

Routledge Studies in the History of Economics

MONETARY ECONOMICS, BANKING AND POLICY

**EXPANDING ECONOMIC THOUGHT TO MEET
CONTEMPORARY CHALLENGES**

Edited by
Penelope Hawkins and Ioana Negru



Monetary Economics, Banking and Policy

This edited collection seeks to advance thinking on money and the monetary nature of the economy, macroeconomic analysis and economic policy, setting it within the context of current scholarship and global socioeconomic concerns, and the crisis in the economics discipline. A key aim is to highlight the central contribution that Sheila Dow has made to these fields.

Bringing together an impressive panel of contributors, this volume explores topics including central bank independence, liquidity preference, money supply endogeneity, financial regulation, regional finance and public debt.

The essays in this first collection of two will be thought-provoking reading for advanced students and scholars of macroeconomics, monetary economics, central banking and heterodox economics. Contributors have a broad range of professional experience at universities, central banks, business, development institutions and policy advisories.

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Monetary Economics, Banking and Policy

Expanding Economic Thought to Meet
Contemporary Challenges

**Edited by
Penelope Hawkins and Ioana Negru**

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Foreword

John King

These two splendid volumes contain many fine expositions and critical reviews of Sheila Dow's superb writings on monetary economics and the methodology of political economy. A quarter of a century ago, when she was writing the 'Preface' to the revised second edition of *The Methodology of Macroeconomic Thought*, Sheila welcomed the fact that there was 'now a much greater willingness among economists in general, and methodologists in particular, to contemplate a range of schools of thought with different methodological foundations'. But, she continued, 'this willingness has often gone too far. By reacting against the previous situation, in which methodology's role was to establish rules for best practice, many went to the other extreme of attempting to avoid judgement altogether'. She could not agree with these writers that merely describing the methodologies of different schools of thought was sufficient in itself. In the first edition of the book she had 'approached description as a necessary first step towards more constructive debate', in the hope that this would initiate 'reasoned argument, based on a mutual understanding of the methodological foundations of different approaches to economics'.

'The point of *Macroeconomic Thought*', Sheila continued, 'was thus not that, in economics or in methodology, anything goes'. On the contrary, she hoped that methodological awareness would serve as 'a basis for constructive debate'. She herself had one specific and very important proposition to defend. Her own position was 'non-dualistic', based on the firm belief that 'there is a range of methodologies, each with its own set of appraisal criteria'. However, some of her readers had 'interpreted my approach dualistically: either there are universal appraisal criteria or there are none'. This was quite wrong, for Dow was instead arguing that 'tolerance and understanding are required among methodologists as well as among economists, but that neither precludes reasoned argument between those with different perspectives. It is through such reasoned argument that knowledge progresses' (Dow 1996, pp. ix-x).

Many of the crucial elements in Sheila's approach to methodology were derived from her reading of Keynes, who in his *Treatise on Probability*

...was grappling with how in practice people overcome the problem of induction; that is, the problem that past observations are never sufficient

to establish the truth of a proposition, as future observations may show it to be false. Keynes was thus concerned with how reasonable grounds for belief may be established in such circumstances, as the basis for action.

(Dow 2002, p. 165)

The general theory of probability that he developed ‘encompassed quantitative probability as a special case’, so that ‘each judgement as to probability...is held with greater or lesser confidence depending on the weight of evidence’ (ibid., p. 165). This differed sharply from ‘the demonstrative certainty of classical logic’, which ‘required that the system under study be finite, and that the elements of the relations under study be atomic rather than organic’ (ibid., p. 166). The application of mathematics to economic problems required that this was the case in the real world. Keynes

...did not argue against the use of mathematics *per se*. He favoured mathematical argument where appropriate to the subject matter. But its use could not be universally justified, and care should therefore be taken to distinguish those contexts in which it was justified from those in which it was not justified.

(ibid., p. 166)

Sheila concluded by agreeing with the fundamentalist post-Keynesian methodological interpretation of Keynes, which shared his ‘vision of the economy as being organic, requiring an emphasis on (irreversibly evolving) institutions, behaviour and knowledge’, and emphasising ‘uncertainty (as non-quantifiable risk), irreversible historical time, and money as an integral factor in capitalist economies’ (ibid., p. 172).

She had made the same points in a seminar presentation at the University of Lancaster in 1988 that aroused my dormant interest in economic methodology, and again in January 1993 when I interviewed her for what would become a chapter in *Conversations with Economists* (King 1995, pp. 153–67). Actually, ‘interview’ is the wrong word. It was a very stimulating conversation, in which we talked about methodology, monetary theory and monetary policy, and the relationship between post-Keynesian economics, the mainstream and other heterodox schools of thought. I got off to a rather poor start, asking Sheila if her principal interest had been in monetary economics at the outset, with her involvement in methodology developing out of that. ‘No’, she replied, ‘they were parallel developments. I was interested in them as separate subjects, and it was only later on that I appreciated the significance of methodology for the way we did monetary economics’ (King 1995, p. 153).

In fact, her first book was on the theoretical and policy questions that arise in a monetary economy, the co-authored and very aptly entitled *Money Matters* (Dow and Earl 1982). Her position on these important issues has always been very simple, and in my view entirely correct: money is *not* neutral, and a monetary economy cannot be analysed ‘as if’ it were

a barter economy. Following on from this, Sheila has always endorsed the post-Keynesian analysis of endogenous money, which denies that the money supply is (as the mainstream assumes) exogenously determined. As she told me in our conversation, Keynes himself had assumed endogenous money in much of his mature work, except in the *General Theory*, where he treated the supply of money not as exogenous but rather as *given* (King 1995, p. 159). This, she continued, was an example of his intuitive use of the Babylonian method (on which, see below). But the banking system had changed a great deal since the 1930s, so that ‘the money supply wasn’t endogenous to the same extent as now when Keynes was writing’ (ibid., p. 160).

Some of Sheila’s work on monetary questions has been co-authored with her good friend Victoria Chick, whose ‘work on the stages of banking development is a really important contribution to the endogeneity debate, in showing how the nature of endogeneity has changed as banking systems have developed, and how its force has in fact increased over time’ (ibid., p. 160). Another important influence on her understanding of money and finance has been Hyman Minsky, and in our conversation, she described her approach to financial crises as ‘very Minskyian’ (ibid., p. 161). Although the supply of money is endogenous, it is not perfectly accommodating, as is inevitably demonstrated in periods of financial instability by the phenomenon of credit rationing. Sheila was able to apply her thinking on all these matters to provide a detailed and convincing analysis of the global financial crisis of 2008–2009 (see, for example, Chick and Dow 2012).

Returning to questions of economic method, she told me that post-Keynesians had taken a greater interest in methodology than their mainstream colleagues, especially since the early 1980s. ‘I feel quite strongly that the way one defines post-Keynesianism is methodological’, she said, ‘and that’s why I’ve always thought it was important to be quite explicit about methodology’ (King 1995, p. 154). The essence of post-Keynesian methodology, Sheila suggested, was its commitment to methodological pluralism. This had been misunderstood by some critics, including Bruce Caldwell, with whom she had debated these issues in an early issue of the *Review of Political Economy* (Caldwell 1989; Dow 1990). Caldwell had not understood that

...there’s a difference between methodological pluralism, which is the methodologist being aware of and respecting a variety of different methodologies, and theoretical pluralism, which is that an economist would not take a position on using a particular method or not...it’s actually a coherent methodological position to choose a particular range of methods united by a vision of some sort...It’s not a matter of dilettantism or eclecticism, it’s quite consciously choosing a range of methods as the best way of going about understanding a very complex system, rather than specifying one set method which everybody has to adhere to’

(ibid., pp. 155–6)

And this did not preclude the use of formal methods, so that mathematical modelling and econometric techniques could be employed legitimately in some contexts:

since Post Keynesian methodology involves using a range of methods, it's quite legitimate to use a closed model to deal with one part of the system, as long as you're quite happy to open it up to incorporate other parts of the system which have been dealt with using other methods, possibly.
(*ibid.*, p. 156)

When I asked Sheila where she stood on Paul Davidson's claim that the world is inherently non-ergodic, she demurred. 'My view is that the world is in general organic', she told me, 'which is a more general case than non-ergodic, and uncertainty is endemic, and yet there are parts of the economic system which are sufficiently stable that we can actually treat them as if they were atomic or ergodic'. She regretted the tendency to conflate uncertainty with instability.

I think that there is a tremendous amount of stability in the system, and Keynes's epistemology shows that in a variety of contexts we develop conventions and habits to deal with uncertainty, and this is what provides stability in the system.
(*ibid.*, p. 157)

After some discussion of the post-Keynesian criticisms of Friedmanite and new Keynesian thinking on the economics of money, we turned to the question of the relationships between post-Keynesians and other heterodox schools. This was a period (the early 1990s) when relations between the Sraffians and the post-Keynesians were rather strained, and Sheila was keen to affirm her belief that there was no necessary incompatibility between the two schools. I soon realised that she was more tolerant than many other post-Keynesians of the use of long-run equilibrium prices as centres of gravity. 'It is a perfectly coherent methodological position to say that one uses different methods for different purposes, and that one doesn't have to stick to one exclusively' (*ibid.*, p. 163). She was saddened by the acrimony that had sometimes arisen between the different non-mainstream groups.

So to me methodology is still the key: if only Post Keynesians could fully understand Keynes's epistemology and the scope for using different methods...we could save ourselves a lot of bother and get on with more constructive things than arguing.
(*ibid.*, p. 164)

We concluded our conversation by discussing the relationship between post-Keynesians, institutionalists and behavioural economists. Sheila took the view that Keynes's epistemology was also relevant here, since his 'analysis

of conventions and habits and so on is quite fundamental to the way we theorise as well as the way individuals behave. I think that could be fed into institutionalism quite constructively' (ibid., p. 165). She suggested, too, that behavioural economics might be useful in developing what was then the relatively undeveloped area of post-Keynesian microeconomics.

So I learned from my conversation with Sheila that economic methodology was both very interesting and very important; that there were major differences within the profession on the way(s) in which these questions might be approached; and that post-Keynesian economists needed to take all this very seriously. When I came to write my *History of Post Keynesian Economics* I drew on her work on the major methodological changes that had accompanied the Keynesian revolution in macroeconomic theory, noting how Keynes's defence of 'the case for ordinary reasoning was strengthened by the restrictions that uncertainty placed on human knowledge' (Dow 1991, p. 138, cited by King 2002, p. 183). Uncertainty was also central to the theory of liquidity preference, I noted, following Sheila. 'Why hold an asset yielding a zero return, unless you doubt your ability to predict the yield of other, competing forms of assets?' (King 2002, p. 183).

I also outlined the reasons for her endorsement of an 'open-systems' view of methodological questions, which she associated with Richard Feynman's 'Babylonian approach' to science more generally, and to physics in particular (Feynman 1965; cf. King 1995, pp. 155, 159). This 'involved a break with the Cartesian-Euclidean mode of thought, which developed closed systems of necessary truths from self-evident axioms'. Sheila agreed with Feynman that this did not entail the acceptance of postmodernism, and therefore rejected 'the "dual" of Cartesian-Euclidian thinking, which denied the very possibility that we can ever obtain knowledge...proposing instead a sort of Hegelian synthesis of Cartesian-Euclidian and non-Cartesian-Euclidian ways of thinking, in which knowability was treated as a matter of degree' (King 2002, p. 196).

As Sheila explained, Babylonian methodology favoured 'open-system thinking',

...where not all the constituent variables and structural relationships are known or knowable, and thus the boundaries of the system are not known or knowable. This is the province of fuzzy mathematics, with indeterminate boundaries of sets...It is also the province of non-classical logic, where logical relations are applied to uncertain knowledge; this logic is variously known as ordinary logic or human logic, as exemplified by Keynes's...probability theory. If reality is understood as an open system, then scope is allowed for free will, for creativity, and for the indeterminate evolution of behaviour and institutions.

(Dow 1996, p. 14)

Her critical comparison of the macroeconomic methodologies of different schools of thought led her to conclude that only the post-Keynesians were

consistently Babylonian, while mainstream economists were unqualified Cartesian-Euclidean, and that this had led them to take very different positions on such important issues as ‘the need for microfoundations, the role of equilibrium theory, the modelling of expectations and the treatment of money’ (King 2002, p. 197). Sheila quite rightly maintained that these Babylonian ideas had much in common with the underlying principles of ‘critical realism’, a methodological position set out very clearly by Tony Lawson (1997), which many post-Keynesian economists were actively supporting by the turn of the century (Dow 1999, cited by King 2002, p. 200).

References

- Caldwell, B.J. 1989. ‘Post-Keynesian methodology: an assessment’, *Review of Political Economy*, 1(1), pp. 43–64.
- Chick, V. and Dow, S. 2012. ‘On causes and outcomes of the European crisis: ideas, institutions and reality’, *Contributions to Political Economy*, 31, pp. 51–66.
- Dow, S.C. 1990. Post Keynesianism as political economy: a methodological discussion’, *Review of Political Economy*, 2(3), pp. 345–58.
- Dow, S.C. 1991. Review of A. Carabelli, *On Keynes’s Method* (London: Macmillan) and R.M. O’Donnell, *Keynes: Philosophy, Politics and Economics* (London: Macmillan), *Economics and Philosophy*, 7(1), pp. 132–9.
- Dow, S.C. 1996. *The Methodology of Macroeconomic Thought: A Conceptual Analysis of Schools of Thought in Economics*. Cheltenham and Northampton, MA: Edward Elgar.
- Dow, S.C. 1999. ‘Post Keynesianism and critical realism: what are the connections?’, *Journal of Post Keynesian Economics*, 22(1), Fall, pp. 15–34.
- Dow, S.C. 2002. ‘Keynes, Post Keynesians and methodology’, in S.C. Dow and J. Hillard (eds), *Post Keynesian Econometrics, Macroeconomics and the Theory of the Firm*. Cheltenham and Northampton, MA: Edward Elgar, pp. 162–75.
- Dow, S. and Earl, P. 1982. *Money Matters: A Keynesian Approach to Monetary Economics*. London: Martin Robertson.
- Feynman, R. 1965. *The Character of Physical Law*. Cambridge, MA: MIT Press.
- King, J.E. 1995. *Conversations with Post Keynesians*. Basingstoke: Macmillan.
- King, J.E. 2002. *A History of Post Keynesian Economics since 1936*. Cheltenham and Northampton, MA: Edward Elgar.
- Lawson, T. 1997. *Economics and Reality*. London: Routledge.

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Introduction

Penelope Hawkins

A tribute to Sheila Dow's life-time contribution to challenging complacent thinking in mainstream and heterodox economics is long overdue. What is immediately apparent is the expansive nature of her contribution – not only in terms of the number of publications but also in terms of her attitude to inclusiveness. Our two-volume collection of articles in her honour attests to the high esteem with which she is held by economists across different schools of thought and reflects unanimous respect and affection.

The shared subtitle of the two volumes, *Expanding Economic Thought to Meet Contemporary Challenges*, highlights two aspects. First, Sheila's work can be seen as expansionary, drawing out new insights from within the post-Keynesian school, to which she is so strongly (although not exclusively) associated, and also widening the appeal of her theoretical understandings to other schools of thought by her commitment to pluralism, both within her theoretical work and her gentle and welcoming personality. Second, it emphasises Sheila's openness to re-evaluation of existing or conventional modes of thought and theories. For example, in the introduction to her 1996 *Economic Journal* article: 'Why the Banking System should be regulated', she begins

It has long been taken for granted that the financial system should be regulated. That this is now open to question, should be welcomed. It is important in general to question assumptions, but it is particularly important to do so in the case of a sector that has undergone such major change in the past few decades.

(696)

The focus of the volumes is on monetary economics and economic method. These represent the kernel of her contribution to the development of the discipline – from which other contributions have been seeded. While her first book, *Money Matters* (1982) with Peter Earl, was published shortly before her *Macroeconomic Thought: A Methodological Approach* in 1985, the rich tapestry between these conceptual areas has resulted in a body of work that reflects mutual intellectual nourishment. Sheila has brought new insights to

monetary economics because of her deep engagement with methodology, ontology and pluralism, and her interest in method reflects the many contradictions in monetary economics. While this volume on *Monetary Economics, Banking and Policy* emphasises Sheila Dow's contribution to matters monetary, the influence of matters methodological is never far. Her papers such as 'Introduction: The Methodology of Development Economics' (2007), 'Policy in the Wake of the Banking Crisis: Taking Pluralism Seriously' (2012), and 'Framing Financial Markets: A Methodological Account' (2016a), to mention but a few, underline her appreciation of the link between economic theory and method. The nature of the contributions to this collection attests to her diverse methodological contributions.

Sheila Dow's contribution to monetary theory and the integral nature of money in modern economies is profound, prolific and has been ongoing for four decades. Her list of publications is provided at the end of this book; few can claim the extent and breadth of her scholastic contribution. But of course, her contribution is far more than this. As Sheila has written: 'Post Keynesian economists unite in emphasising the need for theory and methods which give priority to understanding real-world phenomena' (Dow, Jespersen and Tily, 2018). This is a far cry from the criticism levelled by Sayer against British philosophers (and subsequently academic economists more generally), that 'Its academic practitioners have all but abandoned any attempt to understand the world, let alone change it' (Sayer and Morgan 2022).

Dow's key point of departure is understanding the monetary nature of the economy, which is at the core of her contribution to money, liquidity preference, regional development and monetary policy and regulation. Following Keynes, for whom the role of money in capitalist economies was core and expressed in term of the theory of liquidity preference, Sheila has emphasised the liquidity preference of banks (and more recently other non-bank credit providers) in the supply of credit, and liquidity preference in money demand by households (Dow and Dow, 1989; Dow, 1997). Her work challenges those who still hold that the economy can be understood without an acknowledgement of the integral role of money. It also challenges those who imply that money can be regarded as neutral in theoretical or policy applications. She has vigorously resisted a fully accommodationist or unconditionally endogenous (or horizontal) money supply view, such as expounded by Moore (1988). She writes (Dow 1997: 78):

Post-Keynesians are united in putting emphasis on the causal power of credit demand, and the lack of power of the monetary authorities to control the monetary stock. But a wide range of opinion has built up between those who see credit as solely demand determined, at an interest rate set up by the central bank, with no influence for liquidity preference, on the one hand, and those who still regard the theory of liquidity preference as central and compatible with money supply endogeneity, on the other.

Dow is firmly in the latter camp. A fully demand-determined money supply renders liquidity preference irrelevant and means the loss of an important conceptual tool to understand the real world under conditions of uncertainty. Dow also points out that, following Keynes, ‘if it is a necessary characteristic of money that its supply has a low elasticity, then the logical consequence of complete demand-determination would be that whatever was the money-asset would cease to be acceptable as such’ (Dow, 1997: 66).

Her work on open economies and regional economics brings this conditional endogeneity of money and the role of liquidity preference to bear. For example, the tendency for underdeveloped regions and countries with low degrees of confidence to experience greater liquidity shortages, the more integrated their national banking systems are with developed counterparts, rests on an understanding that the propensity for capital flight depends on the liquidity preference of bankers and investors (for example, Dow, 1987). Liquidity preference and conditional endogeneity of money are a useful combination to understand the transmission mechanisms of monetary policy and the processes by which monetary authorities exert their influence (e.g., Chick and Dow, 2002).

Sheila’s interest in the money supply and the role of the monetary authority and the banking sector in its mutual determination has led to a number of papers on central banking and financial regulation. She has embedded the need for regulation of the financial sector in post-Keynesian thinking and has provided ongoing, and constructive criticism of the monetary institutions. Her arguments for regulation point to the fragility of a system in which authorities conventionally attempt to inspire confidence in money, and in its capacity to retain value and perform the functions of means of payment, store of value and unit of account of economic activity. Dow (1996: 698) refers to this as the ‘moneyness of bank liabilities’. A revision of the system in the light of crises requires a focus on the conventions followed in the financial sector and the relationships between public and private sectors, which in turn requires a pluralist methodology (Dow, 2012).

Sheila’s body of work reveals not only the breadth and depth of her scholarly contribution and interest but also an ever-present desire to understand and explain contemporary challenges. In her discussion of endogenous money in *A Second Edition of the ‘General Theory’*, she emphasises how the context has changed since 1930, so it is necessary to set out the essential features of Keynes’ theory of liquidity preference while incorporating new developments.

This book is organised along the following lines: The opening three chapters focus on monetary policy and central banks, the next three on macroeconomic matters – specifically involuntary unemployment and fiscal solutions, then this is followed by three chapters that explicitly consider the post-Keynesian tensions around endogenous money supply. Two of the final five chapters consider liquidity preference, one examines Sheila’s influence on regional economics and the final two make contributions on policy.

Jamie Morgan opens the book with *Macprudential Institutionalism: The Bank of England's Financial Policy Committee and the Contemporary Limits of Central Bank Policy*, which evaluates the change in central banking theory and practice since the global financial crisis. Dow's 2017 paper on 'Central banking and the 21st century' is Morgan's point of departure. He evaluates the Bank of England's monetary policy from an institutional perspective, and highlights the disconnect between how finance represents itself and what finance really does.

In his chapter on *Central Bank Independence: Are the Glory Days Over?* Charles Goodhart explores why central bank governors have been so influential in spite of legislative subordination to the Treasury. He provides a useful and accessible account of the heydays of central banking in which ministries of finance essentially abdicated their macro-economic stabilising responsibility to the monetary authorities and argues that in a new era of increasing inflation, the privileged position of central bank governors is not assured.

Malcolm Sawyer considers *The Efficacy of Monetary Policy in an Age of Financialisation and Climate Change* within the context of Dow's view that post-Keynesians call for a stable financial system which generates credit to finance real economic activity in such a way as to support government policies with respect to its socio-economic goals (such as reducing income inequality and conserving natural resources). He suggests that realistic goals should be set for the central bank in playing such a supportive role, but that policy should be left to policy-makers.

The next three chapters deal with the vexing problem of unemployment. Rotheim and Torr re-examine the issue of involuntary unemployment – Rotheim considers the nature of the individual and Torr considers what some have called Keynes's tortuous definition of involuntary unemployment in his second chapter of the *General Theory*. Toporowski examines Kalecki's (1944) *Three Ways to Full Employment* and his transfer theory of debt.

In his consideration of *Keynes on Individual Behavior and the Possibility of Involuntary Unemployment Equilibrium*, Roy Rotheim emphasises the emptiness of the mainstream atomistic individual as a device to understand market equilibrium and shows that Keynes's explanation for the possibility of involuntary unemployment equilibrium relied on a different type of individualism. Rotheim refers to Dow (1991) in which she points out that Keynes's epistemology relies on real actors or individuals. Rotheim argues that involuntary unemployment only makes sense in a world with organic interdependence among individuals and firms.

Christopher Torr examines in what way *Keynes's Chapter 2 Definition of Involuntary Unemployment* distinguishes it from classical voluntary unemployment, since the presence of an excess supply of labour does not on its own do so. He invokes Dow's work on micro foundations (Dow, 1983, 1985, 2016b), and begins with an example from astronomy – where matters of observation differ from those related to conception – to draw us into Keynes's explanation of a non-self-adjusting economic system.

Jan Toporowski impresses upon us Sheila's publication achievement in *What Keynes Learnt from Kalecki – A Brief Introduction to the Fiscal Theory of Debt Management*. He expands the transfer problem of international debt – of which Keynes was aware in the interwar period – to domestic debt and suggests that a reframing of internal and external debt has lessons not only for the fiscal sustainability of debt but also for a post-Keynesian framing of money.

As has already been suggested, the interplay between the conditionally endogenous money supply, the role of monetary authorities and banks and the theory of liquidity preference are all matters which Sheila has explored. But those who claim post-Keynesian affiliation are a broad church, and both within and beyond, the matter of endogeneity continues to be debated.

Perry Mehrling and Tim Congdon – neither of whom is post-Keynesian – provide insights on the usefulness of the conditional endogeneity view. Peter Kriesler and the late Geoff Harcourt provide a reading different from Sheila's in the *Second Edition of the General Theory*.

In *Payment vs. Funding: The Law of Reflux for Today* by Perry Mehrling, takes as his point of departure Dow and Dow (1989), a seminal statement on the conditional endogeneity of the money supply and the theory of liquidity preference. Mehrling presents his money view balance sheet framework, and through this, the law of reflux, 'which operates to balance the elasticity of payments and the discipline of funding'. While pointing out that his and Sheila's language differs, he sees the money view approach as consistent with Sheila's view of liquidity preference as determining asset prices as a markup over the money rate of interest (a policy variable of the central bank). Mehrling explores Tobin's 1963 rebuttal to the monetarists, its collateral damage and the likeness of Tobin's view with Modern Monetary theory.

In his *Revolution and Counter-revolution in UK Banks' Asset Composition since 1945, and Why They Matter to the Debate about Horizontalism*, Tim Congdon points to two post-Keynesian contributions to macroeconomic analysis. The first is that most money creation is the result of banks' extension of credit to the private sector and the second is that neither the lending banks nor the central bank has direct and immediate control over the scale of such credit extension or the associated money expansion. Indeed, for Congdon, there is general acceptance of the realism of the endogeneity of the money supply. Congdon shows that Dow's conditional view of endogeneity fits the UK data better than the view that presents the supply curve of bank credit as a horizontal straight line.

Geoff Harcourt and Peter Kriesler consider Sheila's take on endogenous money in *A 'Second Edition' of the General Theory* (Dow, 1997) as their point of departure in *The Endogeneity of the Money Supply in The General Theory*. They re-examine Dow's explicit challenge to conventional interpretation that Keynes understood the money supply to be exogenous in *The General Theory*. Harcourt and Kriesler use the distinction between exogenous and endogenous money as a basis to review Keynes's treatment of the money supply

in *The General Theory* and consider his enduring legacy of liquidity preference in international foreign exchange markets.

Next, two authors explicitly consider the applicability of liquidity preference as a conceptual device. Hawkins considers it useful to evaluate whether financial inclusion has indeed been delivered by digital finance and Koutsobinas considers its possible resurgence through the concept of liquidity premia in behavioural economics.

In her *Liquidity Preference and the Digital Financial Inclusion Illusion*, Penelope Hawkins considers the claim that digitalisation of financial services has delivered financial inclusion. Her narrative on the spectrum of financial inclusion draws on Dow's view of conditional endogeneity of the money supply and the theory of liquidity preference. Hawkins links the evaluation of creditworthiness by banks to their liquidity preference and their credit extension to the range of borrowers. She suggests that digitalisation has indeed shifted the basis for the evaluation of creditworthiness from knowledge based on proximity to knowledge based on data analytics. Such digitalisation of financial access, however, cannot of itself address the fundamental causes of financial exclusion such as liquidity preference or poverty.

Theodore Koutsobinas argues that some of Keynes's arguments about fundamental uncertainty providing an explanation for involuntary unemployment have all but disappeared, even among the works of some contemporary post-Keynesian economists. While he takes note that Dow has successfully criticised the accommodationist approach to the endogenous money supply, he suggests that there is increasing emphasis on liquidity premia of assets rather than on liquidity preference as a traditional representation of demand for money. In *The Rising Importance of Liquidity-Premium Analysis: Towards a Regeneration of Liquidity-Preference Theory?*, Koutsobinas suggests that the use of endogenous liquidity premia influenced by the state of confidence in a multi-asset no-arbitrage framework has the potential to regenerate the development of liquidity-preference analysis, in a way that is compatible with behavioural macroeconomics.

Carlos J. Rodríguez-Fuentes in his *Regional Finance: Beyond Theory and Dualism* sets out to show that in regional finance, methodology matters. Rodríguez-Fuentes draws on Dow's 2002 book, *Economic Methodology: An Inquiry* in which he highlights her views that 'my interest in methodology has always been from the perspective of practice and in the spirit of inclusion', and that she 'became interested in methodology for the practical purpose of understanding disagreement among economists' (Dow, 2002, p. 8). He argues that Sheila Dow not only tries to persuade us of the crucial implications of the endogenous character of money and the uncertain nature of our knowledge about economic behaviour but also of her firm conviction that most (if not all) practical issues how money influences regional development are strongly rooted in methodological issues. He examines citations of Sheila's work, including his joint paper with Sheila, '*Regional Finance: A Survey*' in 1997, underlining the interconnectedness of her contributions in

methodology, monetary economics and regional finance. He concludes that explicit recognition of differences in modes of thought and the adoption of methodological pluralism are essential for the advancement of the discipline.

The final two chapters of the book apply aspects of post-Keynesian thinking advanced by Dow to the evaluation of two national economies – the early Soviet Union of the 1920s and present-day Myanmar and the Solomon Islands. Kobil Ruziev in his *Money in the Early Years of the Soviet Union: Barter and Back Again – A Short-lived Experiment of Transformation* pays tribute to Dow's works on uncertainty, time and money, to explain why money plays a facilitating as well as a constraining role in the economic process. The reasoning is thereafter linked to Keynes's distinction between a co-operative economy, a neutral entrepreneur economy and an entrepreneur economy. He points out that while the early Soviet economists were inspired by Marx's writings and might not have read the early drafts of the *General Theory*, they seemed to agree with Keynes's observation that capitalist economies were inherently unstable precisely because of the role of money in the economic process. To achieve full employment, early Soviet authorities abolished money and banks, rendering the Soviet economy a barter economy by early 1920. This chapter analyses the theoretical and philosophical foundations behind the short-lived radical experiment with a moneyless society in the early years of the Soviet Union.

In *The Practicality of Pluralism in the Economic Analysis of the Least Developed Countries*, Daniel Gay laments the typically singular, universalist methodological perspective and limited range of methods, tools and techniques used to analyse what the United Nations categorises as least-developed countries. Policy prescriptions, often put into practice by international agencies, tend to be the same in many countries and fail to take account of context. Partly as a result, policies have often failed or fallen short of objectives. He suggests that Sheila's concepts of structured pluralism and schools of thought carry distinct practical advantages in this respect and shows, through two case studies, how the use of other schools of thought such as structuralism and neo-structuralism, dependency theories, feminism and neoliberalism, might have led to richer and more sensitive analysis – and different reforms.

This work closes with a full listing of Sheila's publications from 1978 to 2022, a testimony to her impressive contribution to the discipline.

References

- Chick, V and Dow, SC (2002). Monetary Policy with Endogenous Money and Liquidity Preference: A Nondualistic Treatment. *Journal of Post Keynesian Economics*, 24(4), 587–608. <http://hdl.handle.net/1893/22763>
- Dow, SC (1983). Schools of Thought in Macroeconomics: The Method Is the Message. *Australian Economic Papers*, 22(4), 30–47.
- (1985). Microfoundations: A Diversity of Treatments. *Eastern Economic Journal*, 11(4), 342–60. <https://www.jstor.org/stable/40325001>

- (1987). Money and Regional Development. *Studies in Political Economy*, 23(1), 73–94. <http://hdl.handle.net/1893/25175>
- (1991). Keynes's Epistemology and Economic Methodology, in R O'Donnell (ed), *Keynes as Philosopher – Economist*, London: Macmillan, 144–67. <http://hdl.handle.net/1893/25147>
- (1996). Why the Banking System Should Be Regulated. *Economic Journal*, 104(436), 698–707. <http://hdl.handle.net/1893/25153>
- (1997). Endogenous Money, in G C Harcourt and P Riach (eds), *The Second Edition of The General Theory*, Vol. 2, London and New York: Routledge, 61–78.
- (2002). *Economic Methodology: An Inquiry*, Oxford: Oxford University Press. <https://global.oup.com/academic/product/economic-methodology-9780198776123?cc=gb?en&lang=en&#>
- (2007). Introduction: The Methodology of Development Economics. *Journal of Economic Methodology*, 14(1), 1–4.
- (2012) Policy in the Wake of the Banking Crisis: Taking Pluralism Seriously. *International Review of Applied Economics*, 26(2), 161–75. <https://doi.org/10.1080/02692171.2011.624495>
- (2016a). Framing Financial Markets: A Methodological Account, *Brazilian Keynesian Review*, 2(2), 160–73. <http://hdl.handle.net/1893/25144>
- (2016b). Consistency in Pluralism and the Role of Microfoundations, in J Courvisanos, J Doughney and A Millmow (eds), *Reclaiming Pluralism in Economics*, London: Routledge, 32–46.
- (2017). Central Banking in the 21st Century. *Cambridge Journal of Economics*, 41(6), 1539–57. doi:10.1093/cje/bex051 <http://hdl.handle.net/1893/25767>
- Dow, AC and Dow, SC (1989). Endogenous Money Creation and Idle Balances, in J Pheby (ed.), *New Directions in Post Keynesian Economics*, Edward Elgar, 1989, 147–64
- Dow, SC and Earl, PE (1982). *Money Matters: A Keynesian Approach to Monetary Economics*, Oxford: Martin Robertson.
- Dow, SC, Jespersen, J and Tily, G (eds). (2018). *Money, Method and Post-Keynesian Economics for the 21st Century*, Cheltenham: Edward Elgar.
- Dow, SC and Rodríguez-Fuentes, CJ (1997). Regional Finance: A Survey. *Regional Studies*, 31(9), 903–20. <https://doi.org/10.1080/00343409750130029>
- Kalecki, M (1944). Three Ways to Full Employment, in The Oxford University Institute of Statistics (ed.), *The Economics of Full Employment*, Oxford: Basil Blackwell. Reprinted in *Collected Works of Michal Kalecki, Vol I, Capitalism: Business Cycles and Full Employment*, edited by J. Osiatynski, 357–376. Oxford: Clarendon Press, 1990.
- Moore, B (1988). *Horizontalists and Verticalists: The Macroeconomics of Credit Money*, Cambridge: Cambridge University.
- Sayer, A and Morgan, J (2022). A Realist Journey Through Social Theory and Political Economy: An Interview with Andrew Sayer. *Journal of Critical Realism*, March, 1–37. doi/full/10.1080/14767430.2022.2049078
- Tobin, J (1963). Commercial Banks as Creators of Credit, in D Carson (ed.), *Banking and Monetary Studies*, Homewood, IL: Richard D. Irwin, 408–19.

1 **Macroprudential institutionalism**

The Bank of England's Financial Policy Committee and the contemporary limits of central bank policy

Jamie Morgan

Introduction

Sheila Dow has made many contributions to scholarship. She has, amongst other things, been a prominent commentator on and constructive critic of central bank theory and practice for more than three decades (Dow, 1996a, 2014, 2017). This work has cohered around and been provided with continuity by her longstanding post-Keynesian position and championing of a broadly realist approach to methodology (Dow, 1993, 1996b). The contemporary significance of her work on central banks in this realist context can be illustrated using the recent organizational–institutional development of macroprudential policy at the Bank of England. The Bank has responded to the consequences of the global financial crisis (GFC) in innovative ways, but fundamental tensions remain. Dow's work provides important insight in making sense of the tensions regarding finance, open systems, and real historic time.

Dow on contemporary central banking

In a recent “state of the field” essay, Dow explores “how far the prevailing understanding within the theory of central banking has changed in the wake of the [financial] crisis” (Dow, 2017: 1539). According to Dow, prior to the 1970s, central banking theory was more subordinate to practice and power structures, taking the realities of the economy as a point of departure. As such, it conformed to political economy. Thereafter, central banking practice was increasingly informed by formal theory and adopted a more technocratic approach, mirroring changes that occurred in mainstream economics (see Goodhart et al., 2014; Rochon and Rossi, 2015).

Over a period of years, monetary policy replaced fiscal policy as the primary site of intervention for the management of the economy. Policy developed from a simple monetarist focus on controlling the money supply to manipulation of short-term nominal interest rates with the intention of achieving price

stability based on an inflation target. Such targeting presupposes low stable inflation is basic to and indicative of a sustainable long-term growth path for the economy. Crucially, this growth path was assumed to be appropriately described and managed using a New Classical New Keynesian synthesis position expressed in a dynamic stochastic general equilibrium (DSGE) model of the macroeconomy: a natural rate of unemployment, a growth path, a Taylor rule (or some tacit equivalent with some discretion based on data ambiguity, etc.) used to close an output gap and keep the economy on or near trend (see also Chick, 1993; Arestis and Sawyer, 2008; Morgan, 2009).

As Dow notes, prior to the GFC a number of problems developed in central banking. A *primary* focus on price stability tends to neglect financial stability. This is particularly so when the main macroeconomic model does not include broad money and asset prices (a typical omission by central banks that many consider a contributing permissive cause of the GFC, though central banks were aware of trends based on other data). Such neglect in part reflected the assumption that markets are efficient and thus best able to allocate capital and curtail future potential for losses (via the information-seeking incentive of an intermediating disciplinary monitor), but the neglect also operates according to a further separation of the financial and real economies rooted in a neutral money position. For Dow, the whole, however, has ontological commitments, i.e., how an economy as a facet of social reality is deemed to operate. Those commitments are: an economy is a set of well-understood isolable regular relations, conducive to relatively simple manipulation with few policy tools. This intrinsically closed system perspective informed institutional design and practice in the UK.

The UK adopted a tripartite division of responsibility between the Bank of England, the Financial Services Authority (FSA) and the Treasury. The Treasury adopted (a series of more and less formal) fiscal rules. The FSA was given responsibility for microprudential regulation and day-to-day oversight of individual banks and other financial actors. The Bank of England, meanwhile, was given formal independence, and though its remit included both financial and price stability, the overwhelming emphasis was placed on a statutory inflation target. This placed heavy emphasis on interest rate decisions made by the Monetary Policy Committee (MPC) and, more broadly, the communication functions of the Bank via a ritualized focus on quarterly inflation reports (conveying “balance of risk” and inscribing a “direction bias” for interest rate policy). During the early noughties, the consensus that emerged was that monetary policy had been effectively depoliticized, that finance had become increasingly sophisticated, and that central banks were effective in shaping expectations and moderating the business cycle – within a broadly rational expectations understanding of systemic characteristics (see Chick, 2013; Dow, 2014; Hartwell, 2019). The historic and ultimately catastrophic consequences of this are now well documented (for example, Duffie 2019).

However, according to Dow, while there has been widespread acknowledgement of the institutional failings of central banking, there have been

definite limits to policy tool innovation and a general lack of fundamental transformation in perspective. This latter point is important, since it is inadequate ontological framing that grounds problems. A closed system perspective with its tacit understanding that simple regular relations obtain remains an underlying problem. This is not to suggest matters are simple, as Dow notes: “When the crisis hit, central banks had no choice but to accept the interdependencies and complexities belied by the modelling approach” (Dow, 2017: 1545). There have been various changes. In terms of attitude, Andrew Haldane, then Chief Economist, at the Bank of England, made it clear that the Bank is sensitive to the limits of its models and self-critical of its own technocratic tendencies (within what cultural economists have referred to as his “double gambit” (Erturk et al., 2011)). However, the primary focus of the Bank remains its inflation target, despite statutory change to its relative emphasis. The Bank’s primary monetary policy focus remains its interest rate tool, and the Bank’s primary observed public significance remains its communication function in the context of its multiple data producing and forecasting exercises, which, though partially informed by many evidence sources, are still rooted in DSGE modelling, and standard econometric analytical statistical forms.

