

Mainstream Macroeconomics: A ‘Keynesian’ Revival?

Neil Hart *

Abstract

This paper examines the nature of the ‘convergence of vision’ that is said to have existed within mainstream macroeconomics prior to the ‘global economic recession’, and which has been the subject of strong criticism in recent times from Nobel Laureates such as Krugman, Akerlof and Solow. The nature of a proposed ‘Keynesian revival’ is also examined, and it is concluded that while the required changes in theoretical content and methodological perspective are substantial, the most significant obstacle to be overcome is to be found in what Keynes had referred to as the ‘metaphysical principles’ upon which laissez faire has been founded.¹

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Keynesian economics; global financial crisis; macroeconomic theory.

1. Introduction

He is convinced against his will
Is of the same opinion still
(Joan Robinson 1977: 125)

The status and relevance of mainstream macroeconomic theory have been subjected to increased scrutiny in the shadow of the 2008–9 ‘Global Economic Recession’ [GER]. There has been renewed criticism from within mainstream economics itself, while the challenges by ‘non-mainstream’ economists and commentators have gathered some momentum and received increased exposure in the wider public arena. Recent commentary on the status of mainstream macroeconomics by the 2007 Nobel Laureate, Paul Krugman, provides an appropriate setting in which to develop a general discussion of the current situation:

It’s hard to believe now, but not long ago economists were congratulating themselves over the success of their field. Those successes — or so they believed — were both theoretical and practical, leading to a golden era for the profession. On the theoretical side, they thought that they had resolved their internal disputes. Thus, in a 2008 paper titled ‘The State

* School of Economics and Finance, University of Western Sydney

of Macro' (that is, macroeconomics, the study of big-picture issues like recessions), Olivier Blanchard of M.I.T., now the chief economist at the International Monetary Fund, declared that 'the state of macro is good'. The battles of yesteryear, he said, were over, and there had been a 'broad convergence of vision'. And in the real world, economists believed they had things under control: the 'central problem of depression-prevention has been solved', declared Robert Lucas of the University of Chicago in his 2003 presidential address to the American Economic Association. In 2004, Ben Bernanke, a former Princeton professor who is now the chairman of the Federal Reserve Board, celebrated the Great Moderation in economic performance over the previous two decades, which he attributed in part to improved economic policy making... Last year, everything came apart.

Few economists saw our current crisis coming, but this predictive failure was the least of the field's problems. More important was the profession's blindness to the very possibility of catastrophic failures in a market economy (Krugman 2009: 1).²

The 'convergence of vision' description of 'modern macro' is in one respect misleading, as in terms of theory and methodology, mainstream macroeconomics has become somewhat fragmented over recent years. Two distinct approaches can, however, be isolated. Firstly there is the so called 'quantitative dynamic stochastic general equilibrium' [QDSGE] family of models, considered in Section 2 of this paper. As is indicated in the title of Lucas and Sargent's (1978) paper, 'After Keynesian Macroeconomics', these models are indicative of an approach which is openly antagonistic towards macroeconomics that even vaguely resembles the Keynesian tradition. On the other hand, the 'new neo-classical synthesis' [NNS] approach, discussed in Section 3, attempts to establish a 'consensus' in macroeconomic theory, encompassing both Keynesian and Neo-classical elements. A 'convergence of vision' may be more directly associated with the widespread recommendation of 'policy restraint' prior to the GER, encompassing a range of recommendations that opposed the implementation of discretionary macroeconomic policy and the adoption instead of a rules-based method of policy making. In the case of the general equilibrium models, the 'laissez-faire' principle is better seen as a fundamental premise upon which the theoretical arguments are founded and intended to validate. The NNS approach on the other hand is sufficiently flexible to support diverging views on the role of macroeconomic policy, with the widely espoused 'self restraint' principle for policy makers not necessarily implied by the theoretical content of the model itself. More than anything else, the 'convergence in vision' within mainstream economics reflects a shared ideological perspective more than it does convergence in theory and method. A shift in theoretical paradigm within mainstream macroeconomics therefore requires at the same time the adoption or acceptance of a different vision of the role of government in economic affairs and society in general.

A 'reconstruction' of mainstream macroeconomics predicated on a 'revival of Keynes' economics', as advocated by Krugman and others³, is contemplated in Section 4. This requires the abandonment of the general equilibrium based

agenda, and at the same time the transformation of the 'New Neo-classical synthesis' into a 'Keynesian synthesis'. The required changes in theoretical content and methodological perspective are substantial; however, the most significant obstacle to be overcome is to be found in what Keynes (1931: 169) referred to (in his 'collected croakings') as the 'metaphysical or general principles upon which, from time to time, laissez-faire has been founded'.

2. Mainstream Macroeconomics: Quantitative Dynamic Stochastic General Equilibrium Models

The following conclusion was reached in Chari and Kehoe's (2006) recent survey of 'modern macroeconomics in practice', published in the *Journal of Economic Perspectives*:

Over the last three decades, macroeconomic theory and the practice of macroeconomics by economists have changed significantly — for the better. Macroeconomics is now firmly grounded in the principles of economic theory. These advances have not been restricted to the ivory tower. Over the last several decades, the United States and other countries have undertaken a variety of policy changes that are precisely what macroeconomic theory of the last 30 years suggests. (Chari and Kehoe 2006: 3)

According to Chari and Kehoe, three key developments in academic macroeconomics have shaped 'modern' macroeconomic policy analysis: the critique of policy evaluation due to Lucas (1976), the time inconsistency critique of discretionary policy due to Kydland and Prescott (1977), and the development of quantitative dynamic stochastic general equilibrium [DSGE] models following Kydland and Prescott (1982). In this section the third of these three 'developments' is discussed, with the Lucas and time inconsistency critiques considered in a more general setting in the following section.

The DSGE models, developed in the tradition of Kydland and Prescott, have come to epitomise the so-called 'New Classical' approach to macroeconomics.⁴ The models essentially evolved from attempts to add 'supply-side' features to the IS/LM type framework, with the 'general equilibrium' setting entailing a set of simultaneously determined market prices and quantities consistent with the hypothesised steady-state properties of the economic system. Optimising economic agents, endowed with perfect foresight and/or rational expectations, transact in competitive markets where freely operating markets attain equilibrium configurations. Economic agents react to discrepancies between observed values and steady state solutions, with 'adjustment costs' representing the only obstacle to instantaneous adjustments. Market forces guide economies to new equilibrium configurations following random supply side shocks, meaning that in effect business cycles are random walks (with drift) rather than cyclical fluctuations around a deterministic trend. The 'dynamic' designation presumably reflects the 'multi-period' (or even infinite time horizon?) structure of the models. The 'quantitative' label signifies a computational general equilibrium approach, in which the model is 'calibrated' through the assignment of numerical values to key parameters in

the model. 'Empirical evidence' and 'prediction' typically amounts to a simulation of the models taking into account the assigned parameter values.

