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POWER and INSTITUTIONS in MACROECONOMIC THEORY

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A. Introduction

While increasingly large segments of the economics profession cast themselves adrift in a sea of representative agents governed by the invisible hand, John Kenneth Galbraith has spent a lifetime studying and explaining the realities of the advanced industrial state. These realities are dominated by problems that stem from the accumulation and exercise of power by large corporations, and the obligation of government to counter this power in the public interest. This focus has made Galbraith a persistent critic of economic theories that give power and institutions at best a very minor role, and more usually none at all, in influencing economic performance. He finds this neglect of power and institutions, typical of mainstream economic theories, seriously diminishes their capacity to improve our understanding of the real world and its problems. In this paper we find that recent radical changes in economic theory, initiated and propagated primarily by American economists, reaffirm Galbraith's assessment. This shift has resulted in an entirely new formulation of macro theory, profoundly different from that associated with Keynes' *General Theory*. We focus on how macroeconomic theories explain unemployment, because the treatment of unemployment is at the centre of this revolution in macroeconomic analysis and policy. By contrasting the core features of the original Keynesian macroeconomics with the new mainstream macroeconomics (hereafter referred to as Keynesian and New Keynesian macroeconomics respectively), we can more easily identify the shortcomings and misrepresentations that result when power and institutions are omitted from theory. These are essential determinants of macroeconomic outcomes, needed in order to understand why performance differs over time and among countries, and to design effective policies to remedy malfunction.

Section B contrasts macroeconomic developments in the two episodes comprising the period since World War II, the Golden Age and what we designate the Age of Decline. Section C reviews the changing mainstream schools of macroeconomics that prevailed over the same historical period. Section D summarizes in non-technical terms our extension of traditional Keynesian theory, in which power and institutions are integral elements determining macroeconomic function. In Section E these ideas are organised formally as a constrained optimization problem. This model is tested in Section F,

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which reports the results of an econometric model that includes measures of power and institutional characteristics as possible influences on unemployment performance in the OECD economies. The conclusions are contained in the final section of the paper.

B. The Stylized Facts

Table 1 records unemployment and inflation data for 18 developed capitalist economies from 1960 until the end of the century, the 1990s being the last short-run period for which comparable data are available. The countries fall into three groups; those with low rates of unemployment through the entire period (the low unemployment countries); those with relatively high rates of unemployment throughout the period (the high unemployment countries) and a third group in which low unemployment until the mid-1970s was followed by high unemployment thereafter (the low-high unemployment countries). The data show there were two lengthy episodes distinguished by their differing performance, the Golden Age of low unemployment, moderate inflation and rapid growth (not shown), followed by what we designate the Age of Decline, an episode of high unemployment, high rates of inflation and slow growth. Each episode covers a series of short-run business cycles, with turning points in GDP determined by the OECD and cited at the top of the columns.

The customary definition of full employment emphasises the absence of involuntary unemployment after an adjustment for frictional or 'job search' unemployment. Inspection of Table 1 shows an overall average unemployment rate of 2.3 per cent for the 18 developed capitalist economies during the Golden Age. During this episode 3 per cent was commonly accepted as the full employment rate of unemployment in the United States. We follow this custom, although choosing an overall average rate as high as 4.5 per cent would not alter the nature of our conclusions. Table 1 brings out clearly the exceptional unemployment and inflation records of all but four of the economies in the first episode; these form the high unemployment group. This was a period of expansion of the welfare state, especially outside of the United States, resulting in noticeable reductions in poverty rates and in the inequality of income distribution. It was clearly a Golden Age for most.

The period from the mid-1970s to the closing years of the century was one of economic decline. Accelerating inflation rates in the late 1960s and early 1970s were followed by persistent inflation problems in spite of restrictive aggregate demand policies and rising unemployment rates. Episodes of high unemployment for most economies began in the mid-1970s and extended over a period

approximately twice the length of the Golden Age.² The unweighted average unemployment rate rose from approximately 1½ times its Golden Age average rate to triple this rate by the 1990s short-run cycle. Within these average figures there were exceptions also, as the five low unemployment countries continued to experience low unemployment rates, except for Sweden in the 1990s.

The continued failure to achieve full employment raises a serious challenge to the belief that capitalism is self-regulating. Although mild fluctuations in output and unemployment within this episode might be attributed to shocks, shocks cannot explain the persistence of the high and rising unemployment that began in the mid-1970s; it has gone on too long and has been experienced by too many economies. Instead, this episode draws attention to a long and widely shared period of inadequate aggregate demand. This requires explanation, as does capitalism's success in the previous period. We return to the analysis of this deterioration in performance following a discussion of the radical shift in mainstream macroeconomic theory that accompanied the decline.

