively easily absorbed into employment. About half of the 15 year-olds, who terminate education with compulsory schooling, enter the labour market as apprentices. On-the-job-training (apprentices are counted as employed) is complemented by theoretical schooling one day per week on average. Apprentices are remunerated at below branch-specific minimum wages and represent thus a relatively cheap supply of labour. After 3 years of apprenticeship (for some occupations 4 years) many trained apprentices lose their jobs because branches which traditionally employ and train apprentices don't usually belong to the growth sectors of employment. The trained apprentice loses his job and is substituted by a new young apprentice. In the period of economic boom the unemployed skilled young workers easily found other jobs since they did have work experience already even though not of the required skill structure. In a period of excess labour supply, where recruitment stops are enforced by a significant portion of firms, these unemployed young skilled workers have difficulties finding new jobs. They account for the major part of the increase of youth unemployment in Austria since 1981. The share of youth under 25 in total unemployment increased from 23 percent in 1980 to 31.4 percent in 1985.

Table 4: The share of youth unemployment in total unemployment for Austria and the UK

STOCKS AND FLOWS OF EMPLOYMENT

AND UNEMPLOYMENT IN AUSTRIA

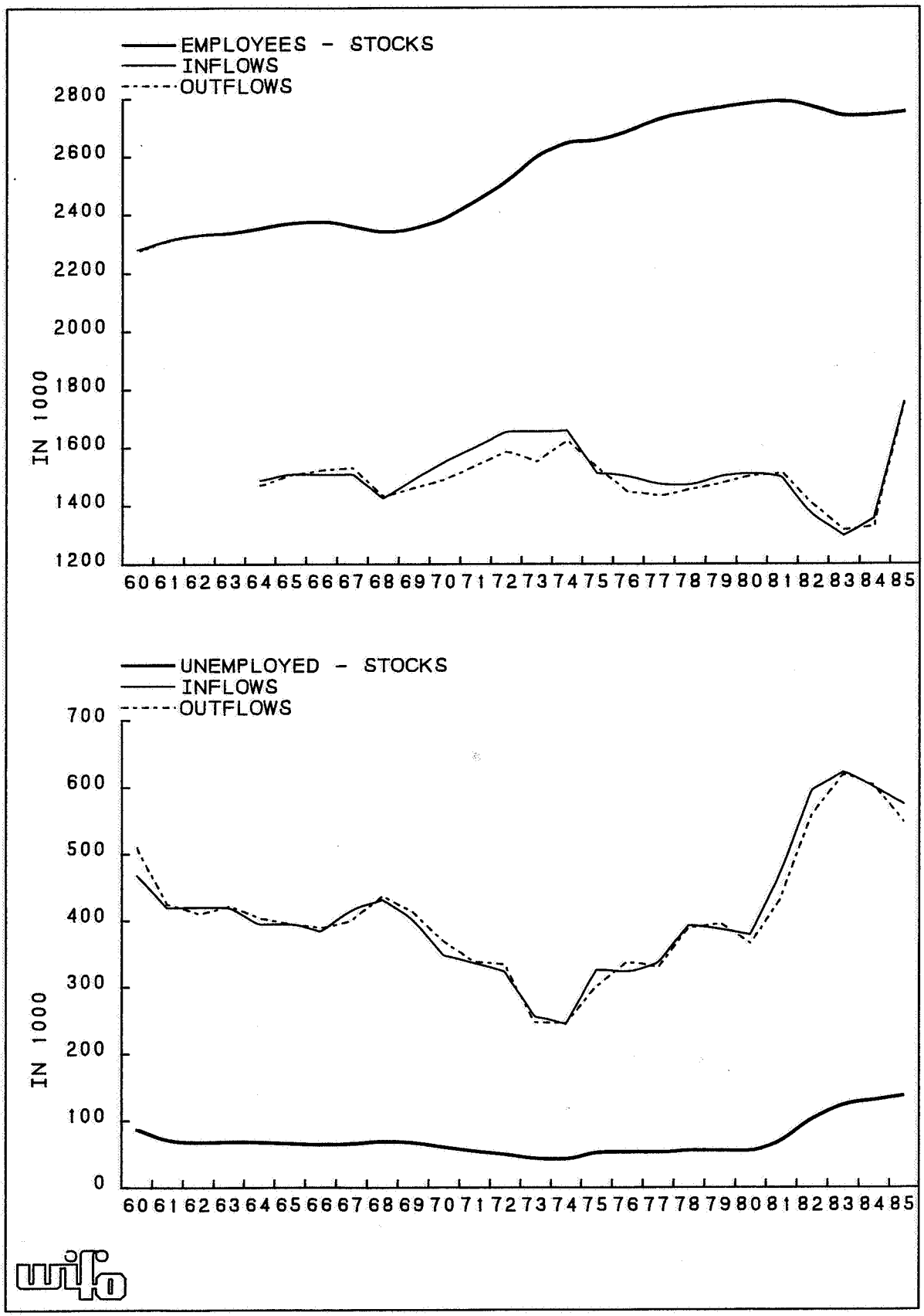

Table 4

The share of youth unemployment in total unemployment for Austria and the United Kingdom

	United Kingdom	Austria
1980	41,7[1)]	23,2[1)]
1981	40,4[1)]	23,9[1)]
1982	40,2[1)]	27,7[1)]
1983	39,8[1)]	29,4
1984	39,0	30,8
1985	37,8	31,4

Source: Eurostat and Austrian Ministry of Social Affairs

1) Estimate

Special youth training programmes and retraining schemes for adults have never played a significant role in Austria. In 1985 less than half a percent of the labour force were covered by such programmes.