Within this setting, discretionary fiscal and monetary policy cannot influence equilibrium values of real variables or the steady state growth path of the economy in any persistent or economically meaningful way. Representative economic agents, armed with rational expectations, are aware of the impotency of such policies, and their behavioural responses to policy changes reflect this 'knowledge'. Responsible macroeconomic policy formulation requires the application of time consistent 'credible' monetary policy rules that target the achievement of price stability, combined with obligatory neutral fiscal policy that permits only the systematic operation of automatic stabilisers.

Despite their wide acclaim, the validity of the methodological foundations and practical relevance to policy of the general equilibrium macroeconomic models has been questioned within mainstream macroeconomics. In the remainder of this section, attention is focused on Solow's (2008) important critique of these models, presented by way of published comment on the Chari and Kehoe (2006) survey article referred to above.⁵ This commentary is significant, given that Solow is often regarded as a leading neoclassical economist (as a result of his contributions to growth theory, for example). Significantly, Solow's critical remarks appear to have been fuelled by the assertion by Chari and Kehoe (ibid: 4) that 'the use of dynamic general equilibrium models in macroeconomics has a long tradition dating back, at least, to Robert Solow 1956'. The general tenor of Solow's commentary can be observed from the following passage:

The first sentence of the article by Chari and Kehoe ... reads "Over the last three decades, macroeconomic theory and the practice of macroeconomics by economists have changed — for the better." I think the last phrase is a little too self-congratulatory, and the last three decades have produced rather a mixed bag ... The second sentence then reads: "Macroeconomics is now firmly grounded in the principles of economic theory." I think this sentence is simply false, but this time as a matter of fact, not opinion. If I am right about the second sentence, the case for the first sentence partly evaporates. (Solow 2008: 243)

In part, Solow's argument is developed along the following lines. The 'principles of economic theory' to which 'modern macroeconomics' is claimed to be based, is in fact a 'special case' of a variety of theoretical frameworks that could be employed.⁵ Chari and Kehoe simply equate modern macroeconomics with theories deduced from a vision in which a single immortal consumer-worker-owner maximises a perfectly conventional time additive utility function over indefinite horizons, under rational expectations and in an institutional and technological setting that ensures universal price taking. It is, as Solow (ibid: 243) argues, not a story which anybody accepts because of its 'obvious rightness'. From a theoretical perspective, the 'restrictions' imposed on the macroeconomic models are 'justified for their own sweet sake'. It is not a theoretical approach that Solow would like to see associated with his own contributions to neoclassical theory⁶, largely because of what he termed the 'extreme and prejudicial' assumption of

'a representative agent in a favourable environment'. Moreover, the idea that this version of 'modern macro' could be 'justified empirically', is, according to Solow 'a delusion', with the testing of the calibrated models relegated to the low hurdle of asking whether simulations of the model with 'reasonable disturbances' can reproduce a few of the low moments of observed time series, reflected in ratios in variances or correlation coefficients.

A final issue considered by Solow is the question as to why this particular approach to macroeconomics has 'won hearts and minds among bright and enterprising academic economists'. The explanation offered by Solow is noteworthy, particularly given the identification of the central role played by ideology in shaping these theoretical approaches:

There has always been a purist streak in economics that wants everything to follow neatly from greed, rationality, and equilibrium, with no ifs, ands, or buts ... Here is a theory that gives you just that, and this time 'everything' means everything: macro, not micro. The theory is neat, learnable, not terribly difficult, but just technical enough to feel like 'science.' *Moreover it is practically guaranteed to give laissez-faire-type advice, which happens to fit nicely with the general turn to the political right that began in the 1970s and may or may not be coming to an end.* (ibid: 245, emphasis added)

It is the final sentence which holds the key to developing an understanding of the popularity of the general equilibrium approaches under discussion. Krugman (2009: 1) has argued that 'the economics profession went astray because economists, as a group, mistook beauty, clad in impressive-looking mathematics, for truth'.⁷ However, as Solow implies, it was the preconceived conclusions of the analysis, and not the 'beauty clad in impressive looking mathematics', which most attracted the attention of policy makers and their supporters. The premises upon which the mathematical analysis was based were carefully chosen so as to deliver the unambiguous 'laissez-faire type' policy prescriptions. Ultimately, what is at stake here is not a particular theoretical or methodological structure, but a political ideology disguised in the form of 'modern macroeconomics'. There is no suggestion that ideology can be eliminated from thought within the social sciences, or that it is not indispensable to social action.⁸ However, as Robinson (1962: 8) had argued, what distinguishes a scientific proposition from an ideological one is that if an ideological proposition is treated in a logical manner, it either dissolves into a completely meaningless noise or turns out to be a circular argument. From the discussion above, it can be concluded that the general equilibrium models of the type discussed in this section correspond precisely to this description of what constitutes purely ideological propositions.

3. Mainstream Macroeconomics: The 'Consensus' Model and the Principle of 'Policy Restraint'

A distinctly different theme within mainstream macroeconomics has been the pursuit of a 'consensus' model, seen as an attempt to find 'common ground' between 'rival' Keynesian and Neoclassical approaches to macroeconomic theory.

The imperative to construct a 'consensus' model has been most enthusiastically pursued by the authors of the popular contemporary textbooks, with the 'erst-while' Keynesian versus Neoclassical disputes consigned to the earlier stages of the development of 'modern macroeconomics'. The 'consensus' said to exist within macroeconomic theory was initially described within the IS/LM-AD/AS-Philips Curve relation family of models, thereby combining elements of Keynesian demand analysis with Neoclassical visions of 'market clearing' within a family of equilibrium models. While these theoretical models retain their status within the latest of the successive editions of the popular textbooks, the 'consensus' during recent years has most often been discussed formally in the setting of the New Neoclassical Synthesis [NNS] model, and it is the key features of this approach which are outlined in this section.