C. Paradigm Shifts

The Golden Age of capitalist development was also the golden age of Keynesian macroeconomics. Mainstream macroeconomic models gave a central role to aggregate demand in determining the equilibrium of the system. Any failure of the private sector to achieve full employment levels of aggregate demand would be short lived, corrected when necessary by stimulative fiscal policies. It was the high growth rates of aggregate demand experienced during this episode that led to the economies' achievement of full employment levels of output and employment. With few exceptions, inflation was at acceptable rates throughout the Golden Age. It was modelled by an assumed stable, downward-sloping Phillips curve with a politically acceptable menu of inflation/unemployment choices. Given the commendable macroeconomic performance of the episode and economists' wide acceptance of a Keynesian explanation of the stylized facts ('we were all Keynesians'), little effort was made by macro economists to push the chain of causation deeper to consider whether there were specific historical factors underlying performance and delivering a Golden Age.

Bouts of rather severe inflation in the late 1960s and early 1970s marked the beginning of the end of the Golden Age. Central bankers, business and political leaders believed the underlying force generating unacceptable inflationary pressures to be the growing exercise of labour power, to a large extent caused by the rising affluence and sustained high employment of the Golden Age. This led to an

²This understates the length of the Golden Age episode because of an absence of comparable data in

'overload' of demands on the economy, especially demands on governments made by labour, that could not all be satisfied. The economy had become inflation prone and needed a drastic anti-inflationary response from government. Based on this appraisal, the recovery programs advocated by business and political leaders, especially in the United States, Canada and the UK, increasingly involved reduction of the welfare state and deregulation, to yield greater 'flexibility' in capital and labour markets. Their adherence to this explanation of decline and its remedy can be considered to large extent 'political, a resurrection of a latent ideology of long-standing importance in these countries. According to this world view, these kinds of market interventions are symptoms of undesirable power shifts. Abolishing them redistributes power and restores the efficiency of a private enterprise market economy.

The stagflation of the 1970s and 1980s was accompanied by the emergence of New Keynesian macroeconomics, which was to replace Keynesian theory as mainstream macroeconomics. This is a theoretical framework with a causal structure and policy implications fundamentally different from Keynesian macroeconomics. In New Keynesian macroeconomics the equilibrium rate of unemployment, a non-observable entity, is uniquely determined by exogenous supply side factors. Aggregate demand plays only a passive role. Given some initial level or growth of aggregate demand, built-in adjustment mechanisms bring aggregate demand into line with the supply-determined equilibrium, i.e. the natural rate of unemployment or NAIRU. Inflationary problems are then explained as the consequence of the authorities' efforts to reduce unemployment below its equilibrium rate through overly stimulative aggregate demand policies. The long run Phillips curve was claimed to be vertical at the equilibrium rate of unemployment, a 'fact' ignored by Keynesian policy makers at their peril. Although actual unemployment was high and there was substantial evidence that much of it was involuntary, this was nonetheless claimed to be an equilibrium according to New Keynesian macroeconomics. The apparent difficulty was resolved by alleging that the real wage was too high to employ all workers willing to work; moreover, the wage was rigid downward, because of excessive labour power, so that unemployment could not be decreased by stimulative aggregate demand policies.

The failure of restrictive aggregate demand policies to quickly reduce inflation to Golden Age rates, in spite of substantial and prolonged high unemployment, reaffirmed the beliefs of economists who already subscribed to a *laissez faire* vision. The growing acceptance of vertical Phillips curve analysis and its unique unemployment equilibrium reinforced this vision. It can be said that a serious omission was a prime cause of the decline in support for Keynesian theory, and that it contributed to an even wider acceptance of New Keynesian principles. Keynesian theory provided the policy solutions to economic

the period before 1960.

problems, but could not explain why these policies were not routinely used by all countries, or applied uniformly over time by an individual country. Once economic theory enters the real world *via a* prescription for interventionism, as Keynesian theory does, it must consider the institutions and the distribution of power that might constrain policy options. By including institutions and power and changes in their structures, the analysis can identify the constraints at work and the appropriate policy responses.