Focusing on the UK, the new context, however, extends to a greater sensitivity regarding the scope for financial instability and the need for early and remedial intervention to support both the banking sector and the economy at large if problems are detected. So, there is a greater emphasis on liquidity support operations and mechanisms and less of a concern with moral hazard that tends to delay responses and privilege a hands-off approach. There is also a notable increase in the use of the language of uncertainty and interest in new metrics to measure and convey it (Morgan and Nasir, 2018). This has developed as part of the Bank’s various attempts to rebuild trust in both its own competence as a macroeconomic manager and in the finance system in general after the global financial crisis. For example, formalized Forward Guidance from the MPC was one attempt to achieve this (Morgan and Sheehan, 2015). Brexit has politicized the Bank’s circumstances in recent years, while over the longer term, managing, anticipating and theorizing relatively novel characteristics of the post-crisis period have also come to the fore in the form of the issues of quantitative easing and zero-bound interest rates.

In order to highlight the problematic limits of change and the insight that Dow’s work can offer, perhaps the most instructive area on which to focus is institutional reform. In introducing the Financial Services Bill in September 2012, then Chancellor of the Exchequer George Osborne clearly stated that the former tripartite system was not fit for purpose and that although financial stability has always been a part of the central bank’s remit, this would benefit from formal organizational embedding, creating designated macroprudential responsibility (HM Government, 2012). According to Dow,

This institutional change also cements recognition of the interdependence between monetary stability and financial stability, and between

macroprudential and microprudential regulation. The resources devoted by the Bank to the financial stability goal are now on a par with those for the monetary stability goal.

(Dow, 2017: 1548)

That said, though the Bank now commits significant resources to financial stability, this is no guarantee that financial and monetary stability are adequately integrated at the institutional level or *equally* well understood or managed.

Systemic risk and macroprudential policy

At any point in time, the *individual* balance sheets of banks and other financial organizations can appear healthy and thus signal no immediate concern. Historic defaults on loans can be low, loans can seem well collateralized, current credit ratings can appear high grade and sectors of business broadly profitable, seemingly indicating appropriate pursuit of business opportunities. Oversight can thus seem to signal no immediate need for intervention, and regulation can appear to be encouraging prudential conduct. However, these microprudential characteristics (defaults, collateralization, etc.) can be misleading in four basic senses.

First, *de facto* and *de jure* lending and supervision standards can be reduced over time and through the business cycle based on lobbying in the context of sustained economic growth. Second, not all the activity of a financial actor may be captured or conveyed to the regulator, so the balance sheet may be intentionally or unintentionally incomplete as an indicator of current vulnerability. Many financial actors are constituted as multiple corporations in many jurisdictions, and these incorporations can involve complex interconnections, some of which create vulnerabilities and yet are developed to formally comply with balance sheet requirements in some given jurisdiction. Third and relatedly, financial innovation can result in new practices and instruments whose full significance is not captured by current regulation (a problem exacerbated in a permissive system whose ethos is “what is not prevented is allowed”). Fourth, the aggregate of activity by banks and other financial organizations can be collectively adverse based on *developing* potentials. A system is not just the sum of its individual parts, but an operative structured interconnection of those parts. Regulatory individualism is no more able to capture this than methodological individualism is able to conceptualize it.

Dow, following Keynes, would describe the fourth sense as a fallacy of composition related to specific consequences of given ways of structuring, and awareness of this structuring is core to post-Keynesian approaches to finance. The important point is that there are issues for a regulator to focus on from the perspective of the system *as a whole*. For example, banks can engage in common or herd behavior resulting in rapid increases in general loan provision or loan provision in specific sectors. Asset prices can thus rise,

and individually this can signal current profitability to financial organizations, adequate collateralization (against rising valuations) for both lender and borrower, and (for some period) relatively low-default levels in the system (creating potentially misleading historic footprints for statistical approaches to credit ratings and for further loan provision and risk). Financial agents can repackage debt as income stream-generating assets and thus disperse risk through chains of ownership. However, absolute levels of debt concurrently increase, bank balance sheets can become entangled with increasingly active and complex shadow banks, debtors can become more interest rate sensitive and debtors' margins of safety prior to distress can reduce (as leverage levels also rise), leading to greater sensitivity to economic downturns (and slow-downs collectively affect wages, incomes and revenue streams in different aspects of the economy and hence capacity to service debt).

Once vulnerabilities are created, some given triggering event can serve as a turning point leading to shifts in sentiment and behavior: prized assets can become problematic markets subject to collective downturn (housing, credit cards, commercial property, vehicle leasing agreements, etc.), credit freezes can exacerbate situations based on individually rational motives but collectively irrational outcomes, dispersion can become contagion, proprietary trading and nominal hedging functions (using derivatives of one kind or another) can become sources of losses, major clients can become sources of vulnerability (private equity, hedge funds, etc.) and so forth. As such, risk can be quite different when considered from a system point of view. This has led to macroprudential policy. Macroprudential policy is a recognition of and attention to broader issues of "systemic risk" (Baker, 2013; Carney, 2014; Lombardi and Moschella, 2017; Saporta, 2018; Aikman et al., 2019; Tarullo, 2019). It is a policy orientation whose interventions are intended to create counter-cyclical effects. Concomitantly, macroprudentialism is conceived as one of several sources of "circuit-breakers" built into the system (operating in conjunction with "ring-fencing" and other such breakers).

As Andrew Baker has explored in detail, macroprudentialism in the 21st century developed from two main sources prior to the GFC. First, work from inhouse staff at the Bank for International Settlements (BIS) in the aftermath of the East Asian Financial Crisis, and second, work from the Financial Markets Group at the London School of Economics (Baker, 2018). These two contributed to the influential post-crisis "Geneva Report" (Brunnemeier et al., 2009). According to Baker, macroprudentialism draws eclectically on Minsky, Keynes and Fisher, and its very existence as a policy stance implies fundamental critique of the practices of financial agents in terms of their collective consequences. Rather than presumption of a spontaneous efficiency-seeking "normal", concepts such as liquidity trap, paradox of thrift, debt deflation, and of margin death spirals and generalized positive feedback loops are commonly recognized. These speak to endogenous processes, such as Minsky's financial instability hypothesis, and, in general, a post-Keynesian perspective on a monetary economy.

As Baker also notes, however, institutional and policy development have tended to suppress the more radical implications of macroprudentialism, regulators/policymakers have preferred to focus on the development of data, analysis of data, the toolkit and its implementation (rather than address fundamental issues of mechanisms and purpose). Still, regulators are not idiots, they are and have always been aware that structures and systems matter. But so does one's education, training and broader socialization. There are multiple tensions that can arise here in terms of methodology, the role of theory and due attention to problems. While there may be an acknowledgement of macroprudentialism, much of mainstream banking, finance and general economic theory subvert, distort or marginalize any focus on intrinsic systemic complexity, contingency and vulnerability. Mainstream theory still speaks of irrational exuberance, information asymmetries, monitoring failures and so forth – concepts which may capture some of the situation but always as momentary deviations from ideal practice to which the whole can be returned. This sits awkwardly with macroprudentialism and is an oddly ahistorical non-sociological way of situating theory to real practices and motives, since one cannot return to a situation that has never pertained and never could, based on assumptions regarding behavior and its context. Dow offers multiple insights in this regard. Given other contributions to this Festschrift discuss methodology, the continuing influence of a Cartesian mode of thought and the superiority of a Babylonian mode, we can usefully assume these as background and elaborate regarding the UK's approach to macroprudentialism.

The Bank of England's macroprudential institutionalism

In the UK, since the GFC the “tripartite” system has been reorganized, and a formal organizational focus on macroprudential policy has been implemented (Dow, 2017). The Financial Services Act 2012 replaced the Financial Services Authority (the previous separate microprudential regulator) with the Financial Conduct Authority (FCA). The FCA's primary remit is to oversee client or customer service aspects of financial organizations. The FCA remains separate from the Bank of England. However, through new statute, regulation and oversight of the “safety and soundness” of individual financial entities (banks, building societies, credit unions, insurers and some large investment organizations), i.e., microprudential policy, now rests with the Prudential Regulation Authority (PRA), which *is* part of the Bank. The Prudential Regulation Committee (PRC) makes key decisions on behalf of the PRA and the PRA sits on a par with the new Financial Policy Committee (FPC) at the Bank. The FPC is responsible for systemic risk and is focused on macroprudential policy. According to the division of labor, the FPC does not intervene directly in the activities of financial entities. Rather it can issue communiqués regarding emerging risks to ensure that key actors are aware, and it can engage in “directive” intervention, which means it can direct the PRC/PRA and the FCA to act on its behalf.

The personnel of the FPC and PRC overlap in order to ensure each is aware of relevant financial stability issues and what the other is currently doing. A range of Deputy Governors of the Bank of England sit on all major committees. These constitute the “internal” membership of committees. For example, the Deputy Governor for Financial Stability sits on both the FPC and PRC (and other personnel are also involved, for example, the chief executive officer (CEO) of the FCA also sits on both the FPC and PRC, as might the Bank’s chief economist). To ensure liaison between monetary policy and financial stability, the Deputy Governor for Monetary Policy (from the Monetary Policy Committee or MPC) also sits on the FPC and PRC. This internal membership (numbering between 4 and 6) is complemented by “external members”, nominally appointed by the government’s Chancellor of the Exchequer, and, in principle, drawn from a wide spectrum of perspectives and interests (but appointees tend to be academic economists, and practitioners from banking and finance). The Governor of the Bank of England, typically chairs the MPC, FPC and PRC. Moreover, a non-voting Treasury representative also sits on both the FPC and MPC.

Clearly then, due attention has been paid to communication and liaison across a series of specialist policy committees, each with designated powers. Dow (2017: 1548) is thus correct to note that institutional change has cemented recognition of the interdependence between monetary stability and financial stability, and between macroprudential and microprudential regulation. However, there is more to say here. The commitment of resources is no guarantee that monetary and financial stability are adequately integrated at the institutional level or *equally* well understood or managed. The positioning of the MPC contrasts with that of the FPC, and there remain basic challenges for a macroprudential regulator, given the characteristics of banking and finance as an open system.

The complexity of coordination

Once macroprudentialism is formally recognized as a policy focus, it requires an institutional location and legal empowerment. Only then can regulation, oversight and intervention occur. This, in turn, requires a decision-making group (a committee) at a domestic level, one able to undertake or review monitoring and develop policy. We have already set out the UK framework above. The FPC, however, confronts a number of coordination challenges.

It confronts an international coordination problem with other policymakers. It must coordinate with other country’s regulators and supranational sources of regulation, since some activity is cross-border and may be out of reach of any given individual regulator. However, there are both reasons to cooperate to create standards and reduce systemic risk and reasons to compete to attract business activity and reporting, since finance is not just a service for the economy it is a set of sectors of that economy (a source of tax revenue, employment, etc., with its own interests and lobby groups).

So, a context exists in which there are conflicting tendencies: international harmonization of standards (subject to sector-based lobbying) and some differentiation, with scope for regulatory arbitrage. Of course, one might think these are incidental issues that macroprudential policy ought to look through, but they are equally part of the political economy of decision-making. In any case, the coordination problem extends to awareness regarding other jurisdictions and their current tendencies (such as whether and how the US reforms Dodd-Frank, Sarbanes-Oxley, etc.; the degree to which the Financial Stability Board and Basel III or IV develop standards that affect compliance in the UK and the relative standing of the UK, the eventual consequences of Brexit for financial services, issues such as European passporting, etc.). What this suggests is that creating responsibility for financial stability is not the same, institutionally, as creating autonomy in regard to the context of regulation or of policy. Both political and technical matters remain complex: what can be done, when and how conveyed as policy, etc. Assessment of systemic risk orients on a system whose openness overflows borders.

Furthermore, the coordination problem is not just international. The FPC as macroprudential regulator must coordinate with the MPC, PRC and Treasury, i.e., domestic policymakers responsible for monetary stability, microprudentialism and for the economy at large (with a focus on fiscal responsibility, growth and other political and social objectives). Here, there is not just an issue of mutual awareness and liaison, there is a need to set out an order or hierarchy of concerns, since the aims of each committee are related, but the aims of each are *not* the same. Clearly, no one wants a financial crisis but the ordinary state of affairs in daily interaction and month-by-month liaison is not a situation of financial crisis. Inter-committee communication is about current policy to address future problems – a more contingent and negotiable situation. It is, therefore, important to recognize that different committees and members may emphasize different issues to different degrees at different times, and these may involve different priorities and conflicts of interest. Just because members sit on each other's committees does not mean that they agree on the issues that occur in each that affect the others.

One might respond that good faith, open dialogue, information sharing and evidence-based discussion can resolve any issue and lead to coordinated decision-making between and within committees. This is, of course, true to some degree. All these characteristics are to be welcomed. They are conditions conducive to appropriately addressing financial stability or any reasonable foci for decision-making. *But* they are not thereby sufficient for *effective* decision-making. One might note that the UK framework includes no statutory *specifics* that guide in any substantive sense who takes precedence based on what information and according to what priorities – though what is meant by this needs some further explanation since guiding concerns are stated in law.¹ Clearly, an overly prescriptive system may be inflexible and unworkable, but a flexible system need not mitigate the problem of disagreement. Simultaneously, informal capture and group think from committee to committee

remain possible. Having responsibilities is not the same as providing clear rule systems for how those responsibilities will be exercised. So, there remains some ambiguity regarding the degree to which the new system improves on the old tripartite system. One might go further and argue that while the ubiquity of the Governor of the Bank of England ensures top-level awareness and engagement, it also creates the potential for the force of personality of a pivotal figure to shape the institutions, rather than for the institutions to moderate that figure (one need only recall Greenspan's overwhelming influence on the Fed). *And* one cannot neglect that, if a Cartesian mode continues to be basic to mainstream economics education, then a cognitively dissonant socialization will continue to affect the capacities of committee participants who must manage a complex situation.

In any case, though each committee has a remit and, in combination, the whole has an interest in stability, this is highly generalized. Furthermore, the main form of statutory guidance for intermediation between the FPC as the macroprudential body and the rest, is that the FPC *must* take account of the current government's economic policy (its strategy for growth essentially). The germane institutional question, therefore, remains: what are the agreed grounds of policy? If monetary stability is not necessarily indicative of financial stability, which is one of the reasons that macroprudentialism has become a formal area of policy, then the concerns of monetary stability are not always and everywhere the concerns of financial stability and may diverge. Moreover, if the growth model of an economy is *financialized*, then its expansion involves the growth of financial services, financial asset production, asset inflation and credit expansion as part of debt cycles. So, subject to this, there is no simple basis for agreement regarding current decisions to manage future financial instability, if the very terms of growth are built around credit and financial asset expansion.

The contingency of evidence and the problem of theory

If committee discussion and inter-committee liaison are current debates to address future problems, then there is an unavoidable ambiguity regarding the core concerns of macroprudentialism. That is, the potential unfolding evolution from financial stability to manifest financial instability and ultimate crisis. This is important in institutional terms. Clearly, the issues set out in the previous section are relevant to any decision-making body or bodies, but are more significant where substantive decision-making rules are absent. That is, they are absent before some critical threshold is reached and regarding what that threshold will be. And to be clear, forms of words intended to guide decision-making are not the same as readily interpreted mechanisms – nor are they the same as clear rules for when and how the available toolkit is used.

However, one might expect that adequate data, etc., and appropriate theory provide macroprudential committee members with the insight and evidence to orient on events indicative of financial instability (they will know when to

act). Yet matters are not as simple as this might imply because adverse consequences of financial instability are time-dependent outcomes of cumulative processes. They are consequences that manifest following triggering events that create turning points for sentiment and behavior. What are those events, in what markets are they triggered, at what scales of activity or thresholds for quantities will they occur? Clearly, one cannot push this argument too far, since to do so is to invoke the fallacious complacency of the mainstream bubble argument (bubbles cannot be known until they burst – a retrospection case). As Baker implies (Baker, 2018), since it is intrinsic to macroprudential theory and policy, and as Dow argues, in an open system of contingencies, we *can* know some processes and relations are vulnerable, and it is important for prudential intervention to grasp that there is no definitive turning point, merely reckless acceleration towards such a point. Put another way, turning points tend to be known unknowns subject to uncertainty.

Of course, stress tests provide the Bank of England with a stylized account of worst-case scenarios for individual financial entities and based on systemic interaction. This is different than whether, in fact, the stylized models are adequate accounts of how actual problems will materialize in an open system, since this is a matter of the limits of models *and* the adequacy of theory in accounting for the financial effects on an economy and of the economy on financial entities. While not worthless, these tests are highly limited as tools for everyday decision-making (Dowd, 2015). Moreover, stress tests are about identifying the degree to which a financial entity or entities seems capable of *surviving* worst-case scenarios. This is different than whether, in fact, behavior of financial agents will change sufficiently before such an outcome occurs.

Fundamentally, systemic risk means *risking* adverse outcomes (what risks are a regulator prepared to accept) based on structures of relations with a direction of travel in an open system. “Risk” itself is perhaps a contentious word, since it implies a quantifiable probabilistic approach rather than only a foreseeable relative likelihood subject to fundamental uncertainty (Dow 2004). Furthermore, both the regulator and policy are internal to the problem the regulator is seeking to resolve, and so the whole is not simple, regular or independent (it has performative interdependencies).

The difference between the MPC and the FPC

Systemic “risk” as an institutional issue is not a matter of precision but of perpetual awareness of the need for caution. And yet this issue of caution too remains problematic for the institutional formation of macroprudentialism. It is not clear that caution is likely to be exercised or indeed what exactly caution means.

Consider the difference between the MPC and the FPC. Whatever one thinks about the adequacy of price stability and inflation targeting, the focus is well defined and relatively simple.² The MPC has a core metric on which to focus, a definite measure of that metric and a target in its regard.

Furthermore, the MPC has well-established conventional practices understood by its target audience. The FPC, by contrast, has no well-established organizational and conventional practices that are readily understood by the target audience and any development is liable to be subject to ambiguity of a different kind than the MPCs constructively ambiguous communication. Financial stability is a multi-faceted aspiration defined as the absence of adverse instability. The concept *is* readily comprehensible, but lacks a single target, core metric and thus policy focus to inform activity and *specify* its operational success or failure. Financial economics has *many* different models that set out “financial distress signals” using econometric tests, but these are about sophisticated averages, lack confirmation, suffer from spurious precision and are essentially retrospective foci on events rather than explanations of the processes that contingently produce them. In any case, the purpose of the FPC is to discuss the current evidence that financial stability is under threat and then to consider countercyclical responses and circuit breakers. There is a tension here.

Prudence, by definition, means erring on the side of caution, which in turn means intervening early to prevent future problems. But, if one looks at the macroprudential toolkit, then early intervention is not unequivocally the case as a matter of practice. The toolkit has two main components. First, the FPC considers current data (provided by the PRA derived from the entities it oversees and from the Bank’s quarterly credit surveys, etc.) and can then choose to issue a communique. Formally, this constitutes information whose purpose is to draw attention to elevated risk based on trends. But the content of the communication is unlikely to be new or surprising to the systemically significant banks. Though the PRA may be responsible for several thousand financial entities, market structure means that few of these are powerful at scale and represent key foci for the FPC. The systemically significant banks operate as a closely aligned oligopoly. Each is aware of the activities of the others and maintains data regarding key relative metrics for the purpose of maintaining market share and providing positional reporting documents for current and potential shareholders. So, each already has the resources to consider their own systemic positioning. Communication of systemic risk, of course, may be new to bank customers and clients but is unlikely to form the basis of any decision to borrow. This decision will have many other considerations, and though customers and clients may be financial actors of a sort, they typically lack much in the way of powerful agency. They will likely participate as captives of the system.

Fundamentally, therefore, communication is *not* an issue of information asymmetry where banks are actors with an information deficit and can be appropriately conceived as rational actors in a rational expectations system who are suddenly given error-correcting tools. Communication is *not* an intervention in this context. The main significant actor with agency who may have a potential information deficit is the regulator, since they are primarily dependent on regulated financial entities to provide true and accurate reports

of all relevant information. But relevant information for financial stability may be more than the law requires banks to provide as true and accurate information. In any case, vulnerabilities involving shadow banking extend far beyond regulation and oversight parameters involving banks. Moreover, responses to FPC communication will be a strategic decision by any given financial organization regarding its *business model*, and this may involve a different perspective on the same context of possible adverse future outcomes than the regulator. It may be possible to tip the balance here if the communique takes the form for relevant banks of “change tack or we will make you do so”, but this may depend on the track record of follow through by the regulator. “Caution” by way of communication is, then, at best a conditional term and a constrained instrument.

Put another way, communication seems a somewhat limited tool. This is especially so once one considers that the focus on financial instability and its outcomes is interpretive and conditional – a matter of what one is prepared to countenance as possible. Concomitantly, outcomes much of the time are contingent and variable, and not all entities *expect* to be harmed in the same way to the same degree, even if the issue is systemic. An important question is, in this context, what is action pre-empting exactly? What consequences are being avoided, and for whom? A collapse in asset prices, a credit freeze, a banking run, etc. Each of these can be deemed adverse but in different ways – for customers, banks and the state – and so systemically, what one is avoiding is internally related to what interests are paramount and how one conceives the overall direction of travel of the finance system. The FPC and those they regulate may differ sharply on this, and again, this is quite different than the MPC’s situation. It is different for the construction of a credible narrative of policy action by the FPC as regulator and for the behavioral response of financial actors.

It is also worth bearing in mind here that, unlike the MPC, the primary constituency of the FPC is tacitly oppositional. It is the purpose of the FPC to, as currently understood in mainstream terms, moderate the credit cycle. But the greater the degree of caution the FPC opts for, then the greater the potential for it to reduce the current profitability of the banks it regulates. Profit is derived from innovation and expansion – *financializing*. Communication is, of course, in reality, two-way across several fronts: via lobbying of the FPC (perhaps via the press), via the links of individual banks to the PRA, and via the banking sector’s capacity to lobby the government (reminding the Treasury that credit provision, mortgage availability, etc., are basic to growth). Despite the independence of the Bank, this is a *dialogue*, even when mute. But it is not an equal one. As dialogue, it need not be deemed political in the ideological or overt sense, since the activity of proponents can reduce to formative considerations in the communicative milieu for participants, and so the effect may simply be indirect discursive influence rather than the direct exercise of power by banks. This brings us to the second main component in the macroprudential policy toolkit: “Directive” intervention.

FPC directives: arrows never fired?

The FPC can direct the PRA to impose new conditions on lending by the banks – either for sectors or in general. However, for the Bank to choose this option, then some threshold must be passed, which in reality means some degree of problematic lending and practice is likely to already have occurred. Again, there is scope here for a kind of calibrated perspective on what is to be pre-empted, which may include a target threshold for consequences that induce caution, which is more or less permissive before it becomes pre-emptive. There is also some question as to what form of pre-emption directive intervention takes. In keeping with Basel III, the main focus of general intervention for banks has been focused on “resilience” via increased capital adequacy requirements. In terms of the toolkit for macroprudentialism, this becomes interventions to curb lending in given overheating sectors (for example, higher requirements against mortgage lending).

Consider what additional capital is and does. Banks are not in the main mere intermediaries that draw in capital and then lend it out. They may have intermediary functions in financial systems, but credit is mainly *created* not collated. As the Bank’s own researchers confirm, credit is commercial/retail bank money, money created when a loan is extended, and a matching deposit is generated that can then be spent into the economy. Increased capital requirements may slow down the rate of lending because the requirement forces a bank to raise or retain additional capital, which raises funding costs and has balance sheet consequences. The requisite changes may take time or may be something a bank does not want to do for strategic purposes. But the capital *does not* directly come at the expense of lending, and it does not definitively *prevent* lending. Moreover, lack of capital buffers was not the direct cause of the global financial crisis, so it is debatable whether, in fact, more capital will prevent the systemic effects that are common to financial crisis. As such, the capacity of capital requirements to act as a countercyclical measure and as a circuit breaker seem open to question in an open system.

As a final point, it is also worth noting that so far, the Bank has been extremely reluctant to use its directive intervention toolkit. While this does not imply the Bank has been captured, it is a reminder that regulatory capture remains a perpetual issue given the nature of macroprudentialism. The FPC is deemed a “success” in so far as no financial crisis occurs, but equally, the absence of financial crisis may lead to the inference that its interventions are superfluous precisely because nothing significant has happened for some significant duration (the system has evolved beyond the need for the FPC to act – a judgement whose potential is intrinsic to a mainstream quasi-efficiency approach, and mainstream game theory and behavioral or agent-based theory do not necessarily militate against this, since the claim may be that agents have become more closely aligned to rationality). In a financialized system, complacency and inaction in order to facilitate growth remain sources of potential tension and subversion (especially if Cartesian mindsets

predominate). Still, though the Bank has been reluctant to use directives individual banks are, however, much better capitalized than was the case in the past. Each carries more assets of higher grade and greater liquidity, so one might consider the system more robust in a balance sheet sense (immediate signals of solvency, etc.), albeit this is in the context of a significant extension of central bank services and activity that have, as Daniela Gabor notes, created a whole new order of dependencies and Bank vulnerability.

Conclusion

Finance is extremely important in a modern economy and so formal organizational-institutional focus on financial stability is clearly progress of sorts. At the same time, recognition that the finance system, the economy and social reality more generally are matters of open system complexity draws attention to basic limitations that any macroprudential stance confronts. Arguably, of course, regulators schooled in a Babylonian mode of thought would be more effective, and, equally arguably, post-Keynesian theory, which in general conforms to or builds from a Babylonian mode offers more insight regarding the mechanisms that lead to financial instability, though one ought to acknowledge that there is no consensus among post-Keynesians regarding the nature of a monetary economy and the role of given models and models, in general, are still at issue – so merely suggesting “be post-Keynesian” would be no panacea for a regulator. That said, Dow’s work suggests that the open-mindedness of a constructive pluralism is surely preferable if one desires a more flexible, creative and nuanced way to address problems. Concomitantly regulatory committees would benefit from more diverse personnel, education and training – embracing history of economic thought, economic history and philosophy (Dow, 2012; Morgan, 2016; Morgan and Patomäki, 2017; Lawson, 2019). Theory and practice would also benefit from careful reflection regarding how the nature of real historic time is conceived (Rescher, 1996; Patomäki, 2011; Rotheim, 2013; Latsis, 2015). But this still leaves lacunae (Morgan, 2019b).

Finally, macroprudential policy is to some degree, system maintaining and so one might reasonably ask two questions: what is it preventing and what form of progress is it? Though there are practical challenges and problems of theory for macroprudential policy, there is also the underlying problem of what a financial system is developed to do and what it allows to occur (Baker, 2018). While there has been extensive financial reform, that reform has *not* fundamentally altered the role of finance in facilitating credit cycles that inherently involve periodic expansion in debt levels and asset prices. Much of the reform is focused on managing or preventing worst-case outcomes and ensuring the state does not become liable for (in the form of bailouts) the banking system. This implies limited capacity to prevent crises and does little to change the nature of a debt-dependent society and economy. It presupposes financial cycles rather than transforms them. Crisis is a conditional term. The

next major crisis may perhaps be more effectively managed, if by this one means banks are more resilient, but it is worth reminding ourselves what the system currently sacrifices: a financialized system with a macroprudential policy will still be one in which bankruptcy and defaults are widespread, and citizen's homes and possessions are seized (Soederberg, 2014; Montgomerie, 2019; Morgan, 2019a).³ Yet the finance sector still represents itself as a source of rational financial deepening, not of reckless financialization. There is a basic discursive mismatch between what finance really does and how it is represented in society. Dow's work over the years has much to offer here in highlighting fundamental issues.

Notes

- 1 The Financial Services Act 2012 modifies and augments the Financial Services and Markets Act 2000. It gives the Bank overall responsibility for financial stability so in a sense it has priority; but formally the Bank only comes into its own if it invokes powers because of manifest or imminent crisis. Macroprudentialism is about shaping events in order to avoid such a situation arising at all. So, beneath the threshold matters are more fluid.
- 2 To be clear, this does not refute the Keynesian claim that marginal efficiency of capital applies, where there is no simple relation between an interest rate and demand for investment capital, since it is the expected return on investment that affects what interest rates one might countenance. Context, of course, also extends to the claim that it is investment returns that produce savings rather than savings that produce investments.
- 3 It is worth noting that during the period since the implementation of the new macroprudential framework bank lending priorities have *not* changed: the majority in the UK is still provided for property and for financial asset production and trading and very little for productive investment in the economy. The UK still has one of the lowest levels of gross fixed capital formation in the OECD and secured and unsecured household debt have once again risen – approaching pre-crisis levels. On a global scale, a recent report from S&P highlights that global debt and debt vulnerability are likewise rising (see Chan et al., 2019) and one might note this is despite the Financial Stability Board's work and its claim that our finance systems are "safe".

References

- Aikman, D., Bridges, J., Kashyap, A. and Siegert, C. (2019) 'Would prudential regulation have prevented the last crisis?', *Journal of Economic Perspectives* 33(1): 107–30. doi.org/10.1257/jep.33.1.107
- Arestis, P. and Sawyer, M. (2008) 'A critical reconsideration of the foundations of monetary policy in the new consensus macroeconomic framework', *Cambridge Journal of Economics* 32(5): 761–79. doi.org/10.1093/cje/ben004
- Baker, A. (2013) 'The new political economy of the macroprudential shift', *New Political Economy* 18(1): 112–39. doi.org/10.1080/13563467.2012.662952
- Baker, A. (2018) 'Macroprudential regimes and the politics of social purpose', *Review of International Political Economy* 25(3): 293–316. doi.org/10.1080/09692290.2018.1459780

- Brunnemeier, M. Crockett, A. Goodhart, C. Persaud, A. and Shin, H. (2009) 'The fundamental principles of financial regulation.' Geneva Report on the World Economy 11. Geneva: International Centre for Monetary and Banking Studies; London: Centre for Economic Policy Research. https://cepr.org/active/publications/books_reports/viewreport.php?cvno=P197
- Carney, M. (2014) 'The future of financial reform', Bank of England, Monetary Authority of Singapore Lecture, 17 November.
- Chan, T. Dimitrijevic, A. Perez-Gorozpe, J. Tesher, D. Waters, P. (2019) *Next Debt Crisis: Will Liquidity Hold?* S&P Global Ratings, March 12.
- Chick, V. (1993) 'The evolution of the banking system and the theory of monetary policy', pp. 79–92 in Frowen, S. editor. *Monetary Theory and Monetary Policy: New Tracks for the 1990s*. London: Macmillan.
- Chick, V. (2013) 'The current banking crisis in the UK: An evolutionary view', pp. 148–61 in Harcourt, G. and Pixley, J. editors. *Financial Crises and the Nature of Capitalist Money: Mutual Developments from the Work of Geoffrey Ingham*. London: Palgrave Macmillan.
- Dow, S. C. (1993) *Money and the Economic Process*. Cheltenham: Edward Elgar.
- Dow, S. C. (1996a) 'Why the banking system should be regulated', *Economic Journal* 104(436): 698–707. doi.org/10.2307/2235578
- Dow, S. C. (1996b) *The Methodology of Macroeconomic Thought*. Cheltenham: Edward Elgar, second edition.
- Dow, S. C. (2004) 'Uncertainty and monetary policy', *Oxford Economic Papers* 56(3): 16. doi.org/10.1093/oep/gpf052
- Dow, S. C. (2012) *Foundations for New Economic Thinking*. Basingstoke: Palgrave Macmillan.
- Dow, S. C. (2014) 'The relationship between central banks and governments: What are central banks for?', pp. 229–43 in Goodhart, C. Gabor, D. Vestergaard, J. and Erturk, I. editors. *Central Banking at a Crossroads: Europe and Beyond*. London: Anthem.
- Dow, S. C. (2017) 'Central banking in the twenty-first century', *Cambridge Journal of Economics* 41(6):1539–57. doi.org/10.1093/cje/bex051
- Dowd, K. (2015) *No Stress: The Flaws in the Bank of England's Stress Testing Programme*. London: Adam Smith Institute.
- Duffie, D. (2019) 'Prone to fail: The pre-financial crisis system,' *Journal of Economic Perspectives* 33(1): 81–106. <https://www.jstor.org/stable/26566978>
- Erturk, I. Froud, J. Leaver, A. Moran, M. and Williams, K. (2011) 'Haldane's Gambit: Political arithmetic and/or a new metaphor', *Journal of Cultural Economy* 4(4): 387–404. <https://doi.org/10.1080/17530350.2011.609696>
- Goodhart, C., Gabor, D., Vestergaard, J. and Erturk, I. (editors) (2014) *Central Banking at a Crossroads: Europe and Beyond*. London: Anthem.
- Hartwell, C. (2019) 'On the impossibility of central bank independence: Four decades of time – (and intellectual) inconsistency', *Cambridge Journal of Economics* 43(1): 61–84. doi.org/10.1093/cje/bex083
- HM Government (2012) *The Financial Services Bill: The Financial Policy Committee's Macro-Prudential Tools*. HM Treasury, September.
- Latsis, J. (2015) 'Shackle on time, uncertainty and process', *Cambridge Journal of Economics* 39(4): 1149–65. doi.org/10.1093/cje/bev031
- Lawson, T. (2019) *The Nature of Social Reality: Issues in Social Ontology*. London: Routledge.

- Lombardi, D. and Moschella, M. (2017) 'The symbolic politics of delegation: Macroprudential policy and independent regulatory authorities', *New Political Economy* 22(1): 92–108. doi.org/10.1080/13563467.2016.1198758
- Montgomerie, J. (2019) *Should We Abolish Household Debt?* London: Wiley.
- Morgan, J. (2009) 'The limits of central bank policy: Economic crisis and the challenge of effective solutions', *Cambridge Journal of Economics* 33(4): 581–608. doi.org/10.1093/cje/bep026
- Morgan, J. (2016) 'The contemporary relevance of a Cambridge tradition: economics as political economy, political economy as social theory and ethical theory', *Cambridge Journal of Economics*, 40(2): 663–700. https://doi.org/10.1093/cje/bev021
- Morgan, J. (2019a) 'The Left and an economy for the many, not the few', pp. 94–137 in Scott, D. editor. *Manifestos, Policies and Practices: An Equalities Agenda*. London: Trentham Press/UCL IOE Press.
- Morgan, J. (2019b) 'Intervention, policy and responsibility: Economics as over-engineered expertise?' pp. 145–163 in Dolfsma, W. and Negru, I. editors. *The Ethical Formation of Economists*. London: Routledge.
- Morgan, J. and Nasir, A. (2018) 'The unit root problem: Affinities between ergodicity and stationarity, its practical contradictions for central bank policy, and some consideration of alternatives', *Journal of Post Keynesian Economics* 41(3): 339–63. doi.org/10.1080/01603477.2017.1387060
- Morgan, J. and Patomäki, H. (2017) 'Contrast explanation in economics: Its context, meaning, and potential', *Cambridge Journal of Economics* 41(5): 1391–418. doi.org/10.1093/cje/bex033
- Morgan, J. and Sheehan, B. (2015) 'The concept of trust and the political economy of John Maynard Keynes, illustrated using central bank Forward Guidance and the democratic dilemma in Europe', *Review of Social Economy* 73(1): 113–37. doi.org/10.1080/00346764.2014.988054
- Patomäki, H. (2011) 'On the complexities of time and temporality: Implications for world history and global futures', *Australian Journal of Politics and History* 57(3): 339–352. https://doi.org/10.1111/j.1467-8497.2011.01600.x
- Rescher, N. (1996) *Process Metaphysics*. New York: State University of New York Press.
- Rochon, L.-P. and Rossi, S. (editors) (2015) *The Encyclopedia of Central Banking*. Cheltenham: Edward Elgar.
- Rotheim, R. (2013) 'The economist who mistook his model for a market' pp. 34–55 in Jespersen, J. and Madsen, M. editors. *Teaching Post Keynesian Economics*. Cheltenham: Edward Elgar.
- Saporta, V. (2018) 'Prudential bank regulation: Present and future', speech to Westminster Business Forum Keynote Seminar: Building a resilient UK financial sector – next steps for prudential regulation, structural reform and mitigating risks, Bank of England, July 4.
- Soederberg, S. (2014) *Debtfare States and the Poverty Industry*. London: Routledge.
- Tarullo, D. (2019) 'Financial regulation: Still unsettled a decade after the crisis', *Journal of Economic Perspectives* 33(1): 61–80. https://www.jstor.org/stable/26566977

2 Central Bank independence

Are the glory days over?

Charles Goodhart

Introduction

Among her many other interests, Sheila Dow has been concerned with the relationship between Central Banks and governments. This paper discusses their changing interrelationships wherein over recent decades Central Banks have taken a much larger role but argues that this has been but a transitory period, with Treasuries once again regaining the upper hand over coming decades.

In recent decades, the head of the Central Bank (whether termed Governor, President, Chair, or whatever) came to be regarded as possibly the second most important person in that country, behind the leader(s) of the executive branch of government (whether termed Prime Minister, President, Chancellor, or whatever). In hindsight, in view of the strict limitations on the so-called ‘independence’ of the Central Bank, this was remarkable.¹ We recall these limitations in Section ‘The limitations of CBI’. Given such limited powers, then why was such importance, even sometimes adulation, ascribed to the person appointed to head the Central Bank? We seek to answer this question in Section ‘The glory days for Central Bankers’.

During the ‘glory days’ of Central Banking,² Central Banks’ main instrument was their control over a short-term, policy-determined interest rate. When this hit the lower bound (whether zero (ZLB) or slightly negative (effective lower bound, ELB), in 2009, the Central Bank turned to more unconventional monetary policies (UMP). These primarily involved operations that expanded their balance sheets, notably quantitative easing (QE), with the aim of increasing liquidity and lowering long-term interest rates, but it also included such other elements as forward guidance (on interest rates), stress tests (to recapitalise weak banks and restore confidence), counter-cyclical capital buffers, subsidised finance to support commercial bank lending (e.g., targeted longer-term refinancing operations – TLTROs), etc.