The NNS model in part reflects a 'consensus' that emerged from a symposium at the 1997 Annual Meeting of the American Economic Association (published in the *American Economic Review* 87: 2), where prominent macroeconomists Blanchard, Blinder, Eichenbaum, Solow and Taylor were asked to consider if there is a core of practical macroeconomics that could be used to underpin macroeconomic policy. As portrayed by Taylor (2000: 90), the 'consensus' elements that form the foundations of NNS model are as follows. It is maintained that the 'long run real growth trend' or 'potential GDP' can be 'understood' using the Solow-type growth model 'extended to make "technology" explicitly endogenous' (i.e. 'New Growth' Theory?). Expectations regarding inflation and future policy decisions are endogenous, and 'quantitatively significant'. There is no 'long-run trade off' between inflation and unemployment, implying that monetary policy is neutral in the 'long-run'. However, in the short-run, due largely to price and wage 'stickiness', an inflation-unemployment trade-off is likely to be present and money is non-neutral. In this sense, it is sometimes suggested that the proposed synthesis combines a 'New Keynesian' style demand determined short-run with a 'Neoclassical' supply determined 'long-run'. The 'New Keynesian' component is of interest, given that this approach was developed largely as a result of criticisms of the New Classical principles described in the previous section. While allowing for 'price-stickiness' flowing largely from risk-averse behaviour where information is incomplete and asymmetric, New Keynesian models generally retained the assumption of rational expectations and optimising behaviour popularised by their New Classical foes in the battle for 'micro foundations'.⁹

The final area of consensus related to monetary policy decisions, which were seen as rules, or reaction functions, in which the short-term nominal interest rate (the instrument of policy) is adjusted in reaction to economic events (Taylor 2000: 90). It should be noted that this equation is based on *observation* of procedures currently adopted by central banks, and does not necessarily imply that these rules are optimal elements of a macroeconomic policy package. Significantly, the inclusion of monetary policy reaction functions signalled the demise of LM functions, with the latter seen to be inconsistent with the realities of monetary policy based on interest rate setting instruments (as opposed to monetary aggregates).

The key components of the NNS model can be summarised in the following functional relationships:

$$y_t = a_0 + a_1 y_{t-1} + a_2 y_t^e - a_3 (i_t - p_{t+1}^e) + u_1 \quad (1)$$

$$p_t = b_1 y_t + b_2 p_{t-1} + b_3 p_{t+1}^e + u_2 \quad (2)$$

$$i_t = R^* + p_{t+1}^e + c_1 y_{t-1} + c_2 (p_{t-1} - p^T) + c_0 \quad (3)$$

where y is the output gap (actual less full capacity output); p = inflation; i = nominal rate of interest; R^* = 'equilibrium' real rate of interest (consistent with $y = 0$?); p^T = target rate of inflation, e superscripts indicate expected values.

Equation (1) is the aggregate demand relationship, showing the output gap as a function of past and expected future output gaps, the real rate of interest and 'demand shocks' (a_0). Equation (2) is a generic Phillips Curve relationship (with $b_2 + b_3 = 1$), while equation (3) is the monetary policy reaction function of the type referred to in the above quote from Taylor. This policy reaction function explicitly incorporates interest rates as the policy instrument, with the control of inflationary pressures perceived to be the major policy target. In these functional relationships, money supply is in effect a residual outcome, having no causal feedback effects on the economy.¹⁰

In terms of its application to practical policy issues, most discussion within the NNS has been focused on the monetary policy reaction function, or 'Taylor Rule', with policy directed towards changes in official (nominal) interest rates used to offset inflationary pressures which surface whenever real output exceeds (or approaches) full capacity output ($y > 0$). The effectiveness of monetary policy in influencing real variables depends on the sensitivity of expenditures to variations in (real) interest rates. The role and nature of fiscal policy has by contrast been largely neglected. In terms of the functional relationships outlined above, the impact of fiscal policy on the economy has to be interpreted as being transmitted initially through the a_0 ('shift') variable in equation (1). Significantly, expansionary fiscal policy can be seen to add to current demand, thereby reducing the gap between full capacity and current output levels. In this setting, expansionary fiscal policy would only fuel inflationary pressures in the economy and place upward pressure on interest rates if the accompanying increases in demand pushed the economy beyond full capacity output. Therefore, fiscal policy impacts directly on demand without being 'crowded out' by higher interest rates, unless full capacity utilisation is encountered or central banks depart from their designated policy reaction functions.

The functional relationships outlined above therefore point clearly to a potential role for discretionary monetary and fiscal policy, with variations in policy stance targeting the real output gap and price stability. As noted, the effectiveness of monetary policy in achieving macroeconomic targets depends on the interest rate sensitivity of planned expenditures, while in the case of fiscal policy, the impact on nominal output depends on the size of the fiscal policy multipliers. However, in keeping with the long-run 'neoclassical' equilibrium properties of the model, macroeconomic policy can have no real effect on long-run (supply determined) equilibrium values.

Despite the theoretical conclusions that may be derived from the NNS models, the 'broad convergence of vision' remains largely unsympathetic to the application of discretionary monetary and fiscal policies. This perspective is summarised as follows in Blanchard's widely used textbook:

At many points in this book, you saw how the right mix of fiscal and monetary policy could help a country out of a recession, improve its trade position without increasing activity and igniting inflation, slow down an overheating economy, stimulate investment and capital accumulation and so on. This conclusion, however, appears to be at odds with growing demands that policy makers be tightly restrained. In the European Union, countries that have adopted the Euro are required to keep their budget under 3 per cent of GDP. In the United States, the first item in the 'Contract with America', the program drawn up by Republicans for the mid-term US elections in 1994, was the introduction of a balanced budget amendment to the Constitution ... In Australia, the Howard-Costello government had made fiscal surpluses into a political virtue ... if a serious downturn occurs, it will be politically difficult to counter it with fiscal deficits. (Blanchard and Sheen 2007: 558)

Consistent with this 'policy restraint' principle, in the years immediately preceding the GER, it was generally accepted that Central Banks should be 'independent' from governments, and follow policy *rules* (e.g. inflation target). Similarly, it was argued that governments should adopt a 'neutral' fiscal policy stance by balancing their budgets (at least 'over the business cycle'). The general 'non-interventionist' policy stance extended also to the policy formulation regarding labour and financial markets.

In considering the case for restraints on macroeconomic policy, Blanchard and Sheen argue that uncertainty about the effects of policy is an important consideration:

A blunt way of stating the first arguments in favour of policy restraint is that those who know little should do little ... Macroeconomists, and by implication the policy makers who rely on their advice, know little, and they should therefore do little. (ibid 2007: 558)

Uncertainty in formulating macroeconomic policy is said to arise because alternative theories may suggest different policy responses (which is the 'correct' theory?), from data limitations on key macroeconomic variables, and from difficulties with economic modelling (statistical problems in testing models, and questions as to the reliability of predictions). Because of these areas of uncertainty, it was argued that discretionary policy can destabilise the structure of the economy, with policy outcomes being econometrically predictable only when changes in policy take the form of fully discussed and understood changes in policy rule.