More exactly, beginning with the decline in macroeconomic performance in the mid-1970s and continuing to the present, Keynesian economists had failed to develop a general explanation of governments' unwillingness to supply the aggregate demand policies required to achieve full employment. Without such a theory the best available explanation of stagflation, especially among the younger macro economists, was seen to be the rising political and economic demands upon the system by labour. The appropriate 'remedial' measures included reductions in labour power. Effectively, this New Keynesian explanation of the difficulties and programme for recovery coincided with the views of business and political leaders. With the notable exception of work by the Post Keynesians, the macroeconomics that emerged was embedded in the supply determined equilibrium framework, a framework that denies the need for any theory of aggregate demand other than its automatic adjustment to aggregate supply. Arguments for rejecting New Keynesian macroeconomics as a method of analysis is a subject for another paper. We will offer a critique of their policies below.

D. A Political Economy Theory of Aggregate Demand.

1. Extending the Keynesian model

The remainder of this paper focusses on formulating a theory of aggregate demand that can explain differences in unemployment rates both among economies and through time. It builds upon a traditional Keynesian base, and is intended to correct the omission in Keynesian macroeconomics referred to in the previous section. While this paper deals with differences in aggregate demand and unemployment across countries, the model can also be used to analyse the changes in aggregate demand and unemployment from the Golden Age to the Age of Decline.

In the extended model, aggregate demand policy is endogenously determined. Its starting point is a central insight of the *General Theory* -- high unemployment rates and low levels of output are caused by deficient aggregate demand and can be remedied by fiscal policy. Persistently high unemployment can therefore be attributed to the authorities' failure to supply the needed expansionary policies. We then push the analysis deeper by asking why they might fail to provide this level of aggregate demand (or

why they have been willing to do so in the past). The answer lies in the underlying power and institutional structures. Although these change relatively slowly compared to movements of the usual economic variables, they are nevertheless 'historically specific' having varied significantly from one historic episode to the next.³

2. The demand for and supply of aggregate demand

Thus, we model the dominant macroeconomic policy response of the authorities in any historical episode as the outcome of an interaction between the supply of and demand for full employment policies. In this framework, the strength of demand for full employment policies is determined by the distribution of political and economic power among organized interest groups. The policies supplied by the fiscal authorities depend upon whether there are constraints limiting their policy options.⁴ For example, they may be unwilling to supply full employment levels of aggregate demand because to do so would generate unacceptable inflation or external imbalance, or because there are laws that limit budget deficits. To focus on essentials, in this section we assume that the only constraint limiting the authorities' policy options is an unacceptably high inflation rate at full employment. In section E the central issues are analysed in a more formal manner, allowing for the treatment of additional constraints on policy options, followed in Section F by an econometric test of our political economy theory of aggregate demand.

The party control theory of economic policy is the most prominent of the models focussing on the demand side and is a useful point of reference. It offers a political explanation of policy choice, explaining differences in unemployment rates across countries in terms of the relative strength of right-wing and left-wing political parties (e.g. Kalecki, 1971; Hibbs, 1987; Alesina *et al.*, 1997). It assumes that political parties represent the society's socio-economic divisions, and that labour is more willing than capital to trade price stability for lower unemployment, a preference registered at the ballot box in its

³Institutions can be defined as the beliefs, customs, laws, rules and norms that guide the behaviour of individuals and groups within society. One of their functions is to legitimize power; another is to provide the mechanisms for conflict mediation. For this study, power is usefully defined as the ability of dominant individuals or groups in economic relationships to make subordinate individuals or groups act in the former's interest. Economic and political power are distinguished by the means used to exercise them – *via* the market or *via* political channels. When institutions legitimize a power relationship, they simultaneously legitimize the economic outcomes that flow from it. These economic outcomes are often, although not exclusively, concerned with income distribution, as are many of the conflicts that arise.

⁴In this analysis monetary policy is treated as a separate institution, with the degree of independence of the central bank varying among countries. For an earlier study employing a similar framework see Gordon, 1975.

choice of political parties. However, this analysis is incomplete. The distribution of political power accounts only for the strength of demand for expansionary policies. Even the most ardently pro-labour government must consider the costs of supplying a full employment policy, the most obvious being the inflation cost. In this case, the key factor underlying the costs and willingness to supply stimulative policies is the position of the Phillips curve, with a poorly placed Phillips curve acting as a constraint. For example, if the maximum politically acceptable rate of price inflation intersects the Phillips curve to the right of the full employment rate of unemployment, policy will target an unemployment rate greater than the full employment rate. In such an economy, inflation costs constrain expansionary policies.

