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Abstract

The trend in mainstream economic thought about macroeconomic policy has been towards minimalism. In the optimistic Keynesian phase of the 1960's, it was assumed that both fiscal and monetary policy were effective tools for macroeconomic management. But the influence of monetarist and New Classical critiques has led to a gradual erosion of theoretical support for activist government policy. First fiscal policy fell by the wayside, perceived as too slow and possibly counterproductive in its impacts. Then New Classical and rational expectations critiques suggested that even monetary policy was ineffective. Thus the role of government policy has been reduced to a cautious effort not to make things worse **B** in effect a return to an economics of laissez-faire.

In contrast, a sustainability perspective implies that radical and proactive government policies are required to achieve economic development that is both socially just and ecologically sound. The path of laissez-faire leads to increasing intra- and international inequality as well as increasing environmental destruction. To some extent the course of market economies can be steered through the use of sound microeconomic policies. But the fundamental redirection required for sustainable development cannot be achieved without reorienting macroeconomic policy also.

Many of the basic tenets of macroeconomic policy need to be redefined in the context of current global problems. The objectives of macroeconomic policy should include economic stabilization, distributional equity, broad social goals such as income security, education, and universal health care, and the management of economic growth. There is an increasing recognition that the achievement of social goals is essential to environmental sustainability. Regarding growth, while earlier macroeconomic theorists generally assumed that growth was good, ecological economists such as Herman Daly have suggested that growth should be limited and that a sustainable economic scale, rather than exponential growth, should be the goal of macroeconomic policy.

The time is ripe for a reassessment of macroeconomic theory and policy. The goal should be to provide a theoretical basis for the reorientation of macro policy at the national and international levels, linking efforts to promote local-level sustainability and equity with Agreening@ and restructuring of multilateral institutions.

Keywords: macroeconomics, growth, equity, sustainable development

1. Some Fundamental Issues of Macroeconomics and Sustainability

As the concept of sustainable development has been refined and developed, many new perspectives on economic theory and policy have been introduced An overview of work on sustainable development recently published by the Global Development and Environment Institute (Harris et al. 2000) includes significant contributions on the topics of: natural capital, current and inter-generational equity, "green" accounting, "green" tax reform, growth and the environmental Kuznets curve debate, trade and structural adjustment, globalization, and international institutional reform. It seems evident that these multi-faceted theoretical and practical issues arising out of the overlap between environmental, social, and economic analysis should have major implications for macroeconomic policy. But there is as yet little work on reforming macroeconomic theory and policy to take account of sustainability.

There has been discussion of a variety of microeconomic policies which can promote environmental sustainability (e.g. Panayotou 1998) But what is implied regarding macroeconomic policy? Since Herman Daly first called for an environmental macroeconomics a decade ago (Daly 1991), there has been relatively little forward progress on this issue – certainly none that has penetrated the mainstream of macroeconomic theory, practice, and teaching. There have been new approaches to macroeconomic measurement, taking into account economic and social factors (World Bank 1997a). A recent article by Anthony Heyes suggests a modification of macroeconomic IS-LM analysis to include environmental constraints (of which more later). This is a welcome response to Daly's call for environmental macroeconomics, but there have not been many other such responses.

The question is especially tantalizing since there are signs that this may be a moment of opportunity for influencing, and altering, mainstream macroeconomics. The field has strayed far from its Keynesian origins, and in doing so has become, like other areas of standard economics, highly abstract and mathematical. But at the same time there are some influential voices within the mainstream, such as former World Bank chief economists Joseph Stiglitz, decrying the decoupling of macroeconomic theory from real-world problems, and calling for a reorientation (Stiglitz 1998). Stiglitz' main concern is not environmental, but he does point to the social devastation wrought in many developing nations by the so-called "Washington consensus" on macroeconomic policy.

The long-term trend in mainstream economic thought about macroeconomic policy has been towards minimalism. In the optimistic Keynesian phase of the 1960's, it was assumed that both fiscal and monetary policy were effective tools for macroeconomic management. But the success of monetarist and New Classical critiques led to a gradual erosion of theoretical support for activist government policy. First fiscal policy fell by the wayside, perceived as too slow and possibly counterproductive in its impacts. The focus moved to central bank monetary policies as the only practical means of government intervention, with the limited goal of price stability. Then rational expectations and New Classical critiques suggested that even monetary policy was ineffective. Thus the role of government is reduced to a cautious effort not to make things worse – in effect a return to an economics of laissez-faire.