In developing their arguments, Blanchard and Sheen draw an analogy between macroeconomists and doctors treating cancer: 'They know a lot, but there is a lot that they don't know' (ibid: 559). However, this analogy does little to enhance the position being argued. While the medical profession would read-

ily acknowledge gaps in their knowledge in the treatment of cancer, it could hardly be argued that doctors as a result have taken a non-interventionist or non-discretionary approach to the treatment of these diseases. Interestingly, Blanchard's 'theory inadequacy' argument is also at odds with the Chari and Kehoe conclusion that the policy restraint conclusion in fact emerges from 'better theory' and a 'deeper understanding' of the macroeconomic environment.

As noted earlier, the Chari and Kehoe (2006) survey of 'modern macroeconomics' lists the 'Lucas critique of policy evaluation' and the time inconsistency critique of discretionary policy amongst the three significant developments in practical macroeconomics. While these 'critiques' are most often discussed formally in the setting of the equilibrium models outlined in Section 2, they appear to have been applied more widely within the current macroeconomics literature, and may help to explain the prominence of the policy restraint principle.

Lucas had argued that some of the key elements of mainstream macroeconomics that were based on historical data, such as the Phillips Curve and Okun's Law relationships, are invalid because they failed to recognise that changes in policy may alter the historical relationships between variables. Changes in policy led to changes in behaviour of economic agents and therefore changes in the relationships between key economic variables.¹¹ Assuming invariant behaviour by economic agents resulted in invalid policy prescriptions. Economic theory therefore had to recognise explicitly that the way expectations are formed might vary with the policy environment, and that the outcome of macroeconomic policies depended critically on economic agents' behavioural reactions to perceived or anticipated policy changes through time. Hence it is not possible to *predict* economic behaviour, as the parameters of a behavioural model cannot be taken to be constant.

The time inconsistency critique of discretionary policy is founded on the notion that 'games' are played between policy makers and voters in the setting where many macroeconomic measures involve trading-off short-run 'gains' and long-run 'losses' (and the converse). Policy makers may, for example, attempt to achieve higher real output growth with lower levels of unemployment to enhance re-election prospects, even if this entailed higher budget deficits and government debt and increased rates of inflation in subsequent periods. More generally, from the government's point of view, it might be optimal to use its announced policy rule, encompassing current and future time periods, to encourage economic agents to commit to certain actions over the near term. However, once private sector agents have committed to these actions, the government might then find it optimal to shift to a new policy rule. As a consequence, economic agents will respond not to currently announced policies, but instead to what they believe to be likely deviations from current policies in future periods. Under such circumstances, discretionary macroeconomic policy may lack 'credibility' and may also be destabilising. These conclusions are obviously augmented when combined with the Lucas critique.

It could be reasonably argued that the general principles underlying the 'Lucas' and 'time inconsistency' critiques of macroeconomic policy appear to be rather uncontroversial, at least in terms of the above exposition. The notion

that macroeconomic policy outcomes are sensitive to the way in which expectations are affected is readily accepted by macroeconomic theorists from diverging schools of thought, as is the reality that macroeconomic policy making proceeds within a strategic political environment, and that its credibility may as a result be questioned. It is only when these principles are nested within the 'quantitative dynamic stochastic general equilibrium models', or other variants of the New Classical approach, that the case against discretionary policy becomes unambiguous.

In terms of the NNS model, the Lucas critique and associated Ricardo-Barro equivalence theorem [RBET] would, to the extent that they occur, imply that fiscal multipliers approach zero. The RBET can be interpreted to imply that budget deficits do not matter; they have no effect on aggregate demand, national saving, real interest rates, exchange rates or current and future output levels. Budget deficits are fully offset by increases in private saving because rational forward thinking economic agents, being 'aware' of inter-temporal fiscal budget constraints, realise that government borrowing today has to be financed later through higher taxes. The relevance of the RBET remains a highly contentious issue within mainstream economic analysis, which is hardly surprising given the long list of assumptions that need to be admitted if the theorem is to be accepted, together with lack of convincing empirical evidence in support of its central propositions.¹² It cannot therefore be conceded that the RBET is a component of what could be termed the 'consensus position' within mainstream macroeconomic thinking. It does, however, in a broader context emphasise the importance of expectations in influencing the outcomes of any policy actions.

The origins of the 'common vision' of the virtues of macroeconomic 'policy restraint' within mainstream economics can now be summarised in the following manner. In terms of the general equilibrium approaches discussed in section 2, the policy restraint conclusion is in fact a presupposition upon which the theory is constructed. It is therefore not a policy principle derived from economic theorising, but instead an assertion that shapes the formulation of the theory itself. In terms of short-run macroeconomic policy formulation, the policy restraint conclusion and aversion to discretionary monetary and fiscal policies is not dictated by theoretical relationships said to define the NNS models. Instead the conclusion emerges from a particular interpretation of the model, and suppositions about the economic and political environment in which policy is being implemented. In short, beyond the confines of the general equilibrium models, modern mainstream macroeconomics does not unambiguously support policy restraint, or universally condemn the application of discretionary macroeconomic policy, at least in the context of short-run macroeconomic stabilisation.

4. A Keynesian Revival?

In order to restore confidence in the credibility of mainstream macroeconomics, Krugman proposed the following:

So here's what I think economists have to do. First, they have to face up to the inconvenient reality that financial markets fall far short of perfec-

tion, that they are subject to extraordinary delusions and the madness of crowds. Second, they have to admit — and this will be very hard for the people who giggled and whispered over Keynes — that Keynesian economics remains the best framework we have for making sense of recessions and depressions. Third, they'll have to do their best to incorporate the realities of finance into macroeconomics ... When it comes to the all-too-human problem of recessions and depressions, economists need to abandon the neat but wrong solution of assuming that everyone is rational and markets work perfectly. (Krugman 2009: 8)

The view that the Keynesian framework was well suited to such a task was also promoted in Akerlof's (2007) presidential address to the American Economic Association, which had as a central theme the requirement that macroeconomic theory consider more closely the factors that actually motivate human behaviour. Akerlof developed his analysis in the setting of 'key neutralities' found in modern mainstream economics; the independence of consumption and current income (the life-cycle permanent income hypothesis); the irrelevance of current profits to investment spending (the Modigliani-Miller theorem); the long-run independence of inflation and unemployment (natural rate theory); the inability of monetary policy to stabilise output (the rational expectations hypothesis); and the irrelevance of taxes and budget deficits to consumption (RBET). Importantly, each of these neutralities led to radically anti-Keynesian conclusions. However, as Akerlof establishes clearly, these conclusions are based on behavioural assumption derived axiomatically as opposed to observationally, and fail to incorporate the 'norms' of the decision makers. The norms reflect how decision makers think they and others should, or should not, behave, and such preferences, even in the absence of 'market frictions', systematically violate each of the five neutralities listed above (ibid: 6). Most importantly, the behavioural norms yield a macroeconomics with close connections to *early* Keynesian thinking, leading to Akerlof's call for a return to the virtues of Keynes' method of basing models on our knowledge of human nature and from the detailed facts of experience (2007: 6, 13–14).