These measures did succeed in reversing the financial panic and calamitous downturn that followed the failure of Lehman Bros in September 2008 (initially worse than that occurring after the Wall Street crash of 1929). But even

after financial and product markets recovered their poise, the resultant recovery was hesitant with slow growth and disappointing productivity (which had a silver lining in a concomitant faster growth of employment). In particular, Central Banks generally³ failed to reach their (usually 2%) inflation targets. Their halo had begun to slip.

Not only did they then fail to achieve their main target but also the feeble recovery and sub-target inflation meant that they were unable to re-normalise their policy rate back to levels that had previously seemed appropriate for 'normal' times, usually around 4–5%. Moreover, the effect on the real economy of each new round of QE appeared to lessen. Meanwhile, low interest rates encouraged a continuous expansion of non-bank corporate debt, often for the purpose of retiring equity (buy-backs) rather than fixed investment. At the same time falling interest rates obscured the potentially damaging effects of rising public sector debt ratios on future generations, when commitments to provide pensions and healthcare to an ageing population will become more pressing, by holding debt servicing ratios constant, or even slightly falling.

There is a common belief that nominal income growth, both inflation and real output, will remain depressed, the 'secular stagnation' thesis, popularised by Summers in numerous publications. Moreover, such depression could at some stage topple over into recession (periods of actually falling output), perhaps as a result of some shock, e.g., US/China trade disputes, Middle East crisis, or whatever, let alone the Covid pandemic that swept across the world in 2020. If so, the Central Banks will not have the 'ammunition' to correct that, and would have to play 'second fiddle' to, become an adjunct of, fiscal policy. We discuss the implications of this scenario for Central Banks in Section 'Low... forever? Central Banks in secular stagnation'.

There is an alternative view, which we espouse, that the disinflationary pressures of recent decades have emanated mainly from a massive positive labour shock, comprising both highly favourable demographic conditions (falling dependency ratios) and the advent of China and Eastern Europe into the world's global trading system (globalisation). Both trends are now reversing. This will restore labour's bargaining powers, which had been severely weakened during these last few decades. If so, inflation will return, albeit at a time of reduced real growth. We consider how this would affect the position and power of Central Banks in Section 'A great reversal?'. Section 'Conclusion' concludes.

The limitations of CBI

In his paper, 'Modern Central Banking', given at the tercentenary of the Bank of England, reprinted in Capie et al. (1994), Stanley Fischer distinguished between 'goal' independence and 'instrument' independence, now

more usually termed ‘operational’ independence, in the following paragraph, from page 292:

Because the term independence is not precise, some prefer to describe a central bank as autonomous, or ‘somewhat apart from government’. Rather than fight the inevitable, I shall continue to use the term independence, but draw a distinction between *goal independence* and *instrument independence*. A central bank whose goals are imprecisely defined has goal independence: at an extreme, one could imagine endowing a central bank with the power to conduct monetary policy and giving it the goal of doing good. At the other extreme, the goal may be as precisely specified as those in New Zealand, where there is no goal independence. A central bank with a mandate for price stability but no numerical targets has more goal independence. A central bank has instrument independence when it has full discretion and power to deploy monetary policy to attain its goals. A central bank bound by a monetary rule would not have instrument independence, nor would a central bank which was required to finance the budget deficit.

No Central Bank has goal independence. The ECB is the most independent Central Bank, both because its independence is guaranteed by Treaty and because its mandated objective, ‘price stability’ is not precisely defined, giving it more leeway. Even so, its freedom of operation is constrained by (legal interpretation of) its mandate. Thus Draghi’s famous 2012 speech about being ‘ready to do whatever it takes to preserve the euro’, presaging the use of Outright Monetary Transactions (OMT), was qualified by the opening clause, ‘Within our mandate’. Moreover, subsequent policy decisions of the ECB, e.g., to start the Asset Purchase Programme (APP) have, indeed, been challenged in the Courts.

Apart from the ECB, protected by the great difficulty of amending, or revoking, its Treaty, virtually all other Central Banks’ mandates are subject to change at the whim of the government of the day. Indeed, if the executive and the legislature agree to that, Central Bank independence (CBI) could be revoked at a moment’s notice. Inevitably that induces any Central Bank to become politically sensitive.

Beyond the government’s capacity to alter, or even to revoke entirely, the mandate on which CBI depends, governments, in almost all cases, have the right to appoint the head of the Central Bank, and in most cases a number of other appointees to the Central Bank’s decision-making body, i.e., Monetary Policy Committee, Federal Open Market Committee, ECB’s Governing Council, etc. Admittedly once appointed, they cannot be dismissed (except for special cause) simply because their decisions annoy the politicians; and the Thomas à Beckett effect commonly occurs. Nevertheless, there are a variety of ways in which an annoyed government can make life extremely difficult for heads of Central Banks, as has been seen in countries such as India, Turkey and the USA, in some cases to such an extent that the incumbent Central Bank head feels pressurised into early retirement.

So the freedom of action of any Central Bank is severely constrained. Governments have delegated to Central Banks the operational independence to vary interest rates, and latterly some UMP instruments, for the purpose of achieving price stability. They did so mainly for three reasons:

- i The time inconsistency thesis;
- ii The vertical long-run Phillips curve thesis (i.e., no longer-term trade-off between growth and price stability);
- iii As a protection for their reputation of financial probity.

But this would seem to be a narrow and circumscribed field of independence. So how did heads of Central Banks come to be regarded as so powerful; often treated as the second most important person in the State?

The glory days for Central Bankers

There are, perhaps, three main inter-connected reasons why Central Bankers, especially their heads, came to appear so powerful and important during the glory days of Central Banking (1992/1993 until 2009/2010). The first was that they succeeded magnificently in achieving their primary, mandated, target of achieving price stability, as measured by the closeness to which their inflation target, usually 2% per annum, was hit. Of course, there were various shocks, unforeseen events, shifting inflation somewhat away from the (2%) target from year to year, but if one averaged the inflation rate over a run of years (say a five-year moving average) then most Central Bankers could crow, as Trichet, for example, did, that they had come within an iota of exact achievement of their primary target.

Such complete success is rare in the macro-economic policy domain and deserves due recognition. Even so, it was, perhaps, not that difficult to achieve. Prior to recent decades, the general view had been that controlling inflation by monetary means (i.e., raising interest rates) would be hard to do, because it would run into political objections from governments and borrowers and would raise unemployment, if only temporally, whereas raising inflation would be simple, since inflation was a monetary phenomenon, and the Central Bank could expand the monetary aggregates. But during recent decades the underlying conjuncture has been disinflationary, so the achievement of price stability has gone hand in hand with a continuing marked downwards trend in interest rates. In this latter conjuncture, the conventional wisdom of prior decades has been exactly reversed. Now it is argued that Central Banks can easily control inflation, by raising interest rates, whereas raising sub-par inflation back to target is harder to achieve because of the ELB to interest rates.

Be that as it may, the generally disinflationary conjuncture of these 'glory days' with downwards trending interest rates meant that the prior political objections to the few occasions of rising interest rates were muted, indeed largely silent. And during these decades when one could see 'The end of history', there were few really severe political shocks.

In his great book on *The History of Public Finance* (1959), Richard Musgrave proposed three separate main purposes of fiscal policy, Allocation, Distribution and Stabilisation. The second main reason why the Central Bankers came to seem so powerful during these years was that the fiscal authorities abdicated from their prior role as macro-economic stabilisers, in favour of the monetary authorities taking on this responsibility.

There were several reasons why the stabilisation role was switched from the Treasury to the Bank. First, a majority of macro-economists thought that monetary policy was better designed for the job. Obviously, the monetarists did so, for a current example see Greenwood (2019). But new Keynesians also had (real) interest rates in their DSGE models, and no fiscal variables. Many mainstream economists thought that the fiscal multiplier was ill-defined, potentially variable and often low, whereas they had faith in their estimates of interest elasticities.

A more practical point is that fiscal policy measures involve long lags, the inside lag of getting them agreed and adopted, and the outside lag of them leading to increased expenditures. Recall Obama's lament about the absence of 'shovel ready' fiscal expenditure projects. Shocks, e.g., the onset of hostilities, a Brexit event, can occur quickly, and ideally need a similarly quick response. Monetary policy can do that; fiscal policy cannot.

For whatever reasons, monetary measures took over from fiscal measures for stabilisation purposes during these years. Whether by luck or good management, during the Great Moderation, 1992–2007, this worked very well. These were the NICE years, non-inflationary, continuous expansion, as Mervyn King famously described them. And for the reasons already set out, Central Bankers felt that they could take, and were accorded by most commentators, credit for both parts, both NI and CE.

Indeed, by about 2005/2006 many influential economists thought that the main problems of macro-economics had been resolved, much as Irving Fisher did in 1928/1929. Perhaps when leading US macro-economists express supreme confidence in the future, it is a good warning signal to take cover!

The third reason why Central Bankers came to seem so powerful was that they appeared to be able, prior to 2007/2008, to intervene in financial markets in such a fashion as to limit, or prevent, sharp downturns or financial panics; the Greenspan put as it became termed. Not only was this period, 1992–2007, NICE but it also saw one of the greatest, and longest-lasting, asset booms ever, involving equities, bonds and housing. The rich benefited mightily; the rich and powerful mostly controlled the media, Press, TV, radio, and they appreciated that Central Bank policies had been a major beneficial factor. So there was a chorus of praise for Central Banks.

What then went wrong? Basically, almost everyone, inside and outside Central Banks, forgot Hy Minsky's dictum that price (and macro-economic)

stability engenders financial instability. In particular, most Central Bankers subscribed to two main myths,

- That the achievement of price stability, plus commercial bank adherence to Basel CARs, made an insolvency crisis in advanced economies' banking systems unthinkable.
- That, with solvency thereby assured, there was no reason to require banks, or shadow banks, to maintain a required ratio of liquid assets on their books, since, whenever needed, cash could be obtained by borrowing in broad, well-functioning wholesale markets.

Low... forever? Central Banks in secular stagnation

The Central Bankers were, as they now generally admit, at fault for not foreseeing the onset and severity of the great financial crisis (GFC), but, once it had taken hold, they responded with vigour and verve to quell the panic/crisis and to restore calm and confidence to both the financial and economic scene. While the onset of the GFC was a black mark for Central Bankers, it was not that that has put their position of power and independence at risk. Indeed, it is arguable that so enterprising, full of initiative and successful was their response to the crisis that by the end of 2009, their reputation and standing had even become reinforced.

Instead, the problem has been that the overall conjuncture has remained so depressed and disinflationary that the Central Banks have not only generally missed their inflationary targets on the downside but also have not been able to re-normalise their instruments, with interest rates still immured near the ELB and balance sheets engrossed. Having trumpeted how closely they achieved their 2% targets during the Great Moderation, Central Bankers have, on this view, been overly sensitive about missing their targets on the downside by somewhere around 1%, more in Japan, less elsewhere. Does it really matter to the ordinary person if inflation averages, say, 1.3% rather than 2%? Indeed, in some absolute sense 1.3% may be better. But having set up 2% as a target, Central Bankers, and other communicators, contrast current 'failure' with the successes during the previous Great Moderation.

In some respects the more important attribute of this 'failure' is that it has combined with the sluggish recovery, low growth and low productivity, to inhibit the re-normalisation of a Central Bank's policy instruments. Interest rates remain at the ELB, and balance sheets are hugely engrossed. There are several dangers with this. For example, in a Project Syndicate comment in August 2019, Summers and Stansbury comment that,

From a micro perspective, low rates undermine financial intermediaries' health by reducing their profitability, impede the efficient allocation of capital by enabling even the weakest firms to meet debt-service

obligations, and may also inhibit competition by favouring incumbent firms. There is something unhealthy about an economy in which corporations can profitably borrow and invest even if the project in question pays a zero return.

Quite why the recovery, and productivity, have been so hesitant is not clear, at least not to me. But in the absence, now more than 10 years after the GFC, of any significant return to faster growth, the default approach is to assume that this will continue. Those who believe in secular stagnation think that it may go on indefinitely. Moreover, the slow growth may be, surely will be, punctuated from time to time by recessions.

If the continuously expansionary monetary policies of recent years cannot drive inflation back to target, nor encourage a resumption of faster growth, then it surely cannot do counter-cyclical stabilisation in the face of a future recession. It has, as the saying goes, 'run out of ammunition'.

Thus, when the Covid pandemic struck in 2020, it was soon realised that the main counter-vailing policy response had to come from fiscal policy. There were in some areas attempts to drive short-term nominal interest rates negative, despite the availability of zero-yielding cash. But they were not driven beyond -1% and their overall effects remain controversial. The main role of monetary policy was, instead, to monetise sufficient of the sharp increase in public sector debt to prevent interest rates from rising, both at the short end and with forward guidance and QE at the long end.

This has led to an unusually sharp difference between the paths of the monetary aggregates, which have risen very strongly and of output/employment, which have weakened a lot. At the time of writing the relative effects of such divergent trajectories on future inflation and interest rates remains to be seen.

So the prior shift of the stabilisation function from fiscal to monetary policy will have to be reversed. If stabilisation reverts to the Treasury, and fiscal policies, what will be the role of monetary policies?

The first requirement will be to act as an adjunct to fiscal policy, i.e., not get in its way. In particular, this will involve ensuring that an expansionary fiscal policy is not attenuated by rising interest rates. In practical terms, this is what 'helicopter money' entails. The Treasury increases fiscal expenditures/cuts taxes, and the Central Bank monetises sufficient of the resulting debt to keep interest rates at rock-bottom (n.b. ideas about the Central Bank posting currency to people with the counterpart being a massive reduction in its equity are pure fantasy. No Central Bank official could possibly countenance this, whereas the option of a fiscal hand-out, with subsequent debt monetisation, is politically a much more attractive alternative.)

During the decades, 1930–1980, when monetary policy was also an adjunct to fiscal policy, monetary policies had some additional roles. In particular, interest rates were raised when there was a need to protect the exchange rate from undesired downwards pressure. And when such weakness was endemic, Central Banks operated the resulting exchange controls. Apart from

this (with interest rates kept low both to support fiscal policy, keep down debt service costs and to encourage investment), other direct controls, usually then in the form of quantitative lending ceilings (or the slightly more subtle ‘corset’), were used to limit bank credit expansion and shift such credit towards more productive purposes, e.g., bans on consumer credit extension. In future, macro-prudential instruments might be called upon for such an allocative purpose.

But so long as inflation remains dormant, and the main stabilisation function reverts to the Treasury, the role and public prominence of the Central Bank will diminish. It hardly matters whether CBI stays, or goes. So long as interest rates remain fixed at the ELB, apart from occasions to prop up the exchange rate, Central Bankers will once again play second fiddle to Ministers of Finance and Secretaries of the Treasury.

A great reversal?

What made recent decades so inherently disinflationary? In our latest book, entitled *The Great Demographic Reversal*, Manoj Pradhan and I ascribe this to an unprecedentedly huge positive supply shock, from a combination of highly favourable demographics and globalisation bringing China and Eastern Europe into the world’s trading system. This cheapened labour and debilitated its bargaining powers. We demonstrate how both forces are now going into reverse, with the effect of restoring labour’s bargaining powers and reinvigorating wage pressure, but at a time of continuing low real income growth, since the workforce will decline in the previously fastest growing regions.

Combine this with the ageing of our populations, putting great upwards pressure on the needs for pensions and medical treatment, where political concerns will not allow a major scaling back, and you have a perfect recipe for conflict between independent Central Bankers, in support of their inflation target on one side and politicians, especially Ministers of Finance on the other, struggling both to encourage growth and to balance the public sector’s books. During recent decades Central Banks have been the best friends of Treasuries. This is not normal; polite hostility is the more traditional relationship.

Such hostility is now resuming in many countries, and will, we believe, become more widespread. As set out earlier in Section ‘Introduction’, the politicians and the Treasury hold the trump cards. All the problems that the Central Banks faced, mainly political problems, of restraining inflation in the earlier decades of the 1950s, 1960s and 1970s, are likely to come back with a vengeance. In that case, CBI will be honoured in the breach, if at all.

Conclusion

The ‘glory days’ of Central Banking were the result of several special factors. For Central Bankers, it was fun while it lasted. But it is not going to last much longer.

Notes

- 1 I sent an early copy of this paper to Otmar Issing, who replied that
Reading your introduction I was reminded of a story from Schlesinger (former President of the Bundesbank). Once with a German delegation in the White House Reagan welcomed him as the most powerful person in the world. And Schlesinger probably still regrets not to have replied: If this were true, something is badly wrong in the world.
- 2 We date this as starting in 1992/1993; this marks both the widespread adoption of Central Bank independence, the end of the 1991/1992 recession and the collapse of the European Monetary System (EMS), leading on to a determination in the euro-area to move on to a single currency (the euro).
- 3 Thus we date the end of the 'glory days' as occurring in 2009/2010.

Bibliography

- Fischer, S., (1994), 'Modern central banking', Chapter 2 in *The Future of Central Banking: The Tercentenary Symposium of the Bank of England*, edited by F. Capie, C. Goodhart, S. Fischer and N. Schnadt, pp. 262–329. Cambridge: Cambridge University Press. <https://doi.org/10.1017/CBO9780511983696.003>
- Goodhart, C., and M. Pradhan, (2020), *The Great Demographic Reversal*, London: Palgrave Macmillan.
- Greenwood, J., (2019), 'Milton Friedman on the interaction between fiscal and monetary policy: Is monetary policy more powerful than fiscal policy, or vice versa?', Institute of International Monetary Research Paper 4, September, see <https://mv-pt.org/wp-content/uploads/2019/09/Research-Paper-4-Screen.pdf>.
- Summers, L.H., and A. Stansbury, (2019), 'Whither Central Banking?', Project Syndicate, August 23, see <https://www.project-syndicate.org/commentary/central-bankers-in-jackson-hole-should-admit-impotence-by-lawrence-h-summers-and-anna-stansbury-2-2019-08?barrier=accesspaylog>

3 The efficacy of monetary policy in an age of financialisation and climate change

Malcolm Sawyer

Introduction

The analysis of monetary policy and its operations has to be located in the specificities of the banking and financial system to which the analysis applies.

The ability of a central bank to achieve its objectives depends upon how its operations affect the various elements that make up the money market. Hence, the efficacy of any particular technique of monetary policy depends upon the financial institutions and usages that exist. ... However, if a period of rapid change in the structure or in the mode of functioning of financial markets occurs, then the efficacy of central bank actions has to be re-examined.

(Minsky, 1957, p. 171)

Friedman (1968) noted how the ways money and monetary policy are viewed shifts over time. 'It is hard to realize how radical has been the change in professional opinion on the role of money' (Friedman, 1968, p. 3). Second, such views have to reflect what monetary policy could potentially achieve and, indeed, what it could not achieve. Friedman (1968) wrote that, 'Unaccustomed as I am to denigrating the importance of money, I therefore shall, as my first task, stress what monetary policy cannot do' (Friedman, 1968, p. 5) which is in effect that money and monetary policy does not affect economic activity other than in the short-run. But it was perceived to influence inflation, thereby shifting the focus of monetary policy to inflation. Third, and following on from the second point, to ascertain what the objectives of macroeconomic policy should be, and within those objectives what roles can monetary policy play and how can monetary policy be co-ordinated with other policies.

In Section 'Monetary policy in recent decades', the evolution of monetary policy over the past few decades is outlined, and specifically the ways in which inflation came to be seen as the sole concern of monetary policy (both in the sense that monetary policy had low inflation as the sole objective, and that only monetary policy focused on inflation).

Section ‘Financialisation and monetary policy’ starts from the view that there have been many changes in the scale and nature of the financial system in the (second) era of financialisation, which is dated from circa 1980. These changes have implications for the nature of monetary policy, ranging from the transmission mechanism of monetary policy through to the effects on economic variables such as inflation and asset prices.

Section ‘Monetary policy, fiscal policy and quantitative easing’ considers the significance of the shifts in monetary policy in the decade since the global financial crises of 2007/2009. Quantitative easing and what were termed ‘unconventional monetary policies’ were brought in by central banks alongside historically low rates of interest. Inflation targeting was in effect quietly dropped and QE policies were advocated seeking to stimulate the economy.

The last sections consider the relationships between monetary policy and the challenges of the climate emergency and environmental degradation. It is argued that central banks should be obliged to act in ways which are supportive of government policies towards climate change.

Monetary policy in recent decades

Monetary policy has often been closely identified with the setting of key policy interest rate by a central bank. There have always been other dimensions to monetary policy and the actions of the central bank. The UK Committee on the working of the monetary system (1959), commonly known by the name of its chairman Lord Radcliffe, in its report 1959, stated that ‘great as have been the changes in economic circumstances during the past three decades [i.e. since the financial crises of 1929], changes in opinions have been even more profound’ (p. 17). The report considered that the objectives of government economic policy had become more complex,

but the degree of priority which is to be attached to any one in relation to the others varies from time to time with changes in economic circumstances: it is no longer appropriate to charge the monetary authorities with unambiguous tasks that can be sharply differentiated from other governmental action.

The report quoted the then Chancellor of the Exchequer when setting up the committee:

there is general agreement of the objectives of monetary policy. This country stands determined to maintain a fixed and stable exchange rate. The primary requisite for this is that we shall be able and determined to avoid inflation at home. Equally it is also agreed policy to avoid slumps and severe unemployment ... These objectives are not open to question.
(pp. 17–18)

However, the Committee continued: ‘the consistency of these objectives, and consequently the possibility of an unequivocal guide to action, are no longer regarded as self-evident’. After some discussion, they came to the view that

the objectives in pursuit of which monetary measures may be used:

- 1 A high and stable level of employment.
- 2 Reasonable stability of the internal purchasing power of money.
- 3 Steady economic growth and improvement of the standard of living.
- 4 Some contribution, implying a margin in the balance of payments to the economic development of the outside world.
- 5 A strengthening of London’s international reserves, implying further margin in the balance of payments.

Although interest rate setting continued as the key policy instrument, in the 1980s and the era of monetarism, for a time, the focus shifted to the growth of a measure of the stock of money. The targeting of the stock of money was related to fiscal policy and budget deficit (as exemplified by the Medium Term Economic Strategy in the UK) even though the stock of money consists largely of commercial bank deposits, and the budget deficit would only very partially be funded by an increase in central bank reserves held by commercial banks. The targeting of the money stock was intended to aid the control of inflation through a combination of effects on inflationary expectations and the level of demand. The targeting of broad money such as M3 proved unsuccessful though some form of M3 target remains for the ECB. In the UK there was a shift to setting a target in terms of base money, then adoption of an inflation target with the key interest rate continuing to be set by the Chancellor of the Exchequer (1992–1997), following the switch to inflation targeting (IT). IT is defined in terms of the pursuit of an inflation target (sometimes described as price stability) by the use of a policy interest rate set by the independent central bank, where independent is taken to mean without direct instructions for the government. Inflation targeting is based on two basic notions. First, interest rate variations along with the commitment to an inflation target were viewed as the appropriate and effective way of controlling inflation – in effect an alignment of one instrument (interest rate) with one objective (inflation). Expectations on inflation are argued to be aligned with the inflation target provided that the inflation targeting policy is viewed as credible by the public. Second, there is a strong linkage from the policy interest rate to interest rates on borrowing and lending to level of demand to price inflation. Each of those steps may be questioned on the linkages of the policy interest rate to rates on loans and deposits, and how far interest rates influence demand, and then the nature of the links of demand to inflation. The influences of the interest rate on the exchange rate and of the global rate of inflation are downplayed.

The experiences of the global financial crisis and the subsequent monetary policies have two lessons on which I focus here. The first is the importance

of financial stability and the avoidance of financial crises. The GFC imposed high costs on the rest of the economy, including the loss of output and employment, slower growth from lower investment and the fiscal costs of the 'bail-outs' and rescue of financial institutions. It illustrated that the achievement of price stability (low inflation) (even if that could not be solely attributable to IT) was not sufficient to avoid asset price bubbles and financial instability.

The second relates to the ways in which macroeconomic policies responded. There was a revival of interest in fiscal policy, some of it linked with the zero-lower bound on interest rates.¹ In many industrialised countries after the GFC policy, nominal interest rates fell below 1 per cent, and in a number of cases, including the European Central Bank (ECB), and Bank of Japan, the policy rate went negative and in real terms (allowing for inflation) interest rates were negative through most of the last decade. Associated with the historically low-interest rates came the adoption of quantitative easing (QE) and similar measures often put under the heading of 'unconventional'. The rationale for QE was essentially that a more liquid banking system would be conducive for more lending and more spending, thereby stimulating economic activity. A feature of QE which sets it apart from open market operations is that under QE, a target is set for the purchase by the central bank of financial assets from the public, often initially focused on government bonds, then extended to some other financial assets. It was often feared that QE would involve an increase in the monetary base, and thereby foster inflation. In the outturn, the higher inflation clearly did not result. A reason for this comes from consideration of the balance sheets of the banks and of the public following QE. For the banks, their assets in the form of reserves held with the central bank rise, as do their liabilities in the form of bank deposits held by the public. For the public, there has been an exchange of one set of financial assets (e.g., government bonds) for another set of financial assets (in the form of bank deposits). There are changes in the degree of liquidity. The 'monetarist' argument for expansion of the stock of money (and thereby inflation) relied on the bank deposits taking the form of cheque account deposits, and hence being regarded as the rise in the stock of money. There were also suggestions for the operation of the money multiplier whereby there would be increases in the stock of money coming from the banks lending out more as their reserves rose. In the event, this did not happen. The effects of QE have been more to support asset prices and to help maintain low interest rates (e.g., on bank deposits) (for further discussion, see below).

Inflation targeting neglected asset price inflation, financial stability and employment/economic activity. This rationale for this was (a) asset price inflation aligned with price inflation, (b) financial system was treated as essentially stable, and (c) in the 'new consensus on macroeconomics' (NCM) approach, a constant rate of inflation would be compatible with the 'natural rate of output'/NAIRU.

Inflation targeting (or similar) still largely remains the declared monetary policy (and the means by which inflation is controlled).

It is with regret that we announce the death of Inflation Targeting. The monetary regime, known affectionately as “IT” to its friends, evidently passed away in September 2008. That the demise of IT has not been officially announced until now testifies to the esteem in which it was widely held, its usefulness as a figurehead for central banks, and fears that there might be no good candidates to assume its position as preferred anchor for monetary policy.

(Frankel, 2012)

Prior to the GFC, inflation targeting had often been declared a great success (‘the great moderation’ in the words of Bernanke, 2004). Inflation had indeed tended to be lower in the 1990s and 2000s as compared with the 1970s and 1980s, and inflation targeting had largely come on stream in the 1990s (though the Bundesbank in Germany had been operating on an inflation target since 1975).

The NCM framework virtually eliminated fiscal policy. In the simple model representation of NCM, there was no mention made of fiscal policy, and more generally, a belief in Ricardian equivalence and stability of the economy precluded any need for fiscal policy (other than perhaps acting as an automatic stabiliser). The experiences after the GFC revived interest in fiscal policy and initially allowed the automatic stabilisers to come into effect along with some discretionary fiscal policy. Policies quickly switched back to ‘bring down the deficit’ (Sawyer, 2016). There has been limited success in reducing deficits and particularly reducing public debt (as a ratio of GDP). What is readily apparent is that notions of ‘expansionary fiscal consolidation’, that policies to reduce budget deficits lead to higher output, do not hold. Policy responses to the coronavirus pandemic have required large increases in the budget deficit, and a step rise in the debt to GDP ratio. It is important that after the pandemic policy does not revert to ‘reduce the debt’ with the destructive effects which would come from such policies (Sawyer, 2021).

IT was closely associated with the ‘new consensus on macroeconomics’ (NCM). The operation of IT (along lines akin to the so-called Taylor rule) relies on notions of the ‘natural rate of interest’ and ‘potential output’ (at which inflation would be constant). These notions are closely tied to a specific theoretical framework, and may or may not be applicable in the real world. At a minimum, calculation of NRI and potential output have proved problematic.

Financialisation and monetary policy

The past four decades and more have been characterised as an era of intense financialisation, although it was not the first era of financialisation (Vercelli, 2013; Fasianos et al., 2018). The present era of financialisation has its own

specific characteristics, which impact on the economy and society, though the focus here is on implications for monetary policy.

A general perspective on financialisation is provided by Epstein (2005, p. 3) when he wrote that ‘financialization means the increasing role of financial motives, financial markets, financial actors and financial institutions in the operation of the domestic and international economies’. Within that broad definition, the recent period is often viewed in terms of expansion of the banking sector and of equity markets and the growth of what is now often termed ‘shadow banking’, growth of a range of financial instruments with securitisation and derivatives, the engagement of non-financial corporations in financial dealings, and the growth of consumer borrowing and household debts.

The themes of particular relevance here are the increasing scale of the financial sector in terms of bank deposits and stock markets, and the developments in the financial sector in respect of securitisation, etc. Financialisation has involved and been stimulated by financial liberalisation and de-regulation, which impacts the behaviour of financial institutions and credit expansion. The present era of financialisation has involved rapid growth of household debt, which has implications for the financial instability and cycles. In the context of the endogenous money, the emphasis shifts from the creation of bank deposits through loans for the financing of production and investment to credit creation for household debt.

During the recent decades of financialisation, the money form has not changed and has remained those liabilities of commercial banks, which are measured by M1 (Sawyer, 2020). The banking system itself has changed, the immediate uses to which money are put have shifted towards more loans for households and to enable asset acquisition and less financing of production and investment. These have implications for the nature and path of economic and financial cycles. Monetary policy retains the policy interest rate as one of the key decision variables, but it has clearly shifted to concerns over financial stability and the use of ‘unconventional’ policies, such as variants of quantitative easing. Some significant differences can arise in so far as the central bank operates to ensure a particular level of bank reserves. This has, in effect, happened through quantitative easing (QE), under which the central bank purchases financial assets in exchange for central bank money, and does so with the intention of maintaining that level of reserves. Similarly, the volume of bank reserves may be policy determined when policy sets the extent to which a budget deficit is to be money funded. In usual practice, the degree to which a deficit is money-funded depends on the decisions made by the private sector (including banks) as to the additional amount of central bank money (bank reserves, notes and coins) to be held.

There are many changes in the financial and banking system associated with the processes of financialisation. The focus here is on two broad areas. First, the significance (or otherwise) of the rise of household debt and credit arrangements for the operation of the banks is considered. Second, and much

more important, the significance of securitisation and shadow banking for the operations of the commercial banks is considered, as well as which financial assets constitute a means of payment.

Higher levels of household debt (relative to income) have been a general characteristic of financialisation across most countries. Similarly, there has been considerable growth in the use of credit arrangements, credit cards and other modes of payment. The simple question is whether and, if so, how such growth of debt and credit fundamentally changes the ways in which commercial banks and money creation are viewed.

Chick (1993) added a sixth stage of banking to the five which she had identified in Chick (1986). This sixth stage is characterised by the two processes of the securitisation of credit and the emergence of off-balance sheet operations. These features of securitisation and shadow banking have been central to the processes of financialisation.

Caverzasi et al. (2019) argue that

securitisation has opened the opportunity for standard banking institutions to expand their business and widen the pool of potential creditworthy borrowers, and—perhaps more relevantly—it has also provided the financial system with the ‘raw materials’, i.e. the securitised assets necessary for the manufacturing of complex structured financial products satisfying the increasing demand for financial assets of financial institutions, seeking either remuneration for intermediated funds or collaterals for the repo market.

(p. 1030)

Furthermore, commercial banks and shadow banks play separate roles in the financial system and that ‘financialisation did not alter the role of commercial banks as money creators, but rather diverted endogenously created money to the financial sphere’ (p. 1029).

Shadow banking system is viewed as a collection of non-bank financial intermediaries that provide a range of services which are similar to those of commercial banks but subject to different and less demanding banking regulations and without the relationships with the central bank that commercial banks have, including the central bank being lender of last resort. Michell (2017) identifies two views on the shadow banking system: the market view, which ‘sees the phenomenon as the rise to dominance of disaggregated market-mediated financial transactions, and emphasises such activities as dealing in securitised debt. In this view, money and banking are demoted in significance relative to arms-length market-mediated financial transactions’ (p. 355). The money view

instead posits that the shadow banking system should be seen as an analogue to the traditional banking system because it performs bank-like functions such as maturity and credit transformation. Holders of this

view argue that, rather than market intermediation, shadow banking is an extension of banking because shadow banks issue money.

(p. 355)

The shadow-banking system raises many concerns in association with financial instability and regulation of the financial system. The argument here can be simply stated. First, the liabilities of the shadow banking system are not (at least yet) to be treated as money as ‘these financial claims cannot be used either as a means of payment for goods and services or as a means of settlement for financial contracts’ (Michell, 2017, p. 355). In the future, it is possible that the transfer from one agent to another of liabilities of shadow banks will become regarded as a means of settlement, but for the present, that has not arisen. In terms of the creation (and destruction of) money, the clearing banks retain their pre-eminence.

The liabilities ‘issued by the shadow banking system are near-monies: liquid short-term stores of wealth’ (Michell 2017, p. 355) rather than being money in the sense of a generally accepted means of payment. Nersisyan and Dantas (2017) analyse banks and nonbank financial institutions in terms of the creation of liquidity within what they term the pyramid of financial liabilities building on the ideas of a hierarchy of money. They conceptualise ‘liquidity creation ... as the process of exchanging liabilities occupying the lower tiers of the pyramid for those at the higher tiers’ (p. 280). They then conclude that ‘the finance sector can be a larger source of instability than accounted for’ (p. 297). In a similar vein, by means of a worked example, starting with a loan made by the bank to a non-financial agent who acquires some bank deposits, Lavoie (2019) finds that the overall amount of credit can rise even though the amount of bank deposits has not; and the amount of liquid assets held by the non-financial sector has also risen. The non-bank financial system contributes to the creation of liquidity and the provision of credit. He argues that

the additional credit could have been provided just as well by the banking sector [and] ... that the non-bank financial institutions would have been unable to provide any credit unless non-financial agents had previously transferred some of their bank deposits to the non-banks.

(p. 116)

From this brief discussion, one implication to be drawn is the commercial banks remain central to the creation of money, and in that sense, the endogenous money analysis remains intact. Financial institutions other than commercial banks have expanded their role but have not as yet become what may be viewed as money creators in that their liabilities are not accepted as means of payment. Furthermore, those financial institutions have not developed ‘lender of last resort’ relationships with central banks. It is rather that the growth of financial institutions has the effects of increasing liquidity.

The restraints on the banks to expand the stock of money through loan creation are changed through the possibilities of securitisation of loans. It also points to the need to analyse the creation of money through bank loans in a system-wide manner which embeds the commercial banks into the overall financial system.

Monetary policy, fiscal policy and quantitative easing

The central bank serves as the banker of banks and the banker of the government. In the former role, it is charged with acting as lender of last resort. In the latter role, it is charged with the provision of central bank money for government spending decisions. In circuitist terms, the central bank provides initial finance for government expenditure, that is, central bank money is provided to the government to enable the expenditure to proceed. In the absence of central bank money not being made available, the expenditure cannot proceed. As far as the central government is concerned, its expenditure is funded by a mixture of tax revenues and the sale of bonds and bills. The central bank acquires some government bonds, which is matched by the issue of central bank money, held as reserves by the commercial banks.

The central bank can potentially frustrate the operation of fiscal policy through two routes – decline to create central bank money to (initially) finance government expenditure, and through responding to a proposed change in the budget deficit (and fiscal stimulus) by changing policy interest rate (e.g., raising the interest rate in face of a fiscal stimulus).

The instruments of central bank policies have focused on the use of the policy interest rate, expanded in the last decade to encompass QE. The use of QE raises the issue of not only the volume of financial assets to be purchased from the private sector and the resulting level of increase in reserves held by the commercial banks, but also the composition of the financial assets. In the early days of QE, as in the operation of open market operations, the purchase was of government bonds. At the consolidated level of government and central bank, this changed the composition of government debt between bonds and bank reserves. But the introduction of interest paid by the central bank on reserves held by the commercial banks means that the costs of funding to the government are little changed though how it is recorded may differ.

A report from the Bank of England reviewed the effects of QE in the UK in the first half of the 2010s. It found what they termed central bank balance sheet expansions ‘had a discernible and significant impact on financial markets and the economy’. Their empirical analysis of the macroeconomic impacts of QE yielded three results. ‘First, it is only when central bank balance sheet expansions are used as a monetary policy tool that they have a significant macroeconomic impact. Second, there is evidence for the US that the effectiveness may vary over time, depending on the state of the economy and liquidity of the financial system. And third, QE can have strong spill-over effects cross border, acting mainly via financial channels’ (Haldane

et al., 2016) with significant impacts on the acquisition of private sector debt in developing countries.

The perspective taken here is that quantitative easing can have a role in the operation of monetary policy, particularly in the context of low real interest rates. However, its role should be focused on macroeconomic conditions and the encouragement of economic activities.

There should be a concern on which financial assets can potentially be acquired under quantitative easing. But, QE should not be used to directly finance new projects. The reasoning behind these remarks is elaborated in the context of climate change in the next section.

Central bank role and climate change

The basic argument here is that central banks should pay full regard to climate change in their decision-making, but that there would be rather limited consequences of that. The mandate of a central bank should be formulated away from inflation targeting, and towards general support of the economic policies of the government. The European Central Bank has the mandate to ‘support the general economic policies in the Union with a view to contributing to the achievement of the objectives of the Union’, though it is doubtful if such a mandate has any impact on the decisions of the ECB. Within such a mandate, the importance of ensuring that monetary policy is conducted in a manner fully consistent with addressing climate change and environmental degradation.² The role of the central bank is thought likely to be a rather limited one, and specifically limited to the purchase of financial assets deemed to be ‘green’ in the context of QE and the purchase of corporate bonds.

The policies of QE conducted by central banks over the past decade have raised a number of policy suggestions. First, since QE appears to provide money to the banking system through the purchase of financial assets, then could not money created by the central bank be supplied to others? Second, the central bank decides which financial assets it will purchase and which it will not, and the quantity of financial assets to be held. It has traditionally been the case that a central bank engaged in open market operations or similar with the purchase/sale of government bonds.

The fact that the central bank (in general) provides money for government expenditure and that many central banks have practiced quantitative easing in the past decade has led to many of propose forms of QE directly linked with expenditure – notably in the environment/climate change areas. These types of proposals place decisions on the forms and level of public expenditure in the hands of unelected central bankers, rather than in the hands of elected politicians. There is a good case for the establishment of the national investment bank, directly funded by bonds or similar. It should be the role of a national investment bank or similar to allocate funds in line with the political objectives.