The position of the Phillips curve is determined by particular labour market institutions. In the period since World War II, the most of important of these has been the strategy adopted by labour, business and government to institutionalize 'fairness' in labour markets. With some variations, there were two types of strategy. One permitted full employment with politically acceptable rates of inflation; the other failed to do so.⁵ The latter outcome results from using a 'market power' strategy in which wage settlements were reached through unrestricted collective bargaining between labour and management. There were no institutions that would routinely coordinate wage settlements with national goals; governments had failed to exercise leadership in establishing such institutions. The lack of coordinating institutions resulted in a strong emphasis on the money wage as the target of bargaining. Maximizing the money wage, with the cost of living and wage settlements in other sectors as guides, was the means chosen to secure real wage gains. The adoption of this labour market strategy reflected, and helped to perpetuate, the conflict endemic to an adversarial industrial relations system, often manifested as a high strike volume. Since labour's market power rose when unemployment rates fell, this strategy generated a negatively sloped long-run Phillips curve. Further, this strategy produces a high strike volume, which pushed the Phillips curve to the right, creating a menu of inflation-unemployment choices that excluded simultaneous full employment and acceptable inflation.

In other economies a 'social bargain' strategy was adopted by labour in cooperation with capital and overseen by government. In this case labour accepted the need for money wage restraint in order to achieve national goals such as wage and price stability and international competitiveness. In exchange, labour was promised full employment, the rising real wages that full employment generated through higher productivity growth, and welfare programs as a safety net. Variations in the institutional forms of the social bargain, including the generosity of welfare programs and employment protection measures

⁵For greater detail see Cornwall, 1994, chapters 5-7.

were largely the result of differences in the power of labour.

In the late 1960s, the breakdown of social bargains in many economies and their replacement by a market power strategy was a contributing cause to the end of the Golden Age. According to our analysis, increased strike activity would be expected as a result of this institutional change, a consequence of the industrial unrest inherent to an adversarial bargaining strategy. Table 2 records the average days lost per thousand workers as a consequence of strikes for each of the three country groups of Table 1. For the groups with consistently low or consistently high unemployment, we can see that strike activity is also consistently low or high. But in the group of countries whose social bargains collapsed in the late 1960s, strike activity increases to well over twice its earlier level. This institutional change, from harmonious to adversarial industrial relations, caused their Phillips curves to shift rightward, with the earliest impact felt on wage inflation; the effect on unemployment was delayed until the mid-1970s, as governments countered rising inflation with restrictive policies, according to the New Keynesian prescription.

E. A Formal Model

Our contention is that both power and institutions act together to determine economic outcomes, unemployment in our example. Our example has so far considered the chosen labour market strategy as a determinant of the position of the Phillips curve, because this indicates the degree of trust and harmony in industrial relations. While the level of industrial harmony is crucial, here we allow for the existence of additional institutional constraints that determine economic outcomes. The distribution of power decides the political party whose preferences will be furthered, but the pursuit of these preferences is limited by what is possible.⁶ The model consists of a political preference function which is to be optimized subject to the existing Phillips curve.⁷ The Phillips curve is assumed to be downward sloping, so that there are trade-offs between unemployment and inflation that governments can exploit. The formal model clearly overstates the precision with which governments act; multiple policy goals, lack of information, and policy mistakes make such precision highly unlikely. Fortunately, all that is needed in practice is the assumption that political preferences differ enough to produce consistent differences in

⁶The resulting model develops earlier ideas that have emphasized the political economy aspects of the unemployment-inflation issue (e.g., Cornwall:1994; Hibbs:1987).

⁷ This model was originally used by Lipsey (1965) and later by Trevithick (1976) to provide a definition of full employment that is consistent with other objectives of economic policy. It is implicit in partisan control theory, e.g. Hibbs(1987).

unemployment outcomes as governments attempt to optimize.⁸

The Phillips Curve

The price inflation Phillips curve can be written as

$$\bar{p} = f(U; V_1) \quad [1]$$

where \bar{p} and U represent the inflation and unemployment rates, and V_1 is a vector of variables that influence its slope and position. These include economic variables such as productivity growth, an import price index, and as a measure of external demand conditions, unemployment in the trading partner countries. There are also institutional variables, included to capture the effects of different and changing industrial relations systems. Other explanations of differences in the position of Phillips curves among countries have included such regulatory measures as payroll taxes and various dimensions of the welfare state, particularly the ratio of unemployment benefits to wages, with mixed results.⁹ Rather than isolating individual regulations, which are relatively easily changed, we emphasize institutions that have a broader and more persistent influence on labour market behaviour.