3. Labour demand

Growth in employment may be viewed (in an arithmetical though not necessarily causal sense) as the difference between growth in output and in productivity of labour (output per person). Decreasing economic growth involves "ceteris paribus" an increase in unemployment. If the slowdown in output growth is accompanied by a slowdown in productivity growth, the rise in unemployment will be dampened. In the course of the sixties growth of real gross domestic product in Austria was higher than in Great Britain (average annual growth rate in Austria 1960 to 1970: 4.7 percent, in the UK: 3.1 percent). With employment (including self-employed) declining in Austria productivity growth was even higher than output growth. In Great Britain employment grew slightly in the sixties and productivity growth was a bit weaker than output growth. In the early seventies output growth in Austria was again higher than in the UK, this time accompanied by weaker productivity growth thus allowing a considerable average annual employment growth in size more than double that of the UK. In the second half of the seventies employment growth in Austria was again stronger than in the UK and sufficed thus to soak up the increase in the labour force. With labour force growth in both countries comparable in size, the widening of the unemployment differential may be attributed to differences in demand developments. In the first half of the eighties employment in Austria decreased less than in the UK. At the same time labour supply growth was reduced in Austria through policy measures while the labour force in the UK kept growing. Thus a combination of demand and supply factors explains the rapidly widening gap between Austrian and British unemployment rates in the eighties. The most striking difference between Austria and the UK is, however, to be found on the demand side. Economic growth has been higher in Austria than in the UK throughout the last 25 years thus favouring employment growth.

Table 5: Output, productivity and employment in Austria and the UK

III. Economic Policy

The favorable development of demand in Austria has to be seen as the direct outcome of a policy mix that has found wide acceptance in Austria's politico-institutional structure. Austrian economic policy is based on traditional Keynesian demand management, a hard-currency policy, and the social partnership as a form of voluntary long-term incomes policy6).

1. Fiscal and monetary policy

Through the institutions of social partnership, fiscal and monetary policies are well coordinated with incomes policy. Therefore, demand management in Austria is not confined to the traditional role of mitigating cyclical fluctuations, but represents also a long-term device to stabilize business expectations and foster investment and growth with the help of incomes and exchange rate policies.

In the fifties and sixties the promotion of economic growth had the highest priority in the implicit national economic strategy; ever since the early seventies maintenance of full employment took over as the prime objective and not, as in many other countries, the fight against rising inflation. Accordingly, unions had not so much changes in the functional distribution of income as objective but rather stabilization of employment and prices in accordance with productivity growth.

From a short-run or cyclical point of view, Austria's federal budget indicates a high degree of built-in-flexibility, implying that budget balances are very sensitive to changes in output and employment through an extensive system of social security which is an effective automatic stabilizer thus ensuring significant anticyclical effects of the federal budget. Though these automatic stabilizing properties of the federal

Table 5

Output, productivity and employment in Austria and the United Kingdom (average annual growth rates for selected time periods)

	Output		Productivity		Employment	
	U K	Austria	U K	Austria	U K	Austria
1959/1969	+ 3,1	+ 4,7	+ 2,7	+ 5,1	+ 0,4	- 0,4
1969/1973	+ 3,7	+ 5,7	+ 3,5	+ 4,7	+ 0,2	+ 1,0
1973/1976	+ 0,7	+ 2,7	+ 1,0	+ 2,3	- 0,3	+ 0,4
1976/1979	+ 2,3	+ 3,2	+ 1,5	+ 2,7	+ 0,8	+ 0,5
1979/1984	+ 0,7	+ 1,6	+ 1,7	+ 2,0	- 1,0	- 0,4

Source: OECD National Accounts and Labour Force Statistics.

budget may have been predominant7) there have also been considerable discretionary fiscal actions; at least the full-employment budget indicates a clear change to a more expansionary fiscal stance since 1975, while other countries turned to restrictive measures to combat inflation8).

Furthering the long-run or growth perspective, Austria has an extensive system of tax incentives and direct subsidies, i.e., accelerated depreciation, tax credits, low-interest loans, export guarantees, etc., to promote business investment and export demand. Monetary policy accommodates in the short run fiscal policy; it is in accordance with the hard currency option directed towards smoothing down financial speculation and stabilizing nominal interest rates. Thus, the investment and export promotion on the fiscal front is complemented by stable financial and currency conditions to prevent adverse effects on business expectations and to foster economic growth.

2. Hard currency policy

The goal of price stability is traditionally assigned to monetary policy and external equilibrium to exchange rate policy; "Austro-Keynesianism" centers around a new assignment of economic goals and instruments which takes into account the conditions of a small open economy and the origin of inflation.

Since the rapid acceleration of imported inflation in 1973 Austria has tied the Schilling first to a currency basket and since 1976 to the revaluation-prone German Mark. This strategy was considered as both an alleviation for incomes policy and as a precondition for an expansive demand policy to maintain a high level of employment in the face of high inflationary pressures from abroad. This hard-currency policy enforces considerable self-restraint on trade unions and its maintenance implies a high degree of trade union cooperation. Foreign authors regard the trade union support of the hard-currency option as "highly unusual"9);

it is not realized that it was in fact the Austrian Trade Union Federation, which proposed it. This has to be seen in the light of the Austrian social partnership, which implies extensive personal and institutional interrelationships between top-level employee and business representatives on the one hand and the government and central bank on the other.