The economic and social impacts of climate change and environmental degradation raises the need for the re-structuring of economic activity,

shifting to low carbon production, etc.: the shift away from ‘brown’ investment towards ‘green investment’. And then the funding of those shifts and the transition to a low carbon economy. Funds and finance are channelled through the financial system, to address climate change and the transformation of the economy requires the channelling of funds in the ‘right direction’. I would argue that the monitoring of the allocation of funds towards ‘green investment’ should be within government policy. In a similar vein, the use of public funds for green investment should be channelled through a green investment bank of some form.

There can be issues of financial instability arising from the challenge of climate change. There is recognition that there is what has been termed ‘transition risks’ arising from the re-valuation of carbon-intensive assets arising from shifts to a low-carbon economy³. The change in asset values (assumed to be downwards – though the valuation of carbon-unintensive assets could well rise) have implications for the range of financial institutions and households who own the corresponding assets. This may well be another example of financial markets mispricing financial assets – why have the risks involved not been incorporated into the financial asset prices? While it may be relevant for the central banks and others to warn about the likely shifts in asset prices, it is far from clear what actions would follow for monetary policy.

There have been suggestions that central banks should pay regard to the ‘green’ credentials of the financial assets in their portfolio. Following on from QE, central banks have acquired a range of financial assets outside the usual range of government bonds. Christine Lagarde (2019), for example, said that a ‘move to a gradual transition to eliminate this type [carbon] of asset was something which needs to be done’. She also remarked that the ECB could not exclusively invest its 2.6 trillion euro portfolio in green bonds ‘because there is not enough of a market’. The implementation of such a policy requires a clear definition of what constitutes a ‘green investment’, particularly in terms of financial assets. It may be possible, though with some difficulties, to say that a particular physical investment can be deemed ‘green’, based on features such as the environmental impacts of its construction, the nature of the production which will be associated with the investment, etc. But a financial asset is ‘fungible’ – that is, the sale of a financial asset raises money which is spent by the company.

The operations of the central bank in this regard should be set out by the government – that is, it should be a decision of the government as to what is regarded as ‘green investment’ and the degree of ‘greenness’. In effect, a central bank is willing to purchase/hold some financial assets but not others shifts the composition of demand for the financial assets, and to that extent, the price of ‘green’ financial assets is somewhat higher than otherwise, and the price of ‘brown’ financial assets somewhat lower. The effects could be similar to those of the disinvest movement, which then raises the question of who decides which type of assets are to be favoured and which not.

In this discussion, it is being assumed that the financial assets acquired by the central bank are purchased in the secondary market, and are not directly

purchased by the issuer of the financial asset. Thus, the central bank is not directly financing investment, green or otherwise. I would argue that it is not the role of the central bank to directly finance/fund investment for the simple reason that to do so requires the central bank to set up the required abilities to credit rate, monitor etc. the loans, etc. A dedicated State Investment Bank or similar is more suited to such tasks than the central bank. This could be summarised at the European level in terms of more use of the European Investment Bank, which has developed capacities for fund raising and allocation to investment project, rather than the European Central Bank, which has been focused on monetary policy.

Concluding comments

Sheila Dow (2017) pointed to the principle ‘that central banks should ensure that a safe money asset is provided’ (p. 1553). She then argued that this principle should not be interpreted in terms of a monetary policy of inflation control. Instead,

the post Keynesian perspective interprets it as the core element of a stable financial system which generates credit to finance real economic activity in such a way as to support government policies with respect to its socio-economic goals (such as reducing income inequality and conserving natural resources.

(p. 1553)

As Michell and Toporowski (2019) argue there are dangers of giving central banks (Bank of England in their discussion) responsibilities that it cannot fulfil. They argue that a central bank can regulate banking, set interest rates and ensure that there is sufficient liquidity in capital markets to support the financial operations of government and firms, and in a crisis, can provide financial markets with liquidity. However, ‘the proper regulation of employment and investment in the economy is a matter of policy for Government, not the central bank’ (Michell and Toporowski, 2019).

In the era of financialisation, it is necessary to evaluate the roles of monetary policy and the operations of the central bank. It has long been recognised that the banking and financial systems evolve over time, and the nature and role of money also. A simple conclusion flows from that simple observation, namely that the role, objectives and instruments of monetary policy have also to evolve.

Monetary policy has often been viewed through the lens of the classical dichotomy, in the form that monetary policy has often been seen as geared towards prices and inflation, with little impact on the level or rate of change of economic activity. The inflation targeting (whether by means of attempted control of the stock of money or through interest rates) clearly fitted into that view. The era of financialisation raises many issues on the conduct of

monetary policy. I would highlight two. First, the transmission channels of monetary policy (in the form of interest rates) change. Second, financial stability has become much more of an issue.

The policy instruments at the disposal of central banks are centred on the setting of policy interest rates and the purchase and sale of financial assets (often notably government bonds, now extended to a range of private financial assets), whether through open market operations or through so-called unconventional policies such as quantitative easing. These policies should be used in general support of the policy objectives of the government, but with a realisation (as noted by Michell and Toporowski above) of the limitations of these policy instruments and their impacts on real economic activity.

The effects of monetary policy on inequality and on climate change have been discussed. In respect of inequality, the general effects of monetary policies on interest rates and quantitative easing were general viewed as modest. Furthermore, insofar as there are significant effects, it would be appropriate to address these through taxation, that is, through income and wealth taxes. In the case of the challenges of climate change (and environmental degradation more generally), I would argue that the role of central banks should be supportive of government policies on climate change, through the nature of financial assets that it accepts. But I argued against the direct financing by the central bank itself of 'green' (or indeed other) investment and of any monitoring of the allocation of funds by the central bank. It is appropriate for funds to be allocated by specialist agencies such as a State/Green Investment Bank, with the central bank proving initial finance for government expenditure as it already does.

The interest rate setting should be geared to the achievement of a suitable real rate of interest, which has been suggested as one linked with the trend rate of (per capita) income.

Financial stability becomes the focus of monetary policy with the development of macroprudential policy instruments.

Notes

- 1 For my discussion on these points see Sawyer (2016).
- 2 As the paper was being finalised, the UK Chancellor of the Exchequer announced there is to be a reformed mandate for the Bank of England "reflect the importance of environmental sustainability and the transition to net zero".
- 3 For example, Breeden (2019), Dafermos et al. (2018).

References

- Bernanke, B. (2004), "The great moderation", Remarks at the Meetings of the Eastern Economic Association, Washington, DC, available at <http://www.federalreserve.gov/BOARDDOCS/SPEECHES/2004/20040220/default.htm>
- Breeden, S. (2019), "Avoiding the storm: climate change and the financial system", Speech given at Official Monetary & Financial Institutions Forum, London 15

- April 2019, available at <https://www.bankofengland.co.uk/publications/Pages/speeches/default.aspx>
- Caverzasi, E., Botta, A. and Capelli, C. (2019), “Shadow banking and the financial side of financialisation”, *Cambridge Journal of Economics*, 43(4), 1029–51.
- Chick, V. (1986), “The evolution of the banking system and the theory of saving, investment and interest”, *Economies et Sociétés*, 3(8–9), 111–26.
- Chick, V. (1993), “The evolution of the banking system and the theory of monetary policy”, in S. Frowen (ed.), *Monetary Theory and Monetary Policy: New Tracks in the 1990s*, Basingstoke: St Martion’s Press, 79–92.
- Dafermos, Y., Nikolaidi, M., and Galanis, G. (2018), “Climate change, financial stability and monetary policy”, *Ecological Economics*, 152, 219–34.
- Dow, S. (2017), “Central banking in the twenty-first century”, *Cambridge Journal of Economics*, 41, 1539–57. doi.org/10.1093/cje/bex051
- Epstein, G. (2005), “Introduction: financialization and the world economy”, in G. Epstein (ed.), *Financialization and the World Economy*, Cheltenham and Northampton: Edward Elgar, 3–16.
- Fasianos, A., Guevara, D. and Pierros, C. (2018), “Have we been here before? Phases of financialization within the twentieth century in the US”, *Review of Keynesian Economics*, 6(1), 34–61. doi.org/10.4337/roke.2018.01.03
- Frankel, J. (2012), “The death of inflation targeting”, *Project Syndicate*, 16 May 2012.
- Friedman, M. (1968), “The role of monetary policy”, *American Economic Review*, 58(1), 1–17.
- Haldane, A.G., Roberts-Sklar, M., Wieladek, T., and Young, C. (2016), “QE: the story so far”, Bank of England Staff Working Paper no. 624.
- Lagarde, C. (2019), Reported in “European Central Bank should ‘gradually eliminate’ carbon assets, Lagarde says”, Euractive.com, 22 October 2019.
- Lavoie, M. (2019), “Advances in the post-Keynesian analysis of money and finance”, in P. Arestis and M. Sawyer (eds.), *Frontiers of Heterodox Macroeconomics*, Houndmills: Palgrave Macmillan, 89–129. doi.org/10.1007/978-3-030-23929-9_3
- Michell, J. (2017), “Do shadow banks create money? ‘financialisation’ and the monetary circuit”, *Metroeconomica*, 67(2), 354–77. doi.org/10.1111/meca.12149
- Michell, J. and Toporowski, J (2019), “Can the Bank of England do it?: the scope and operations of the Bank of England’s Monetary Policy”, Progressive Economy Forum Working Paper.
- Minsky, H.P. (1957), “Central banking and money market changes”, *Quarterly Journal of Economics*, 71(2), 171–87.
- Nersisyan, Y., and Dantas, F. (2017), “Rethinking liquidity creation: Banks, shadow banks and the elasticity of finance”, *Journal of Post Keynesian Economics* 40(3), 279–299.
- Sawyer, M. (2016), “Lessons on fiscal policy after the global financial crisis”, in P. Arestis and M. Sawyer (eds.), *Economic Policies since the Global Financial Crisis*, Houndsmill: Palgrave Macmillan, 41–84. doi.org/10.1007/978-3-319-60459-6_2
- Sawyer, M. (2020), “Endogenous money in an era of financialisation”, *European Journal of Economics and Economic Policy*, 17(3), 356–66. doi.org/10.4337/ejeep.2020.0057
- Sawyer, M. (2021), “Keep calm and carry on: responding to higher public debt after the pandemic”, *Academia Letters*, Article 276. doi.org/10.20935/AL276
- Vercelli, A. (2013) “Financialisation in a long-run perspective: an evolutionary approach”, *International Journal of Political Economy*, 42(4): 19–48.

4 Keynes on individual behaviour and the possibility of involuntary unemployment equilibrium

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Introduction and context

The accepted conventional wisdom in the economics discipline addressing the nature, types, and remedies for unemployment can be framed in terms of the following narrative: Begin *at* the market clearing equilibrium in *a* or *the* labour market, either at the level of the firm and industry or for the economy as a whole, where independent job seekers and job creators converge in conjunction with an equilibrium real wage. It makes no difference whether *a* or *the* labour market is considered; they both follow the logic. Impose an exogenous shock on these equilibria either in terms of a change in tastes or technology that upsets the underlying specifications of relative conditions of labour demand and supply or as an economy-wide shock that upsets the conditions of demand and supply for labour in the aggregate. Identify the existence of two market clearing equilibrium points reflecting different characteristics of the parameters of the economy, one before the shock, and the other after the shock. Create scenarios where choices made by independent individual job seekers and job creators serve as *causal* factors that drive the labour market from the first to the second equilibrium position, corresponding to different real wages.² It may take time for these movements to occur in the labour market (frictional unemployment).³ The duration of these movements may be affected by individual willingness or choices to embark on behaviours to find new employment (voluntary unemployment). And finally, circumstances might be such that there are factors preventing individuals from effecting their preferred choices either on account of rational policies made by firms (efficiency wage policies, etc.) or the State (in terms of minimum wage laws, legitimisation of unions, unemployment compensation, etc.).⁴ When individual choice is inhibited, labour cannot effectuate what they would like to regain employment and savers and investors cannot undertake strategies that would cause the real rate of interest to converge to the natural rate of interest, in which case unemployment is considered to be *involuntary*.⁵

The singular underlying vision of this mainstream story entails thinking in terms of markets and market behaviour driven or caused by *individuals* making *choices* to seek employment and create jobs *causing* resources, and therefore

real wages, to move accordingly to broach a new labour market clearing equilibrium. Individual choice, therefore, as the locus of concern in this vision, contextualises how resources will or will not move between and among firms or for the economy as a whole.⁶

Equilibrium, individuals, markets, and causality. These are the four pillars of the mainstream tradition that gave Keynes cause for concern. The market metaphor, which Keynes accepted when explaining changes in the level of employment between and among firms, broke down when attempting to explain the existence and changes in the level of employment for the economy as a whole, especially when thinking about the nature and causes of involuntary unemployment. The idea of *the* labour market, where independent supply and demand relations for labour were mediated by the real wage, was untenable (Rotheim 2002b, 2013). They had no method of analysis to handle the problems they sought to address. At the level of the firm or industry, independent demand and supply curves for labour could be considered so long as output and employment for the economy as a whole did not change, he observed. Thinking about changes in output and employment for the economy as a whole caused the conditions of supply and demand for labour to be interdependent (with the causality between real wages and employment inverted), implying that the method of analysis for the individual firm or industry in terms of market metaphors did not bear any credibility when thinking in terms of labour as a whole. Market metaphors founded on individual decision-making as the basis for a theory of involuntary unemployment was illusory. Applying the logic of this fabricated vision to address and remedy unemployment in the economy as a whole would be disastrous, Keynes observed.

Keynes, therefore, abandoned the market metaphor as a useful framework by which one could understand flows of labour demand and supply for the economy as a whole *caused* by choices made by individual actors in the context of that metaphor. In its place, he substituted what he called a principle of effective demand which sought to establish the level of employment for the economy as a whole in terms of what he called aggregate demand and aggregate supply. The market metaphor refers to questions of resource *allocation*, between and among presumably firms and industries (and even between allocations of capital intensity within those firms and industries), for a given volume of output and employment.⁷ Thinking in terms of aggregate demand and aggregate supply from the perspective of the principle of effective demand was not an allocative matter; it was not concerned with the demand and supply of individual workers between and among jobs. Questions of independent supply and demand curves for labour mediated by a real wage were out of the realm of consideration.

The mainstream interpretation and trenchant objection to this ‘principle’, as they interpreted it, was that Keynes limited his analysis to considering only aggregate demand and aggregate supply of labour but without a microeconomic foundation based on individual preferences, choices, and constraints.

At first glance, one might see some merit in this criticism, noting, for instance, what Keynes wrote in the preface to the French edition of the *General Theory*:

I have called my theory a *general* theory. I mean by this that I am chiefly concerned with the behaviour of the economic system as a whole, -- with aggregate incomes, aggregate profits, aggregate output, aggregate employment, aggregate investment, aggregate saving rather than with the incomes, profits, output, employment, investment and saving of particular industries, firms or individuals. And I argue that important mistakes have been made through extending to the system as a whole conclusions which have been correctly arrived at in respect of a part of it taken in isolation.

(p. xxxii)

This mainstream dismissal of Keynes's approach overlooked a critical qualification contained in that statement. Thinking in terms of relative movements of labour between and among firms and industries reflects the necessary assumption that those parts exist in isolation of each other; these individuals were *atomistic* individuals.⁸ The circumstances underlying the specification of supply and demand relations for labour at the level of the firm or industry were such that one could accept their independence. That is why Keynes did not rule out this aspect of the mainstream understanding of at least frictional and voluntary unemployment. But it was when we wished to consider changes in the level of employment for the economy as a whole that the assumption of *isolation* was no longer tenable. It was for this reason that Keynes could not accept the idea of *the* labour market as a reliable heuristic for considering the possibility of the existence of involuntary unemployment.

What needs to be emphasised is that the framework that he chose to put in place of the market metaphor, the principle of effective demand, did *not* ignore the crucial role played by individual decision-making in the determination of his point of effective demand (denoting the equilibrium level of employment for the economy as a whole). Instead, the nature of that individual was contextualised in a social ontology by which individuals and the economy presupposed the existence of each other but were not reducible to the other. Thinking in terms of a macrofoundation for macroeconomic thought (or even a macroeconomic foundation for microeconomic thought) reflected a dual – individual/economy – that was transcended when Keynes contextualised individual choice and action into his overall theory.

Individuals and individual choice did matter in Keynes's theory of employment; they stood at the heart of the social ontology that underlaid his theory. His principle of effective demand incorporated the idea of an organic interdependence among individuals that gave a broader, more open sense of economic analysis that embraced, but was not limited to individual choice

and action. Observe how he gives clarity to this idea, as his argument continued in the preface to the French edition:

Quite legitimately we regard an individual's income as independent of what he himself consumes and invests. But this, I have to point out, should not have led us to overlook the fact that the demand arising out of the consumption and investment of one individual is the source of the incomes of other individuals, so that incomes in general are not independent, quite the contrary, of the disposition of individuals to spend and invest ...

(Keynes, 1937, pp. xxxii–xxxiii)

One cannot make any sense of this last statement made by Keynes if they are stuck in a dualist mind-frame of individual versus economy. Understanding what Keynes intended the term involuntary unemployment equilibrium to imply required a social ontology where individual and economy presupposed the existence of the other, but, as opposed to the mainstream social ontology, could not be reduced to the other. The focus of this current essay will be to lend clarification to the ontological nature of an individual as Keynes saw it and the causal nexus which determined the equilibrium level of employment in the economy via his principle of effective demand. The goal is to show that Keynes's explanation for the possibility of involuntary unemployment equilibrium relied on a different type of individualism in terms of a different contextualisation of this individual within the economy. His individuals were what Sheila Dow has described as *real actors* or individuals:

Keynes was centrally concerned with the study of the grounds for belief of real actors in the economy, as well as those of real economists⁹. It is thus Keynes's realism (in this sense) which makes his epistemology so pervasive to his work, and so central to our understanding of that work, at all levels.

(Dow, 1991, p. 145).

The distinction between an individual considered in isolation of all other individuals and one who is not so constituted (Dow's real actor or individual) needs to be considered simultaneously with a clearer understanding of the nature of the word equilibrium in the mainstream versus in Keynes's analysis (which we might call, in an analogous fashion, a *real equilibrium*). Equilibrium, for Keynes, reflected a balance of emergent forces driven by real individuals who recognised that social relations manifesting outcomes for the economy as a whole 'depended on us entirely' (see Lawson, 2006, p. 495, 2013b). His criticism of the mainstream understanding of equilibrium was that their use of the term was limited to the unique outcome of mathematical solutions to specified preconditions, incapable of explaining the *causal* mechanisms that allowed for those states to emerge. These states of equilibrium that

purport to identify quantities of employment, consumption, investment, saving, etc., superimpose the word ‘individual’ once that equilibrium solution is determined. The equilibrium quantities come first; the assigned adjective ‘individual’ follows. These superimposed adjectives gain their existence *as a result of* the conditions of equilibrium; they are not, however, the *cause* of that equilibrium or to any unique quantities determined by their choices. The idea of causality cannot be inferred from the existence of these equilibrium forms. Note, then, a second point made by Sheila Dow:

The more all-encompassing the model, i.e., the more variables are endogenized, the less explanatory power it has. If an equilibrium position represents a *simultaneous* clearing of markets, then *within* the model, it cannot be determined which variable affects which. The function of the model is rather to prove the existence, and uniqueness of a stable equilibrium, given particular sets of assumptions, and to demonstrate the effect on the equilibrium position of changes in exogenous variables.

(Dow, 1985, p. 119)

General equilibrium solutions, she is contending, lack the capacity to reveal anything about what factors could be identified as the *causal* determinants of those solutions. How, then, could an equilibrium theory of employment, as constructed by the mainstream, consider the individual choices of job seekers and job creators as the focal points of the *determination* of that equilibrium? Causality becomes problematic; real individuals do not exist, let alone matter.

Considering these two prescient observations of Dow’s gives a new sense of clarity to Keynes’s criticism of what was at the time he was writing the definitive theoretical framework characterising the determination of unemployment found in A. C. Pigou’s *Theory of Unemployment* (1933):

His title the “Theory of Unemployment” is ... something of a misnomer. His book is not really concerned with this subject. ... We may regard his book as a non-causative investigation into the functional relationship which determines what level of real wages will correspond to any given level of employment. But it is not capable of telling us what determines the *actual* level of employment; and on the problem of involuntary unemployment it has no direct bearing.

(Keynes, 1936, p. 275)

Make note of his words ‘non-causative’ and ‘correspond to’. Think, then, about what he might have meant by the phrase ‘a non-causative investigation into the functional relationship’. I would suggest that Keynes understood that the mainstream notion of equilibrium inappropriately conflated what is a functional relationship (in the mathematical sense of a first derivative – a mathematical, not temporal expression) with one that is *causative*. One might identify a state of equilibrium in the economy indicating some level of

employment that *corresponded* to some money wage relative to some index of the prices of all products. One could then consider a different state of equilibrium in the economy where there might be a different level of employment that *corresponded* to a different money wage relative to some index of prices of all products. What these frameworks cannot do, however, is offer any explanation about *how* the equilibria came about or that changes in the factors that led to a change in the real wage *caused* the different levels of employment to emerge.

Once the idea of causation is ruled out, then one cannot identify the individual choices of those who supply labour and those who demand it as the factors which caused resources to move between the two equilibrium states and, therefore, to serve as the causal forces in the determination of any equilibrium state. It might be a reassuring thought to the vision held by the mainstream that all economic knowledge, including that reflecting economic aggregates, has its roots in the behaviour of individuals. But it is a vacuous thought. One might denote the outcomes of the equilibrium model as ‘individuals’, but one cannot say that those individuals were real entities, that they were capable of making choices. The element of causality requires something from the mainstream notion of equilibrium that is beyond its capacity to deliver.

I intend in this current chapter to develop these conclusions prompted by Dow’s insights on the nature of the individual and causality in the Keynes’s model. What we shall see is that it is the nature of what is meant by equilibrium in these two systems that will reveal how it is possible to consider the question of how decisions made at the level of the individual can or cannot cause the level of employment to be determined for the economy as a whole. My comments will rely on the distinction made by Tony Lawson between equilibrium as theoretic and equilibrium as ontic (see Lawson, 2015, Chapter 8). From there, I will briefly revisit Keynes’s principle of effective demand as an ontic equilibrium framework seeking to explain the level of employment for the economy as a whole, but without any reference to that level occurring in *the* labour (or capital) market. I will follow the logic of what Keynes believed to be the driving forces underlying the conditions of aggregate demand and supply that determined the equilibrium level of employment, namely, the investment decision at the level of the firm and, thereby, for all firms in the economy. Here alone, could one be on safe theoretical grounds to explain the existence of equilibrium involuntary unemployment.

Equilibrium and individualism

We begin by giving some thought to the meaning of the word equilibrium. One can consider two possible interpretations of that state which relate directly to the identification of individual action/choice within those models. In the case of the mainstream approach, we shall see that the ideal of an equilibrium state cannot move past the properties of those states, themselves, in

order to consider how the conditions of employment move from one equilibrium state to the next.¹⁰ This conclusion is critical to understanding Keynes's critique of the mainstream theory of employment in that individual choice is not possible. The individuals who are depicted in the mainstream equilibrium approach are not *real* individuals in Sheila Dow's sense of the term.

The type of employment equilibrium that emerged from Keynes's principle of effective demand, on the other hand, had nothing to do with the properties of *solutions* to mathematical systems. The nature of employment equilibrium at the point of effective demand reflected a balance of actual forces, the result of volitional human activity and choices that *caused* any level of equilibrium employment to emerge. We shall investigate this principle of effective demand which served as the basis for the existence of employment equilibrium for Keynes, once we have made a few clarifications about the distinctions between different types of equilibrium and how they reflect of the nature of the individual as a causal factor in the establishment of that equilibrium.

We should remind ourselves of Keynes's accusation of the mainstream theory of employment equilibrium which he said was a *non-causative investigation into the functional relationship which determines what level of real wages will correspond to any given level of employment*. Let us also remind ourselves of the observation made by Sheila Dow appearing earlier in this chapter that it is impossible to know which variable affected which in any equilibrium position that represents a *simultaneous* clearing of markets makes. If causality is ruled out by the nature of this type of equilibrium, then how may we speak about *getting* from one equilibrium position to the next? The answer is that we cannot because the best we can do is to identify two equilibrium states, one which is generated by a set of stated conditions, the other that reflects a different set of underlying conditions.

Tony Lawson identifies this type of equilibrium as *theoretic*. An equilibrium that is theoretic implies 'the determinateness of particular representations or formalizations of the economy' (2005, p. 431). It is strictly axiomatic, devoid of real-time, equilibrium. As he notes: 'the equilibrium is merely a solution to a system of equations' (2015, p. 179). Equilibrium, therefore, is no more than a set of conclusions (prices and quantities) that are revealed as part of the solution to a mathematical set of equations. It is *theoretic* in Lawson's sense of the term. They conform with Keynes's idea of the mainstream equilibrium being a non-causal statement about functionality.

No statements about human intentionality or human action can be made in an equilibrium that is theoretic. These individuals are not *real* individuals, as Sheila Dow has identified the term, because there is no room by which they may make choices or even have the capacity to act. Individual is merely the assigning of a name – individual – to the outcomes that emerge from the solution, itself. Begin with what is revealed by the solution, namely, vectors of inputs, output, and prices. To use Brian Arthur's recent metaphor, these words signify nouns; that just are by the names they receive.¹¹ Inputs do not

create output; they are merely nouns that are identified with the equilibrium level of things produced, called output. Output, again, is also information conveyed by the solution of the model; it is not something *created*. The same is true of the word prices. They are valuations of those things called inputs and outputs, but they are not things whose existence is *caused* by any actions of any individuals in the form of producers of inputs or outputs. The individual called producer will have assigned to it numbers called output produced and sold. The individual called consumer will have quantities assigned to it, the amount of input it provided, and the share of output assigned to it. This is all the maths can possibly tell us.¹² Assigning the word human or person and choices to those data points revealed by the mathematical solution, called equilibrium, does not, therefore, *make* those data points real individuals. These things which are called ‘individuals’ are not real individuals; they have not really made choices about the outcomes that are observed in the solution to the mathematical systems so described. They are no more than hypostatised stick-figures existing in isolation from each other.

The mainstream perspective compares two equilibrium states, embodying different specified properties. Its next step is to impose some exogenous shock on the first equilibrium creating a disequilibrium situation. Situations abound where individual choices cause reallocations of resources until a new equilibrium is reached. Both equilibrium states are non-causal solutions to systems of mathematical equations. They are timeless, by definition. Exogenous shocks are believed to occur ‘in time’ and the revision of plans and actions by individuals is also something that is purported to occur ‘in time’. How is this possible? Note what Victoria Chick says about the possibility of disequilibrium states in these static equilibrium models:

... [T]he mathematization of economics ... formalized the system as a series of markets each described by a demand function and a supply function. If the equations are static, they admit of only one solution, if the equations are well behaved. There is no other set of value for which the specified system is internally consistent. Therefore the solution set is the equilibrium, and that equilibrium ensures co-ordination of plans which represent optimal choices, but there can be no meaning to disequilibrium in such a system.

(Chick, 1998, p. 40)

If the idea of disequilibrium has no meaning, then how would it be possible for us to construct any logical, relational framework where we can speak of a process by which any equilibrium would be attained out of a position of disequilibrium brought about by exogenous shocks? The language of markets comprising a general equilibrium framework, therefore, would have no meaning, no ontological foundation, and would impart no information to us about how things actually come about. Something can be said to be supplied and demanded at some relative price at the axiomatic solution point. There

is no operational information provided, however, by that statement – in no way can we say that there is some unique relationship between price and either quantity demanded or supplied. Yet, it is the notion of relationality, ironically, that is most significant to the mainstream equilibrium view, i.e., if conditions x are posited, then outcome y must occur (see Lawson, 1997). If there is no meaning to disequilibrium in such a system, then questions that indicate relationality especially driven by individual choices are meaningless, as well. Frank Hahn once commented that general equilibrium analysis ‘is strong on equilibrium and very weak on how it comes about’ (Hahn, 1973, p. 327). Hahn in his co-authored book with Kenneth Arrow (1971, p. 1) described the timeless story whereby resources move to their most desired ends as ‘poetic expression’. *Poetic license* might have been more apropos of this fiction that is being depicted.

An ontic equilibrium, on the other hand, can be ‘interpreted as an aspect of the economy [we] are attempting to represent’. It describes a state reflecting ‘the forces of society’ rather than ‘the properties of the model’ (Lawson, 2015, p. 178). The forces of society describe the actual social realm, the ‘domain of all phenomena whose existence depends at least in part on us’ (Lawson, 2006, p. 495). These forces lead to a position of balance or unity where it is the properties and natures of the forces themselves, occurring in real time, that help to describe that balance. The balance of forces *emerges* from the organic interaction and interdependence among real individuals. This equilibrium reflects an organic state, it is processual, compositional, and relational. It is not, however, aggregative (Lawson, 1997). This socially constructed position is brought about by what Lawson refers to as *human intentionality*, the ability to choose among a spectrum of possibilities. Intentional choice means that the individual has control over the choices she makes, as distinguished from the perceived but delusional understanding of individual choice from a mainstream perspective where there exists no choice at all, as it is limited to one and only one outcome. Human agency in this form implies a recognition by each individual that she is a member of a larger social framework in which her sense of place and basis upon which she makes decisions consider that social positioning. There is an implied internal dynamic to the system that links the individual and her decisions, and the community of all relevant individuals whose actions she perceived could contextualise and affect her ability to act and the outcome of those actions. Lawson goes on to state that ‘human agency is not only intentional causality: it is *imbedded* intentional causality... [I]t is sustained by an emergent powers materialist orientation’ (1997, p. 63).

This ontic equilibrium stands as a socially constructed state, an organically created outcome reflecting choices made by real individuals who recognise that any choices they make, collectively, create outcomes that will be realised by those choices. Individual *cum atom* needs to know only the objective circumstances that they confront, all of which are *internal* to their state of existence. Being independent of any other individual implies that observed outcomes are compositional, although that conclusion is, recall, an impossibility

because the outcome must exist prior to whatever data ‘outcomes’ are assigned to these individual components.

Finally, a real individual is one who is socially constructed *and* who recognises that she is a socially constructed entity. Any action taken by this type of individual surely is cognisant of the social environment in which she acts and the potential resulting outcomes, including the one that follows from her actions.

Thinking in terms of market metaphors, one could say that full employment will be reached unless there are obstacles to the real wage falling sufficiently to assure that all those in the labour force have jobs.¹³ That is the way one would think about *involuntary* unemployment from a conventional perspective, a static perspective. Open up the thought process to consider what Chick calls a path-dependent, recursive system. Then, we transcend the market metaphors to thinking about the decision of firms to hire labour in terms of the income they *expect* to make from the employment of labour and capital as part of a larger nexus of such decisions. Beyond that level, there is not confidence held by firms that they will be able to sell more output at some specified price. No amount of extra labour or capital is going to be employed, regardless of the real wage (or the real rate of interest). So long as firms must pay *something* to employ labour and capital, they must believe that they can sell those extra goods produced by whatever level of labour and capital they choose to employ. Once they have settled on their prediction of future demand for their product (which includes future revenue), then a quantity of labour and capital will be employed. There is no assurance that this level of employment will equal the full-employment level, and there is no possibility that lower prices of these factors will give employers to hire more of them, given that there is no confidence that the extra output is going to be sold. Here, we have a conceptualisation of involuntary unemployment that has nothing to do with markets or market metaphors.

The combination Keynes put together blended a path-dependent, recursive system which in principle could go anywhere, with a derivation of one combination of factors which would leave the system replicating itself. It is, therefore, at a position of rest, in the sense that the variables do not change (actually, I would say that it is the *decisions* that do not change), and we call that an equilibrium. The fact that this equilibrium may entail unemployment is incompatible with a market-clearing notion of equilibrium but is acceptable here, because the workers, though not able to work as much as they, collective, would like at the going wage, are powerless to change their situation.

(Chick, 2002, p. 172)

Keynes’s firm, needed to consider its expectation of receipts from (both in terms of the current flow of output [short-term expectations] and in terms

of the future returns from engaging capital goods [long-term expectations]) employing any quantity of labour relative to the supply price of its output (meaning the cost of producing another unit of output including the notion of user cost). Here, we have a framework for thinking about the employment decision for the industry as a whole, based on the employment decision of each individual firm. The ontology of this framework represents a *social* ontology to the extent that it is not necessary to *know* the resultant level of employment and output for the industry as a whole based on a knowledge of the factors inherent in the individual firms. Keynes was only formulating a foundation for the construction of his building, his *principle* of effective demand. Our understanding of the term equilibrium has moved from the *theoretic* to the *ontic*.

The principle of effective demand

Allow me to explain my intention in addressing what Keynes believed to be the mechanism by which one could understand his *general theory* of employment. As we noted, above, Keynes asserted that the mainstream view of employment equilibrium at the time he was writing did not possess the theoretical tools for handling the problems they intended to describe. Proponents of that view believed that they could explain the resulting level of employment for the economy as a whole as a state of equilibrium *emanating* from individual choices to seek and create jobs via labour markets. Keynes asserted that, they could at best consider movements of different types of labour between and among firms and industries, assuming that the level of employment for the economy as a whole was fixed and unchanging. What they could *not* do was to explain *how* any level of employment emerged or *how* it might proceed from one equilibrium state to another should underlying circumstances change. He suggested, as we saw, that their theory of employment was at best a *non-causal* identification of what appeared to be functional relations. Individual choice was not the driving force in bringing about equilibrium in what they viewed to be *the* labour market. There was no theory of the *determination* of equilibrium employment, and whatever that level turned out to be, it had nothing to do with the choices made by any parts of that model. There were not forces, no real decisions that, in conjunction with other decision makers brought about that equilibrium state. They begin with a solution, and then assign values to each of the parts, in isolation of each other, parts who are identified as individuals. There was one *specific* equilibrium level of employment for the economy as a whole. It just *was*; it was not brought about by anything.

Keynes, instead, wished to come up with a *general* theory of employment by which he could explain the conditions that brought about any level of employment equilibrium, that, indeed, emanated from choices made by individuals. Equilibrium emerged *from* those choices; the choices were not identified from the conditions of equilibrium. Keynes's idea of equilibrium was,

therefore, an organic state, a balance of emergent forces causing that state to be so positioned. It was something that emerged from the organic interaction of individuals, but whose decisions were made in recognition of potential environments as a result of others' decisions. It is for this reason that he wrote towards the end of his book:

The object of our analysis is, not to provide a machine, or method of blind manipulation, which will furnish an infallible answer, but to provide ourselves with an organised and orderly method of thinking out particular problems.

(1936, p. 297)

Keynes expressed that organised and orderly method of thinking about the level of employment for the economy as a whole as a *principle* of effective demand. I emphasise the word principle because it served the purpose of a framework of thinking about the circumstances, powers, forces, etc., that might bring about any level of employment, and especially one that was unchanging so long as those circumstances, powers, and forces had no reason for changing. That heuristical framework involved merely two circumstances to consider: the minimum amount of proceeds that firms expected to receive to justify any level of employment (aggregate supply) and the actual level of proceeds that firms expected to receive from the employment of any quantity of workers (aggregate demand):

Let Z be the aggregate supply price of the output from employing N men, the relationship between Z and N being written $Z = f(N)$, which can be called the *Aggregate Supply Function*. Similarly, let D be the proceeds which entrepreneurs expect to receive from the relationship between D and N being written $D = f(N)$, which can be called the *Aggregate Demand Function*.

(1936, p. 25)

The equilibrium level of employment for the economy as a whole would emerge when those two elements were in balance. Any level of employment was possible, depending on the factors that resulted in equality between the two. The level of employment for the economy as a whole, identified at the point of effective demand, emerged from the choices and decisions of individuals, *real* individuals, to consume and invest:

A decision to consume or not to consume truly lies within the power of the individual; so does a decision to invest or not to invest. The amounts of aggregate income and of aggregate saving are the *results* of the free choices of individuals whether or not to consume and whether or not to invest.

(Keynes, 1936, p. 65)

The point of effective demand reflects an ontic equilibrium position that *emerges* as a balance of forces out of the decisions made by those real individuals. It is organically constituted by socially constructed individuals who bear the responsibility for employing labour. The expectation of proceeds as an organic notion implies not only the reproduction of current states of production and employment, but also the decision to transform the bases upon which production and employment will occur for the future.

If the employment decision by all entrepreneurs is considered as reflective of the employment decision made by an individual entrepreneur, then why is Keynes asking us to think about expected consumption and investment rather than the real wage that an entrepreneur must pay to her employees relative to the marginal productivity of those workers and the real rate of interest that the entrepreneur might receive had she not taken those funds and weighed the real rate of interest to the marginal productivity capital goods? The answer to this question hinges on whether the employment decision at the level of the firm is forward looking or backward looking. The equilibrium level of employment at the point of effective demand, as an ontic equilibrium, is neither static nor is it dynamic, particularly in the way that term is used by the mainstream as a series of unconnected equilibrium states with different dates assigned to those equilibrium. Keynes equilibrium might be called, instead, an organic equilibrium, or as Chick described it: ‘the combination of static and dynamic theorizing is the most ingenious aspect of Keynes’s system’ (Chick, 2002, p. 170).

Looking backward as the basis for decision-making in the present implies that firms can assume that they will be able to sell the same amount of goods in the future and at the same prices as they experienced, today. The only factor of relevance to them, therefore, is something that allows them to think in isolation of each other, namely, how productive is the capital they choose to employ. Looking forward, however, means that no firm can be assured that they will be able to sell what they produce now and in subsequent periods and at what price regardless of how productive is the capital that they use to generate those goods. They *cannot* know how much they will actually sell, because that amount is dependent on how much other firms choose to produce and sell, that is, on total effective demand.¹⁴

Investment

My point in this section is to lay the groundwork for understanding the possibility of involuntary unemployment equilibrium for the economy as a whole in the context of Keynes’s principle of effective demand emanating from investment decisions made by forward looking, *real* individual firms. Part of the mainstream explanation for involuntary unemployment, in terms of sticky prices downward, is the recent work by new New Keynesian economists who look to problems of equilibration in *the* capital market, i.e., the relationship between savings and investment mediated by a real rate of interest.

Equilibrium investment is fixed at a level less than full-employment investment because there is something preventing the real rate of interest from falling to the natural real rate of interest (the point of full employment investment). The inability of the real rate of interest to fall has been attributed to nominal interest rates being constrained by what they call the zero lower bound (short-term interest rate targets at central banks being equal to zero) coupled with inflation targets that are too low to allow the real rate of interest from falling even if the nominal interest rate target were zero.

