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## Introduction to Part I

One of the striking characteristics of the 1970's – which persisted into the first half of the 1980's – was the divergence of the economic performances of the major industrial democracies. Though the differences within Europe were great, <sup>1</sup> none was perhaps so dramatic as the reversal of the pattern of high unemployment and slow growth in the United States and tight employment and rapid growth in Europe which had characterized much of the previous post-War period.

After the first oil shock, American labor markets and the American economy were able to absorb the additional unemployment, contain the additional inflation, and resume moderate growth. The consequences of the second oil shock were more severe worldwide, but by the mid-1980's, the American economy had again contained its outburst of inflation and was resuming real growth. In Europe, on the other hand, unemployment mounted through most of the 1970's and 1980's, inflation persisted, and growth disappeared. By the middle of the 1980's, many of the nations of Europe had remarkably high unemployment and slow growth.

Even casual observation suggested that it was differences in structure rather than differences in policies that were primarily responsible for these contrasting responses to the oil shocks. All of the industrial economies had, after all, faced essentially the same oil and commodity price increases. Yet some experienced markedly less difficulty with both inflation and unemployment than others. <sup>2</sup>

Both the inflationary nature of the oil shocks and the prevalence of inflationary pressures world-wide in the preceding decade, pointed to the strategic importance of wage-price relationships. Several European economists, notably Herbert Giersch, identified the rigidity of the real wage

<sup>&</sup>lt;sup>1</sup> See, for example, the differences between France and Germany described and analyzed by Georges de Ménil and Uwe Westphal, 1982, The Transmission of International Disturbances: A French-German Cliometric Analysis, 1972–1980, in the third annual International Seminar volume, European Economic Review, vol. 18, no. 1/2.

<sup>&</sup>lt;sup>2</sup> The difference between European and American performances in the preceding decades – in that age of innocence when Phillips curves were not yet vertical and supply shocks were unimportant – seems, by contrast, to have been in part a reflection of differences in the willingness on the two sides of the Atlantic to use discretionary Keynesian policies to exploit the ephemeral rewards of moving up the Phillips curve.

- protected by de jure and de facto indexation and by pervasive social pressures – as a central structural impediment to successful adjustment in Europe. William Branson and Julio Rotemberg, inspired by a lecture by Giersch at Princeton in 1978, developed the first model and analytical study of the implications of real wage rigidity for macroeconomic policy in an international setting. The introduction to their paper, 'International Adjustment With Wage Rigidity', which is the lead article in this volume, succinctly summarizes the macroeconomic policy debate between Europe and the United States in the late 1970's, and points to the flexibility of the real wage in the United States – where inflation is relatively free to reduce the purchasing power of contractually fixed nominal wages – as the key to the success of its expansionary policies.

They suggest that real wage rigidity in Europe would cause the same expansionary policies to produce more inflation but not more output. The unstated implication is that the coordination of macroeconomic policies in interdependent countries with differing degrees of real wage rigidity calls for asymmetric combinations of both supply and demand policies.

Even as the policymakers of Europe and the United States struggled with adjustment problems in the 1980s, they never lost sight of the eventual objective of a return to steady growth. A lively interest in the determinants of growth thus persisted on both sides of the Atlantic. In 'Comparing Productivity Growth: An Exploration of French and United States Industrial and Firm Data,' Zvi Griliches and Jacques Mairesse provide an example of the light that careful, comparative econometric analysis of firm data can throw on these issues. The authors examine and ultimately reject a set of 'single-cause' hypotheses proposed by others to explain the productivity slowdown. Their findings are that neither slower growth in the accumulation of either physical capital or research and development (R&D) capital, nor the post-1972 increase in the relative price of raw materials, appears to explain any appreciable share of the productivity slowdown in France and the U.S.

The authors base their findings on an ambitious research project which involved assembling, partly from previously unpublished data, a new set of comparable information on key variables, using consistent definitions, for 15 manufacturing industries and over 500 firms in the two countries over the period 1967–1978. The data for output and input were used to compute growth rates of total factor productivity (TFP) for each firm, industry, and country. TFP growth was higher in France than in the U.S. not only for manufacturing as a whole, but also for each industry separately. In both countries productivity growth slowed hereafter with a somewhat greater slowdown in the U.S.

Much of their paper is devoted to a detailed examination and ultimate rejection of several single-cause explanations. They show no tendency for industries having relatively slow capital accumulation or relatively large increases in energy prices to exhibit relatively large slowdowns in TFP growth. Similarly, R&D does not help, both because there was only a modest slowdown in the ratio of R&D spending to GNP in the U.S., and also because France has an even lower R&D-to-GNP ratio than the U.S. yet achieves faster productivity growth across-the-board. The most positive aspect of this part of the study is the confirmation of previous estimates that the overall gross rate of return to investment in R&D is about 25 percent.