3. The social partnership

The institutional and political indicators of the Austrian economic development have been widely discussed lately by a number of Austrian and foreign economists10).

The social partnership is not just an approach to incomes policy but has to be seen as a system of institutionalized cooperation between business, labour, and government touching nearly all important aspects of economic policy. In the language of the theory of new corporatism the Austrian social partnership can be described as a political device to control the basic class conflict between capital and labour and to facilitate the pursuit of macroeconomic goals in a modern capitalist economy with a highly oligopolistic market structure.

Though the Austrian social partnership was designed to control inflation in the early fifties it is deeply rooted in the history of Austria. Firstly, from an institutional perspective, there is the Austrian chamber system as the highest and broadest level of interest group representation with compulsory membership, the origin of which dates back to the last century. The chambers are the legal representatives of their members in the legislative process. There are chambers for various professions, but only the Chamber of Commerce, the Chamber of Labour, and the Chamber of Agriculture are of political importance from a macroeconomic point of view today. They play an essential part as brain trusts for the two large political parties in the general process of policy and strategy formulation which is not confined to economic

matters alone; they do, at the same time, constitute together with the Austrian Trade Union Federation, the powerful, nation-wide top-level bargaining institutions for wage and price policies.

Secondly, from the perspective of political history; the tragic experience of civil war in the inter-war period and the German occupation had advanced a cooperative mode of relationship between the social classes; after World War II the need for such cooperation was reinforced due to the desire for quick independence from the allied occupational forces. The achievement of political consensus was reflected in a long-lasting coalition government between the Austrian People's Party and the Austrian Socialist Party, both representing the major interest groups and about 90 percent of the electorate.

Thirdly, while in the First Austrian Republic (1918 to 1938) the trade unions had been fragmented along craft and political lines and were more or less uncoordinated as far as common goals were concerned, the institutional structure was changed dramatically in 1945 by the formation of the Austrian Trade Union Federation. In general, this structural reorganization not only increased the potential political power of the labour movement by centralizing authority, finance and bargaining but, in leaving less room to interunion competition, placed a higher priority on long-run and nation-wide macroeconomic goals and a more cooperative mode of trade union contact with employers than in countries with a more decentralized trade union structure.

In short, the Austrian social partnership, which grew out of the history of this country, can be characterized by

- a high degree of centralization,
- a wide scope of policy involvement,
- a cooperative mode of industrial relations,
- durability,
- voluntarity, and
- absence of direct government involvement.

In many countries governments resort to incomes policies as short-term actions to stop accelerating inflation; incomes policy normally is confined to wage and price supervisions and carried through by legal force. In contrast thereto, the Austrian social partnership represents a long-term, voluntary strategy, encompassing virtually all aspects of economic policy. This means that incomes policy in Austria is embedded in a national economic strategy and coordinated with monetary and fiscal policy.

4. Wage policy

a) General wage guidelines

Trade union leaders have long pointed out that unions follow a wage policy geared to the long-run productivity growth. The long-term aspect of this policy was emphasized in the fifties and sixties by the notion of a countercyclical wage policy. Such a policy would press for higher wage increases in a recession so as to strengthen the purchasing power of consumers, but to moderate wage claims during expansionary phases11).

The deterioration of the balance of payments and the experience of the recession of 1967 prompted a change in the thinking of trade union officials. The promotion of economic growth and the maintenance of full employment was given higher priority and at the beginning of the seventies a new general guideline was formulated: real wages should grow at an average rate of only 3 percent in the long run, providing entrepreneurs with ample funds for investment. This is known as the "Benya formula", named after the president of the Austrian Trade Union Federation. In fact, with yearly productivity increases ranging between 4 and 6 percent in the first half of the seventies, real wage gains turned out to be much higher than the postulated 3 percent.

A further shift in union wage policy took place in the course of the seventies as the increasing openness of the Austrian economy called for

a reassessment of economic policies: it became increasingly clear that a stimulation of the domestic economy would clash with the goal of external equilibrium and the short-term outlook played a more important role in formulating wage claims. The deterioration of the trade balance after 1975 forced the unions to pursue a course of wage moderation with the aim, first, of easing domestic demand pressures and thus import demand, and, second, of improving the international competitive situation of Austria's economy12). This became a particularly pressing problem because Austria's main trading partners persued an explicit anti-inflationary policy.

b) The wage explosion of 1975

In fact, wage inflation decelerated rapidly in the years after 1975, but this slowdown has to be seen against the surge in wages in the year 1975 which stands out as a singular event, that to some observers then signalled the end of the social partnership in the wage setting process. The wage settlements of the late fall of 1974, which for most sectors of the economy determined the wage increases for the year 1975, were reached under a still very favourable economic forecast. The outlook was for a growth of real GDP of 4 percent, a low unemployment rate, but an inflation rate of 9.5 percent. In the event, GDP growth was about 5 percentage points below the forecast, unemployment was higher, and the inflation rate was only 8.4 percent. The divergence of forecast from actual rates of increase in GDP and in inflation accounts for several percentage points of the wage increases recorded for the year 1975.13) This explanation of the "wage explosion" of 1975 agrees with the interpretation by the Austrian Trade Union Federation; in the following years the trade union leadership tried to work off the "overdrawn" wage round of 1974/75.

c) Wage equations

Wage equations were estimated to quantify the special features of the bargaining process in Austria. The wage variable used refers to hourly contractual wages of production workers in the manufacturing sector, the sector of the private economy most strongly organized and thus most likely to present a sharp picture of the wage setting process14).