The Political Preference Function

The political preference function measures the disutility (M) of pairs of unemployment and inflation rates. It is assumed to be strictly convex, ensuring that it yields strictly concave indifference curves. It can be written as

$$M = M(\bar{p}, U; V_2) \quad M_p, M_u > 0 \quad [2]$$

where V_2 is a vector of political and institutional variables influencing its slope and position. The parameters of the preference function vary with the political party in power, and it is expected that left-leaning governments will attach a relatively greater weight to unemployment than will right-of-centre governments, yielding steeper indifference curves. Put simply, the left-leaning government will accept a greater rise in inflation to achieve a given reduction in unemployment than the right-wing government. Custom and tradition also influence preferences, causing different weights, and so different slopes, even among countries with similarly left- or right-wing governments. For example, compared to others, a country with a strong aversion to inflation, such as Germany, will attach a greater weight to inflation by any government it elects.

⁸There are several arguments for rejecting the use of vertical Phillips curve analysis (e.g. Cornwall and Cornwall: 2001).

⁹The variables are used to measure real wage rigidities, which are then used to explain unemployment (e.g., Layard *et al.*, 1991). Others claim that labour market rigidities fail to explain differences in unemployment (McCallum:1986; Freeman: 1995).

Optimisation

Each unemployment outcome is interpreted as the result of the government acting to optimize its preference function subject to the existing Phillips curve. The preference function measures disutility, so that the indifference curve closest to the origin is preferred. In Figure 1 this is shown at point A, the point of tangency between the Phillips curve (PC_1) and the indifference curve (IC_1). Should the Phillips curve shift to PC_2 , there is greater disutility at the optimum point B. The effect of alternative preference functions is shown in Figure 2, where the steeper indifference curve (IC_L) depicts the effect of a more left-wing government than curve IC_R . Given the prevailing Phillips curve, optimisation occurs at point A, with lower unemployment and higher inflation than at point B, which would be the choice of a right wing government.

F. The Reduced Form

Our interest lies in the extent to which actual unemployment outcomes are determined by an economy's institutional characteristics and distribution of power. Each observed (optimal) unemployment rate can be represented by a reduced form equation

$$U = U(V_1, V_2) \quad [3]$$

where the vectors V_1 and V_2 contain the institutional and other exogenous or predetermined variables¹⁰. Estimation of this reduced form will provide information about the importance of power and institutional variables in explaining the differences in unemployment rates both among countries and over time for a group of OECD economies. Problems associated with business cycle fluctuations are avoided by using data averaged over the cycle. The first step is to specify the variables to be used and relate them to our theoretical model.

The vector V_2 is from the political preference function, and includes variables that determine the slope of the indifference curves. The idea that left or right political leanings will affect the slope is tested by using the proportion of left-of-centre votes cast in the period as a measure of effective political preferences. Others (e.g., Hibbs, 1987; Alesina *et al.*, *op cit.*) have distinguished left-wing from right-wing governments by using dummy variables that simply assume values of plus or minus one. Using left-of-centre votes allows a finer distinction, providing a measure of the extent to which any government hoping for re-election must moderate its ideological preferences. A strong left vote will move the policies of a right-wing government toward the centre, or strengthen a left-wing administration's ability to resist

¹⁰ Similarly, there is a reduced form equation for inflation, $\pi = P(V_1, V_2)$. It should also be noted that

the claims of powerful business and financial interests. Neither can the simple left-right classification distinguish between high unemployment countries like the United States and Canada, and Japan and Switzerland which have low unemployment, since they all consistently elect right-wing governments. But they have very distinct voting patterns; the average percentage of left votes is 38% for Japan and 26% for Switzerland, compared to zero for the United States and about 15% for Canada. The use of left votes also avoids some of the measurement problems for multi-party states that often have coalition governments. In general, the higher the proportion of left votes, the greater the tolerance for inflation and the stronger the preference for low unemployment.

Identical voting patterns do not imply identical indifference curves, since political preferences also depend on a country's history and institutions. One source of variability is the level of aversion to inflation, proxied here by an index of central bank independence.¹¹ Lastly, because it was voluntary, membership in the European Monetary System also represents political preferences; a dummy variable is used to capture its effects. The monetary policy of EMS members was affected by exchange rate coordination, lowering inflation rates (Jenkins, 1996). EMS membership is therefore an additional measure of a preference for lower inflation.