Keynes rejected this theory of *the* capital market as a nonsense theory (see JMK to Roy Harrod) because of the interdependence among the underlying factors that specify the demand for investment and supply of savings functions. Keynes rejected the foundational idea of the demand for investment for the economy as a whole as determined by the marginal product of capital. And so, while Keynes abandoned the inquiry into the nature and causes of involuntary unemployment in terms of *the* labour market, he rejected, as well, the same type of logic that underlaid the demand for investment in terms of *the* capital market. Capital, for Keynes, received a return because it was *scarce*, a socially constructed idea, and not because it was productive, a term which he doubted could be measured and which was something internal to firms, independent of the decisions of all other firms, and, therefore, which had nothing to do with events in the future.¹⁵ It is the individuation of outcomes at the level of the firm in mainstream equilibrium analysis, looking only inward, and not in a larger socially constructed reality, that causes firms to be *unreal* or hypostatized entities.

Keynes defined both aggregate demand and aggregate supply in terms of the *expectation* of revenue by firms and, therefore, all firms. The word expectation implies some relationship between decisions made today and potential outcomes of those decisions at some future date. For Keynes, it was the decision to demand capital goods by firms, as durable goods, that provided the key to this link between the present and the future:

It is by reason of the existence of durable equipment that the economic future is linked to the present. It is, therefore, consonant with, and agreeable to, our broad principles of thought, that the expectation of the future should affect the present through the demand price for durable equipment.

(1936, p. 146)

And recall that this link between the present and changing ideas about the future comprised the essence of what Keynes described as a monetary economy:

A monetary economy, we shall find, is essentially one in which changing views about the future are capable of influencing the quantity of employment and not merely its direction. But our method of analysing the economic behaviour of the present under the influence of changing

ideas about the future is one which depends on the interaction of supply and demand, and is in this way linked up with our fundamental theory of value.

(1936, p. vii)

When considered in the context of the principle of effective demand, as we say, it was the expectation of the aggregate demand for investment (and prospective consumption) that set a limit on the amount of labour that would be hired. Given the fact that there was the recognition of an organic interdependence among all firms and, therefore, the economy as a whole, the factor governing the employment decision by firms was the *expectation* of sales in the future – how much of the extra output firms might sell and at what price from employing more capital and labour. And it was the investment decision, in terms of purchasing *new* plants and equipment, that served as the catalytic factor in understanding the organic, dynamic nature of the equilibrium level of employment¹⁶:

To obtain the expected demand function of the entrepreneurs as a whole, as an estimate of the aggregate expenditure function, we must assume that each producer is trying to guess the impact of his output and employment decisions on the demand function of the commodity he produces and hence on its price. And this implies that each firm has to make a guess on how the output and employment decisions of the other firms are related to its own decisions and on how consumers react to the output and employment decisions of the firms as a whole!

(Casarosa, 1981, p. 192)

It is difficult to discuss the demand for investment in a dynamic sense of the terms relative to the way it is addressed by the mainstream. The reason for this problem is that the mainstream mode of reasoning occurs in *the* capital market, where the independent supply of savings and demand for investment schedules are mediated by a real rate of interest. By virtue of the nature of the equilibrium as theoretic in the mainstream programme, the mathematical solution to this general equilibrium problem identifies a market clearing level of capital associated with some real rate of interest. This quantity of capital has nothing to do with what Keynes was thinking about in terms of the expansion of plants and equipment, i.e., a flow term. Equilibrium capital in *the* capital market represents a stock term, it denotes the quantity of goods in the economy as a whole that has been deemed capital as opposed to those same goods serving as articles of consumption. The equilibrium indicates some allocation of that output between consumption and capital consumption (equal to that output that is not used for consumption). Change the underlying circumstances that specify the system, and there will be either more consumption and less capital (less saving) or more capital and less consumption (more saving). Such is the nature of an equilibrium that is theoretic.

Firms in this theoretic equilibrium are identified in isolation of each other. The equilibrium which is associated with market clearing implies that anything produced at the level of the firm will be known (identified by the conditions of equilibrium). Firms that produce more must presumably have more productive capital (and labour). The return on that capital, therefore, has everything to do with its relative marginal productivity.

Keynes, however, was concerned with the equilibrium level of employment for the economy as a whole as an *ontic* equilibrium, where the organic/dynamic nature of that equilibrium, as the balance of *forces*, spoke to the decision of entrepreneurs to *enhance* their capital stock, to produce more (or fewer) goods in the future. An ontic system is consistent with the notion of investment as a flow; a theoretic system can never move past an identification with capital as a stock. The investment decision was forward looking towards a future that is uncertain, not only because the future is far out from the present, but because it is ontologically uncertain to the extent that results realised in the future based on decisions made today will be affected by the actions of other individual firms and, therefore, by producers in the economy as a whole. Understanding Keynes's inquiry into the determinants of investment at the level of the individual firm and, therefore, of all firms, is tied to this socially contextual nature of the individual firm. It uniquely underscores Keynes's identification of the critical determinant of the investment decision as the marginal *efficiency* of capital (as opposed to the conventional idea of the marginal productivity of capital).

Keynes considers investment in terms of an individual firm's decisions to take the *money* received in the form of retained earnings and use it to expand its plant and equipment (investment) or to purchase some existing financial asset that pays a specified *monetary* return (in some asset that would include money whose expected return is zero but whose liquidity premium exceeds its carrying cost). The decisive factor influencing this choice was, as we saw in the quote above, the demand price for durable assets (capital goods), in the context of linking the present with the future. Keynes set the tone for the reader to grasp what he saw as the determinants of this demand price for durable assets relative to the way it was conceived by the mainstream view (occurring in *the* capital market).

There is, to begin with, the ambiguity whether we are concerned with the increment of physical product per unit of time due to the employment of one more physical unit of capital, or with the increment of value due to the employment of one more value unit of capital.

(1936, p. 138)

This statement captures the essence of the direction that Keynes points. The individual firm, in the mainstream view, needed to look only at how productive another piece of capital would be (how much extra output it could

produce). Since these firms existed within theoretic equilibrium models, the conditions of equilibrium revealed that firms hired capital up to the point where its marginal product equalled the real rate of interest. The nature of the equilibrium assumes that everything produced is sold (otherwise, it would not be an equilibrium). The *value* of the extra unit of capital was always equivalent to the *productivity* of that extra unit of capital. Measuring the return on capital in terms of its marginal productivity, in equilibrium, implies that the individual firm need not worry about any influences that might be occurring in the market at large, in terms of the activities of other firms. The perceptual field of inquiry is the individuated firm, in isolation from all other firms, one that qualifies as *unreal* to be consistent with Sheila Dow's observation.

Change the perceptual field of inquiry to one where future outcomes of investment decisions at the level of the individual firm (*the increment of value due to the employment of one more value unit of capital*) could not be known until investment decisions (as well as subsequent consumption decisions) were known by all firms in the economy as a whole. In this case, the *value* of employing one more unit of capital had little if nothing to do with the marginal product of that capital. Thinking in terms of the outcomes of one's decisions in the context of the decisions effectuated by others in the economy makes the *value* of employing one more unit of capital *uncertain* to the individual firm. A firm's perception of the expected yield on a new capital asset is defined in terms of its socially contextual nature, not its nature in isolation of the social context. Thinking about these two competing social ontologies gives clarity to Keynes's point that capital receives a return because it is scarce; not because it is productive. The idea of scarcity is a socially contextual notion, defined in terms of the actions of one part in light of the actions of all other parts of the larger realm. Productivity, as I indicated, is limited to the individuated circumstances of firms, independent of what might or might not be occurring for all other firms.

It is in light of this unique social ontology of the investment decision that Keynes identified the demand price of a durable asset in terms of what he called the marginal *efficiency* of capital, as opposed to the mainstream view, which relied only on the marginal *productivity* of capital. If one could point their finger at a single critical misunderstanding by the mainstream interpretation of Keynes's description of the demand price of durable assets for an individual firm, it would be their conflation of the notion of marginal productivity of capital with marginal efficiency of capital:

The marginal productivity of capital is a function of the amount of investment undertaken. The marginal productivity of capital appears in Mr Keynes' book under the title of marginal efficiency. It does not appear that there is a difference of principle here.

(Harrod, 1937, p. 76)

Or more recently:

Keynes points out that the marginal efficiency of capital schedules will decline as a function of investment, both because of diminishing marginal returns from particular assets or from capital as a whole and because the supply curves for assets or for capital goods will tend to slope upward. The more capital is being acquired, the greater will be the supply price.
(Eisner, 1997, p. 196)

The latter quote suggests that the marginal efficiency of a capital asset will fall because of diminishing returns in the capital goods-producing [actually it should read: “capital-goods producing” industries, something that Keynes recognised occurring at least in the short run, and because of ‘diminishing marginal returns from particular assets or from capital as a whole’. Keynes did not say, as Eisner seems to have suggested, that the diminishing marginal returns were the result of diminishing marginal productivity of capital in light of the engagement of more capital in production processes. Keynes’s reach was much farther, indicated by the fact that of his assertion that the marginal return on capital was determined by its scarcity (a socially defined notion) rather than its productivity (a term denoting isolation of firms). Keynes could not have been clearer when he positioned the marginal efficiency of capital to

depend on the rate of return expected to be obtainable on money if it were invested in a *newly* produced asset; not on the historical result of what an investment has yielded on its original cost if we look back on its record after its life is over.

(1936, p. 136)

Thinking in terms of the marginal *efficiency* of capital, an estimation of the possible return on a capital asset in a socially constructed context means that *current* yields on capital provide no information to firms about how that same investment might fare in the future. The same capital goods might be just as ‘productive’ moving forward. But what the firm cannot know at the time of the commitment to hire another capital good is the choices and decisions made by other firms in the economy.

Towards the *possibility* of involuntary unemployment

Keynes’s vision of an equilibrium level of employment for the economy as a whole was that of a socially contextual individual who makes decisions based on a series of factors that capture the relationship between the expectation of outcomes in the future (congnisant of what exists currently, what others might do, and what the societal outcomes of those decisions might imply) and how that expectation informed and translated into individual action. His principle of effective demand, the underlying generative mechanism of his

general theory, embraced a sentient individual who has choices open to her where her recognition of uncertain future weights on decisions she makes today. Only then is one in a position to understand the *quantity of employment* for the economy as a whole as the outcome of economy-wide employment decisions made by such sentient individuals. We have a return to a genuine individualist focus, but where the social ontology of this construct is predicated on an individual, a real individual as Dow calls her, who is cognisant of her socially contextual nature by which the future is uncertain and where decisions made today exist in light of expectations formed in light of that uncertain future.

A point of effective demand, as Keynes defined it, may be such that firms will not use all of their available capital and labour, nor increase their demand for capital and labour, if their expectation about revenue of the future does not warrant that extra employment. Why would this equilibrium level of unemployment be characterised as involuntary and in a way that is diametrically opposed to the way it is understood by the mainstream? Dismiss the possibility of there being something called *the* labour market, in which employment was deemed involuntary because there are factors preventing the real wage from falling in *the* labour market is eliminated. Taking the frame of reference out of market metaphors and placing it, instead, into a principle of effective demand indicates that the only compelling factors for firms making employment decisions (especially capital accumulation decisions) rests on whether they believe that anything they produce, and how many inputs they engage, are to be sold. Here, there is nothing that labour (or savers) can do to change the expectation of producers that they will sell the goods produced by extra labour and capital associated with all inputs being employed. Labour can ask for any going wage below the current wage and in excess of their reservation wage, but that will not change the employment decision made by a firm if they are uncertain about the likelihood of selling the extra goods generated by their expanded labour force. Corporate savings (or bank deposits in a loanable funds theory of the rate of interest) will not be transformed into increased capital purchases if firms are uncertain as to whether they will be able to sell the extra goods at some price in the future, regardless of how low the return on placing those financial assets might be. Money wages and money rates of interest could fall to any level all the way to zero. But that would not be enough to persuade firms to hire more labour and capital because they could hire that labour and capital more cheaply.

Involuntary unemployment is not a price issue or a market issue; this is where the mainstream perspective on involuntary unemployment falls short of the mark. Their market metaphors framing equilibrium systems identify individuals in isolation of each other. It is this critical assumption which pervades the mainstream position that allows them to identify independent supply and demand curves in goods, labour, and capital markets. These individuals of the mainstream are not *real* individuals, as Dow would define it, because equilibrium solutions must come prior to the assignment of

quantities/[it is ‘quantities’; not ‘values’] values to individual entities. Seen from the vantage point of the equilibrium, itself, one is not in a position to say that changes in the price of anything brought about by choices of individuals reveal any *causal reasoning*, whatsoever. There simply is no theory of employment, here, for the economy as a whole.

Drop the equilibrium as theoretic, established prior to individual choice/action, and open the system to an alternative social ontology in which individual action and economy-wide action presuppose the existence of and decisions made by others in the economy. Any observed equilibrium is an ontic equilibrium, the result of a balance of forces caused by individual choices made in light of their recognition that they are social beings whose actions affect and may be affected by the actions of others. Seen in the context of Keynes’s principle of effective demand, an equilibrium level of employment, as ontic equilibrium, reflects the possibility that aggregate demand may equal aggregate supply where no individuals are willing to alter their employment decisions *regardless* of how much they might be able to pay for hire labour and capital. Involuntary unemployment is a social outcome emanating from decisions made at the level of real individual firms whose employment decisions are predicated on their recognition of the socially contextual possibilities affecting those individual decisions.

Notes

- 1 An earlier version of this chapter was presented to the Keynes Seminar, Robinson College (Cambridge). Thanks for comments at the time from Victoria Chick, Geoff Harcourt, Prue Kerr, Tony Lawson, and Steve Pratten; and from Penelope Hawkins.
- 2 ‘We think of an economy in which, at any instant, many jobs become profitable and many jobs become unprofitable. To find workers for those newly profitable jobs, firms post vacancies. Workers in jobs that become unprofitable are laid off and look for new jobs. The complex process through which workers and jobs look for and find each other is represented by a simple aggregate matching function, giving new matches as a function of both unemployment and vacancies’ (Blanchard and Diamond, 1989, p. 2). See, also, Mortensen and Pissarides (1994) and Pissarides (2000).
- 3 ‘You can’t change the carpenter into a nurse easily, and you can’t change the mortgage broker into a computer expert in a manufacturing plant very easily. Eventually that stuff will sort itself out. People will be retrained and they’ll find jobs in other industries’ (Plosser, 2011).
- 4 Another wrinkle to this story is that there may be impediments in the capital market where the supply of savings and demand for capital generate a real rate of interest that cannot fall sufficiently to broach the natural rate of interest. The explanation for this downward inflexibility in the capital market, which encourages too many individuals to save and too few firms to demand capital can be explained by a central bank whose mandate is to maintain low price inflation and interest rate policies that put their short-term interest rate target at the zero lower bound.
- 5 ‘In the wage setting–price setting framework, unemployment is likely to be involuntary. For example, if firms pay an efficiency wage – a wage above the

- reservation wage – workers would rather be employed than unemployed. Yet, in equilibrium, there is still involuntary unemployment’ (Blanchard, *Macroeconomics*, 8th edition, Pearson, 2021, p. 154).
- 6 ‘If there is unemployment in a Walrasian labor market, unemployed workers immediately bid the wage down until supply and demand are in balance. Theories of unemployment can therefore be classified according to their view of why this mechanism fails to operate’ (Romer, 2012, p. 457).
 - 7 ‘Say was implicitly assuming that the economic system was always operating up to its full capacity, so that a new activity was always in substitution for, and never in addition to, some other activity. Nearly all subsequent economic theory has depended on ... this same assumption’ (Keynes, 1973, p. xxxv).
 - 8 ‘The metaphorical reference to atoms here is not intended to convey anything about size. Rather the reference is to items which exercise their own separate, independent and invariable (and so predictable) effects (relative to, or as a function of, initial conditions)’ (Lawson, 2003, pp. 13–14).
 - 9 I will avoid this interesting and perhaps controversial reference to Dow’s alluding to mainstream economists as not being real. I have explored this topic somewhat in Rotheim (2002).
 - 10 Chick refers to this type of equilibrium as ‘virtual equilibrium’ (see 2002, p. 169).
 - 11 ‘I will argue that economics, as expressed via algebraic mathematics, deals only in nouns – quantifiable nouns – and does not deal with verbs (actions), and that this has deep consequences for what we see in the economy and how we theorize about it’ (Arthur, 2021, p.2).
 - 12 Even the word *functionality* that is included in Keynes’s observation about the mainstream theory of employment equilibrium does not really imply any if/then statements.
 - 13 As well as obstacles to the real rate of interest falling such that individuals are saving too much out of current income but that they are not willing to purchase them in the form of capital goods.
 - 14 ‘Keynes ... explicitly recognizes that the employment individual firms will give is a function of total effective demand. This is only natural. When an entrepreneur forms an expectation about how much demand will be forthcoming to his or her firm, he or she will have to consider whether times are good or bad for the overall economy. Therefore, the employment decision of individual firms will depend on total effective demand (which is an expected magnitude)’ (Harwtig, 2013, p. 674).
 - 15 ‘The only reason why an asset offers a prospect of yielding during its life services having an aggregate value greater than its initial supply price is because it is scarce; . . . If capital becomes less scarce, the excess yield will diminish, without its having become less productive—at least in the physical sense’ (Keynes, 1936, p. 213).
 - 16 ‘In *The General Theory* variation of investment is the key to the dynamics of the system’ (Chick, 2016, p. 108).

Bibliography

- Arestis, P., Desai, M., and Dow, S. eds. (2002). *Methodology, Microeconomics and Keynes: Essays in Honour of Victoria Chick*, Vol. 2 (London, Routledge).
- Arthur, W. B. (2021). “Economics in Nouns and Verbs,” Santa Fe Institute, April 5.
- Bhaskar, R. (1979). *The Possibility of Naturalism: a Philosophical Critique of Contemporary Human Science* (Hertfordshire: Harvester Wheatsheaf); all quotes from the 2nd edition, 1989.
- (1997). *A Realist Theory of Science*, 3rd edition (London: Verso).

- Blanchard, O. (2021). *Macroeconomics*, 8th edition (New York: Pearson).
- Casarsa, C. (1981). "The Microfoundations of Keynes's Aggregate Supply and Expected Demand Analysis," *Economic Journal*. Vol. 91, pp. 188–94.
- Chick, V. (1983). *Macroeconomics After Keynes* (Cambridge: MIT Press).
- (1995). "Order Out of Chaos in Economics? Some Lessons from the Philosophy of Science," in Dow, S. and Hillard, J., eds., *Keynes, Knowledge, and Uncertainty* (Cheltenham: Elgar). pp. 25–42.
- (1998). "A Struggle to Escape: Equilibrium in the *General Theory*," in Sharma, S., ed. *John Maynard Keynes: Keynesianism into the Twenty-first Century* (Cheltenham: Elgar). pp. 40–50.
- (2002). "Reflections on Caravale's Contributions Relating to Equilibrium and Their Relation to the Interpretation of Keynes," in S. Nisticò, S. and D. Tosato, eds., *Competing Economic Theories: Essays in Honour of Giovanni Caravale* (London: Routledge). pp. 167–76.
- (2016). "On the Microfoundations and Keynes' Economics," *Review of Political Economy*, Vol. 28, No. 1, pp. 99–112.
- Desai, M. (2002). "The Nature of Equilibrium in Keynes's *General Theory*," in P. Arestis, M. Desai, and S Dow, eds., *Methodology, macroeconomics and Keynes: Essays in Honour of Victoria Chick* (London: Routledge) Vol. 2. pp. 15–25.
- Dow, S. (1985). *Macroeconomic Thought: A Methodological Approach* (Oxford: Blackwell).
- (1991). "Keynes's Epistemology and Economic Methodology," in R. O'Donnell (ed.) *Keynes as Philosopher-Economist*. (London: Macmillan) pp. 144–67.
- (1991) "Keynes's Epistemology and Economic Methodology," in O'Donnell, ed., *Keynes as Philosopher-Economist* (London: Macmillan), pp. 144–67.
- Eisner, R. (1997). "Marginal Efficiency of Capital and Investment," in G. Harcourt and P. Riach (eds) (1997), *A 'Second Edition' of the General Theory*, (London: Routledge). Vol. 1, pp. 185–97.
- Hahn, F. (1973). "The Winter of our Discontent," *Economica*, New Series, August, pp. 322–30.
- Harcourt, G. and Riach, P. (1997). *A 'Second Edition' of the General Theory*, Vol. 1 (London: Routledge).
- Harrod (1937). "Mr Keynes and Traditional Theory," *Econometrica*, Vol. 5. No. 1, pp 74–86.
- Hartwig, J. (2013). "Effective Demand: Securing the Foundations," *Review of Political Economy*, Vol. 25, No. 4, pp. 672–8.
- (2011). "Aggregate demand and aggregate supply: Will the real Keynes please stand up?" *Review of Political Economy*, Vol. 23, pp. 613–8.
- Hicks, J.R. (1937). "Mr. Keynes and the Classics: A Suggested Interpretation," *Econometrica*, April., Vol. 5, No. 2, pp. 147–59.
- Keynes, J.M. (1936). *The General Theory of Employment, Interest and Money*, reprinted as vol. VII of the *Collected Writings of J.M. Keynes* (Cambridge University Press 1973).
- (1937). "The General Theory of Employment," *Quarterly Journal of Economics*. pp. 209–223.
- Lawson, T. (1991). "Keynes and the Analysis of Rational Behaviour," in R. O'Donnell (ed.), *Keynes as Philosopher-Economist*. (London: Macmillan) pp. 184–226.
- (1997). *Economics and Reality* (London: Routledge).
- (2003). *Reorienting Economics* (London: Routledge).
- (2004). "Reorienting Economics: on Heterodox Economics, Themata and the Use of Mathematics in Economics," *Journal of Economic Methodology*, Vol. 11, No. 3, pp. 329–40.

- (2005). “The (Confused) State of Equilibrium Analysis in Modern Economics: An Explanation,” *Journal of Post Keynesian Economics*, Vol. 27, No. 3. Spring, pp. 423–44.
- (2006). “The Nature of Heterodox Economics,” *Cambridge Journal of Economics*, Vol. 30, No. 4, pp. 483–505.
- (2009). “Heterodox Economics and Pluralism: Reply to John Davis,” in E. Fullbrook, ed. *Ontology and Economics: Tony Lawson and his critics*. (London: Routledge). pp. 93–129.
- (2013a). “Emergence, Morphogenesis, Causal Reduction and Downward Causation,” in Archer, M. ed. *Social Morphogenesis* (New York: Springer), pp 61–84.
- (2013b). “Emergence and Social Causation,” in Greco, J. and Groff, R., eds., *Powers and Capacities in Philosophy* (London: Routledge), pp. 285–307.
- (2013c). “What Is This ‘School’ Called Neoclassical Economics?” *Cambridge Journal of Economics*, Vol. 37, No. 5, pp. 947–83.
- (2015). *Essays on the Nature and State of Modern Economics* (London: Routledge).
- Mortensen, D. and Pissarides, C. (1994). “Job Creations and Job Destruction in the Theory of Unemployment”, *The Review of Economic Studies*, Vol. 61, No. 3, pp. 397–415.
- Nisticò, S. and Tosato, D. (2002), *Competing Economic Theories: Essays in Memory of Giovanni Caravale* (London: Routledge).
- Pasinetti, L. (1997). “The Marginal Efficiency of Investment,” in Harcourt, G and Riach, P., eds., *A ‘Second Edition’ of the General Theory*, Vol. 1 (London: Routledge), pp. 198–218.
- Pigou, A.C. (1933). *Theory of Unemployment* (London: Frank Cass).
- Pissarides, C. (2000) *Equilibrium Unemployment Theory*, 2nd edition (Cambridge: MIT Press).
- Plosser, C. (2011) cited in “The Fed’s Easy Money Skeptic: Monetary Policy Can’t Retrain People; Monetary Policy Can’t Fix Those Problems,” *The Wall Street Journal*, Feb 11.
- Romer, D. (2012). *Advanced Macroeconomics*, 4th edition (New York: McGraw Hill).
- Rotheim, R. J. (1995). “Keynes on uncertainty and individual behaviour in the theory of effective demand,” in Dow, S. and Hillard, J., eds., *Keynes, Knowledge, and Uncertainty* (Aldershot: Edward Elgar), pp. 161–76.
- (2002a). “Timeful Theories, Timeful Theorists,” in Arestis, P. and Dow, S., eds., *Methodology, Microeconomics and Keynes: Essays in Honour of Victoria Chick*, vol 2 (London: Routledge) pp. 62–72.
- (2002b). “Keynesian Economics from a Non-Price Theoretic Framework,” in Nisticò, S. and Tosato D., eds., *Competing Economic Theories: Essays in Honour of Giovanni Caravale* (London: Routledge) (2002), pp. 301–5.
- (2013). “The Economist Who Mistook his Model for a Market,” in Jespersen, J. and Madsen, O., eds., *Teaching Post Keynesian Economics* (Cheltenham: Elgar), pp. 34–55.
- Vercelli, A. (2016). “Microfoundations, Methodological Individualism and Alternative Economic Visions,” *Review of Political Economy*, Vol. 28, No. 1, pp. 153–67.
- Walras, L. (1883). *Elements of Pure Economics*, Jaffe translation 1954 (Chicago, IL: Irwin).
- Wells, P. (1962). “Aggregate Supply and Demand: An Explanation of Chapter III,” *General Theory, the Canadian Journal of Economics and Political Science*, Vol. 28, No. 4, pp. 585–90.

5 Keynes's Chapter 2 definition of involuntary unemployment¹

Christopher Torr

Introduction

Sheila Dow has left her mark in many fields of economics, such as macroeconomics, microfoundations, methodology and the history of economic thought. From early on, and again more recently, she has investigated how different schools of thought treat microfoundations, an issue with obvious links to the labour market (Dow 1983, 1985a, 2016).

In this chapter, we examine the labour market definition of involuntary unemployment that appears in Keynes (1936, 15). Although not as topical a subject as it was in the aftermath of the *General theory*, issues related to involuntary unemployment surface from time to time. The issue of whether or not the economic system is self-adjusting is inextricably bound up with the issue of involuntary unemployment.

We also take a brief look at a couple of the more common criticisms levelled against Keynes's definition and distinguish between *Mark I* and *Mark II* versions. They are examined with the aid of four supply and demand diagrams of the labour market. Harrod's preference for *Mark I* is discussed.

In both the classical and the Keynesian systems, the presence of unemployment requires that the number of people seeking employment exceeds the number of jobs available. Ferguson (2013, 13) reminds us:

... the fact that there are more people looking for work than there are jobs available, or that there is an excess supply of labour at the going wage, cannot be used to differentiate between Keynesian involuntary and classical voluntary unemployment.

We need to clarify what it is about Keynesian involuntary unemployment that distinguishes it from classical voluntary unemployment, since the presence of an excess supply of labour does not on its own do so. In the process, we distinguish matters related to observation from those related to conception and start off with an example from astronomy.

Observation and conception

1973 was the year of the 500th anniversary of Copernicus's birth. The astronomer Owen Gingerich asked the designer Charles Eames to design a model for the commemoration, a suggestion that culminated in an exhibition at the IBM headquarters in New York. In his model, Eames sought to display the equivalence of the Ptolemaic and Copernican systems. The term, *equivalence* seems misplaced at first sight – the Ptolemaic system is, after all, geocentric, while the Copernican system is heliocentric. The equivalence has to do with the line of sight from Earth to Mars, and hence with matters related to observation and recorded data. A photograph of the Eames machine appears in Gingerich (2004, 146), with a sketch by Gingerich on page 44.

The Eames machine was up for auction in 2003, and a picture of it may be seen at:

<https://www.wright20.com/auctions/2003/05/modernist-20th-century/182>

To understand its workings, consider a rectangular board lying on its side, with the left-hand side of the board representing Ptolemy's geocentric system and the right-hand side Copernicus's heliocentric system. Draw two large circles on the left and right sides of the board and let the centre of both circles lie on an imaginary horizontal line which divides the board in two.

The circle on the right-hand side represents the orbit of Mars for a heliocentric system. Place a small red disk on this circle to represent Mars. Draw a smaller circle around the centre of the larger circle and place a blue disk on this to represent the Earth.

On the left-hand side, draw a smaller circle, the centre of which lies on the larger circle. Call this smaller circle an epicycle. Place a second small red disk on the epicycle to represent Mars in Ptolemy's system. Mars rides on the epicycle and the epicycle rides on the larger circle which is named the *deferent*. The term comes from the Latin word *ferre* which means *to carry*.

In Ptolemy's system, Mars moves around a motionless Earth. From ancient times, however, it was observed that Mars's motion was not uniform. Henry (2001, 15) notes:

The motions of the planets are ... not uniform and unchanging. Indeed, they occasionally stop then reverse their direction of travel for a while before stopping again and resuming their normal direction around the heavens. During these periods of reverse or retrograde motion they appear brighter and larger in the sky.

To accommodate the retrograde motion of the planets, and yet to retain the notion of circular motion, Ptolemy introduced the concept of an epicycle, which rides upon the deferent. In this fashion, Ptolemy sought to explain the retrograde behaviour of Mars. Viewed from above, both the epicycle and the deferent move in a counterclockwise direction.

Copernicus's system is easier for us to conceive of, because at school, we are taught that both the Earth and Mars go round the Sun. Viewed from above, both are moving in a counterclockwise direction. The blue disk on the inner lane (Earth) is moving faster than the red disk (Mars) in the outer lane, and from time to time the blue disk, will overtake the red one. To an observer on Earth, it will look as though Mars is moving backwards against the backdrop of the stars in the Zodiac.

In the Eames machine, rods connect the Earth to Mars in both systems. The rods represent the line of sight from Earth to Mars. The machine was calibrated in such a way that when set in motion, the rods always remained parallel to each other. Whether the observer was imagined to be sitting on the motionless earth of Ptolemy, or on the moving Earth of Copernicus, the line of sight from Earth to Mars remained equivalent, as reflected in the parallel rods.

Gingerich (2004, 45) describes the performance of the Eames model as follows:

In the exhibition, which opened in December of 1972, the Eames machine ran continuously without default for something like six months... As the circles turned, the rods, representing the observed line of sight to Mars, always remained parallel. Each time Mars came on the inner side of the epicycle, the combined counterclockwise motions of the deferent and epicycle caused the geocentric rod to briefly swing clockwise, the so-called retrograde motion. Whenever that happened, in the heliocentric model the faster-moving Earth was always nearest Mars and bypassing it, so the heliocentric rod remained in perfect tandem with the geocentric rod. It was a brilliant demonstration of the equivalence of the two systems, and what worked for Mars would work for each of the other planets.

The Eames model implies that the choice of which vision was correct could not have been based on the astronomical data alone. Both account for Mars's retrograde motion. Both visions can be regarded as having employed the same data.

Copernicus's book, *On the Revolutions of the Heavenly Spheres*, appeared in 1543. For at least 60 years thereafter, the Ptolemaic and Copernican systems served as competitive approaches. The Copernican system started outperforming its rival in terms of overall accuracy once Kepler had overthrown the notion (of both Copernicus and Ptolemy) that heavenly spheres exhibit circular motion. He replaced such circular motion with elliptical orbits. Other factors, such as the invention of the telescope also played a role in persuading observers to favour the heliocentric system.

To account for the unemployment of the 1930s, Keynes (1936, 7) argued that 'the population generally is seldom doing as much work as it would like to do on the basis of the current wage...' and added that '... more labour

would, as a rule, be forthcoming at the existing money-wage if it were demanded'. Here, Keynes is starting to paint the unemployment of the 1930s as involuntary even though he has yet to present his formal definition. Kahn (1976, 21) referred to these page 7 remarks as a 'perfectly adequate' definition of involuntary unemployment.

In his very next sentence, Keynes presented the opposing view on the unemployment of the times, which was that it was voluntary. Keynes maintained that the classical school accounted for the unemployment of the 1930s by arguing that workers were agreeing amongst themselves 'not to work for less' – behaviour that Keynes (1936, 8) classified as voluntary. It is ironical that this rigid wages view has come to be ascribed to Keynes, but this topic is not pursued here.

The 1930s thus witnessed the presence of two opposing views on the unemployment of the time, and we shall in what follows give an idea of the employment and unemployment data. For the moment, the point that we are making is that this was a time in which employment and unemployment data for the UK (or, for that matter, the USA) were being viewed in at least two different ways. If both sides are giving a reasonable account of the data, the argument cannot be clinched by appealing to the data alone.

The nature of some of the criticism levelled against Keynes's Chapter 2 definition

A common complaint directed against Keynes's Chapter 2 definition of involuntary unemployment has been that it is complicated, with several of the commentators specifically adding his or her lament to an existing chorus of complaints. Thus, Leijonhufvud (1968, 94) remarks that 'This definition has been regarded as most tortuously contrived by most later interpreters' and Hoover, (1995, 679) notes that it 'strikes many as extremely convoluted, and it has been the source of much confusion'. Ambrosi (2003, 89) remarks that: 'To this very day economists muse about the sense or nonsense of this passage'. Corry (1997, 220) notes that the '... ambiguities and misunderstandings that have plagued the interpretation of the concept begin with Keynes's famous and admittedly rather tortuous definition'. Hayes (2006, 50) refers to 'this convoluted definition', Patinkin (1979, 163) writes of 'the involved definition' and Rima (1986, 471) says it is 'familiar, though convoluted'. Darity and Young (1997, 22) refer to it as 'excessively complicated'. Chick (2006, 143) argues that 'By no standard of transparency or lucidity does it pass muster'. Ferguson (2013, 23–24) writes that 'This is not, it must be acknowledged, the most obvious of definitions and it is, not one which could be called easy to implement'. Kahn (1976, 21) wonders 'why it was necessary to be so complicated'.

Several of the above authors, even while acknowledging the complicated nature of Keynes's definition, proceed to provide some justification for its nature. Thus Chick (2006, 143), in the sentence immediately following the

above passage, goes on to, say: ‘But we may find that, once it is unravelled, it has the virtue of precision. We must work’. And the passage from Hayes (2006, 50) above reads in full: ‘The reason for this convoluted definition is that it allows Keynes to identify his point of departure from the Classical theory of employment on its own terms’. And even though he admits that the definition has caused confusion, Hoover (1995, 680) lets us know ‘Chapter 2 is neither redundant nor incoherent; it is indispensable’.

Some question its status as a definition. Sawyer and Spencer (2008, 718, 721) regard it as a test for the existence of involuntary unemployment rather than a definition. Leijonhufvud (1968, 94) and Ambrosi (2003, 89) both speak of it as a thought experiment. Chick (2006, 143) notes that it is ‘a hypothetical statement, a test, if you like, by which to judge whether this type of unemployment exists’.

Diagrams of the *Mark I* and *Mark II* definitions of involuntary unemployment

The definition of involuntary unemployment that appears in italics on page 15 of the *General theory* will be called the *Mark II* version. The *Mark I* version appears in Keynes (1973b, 366). (See Rivot (2001, 139–40).) *Mark II* is presented first as it is the better known of the two – in fact Meltzer (1988, 165) remarks that this definition ‘is one of the most frequently quoted passages in the book’. It provides a framework against which to examine the shorter *Mark I* version. The two versions are as follows:

Mark II

Men are involuntarily unemployed if, in the event of a small rise in the price of wage-goods relatively to the money-wage, both the aggregate supply of labour willing to work for the current money-wage and the aggregate demand for it at that wage would be greater than the existing volume of employment [italics in original].

Mark I

Men are involuntarily unemployed if the supply of labour, willing to work for a money wage worth in terms of wage goods the same or less than the existing money wage, is greater than the existing volume of employment [italics in original].

Following the lead of Ferguson (2013, 25), we highlight two elements which appear in both versions. The first is the phrase that appears right at the end of both – the ‘existing volume of employment’. This will be called the *EVE*. The other element ‘the existing money wage’ (*Mark I*), appears as the ‘current money-wage’ in *Mark II*. Keynes uses the two variations interchangeably in Chapter 2, and we stick to *EMW* to indicate the existing money-wage. In

this chapter, we ignore, any measurement or aggregation problems related to either the *EVE* or the *EMW*.

Keynes uses the labour supply and demand apparatus to represent the classical conception of the labour market. Fleetwood (2014) has raised the question of whether labour supply and demand curves exist, but we do not go into this issue.

Supply and demand are presented in Figure 5.1, with the real wage on the vertical axis and the volume of employment on the horizontal. This is the kind of diagram used by several observers when they discuss Keynes's definition of involuntary unemployment – see Chick (1983, 73, 140), Perlman (1960, 230, 1969, 145) and Patinkin (1979, 160). The analysis can also, of course, be carried out with the money-wage measured along the vertical axis. This is the method employed by Smithin (1985, 220). Figure 5.2 represents this type of approach.

Figures 5.1 and 5.2 tell the same story. In Figure 5.1, the real-wage falls when the price level increases, and this is reflected by a downward shift of a horizontal line. In Figure 5.2, the supply and demand curves shift upwards when the price level increases.

The following statement appears in *Mark II*:

... a small rise in the price of wage-goods relatively to the money-wage...

Let us refer to this whole statement as a small price rise (*SPR*). In Figure 5.1, therefore, we can say that an *SPR* amounts to a fall in the real wage, with the supply (*S*) and demand (*D*) curves not shifting. In Figure 5.2, the *SPR* leads to the supply and demand curves shifting upwards.

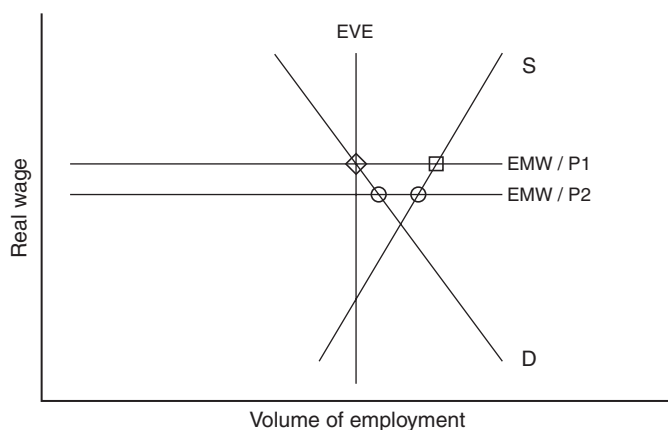


Figure 5.1 Involuntary Unemployment Mark II – real wage.