The period of estimation is 1964 to 1984. The unemployment rate (U) refers to unemployment excluding seasonal unemployment15) and is specified in the reciprocal form. The inflation rate (P) according to the consumer price index enters the equation as a two-year average, with two thirds of the weight going to the inflation rate lagged one year. Hence the short-run elasticity is one third of the long-run elasticity.

The variable normal working time (NT) accounts for the reduction in working hours that occurred in the years 1970, 1972, and 1975 (with reductions by 4 percent, 2 percent, and 5 percent).

The productivity variable is a two-year moving average of the growth of productivity (Y, real GDP per dependent employee).

$$\dot{w}_t = a_0 + a_1 NT_t + a_2 (\dot{P}_t + 2\dot{P}_{t-1})/3 + a_3 /U_t + a_4 (\dot{Y}_t + \dot{Y}_{t-1})/2$$

Table 6: Wage inflation equations: Contractual wages

In the standard Phillips curve as reported in equation 1 the coefficient of inflation is 0.66, the semi-elasticity with respect to unemployment (measured at the average unemployment rate over the period 1980 to 1984) 0.98. This indicates that there is, contrary to the experience in other countries, a stable trade-off between the inflation rate and unemployment. The institutional characteristics of the wage determination process in Austria call, however, for a departure from the basic wage model. The inclusion of the productivity growth rate raises the inflation coefficient to 0.98, lowers the coefficient of the inverse

Table 6

Wage Inflation Equations

Contractual Wages

Equation	Sample period	Independent variable: Constant	Normal working time	Inflation	Lagged unemployment	Productivity	Deficit	Summary statistics: R2	D-W
1	1964 - 1984	-.0	-1.09	.66	6.01			.88	1.6
		(-.0)	(-5.0)	(3.6)	(4.2)				
2	1964 - 1984	-2.25	-.96	.98	4.18	.48		.91	2.0
		(-1.7)	(-4.8)	(4.7)	(2.9)	(2.4)			
3	1964 - 1984*	-1.91	-.37	.81	4.00	.64		.92	1.4
		(-2.3)	(-2.1)	(5.9)	(4.3)	(4.9)			
4	1964 - 1984	.12	-1.00	0.75	6.11		.68	.92	2.2
		(.1)	(-5.4)	(4.8)	(5.1)		(2.9)		
5	**1964 - 1984***	-.95	-.38	.75	4.80	.45	.41	.95	2.1
		(-1.1)	(-2.5)	(6.05)	(5.5)	(3.2)	(2.4)		

* Excluding the year 1975.

of the unemployment rate, and improves the overall fit. Thus, productivity changes appear as a significant variable in the wage determination process. Exclusion of the year 1975 from the sample period yields an estimate of the inflation coefficient that is somewhat lower, but leaves the coefficient of the unemployment rate virtually a further modification, unchanged.

The concern of the Austrian labour unions with the maintenance of a competitive situation vis-a-vis the main trading partners suggest a further modicification, the inclusion of a variable characterizing the external sector. When the deficit in the current balance as a percentage of GDP (in the form of a two-year average of the deficit lagged one and two years) is introduced into the equation, the variable is significant, but competes with the productivity variable (equation 4). If the atypical year 1975 is excluded from the sample period (equation 5), the results suggest a strong direct link between the external sector and the wage determination process, a link that does not include a change in the unemployment rate: an increase in the deficit by one percentage point lowers the increase in negotiated wages by half a percentage point16). This result, of course, does not indicate that wage increases are always perfectly in line with the requirements of the external sector. This is already suggested by the time lag of one and a half years. Excessive wage growth, as in the years 1974 and 1975 was an important factor in producing deficits in the external sector. These imbalances, to be sure, were accompanied by production and employment losses, subsequently dampening wage inflation. But the explicit consideration of Austria's exposure to the world markets sets in train a self-correcting mechanism that tends to offset earlier excessive wage increases.

Table 7: Wage inflation equations: Contractual wages

There are also good institutional grounds for specifying forward looking expectations. This applies to inflation as well as to the growth of real GDP. Since 1964 economic forecasts have been carried out under the aegis

Table 7

Wage Inflation Equations

Contractual Wages with Forecast Variables

Equation	Sample period	Independent variable: Constant	Normal working time	Inflation	Lagged unemployment	GDP growth	Forecast Inflation	Forecast GDP	Summary statistics: R2	D-W
6	1964 - 1984	-.86	-.94		4.54		.78	.49	.88	1.6
		(-.7)	(-4.0)		(2.3)		(3.4)	(1.7)		
7*	1964 - 1984	7.46	-1.10	.41	6.63	-.07			.83	1.7
		(.4)	(-4.2)	(1.6)	(3.3)	(-.3)				
8	1964 - 1984	-.78	-1.08	.85	3.51			.52	.91	1.9
		(-.8)	(-5.5)	(4.5)	(2.0)			(2.1)		