The Phillips curve defines the set of possible outcomes; its parameters are defined by the variables in vector V_1 . The degree of industrial conflict is expected to have a strong influence on the position of the Phillips curve. It is measured here by the volume of strikes, which is lagged to allow time for changes in industrial relations to exert their influence. Harmony in industrial relations depends upon trust, particularly in wage bargaining. When management's assessments of costs and productivity are believed, wage claims will take them into account, reducing conflict and the likelihood of strikes, and improving the inflation-unemployment trade-off.¹² The volume of strikes is a more direct and more sensitive measure of the wage bargaining environment than the structure of collective bargaining used by others (e.g. Calmfors & Driffill, 1988). The position of the Phillips curve also responds to changes in economic conditions, for example the international economic environment. We account for external demand conditions by using unemployment in each country's trading partners' economies, weighted by its exports to GDP ratio. This weight allows for differences in openness that determine the degree of

the vectors V_1 and V_2 may have some elements in common.

¹¹We support the proposition that central bank independence is caused by aversion to inflation, whether this is 'grass roots' aversion (Debelle and Fischer, 1994) or the view of powerful financial interest groups (Posen, 1995).

¹²McCallum (1983) and Paldam (1980) provide further discussion of these points.

exposure to external demand. Finally, lagged inflation is included as a determinant of the position of the Phillips curve, but we use the average inflation rate in the previous business cycle. Therefore it is not a simple inflationary expectations variable; instead, it measures the cumulative effects of past inflation on the position of the Phillips curve. These effects can be traced to institutional changes in the post-war era, especially the increasing power of labour. Backed by this power, labour's claim to 'fairness' in wage settlements induced employers to accept the protection of real wages as a legitimate objective (Hicks, 1974; Perry, 1975). Past inflation can also affect the Phillips curve *via* the restrictive policies it induces, in a hysteretic process. In addition, more familiar economic variables such as productivity growth and import price inflation are potential determinants of the position of the Phillips curve.¹³

G. The Test Results and Some Implications

We tested the model using a sample of eighteen OECD countries, with four observations for each, for the years 1960-67, 1968-73, 1974-79 and 1980-89, which approximate the business cycles of the period¹⁴. These observations were pooled, and estimated using OLS.¹⁵ The variables are defined in Table 3. Table 4 lists the countries in the sample, and reports regression results for the reduced form unemployment equation [3].¹⁶ Tests for changes in the coefficients after 1973 showed the estimates to be very stable, with one possible exception. The Hocking specification test points to a break in the lagged inflation variable. Its coefficient was not significantly different from zero prior to 1974, but afterwards took a positive value, implying that lagged inflation came to play a part in determining unemployment only after the end of the golden age. This result is consistent with the greater intolerance of inflation, and acceptance of higher unemployment rates to combat it, which occurred in many countries at that time, and also with the widespread use of restrictive policies since the mid-1970s. The coefficient of the external demand variable (WU) is significant, with a value a little less than one. This is expected, given the extent of trade among these countries, and sufficient time in each period to allow the

¹³Our tests showed these to have coefficients that are not significantly different from zero, probably the result of using data averaged over the business cycle.

¹⁴More recent data is not included, partly because there is not a complete business cycle, and partly because of the inconsistencies created by the unification of Germany.

¹⁵Using Monte Carlo simulations, Hauk and Wacziarg (2004) show that OLS applied to averaged country data provides estimates with reduced overall bias compared to other commonly used estimation methods.

¹⁶For a full treatment of the model, the variables used for estimation, and additional estimation results,

transmission of changes to take place. This coefficient suggests that if a country exports 50 per cent of its GDP, and the unemployment of its trading partners rises by one percentage point, it can expect its own unemployment rate to rise by about 0.5 percentage points¹⁷.

Of greater interest to our analysis are the coefficients of the institutional and power variables, which are all of the expected sign, and significantly different from zero at the 5 percent level. The 'left votes' variable used to capture the distribution of power, suggests that a 10 percentage point increase in left votes would result in approximately 0.5 percentage point drop in unemployment. The institutional variables have similarly strong implied effects. Membership in the EMS increases unemployment by about 3 per cent, *ceteris paribus*. Increased central bank independence also increases unemployment rates. For example, the difference in the index between the USA and Japan is 0.30, and accounts for almost one percentage point of the difference in the unemployment rates of these countries. For the period 1973-89, the annual average days lost to strikes per thousand workers for the 'high unemployment' economies of Table 1 was 692, and it was 32 for the 'low unemployment' group, accounting for a 3 percentage point difference in their unemployment rates. The strong partial correlations of these variables with unemployment, and the high overall explanatory power of the estimates support the view that power and institutions play a significant part in determining unemployment rates.