Source: Author's construction based on Chick (1983, 73, 140), Perlman (1960, 230, 1969, 145), and Patinkin (1979, 160).

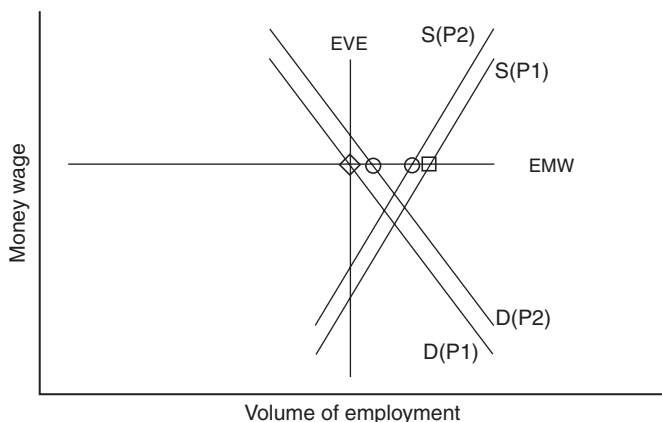


Figure 5.2 Involuntary Unemployment Mark II – money wage.
Source: Author's construction based on Smithin (1985, 220).

In both Figures 5.1 and 5.2, a vertical line has been drawn to depict the *EVE*. To keep matters simple, we assume that $P1 = 1$. Because the shift in supply and demand curves in Figure 5.2 does not affect the *EMW*, we have a convenient way of examining the *SPR* along a horizontal *EMW* line. In Figure 5.1, we must consider the *EMW* as embedded in the real wage. Since both diagrams are illustrating the same story, we can jump back and forwards from one diagram to the other when considering *Mark II*. We proceed as if there are no insurmountable problems in measuring either the *EVE* or the *EMW*.

Keynes (1936, 6) relates the marginal product of labour to the first classical postulate and argues that it 'gives us the [classical] demand schedule for employment' (Keynes 1936, 7). This is the *D*-curve in Figure 5.1 and in Figure 5.2 the downward sloping lines give us the schedules of the value of the marginal product of labour for *P1* and *P2*. To simplify matters, the *SPR* in Figure 5.2 shifts the demand and supply curves upwards by equal amounts. This will not be the case when heterogeneous goods are involved (Chick 1983, 141–2; Hoover 1995, 661–2).

The following symbols appear in Figures 5.1 and 5.2.

A diamond (◊) depicts the *EVE* at the *EMW*. As has been indicated, the *EMW* is most easily conceived of in Figure 5.2, which has the money wage on the vertical axis. In Figure 5.1, we need to conceive of the *EMW* as being embedded in the real wage.

A square (◻) marks a point on the supply curve at the *EMW* before the *SPR*.

The square and the diamond are used to measure the number of unemployed and we do this before the introduction of the *SPR*. The labour force (*LF*) is assumed to consist of the number of employed (*E*) plus the number of unemployed (*U*) and we use this to calculate the unemployment rate (*Ur*). Chick (1983, 139) points out that 'In practice, the labour force varies in size,

the level of participation depending, *inter alia*, on the level and structure of wage rates...'

A circle (○) is used to mark both the supply and demand positions arising from the *SPR*.

If we come across a configuration of $\diamond \circ \circ$, the *SPR* has generated points on the supply and demand curves to the right of the *EVE*. Hence, the test (thought experiment) tells us that the unemployment (measured before the *SPR*) is involuntary.

If we come across a configuration of $\circ \diamond \circ$, the *SPR* has generated supply and demand points on either side of the *EVE*, which indicates excess demand and the absence of involuntary unemployment. The *EVE* is lying to the right of the intersection of the supply and demand curves.

Let us go over the *Mark II* procedure in a briefer fashion.

We identify the diamond (which gives us E) and the square (which gives us LF).

The difference between the two gives us the number of unemployed (U). We assume the extent of U corresponds to the monthly administrative unemployment figures and calculate the unemployment rate (Ur).

We introduce the *SPR*, perform the thought experiment and establish the ensuing diamond-circle configuration. This is mostly easily seen in Figure 5.2, where the symbols appear on a horizontal line.

With a $\diamond \circ \circ$ configuration, the already identified unemployment is held to be involuntary.

With a $\circ \diamond \circ$ configuration, involuntary unemployment is absent.

In order not to complicate matters, we have assumed that the supply and demand curves that Keynes has in mind for the classical case have conventional slopes. *Mark II* can, however, also accommodate the presence of a backwards sloping supply curve if the *SPR* generates a situation in which there is an excess supply of labour.

In the paragraph immediately following Keynes's *Mark II* (1936, 15, 16), Keynes indicates that the intersection of the supply and demand curves represents full employment.

With repeated thought experiments for all conceivable existing volumes of employment, *Mark II* would identify a zone of excess labour supply in which involuntary unemployment is present. The zone consists of all points on the classical demand curve at less than full employment (see Patinkin (1979, 163) and Chick (1983, 143, Figure 7.4)).

The presence of an excess supply of labour is compatible with both voluntary and involuntary unemployment. In *Mark II*, the position of the circles is presented in conjunction with the position of the diamond (the *EVE*). In the classical conception, the placement of the circles is viewed in relation to the position towards which the system is supposed to be moving, which is at the intersection of the supply and demand curves.

What determines the *EVE*? In Chapter 2 of the *General theory*, Keynes is trying to illustrate the presence of involuntary unemployment on a classical supply and demand framework and does not explicitly bring the principle of

effective demand into the picture. In Chapter 3, the level of employment is determined by the principle of effective demand. When Keynes specifies an *EVE* in *Mark II* of Chapter 2, he is paving the way towards the introduction of the principle of effective demand in Chapter 3.

At positions of less than full employment, something other than labour supply and demand forces are determining the *EVE*. Workers who find themselves unemployed cannot negotiate their way out of a situation which is not of their own making. Unless exogenous expenditure is high enough, the *EVE* will not be at full employment. The situation is different at positions beyond full employment, where supply and demand forces (in the labour market) can prevail. In terms of *Mark II*, involuntary unemployment ceases to exist beyond full employment.

With the aid of Figure 5.1, let us review the situation in terms of observation (data) and in terms of conception. The diamond position gives us the *EVE*. We shall soon be presenting some employment and unemployment figures, but for the moment let us note that in 1932 the employment figure was around 10 million persons and the total number of employed and unemployed a bit more than 12 million. Before any supply or demand lines are drawn in Figure 5.1, and before any circles are added to the picture, we know how far we must move horizontally to get to the diamond (about 10 million) and to the square (about 12 million). Because the demand curve is supposed to reflect the marginal product, we can presumably (by a suitable choice of units and possibly by appropriate use of index numbers), arrive at the vertical position of the diamond, through which the demand curve must go. But we have then only one point on the demand curve. If we take the square to be situated at the same height as the diamond, we have a point on the supply curve, through which we hope to draw a supply curve. We have, of course, assumed that the supply and demand curves are linear, and that they have conventional slopes. But that, however, is about as far as we can go empirically. The D curve must go through the diamond, and the S curve must go through the square, but we thereafter proceed on *a priori* grounds when we draw the actual curves. Of course, the thought-experiment of *Mark II* specifies an *SPR* – which stands for a *small* price rise. If we draw the circles before the lines, the subsequent demand curve should go through the diamond and a circle, and the supply curve should go through a square and a circle. Other than such considerations, the overall picture that emerges is that the placement of the circles and hence the consequent supply and demand curves stem from *a priori* reasoning. If that is the case, so does the point at which the curves intersect. The intersection is the point at which involuntary unemployment is non-existent.

Harrod's complaint

A comparison of the *Mark I* and *II* versions of the definition of involuntary unemployment indicates that the aggregate supply of labour and the

aggregate demand for it appears both appear in *Mark II*, whereas only the aggregate supply of labour appears in *Mark I*.

Figures 5.3 and 5.4 illustrate Keynes's *Mark I* version of the definition of involuntary unemployment. But for the fact that they do not contain demand curves for labour, Figures 5.3 and 5.4 are the same as Figures 5.1 and 5.2, respectively.

Consider Figure 5.4. In effect, the *Mark I* version asks us to consider the effect of an *SPR*, where we are supplanting *Mark II* price considerations into *Mark I* without changing the nature of the argument. $S(P1)$ accordingly shifts

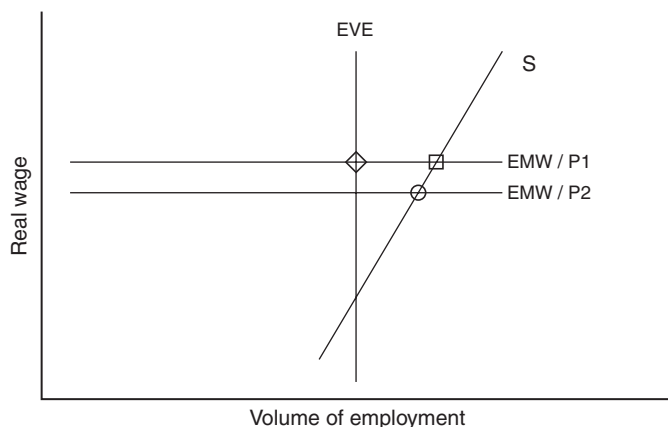


Figure 5.3 Involuntary Unemployment Mark I – real wage.
Source: Author's construction.

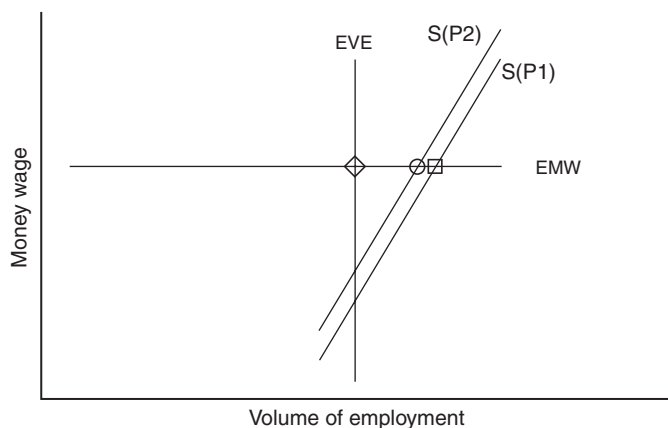


Figure 5.4 Involuntary Unemployment Mark I – money wage.
Source: Author's construction.

upwards to $S(P2)$. The circle on $S(P2)$ – which reflects the *SPR* – lies to the right of the *EVE* (indicated by the diamond), also situated along the *EMW*.

We can depict this by the expression as $\diamond \circ$. In terms of *Mark I*, this represents involuntary unemployment.

Figure 5.3 gives the same result in the real wage diagram. Start at the position of the diamond (\diamond) and introduce an *SPR*. The real wage falls. We arrive at the circle on the supply curve, and as this lies to the right of the *EVE*, we have involuntary unemployment.

Soon after noticing what we have called the *Mark II* version, Harrod wrote to Keynes (on 19 August 1935):

I prefer your former definition. It seems to me clearer; also I think it is better because it does not bring in demand. ... You have made the requisite breach with classical theory by pointing out that at the existing real wage and even at a lower one more labour is available than employed. I think the introduction of demand is confusing at this point.

[See Harrod's letter in Keynes (1973a, 543).]

Keynes's response appears in a footnote on this page:

It [the introduction of demand] is rather confusing but it is not correct without it.

We accordingly have it on good authority that *Mark II* is 'rather confusing'. Unfortunately, Keynes did not elaborate why (on reflection) he considered *Mark I* to be incorrect.

Keynes may have moved from *Mark I* to *Mark II* because the definition of involuntary unemployment requires the identification of full employment, and without the explicit presence of demand in the definition, the definition can presumably not distinguish an *EVE* of massive unemployment from an *EVE* of over full employment. However, even if demand is not explicitly mentioned in *Mark I*, it is surely still there behind the scenes. Keynes was prepared to accept that the real wage was inversely related to the volume of employment (1936, 17).

We saw above that when referring to what we have called *Mark II*, Chick (2006, 143) remarked that:

By no standard of transparency or lucidity does it pass muster. But we may find that, once it is unravelled, it has the virtue of precision.

We may refer to this as the Chick effect. By this we mean that, if a more complicated way of conceiving things leads to greater precision, we should go for it even if it entails unravelment. Unravelment involves recognising the key role of *EVE* in *Mark II*. That it does so, can be seen by Keynes's comments a few years after the appearance of the *General theory* in 1936. His next book,

How to Pay for the War appeared in 1940 and in it we find Keynes (1940, 17–8) writing:

But we have become so accustomed to the problem of unemployment... that it requires some elasticity of mind to adapt our behaviour to the problem of full employment... The nature of unemployment to-day is totally different from what it was a year ago. It is no longer caused by a deficiency of demand.

The Harrod episode shows that Keynes's decision to go ahead with Mark II was not idly chosen. He wanted to bring supply and demand into the proceedings, *as far as the classical scheme was concerned*. At the same time, however, the key to *Mark II* lies in the realisation that supply and demand conditions cannot be evaluated independently of the *EVE*. *Mark II* distinguishes an *EVE* of massive unemployment from an *EVE* of over full employment.

Employment and unemployment (1922–1948)

Table 5.1 presents employment and unemployment figures for periods before and after the appearance of *Mark II* in 1936. The data for unemployment (U) and the unemployment rate (Ur) have been obtained from Denman and McDonald (1996). The annual labour force (LF) and annual employment (E) figures are calculated from their U and Ur data figures.

In analysing Keynes's definition of involuntary unemployment, we have emphasised the punchline in the last four words of both *Mark I* and *Mark II*, namely, the *existing volume of employment* or *EVE*. The employment figures that appear in Table 5.1 are depicted in Figure 5.5, in which we can also follow the unemployment figures and the unemployment rate (Figures 5.5 and 5.6).

In Figure 5.5, a diamond marks the 1932 and 1940 employment figures. In those two years, the unemployment rate fell from around 22% to 6% (Table 5.1 and Figure 5.6). It is worth bearing such figures in mind when we recall the supply and demand diagrams of Figures 5.1 and 5.2 in which we suggested superimposing an *EVE* of around 10 million persons for the 1932 situation. We have just seen how Keynes distinguished the nature of unemployment in 1940 from what it had been a year previously.

Consider Figure 5.1 again. In this figure, we drew linear demand and supply curves going through the diamond and the square, respectively. Thereafter, by applying the *SPR*, we indicated where the circles might lie. These circles lie on the imagined linear curves. The data obtainable from Table 5.1, however, have to do only with the positions of the diamond and the square (from which we can calculate the unemployment rate), not with the positions of the circles. The intersection of the linear supply and demand curves gives us the point of full employment, but if we had imagined different slopes for these two curves (still going through the diamond and the square), we would have imagined a different intersection of the two curves.

Table 5.1 Administrative Unemployment in the United Kingdom (1922–1948)

Year	Employment (own calculations)	Unemployment	Labour force (own calculations)	Unemployment rate
	E	U	LF	Ur
1922	9238220	1541500	10779720	14.3
1923	9751173	1292058	11043231	11.7
1924	10040086	1152875	11192961	10.3
1925	10116054	1288742	11404796	11.3
1926	10088225	1441175	11529400	12.5
1927	10626774	1141525	11768299	9.7
1928	10628494	1286858	11915352	10.8
1929	10993162	1275992	12269154	10.4
1930	10573589	2014017	12587606	16.0
1931	10043764	2718325	12762089	21.3
1932	9915711	2813058	12728769	22.1
1933	10418502	2588367	13006869	19.9
1934	11078735	2221067	13299802	16.7
1935	11481778	2106125	13587903	15.5
1936	12084407	1821700	13906107	13.1
1937	12859667	1557000	14416667	10.8
1938	12702873	1881367	14584240	12.9
1939	15504824	1589800	17094624	9.3
1940	16220092	1035325	17255417	6.0
1941	17404710	391517	17796227	2.2
1942	17870508	144117	18014625	0.8
1943	16413425	99075	16512500	0.6
1944	14839592	89575	14929167	0.6
1945	15357948	202283	15560231	1.3
1946	15200562	389758	15590320	2.5
1947	15493310	495658	15988968	3.1
1948	18031975	330525	18362500	1.8

Source: Denman and McDonald (1996, 6–7).

In terms of Figure 5.1, we have a linear, conventionally sloped demand curve going through the diamond, which represents (in terms of Table 5.1) a volume of employment of 9.915 million for 1932. In terms of the conventionally sloped linear supply curve going through the square in Figure 5.1, we have a total labour force of 12.728 million (see Table 5.1) for 1932. The (administered) unemployment rate emerging from the data is thus $(12.728 - 9.915)/12.728 = 22.1\%$. The intersection of these two linear supply and demand curves has, therefore, to lie somewhere between 9.915 and 12.728 million. If we do a similar calculation for 1940, with an *EVE* of 16.22 and a labour force of 17.255, we get an unemployment rate of 6%. Here, the intersection of two conventionally sloped supply and demand curves would point towards an intersection lying between 16.22 and 17.255 million, well in excess of the implied 1932 figure lying between 9.915 and 12.729. Full employment is a moveable feast.

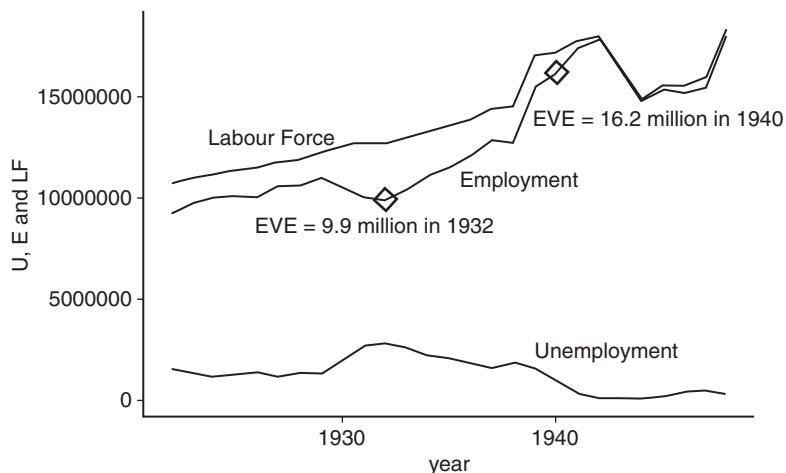


Figure 5.5 Employment, unemployment and the labour force, UK 1922–1948.
Source: Author's construction based on Denman and McDonald (1996, 6–7).

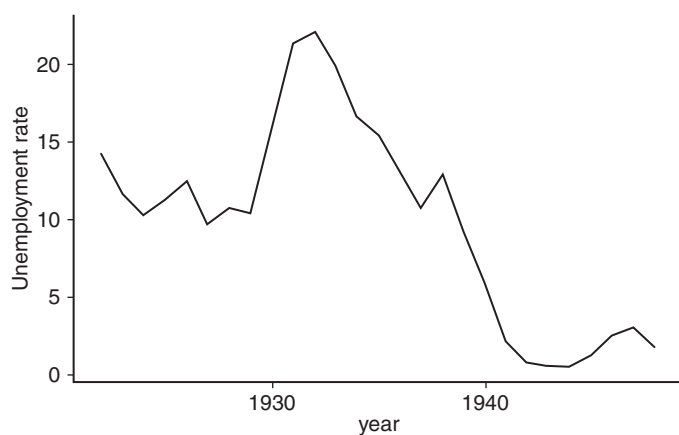


Figure 5.6 The unemployment rate, UK 1922–1948.
Source: Author's construction based on Denman and McDonald (1996, 6–7).

We have employed labour and supply curves in Figures 5.1 and 5.2 to find our way through *Mark II*. To superimpose Table 5.1 figures on to such diagrams requires a great deal of care. We can assume without too much concern that the annual employment figures may be used in lieu of the *EVE* and we may argue that by suitable indexing we can arrive at a vertical point above that year for a point on the demand curve for labour. It remains, however, a point, and the specification of a linear demand with a conventional slope

running through that point represents *a priori* reasoning. The position and slope of the curves have not been determined empirically.

As is evident, we have used only employment and unemployment data in presenting the historical position. This was because the main aim was to unravel *Mark II*, and we can get quite a long way by considering employment and unemployment conditions in the 1930s. To go further, however, would require an examination of the wage and price history as well. Even with the addition of price and wage data to the quantity data, the identification of the demand and supply curves remains a problem. With market-related data, how do we know if the data is registering a position on the supply curve or the demand curve?

Conclusion

Near the start of the COVID-19 inter-regnum, the *New York Times* (Saturday 9 May 2020) carried a front-page headline claiming that: ‘U.S. UNEMPLOYMENT IS WORST SINCE DEPRESSION’.

The extent of the unemployment problem was conveyed by means of several graphs. The accompanying front-page commentary had a lot to do with unemployment, but there was no mention of it being involuntary.

While the issue of large-scale unemployment is never far from the headlines, the issue of whether it is involuntary has largely disappeared from popular discourse. This emphasis reminds us of Kahn’s remarks (in 1976) when he was asked to comment on the issue of involuntary unemployment (from a 1930s perspective). His remarks indicate that during the Great Depression he seemed more interested in the problem of unemployment than on whether it was voluntary (see Kahn (1976, 21)). In his postscript, however, Kahn indicated that the distinction was ‘very important *conceptually*’ (Kahn 1976, 31, emphasis added).

Although the topic of involuntary unemployment has largely disappeared, related issues surface regularly. This is surely because the notion of involuntary unemployed is inextricably bound up with the issue of whether or not the economic system is self-adjusting. This is an issue which Leijonhufvud (1973, 28) regards as ‘the central issue in macroeconomic theory’. (Leijonhufvud uses the term self-regulating rather than self-adjusting.)

The voluntary – involuntary distinction seems to emerge quite naturally from the issue of self-adjustment, but Keynes himself was not immune to the temptation of addressing self-adjustment on its own rather than the involuntary unemployment it could imply. In 1934, he wrote an article in *The Listener* (21 November 1934) in which he commented at length on the fact that the economic system was not self-adjusting without ever mentioning involuntary unemployment. His position on self-adjustment is nevertheless abundantly clear:

The system is not self-adjusting, and, without purposive direction, it is incapable of translating our actual poverty into our potential plenty.

(Keynes, 1973a, 491. *The Listener* article appears in this edition.)

There seems little doubt where Pigou (1941, 78, 81–2) stood on the issue of self-adjustment:

What, then, *is* the classical view? It is – and, as one who is supposed to hold it, I am perhaps in a better position to know than those who say that they do not – that full employment does, indeed, not always exist, but always *tends* to be established. ... If there were no friction, no immobility, and perfect competition among wage-earners, these correcting adjustments would keep practically the whole available labour force continuously employed.

With Pigou, the presence of unemployment emerges because some or other spanner-in-the-works prevents full employment from being reached. From a conceptual point of view, the notion of an excess supply of labour is related to the equilibrium position (at full employment).

In this chapter, we have put forward an interpretation of Keynes's definition of involuntary unemployment (*Mark II*), which emphasises the *EVE*. An excess supply of labour has to be viewed in relation to the *EVE*, which in the *Mark II* version of involuntary unemployment has yet to be explained. It is, however, present as an observational entity. If we don't distinguish between the two ways in which an excess supply of labour is to be conceived, we have what we may refer to as the Ferguson problem:

It is not sufficient to say that there is involuntary unemployment when there are more people willing to work at the going wage than there are jobs available, since that condition also applies in the case of classical voluntary unemployment.

(Ferguson 2013, 23)

In the *General theory*, Keynes (1936, Chapter 2) invites us to investigate the excess supply of labour in relation to the *EVE*. In his system, the system is not self-adjusting.

In *Equilibrium and unemployment*, Pigou (1941, 78, 81–2) invites us to consider the labour supply and demand situation in relation to the intersection of the supply and demand curves. In his system, there is a tendency to full employment.

In Chapter 2, Keynes has yet to present his conception of how the economic system works. This does not prevent him from here discussing the concept of involuntary unemployment in relation to the existing volume of employment – which we have referred to as the *EVE*. In Chapter 2, therefore, the *EVE* comes across as an observational term, but its level has yet to be explained. In other words, the *Mark II* definition of involuntary unemployment specifies such unemployment in relation to the *EVE*, but does not specify how *EVE* comes about.

In Chapter 3, the *EVE* retains its observational status, but Keynes now turns to the task of showing how the principle of effective demand determines

the *EVE*. We do well to remind ourselves that *EVE* is an acronym for the last four words of the *Mark II* definition of involuntary unemployment. When we re-read this definition through the lens of Chapter 3, those four words morph into something which is explicable in terms of Keynes's theoretical contribution even as they retain their observational status.

Note

- 1 I should like John Hart and Philippe Burger for the advice they gave me while I was preparing this paper.

References

- Ambrosi, M. (2003). *Keynes, Pigou and Cambridge Keynesians*. Basingstoke: Palgrave Macmillan.
- Chick, V. (1983). *Macroeconomics after Keynes*. Deddington: Philip Allan Publishers.
- (2006). The General Theory is difficult; whose fault is that? *Revista de Economia*, 32(2), 135–51. <http://dx.doi.org/10.5380/re.v32i2.7732>
- Corry, B. (1997). Keynes's use of the term 'involuntary unemployment'. In Arestis, P., Palma, G.J. and Sawyer, M.C. (eds), *Capital Controversy, Post Keynesianism and the History of Economic Thought: Essays in Honour of Geoff Harcourt*, Vol. 1. London and New York: Routledge, 212–225.
- Darity, W. and Young, W. (1997). Keynes's concept of involuntary unemployment. In Harcourt, G.C. and Riach, P.A. (eds), *A 'Second edition' of the General Theory*, Vol. 1. London and New York: Routledge, 20–7.
- Denman, J. and McDonald, P. (1996). Unemployment statistics from 1881 to the present day. *Labour Market Trends*, 104, 5–18.
- Dow, S. (1983). Schools of thought in macroeconomics: The method is the message. *Australian Economic Papers*, 22(4), 30–47.
- (1985a). Microfoundations: A diversity of treatments. *Eastern Economic Journal*, 11(4), 342–60. <https://www.jstor.org/stable/40325001>
- (2016). Consistency in pluralism and the role of microfoundations. In J. Courvisanos, J. Doughney and A. Millmow (eds), *Reclaiming Pluralism in Economics*. London: Routledge, 32–46.
- Ferguson, B.S. (2013). Lectures on John Maynard Keynes' *General Theory of Employment, Interest and Money* (2): Chapter 2, "The Postulates of the Classical Economics". Guelph Ontario: College of Management and Economics, Discussion Paper. 2013–07.
- Fleetwood, S. (2014) Do labour supply and demand curves exist? *Cambridge Journal of Economics*, 38(5), 1087–113. <http://dx.doi.org/10.1093/cje/beu003>
- Gingerich, O. (2004). *The Book Nobody Read. Chasing the Revolutions of Nicolaus Copernicus*. London: William Heinemann.
- Hayes, M. (2006). *The Economics of Keynes. A New Guide to the General Theory*. Cheltenham: Edward Elgar.
- Henry, J. (2001). *Moving Heaven and Earth. Copernicus and the Solar System*. Cambridge: Icon Books.
- Hoover, K.D. (1995). Relative wages, rationality, and involuntary unemployment in Keynes's labour market. *History of Political Economy*, 27(4), 653–85. <http://dx.doi.org/10.1215/00182702-27-4-653>

- Kahn, R.F. (1976). Unemployment as seen by the Keynesians. In Worswick G.D.N. (ed.), *The Concept and Measurement of Involuntary Unemployment*. London: Allen & Unwin, 19–33.
- Keynes, J.M. (1936). *The General Theory of Employment, Interest and Money*. London: Macmillan.
- (1940). *How to Pay for the War. A Radical Plan for the Chancellor of the Exchequer*. London: Macmillan.
- (1973a). The general theory and after. Part I; Preparation. In *The Collected Writings of John Maynard Keynes*, Vol. XIII. London: Macmillan.
- (1973b). The general theory and after. Part II; Defence and development. In *The Collected Writings of John Maynard Keynes*, Vol. XIV. London: Macmillan.
- Leijonhufvud, A. (1968). *On Keynesian Economics and the Economics of Keynes*. New York: Oxford University Press.
- (1973). Effective demand failures. *The Swedish Journal of Economics*, 75(1), 27–48. <https://0-doi-org.oasis.unisa.ac.za/10.2307/3439273>
- Meltzer, A. (1988). *Keynes's Monetary Theory. A Different Interpretation*. Cambridge: Cambridge University Press.
- Patinkin, D. (1979). A study of Keynes' theory of effective demand. *Economic Inquiry*, 17(2), 155–76. <https://doi.org/10.1111/j.1465-7295.1979.tb00306.x>
- Pigou A. (1941). *Employment and Equilibrium. A Theoretical Discussion*. London: Macmillan.
- Perlman, R. (1960). A reformulation of Keynesian wage theory. *Southern Economic Journal*, 26(1), 229–33. <https://doi.org/10.2307/1054955>
- (1969). *Labour Theory*. New York: Wiley.
- Rima, I. (1986). The Pigou-Keynes controversy about involuntary unemployment: A half-century reinterpretation. *Eastern Economic Journal*, 12 (4), 467–77. <https://www.jstor.org/stable/40325054>
- Rivot, S. (2001). The evolution of the concept of involuntary unemployment: From Keynes to the new Keynesians. *History of Economic Ideas*, 9(1), 121–44. <https://www.jstor.org/stable/23723594>
- Sawyer, M. and Spencer, D. (2008). On the definition of involuntary unemployment. *The Journal of Socio-Economics*, 37(2), 718–35. <https://doi.org/10.1016/j.socec.2006.12.049>
- Smithin, J. (1985). The definition of involuntary unemployment in Keynes' *General theory*: a note. *History of Political Economy*, 17(2), 219–22. <https://0-doi-org.oasis.unisa.ac.za/10.1215/00182702-17-2-219>

6 What Keynes learned from Kalecki – a brief introduction to the fiscal theory of debt management

Jan Toporowski

Introduction

I am delighted to have this opportunity to pay tribute to the work of Sheila Dow, one of the pioneering post-Keynesians who I first met at the original meetings of the post-Keynesian Study Group at the end of the 1980s. I had just made my transition from banking to academic work. In the course of my research, I visited the library of the London School of Economics, where I was struck with awe on seeing a whole shelf of books authored and edited by Sheila Dow. This was just as university professors were starting to be assessed on their productivity in producing journal articles. Despite this Sheila Dow has achieved a distinctive profile and an international reputation, by going against the tide of what was expected of academic output and, in this way, showing where true scholarship lies in economics.

Sheila Dow, along with her friend Victoria Chick, came to have a huge influence on my work and my thinking because of their undogmatic approach to a post-Keynesianism rooted in the history of economic ideas, rather than to post-Keynesianism as a school of thought whose adherents ‘believe’ in a set of doctrines. Sheila Dow’s openness has undoubtedly enlarged the impact of post-Keynesianism outside the circle of its devotees and gives hope at a time when it is almost *de rigueur* to decry the future of the discipline and diminish its scholarly pretensions. This essay in the history of economic ideas, and the relevance today of old ideas, is its author’s modest tribute to a great post-Keynesian.

Financing full employment

In 1944, the Oxford Institute of Statistics prepared a set of studies, under the title *The Economics of Full Employment*. Michał Kalecki, at that time working in the Institute, contributed to this set a chapter entitled ‘Three Ways to Full Employment’. The three ways were deficit spending on public investment and social welfare, financed by borrowing, stimulating private investment and redistributing income from those on higher incomes to households on lower incomes.

Kalecki reiterated his previous arguments that a fiscal deficit always finances itself, in the sense that the spending ensures that funds accrue in bank accounts to finance the government borrowing. The problem is merely an inter-temporal one of securing the funds for the government before they arrive in the bank accounts. But this is made easy by the fact that the capitalists who hold bank accounts have money in them in the first place. The rate of interest would not rise as long as the central bank expanded commercial banks reserves sufficiently to allow commercial banks to maintain their cash and reserve ratios. If the rate of interest on government bonds started to rise, then the government could always switch its financing to shorter-term bills. In this way, as with the war-time fiscal deficit, the government borrowing could continue without affecting the rate of interest. Wage pressure on prices of consumer goods could be regulated by a combination of price controls, subsidies and income tax. Concerns about the 'burden' of the national debt could be met by servicing it from the proceeds of a capital levy, or a tax on profits with the amounts of fixed capital investment deducted from the profits liable to tax. This last Kalecki called a modified income tax that would have a neutral effect on output and employment. The capital levy idea cannot have failed to appeal to John Maynard Keynes, working on government finances in the British Treasury. In the footsteps of David Ricardo, Joseph Schumpeter, John A. Hobson and Otto Bauer, Keynes had been a long-standing advocate of a capital levy ('... the scientific, expedient... rational, the deliberate method' of financing government debt, Keynes 1923, p. 65. See also Balogh 1944).

Kalecki found the regulation of private investment to be the most problematic way of securing full employment. The optimal amount of such investment was the amount that would keep productive capacity growing with the level of consumption and total expenditure. However, investment is the least stable part of expenditure in an economy. It was therefore unlikely to be regulated by the rate of interest, where the relevant long-term rate of interest is relatively stable, indicating only a very weak relationship between policy rates of interest, which are short-term, and the level of private investment, or by tax allowances. Either of these measures would require cumulative reductions to maintain their effect so that, in time, a government would be unable to reduce interest rates or taxes any further.¹ Another way may be to use public investment to augment and stimulate private investment. But such public investment depends on social need and, if that need is not there, it may be preferable to subsidise consumption with welfare payments. The problem with relying on private investment is that it also adds to productive capacity. Excess capacity would emerge because the rate of investment required to maintain full employment is less than that required to maintain full capacity utilisation. Such excess capacity will tend to depress investment.

Relying on private investment to achieve full employment was, in Kalecki's view, a 'fundamental error'.

The proper role of private investment is to provide tools for consumption goods, and not to provide enough work to employ all available labour...

Both public and private investment should be carried out only to the extent to which they are considered useful. If the effective demand thus generated fails to provide full employment, the gap should be filled by increasing consumption [by subsidizing consumption and welfare payments] and not by piling up unwanted public or private capital equipment. (Kalecki 1944, pp. 52–3)

There was moreover ‘a technical but important disadvantage’, relative to government expenditure, of using private investment to secure full employment. ‘Government spending can never fail to achieve immediately the desired employment if it is on a sufficient scale, because it generates effective demand directly. The effects of stimuli to private investment depend, however, on the reaction of entrepreneurs, and it is quite possible that when they are in a very pessimistic mood they may not respond even to considerable inducements. This may happen, for instance, if they do not feel confidence in the political situation.’ Private investment, therefore, cannot be regarded as a ‘satisfactory’ policy for achieving full employment.

The third way of achieving full employment is by redistributing income to achieve higher consumption by taxing higher incomes and subsidising, with welfare payments, those on lower incomes. The tax on higher incomes would have to be ‘modified’ by allowing deductions for business investment, so that the redistribution does not adversely affect private investment. The redistribution would result in a more equal distribution of income after tax. Such redistribution was likely to meet with much stronger opposition than the policy of deficit financing. It may therefore be necessary to reinforce redistribution with deficit spending by the government.

Kalecki noted two further distributional aspects of full employment. Wage bargaining, he argued, would have a different role in a regime of full employment. With the economy operating at full capacity, maintaining demand at the level of the output of consumer goods may require taxation to be higher than planned for under a policy of fiscal stimulus. Prices could be kept constant by price controls. The other aspect concerned the distribution of income between profits and wages. Price controls would have the effect of redistributing income from profits to wages, by increasing real wages. Here too, price controls may need to be supplemented by increased taxation on higher incomes. This will also mean ‘linking up trade union bargaining with general economic bargaining’ over price controls (Kalecki 1944, pp. 56–7).

Kalecki concluded that the most reliable way of securing full employment was by a combination of deficit financing and redistribution through taxes, subsidies, price controls and welfare payments. At the same time, it would be necessary to ensure that private investment provided sufficient capacity for demand, given full employment and labour productivity. Private investment could be encouraged by making fixed investment deductible against tax, or by replacing income tax with wealth taxes, which will have no effect on the profitability of investment. Such incentives for investment could be

supplemented by public investment, for example, in slum clearance (Kalecki 1944, pp. 57–8).

Keynes, who had urged in his *General Theory* ‘the socialisation of investment’ (Keynes 1936, p. 378) as a solution to the problem of unemployment, was impressed. He wrote to Kalecki to thank him for the book. ‘Your own contribution seems to me most striking and original, particularly pages 44–6; also most beautifully compressed. It is a great comfort to read something so short and so much to the point. I am very much taken with your modified income tax (i.e., the tax on profits). It will be alleged, I am afraid, that the difficulties of transition would be excessive, since it would mean that a new business might have next to no tax to pay for years, which would appear to give it a great competitive advantage. Nevertheless, there is, I think, a good answer to this, and such criticisms, which would be certain to arise, would be based on a fallacy.’ (Letter of J.M. Keynes to M. Kalecki dated 30 December 1944 in Keynes 1980, pp. 381–82).

‘Inside’ and ‘outside’ debt

Pages 44–6 in Kalecki’s essay were where Kalecki advanced the idea of the national debt as not ‘a burden to society as a whole because in essence it constitutes an internal transfer’ and proposed a wealth tax, or a tax on profits from which investment could be deducted. Kalecki clearly had in mind debt issued in the domestic currency, in the fiscal jurisdiction of the government. Such *inside* debt needs to be distinguished from *outside* debt owed to residents in a foreign country. The most salient difference between the two kinds of debt concerns their effect on the financial resources of a country. *Internal* debt conserves financial resources, because the counterpart of the government’s liability is the asset held by residents who are owed money by the government. Such government debt merely requires regular transfers of money from taxpayers to holders of government bonds in the form of interest and agreed repayments. By contrast, *external* debt drains the financial resources of the economy: these liabilities of a government are assets for foreign residents because interest and repayments are transfers from taxpayers in the economy to residents outside the country.