* The inflation Variable is the unlagged inflation rate.

of the social partners. These forecasts, as worked out by the Austrian Institute of Economic Research, form also the official government forecasts. When the forecast variables are introduced into the equation in place of the actual rate of inflation moving average and the productivity variable, the fit worsens just slightly (with an R^2 of 0.88 for equation 6 compared to 0.91 for equation 2). These forecast variables do not just incorporate the information contained in the actual variables. This is shown by a comparison of the equation with the forecast variables with one containing the contemporaneous GDP growth rate and the contemporaneous rate of inflation (not a moving average) (equation 7). The fit of the equation with the actual variables is considerably worse, the coefficient of GDP growth is around zero. The forecast variables seem to capture the year 1975 quite well[17]; the results thus support the hypothesis that the "wage explosion" of 1975 was unintended.

More generally, the presence of the forecast variables in the wage equation indicates that the parties of the wage bargaining process explicitly take into account the economic forecasts formed by the social partners. This represents an important departure from the practice in other countries where past events are extrapolated adaptively. Particularly noteworthy is the good performance of the GDP forecast variable, because it indicates that the social partners take into account short-term economic developments. A slowdown in economic growth induced by supply shocks will thus soon be reflected in lower wage increases. This interpretation applies also to the productivity term.

d) Earnings equations

The wage equations put forward so far refer to contractual wage rates for production workers in the manufacturing sector. But contractual wages are not representative of compensation per employee in the overall economy. In many sectors, contractual wages are only minimum wage rates

that are exceeded by effectively paid wages and at times earnings rise faster than collectively bargained wage rates, such as in the early seventies, or more slowly as in most years since the mid-seventies.

Table 8: Earnings equations

The following section analyses the behaviour of average earnings (wages and salaries per employee per hours worked) in the whole economy (including the government sector). The definitions of the other variables remain the same; the unemployment rate now enters the earnings equations without a lag.

The coefficient of inflation in the wage equation is far below unity, around 0.5, a value lower than for most OECD countries listed in Coe (1985). According to this equation price increases are only partially compensated by wage increases in Austria.

Just as in the equations for contractual wages, inclusion of the productivity variable increases the inflation coefficient and reduces the coefficient of the unemployment variable18). Thus, productivity growth again proves to exert a strong influence on the movement of wages; the productivity variable might be interpreted as a proxy for past or future productivity (or GDP) growth or, perhaps more so than in the contractual wage equations, as a cyclical variable and thus as a proxy for conditions in the labour markets. Exclusion of the year 1975 yields a smaller inflation coefficient, but a higher coefficient of the unemployment rate.

5. Real wage rigidity

The rise in unemployment in recent years in Europe has often been linked to growing rigidities in the labour market. The inflexibility of real wages is listed as one of the most important aspects of this phenomenon. As the OECD (1985 p.29-30) puts it: ""Real wage flexibility in the event

Table 8

Wage Inflation Equations

Average Earnings

Equation	Sample period	Independent variable: Constant	Normal working time	Inflation	Unemployment	Productivity	Summary statistics: R2	D-W	Real wage rigidity
9	1964 - 1984	-.24	-.67	.51	8.58		.75	1.9	.39
		(-.1)	(-2.2)	(2.2)	(5.3)				
10	1964 - 1984	-3.27	-.40	.95	4.91	.86	.83	2.4	.39
		(-1.8)	(-1.4)	(3.6)	(2.5)	(2.6)			
11	1964 - 1984*	-2.75	.24	.65	6.22	.87	.86	2.3	.24
		(-1.8)	(.8)	(2.7)	(3.7)	(3.2)			

* excluding the year 1975.

of an external price shock calls for real wages to adjust quickly to losses in the terms of trade. Likewise, real wage flexibility in the face of a trend decline in productivity necessitates a prompt downward adjustment. In these conditions, there need be no lasting acceleration of inflation and little squeeze on profits." But if real wages fail to adjust promptly to the external price shock and associated increases in unemployment a rise in structural unemployment may be the result."

The wage equations estimated for Austria allow us to compute a measure of real wage flexibility also for Austria. The measure employed in this paper is that used by Coe (1985, p116). Real wage rigidity is defined as the short-term elasticity of nominal wages with respect to inflation divided by the semi-elasticity of nominal wages with respect to the unemployment rate. It is the increase in the unemployment rate required to offset the inflationary consequences in the face of an adverse shock. Real wage rigidity will be higher the less responsive nominal wages are to the unemployment rate and the more rapidly nominal wages respond to a price shock.

The standard Phillips curve equation (equation 9 of Table 8) yields a semi-elasticity of nominal wages with respect to the unemployment rate of 1.3, on the basis of the average rate of unemployment for the period 1981 to 198419). This value of the unemployment elasticity is in the upper range of estimates for OECD countries, close to the value estimated for Japan, and much below that obtained for the United Kingdom which is put at 0.17 (Coe, 1985, p.117, Table 9). This, together with the coefficient of the inflation rate results in a real wage rigidity of 0.39.