By contrast, the sustainability perspective implies that radical and proactive government policies are required to achieve economic development which is both socially just and ecologically sound. The path of laissez-faire leads to increasing inter- and intra-national inequality and increasing environmental destruction To some extent the course of market economies can be steered through the use of sound microeconomic policies. But the fundamental redirection required for sustainable development cannot be achieved without reorienting macroeconomic policy also. Substantial changes in economic policy are needed in order to promote sustainability as well as more traditional economic goals of efficiency, increased consumption (in the sustainability perspective, for those who need it) and macroeconomic stability. In particular, environmental and social dimensions must be integrated into economic policy.

It is therefore worthwhile to return to the basic goals of macroeconomic policy, as set forth by Keynes, his contemporaries, and his immediate successors, and to ask the question whether some of the essential elements of macroeconomics have been lost in the last half-century of evolution of economic thought. "New occasions teach new duties": the appropriate macroeconomic goals for the twenty-first century are very different from those which confronted Keynes and his colleagues in the immediate post-World War II period. Yet there are similarities in the scope of problems on a global scale which suggest that the broader view taken at an earlier stage in economic thought may be relevant as we consider new issues unforeseen fifty years ago.

2. A Broad View of Macroeconomic Policy Goals

Let us review some of the basic functions of macroeconomic policy, broadly conceived.

Economic stabilization, avoiding excessive inflation or recession – the best known function, which has often but mistakenly been viewed as the only appropriate goal for macro policy.

Distributional equity, which played an important role in early Keynesian analysis and in the work of Sraffa, Kaldor, Joan Robinson, and Kalecki.[1]

The achievement of **broad social goals**, such as income security, education, and universal health care. These were integral to "New Deal" Keynesian policies, but have become incidental in economists' purely quantitative analysis of the macroeconomy.

Providing a **stable basis for economic development**. The dynamics of economic growth, were explored by Harrod and Domar and later Solow.[2] These theorists generally assumed that growth was good, considering an ultimate steady-state economy only as a theoretical construct. More recently, ecological economists such as Daly (1991, 1996) have suggested that growth should be limited and that a sustainable economic scale, rather than exponential growth, should be the goal of macroeconomic policy. Within mainstream economics, the development of endogenous growth theories, taking into account the role of

[1] See, for example, Joan Robinson, What Are the Questions (1980), and King ed., An Alternative Economic Theory: The Kaleckian Model and Post-Keynesian Economics (1996).

[2] See e.g. Solow 1987.

human and potentially of natural capital in long-term growth, provides another perspective on the importance of policy determinants of growth.[3]

The recent macroeconomic crises in Asia and Japan suggest that the first function is more important than implied in the modern, laissez-faire-oriented approach to macroeconomics. The tendency of unregulated capitalist economies to excessive cycles of boom and bust, emphasized by Keynes and dismissed by New Classicists, has been re-explored by Krugman (1999, 2000) in the light of the Asian crisis.

The importance of the second and third functions has been emphasized by critiques of IMF and World Bank structural adjustment policies, including those by Joseph Stiglitz (1998, 1999a,b). Contractionary macroeconomic policies have devastating effects on social equity, as well as on income distribution, with the heaviest burden of economic contraction being borne by the poorest. Expansionary, export-led growth is no panacea: growing income inequality and loss of social safety nets threatens the "success stories" of rapidly developing nations such as China. Issues of fairness in distribution and social investment need to be included in a redefined set of economic policy goals (Sen 1999; Streeten 1998).

Regarding the fourth function, even the World Bank acknowledges (1992) that the scale of global growth poses enormous environmental problems for the twenty-first century. Whether or not Daly's approach to growth limits is adopted, it is clear that economic growth needs to be steered in an environmentally sustainable direction, implying some degree of macroeconomic planning (not in the sense of a centrally planned economy, but in the sense of indicative planning for long-run energy and resource use, as implied for example by the Kyoto process).

All four functions, not just the first, will be important in the macroeconomics of the twenty-first century. This will require a rethinking and reorientation of both theory and policy, at the national and international levels.

3. The Current State of Macroeconomics

The state of mainstream macroeconomics today can be roughly divided between New Classical and New Keynesian perspectives. The New Classical approach is heavily Walrasian. In this view, the macroeconomy is best seen as a system of interlinked markets, all tending towards equilibrium. Disturbances or shocks may temporarily divert markets from equilibrium, but they will tend to return to equilibrium without government intervention. Equilibrium in the labor market means that all unemployment is voluntary, based on workers' offering or withdrawing labor at different wages rates. Absent government or union intervention, wage levels will move towards equilibrium, with a "natural" rate of unemployment based on voluntary decisions by workers. Government intervention intended to stimulate the economy or reduce unemployment can only have a very short-term effect, to the extent that people are surprised by policy actions or subject to money illusion. Once expectations have adapted to a new policy environment, the only long-term effect of expansionary policy will be a higher price level.