The distinction between internal and external debt highlights the ingenuity of Keynes’s and Kalecki’s proposals for a capital levy to pay for the servicing of government debt. The national debt, in Kalecki’s approach, is a system for redistributing monetary resources from taxpayers in general to the smaller, wealthier group of government bond-holders (although today, in the 21st century, a significant proportion of governments bonds are held on behalf of the less wealthy in pension funds and insurance companies). Such transfers are in general regressive. However, a tax levied on capital wealth, or a wealth tax, to pay for servicing the government’s debt, would reverse this regressive transfer, by making the transfer from wealthy taxpayers to wealthy bond-holders. Since the asset counterpart of government debt is wealth, a

capital levy effectively mobilises the monetary assets of the wealthy to pay interest to the wealthy and repay bonds held by them. Kalecki had already argued for that in his earlier paper on ‘Political Aspects of Full Employment’, pointing out an additional advantage of this financing, that it does not affect the incentive to invest (Kalecki 1943). Similarly, the tax on profits, with deductions for investment, would not reduce the returns from investment.

Behind Kalecki’s advocacy of wealth and profit taxes lies an important and novel principle of taxation. In the neo-classical theory of taxation, taxes are supposed to result in the departure of prices and incomes from what they would be if determined in free competitive markets. The more recent ‘optimal theory of taxation’ introduces a social welfare function that is supposed to be ‘optimised’ by government expenditure and taxation. Kalecki regarded fiscal policy as influencing the distribution of income not just between poorer and wealthier households but also between wages and profits. Public employment, public services (what Kalecki called ‘subsidised consumption’) and welfare payments to workers and their families increased workers’ incomes. If paid for by taxes on workers and their consumption, then real incomes are not increased but just redistributed. In ‘Political Aspects of Full Employment’ he suggested that this is the feature of Fascist employment policies (Kalecki 1943). But if paid for by taxes on the wealthy, then these could be so calibrated as not to affect their expenditure. Government expenditure then increases incomes, and private expenditure, but without any reduction in the expenditure of those taxed. Similarly, government expenditure financed by borrowing increases incomes and expenditure without the deflationary effects of taxation.

But where does the money come from for borrowing? Kalecki famously considered that workers do not save on any significant scale. They are, he thought, largely passive recipients of wages and welfare payments, who ‘spend what they earn’, so that their money is eventually received by retailers and producers in the economy. Hence, taxation of their incomes or expenditure depresses their consumption. By contrast, those on higher incomes and capitalists save. For this reason, taxation of their incomes and expenditure does not affect their spending. It only affects the liquidity of their wealth portfolios, as they draw down their liquid assets to pay taxes, but also add to their liquid assets when they receive interest on their holdings of government bonds and repayments in respect of those bonds. This is the rationale for splitting the government’s budget into taxes on lower incomes and expenditure on government services and welfare payments, from taxes on higher incomes and property and expenditure on debt servicing. The first a ‘functional’ budget affects real incomes and expenditures in the economy. The second affects only the distribution of liquid assets, or bank deposits, in the economy (Toporowski 2020a).

The Withers connection

Kalecki’s analysis of internal government debt as a system of income transfers, rather than just deductions from income, should not have come as any surprise to Keynes. The analysis had been put forward 27 years earlier by

the distinguished economic journalist and editor of *The Economist* magazine, Hartley Withers, in a set of lectures on 'Public Finance' that Withers gave at the London School of Economics in February and March 1917. Withers had already distinguished himself as a monetary economist with his book *The Meaning of Money* (Withers 1909). In this book, he first enunciated the principle that, in a credit economy, bank deposits come into banks through banks' loan advances, rather than through public deposits of money. According to Schumpeter, this 'was considered as a novel and somewhat heretical doctrine' (Schumpeter 1954, p. 1111). But it found its way into Keynes's *Treatise on Money* (Keynes 1930, Chapter 2) and was espoused by his colleague at Cambridge Dennis Robertson (Robertson 1926).

Keynes was also impressed by Withers' 'masterly account of the English financial system' for the United States Senate Commission that, in 1911, was preparing the establishment of the US Federal Reserve (Keynes 1983, p. 368). But apart from using this account of the British financial system, and *The Meaning of Money*, in his Cambridge lectures, there is no evidence that Keynes knew of Withers' lectures in public finance, which were published in 1917, under the title *Our Money and the State* (Withers 1917). Indeed, with the exception of the chapter dealing with the national debt, the book is rather conventional, although, perhaps because of the fiscal effort in financing the First World War, singularly free of the hostility towards government expenditure and debt that one would expect of an economic journalist of his generation (Withers was born in 1867) and an editor *The Economist*.

This lack of hostility towards government expenditure comes from Withers' clear recognition that when the government taxes the population in order to finance its expenditure, it is creating income for the public. The government draws on the monetary resources of the subscribers to its bonds; returns that money to the public in the course of expenditure; draws on that money again in the form of taxation to pay the interest cost of the bonds; returns those taxes to the holders of the bonds in the form of interest on those bonds; before drawing on the monetary resources of the public through taxation again to repay the bonds, returning that money to the subscribers of the bond. In this way, 'the view that borrowing at home puts the burden [of current expenditure] on posterity is a delusion... whatever posterity pays, it pays to itself' (Withers 1917, pp. 45 and 35). In the case of government borrowing in the form of what were known as *consols* (or 'consolidated funds', which were perpetual bonds) payment continues indefinitely: 'the interest charge will continue to be a burden to the citizens as a whole and an income to the heirs of those who originally subscribed' (*ibid.*, p. 40).

A consequence of this is that the national debt is not 'net wealth', that is the

existence of a national debt, held by the citizens, does not affect the wealth of the nation as a whole. The wealth of a nation consists of its material assets in the way of industrial plant, agricultural estates and stock, houses, roads, railways, canals, and so on, and its holding, if any, of foreign investments, and its income consists of the annual produce of

these material assets as organized and worked as a going concern by the nation's brains and sinews.

(*ibid.*, p. 41)

However, the debt does involve a transfer of incomes. On the one hand

the system has this advantage in a community in which wealth is unequally distributed, that it enables those who have a margin of income above the necessities of life to pay for whatever be the object that the Government wants without at the time feeling any poorer, because they get a security that makes them think they are actually richer. If taxation is equitably imposed they will afterwards be taxed to pay themselves interest in proportion to the amount that they ought to have put into the loan when appealed to by the Government.

However,

...if those with a margin, who can save without serious discomfort, take up all or the greater part of the loan, and then taxes are imposed on all, whether they have a margin or no, then the system of financing Government spending by loan tends to accumulate more and more wealth in the hands of those who are well off.

(*ibid.*, pp. 40–1)

Perhaps because of this income transfer from the general mass of taxpayers to the smaller minority of wealthy bond-holders, Withers did not recognise any reluctance in the financial markets or among the wealthy to lend money to the government. Implicit in his (and perhaps Kalecki's) argument is the notion that the regressive redistribution of income that is effected by government debt requires more progressive taxation. The logical conclusion of such reasoning is Kalecki's capital levy to pay the annual costs of servicing the government's debt: reducing the redistribution of income effected by government debt to a redistribution entirely within the class of the wealthy, that is, making the wealthy pay the cost of servicing the debt owed to the wealthy. Withers' analysis suggests why even the prospect of having to pay taxes may not deter the enthusiasm of the wealthy for more government bonds. If they recognise that their tax liability is increased by government debt, they will buy even more government bonds: Their tax liability will not increase, because their total wealth has not increased (they have merely swapped money for bonds), but their *after-tax* income will rise, providing the government bonds pay a sufficient interest margin over the rate of interest on bank deposits. The reaction against government borrowing was more likely from taxpayers rather than bond-holders:

High taxes, due to a big debt charge produced by home borrowing, will only go out of one pocket into another, but the taxpayers will not all

recognize this, and if they are not also debt-holders it will not console them if they do.

(*ibid.*, pp. 47–8)

Withers concluded that it may be too easy for governments to finance expenditure by borrowing, and recommended as a progressive financing system that borrowing should only be undertaken where it was not possible to finance by means of taxation:

A well-informed and benevolent despot, with a perfectly docile people, would see that if there is money in the country that he can get by borrowing he can also get it by taxing if he sets about it in the right way, and that by doing so he not only cheapens the war by reducing his subjects' demand for goods which competes with that of his War Minister, but also makes industrial recovery in peace more rapid and hearty, by the absence of after-war taxation. All the money that he wanted for war he would just take from his people in taxes as the war went on, without going through the cumbrous process of borrowing it from them and afterwards taxing them to pay themselves back. But in order to do so he would have to be able to rely on a truly equitable system of taxation, which would curtail the power even of the richest to waste money on things that are not really needed at a time of national crisis, without taking food out of the mouths and clothes off the backs of those who are hungry and ill-clad.

(*ibid.*, pp. 48–9)

So far, Withers was lecturing/writing about 'internal' or domestic debt. His view of external debt was more critical. In his view, foreign borrowing wherever possible should be avoided because, in contrast to domestic borrowing, it drained financial resources, by redistributing income from domestic sources, via taxation, to foreign holders of government bonds. Borrowing abroad was only worthwhile if it promoted economic development:

Borrowing abroad, except for reproductive purposes such as railway building, is so evidently "bad business" that it is only done by Governments of economically backward countries, or by Governments which are impelled into this course, against their will, by the force of circumstances, as happened to ours in the present war.

(*ibid.*, p. 50)

Debt as real or monetary claim?

An ambiguity remains in Withers' exposition, as to whether government debt is a claim on *real* resources (a deduction from the real output of the economy) or merely a claim on the monetary resources of the economy. In the first case, government debt is ultimately, like 'outside debt', deflationary.

In the second case, it has no effect on the real resources used in the economy, but merely involves a higher turnover of monetary resources. In some passages, he regarded debt charges as being claims on the money in the economy (e.g., the phrase above about ‘high taxes, due to a big debt charge produced by home borrowing, will only go out of one pocket into another’) while at the same time regarding it as a claim on the real output of the economy (‘... debt-holders, without making any further effort, get for all time, as long as the loan is outstanding, a large slice of the nation’s revenue, which has to be found out of its annual produce’, *ibid.*, p. 42).

There is no doubt that ‘external debt’ that Withers warned against is a claim on real resources, in the sense that borrowing from abroad then requires income from abroad for servicing its interest and repayment. That income, as Withers pointed out, can only be obtained from: either investments abroad, e.g., using foreign borrowing to invest abroad, what might be called today a perfect ‘hedge’ for the borrowing, but of little economic use to a government or a country unless the foreign investment entails buying equipment from that country, as Withers noted; or by exporting goods and services abroad to generate the foreign currency to repay the foreign borrowing.

With internal debt, the situation is more complicated. Withers explained the sources of government debt finance as follows:

When we subscribe to the loan we either do so out of money that we borrow... or by drawing down our bank balances, in which case, unless we have been stupid enough to keep unnecessarily big ones, we shall save to replenish them. If we save we have so much less to spend on our own comforts and amusements, or so much less to invest in other directions, from which we should have received interest and repayment that would not have come out of our pockets. So by subscribing we hand over our money...

(*ibid.*, p. 38)

Here Withers reveals himself as one of Keynes’s ‘neo-classicals’, that is someone who still believes that the financial system intermediates between ‘saving’ and investment (but who differs from the ‘classicals’, according to Keynes in believing that ‘saving’ and investment can be actually unequal) (Keynes 1936, p. 177).² In fact, there is no reason to believe that the amount of money available to take up government bond sales is limited to saving out of current income. But this is also the same Withers who had earlier argued that bank loans, rather than saving, create deposits and, in the following chapter of *Our Money and the State*, went on to argue for the quantity theory of money, that the price level in the economy is determined by the quantity of money because the velocity of circulation of that money may be taken to be constant (*ibid.*, pp. 55–6). Perhaps Schumpeter was right in paying him a double-edged compliment, describing the London *Economist* as being part of

‘the most valuable part’ of a ‘vast literature’ on credit and banking, despite it being

written by ... financial writers ... who knew all about the facts, the techniques and the current practical problems of banking, but who cared little about “principles” – except that they never failed to refer to established slogans – and cannot be said to have had any very clear ideas about the institutional trends they beheld.

(Schumpeter 1954, p. 1110. Schumpeter’s view, also applied to Withers’ better-known predecessor at *The Economist* Walter Bagehot)³

Ultimately, the effects of government debt on the ‘real’ economy depend on our starting assumptions and the type of expenditure that is financed by borrowing. If the starting assumption is the neo-classical one that the economy is operating at full employment of productive resources, then fiscal policy, however, financed, may only redistribute those resources around the economy. Government borrowing within the economy effects a redistribution of income around society. If, however, the economy is not operating at full employment, then government expenditure on services and welfare may bring the under-utilised resources into productive use. Fiscal expenditure on servicing government debt and taxation of the wealthy classes merely turns over the monetary assets that they hold in their portfolios (Toporowski 2020a).

Conclusion

Keynes was very aware of the transfer problem in international debt that, along with the gold standard, dominated international economic diplomacy in the inter-war period (Keynes 1978). However, he appears not to have considered domestic debt in the same light. This is a pity, because the transfer theory of debt points to a ‘pure monetary’ theory of interest, in which interest is the relative price of different kinds of financing, the *slope* of the yield curve, as opposed to the level of the curve at some standard maturity, reflecting the different liquidity of the various kinds of financing according to their maturity. This was what Keynes was working towards in his 1937 controversy over the rate of interest (Keynes 1973, pp. 201–33). This approach to the theory of interest is in contrast to the classical theory of interest that links interest to the rate of profit (Toporowski 2020b).

The difference between the classical and the transfer approach is essentially about where the money comes from to pay interest and repay loans. In the transfer approach, the money to pay interest and repay loans comes from existing money hoards: In the case of government debt, taxpayers run down their money hoards to pay the government, which in turn returns the money to holders of government bonds. The amount of money held by ‘the public’ has not changed; it has simply been redistributed or transferred from the

pockets or (as Keynes and Kalecki would have it) the portfolios of taxpayers, who receive the money the government spends, to the pockets or portfolios of bond-holders. By contrast, in the classical theory, the public is deemed not to hold money, but has to sell commodities in order to raise the money to pay the taxes. But even in that situation, the money raised returns to holders of government bonds. Interest here is, in effect, a Ricardian rent that comes out of the surplus currently generated from production. In Withers' words '... the interest we shall have to provide out of our annual production of goods and services... we shall have to work harder to provide for our own wants' (Withers, 1917, p. 51).

Would the classical theory still apply if the money holdings of taxpayers were insufficient to pay the taxes required to defray the interest and repayment costs of government debt? To some degree, the classical theory would hold. But then a market would have to be found with the monetary resources to buy the commodities being sold to pay taxes. This may be the case if taxpayers (including firms and banks) do not have the liquid assets necessary to pay their taxes. However, in the case of wealthy individuals and institutions, this is not the case. In this situation the commercial banking system and the central bank have a very specific function in maintaining the liquidity of the assets portfolios of the wealthy: the commercial banks by creating bank deposits through lending against the security of other assets in those portfolios; and the central bank by buying in securities in exchange for the reserves that the commercial banks may need to support their lending.⁴

The transfer approach to government debt shows that its sustainability is reinforced by a progressive tax system that levies the taxes necessary for the servicing of government debt on wealthy individuals, firms and financial institutions. The more progressive is the tax system, the less is the drain of government debt on current income. The banking system plays its part in advancing credit to maintain the monetary hoards that are transferred in the process of debt payments and creating, through securitisation and buying government debt, the debt securities that the central bank can buy in maintain the liquidity of banks.

The transfer approach to debt also brings clarity where the discussion on government debt confuses 'inside' debt, where debt is simply a commitment to transfer money in the future from taxpayers to bond-holders, with 'outside' debt, which drains monetary and financial resources, output and income. Under the gold standard, such confusion was to some degree understandable, because the gold for debt repayments had either to be mined at some cost, or imported in exchange for exports. In this situation, it was easy to mistake what, for an individual, may be 'outside' debt but which, for an economy as a whole, is merely a transfer of existing monetary resources. Certainly, the transfer approach reveals the logical inconsistency in Robert Barro's doctrine of 'Ricardian Equivalence', in which government debt is assumed only to effect transfers from future generations to current generations, rather than 'from posterity to posterity' (as Withers put it) (Barro 1974).

A similarly ‘outside debt’ approach is taken by Luigi Pasinetti in two influential papers, in which he put forward equality between the rate of growth of the economy and the rate of interest as the threshold between debt rising in relation to GDP (if the economic growth rate is below the rate of interest), or falling debt (if the economic growth rate exceeds the rate of interest) (Pasinetti 1997, 1998; see also Halevi 2016). Within the Ricardian model of production and distribution in which Pasinetti works, all debt is of course ‘outside’ debt. But this is not the case in the real world. Inside debt operates much more, as Thomas Piketty has argued, to concentrate wealth, although this happens irrespective of whether or not the rate of interest is greater or less than the rate of growth (Piketty 2013).

Finally, to return to more post-Keynesian concerns, the transfer approach not only reveals the confusion over ‘inside’ and ‘outside’ debt. The approach also has important implications for the theory of money. A staple of post-Keynesian monetary theory is that money is held because of uncertainty, and finance exists because money is being held. The transfer approach to government debt shows that in our credit society with central banking regulating liquidity, monetary accumulations are held because payments need to be made on debt, and uncertainty arises over the returns from debt, as opposed to money. In these circumstances, money is held because of finance, and uncertainty arises because of money.

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Notes

- 1 In recent decades, governments have tried to overcome this difficulty by imposing profit or corporate tax increases against which investment could be set. The difficulty here is that this is only an incentive to invest if the firm is making a taxable profit. The fiscal effect is pro-cyclical, in the sense that the incentive is weakest in a recession, when profits are low, and strongest in a boom when profits are high.
- 2 To give Withers his due, at the time he was writing Keynes was himself a ‘neo-classical’.
- 3 Bagehot’s lack of clarity on, for instance, Scottish Political Economy is exposed in the opening sentence of his essay on ‘The Postulates of English Political Economy’, written in 1876: ‘Adam Smith completed the *Wealth of Nations* in 1776, and our English Political Economy is therefore just a hundred years old’ (Bagehot 1876).
- 4 ‘... a credit deadlock which is impervious to cheap money may (thus) yield to treatment of through open market purchases of securities’ by the central bank (Hawtrey 1938, p. 256).

References

Bagehot, W. (1876) ‘The Postulates of English Political Economy’, in *Economic Studies*, London: Longmans, Green, and Co., 1898.

- Balogh, T. (1944) 'The Unimportance of a Capital Levy', *Bulletin of the Oxford Institute of Statistics*, Vol. 6, No. 3, pp. 44–8.
- Barro, R.J. (1974) 'Are Government Bonds Net Wealth?', *Journal of Political Economy*, Vol. 82, No. 6, pp. 1095–117.
- Halevi, J. (2016) 'Luigi Pasinetti and the Political Economy of Growth and Distribution', *Working Paper No. 40*, Institute for New Economic Thinking.
- Hawtrey, R.G. (1938) *A Century of Bank Rate*, London: Longmans Green and Co.
- Kalecki, M. (1943) 'Political Aspects of Full Employment', *Political Quarterly*, Vol. 14, No. 4, pp. 322–31.
- Kalecki, M. (1944) 'Three Ways to Full Employment' in *The Economics of Full Employment*, edited by The Oxford University Institute of Statistics, Oxford: Basil Blackwell. Reprinted in *Collected Works of Michal Kalecki, Vol I, Capitalism: Business Cycles and Full Employment*, edited by J. Osiatynski, 357–376. Oxford: Clarendon Press, 1990.
- Keynes, J.M. (1930) *A Treatise on Money in Two Volumes 1 the Pure Theory of Money*, London: Macmillan.
- Keynes, J.M. (1936) *The General Theory of Employment, Interest and Money*, London: Macmillan.
- Keynes, J.M. (1978) *The Collected Writings of John Maynard Keynes Volume XVIII Activities 1922–1932 The End of Reparations*, edited by Elizabeth Johnson, London: Macmillan for the Royal Economic Society.
- Keynes, J.M. (1980) *The Collected Writings of John Maynard Keynes Volume XXVII Activities 1940–1946 Shaping the Post-War World Employment and Commodities*, edited by D.E. Moggridge, London: Macmillan/Cambridge University Press.
- Keynes, J.M. (1983) *The Collected Writings of John Maynard Keynes Volume XI Economic Articles and Correspondence Academic*, edited by D.E. Moggridge, Cambridge: Cambridge University Press.
- Pasinetti, L.L. (1997) "The Social 'Burden' of High Interest Rates" in *Capital Controversy, Post-Keynesian Economics and the History of Economic Thought*, edited by P. Arestis, G. Palma, and M. Sawyer, Vol. I; London & New York: Routledge, pp. 161–68.
- Pasinetti, L.L. (1998) 'The Myth (or Folly) of the 3% Deficit/GDP Maastricht Parameter' *Cambridge Journal of Economics*, Vol. 22, No. 1, pp. 103–16.
- Piketty, T. (2013) *Capital in the Twenty-First Century*, Cambridge, MA: Harvard University Press.
- Robertson, D.H. (1926) *Banking Policy and the Price Level*, London: Macmillan.
- Schumpeter, J.A. (1954) *History of Economic Analysis*, London: Allen and Unwin.
- Toporowski, J. (2020a) 'Debt Management and the Fiscal Balance', *Review of Political Economy*, Vol. 32, No. 4, pp. 596–603.
- Toporowski, J. (2020b) 'Anwar Shaikh and the Classical Theory of Interest: A Critical Note', *Cambridge Journal of Economics*, Vol. 44, No. 2, pp. 465–74.
- Withers, H. (1909) *The Meaning of Money*, London: John Murray.
- Withers, H. (1917) *Our Money and the State*, London: John Murray.

7 Payment vs. funding

The law of reflux for today

Perry Mehrling

But from the point of view of the bank, it has acquired the security without giving up any cash; the counterpart, in its balance-sheet, is an increase in its liabilities. There is expansion, from its point of view, on each side of its balance-sheet. But from the point of view of the rest of the economy, the bank has ‘created’ money. This is not to be denied.

Hicks (1989, 58)

We start with the idea of credit creation, specifically a swap of IOUs between a bank and myself involving a bank loan that is my IOU and a bank deposit that is the bank’s IOU. Nothing could be simpler, and yet the mind rebels, especially the well-trained economist’s mind, because this simple operation increases my purchasing power without decreasing anyone else’s. It seems like alchemy, or anyway a violation of some deep conservation law. Real productive resources are the same as they were before, and the swap doesn’t change that, does it?

Spending of the new purchasing power adds another layer of perplexity. If spending increases but real resources do not, then it seems logical that the increased spending must exhaust itself in higher prices—that is the intuitive appeal of the quantity theory of money. My purchasing power may increase, but everyone else’s must decrease because their money balances buy less. From this point of view, the alchemy of banking seems like a kind of theft, something to be deplored in the name of economic science, and if possible outlawed in the name of the general good.

The Keynesian tradition counters this monetarist intuition by questioning the assumption that real resources are fixed.¹ If there is slack in the economy, then new spending most immediately draws down inventories, triggering new orders and new production, so mobilizing previously underutilized capacity, both capital and labor. In this counter intuition, my purchasing power increases and the consequence is that aggregate income increases. From this point of view, the alchemy of banking seems like a kind of widow’s cruse, something to be treasured by economic science, and if possible exploited in the name of the general good.

Apparently, both of these intuitions have their appeal, since monetarists and Keynesians remain with us always. Maybe it is an empirical issue, about the amount of slack at a particular moment and where exactly it is. This is certainly the form the conversation has typically taken within the frame of the so-called neoclassical synthesis. But to my way of thinking, this empirical framing papers over a deeper and prior conceptual issue, which has nothing to do with the amount of slack in the economy and everything to do with the difference between payment and funding. This analytical distinction is not original to me, being basically the same as Graziani's (2003) distinction between initial finance and final finance for example. My contribution is the refinement and elaboration of that distinction within the money view balance sheet framework which, as will be seen, helps to clarify multiple long-standing debates as well as present controversies about the limits of money finance.

Payment versus funding

A simple concrete example may help to fix ideas. Let us suppose that the swap of IOUs is a mortgage loan and that I use my new purchasing power to buy your existing house. At the instant of sale, I swap one asset for another, and you swap the other way around, presumably because each of us prefers the asset held by the other. For present purposes, the important point to appreciate is that the alchemy of banking has made this sale possible, by creating new means of payment that you are willing to accept. After the sale, the bank's new IOU is owed to you instead of to me.

In fact, by accepting the bank's IOU as payment, by accepting a bank deposit in exchange for your house, you are funding the bank's mortgage loan to me, at least temporarily. Importantly, this is so even if you immediately shift the deposit from my bank to your own, provided that there is an interbank market where our banks can reverse the implied flow of reserves, as depicted in Figure 7.1. The first row records the initial swap of IOUs that created the new means of payment. The second row records the exchange of the new deposits for the house. And the third row records the shift of deposits from my bank to yours and the corresponding interbank lending. Tracing through who owes what to who, it is clear that, at the end of the day, you are funding your bank's money market (MM) loan to my bank and that MM loan is funding my bank's mortgage loan to me. Note that, in this stylized example, credit creation involves not only a new mortgage loan coupled with new bank deposits but also an expansion of interbank lending.

The important point to appreciate from this example is that the apparent alchemy of banking is not so much about slack in the real economy as it is about the elasticity of payments in the banking system. Key to the alchemy is the fact that the newly created means of payment is indistinguishable from the old, and for that reason just as acceptable in payment. An important implication is that I am able to buy your house without any prior accumulation of liquid balances and that you are able to sell your house without having to

My Bank		Me		You		Your Bank	
Assets	Liabilities	A	L	A	L	A	L
+mortgage	+deposits	+deposits	+mortgage				
		-deposits		+deposits			
		+house		-house			
	-deposits +MM borrowing					+MM lending	+deposits

Figure 7.1 Private credit expansion to facilitate payment.
Source: Author.

persuade any current holder of purchasing power to give up present liquidity. The alchemy of banking, or perhaps we should say the endogeneity of credit money, thus most fundamentally works to facilitate mutually improving bi-lateral trade.

But that’s not the end of the story. You were willing to accept new purchasing power as means of payment for your house, and in doing so you wound up funding the bank’s mortgage loan for the moment. But by no means does that mean that you are willing to fund the loan for its entire term. Indeed, what matters after the moment of payment is not so much your own portfolio preferences as the preferences of the rest of the world to whom you pass along the new purchasing power as you spend it. The question is, when you are no longer funding the loan, who is and in what form? Figure 7.2 shows the three possible limiting cases.

In the first limiting case (Figure 7.2a), the new purchasing power might be used simply to repay some other outstanding debt, so that at the end of the day there is no increase in aggregate credit or money at all. (In the first row, I show this contraction of credit and money. In the second, for completeness, I show also a contraction of interbank credit as the mortgage shifts to fill the hole left by the repaid loan.) In the end, the banking system just replaces one loan with another; the initial expansion of bank credit facilitated the process, but then collapsed back down again. This limiting case is perhaps the closest to what those who first spoke about the law of reflux had in mind (Fullarton 1844, see Skaggs 1991 and more generally Le Maux 2012). In Fullarton’s 19th-century world of short-term commercial bills, there were always some bills maturing, so there was a direct channel for excess money balances to flow out of circulation by contraction of bank balance sheets on both sides. For modern conditions, however, we need to consider additional possible cases.

a. My Bank Me Rest of World ROW Bank

Assets	Liabilities	A	L	A	L	A	L
				-deposits	-loan	-loan	-deposits
-mortgage	-MM borrowing					+mortgage -MM lending	

b. My Bank Me ROW ROW Bank

Assets	Liabilities	A	L	A	L	A	L
-mortgage	-MM borrowing			-deposits +mortgage		-MM lending	-deposits

c. My Bank Me ROW ROW Bank

Assets	Liabilities	A	L	A	L	A	L
-mortgage	-MM borrowing					-MM lending +mortgage	

Figure 7.2 Private reflux, capital funding, and money funding compared.
Source: Author.

As a second limiting case (Figure 7.2b), we might imagine that the new purchasing power is used instead to buy a life annuity that is funded by investment in fixed income securities, perhaps even including the new mortgage having been sold by my bank, packaged with other similar securities, and transformed into a mortgage-backed security. In this case, a new portfolio equilibrium is achieved by elimination of both the interbank credit and the new purchasing power, but the new long-term credit remains, now funded by new long-term lending, all outside the banking system. As in the first case, the initial expansion of bank credit facilitated the process, but then collapsed back down again. The bank originated the mortgage, but it was ultimately funded elsewhere.

In a third limiting case (Figure 7.2c), we might imagine instead that the new purchasing power remains fully in circulation, satisfying a new

demand for liquid balances that has arisen for some reason or another. In that case, we might imagine that the banking system continues to hold the mortgage, perhaps shifting it to where the new balances are being held so that interbank credit shrinks back to what it was originally even as the new mortgage loan and the new purchasing power both remain. In this case, there is no reflux of the new purchasing power, but the reason is that somehow the spread of that new purchasing power through the economy has had the effect of increasing the demand for money balances. The new money did not disappear, but the excess supply of money did, because the demand for money grew into it.

All three of these limiting funding cases can be understood as instances of what Keynes (1937, 666) called the “revolving fund of liquid finance”. Bank credit expands but then contracts again, and the entire thing is a balance sheet operation requiring no real resources. Even in the third case, holdings of the newly created money balances serve in effect as long-term funding for the new long-term credit. In all three cases, credit creation is fundamentally about a bank choosing to become illiquid in order that a buyer can become liquid, and then about traversing the gap to a new funding equilibrium. When the traverse is done, the “revolving fund of liquid finance” is restored, and the process can start again.

A key issue in this process is the role of asset prices, so far not mentioned but in fact the central focus of Keynes’ 1937 article, as evidenced by its title “The ‘Ex-Ante’ Theory of the Rate of Interest”. Because the entire flux and reflux process is just a balance sheet operation, Keynes argued that the standard “savings theory” of the interest rate needs to be replaced by a “liquidity theory” of the interest rate. As the previous analysis has hopefully made clear, from the bank’s point of view the interbank MM rate of interest is the initial (i.e., “ex ante”, in Keynes’ language) cost of funding the loan during the transition period from one funding equilibrium to another. That’s the rate that a bank which has chosen to become illiquid must pay to another bank to recover its original reserve position in the event that the new purchasing power is transferred elsewhere. The liquidity theory of the interest rate must, in the first instance, be a theory of that interbank rate.

In my reading, this 1937 Keynes is the Keynes that Sheila Dow embraces in “Endogenous Money Creation and Idle Balances” (Dow and Dow 1989), though without using my language of payments and funding.² Liquidity preference, she emphasizes, determines asset prices as a markup over the money rate of interest, which is set as a policy variable by the central bank. To my mind, this position is fully consistent with the money view, so long as we appreciate that the central bank makes its policy rate effective by engaging in the interbank market, in effect offering its own balance sheet as a buffer to absorb any excess demand or supply at the chosen rate. Furthermore, the larger dealer system, cognizant of its own liquidity position, then translates MM conditions into a set of asset prices, both bid and ask prices, that are consistent with the new funding equilibrium. In general, any new funding equilibrium will be a blend of the three limiting cases—part reflux, part capital

funding, and part money funding—and the movement of asset prices is part of the process that determines the proportions of the final blend.

In this way, the language of the money view helps to clear up an obscurity in Keynes that has long puzzled the post-Keynesian tradition (as Bibow 1995, Rochon 1997, Cesaroni 2001, de Carvalho 2002). Those familiar with this literature will have noticed that, by comparison to it, the present analysis simplifies matters by treating the case of financing the sale of an existing capital asset, rather than the case of financing the production of a new capital asset. In this way, we abstract from any direct effect on income and concentrate instead on the balance sheet operations involved, enabling us to show that the process underlying the “revolving fund of liquid finance” has nothing to do with saving or investment, but instead involves merely the law of reflux, which operates to balance the elasticity of payments and the discipline of funding.

The old view versus the new view

We turn now to clarification of a second obscurity, this one in postwar Keynesian orthodoxy, which has its origin in Tobin’s 1963 “Commercial Banks as Creators of ‘Money’”.³ Produced for a volume celebrating the 100th anniversary of the National Banking System, by the pre-eminent American Keynesian monetary economist, professor at Yale and author of the famous 1962 *Economic Report of the President* under President Kennedy, this paper more than any other marks the moment of transition from a purported “old view” to a purported “new view” of money, which fatefully involved also a shift away from Keynes’ 1937 focus on the elasticity of payments toward focus instead on the discipline of ultimate funding (as Tobin 1969). By focusing attention on the ultimate funding equilibrium, Tobin’s new view in effect abstracted from both the flux of bank credit expansion and the reflux of subsequent contraction, and so also from the traverse between one funding equilibrium and another. He is interested only in final positions, and concerns himself therefore centrally with how asset prices change to make the new final position an equilibrium. In the new view, banks are just one financial intermediary among others, and bank deposits are just one funding liability among others, not particularly special and only able to remain in circulation subject to the portfolio preferences of wealth holders.

The apparent target of Tobin’s paper was of course not Keynes nor even the Radcliffe Report which had so recently emphasized the endogeneity of credit money (Committee on the Working of the Monetary System 1959). Rather his target was the simple-minded monetarist policy proposal to limit monetary policy to a long run 3–4% money growth rule, and specifically the idea to implement that rule by limiting reserve growth to 3–4% on the grounds that reserve growth translates mechanically into money growth by means of the so-called money multiplier (as Phillips 1920). Tobin’s paper explicitly mentions Shaw (1958) as the proponent of such a rule, but contemporaneous

readers would have recognized that the real target was Milton Friedman (1960). Apparently, Shaw was a more appealing target, insofar as his subsequent book *Money in a Theory of Finance* (Gurley and Shaw 1960) could, in Tobin's interpretation, be understood as the foundation stone of the "new view". Shaw changed his mind, Tobin is suggesting, and so should you.

Tobin seems to have understood the monetarist growth rule proposal mainly as an attempt to rein in the ability of banks to create what he calls "fountain pen money", new purchasing power forced into circulation by means of new lending or asset purchases paired with new deposit creation. For monetarists, reserve requirements played an essential role in constraining what would otherwise be a "widow's cruse" of uncontrolled expansion of bank credit and money. Tobin countered with the argument that the portfolio preferences of wealth holders would put a limit on the expansion of bank credit, even without reserve requirements, since any new money would have to be willingly held. For Tobin, reserve requirements are important not so much to rein in wanton money creation but rather because they introduce important frictions that give the monetary authority valuable leverage for short-run economic stabilization using monetary policy (Tobin and Brainard 1963).

Here we find the origin of postwar American Keynesian orthodoxy, a view that elides the process of flux and reflux that underlies the shift from one funding equilibrium to another, and hence abstracts from exactly that aspect of banking that is special, namely, the role of credit creation in directing the flow of new credit, and hence in directing the economy more generally. The elasticity of payments through the expansion of bank balance sheets is completely absent from Tobin, and post-Keynesian critics have been bemoaning its absence ever since, pointing to Tobin's difference from Keynes (1937) in this respect, albeit largely to no avail. As I say, Tobin's intended target was monetarism, and the payments approach to monetary analysis was merely unintended collateral damage, but collateral damage it most definitely was. Abstracting from the process of flux and reflux, and indeed from all the mechanics of the payments system, Tobin shifted attention to asset prices rather than bank lending decisions as playing the central role in directing the flow of new credit and hence the economy more generally. In Tobin's hands, banks are mere intermediaries, one among many and perhaps not even the most important since pension funds and insurance companies are arguably the more natural repository for the long-term equity and bonds that finance the capital development of the nation.

In addition to downgrading the "old view" of banks and bank credit, Tobin was equally concerned with upgrading the agency of government and government-issued "printing press" money. The widow's cruse of "fountain pen" money that monetarists fear so much is, according to Tobin, controlled well enough by portfolio preferences, but the essentially similar widow's cruse of government-issued "printing press" money is not and that presents policymakers with an opportunity. In effect, for Tobin, the law of

reflux works for private money but not for public money. Why not? Here are Tobin's own words:

Evidently the fountain pens of commercial bankers are essentially different from the printing presses of governments...Once created, printing press money cannot be extinguished, except by reversal of the budget policies which led to its birth. The community cannot get rid of its currency supply; *the economy must adjust until it is willingly absorbed*. The 'hot potato' analogy truly applies. For bank-created money, however, there is an economic mechanism of extinction as well as creation, contraction as well as expansion. If bank deposits are excessive relative to public preferences, they will tend to decline; otherwise banks will lose income. The burden of adaptation is not placed entirely on the rest of the economy.

(Tobin 1963, 415; my emphasis)

Evidently, Tobin is thinking of printing press money as "outside" money, an asset that is no-one's liability, by contrast to bank money which is "inside" or credit money. In this regard, he follows the lead of Gurley and Shaw (1960), but it should be noted that their distinction between outside and inside is not a fact about the world, simply an analytical device that they use as a way of emphasizing that government money is superior to bank money in the domestic hierarchy of money and credit. Banks cannot create government money, and must furthermore stand ready to redeem bank money on demand in government money; this is the convertibility discipline that underlies the law of reflux that disciplines their fountain pens. In Tobin's hands, this same analytical distinction between outside and inside has the effect of implicitly consolidating the balance sheets of the Treasury and the Federal Reserve, and the further effect of abstracting from the fact that the central bank is indeed a bank, analogous to a commercial bank but at a higher level in the system.

Notwithstanding Tobin, Figure 7.3 shows how the creation of "printing press" money can in fact be understood completely analogously to the creation of "fountain pen" money (compare Figure 7.1), in both cases as the expansion of a bank's balance sheet. In the government case as in the commercial banking case, the first step is the quintessential act of banking alchemy, the creation of new purchasing power in order to facilitate payment. (In Tobin's account, this first step is hidden from view by implicit consolidation of the Treasury and Fed balance sheets.) In the second step, the government buys goods with the new money, and the seller deposits that new money in her bank.⁴ Observe that here, as in the commercial case, in the first instance it is the seller of the goods that is funding the (central) bank loan to the (government) buyer. In a final step, I show the commercial bank exchanging currency for a reserve account at the central bank, as the analogous operation to interbank lending in the commercial case; we might think of reserves paying interest on the margin whereas currency does not.

Figure 7.3 thus shows how, in the government case as in the commercial banking case, it is the elasticity of payments that makes the initial payment possible. But what about the discipline of funding? As in the commercial banking case, the seller of goods funds the loan in the first instance, but who funds the loan ultimately, and how exactly? Analogously to the commercial banking case, three limiting cases of reflux can be identified, as Figure 7.4.