In section C we noted that New Keynesian economists blame the effect of labour-friendly institutions accumulated during the golden age for the increased unemployment that followed. The cure was deregulation, to create a more competitive, flexible labour market. Another influential view is that institutions aid performance the closer they are to some competitive norm. Both views are contrary to the historical record. Among the best performers during this episode were Austria, Germany and the Scandinavian economies, all characterized by extended welfare states, high taxes, high union densities and highly regulated labour markets. In contrast economies with institutions closer to a competitive norm, e.g., Canada and the United States, were among the worst performers.

Using our estimates to account for the change from the golden age to the Age of Decline provides some numbers that support this. While EMS membership and international demand conditions account for a large share of the increase in unemployment between these two episodes, labour market institutions were important. In Canada, Ireland, Italy, Australia and the United Kingdom, increased strike activity accounts for about a one percentage point increase in their unemployment rates. In four of the

see W. Cornwall (1999).

five countries that kept their social bargains, strikes fell, reducing their unemployment rates by an average one percentage point, while in Sweden a small increase in strikes had a minimal effect. These estimates suggest that far from hindering performance, social bargains can assist it.

H. Conclusions

Galbraith has argued that by failing to take into account historical context, economists have produced theories that lack depth and relevance. The power structures and institutions of a country are important determinants of economic performance. These change over time, influenced by and influencing economic development. Analysis that ignores them provides at best only a superficial interpretation of events, and at worst misinterprets them.

Our paper supports this charge, citing developments in macroeconomic theory over the past half century. We conclude that the currently dominant New Keynesian macroeconomics has advocated policies to reduce unemployment that are based on assumptions inconsistent with the historical data of Table 1. The historical record does not support the position that macroeconomic performance improves the closer institutions conform to the competitive model. In fact those economies whose structure most clearly resembles the competitive model were consistently among the high unemployment performers, e.g., Canada and the United States. On the other hand, the economies with the best unemployment records, in the Golden Age and beyond, were those in which the authorities engaged in market interventions, establishing and maintaining labour-friendly institutions. We also contend that the declining acceptance of the kind of Keynesian macroeconomics associated with the *General Theory* has been its failure include power and institutions as part of its theoretical framework. Perhaps most damaging in this context has been its inability to provide a general explanation of stagflation.

The remainder of the paper presents a model that extends Keynesian macroeconomic principles. This reformulation of Keynesian theory includes power and institutions as determinants of aggregate demand; it is offered here as a remedy to some of Galbraith's criticisms. The importance of power and institutions is supported by our econometric tests. But Galbraith's critique of current theory goes further, and concerns the manipulation of public preferences and the consequent induced impact on institutions. The concentration of power in the modern economy, and its use to further consolidate its already formidable strength has been at the root of Galbraith's writings. This is the overriding characteristic that he insists we recognize. Once we have done so, any vestiges of self-regulating markets evaporate, and

¹⁷These numerical illustrations use the coefficients of equation (1) in Table 4.

the we can begin to understand how real economies work. Although we have not ventured into analysing the use of power to form or manipulate preferences, we have taken the first steps to investigate how power promotes the preferences of particular groups via the policy choices that are made. This has increased the power of our analysis by showing how power and institutions are linked to economic policies and performance. For the future, we believe a research programme that emphasises case studies and historical analysis will provide the detail that will allow us to refine and expand our results.

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Table 1 Annual average standardized unemployment rates (U)* and rates of consumer price inflation (p)** for 18 OECD countries (%).

	1960-67		1968-73		1974-79		1980-89	
	U	p	U	p	U	p	U	p
<i>Low unemployment</i>								
Austria	2	3.6	1.8	5.2	1.8	6.2	3.3	3.8
Japan	1.4	5.7	1.2	7.1	1.9	9.9	2.5	2.5
Norway	2	3.9	1.7	6.9	1.8	8.7	2.8	8.3
Sweden	1.6	3.8	2.2	6	1.9	9.8	2.6	7.9
Switzerland	0	3.4	0.0	5.6	0.4	4.0	0.6	3.3
Unweighted Average	1.4	4.1	1.4	6.20	1.6	7.7	2.4	5.2
<i>High unemployment</i>								
Canada	4.8	2.4	5.4	4.6	7.2	9.2	9.4	6.5
Ireland	4.9	4.0	5.6	8.9	7.9	14.9	14.3	9.2
Italy	4.8	4.0	5.7	5.8	6.6	16.1	8.0	11.1
United States	4.9	2.0	4.6	5	6.8	8.5	7.3	5.5
Unweighted Average	4.9	3.1	5.3	6.1	7.1	12.2	9.8	8.1
<i>Low-high unemployment</i>								
Australia	2.2	2.2	2.0	5.6	5.1	12.2	7.5	8.4
Belgium	2	2.8	2.5	4.9	7.1	8.4	9.8	4.9
Denmark	1.6	6.2	1.0	6.3	6.1	10.8	8.1	6.9
Finland	1.6	5.6	2.6	5.8	5.1	12.6	5.4	7.1
France	1.6	3.6	2.6	6.1	4.5	10.7	8.8	7.3
Germany	0.6	2.7	1.0	4.6	3.2	4.6	5.8	2.9
Netherlands	1	3.6	1.5	6.9	5.4	7.2	7.9	2.8
New Zealand	0.1	3.3	0.3	7.4	0.8	13.8	4.6	11.1
United Kingdom	2.7	3.6	3.3	7.5	4.7	15.6	9.8	7.4
Unweighted average	1.5	3.7	1.9	6.1	4.7	10.7	7.5	6.6
Overall Average	2.2	3.7	2.5	6.1	4.4	10.2	6.6	6.5