[3] See Barro and Sala-I-Martin 1995.

Clearly the New Classical perspective is well named, since it has eliminated all the essential components of the Keynesian view, returning macroeconomic theory to the analyses and policy prescriptions of the 1920's – though with much greater mathematical sophistication.

The problem with this approach is that is so obviously in conflict with reality. No government in the world follows its minimalist policy prescriptions, and with good reason. In the United States, we see that as soon as a stock market downturn leads to a mild economic slowdown, the Federal Reserve Bank spring into action with a series of interest rate cuts. A conservative Administration promotes tax cuts to stimulate the economy. These monetary and fiscal adjustments, of course, are standard Keynesian expansionary policy. In addition, the structure of a modern economy includes numerous Keynesian automatic stabilizers such as graduated income taxes and unemployment insurance. Any government which truly dismantled this Keynesian set of policy functions would soon be confronted with catastrophic recessionary conditions, and would undoubtedly reverse their policies or be rapidly thrown out of office by enraged voters.

New Keynesians are more cognizant of economic reality, and less enamoured of elegant Walrasian abstractions. They seek to discover imperfections, asymmetries, and coordination failures which interfere with the smooth workings of markets, and can lead to disequilibrium, instability, and involuntary unemployment. They are accordingly less skeptical of the functions of government, harking back to the original Keynesian view that if markets cannot solve economic problems, government intervention is essential. In a review of modern macroeconomics, Olivier Blanchard suggests that the distance between New Classicals and New Keynesians has recently diminished: "most macroeconomic research today focuses on the macroeconomic implications of some imperfection or another" (Blanchard 2000, p. 1404).

There is a third, non-mainstream, view of macroeconomics which finds fault with both New Classical and New Keynesian perspectives. David Colander, propounding this view, argues that both are founded in a fundamentally Walrasian approach which "has not taken the complexity of the aggregate economy seriously either in its assumptions of individuals ability to deal with that complexity, or in the structure of its models." (Colander 1996, p. 3). In order to make economic relationships tractable in theory, mainstream macro assumes relatively simple, price-mediated relationships between variables. Problems of disequilibrium or unemployment in the macroeconomy then arise from such problems as "sticky" wages or prices which fail to adapt to changes in supply and demand. But what Colander calls a "post-Walrasian" approach sees the economy as complex and potentially chaotic, with multiple potential equilibria and internal processes different from those of microeconomic price adjustment.

This view harks back to an earlier critique of mainstream Keynesianism, associated especially with Joan Robinson (1971, 1980) and Axel Leijonhufvut (1968). These writers attacked the Hicksian interpretation of Keynesian theory, including IS-LM analysis and Samuelson's formalization of the neoclassical synthesis (Hicks 1937, Samuelson 1947). Their argument was that by assuming smooth, well-behaved macroeconomic relationships between interest rates and investment demand the IS-LM formulation abandons Keynes' basic insights concerning the instability of capitalist systems.

More specifically, Leijonhufvut (1968) argued that the neoclassical focus on such phenomena as "sticky" wages and liquidity traps accepts a basically classical, Walrasian environment, and implicitly endorses the classical view that recessions result from a failure of wage rates to fall, or other "imperfections" in self-adjusting markets. Leijonhufvut pointed out that this is quite different from what Keynes actually maintained. Keynes argued that recessions and depressions occur despite, or partially as a result of, falling wage rates, with the fundamental cause being unstable investment leading to negative multiplier effects:

> . . .the contention that the unemployment which characterizes a depression is due to a refusal by labour to accept a reduction of money-wages is not clearly supported by the facts. It is not very plausible to assert that unemployment in the United States in 1932 was due either to labour obstinately refusing to accept a reduction of money-wages or to its obstinately demanding a real wage beyond what the productivity of the economic machine was capable of furnishing. Wide variations are experienced in the volume of employment without any apparent change either in the minimum real demands of labor or in its productivity. Labour is not more truculent in the depression than in the boom – far from it. Nor is its physical productivity less. These facts from experience are *prima facie* evidence for questioning the adequacy of a classical analysis.
>
> – J. M. Keynes The General Theory of Employment, Interest, and Money ([1936], 1964 p. 9.)