Intractable real wages are not the only structural rigidities that can have an effect on economic performance. The thirst for remedies to Europe's stagnation inspired a resurgence of studies of institutions and policies at the microeconomic level which hinder adaptation. The 1986 meeting of the International Seminar (published in the *European Economic Review* in 1987), was devoted exclusively to supply side impediments to growth. Three of the papers presented then, and reproduced in this volume, give a sense of the varieties of comparative and empirical work which the Seminar has promoted.

In 'Housing Markets, Unemployment and Labour Market Flexibility in the U.K.', Gordon Hughes and Barry McCormick show graphically how housing policies have unwittingly reduced the mobility of workers in that country. They document with micro data the fact that the inevitable queues for public and rent-subsidized housing are a strong disincentive to mobility. In an interesting speculative part of the paper (part 4), they examine the relationship between geographic mobility and the NAIRU, and conjecture further that there may be a relationship between the low level of geographic mobility and aspects of unionism in Britain: 'When mobility is costly, workers have an increased incentive to ... join and be active in unions ... [and] the choices of the unions (for example, whether to strike or not) [tend to foster] ... adversarial ... management—union relations [of the kind which are one] traditional explanation of low U.K. productivity.' <sup>3</sup>

In both Europe and the United States, the reputed flexibility of the Japanese economy has been a recurrent standard of comparison for studies of structural rigidities and macroeconomic performance. In 'Labour Market Flexibility in Japan in Comparison with Europe and the U.S.', Toshiaki Tachibanaki provides an empirical survey of the differences between these labor markets and analyzes their contribution to macroeconomic performance. The array of differences is impressive: the high mobility of labor, the importance of the share of part-time and self-employed labor, the flexibility of hours and wages, the relative weakness of social policy toward labor, etc. Tachibanaki is careful to warn against extrapolating simplistically from Japanese experience to the possible consequences of following the 'Japanese model' in Europe or the United States.

<sup>&</sup>lt;sup>3</sup> This volume, Chapter 3 pp. 101-102.

In the last paper in Volume I, we move from econometric studies of markets based on panels of microdata to highly aggregated time-series analysis. In 'Productivity, Wages, and Prices Inside and Outside of Manufacturing in the U.S., Japan, and Europe,' Robert J. Gordon studies for 1964–1984 the comparative dynamic behavior of annual series on prices, wages, output and productivity in the U.S., Japan, and a composite he calls 'Europe' (a fixed-weight aggregate of eleven countries in and out of the EC).

Gordon emphasizes the differences between his results and that of the previous literature on inflation and productivity in Europe. One of the central issues in that literature is the assertion that excessive real wages were a significant cause of the unemployment of the 1970s and 1980s throughout the OECD and particularly in Europe. Bruno and Sachs, for instance, report high and rising values in eight OECD countries during that period of the 'real wage gap' – defined conceptually as the difference between the real product wage and its market-clearing value. <sup>4</sup> This concept is related to the emphasis that Branson and Rotemberg, interpreting Giersch, placed on real wage rigidity and the potential for excessive real wages in Europe.

Gordon points out that much of the earlier evidence is based exclusively on data for real wages and productivity in manufacturing, and does not apply to the larger, nonmanufacturing sector, where data problems are much greater. One of the unique features of his study is its systematic exploitation of published and unpublished data on nonmanufacturing aggregates, and one of his most striking results is the finding that the real wage gap in nonmanufacturing declines over the 1970s in both the United States and in his European aggregate. His finding for the wage gap in manufacturing – which rises more in his European countries than in the United States over the 1970s, and then reverses itself – is not inconsistent with other findings. But the decline which he finds in the nonmanufacturing sector is sufficient to leave the economy-wide wage gap unchanged over the period in both Gordon's European aggregate and the United States.

As Gordon points out, this striking result for nonmanufacturing is in part attributable to his inclusion of 100 percent of the income of self-employed persons in his measure of labor compensation in nonmanufacturing. Allocating this volatile series – which includes the incomes (particularly significant in Europe) of farmers, artisans, and shopkeepers – more to capital income and less to labor income would alter the result.

In the econometric section of his paper, Gordon estimates extended Phillips-type wage equations, price equations, and the partial reduced form relating prices to output for both manufacturing and the residual nonmanufacturing sector in the three regions. His direct and indirect estimates of the

<sup>&</sup>lt;sup>4</sup> Michael Bruno and Jeffrey D. Sachs 1985, The Economics of Worldwide Stagflation. (Harvard University Press, Cambridge, MA) Chapters 9 and 10.

reduced-form response of prices to output – a measure of sensitivity of inflation to excess demand – are about the same in the U.S. as in the European aggregate. He concludes that nominal prices and wages have a similarly low degree of sensitivity to excess supply and demand in both regions.

Gordon's paper is not exclusively contrarian. It confirms the consensus of empirical studies in this area on a number of significant points – notably the importance of autonomous wage push episodes in the late 1960s and early 1970s as a source of higher real wages, and hence lower employment, in both Europe and Japan. He finds that the wage explosions of those periods are best captured by highly significant dummy variables, whose indirect effect on employment he then further documents. This result rejoins some of the concerns of Giersch and other European commentators.