A 'return' to a more 'Keynesian' framework is not difficult to contemplate, given that the 'New Keynesian' school is said to represent a partner to the NNS consensus, and that more fundamental Keynesian ideas have continued to flourish within the 'non-mainstream' Post Keynesian and related schools of thought. However, unlike their New Keynesian relatives, the Post Keynesians and their allies have been highly critical of many key aspects of the NNS approach described in Section 3.

One of the significant points of departure between the New Keynesians and what Akerlof refers to as the 'older Keynesians', is aptly summarised by Akerlof as follows:

These New Keynesians accepted the methodological dictums of the New Classical economics: that constrained maximization of profit and utility functions is the appropriate microfoundation for macroeconomics. They also viewed the neutralities as having a certain sort of generality. The

neutralities do commonly describe equilibria of competitive economies with complete information, irrespective of people's preferences — *as long as those preferences correspond to economists' typical descriptions of them*. The Keynesians then resurrected some — but not all — of the Keynesian conclusions by adding a variety of frictions to the New Classical model. (Akerlof 2007: 6)

In accepting the 'methodological dictums' of New Classical economics, the New Keynesians had as a consequence travelled along the same pathway as what Keynes (1937c: 215) had referred to as classical economics, portrayed as 'being itself one of these pretty, polite techniques which tries to deal with the present by abstracting from the fact that we know very little about the future.' This unwarranted abstraction permits economic analysis to evade what Keynes had depicted as the fundamental consequences of uncertainty on economic decision making and activity. Given the essential nature of this theme to Keynes' economics, his well-known definition of uncertainty merits repetition:

By 'uncertain' knowledge, let me explain, I do not mean merely to distinguish what is known for certain from what is only probable. The game of roulette is not subject, in this sense, to uncertainty; nor is the prospect of a Victory bond being drawn. Or, again, the expectation of life is only slightly uncertain. Even the weather is only moderately uncertain. The sense in which I am using the term is that in which the prospect of a European war is uncertain, or the price of copper and the rate of interest twenty years hence, or the obsolescence of a new invention, or the position of private wealth owners in the social system in 1970. About these matters there is no scientific basis on which to form any calculable probability whatever. We simply do not know. (Keynes 1937c: 213–4)

As a consequence, long-term expectations, upon which decisions are based, cannot be based solely on the 'most probable forecast we can make', but depend also on 'the *confidence* with which we make this forecast — on how highly we rate the likelihood of our best forecast turning out quite wrong' (Keynes 1936: 148, original emphasis). Therefore, in forming expectations, it is likely to be assumed that the present is a much more serviceable guide to the future, and that the existing state of opinion as expressed in prices and the character of existing output is based on a *correct* summing up of future prospects. Most importantly, 'knowing that our own individual judgment is worthless', there is instead reliance on the 'judgement of the rest of the world', and 'to conform with the behaviour of the majority or the average'. Throughout, it is the level of confidence that is the force which drives decision making. The state of confidence is itself based on 'flimsy foundations, being subject to 'sudden and violent changes' disturbing any notion of 'calmness and immobility' (Keynes 1937c: 214–5). An essential role for governments therefore is to manage the 'animal spirits' in a manner that offsets the systematic instability and tendency towards prolonged periods of under full employment within capitalist economies.

From these premises, Keynes' macroeconomics placed emphasis on the role of effective demand, decision-making under conditions of uncertainty, and

the associated role of subjective and volatile expectations. Participants in the economic system he sought to describe are assumed to act under conditions of uncertainty, adopting behavioural routines that differ from maximising strategies that may possibly have been selected within economic systems being guided by equilibrating or 'persistent' forces. All of this is a radical departure from the aspects of New Classical methodology and the assumption of rational expectations that have formed the basis of much of the New Keynesian theory. A return to Keynes' framework therefore entails a rejection of much of what has become characterised as the 'Keynesian' component of the NNS consensus in modern macroeconomics. The behavioural norms to which Akerlof refers must be constructed in a manner which recognises the realities of uncertainty and volatile subjective expectations that is characteristic of economic systems.

In terms of the NNS model presented in Section 3, the recognition of uncertainty as described by Keynes changes dramatically the way the IS relationship (equation 1) has to be interpreted. Put simply, the 'shift variable' [u_1], reflecting 'exogenous' shifts in spending, becomes the key element of the model, as it is through this channel that the 'sudden and violent' shifts in confidence enter the system. Similarly, the parameters identified with the IS relation are likely to be unstable. As Keynes insisted, the treatment of money and interest rates is another key aspect arising from uncertainty, with a meaningful analysis of liquidity preference only possible if the function of money is related to the existence of uncertainty (in providing a mechanism whereby the unchangeable past can be linked with the unknowable future). It is often argued that a major shortcoming of Keynes' analysis in the *General Theory*, is the (often implicit) assumption of an exogenously (central bank) determined money supply in his analysis of liquidity preference and interest rate determination. However, Keynes in the *General Theory* in effect assumed the money supply to be *given*, as opposed to arguing explicitly that the money supply was in reality exogenously determined (by the monetary authorities). As Harcourt (2006: 66) concludes, for virtually all of his professional life, Keynes was 'overwhelmingly an endogenous money person', as can be observed most directly in his detailed discussion of the analysis of money and credit provided on his *Treatise on Money* (Keynes 1930). In the writings that followed the *General Theory*, Keynes' (1937a, 1937b) discussion clearly encompasses aspects of endogenous money; however, this analysis has been neglected in the subsequent textbook expositions of Keynes' macroeconomics. The NNS model appears at first glance to rectify this problem, with the rejection of the LM function based on exogenous money and instead the explicit recognition that official interest rates (which influence market rates) represents the instrument of monetary policy.¹³

Observation of the formal NNS model outlined in Section 3 indicates that the money supply is in fact a residual, playing no active role in the determination of real or nominal variables in the economy. The supply of money and finance simply 'adjusts' inertly to the demand for money, with money and finance impacting on economic activity only to the extent that decision makers are responsive to changes in the cost of finance. In such a setting an explanation of financial instability, and its possible effects on the real economy, is difficult to conceive.