Table 9: Real wage gap

The empirical results indicate, however, that the wage equation for Austria should also include a term for productivity growth. Deflationary measures to control inflation are in general accompanied by a decline in

Table 9

Real Wage Gap

Percentage change in the real labor cost position1)

1970	-1,7
1971	4,1
1972	-0,6
1973	2,6
1974	3,4
1975	3,6
1976	-0,6
1977	-0,1
1978	4,1
1979	-2,1
1980	0,7
1981	1,5
1982	-4,4
1983	-0,9
1984	-2,7

---

1) Real wage growth minus growth of labor productivity minus perdentage change of terms-of-trade effects.

Source: Breuss, 1983.

productivity and thus a smaller rise in unemployment will be required to keep inflation constant. If this productivity term is interpreted as a cyclical variable or as an expectational growth variable, the productivity coefficient can be converted into the equivalent of the unemployment elasticity. Following Coe and Gagliardi (1985, p.40), an Okun coefficient of 2 is assumed20). Then, with a total unemployment elasticity of 2.46 (0.74 plus 1.72) the real wage rigidity measure is 0.39. On the basis of equation 11 of Table 8, which excludes the year 1975, a slightly lower measure of real wage rigidity is obtained (0.24).21)

Even if only the unemployment coefficient (of equation 10 and 11) is considered in the computation of the measure of real wage rigidity, its value is just slightly above 1. Thus, Austria is among the countries with the most flexible wages in Europe. This finding agrees with the observation that the process of disinflation in the second half of the seventies and then again in the eighties has been accomplished with a much smaller increase in the rate of unemployment than in other countries. Wage increases responded rapidly to the slowdown in productivity and the rise in unemployment. At the very least, harsh deflationary policies to control inflation seemed avoidable.

6. The long-term Phillips curve

In the longer term, the rate of price inflation must also be viewed as determined within the wage-price system. The estimates of the wage equation together with estimates of a price equation yield a long-term Phillips curve, with the unemployment rate, productivity growth and import prices as the main determinants. If this equation is solved for the unemployment rate, we can calculate the level of unemployment consistent with stable inflation, i.e., the nonaccelerating inflation rate of unemployment (NAIRU)22). What distinguishes the equation governing the NAIRU for Austria from that of other economies is the appearance of the productivity term in the wage equation: a lower trend

value of productivity growth tends to raise inflation, ceteris paribus, through higher unit labour costs; in the Austrian economy, slower productivity growth, however, also reduces wage growth, more than offsetting the (negative) effect of a slowdown in productivity advances on the NAIRU.

The NAIRU estimates for the Austrian economy are around 2.8 percent in the period 1976 to 1980 and 2.7 percent for the period 1981 to 1984. The effects of lower import price inflation and lower productivity growth in the second period are more or less balanced by a movement along the curve to a point of lower wage inflation. With the actual values of the unemployment rate at 1.7 and 3.3, the NAIRU was first below and then above the actual rate of unemployment, indicating an inflationary climate in the second half of the seventies and a deflationary climate in the eighties.

7. Real wage flexibility and the actual development of wages and employment

The finding of high-wage flexibility raises two minor problems. First, in comparison with other OECD countries (OECD Outlook) the employment losses incurred in Austria seem rather high given the low real wage rigidity. Second, the increase in unemployment set in rather late in Austria.

A partial explanation of both of these phenomena can be found in the relation between cost developments and the course of unemployment in the second half of the seventies, a relation which is not reflected in the measure of real wage rigidity.

The course of labour costs can be adequately described by the real wage gap defined as the difference between real wages and productivity adjusted for terms-of-trade effects. This measure is strongly influenced by short-term productivity changes (such as the virtual stagnation of

labour productivity in 1978, raising the real wage gap), and terms-of-trade effects (such as losses in 1974, and then again in 1980, and 1981). These effects tend to average out over several years. So, in general, positive real wage gaps alternate with negative ones. A different situation, however, prevailed in the mid-seventies, when the real wage gap was strongly positive for three consecutive years. This was the result of terms-of-trade losses, a deceleration of productivity growth, and very high wage gains in 1974 and 1975.

The reaction of the labour market to the deteriorating cost situation - and the demand shortfall in the course of the 1974/75 recession - was partly suppressed in the following years. This was accomplished by maintaining employment in some sectors of the manufacturing industry by administrative measures, and also by a reduction in the number of foreign workers in Austria. The first aspect of these employment measures was documented in detail by Geldner (1984, p.414) who points out that in the recession 1974/75 employment in the nationalized industries was maintained while in the private sector23) employment declined by nearly 10 percent. These employment practices were continued over the following years. While avoiding regionally acute unemployment problems, they created labour redundancies that continue to haunt these enterprises even today. Employment in these industries seems to constitute an exception to the general rule observed in the manufacturing sector: high labour costs in relation to value added is negatively related to employment changes (Geldner, p.413).

Both these measures, the reduction in the number of foreign workers and the maintenance of employment in certain manufacturing industries, have mitigated the effects of the two price shocks and the ensuing recessions on the labour market, and the adjustment process has been drawn out over many years. Three times in the last decade (1976, 1978, 1984) economic policy in Austria had to resort to explicit deflationary measures (mostly in the form of increases in the value-added-tax). These measures were enacted with the primary aim of regaining equilibrium in the

external sector which had been lost as a result of expansionary measures, undertaken by Austria on its own, unaccompanied by Austria's main trading partners, during and shortly after the recession of 1974/75 and the surge in labour costs in the mid-seventies. The 1984 measures were mainly prompted by the desire to reduce the budget deficit, a budget deficit that had grown oversize in the attempt to prop up the economy through a vast array of support programs24). All these measures were actively supported by the Trade Union Federation and accompanied by calls for wage moderations; on the whole deflationary measures were moderate compared to those in other countries, such as the United Kingdom, the United States and West-Germany.