Robinson comments on the IS-LM analysis that:

> If Keynes' own ideas were to be put into this diagram, it would show IS as the volatile element, since it depends upon expectations of profit; the case where full employment cannot be reached by monetary means would be shown by IS falling steeply and cutting the income axis to the left of full employment.
>
> – Joan Robinson, Economic Heresies (1971, p. 84)

The implication of this more radical interpretation of Keynes is that government intervention is essential to stabilize an inherently unstable macroeconomy. In addition, it casts severe doubt on the "rationality" of market capitalist economies and the social optimality of market outcomes. More recently, Leijonhufvut (1996) has called for a "not-too-rational" macroeconomics, and has suggested an imperfect information model whose outcomes are sometimes stable, due to buffer stocks of liquid assets, but can become unstable under certain conditions.

We can see, then that in macroeconomic theory *plus ça change, plus c'est la même chose*. The battles between classical, neo-classical Keynesian, and radical Keynesian views are still being fought out, just with more elaborate mathematics. Of these three schools, however, it is the radical Keynesian which offers the best foundation for an ecological macroeconomics. In this as in other areas, the ecological economics perspective is inherently in opposition to the classical view of self-adjusting markets. It takes its inspiration from those economists who have focused on disequilibrium and imbalances, starting with Malthus, who worried both about population growth and the possibility of a "general glut" or depression. The bland optimism about market efficiency characteristic of classical and New Classical views severely underrates the kinds of problems that concern social economists and ecological economists, including resource overuse, environmental damage, income, wealth, and power inequity, and institutional weakness.

Thoughtful proponents of New Keynesianism may also be in tune with ecological economists on a number of issues. The imperfections, asymmetries, and market failures which they see as leading to macroeconomic problems may often also be associated with environmental and resource abuses and social inequities. But the more radical macroeconomic formulation -- that market economies are inherently prone to severe disequilibrium, and that informed social intervention is essential for a sustainable society – is closer both in spirit and in content to the radical critiques of "optimal" market outcomes and smooth economic growth which have been advanced by Herman Daly, Richard Norgaard, and many others associated with an ecological economics perspective (Daly 1996, Norgaard 1994).

4. Redefining Macroeconomic Theory and Policy for the Twenty-First Century

A macroeconomics that is consistent with sustainable development must return to, and expand upon, the fundamental principles of Keynes, without the dilution inherent in the neoclassical interpretation. An initial list of the characteristics of such a macroeconomics should include:

Simplicity and transparency. This appears to contradict the post-Walrasian emphasis on complexity. But we should remember that consistency is the hobgoblin of little minds, and that great ideas are typically capable of fairly simple expression. Even a theory involving great mathematical complexity in its formal derivation may have fairly straightforward policy conclusions.

One of the great problems with current macroeconomics is that, unlike the relatively simple microeconomics of markets, it is enormously confusing. After following many tortuous arguments about expectations, shocks, rigidities, and short and long term effects, the student of macroeconomics is likely to be totally confused. One macroeconomics text lists seven different explanations for recession: traditional Keynesianism, misperception theory, real business cycle theory, sectoral shift models, new Keynesian theories of wage and price rigidities, coordination failures, and political business cycle theory – each with completely different policy implications (Auerbach and Kotlikoff 1998, p. 261).

In contrast, an ecologically oriented macroeconomics should focus on a simple basic principle: since unregulated markets are volatile and often socially and environmentally disruptive, informed government intervention using fiscal, monetary, and other policy tools is essential. There can be differences over the appropriate policy mix, but there can be no doubt that an activist government role is required to promote economic, environmental, and social sustainability.

Promotion of social goals. The more radical formulation of the Keynesian critique is fatal to the concept of market "optimality". Once the self-regulating Walrasian world evaporates, it becomes apparent that many social goals can only be achieved through collective action using democratic institutions of governance. Thus the need for government intervention is more than simply a technical requirement for macroeconomic stability. It represents the only feasible way of achieving goals which are essential for well-being, and which are not supplied, or inadequately supplied, through the market.

The implicitly anti-democratic free-market paradigm insists that dollar votes should rule and the public sphere should be minimized. While conservative economists are free to argue this as their political preference, they should not be able to appeal to any supposed professional consensus to justify it. A realistic macroeconomics requires a different approach, which is why New Classical theorists have attempted to reduce macroeconomics to non-existence. The reassertion of a distinct macroeconomic theory involves, as Keynes recognized, an essential role for social choice. This, not free-market ideology, should be the main message of economists to policy-makers and the public.