Clearly, what is required is a systematic explanation of the nature and role of finance in a setting where the money supply is explicitly recognised as being determined endogenously by both the spending decisions of consumers and investors *and* the portfolio decision made by lenders and wealth owners.

The nature of endogenous money and finance, together with the implications for policy, has been extensively discussed within a variety of different models in the Post Keynesian literature.¹⁴ While a summary of this literature is well beyond the scope of this paper, a few general observations can be made. Firstly, in the tradition of Keynes, the existence of uncertainty is the key rationale for holding money as a store of value, playing a key role in connecting the irreversible past and uncertain future. The money supply itself is not a given stock of financial assets, but a flow of debt issued primarily to transfer purchasing power from the present to the future. The money supply increases as financial institutions make more loans available, leading to increased deposits in financial institutions and/or purchase of financial assets. These borrowing and lending decisions are based on expectations about the future and the cost of funds.

Changes in the volume and composition of financial assets depend critically on the subjective perceptions on the part of lenders of the balance sheet positions of potential borrowers. The collective manner in which these perceptions are formed leads to alternating episodes of optimism and pessimism within financial markets, which may well amplify similar shifts in confidence within the real sectors of the economy. As was most clearly demonstrated in Minsky's (1985, 1986) financial instability hypothesis, real and financial sector instability are interconnected and inevitable characteristics of capitalist economies. Countervailing forces to endogenous instability is to be found in the operations of central banks and fiscal stabilisation policies (combined with the operation of automatic stabilisers).

An understanding of the current global financial crisis can therefore be developed from within the general framework provided by traditional Post Keynesian theories of endogenous money and financial instability, bolstered to consider the ever changing nature of financial systems which introduces potentially new sources of financial crisis such as has been witnessed through the securitisation process during recent years.¹⁵ From a theoretical perspective, at the most fundamental level, imbalances in financial markets can be understood in terms of the New Keynesian perspective of 'credit rationing'; however, this has to be extended from an analysis of 'rational' behaviour in response to risk and asymmetric information to one that encompasses decision making under uncertainty.

By implication the theoretical foundations upon which much of mainstream financial theory is based has to be abandoned. It cannot be assumed that market prices of financial assets reflect all 'relevant information' available about variables that influence the [NPV of] expected future returns (i.e. the efficient market concepts). Changes in market prices do not simply reflect the availability of new information that arrives in a purely random fashion. Instead, as described clearly by Keynes, asset prices reflect subjective expectations and the existence of a 'herd instinct' in financial markets.¹⁶ The explicit recognition of these insights

is essential if the reconstruction of mainstream economics is to proceed along the lines outlined by Krugman as outlined at the beginning of this paper.

Before concluding, some final remarks are required in relation to the 'long-run' properties and policy prescriptions found in the NNS model, given that these properties appear to inform much of the 'anti-Keynesian' policy agenda. In terms of the algebraic representation of the model presented in Section 3, it is clear from the aggregate demand and 'Phillips Curve' relationships that real GDP will continue to change, driven by movements in the inflation rate, until it reaches its supply determined full capacity level at the 'equilibrium' real rate of interest. The natural rate hypothesis has continued its long reign despite the absence of compelling empirical evidence.¹⁷ The notion of a 'natural rate of unemployment' or 'NAIRU', has been derived from models that, as Akerlof has portrayed, are founded on behavioural assumptions that appear not to reflect observed behavioural norms. Alternatively specified Keynesian representations of a possible inflation-unemployment trade-off emphasise that in addition to demand pressures, cost considerations and institutional arrangements affecting the wage and price determination processes have a significant influence on the inflation rate (Setterfield 2004). Importantly, as argued by Kriesler and Lavoie (2007), changes in capacity utilisation need only be inflationary at levels of capacity near full utilization, and it is only at very low levels of capacity utilisation that we would expect some reduction of the inflation rate. Consequently, for levels of a large intermediate range of capacity utilisation, the inflation rate may be constant, and therefore pre-emptive strikes against inflation may not be necessary within a large range of capacity utilisation.

Similarly, the notion of the existence of a unique 'equilibrium' real rate of interest, at which the real output gap would equal zero, appears to be rather elusive. As Arestis and Sawyer (2003: 6–8) demonstrate, once the aggregate demand is expanded to incorporate explicitly the various determinants of spending (consumption, investment and Government), then the 'equilibrium real interest rate' depends on the parameters of the consumption and investment functions and the level of government spending. These parameters are unlikely to be constant and indeed may well react to policy decisions and general economic conditions. The notion of an equilibrium real rate of interest is therefore a rather indistinct concept, unless the 'New Classical world' of automatic market-clearing is inappropriately imposed on the analysis. It should be noted that the authors of the NNS synthesis claim to abide by the Solow-type growth theory framework (to describe the derived supply determine long-run equilibrium conditions), subject to a very significant 'extension'. This extension allows 'technology' to be 'explicitly endogenous' (Taylor 2000: 90), and presumably is meant to reflect a common thread found in the rather voluminous 'New Growth Theory' literature. However, there is nothing in the formal expositions of the NNS model that explicitly accounts for 'endogenous technology'. One of the major implications of New Growth Theory is that path dependency undermines the notion of unique long run equilibrium configurations such as a 'natural rate of unemployment' and equilibrium growth paths that are independent from 'short-run' relationships.¹⁸ This would challenge the existence of the notion of a 'supply determined long-

run' that is somehow divorced from 'demand determined — supply constrained short-run' fluctuations in the level and composition of real output.