The impact of the shortfall in demand and the loss in international competitiveness was therefore felt in some industries only with a long lag. Thus, it is not surprising that no relation can be established between the real wage gap and employment or unemployment, a relation that has been documented by Bruno - Sachs for some European countries (Bruno - Sachs, 1985). The factors mentioned above suggest an interval of five to ten years between the rise in the real wage gap and an increase in the rate of unemployment. This view agrees also with the decline in the cash flow rate (cash flow as a percentage of value added) that began in 1975 and lasted until 1982 in the manufacturing sector (Hahn, 1985), a phenomenon not consistent with the prompt adjustment of real wages.

8. Wage Differentials

The degree of real wage flexibility is an important indicator of the ability of an economy to overcome supply shocks, but may not suffice to represent the wage determination process if wage differentials change significantly. Earlier studies (Pollan, 1977 and 1980) provided evidence that the wage structure was sensitive to market forces and that the trade unions have not hampered the allocative role of wage differentials. Individual unions and shop stewards seem to have attached

small importance to the maintenance of customary wage differentials relative to other employee groups. Of the major sectors, wages in manufacturing with its high share of skilled workers and high union representation, react less strongly to changes in the labour and goods market than wages in the private services sector or in construction (Pollan, 1982). These differences in wage flexibility can well be given an economic interpretation by reference to the distinction between career and auction labour markets (Okun, 1981). Compensation per employee in the public sector is also rather insensitive to short-term economic factors.

There are indications that these differentials have grown over the last decade, a period of economic stagnation. In the years immediately following the recession of 1974/75 the slowdown in wage inflation affected all sectors of the economy to roughly the same degree. Wages in manufacturing, the sector with the least wage flexibility, did not advance faster than in other sectors, a result hardly surprising in view of the massive employment losses incurred in this sector.

Wage differentials, however, began to widen at the end of the seventies (Pollan, 1986). While relative earnings in the construction sector, which suffered severely from the recession, declined very rapidly, wages in the manufacturing sector gained relative to the rest of the economy, even though manufacturing employment fell by some 10 percent between 1980 and 1985, profits declined sharply and massive subsidies were required to offset losses in some branches, notably the heavy industry. Compensation in the public sector also gained vis-a-vis other sectors, with no sign of a trade-off between wage increases and job security.

These developments which were confirmed again in the wage round of the fall of 1985, indicate that the segmentation in the Austrian labour market has become deeper, impeding the reallocation of labour from money-loosing to profitable industries. The burden of adjustment has been borne not so much by the industries affected by the recession but

through reduced wage growth in construction and in private services. It was this sector which provided most of the employment growth in the economy since 1975.

IV. Summary and conclusions

While unemployment in Austria has been higher than in Great Britain in the sixties, the situation changed at the end of the sixties. Ever since then unemployment in Austria has been lower than in the UK. At first the differential of unemployment rates opened up slowly, in the second half of the seventies and early eighties dramatically. In 1985 the unemployment rate in Great Britain was about three times as high as the Austrian rate. Reasons for this different development of unemployment in the two countries are to be found on the supply and demand side of the labour market. On the supply side a number of labour market policies were pursued which reduced labour supply growth during and after the recession of 1974/75. On the demand side, and this is where the most striking differences between Austria and the UK occured, the cooperative labour market institutions allowed a successful full employment strategy. Through the institutions of the Social partnership, fiscal and monetary policies were well coordinated with incomes policy, thus allowing a relatively favourable labour market development in Austria.

Labour market measures which dampened labour supply growth were above all a restrictive foreign worker policy after 1974 and early retirement schemes after 1980. Youth unemployment was relatively low; this can be attributed to some extent to the importance of apprenticeships. Apprentices are renumerated below branch-specific minimum wages thus representing relatively cheap supply of labour.

Demand for labour has been higher in Austria than in Great Britain ever since the late sixties. One of the major determinants for employment growth, economic growth, has been stronger in Austria than in the UK throughout the last 25 years. In the fifties and sixties the promotion

of economic growth had the highest priority in the Austrian economic strategy, in the early seventies maintenance of full employment took over as prime objective. Accordingly, unions strived for stabilization of employment and prices in accordance with productivity growth and not so much for changes in the functional distribution of income. An expansive demand policy, in the short-run through the budget and in the long-run through an extensive system of tax incentives and direct subsidies, was complemented by a hard currency monetary policy, directed towards holding back financial speculation and stabilizing interest rates. Since the rapid acceleration of imported inflation in 1973 Autria has tied the Schilling first to a currency basket and since 1976 to the revaluation - prone German Mark. This hard-currency policy was promoted by the Austrian Trade Union Federation which signifies the high degree of trade union co-operation through the institutions of the social partnership. The Austrian social partnership consists of the Chambers of Commerce, Agriculture and Labour as well as the Trade Union Federation. It represents a long-term, voluntary strategy, encompassing virtually all aspects of economic policy. This means that incomes policy in Austria is embedded in a national economic strategy and coordinated with monetary and fiscal policy.