* OECD *Historical Statistics 1970-2000* and earlier issues, Table 2.19, Standardized Unemployment Rates. For 1960-64, unemployment rates were obtained from the LSE data set. For Austria, Denmark and Switzerland, and for New Zealand prior to 1974, standardized rates are not available; unemployment as a percentage of the total labour force is used instead.

** OECD *Historical Statistics 1970-2000* and earlier issues, Table 7.10.

<i>Country group</i>	<i>1960-67</i>	<i>1968-73</i>	<i>1974-79</i>	<i>1980-89</i>
<i>Low unemployment</i>	43	32	32	57*
<i>High unemployment</i>	370	676	706	333
<i>Low-High unemployment</i>	97	257	248	207**

*This falls to 36 if Sweden is excluded.

**Excludes Belgium, because of missing data.

Table 3: Definitions of the Variables used in the Unemployment Equation

U: average unemployment rate over the period

LV: left-of-centre votes as a proportion of total votes cast in elections during the period

CBI: index of central bank independence

EMS: dummy variable for membership in the European monetary system

STR: logarithm of man days lost to strikes per thousand workers, lagged one period

WU: weighted average unemployment rate of the other seventeen countries in the sample, scaled by the country's own exports to GDP ratio,

LINF: average inflation rate, lagged one period.

Sources: voting data, Mackie and Rose (1991); central bank independence index, Cukierman *et al.* (1992); strike data, *ILO Yearbook of Labour Statistics*, various issues; OECD data are used for the remaining variables.

Table 4: Regression results for the reduced form unemployment equation				
	<i>equation (1)</i>		<i>equation (2)</i>	
<i>Left-of-centre votes</i>		-4.877		-4.535
	(4.02)		(3.77)	
<i>Central Bank Independence</i>		3.046		2.810
	(2.64)		(2.47)	
<i>Membership in the EMS</i>		3.016		3.149
	(4.60)		(4.87)	
<i>Strikes</i>		1.005		1.001
	(8.05)		(8.17)	
<i>'World' Unemployment (WU)</i>		0.944		0.794
	(4.04)		(3.27)	
<i>Lagged Inflation</i>		0.195		-0.037
	(3.43)		(0.28)	
<i>1974-89 dummy x Lagged Inflation</i>				0.198
			(1.88)	
<i>Constant</i>		-2.7337		-2.0652
	(2.27)		(1.68)	
<i>Adjusted R²</i>		0.8222		0.8289
<i>Hocking test critical value</i>	2.0317			
<i>Hocking Sp</i>		3.5445		

Notes:

The figures in parenthesis are the absolute values of the t-statistics. The eighteen countries included are: United States, Japan, Germany, France, Italy, United Kingdom, Canada, Australia, Austria, Belgium, Denmark, Finland, Ireland, The Netherlands, New Zealand, Norway, Sweden and Switzerland. There were four observations for each, for the years 1960-67, 1968-73, 1974-79, 1980-89.

Figure 1 *Optimising Political Preferences*

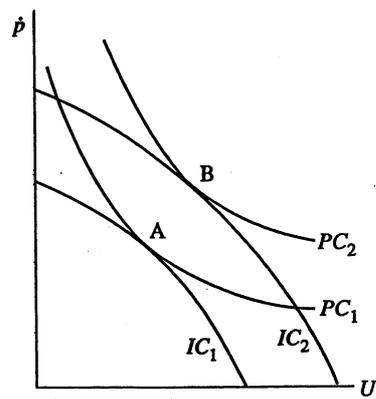


Figure 2 *Alternative Political Preferences*