Finally, the relevance of debate over the long-run properties of competing macroeconomic models to policy formulation is itself a question that is open to much debate. The following observation from Keynes himself is perhaps an appropriate endnote to such a discussion:

The long run is a misleading guide to current affairs. *In the long run* we are all dead. Economists set themselves too easy, too useless a task if in tempestuous seasons they can only tell us that when the storm is past the ocean is flat again. (Keynes 1923: 80, original emphasis)

5. Concluding Comments

This paper began by investigating the nature of the 'convergence of vision' said to have existed within mainstream macroeconomics prior to the GER. This convergence cannot be said to have emerged from a unified theoretical or methodological approach; however, the recommendation of 'policy restraint' is recurrently observed. In the case of the 'dynamic quantitative stochastic general equilibrium' models, it is argued that the case against the implementation of discretionary macroeconomic policy was in fact preordained within the 'laissez-faire' premises from which the 'theories' are concocted. According to critics such as Krugman, this approach attracted many followers simply because economists 'mistook beauty, clad in impressive-looking mathematics, for truth.' However, as is suggested in Solow's commentary, the attractiveness of these theories is to be found in the accompanying ideological perspective that was antagonistic to the notion of an active role by government in influencing economic and social affairs. In the case of the NNS model, the case against discretionary macroeconomic policy cannot be derived directly from theoretical relationships that combine to form what is claimed to be a 'consensus' within mainstream macroeconomics. Instead, the conservative policy recommendations follow from a number of additional caveats that are claimed to reflect the practical environment in which policy is being implemented.

In any event, the palpable inability of mainstream macroeconomics to explain the circumstances under which the GER could evolve has led a number of commentators, including Nobel Laureates such as Krugman and Akerlof, to call for a reconstruction of mainstream macroeconomics in a manner that implies a return to a more 'Keynesian' orientated framework, both in terms of theoretical content and methodology. As was outlined in Section 4, a 'resurrection' of Keynes' economic framework is not required, for the fundamental Keynesian ideas have survived and have been further developed within non-mainstream Keynesian approaches. However, an acceptance of these fundamental Keynesian principles requires at the same time a rejection of the way most mainstream macroeconomists have represented decision making and the operation of markets. It is a recognition of the existence of, and consequences arising from, uncertainty that most radically challenges mainstream thinking that has embraced instead notions such as quantifiable risk, optimising behaviour governed by rational expect-

tations, and departures from equilibrium explainable simply in terms of market frictions that were often deemed to be temporary of 'short-run' in nature.

Writers such as Nevile (2009) and Harcourt (2009b) have suggested that that the GER may hasten the defeat of market liberalism and the rehabilitation of fiscal policy as part of the macroeconomic policy tool kit. Certainly a 'Keynesian revival' within macroeconomic theory implies the acceptance of a much greater role of government in economic management, both in terms of discretionary macroeconomic policy, and closer supervision of the activities within the business and financial sectors of the economy. Achievement of price stability also requires the establishment of a permanent incomes policy, along the lines detailed in Harcourt (2006: Ch.8). From a fiscal policy perspective, what is required is a return to the principles of functional finance, in the tradition advocated in Lerner's (1943) famous article. Rather than following the 'sound finance' dogma of balanced budgets, functional finance instead implies that government expenditure and revenue should be determined so that net expenditure in an economy is at the rate which will produce full employment without inflation, without any concern about whether the budget is in surplus or deficit. Budget deficits become 'irresponsible' only when the implied policy stance is inappropriate to the prevailing economic circumstances. Beyond the confines of the 'sound finance' principles, there is no compelling argument based on economic principles that would insist that budget deficits have to be financed by the issuance of government debt.¹⁹ In modern capitalist economies, governments spend by crediting the private sector bank's settlement accounts (reserves) held at the central bank, with debt issuance part of a reserve management process undertaken by central banks consistent with their monetary policy official discount rate targets. Monetary policy must be seen as complimenting and augmenting fiscal policy, and its objectives can extend well beyond targeting price stability along the lines imposed in the simple Taylor rule added to the NNS models. In this context, the virtue of central banks as entities 'independent' from democratically elected governments requires reconsideration.

However, these principles are difficult to reconcile with what Solow appropriately described as the 'general turn to the political right that began in the 1970s'. The challenge to the dominant ideology informing macroeconomic policy formulation was recognised explicitly by Greenspan, the former Chair of the US Federal Reserve: ... to exist you need an ideology. The question is whether it is accurate or not. And what I am saying is, yes, I found a flaw. I don't know how significant or permanent it is, but I've been very distressed by that fact.²⁰

It is not inconceivable that this 'ideological flaw' will be considered non-permanent [He is convinced against his will, is of the same opinion still], and that the current interest in the 'older Keynesian' economics will dissipate as economies trudge along the road towards economic recovery and previous anxieties in financial markets are long forgotten in a tide of improving market sentiment. In this setting, the content of professional economic journals and mainstream economic textbooks would remain largely undisturbed by the 'abnormal' events of the GER, and Nobel prizes could once again be allocated to the architects of mainstream economics of the past few decades. In such a setting, affinity towards

the 'Keynesian framework' would be destined to suffer the fate allocated to it in what Kalecki (1943) had aptly described as the political business cycle. Perhaps the growing popularity of behavioural economics and finance within the economics profession offers a channel through which the Keynesian perspectives can become more firmly entrenched within mainstream macroeconomics. Such a scenario is suggested in Akerlof's (2007) presidential address to the American Economic Association discussed in some detail in the early paragraphs in Section 4. The linkages between the behavioural approaches and Keynes' original ideas are emphasised even more clearly in Akerlof and Shiller's (2009) recent book that seeks to reincarnate Keynes' notion of 'animal spirits' as a basis for describing the psychological forces that drive decision making within market economies.

However, policy making in the shadows of the GEC clearly indicates the unlikelihood of a 'Keynesian revival'. According to the IMF, while 'fiscal activism has cushioned the adverse effects of the crisis', it is now necessary to 'articulate a strategy to ensure the sustainability of the public finances' (Ali Abbas 2010: 4). As interpreted by the G-20 (2010), the fiscal sustainability agenda, founded on the 'sound finance' dogma, translates into a commitment by the G-20 countries to fiscal plans that will at least halve deficits by 2013 and stabilise or reduce government debt-to-GDP ratios by 2016. Given the sluggish growth rates predicted for most advanced economies over the coming years, it is apparent that for many of these countries, the agreed G-20 fiscal sustainability measures imply a *contractionary* fiscal policy stance, despite what is recognised as being an 'uneven' and 'fragile' recovery accompanied by 'unacceptably high levels of unemployment' (ibid: 1). Throughout the European region and the UK, many governments have introduced austerity policies, involving spending cuts, particularly in the areas of family, disability and unemployment benefits, and civil servants entitlements. In the US, where economic growth remains sluggish and the national jobless rate continues to hover at around 9 per cent, debate between and within both of the major political parties centres on the means by which the budget deficit should be cut. Most significantly, in the longer term, the IMF's fiscal consolidation measures impose a contractionary bias on the stance of fiscal policy formulation in the decades ahead. Such a scenario is far removed from the 'defeat of market liberalism' and the 'rehabilitation of fiscal policy' along the lines advocated by Keynes and his followers.