The Austrian politico-institutional setup resulted in a stable Phillips relationship in Austria, i.e., a stable trade-off between the inflation rate and unemployment. In contrast to other countries productivity also enters as a significant variable in the wage determination process. The wage equations indicate furthermore that the social partners take short-term economic developments into account. A slowdown in economic growth induced by supply shocks results therefore in lower wage increases.

If, on the basis of wage equations, one calculates a measure for the real wage rigidity, one finds that Austria is among the countries with the most flexible wages in Europe. This finding corresponds to the fact that the process of disinflation in the 2nd half ot the seventies and in

the eighties has been accomplished in Austria with a much smaller increase in the rate of unemployment than in other countries. Wage increases responded rapidly to the slowdown in productivity and the rise in unemployment. Thus harsh deflationary policies to control inflation were avoidable. The wage structure in Austria has generally been sensitive to market forces, i.e., trade unions have not hampered the allocative role of wage differentials. Ever since the beginning of the eighties, however, wage differentials have widened, not as a consequence of the reallocation of labour from money-loosing to profitable industries but much rather as a result of a stronger segmentation of the labour market. The burden of the downward adjustment of wages is in the main borne by construction and private services and not by the industries most hit by the recession.

It can therefore be said that in spite of a rather successful general economic performance until now, there are indications for increasing structural imbalances, which could inhibit a continuing smooth functioning of the Austrian labour market.

V. Footnotes:

1) The standardization of unemployment rates follows the OECD-concept; Challenge of Unemployment, Labour Force Statistics, OECD.

2) In the long run when migration becomes an ongoing process - the migratory chain - rigidities ensue. See G. Biffl, (1984).

3) This method was first used by Rothschild, K.W., (1977).

4) Data for the UK in OECD "The Challenge of Unemployment", 1982, p.41.

5) Data for the UK in OECD "The Challenge of Unemployment", 1982, p.39.

6) Referred to in Austria as "Austro-Keynesianism", Seidel, Hans (1982).

7) Holzmann, Winckler (1983).

8) Guger (1978), Frisch (1982).

9) Flanagan et al. (1983).

10) Arndt (1982), Flanagan et al. (1983).

11) There is, however, no indication in the data on wage inflation that such a policy was ever successful. For evidence see Pollan (1986).

12) In the same vein, the union federation fully accepted the increases in the value-added-tax in 1978 and 1984. Both aimed at curbing domestic demand and reducing the federal deficit. The VAT increase of 1984 raised the inflation rate by 2 percentage points.

13) Some evidence on this point is provided later.

14) The year 1975 with its high wage increases poses a problem in estimating the standard wage equation, for it is characterized by the coincidence of a wrong economic forecast, the reduction in weekly working hours from 42 hours to 40 hours, and a very high inflation rate in 1974. The lagged inflation rate, for example, seems to capture some of the effects that may be due to the wrong forecast of economic activity or the reduction in working hours (which by definition raises compensation on an hourly basis). We therefore include wage regressions which exclude the year 1975.

15) The influx of foreign workers in the sixties and seventies into the Austrian economy reduced the seasonal component of unemployment in

Austria very strongly (see Biffl, 1985). In the second half of the seventies and in the eighties the percentage of foreign labour was on the decline again. An adjustment for this change is called for under the assumption that seasonal unemployment has much less bearing than nonseasonal unemployment on wage developments. This is done by excluding the seasonal component of unemployment. For a more detailed justification of this procedure see Pollan (1980, p.706).

16) Terms-of-trade changes per se, however, do not seem to influence wage inflation.

17) The combination of the GDP-forecast and the actual rate of inflation (as a moving average) also produces a very good fit. See equation 8.

18) Similar results were obtained by Breuss (198o), Wörgötter (1983), and Seidel (1985). The standard Phillips curve equations estimated by Coe (1985) yield, however, a smaller unemployment elasticity. The inclusion of the unlagged inflation rate (with one third of the weight in the inflation variable as used in the analysis) as an exogenous variable might be thought to raise some problems. But prices of manufactures as compiled in the consumer price index follow the course of import prices, prices of other goods and services are under administrative control and do not depend on short-term changes in wages; only some service prices (with a weight of about 12% in the consumer price index) are directly influenced by wage developments, with a lag of about half a year (Pollan, 1980). On the whole, the degree of simultaneous equation bias can be expected to be very small. This judgement is confirmed by the results of two-stage-least squares estimates.

19) In earlier years when the unemployment rate was lower, the elasticity was considerably higher.

20) This is a low estimate of the Okun coefficient, see Breuss (1982, p.105).

21) In a linear specification of the unemployment rate, the coefficients for the unemployment rate and of the productivity variable are slightly higher, more than offsetting the effect of the higher coefficient of the inflation rate. The measure of real wage rigidity is 0.29.

22) This measure was computed on the basis of a linear wage and price equation; the average value of the determinants of the NAIRU were taken as the equilibrium values for the periods indicated.

23) The private sector includes enterprises owned by the two major banks, banks in which the federal government has a majority ownership. These firms were also very slow in adjusting their labour force to production requirements, a practice which makes the difference in employment practices between the private sector proper and the public sector even more pronounced.

24) Fiscal measures to dampen domestic demand in 1978 may have depressed GDP growth by 1.5 to 2 percentage points. GDP losses in 1984 due to deflationary measures were put at 1 percentage point of GDP by the Austrian Institute of Economic Research (1983).

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