Concern for equity. Even the World Bank has acknowledged that "equity also remains a central concern of the state" (World Bank, 1997b, p.25). As we have noted, earlier Keynesian theories placed emphasis on equitable distribution, both as a social goal and to promote a more stable macroeconomic system. In addition, as Adelman (1980) and Amsden (1992, 2000) have argued, equitable distribution is a strong precondition for effective economic growth in developing economies. In a world of ecological limits, issues of equity take on a particular importance since increased consumption for the poor may depend on moderated consumption by the rich (Durning 1992). This reality calls for new attention to the preconditions for macroeconomic stability with limited consumption growth.

Environmental protection and growth limits. These issues were not on Keynes' agenda, but as Daly and others have emphasized, they must be an essential part of a twenty-first century macroeconomics. Heyes (2000) proposes the addition of an EE schedule indicating environmental equilibrium to the standard IS-LM diagram. The EE schedule is an interesting construction, since it depends both on the installation of environmentally cleaner technology, assumed to be related to the real interest rate (which determines the slope of EE), and on the level of environmental regulation in the economy (which determines its placement). It is not clear whether environmental factors can truly be captured by such a relatively simple formulation (just as IS-LM itself tends to oversimplify macroeconomic relationships). However, a fairly clear and commendable implication of the IS-LM-EE analysis is that economic growth must be accompanied by cleaner technology and stronger environmental regulation. In this sense, Heyes' proposal fits well with our earlier admonition that ecological macroeconomics should have straightforward and comprehensible policy implications.

Sustainable trade policies. One of the important aspects of the expanding critique of free trade and globalization is the issue of control of macroeconomic policy. Critics of free trade have pointed to its negative environmental and social effects, and its tendency to expand corporate power (Daly 1996, Crotty et al. 1998, Harris 2000.) An equally important concern is the tendency of regional and global free-trade regimes to remove fiscal and monetary policy from national control. This is at issue, for example, in the attempt to promote a common currency within the European Union.

Extensive opposition in Britain and other countries has forced European leaders to retreat on their timetable for the euro. What reasons do people have to be concerned about this issue, other than an affection for traditional currencies? Very good reasons. Not only is national cultural autonomy weakened by a soulless euro, but more substantively, control over monetary policy passes from elected national governments and their central banks to a European authority whose democratic mandate is at best weak. People sense that this represents an important aspect of loss of control over their economic destinies.

In the Asian crisis, countries like Malaysia and China, with controls on capital movements, were to some degree isolated from the recessionary contagion. In the wake of the crisis, Joseph Stiglitz and others have criticized the ideological dogmatism that led to an insistence on eliminating barriers to capital movement in East Asia in the name of free trade.[4] While this led to short-term profit opportunities for international financial institutions, it left the area vulnerable to massive speculative capital flows – something which Keynes warned about, and which has led James Tobin to propose the "Tobin tax" on international capital movements.[5]

International institutional reform. Keynes and others similarly minded were instrumental in setting up the Bretton Woods institutions to provide international macroeconomic stability. By the end of the century, these institutions were showing their age (Harris 1991). One major problem is the lack of global environmental institutions, or of any prominent place for environmental concerns in the mandates of existing institutions. Another is the capture of international monetary policy-making by economists oriented towards contractionary "classical medicine" approaches. As Paul Streeten (1991, 1998) has long advocated, this approach disserves development and should be replaced by more aggressive policies aimed at recirculating capital and disseminating technology to promote sustainable development.

The development of such institutions and policies involves a careful consideration of which macroeconomic policy functions are best performed at a national, and which at an international level. Given the other goals of environmental protection and equity mentioned above, the current combination of rapid globalization and classically-oriented contractionary policies is clearly inappropriate, and it is not surprising that it has led to growing resentment and opposition.

5. Conclusion

Given the urgency of many macro-level and global environmental issues, together with the clearly inadequate state of current macroeconomic theory, it appears that the time is ripe for a reassessment of macroeconomic theory and policy. This reassessment could draw on some mainstream approaches, especially the New Keynesian variety as well as more radical Keynesian or ecological perspectives.

This essay has sought to be provocative rather than definitive in its discussion of macroeconomic issues; it is intended to offer a starting point for further discussion. A balanced approach to the development of a new macroeconomics should neither reject the insights of

[4] Joseph Stiglitz, American Economic Association panel on Globalization and Growth, January 2001.

[5] See Ul Haq et al., 1996 for background on the Tobin tax.

mainstream theorists, nor rule out more radical views. It is essential, however, that the theorists and practitioners of a new macroeconomics should insist on a broad perspective that asks what macroeconomic policy can achieve in the areas of distribution, social equity, and ecological sustainability. The goal should be to provide a theoretical basis for the reorientation of macro policy at the national and international levels, linking efforts to promote local-level sustainability and equity with "greening" and restructuring of multilateral institutions.

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