Notes

1. This is a revised version of a paper originally presented to the Eighth Australian Society of Heterodox Economics conference, University of New South Wales, 7–8 December 2009. Useful comments and suggestions have been received from two anonymous referees.
2. Some similar conclusions were presented in an earlier commentary by Stiglitz (2008). A good example of criticisms of contemporary macroeconomics in the public arena is Jayati Ghosh's (2009) commentary in *The Guardian* (8/10/09) titled 'The Nobel Prize for economics may need its own bail out.' Lucas (2009) represents an example of a 'defence' of the 'orthodoxy'.
3. Particular attention is drawn to Corden (2009), Laidler (2009) and Harcourt (2010), where discussion of the crisis in mainstream economic theory and

- policy leads to arguments in support of Keynesian style fiscal policy. An 'orthodox' defence of fiscal stimulus policies during the GEC can be found in Freedman et al. (2009).
4. Essential elements of the New Classical approach can be found in Lucas (1981) and Prescott (1986).
 5. More recently, Caballero (2010) has developed a critique of dynamic stochastic general equilibrium approach, emphasising similar themes as those discussed by Solow.
 6. Solow (2008: 244–5) applied the following analogy: '[S]omeone who tells you that his diet consists of carrots and nothing but carrots; when you ask why, he replies grandly that he is a vegetarian. But the principles of vegetarianism offer no support to so extreme a diet. The definition only requires that the diet contain no meat. Carrots-only is at best idiosyncratic and at worst a danger to health'.
 7. Solow (2008: 244) remarks: 'I feel guilty about some things, but not about "modern macro"'. The authors were apparently unaware of Solow's (1997) contributions to what later became the NNS models, and had not consulted Solow's (1990) detailed treatment of labour markets where it was concluded: 'the currently orthodox [neoclassical] view of the labor market rests on rather weak evidence and ought to be viewed with healthy scepticism'.
 8. Krugman's own views on the role of mathematics in economics were detailed in Krugman (1998). The fact that there are logical flaws within this theoretical 'beauty' is rarely acknowledged, with the recurrent controversies over capital theory and 'well-known' Sonnenschein-Mantel-Debreu theorem conveniently absent from this literature. The latter is at least referred to in Solow's commentary, although he does not proceed to the conclusion reached by Arrow (1986: S388) that 'in the aggregate, the hypothesis of rational behaviour has in general no implications'; or to Bliss' (1993: 227) finding that 'the near emptiness of general equilibrium theory is a theorem of the theory'.
 9. An insightful account of how ideology and analysis affects the social sciences can be found in Stretton (1969).
 10. The basic themes of the New Keynesian approach are outlined in Mankiw and Romer (1991), with the reason for the 'New' designation outlined in Greenwald and Stiglitz (1993).
 11. Similar representations of the NNS model can be found in Arestis and Sawyer (2003) and Romer (2000), while Taylor (2000) presents what he terms a suitable 'textbook level' exposition. This is a closed economy model, with the overseas sector usually introduced with the inclusion of interest rate parity type relationships, which can be rather problematical as emphasised in Harvey (2004).
 12. A similar argument to the Lucas critique can be found in 'Goodhart's Law', which relates more specifically to monetary policy design (Goodhart 1975).
 13. A particularly well argued critique of the Ricardian Equivalence theory and related themes can be found in Tobin (1980: chapters 2 and 3).
 14. Convincing accounts of Keynes' treatment of money and finance in the context of the exogenous-endogenous distinction can be found in Dow (1997)

- and Harcourt (2006: ch. 5). A more detailed analysis of the representation of money and monetary policy in the NNS model can be found in Kriesler and Lavoie (2005) and Morgan (2009), while Rogers (2006) provides a powerful critique of the treatment of money in the general equilibrium models discussed earlier. The limitations of the treatment of fiscal policy within the NNS framework are discussed in some detail in Arestis and Sawyer (2003) and Setterfield (2007).
15. The central elements of the Post Keynesian theories of endogenous money are outlined in Lavoie (2003), and its historical development is described in King (2002: ch. 8). The implied nature of monetary policy is well covered in Arestis and Sawyer (2006).
 16. In this context, Davidson (2008) and Wray's (2009) discussions of the current financial distress episode are particularly significant.
 17. This is illustrated in Keynes' (1936: 156) often quoted metaphor of a newspaper competition in which the competitors have to pick out the six prettiest faces from a hundred photographs, which describes how in the case of 'professional investment' decision making has reached the third degree where we devote our intelligences to anticipating what average opinion expects the average opinion to be. The general thrust of Keynes' ideas on the behaviour of investors can be readily observed in the recent behavioural finance literature, stemming from the work of writers such as Shleifer (2000) and Shefrin (2002).
 18. See discussion, for example, in Galbraith (1997) and Storm and Naastepad (2007). As Solow (1990) for instance claimed, calculating the NAIRU as a simple average of the actual rates of unemployment over the previous five years does a better job than calculating a NAIRU based on the traditionally hypothesised supply-side factors. This in turn adds support to the view that the rate of inflation depends on the change in the rate of unemployment, rather than on the level of unemployment at a particular point in time (Kriesler and Lavoie 2007: 392, 395).
 19. This result had been demonstrated much earlier in Domar's (1946) pioneering contributions, where it is shown that an economy's growth path is influenced by both the level and composition of government spending. It is also emphasised in the path dependency literature, as summarised, for example, in Setterfield (1995).
 20. The case for the 'rehabilitation' of fiscal policy along these lines is developed by the contributors to the Creel and Sawyer (2009) and more generally in Nevile (2003), Hart (2009) and Harcourt (2009a).
 21. Alan Greenspan at a Congressional Hearing on the Financial Crisis in October 2008, quoted in Blankenburg and Palma's (2009: 531) introduction to the special issue (vol. 33) of the *Cambridge Journal of Economics* covering aspects from the GER largely from a distinctly Keynesian perspective.

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Details of Author

- » **Dr Neil Hart** is a Senior Lecturer in Economics at the University of Western Sydney. He has a PhD from UNSW, a Master of Economics (First class Honours) from the University of Sydney and a Bachelor of Commerce (First Class Honours) from UNSW. He can be contacted at n.hart@uws.edu.au.