The first limiting case (Figure 7.4a) is reflux of the new money as repayment for a debt. There are a number of possible channels, including bank repayment of central bank discount loans, but to achieve complete reflux we need private wealth holders repaying a debt to the Treasury, i.e., tax payment. Concretely, we might imagine wealth holders writing a check to the IRS, which when cashed shifts reserves from the banking system into the Treasury’s account at the Fed. In effect, this operation reassembles the swap of IOUs (between the Treasury and the Fed) that got things going in the first place, and the reassembled swap can then be canceled as the two legs net out. In this case, the revolving fund of liquid finance is restored by, as Tobin himself puts it, a “reversal of the budget policies”, i.e., fiscal contraction rather than fiscal expansion, which is to say taxes in excess of spending rather than spending in excess of taxes.

The second limiting case (Figure 7.4b) involves private wealth holders shifting out of money in order to hold the new long-term debt directly. Concretely, we might imagine wealth holders using their deposit holdings to buy Treasury bills from the Fed. Here again, the revolving fund of liquid finance is restored by a “reversal of budget policies”, in this case, monetary contraction rather than monetary expansion.

In the absence of fiscal or monetary contraction, there remains the third limiting case in which wealth holders willingly hold their new money balances in the new funding equilibrium, and it is this case that Tobin apparently takes to be the general one. In Figure 7.4c, balance sheet entries for this case

Central Bank		Treasury		ROW		ROW Bank	
Assets	Liabilities	A	L	A	L	A	L
+Tbill	+currency	+currency	+Tbill				
		-currency				+currency	
		+goods		-goods			+deposits
				+deposits			
	-currency					-currency	
	+reserves					+reserves	

Figure 7.3 Public credit expansion to facilitate payment.
Source: Author.

a. Central Bank Treasury Rest of World ROW Bank

Assets	Liabilities	A	L	A	L	A	L
		+reserves		-deposit		-reserves	-deposit
-Tbill	-reserves	-reserves	-Tbill				

b. Central Bank Treasury ROW ROW Bank

Assets	Liabilities	A	L	A	L	A	L
-Tbill	-reserves			+Tbill		-reserves	-deposit
				-deposit			

c. Central Bank Treasury ROW ROW Bank

Assets	Liabilities	A	L	A	L	A	L

Figure 7.4 Public reflux, capital funding, and money funding compared.
 Source: Author.

are completely empty because all of the adjustment takes place in the rest of the economy instead. Concretely, and consistent with the IS-LM framework that was dominant at the time Tobin was writing, we might imagine that the initial monetary expansion leads to lower interest rates, both because higher reserves push down the interbank rate and because lower rates on non-monetary assets are needed to make wealth holders content to hold the additional non-interest bearing money. Subsequently, lower interest rates may stimulate higher spending in those categories sensitive to the interest rate, and hence also higher equilibrium income. It is the higher income and the lower rate of interest that cause money demand to expand to absorb the new money supply.

Framing Tobin’s argument in the language of payments and funding, flux and reflux, thus reveals the maintained assumption underlying his argument, namely, that the government in effect blocks channels of fiscal and monetary reflux in order to maintain the new purchasing power in circulation. In effect, Tobin assumes that fiscal authorities refuse to allow wealth holders to dispose of excess money holdings by paying taxes and that monetary authorities similarly refuse to let them buy central bank assets. That’s why printing press money is a “hot potato”.

What Tobin offers here, in effect, is a peacetime analog to the war finance stratagem of blocked accounts, famously advocated by Keynes in *How to Pay for the War* (1940). In wartime, workers' wages accumulate in accounts that cannot be spent until after the war is won, and even then only in releases carefully staged to prevent excessive upward price pressure. Note well, however, that this is a case of funding *disequilibrium*, politically acceptable only in wartime. In peacetime, by contrast, funding equilibrium is achieved by asset price changes, and the analog to the staged release of blocked accounts is active macroeconomic management using fiscal and monetary policy. Instead of a 3 or 4% money growth rule, year in and year out, in pursuit of price stability, Tobin wants to use open market operations to move the rate of interest around in the interest of economic stabilization more generally.

With regard to price stability more narrowly, Tobin insists that in the case of "fountain pen" money reflux operates sufficiently smoothly so as to ensure that there are no excess bank money balances floating around to put upward pressure on commodity prices. In the case of "printing press" money, however, despite the fact that reflux is blocked so that excess central bank money balances remain in circulation, asset prices move sufficiently to increase money demand *pari passu*, so once again there are no excess money balances floating around to put upward pressure on commodity prices.

The difference between the old view and the new view, it turns out, once we translate both into the language of payment and funding, is really the difference between private bank agency and central bank agency. Tobin's goal was to provide analytical support for money funding of fiscal expansion, in opposition to monetarism. Obviously, he did not succeed in killing monetarism, but he definitely did succeed in shifting analytical attention from *ex ante* to *ex post*, from payments elasticity to funding discipline, from reflux as a dynamic process to portfolio equilibrium as the end result of that process, and from bank agency in credit allocation to government agency in monetary policy.

Modern money theory

Twenty years ago, when I was just starting the project that would become the money view, I was asked to write a review of Randall Wray's *Understanding Modern Money* (1998), the book that launched what has come to be known as the Modern Money Theory movement, today perhaps the most prominent version of post-Keynesian heterodoxy. Back then, I welcomed the assignment as an opportunity to consider where to position my own developing view relative to the existing post-Keynesian firmament. As I reconstruct my thinking at the time, I had dedicated myself to the development of a credit theory of money, and from that point of view, I read Wray's neo-chartalism as an attempt instead to develop a monetary theory of credit.⁵ Hence my title, "Modern Money: Fiat or Credit?" (Mehrling 2000).

Since then, my thinking has developed quite a bit, and as a consequence, I would today read Wray somewhat differently. Although he certainly insists on the fiat (vertical) character of government money, and the derivative (horizontal) character of private money—Wray (1998) focuses on the former while Wray (1990) focused on the latter—it is nevertheless eminently possible to reframe what he says about government money in credit terms analogous to commercial banking money, very much along the lines of the discussion of Tobin in the pages above.

Like Tobin, Wray consolidates the Fed and Treasury balance sheets and as a consequence sees a fundamental difference between “fountain pen money” and “printing press money”, the former as credit money and the latter as fiat money. Also like Tobin, he wants to use control of the latter for the public good, specifically the achievement of full employment and price stability. Instead of buying goods, he wants the government to hire unemployed labor directly at a fixed wage that then becomes the nominal anchor for prices in general. But substitute “labor” for “goods” in Figure 7.3, and the money view translation of Tobin applies equally well to Wray. In both Tobin and Wray, the first step is credit creation through expansion of the central bank balance sheet, completely analogous to commercial bank credit creation for a private customer.

Where Wray differs from Tobin is not on the flux, but on the reflux (or “reserve drain” as he sometimes prefers). He has in mind that almost all of the newly issued money flows back to the government in payment of taxes, which is the first “reflux” limiting case in Figure 7.4a (Wray 1998, 23). Indeed, in his “taxes-drive-money” view, the imposition of taxes payable in the government’s money issue is key to supporting the value of that money issue. Taxes too low, and excess money that cannot find a way to reflux may instead go into higher prices. Taxes too high, and the result is deflation as taxpayers scramble to acquire scarce money balances, even as some will necessarily default since in aggregate new money balances are insufficient. For a given level of spending, the government thus needs to find the right level of taxes. For Wray, the important point is that in general, we might expect the right level of taxes to be strictly less than the given level of spending, because people want to hold back some of the new money issue to use for other purposes. Note that this “hoarding” of new money issue is the third “money funding” limiting case in Figure 7.4c, the one that Tobin emphasizes.

Where Wray further differs from Tobin is by assuming that, instead of allowing asset prices to adjust to the new enlarged money supply, the central bank exogenously fixes the rate of interest and then defends that fix by trading new money for interest bearing government bonds. This is recognizably the second “capital funding” limiting case in Figure 7.4b. Higher interest rates make bonds more attractive, so more reflux of the new money issue; lower interest rates make bonds less attractive, so less reflux. Because he consolidates the Treasury and Central Bank, Wray thinks of the original currency issue as simply fiat money, not the liability of a central bank, and

the new interest-bearing bond as nothing more than an interest-bearing form of fiat money. Nevertheless, he explicitly recognizes that the operation of replacing the former with the latter is a form of reflux (161).

Thus, unlike Tobin, Wray treats all three channels of reflux, indeed putting most emphasis on the first rather than the third. For him what is exogenous is price, both the price of labor and the rate of interest. What is endogenous is spending which depends on the amount of unemployed labor, but also taxes (to achieve price stability) and the quantity of money (to achieve funding equilibrium at the chosen rate of interest). In effect, Wray sees even less difference between war finance and peace finance than does Tobin, and consequently even more agency for government to achieve desirable social goals. Just so, he remarks:

For example, during WWII, the US government was able to ‘borrow’ to finance ‘massive deficits’ (five times larger than President Reagan’s deficits, relative to the size of the economy) at a short term interest rate of 3/8 of 1 per cent.

(89)

Like Tobin, Wray’s Keynes is not so much vintage 1937 as it is vintage 1940, *How to Pay for the War*. And it is not so much a restoration of the “old view”, with its emphasis on bank agency, as it is an endorsement of Tobin’s “new view” of government agency.

Both Tobin and Wray make a big deal of the difference between bank money and government money, emphasizing that the former is “inside” or credit money while the latter is “outside” or fiat money, fountain pen money versus printing press money. In both cases, however, as we have seen, the big deal is not really about inside versus outside, but rather about emphasizing the potential agency of the monetary authority for achieving desirable social goals. In both cases, it is both possible and illuminating to reframe the argument in credit terms by treating the central bank and the Treasury as separate entities, and so to understand the central bank as in fact a bank, expanding and contracting its balance sheet in a process of flux and reflux, much like a commercial bank. Tobin insisted, against the monetarists, that we don’t have to worry about private bank flux because reflux will discipline, and we don’t have to worry about central bank flux because changing asset prices will absorb any excess supply. Going further than Tobin, Wray in effect insists that we don’t have to worry about central bank flux even if we fix the rate of interest exogenously and so prevent asset prices from changing, provided that government keeps the channels of reflux open that Tobin assumed were closed, both the fiscal channel (taxes) and the monetary channel (bond sales).

In a sense, the story underlying the evolution of monetary thought from Keynes (1937) to Tobin (1963) to Wray (1998) is fundamentally about absorbing the implications of war finance. With the benefit of hindsight, we can see that state money, like private money, is essentially just a form of credit.

As such, the regulatory mechanism of flux and reflux that polices the former is just as important, though it takes a different institutional form, for policing the latter. In both cases, the elasticity of payment is the key resource for initial agency, and the discipline of funding is what replenishes that resource for future agency. Ex-ante banks, and also central banks, are *both* agents of credit creation. Ex-post banks, and also central banks, are both intermediaries between borrowers and money holders. The tension between the theory of endogenous (credit) money and the theory of liquidity preference is thus revealed to be the difference between the elasticity of payments and the discipline of funding.

Notes

- 1 I focus on the Keynesian tradition, but see also Schumpeter (1934) who locates the source of slack in innovation, and Lewis (1954) who emphasizes underemployed labor in the traditional sector of a dual economy. Henry Dunning Macleod (1855, 1856) appears to be the origin of this tradition, inspired as he was by the experience of Scottish free banking (Skaggs 2003).
- 2 Dow's language apparently owes more to the circuitist tradition of Graziani, Parguez, and others. See Graziani (2003), Parguez and Seccareccia (2000). My own "money view" approach similarly owes the initial stimulus to encounter with the circuitistes, whom I first met in Aglietta (1979). See Mehrling (1996), written in 1990.
- 3 Compare Godley and Lavoie (2007, Chapter 13).
- 4 The attentive reader will observe that purchase of new goods rather than an existing house will create income for the seller. We will however continue to abstract from that in order to maintain focus on the mechanism of flux and reflux.
- 5 The distinction is due to Schumpeter (1954, 717) in a passage I reproduced as an epigraph to the review.

Bibliography

- Aglietta, Michel. 1979. *A Theory of Capitalist Regulation: The US Experience*. London: New Left Books.
- Bibow, Jorg. 1995. "Some reflections on Keynes's 'finance motive' for the demand for money." *Cambridge Journal of Economics*, 19 No. 5: 647–66. <https://doi.org/10.1093/oxfordjournals.cje.a035335>
- Cesaroni, Giovanni. 2001. "The finance motive, the Keynesian theory of the rate of interest and the investment multiplier." *European Journal of the History of Economic Thought* 8 No. 1 (Spring): 58–74. <https://doi.org/10.1080/713765224>
- Committee on the Working of the Monetary System. 1959. *[Radcliffe] Report*. London: HM Stationery Office.
- de Carvalho, Fernando Cardim. 2002. "On Keynes's concept of the revolving fund of finance." Pages 79–90 in *Money, Macroeconomics, and Keynes, Essays in Honour of Victoria Chick*, edited by Philip Arestis, Meghnad Desai, and Sheila Dow. Northampton, MA: Edward Elgar. <https://doi.org/10.4324/9780203467473-16>
- Dow, Alexander C. and Sheila C. Dow. 1989. "Endogenous money creation and idle balances." Pages 147–64 in *New Directions in Post-Keynesian Economics*, edited by John Pheby. Brookfield, VT: Edward Elgar.

- Friedman, Milton. 1960. *A Program for Monetary Stability*. New York: Fordham University Press.
- Fullarton, John. 1844. *On the Regulation of Currencies*. London: J. Murray.
- Godley, Wynne and Marc Lavoie. 2007. *Monetary Economics: An Integrated Approach to Credit, Money, Income, Production and Wealth*. 2nd edition. New York: Palgrave Macmillan. [https://doi.org/10.1007/978\[\[sbn\]\]1\[\[sbn\]\]137\[\[sbn\]\]08599\[\[sbn\]\]3](https://doi.org/10.1007/978[[sbn]]1[[sbn]]137[[sbn]]08599[[sbn]]3)
- Graziani, Augusto. 2003. *The Monetary Theory of Production*. Cambridge: Cambridge University Press. <https://doi.org/10.1017/cbo9780511493546>
- Gurley, John and Edward S. Shaw. 1960. *Money in a Theory of Finance*. Washington, DC: Brookings Institution.
- Hicks, John R. 1989. *A Market Theory of Money*. Oxford: Clarendon Press. <https://doi.org/10.1093/0198287240.001.0001>
- Keynes, John Maynard. 1937. "The 'Ex-Ante' theory of the rate of interest." *Economic Journal*, 47 No. 188 (December): 663–9. <https://doi.org/10.2307/2225323>
- Keynes, John Maynard. 1940. *How to Pay for the War: A Radical Plan for the Chancellor of the Exchequer*. London: Macmillan.
- Le Maux, Laurent. 2012. "The banking school and the law of reflux in general." *History of Political Economy*, 44 No. 4: 595–618. <https://doi.org/10.1215/00182702-1811352>
- Lewis, W. Arthur. 1954. "Economic development with unlimited supplies of labour." *Manchester School* 22 No. 2 (May): 139–91.
- Macleod, Henry Dunning. 1855. *The Theory and Practice of Banking*, Vol. 1. London: Longman, Brown, Green, and Longmans.
- Macleod, Henry Dunning. 1856. *The Theory and Practice of Banking*, Vol. 2. London: Longman, Brown, Green, and Longmans.
- Mehrling, Perry. 1996. "The relevance to modern economics of the banking school view." Pages 330–40 in *Money in Motion: The Post Keynesian and Circulation Approaches*, edited by Ghislain Deleplace and Edward J. Nell. New York: St. Martin's Press. [https://doi.org/10.1007/978\[\[sbn\]\]1\[\[sbn\]\]349\[\[sbn\]\]24525\[\[sbn\]\]3_11](https://doi.org/10.1007/978[[sbn]]1[[sbn]]349[[sbn]]24525[[sbn]]3_11)
- Mehrling, Perry. 2000. "Modern money: fiat or credit?" *Journal of Post Keynesian Economics*, 22 No. 3 (Spring): 397–406. <https://doi.org/10.1080/01603477.2000.11490247>
- Mehrling, Perry. 2013. "The inherent hierarchy of money." Pages 394–404 in *Social Fairness and Economics*, edited by Lance Taylor, Armon Rezai, and Thomas Michl. New York: Routledge. <https://doi.org/10.4324/9780203109502-34>
- Parguez, Alain and M. Seccareccia. 2000. "The credit theory of money: the monetary circuit approach." Pages 101–23 in *What Is Money?* edited by John Smithin. London: Routledge.
- Phillips, Chester A. 1920. *Bank Credit, a Study of the Principles and Factors Underlying Advances Made by Banks to Borrowers*. New York: Macmillan.
- Rochon, Louis-Philippe. 1997. "Keynes's finance motive: a re-assessment. Credit, liquidity preference and the rate of interest." *Review of Political Economy* 9 No. 3: 277–93.
- Schumpeter, Joseph A. 1934. *The Theory of Economic Development. An Inquiry into Profits, Capital, Credit, Interest, and the Business Cycle*. Cambridge, MA: Harvard University Press.
- Schumpeter, Joseph A. 1954. *History of Economic Analysis*. New York: Oxford University Press.

- Shaw, Edward S. 1958. "Money supply and stable economic growth." Pages 49–71 in *United States Monetary Policy, Its Contribution to Prosperity without Inflation*. New York: American Assembly.
- Skaggs, Neil. 1991. "John Fullarton's law of reflux and central bank policy." *History of Political Economy*, 23 No. 3: 457–80. <https://doi.org/10.1215/00182702-23-3-457>
- Skaggs, Neil. 2003. "H. D. Macleod and the origin of the theory of finance in economic development." *History of Political Economy*, 35 No. 3 (Fall): 361–84. <https://doi.org/10.1215/00182702-35-3-361>
- Tobin, James. 1963. "Commercial banks as creators of credit." Pages 408–19 in *Banking and Monetary Studies*, edited by Deane Carson. Homewood, IL: Richard D. Irwin.
- Tobin, James. 1969. "A general equilibrium approach to monetary theory." *Journal of Money, Credit, and Banking*, 1 No. 1: 15–29. <https://doi.org/10.2307/1991374>
- Tobin, James and William Brainard. 1963. "Financial intermediaries and the effectiveness of monetary controls." *American Economic Review*, 53 No. 2 (May): 383–400.
- Wray, L. Randall. 1990. *Money and Credit in Capitalist Economies: The Endogenous Money Approach*. Brookfield, VT: Edward Elgar.
- Wray, L. Randall. 1998. *Understanding Modern Money: The Key to Full Employment and Price Stability*. Northampton, MA: Edward Elgar.

8 “Revolution and counter-revolution in UK banks” asset composition since 1945, and why they matter to the debate about horizontalism

Tim Congdon

Introduction

The post-Keynesian school has made an important contribution to macroeconomic analysis by emphasising two characteristics of money creation in a stable peacetime capitalist economy. First, most money creation is the result of banks’ extension of credit to the private sector. Secondly, neither the lending banks nor the central bank has direct and immediate control over the scale of such credit extension or the associated money expansion. The lack of control arises from the widespread availability of overdrafts, where borrowers decide on the timing and size of credit drawdown, and in this respect determine the size of banks’ balance sheets. Furthermore, many post-Keynesian economists believe that the supply curve of bank credit can be represented as a horizontal straight line in a frequently-presented diagram with the quantity of so-called “credit money” on the x axis and the rate of interest on the y axis.¹

This feature of credit supply has led to the emergence of a school of thought known as “horizontalism”, a term that appeared in unabashed form in the title of a 1988 work, *Horizontalists and Verticalists: The Macroeconomics of Credit Money*, by the Canadian economist, Basil Moore. Most post-Keynesians have then claimed that money creation is “endogenous”, reflecting the inherent workings of a capitalist economy, and so rejected a standard textbook account of the determination of the quantity of money.² Crucial to post-Keynesian horizontalism is an assertion that the central bank wants commercial banks always to have enough cash to honour settlement obligations. By extension, the central bank is understood to offer overdrafts to the commercial banks in much the same way that the commercial banks extend overdrafts to non-banks.³ The supply curve of central bank credit becomes, like the supply curve of commercial bank credit, a straight line horizontal to the x axis in a diagram for the market in central bank credit. Participants in the banking system are understood to be anxious “to accommodate” each other and relations between them can be described as “accommodationist”.

Accommodationism may capture the essence of the post-Keynesian view on money creation, but perhaps the ideas can be pressed too far. In one of his more ambitious statements, made in a 2003 compendium on post-Keynesian economics, Moore proposed first that, “The volume of lending *by* the banking system determines the volume of lending *to* the banking system”, and second that, “For the banking system as a whole, total loans equal total deposits”.⁴ These two claims are thought-provoking, but are they correct when checked against the historical record? In a number of papers with Chick and others, Dow has protested against extreme statements of the horizontalist position, saying that more attention must be paid to the actual structure of banks’ balance sheets. According to the structuralist approach, a mechanical one-to-one relationship between loans and deposits does not obtain in the real world.

The purpose of the current paper is to show that, as far as the UK is concerned, the accommodationist approach does not accord with the facts. The paper discusses, in two sections, the evolution of UK banks’ asset composition in the post-war era. One covers the period from 1945 to 1971, when “financial repression” prevailed and banks were not free in their asset selection; the second, from 1971 to today, has been characterised by financial liberalisation, although arguably that was reversed by the growth of macro-prudential regulation after the Great Recession. The question throughout the two sections is, “has the level of banks’ assets been consistently dominated by loans to the private sector, particularly loans in the form of overdrafts?”, and the answer is a definite “no”. The concluding section focuses more specifically on the relationship, in the last 20 years, between changes in UK banks’ loans to the domestic private sector and changes in broad money, which consists predominantly nowadays of bank deposits. Again, it emerges that changes in loans and deposits can be very different. But first, some general remarks about the money-creation process are needed.

Banks’ balance sheet management: key issues

Bankers are often surprised when they are told that their actions determine the quantity of deposits. Many of them think that they must attract deposits in order to fund their assets and are startled by the notion, implicit in the Moore quote above, that deposits are automatically retained on their balance sheets when they grant a new loan. Of course, in the first instance the granting of a new loan results in identical additions to the two sides of an individual bank’s balance sheet, an extra loan on the assets side and an extra deposit (for the borrower) on the liabilities side. But the borrower soon uses the deposit, typically by spending the deposit to acquire an asset that may serve as loan collateral.

The payment is an instruction to the lending bank to transfer cash to the account of another party at a different bank. Unless the lending bank is receiving cash from other sources, a bank that grows its loan assets too rapidly sees its cash

reserves depleted. According to one textbook, “Banks have been caught out granting credit lines which they do not expect to be drawn down, but which are subsequently used by the borrowers.”⁵ In a classic discussion in his *Treatise on Money*, Keynes accepted that banks create money when they expand credit but insisted that amounts of new credit “are not arbitrary and are not unlimited”. It went without saying in his day, as it still does now, that banks can lend only if there is a demand for new credit “governed by the requirements of trade on the one hand”. But also relevant – and crucial to the debate about the horizontalist thesis – is “the state of their [cash] reserves on the other”.⁶

Banks must have some cash on the assets side of their balance sheet at all times, to meet deposit withdrawals and settlement obligations in the payments system. The proportion of cash to assets may be very low, as it was in the UK just before the Bank of England started in 2006 to pay interest on the cash reserves that banks maintain with it.⁷ But some cash is essential. Quite simply, loans cannot be 100% of assets. An even more serious difficulty for the accommodationists is that in practice banks hold not just cash in their own tills and at the central bank, but also two further kinds of liquidity. First, they have deposits with other banks or so-called “inter-bank deposits”, and, secondly, they keep a buffer of safe, liquid and “available-for-sale” securities. Ideally, the securities can be sold to the central bank, which replenishes a bank’s cash reserve with consideration. If not, sales to other banks can at any rate bolster its inter-bank deposits. In any real-world situation banks’ assets, therefore, consist of a trio of liquid assets – cash, inter-bank deposits and liquid (or “available-for-sale”, in the jargon) securities – as well as loans. It makes sense to talk of banks having “liquidity preferences”, analogous to the “liquidity preferences” of non-banks that figure in Keynes’ theory of the rate of interest.⁸

The need for liquidity is one reason that loans do not account for all of an individual bank’s assets or the assets of the entire banking system. But another point has to be made here. Loans carry a profit-seeking margin over the cost of funds and hence are deemed by bankers to be “earning assets”. By contrast, liquid assets usually give a poor return and are held in order to “fund the balance sheet” (that is, to finance the acquisition of earning assets) and to meet cash strains if funding dries up. But sometimes securities can offer a high enough return, and at an acceptable level of risk, that they too qualify as earning assets.⁹

In judging the balance in their portfolios between liquid assets, loans and profit-making securities, banks pay attention to relative returns on the asset types, as well as to risk (the danger of default) and illiquidity (the danger of high costs of sale in stressed conditions). When banks are pursuing their own self-interest, it is not inevitable that loans are their pre-eminent assets. But the broader context of public policy also can have a powerful bearing on their asset composition. Banks are salient and often unpopular institutions in contemporary capitalist societies, and the state can override their interests in the furtherance of public policy. Official regulations sometimes demand that banks hold a high share of total assets in government securities, for no better reason than that the government cannot otherwise finance its budget deficit.¹⁰

Unsurprisingly, in wartime the banks' ability to capture resources by credit extension is often used by the state to pay for the military effort. In such circumstances, the structure of bank balance sheets has little to do with private-sector overdraft finance which is a signature theme of accommodationism.

Of course, if liquid assets and government securities are a high proportion of total assets, banks' deposit liabilities are almost certain to differ in size from their loan assets, contradicting Moore's second 2003 claim. Accommodationists might like to wish away the awkward real-world activities of governments, which do not fit neatly into their analyses.¹¹ But, even when their assets are mostly claims on the private sector, there is another respect in which banks cannot escape from official attention. Regulators are always concerned that their liabilities include a sufficiently strong equity buffer to ensure that depositors are repaid in full. Increased surveillance of banks' capital/asset ratios was a major part of the official response to the Great Recession of 2008 and 2009. Nowadays macro-prudential regulation insists that banks must have enough capital to sustain lending activity, no matter how hostile the economic environment.¹² If banks' customers take up overdraft facilities in a rush, banks' assets surge upwards and may cause their ratios of capital to assets to dip beneath regulatory minima. Logically, banks ought to react by widening loan margins. But – if loan margins widen as the quantity of loans increases – the supply curve of bank credit slopes upwards to the right, at least over a certain range.¹³ The horizontalist model – which posits a flat supply curve of bank credit – becomes a conceptual idealisation with an insecure empirical basis.

In summary, the accommodationist account of bank behaviour harnesses a key insight, that banks create deposits when they extend loans. But the implications of this insight can be oversimplified and exaggerated. Every bank has to be concerned that, when its balance sheet expands, it has both enough cash to meet settlement obligations and enough capital to support the extra risk. These constraints apply even in the most benign political and economic context. But banks are always vulnerable to government intervention which forces them to acquire claims on the state. These pressures may have enduring effects on banks' asset composition, regardless of both the frustration of their profit objectives and the existence of an un-accommodated fringe of potential borrowers, and regardless also of economists' theorising about how banks conduct themselves in fair-weather conditions.

Financial repression in UK banking from 1945 to 1971

It is now time to look at some numbers. A survey of UK evidence since the Second World War will show that banks' asset composition has changed enormously over the decades and that a perfect matching of deposit and loan growth has not been observed. The starting point perhaps gives the game away. The accommodationist story is about overdraft finance to the private sector; it applies to an economy in which the banking system is particularly concerned to help private sector businesses in the financing of their

operations. But in 1945 the UK economy had suffered almost six years of warfare in which the banking system had to support the government in channelling resources to military ends.

In the late 1940s, the bulk of the UK banking system's assets, therefore, consisted of claims on the public sector. In the early post-war years, the London clearing banks dominated the UK banking system. During 1945 their advances (most of their claims on the private sector) were a mere 16.4% of gross deposits and an even lower ratio of total liabilities. Furthermore, only part of these advances was of overdrafts, since then – as now – many loans were for fixed amounts or with fixed repayment schedules. By contrast, total liquid assets were no less than 57.5% of gross deposits. This seemingly extraordinary figure reflected the accumulation of easy-to-sell claims on the state during the War. They were easy to sell due to the Bank of England's preparedness to buy such claims, given the virtual certainty that they would be repaid in full by the state. The clearing banks also owned government bonds as part of their more long-term "investments". With investments at 26.4% of gross deposits, claims on the public sector were over 80% of total assets. The legacy of the Second World War was a pervasive influence on balance-sheet structures. As Figure 8.1 shows, the weight of claims on the public sector in banks' assets was such that suggestions – like those from Basil Moore over 50 years later – that "total loans equal total deposits" were far from applicable.¹⁴

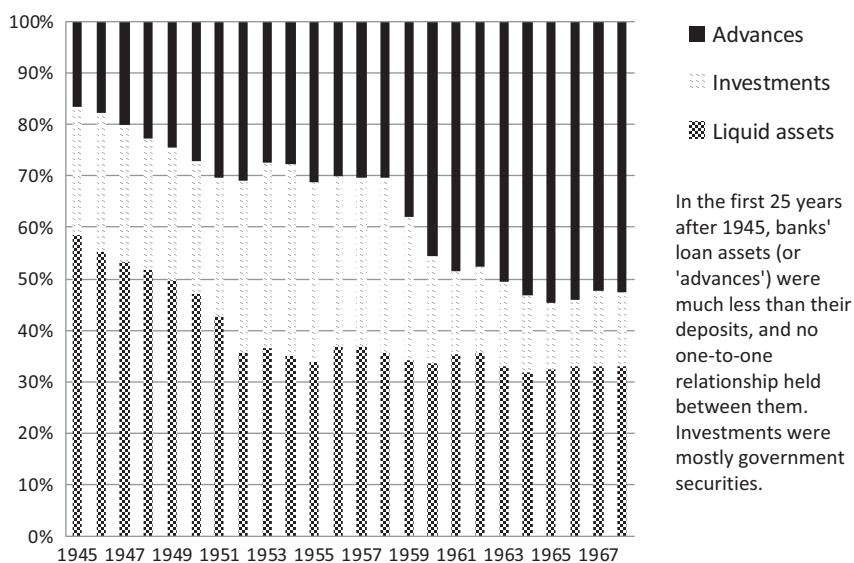


Figure 8.1 Main asset types as a percentage of gross deposits at London Clearing banks 1945–1964.

Source: Nevin and Davis, *The London Clearing Banks*, 1970.

This is not to deny that – all through the late 1940s, 1950s and 1960s – the banks were eager to expand their loans to the private sector, including overdraft facilities. The banks were confident that such loans would generate a higher margin over the cost of funds than Treasury bills, gilt-edged securities and the like. But only rarely could they translate their commercial objectives into practice. Memories of the 1930s and the Second World War continued to affect official attitudes and government policies for many years after 1945. Restrictions on bank lending to the private sector were a quasi-permanent feature of the British financial scene. Occasional attempts to remove the restrictions (as in 1959) allowed banks to expand rapidly their credit to the private sector. The consequent money creation tended to boost asset prices and domestic demand growth, and hence to cause the loss of foreign exchange reserves and the depreciation of the exchange rate. Successive “sterling crises” then prompted the re-imposition of controls on new lending.¹⁵

As late as 1969 over half of the London clearing banks’ assets were claims on the UK state, taking the form mostly of Treasury bills and short-dated gilts. For most of the first 25 years after 1945 companies and individuals in the private sector could not borrow as much as they wished from the banks, and banks could not lend freely to potential customers in the maximisation of profits. Indeed, it could be argued that the UK economy suffered from serious “financial repression”, with business unable fully to seize profitable opportunities because of the clampdown on new loans.¹⁶ The notion that participants in the banking industry were “accommodating” each other could hardly be further from the truth. One aspect of the financial repression was that banks had far higher ratios of liquid assets to total assets than was strictly necessary. Although the ratio of liquid assets fell from the 1945 high of almost 60% to a fairly stable figure of about 30% in the 1960s, the 30% number was still far above banks’ operational requirements and not that different from the ratio of loans to assets.

This state of affairs caused much unhappiness, not least at the Bank of England, where several senior officials urged a more liberal approach.¹⁷ Credit restrictions were widely disparaged, not least because banks subject to them believed themselves to be losing market share to foreign-owned banks and quasi-banks (such as hire purchase companies) that were free from official control. A move to a new, more relaxed regulatory regime, known as “Competition and Credit Control” (CCC), was announced by the Bank in September 1971. It was followed over the next two years by another explosive surge in bank credit to the private sector. Although restrictions were re-introduced in late 1973, the long-run aim of the policy remained to increase competition in the banking sector and to improve credit availability throughout the economy.

Private credit booms, with liberalisation from 1971

This was reinforced in the 1980s by the Thatcher government’s enthusiasm for the free market. The growth of bank credit to the private sector was extraordinarily rapid during the Thatcher premiership and often threatened the official

objective of curbing excessive growth of the quantity of money. In the first half of the decade, the monetary authorities embarked on a controversial practice termed “over-funding”. The government tried to neutralise the monetary effects of the boom in private credit by selling more public debt outside the banking system than its own budget deficit. The proceeds of the excess debt sales could be used to repay Treasury bills and short-dated gilts held by the banks. UK banks' claims on the public sector were therefore virtually identical at the end of 1985 (£17.3 billion) to their level in 1980 (£17.3 billion), whereas their claims on the private sector went up more than 150% in the same period and the national debt had increased by over 50%.¹⁸ The intended and actual result of over-funding was that the increase in the quantity of money, broadly-defined, was less than the increase in bank lending to the private sector.

The long period of financial liberalisation – which ran, apart from minor intermissions in the 1970s, from 1971 to autumn 2008 – resulted in an extraordinary metamorphosis of UK banks' asset composition. As noted above, even in the late 1960s UK banks had not escaped the legacy of wartime finance and the associated controls; they still extended more credit to the state than to the private sector. But in the 1970s the private sector became the banks' more important customer and in the 1980s that trend went much further (see Figure 8.2).¹⁹ Through the 1990s and opening years of the 21st-century UK banks' holdings of government paper dwindled into insignificance relative to balance sheet totals.

To summarise, restrictions on UK banks' asset composition survived – if in increasingly attenuated form – for a generation after the end of the Second

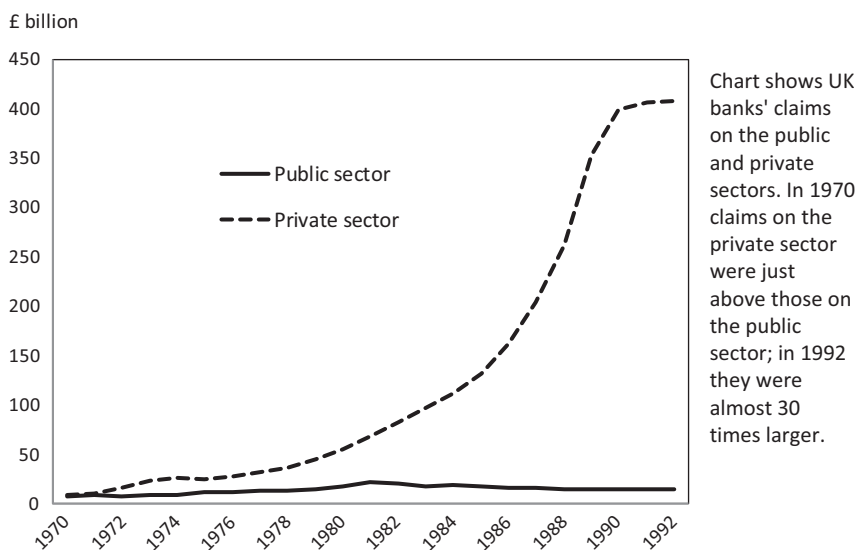


Figure 8.2 The revolution in UK banks' asset composition, 1970–1992.

Source: UK Financial Statistics.

World War, and even in the late 1960s holdings of British government securities remained larger than loans to the private sector. But the four decades to 2008 saw a revolutionary change. At the end of 1970, UK banks' claims on the private sector of £9.6 billion and building societies' mortgage books of £8.8 billion together totalled £18.4 billion, compared with nominal GDP at market prices in the 1970 year of just under £60 billion.²⁰ So – roughly speaking – UK monetary institutions had extended credit to the private sector equal to 31% of national output. In mid-2008, when such credit had soared to £2,154 billion compared with nominal GDP at market prices of £1,583 billion, the corresponding ratio was over 135% of GDP.²¹ Whereas in the 1960s the UK monetary sector's claims on the state were larger than those on the private sector, and were still sizeable relative to GDP, in 2008 they were much the same in nominal terms as they had been in 1980s. These claims were minuscule (less than 1%) compared with GDP and even more trivial (little more than ½%) relative to the banking industry's claims on the UK private sector.

New regulations curb credit growth from 2008

But the Great Recession led to a partial counter-revolution. International regulatory agencies – notably the Basel-based Bank for International Settlements, acting at the behest of the G20 group of industrial nations – determined that across the advanced world banks had allowed their risk assets, dominated by loans to the private sector, to become excessive relative to their capital. From September 2008, banks knew that a huge change in the regulatory environment was underway. Whereas the Basel II regime in force before the crisis allowed banks to operate with a ratio of equity capital to risk assets as low as 4%, the more demanding Basel III standard was that the minimum ratio should be 7%. (This minimum consisted of a slightly raised basic figure of 4½% and a 2½% “capital conservation buffer”. On top of this central banks and regulators might impose a “counter-cyclical buffer” of between 0 and 2½%.)²²

With a given quantity of equity capital, an increase in the minimum equity capital ratio from 4% to 7% of risk assets signalled the need for a reduction in risk assets of over 40%. New capital was difficult to raise from the stock market. Banks, therefore, had no alternative to restricting loan growth or even withdrawing long-standing credit facilities. Risk assets did not go down as much as might have been expected given the headline jump in the regulatory capital/asset ratios, but they did go down. In the two years to the first quarter of 2009 UK banks increased their lending to the UK genuine non-bank private sector from £1,916.9 billion to £2,221.2 billion, or by 15.9% (equivalent to a compound annual rate of 7.6%). The ratio of such lending to GDP then peaked at its all-time high of just above 145%. In the following two years, lending dropped to £2,167.9 billion, or by 2.4% (a compound annual rate of decline of 1.2%).²³

The lending figure stayed at its early 2011 level for three years, as the banks adjusted to the harsher regulatory position and took care that their assets could be funded from market sources. Meanwhile, the UK, along with other advanced countries, made a useful macroeconomic recovery in late 2009 and 2010, and nominal GDP moved ahead quite steadily from mid-2009. Relative to GDP, bank lending to the genuine non-bank private sector dropped by a quarter, touching a low of under 120% in the middle of 2015.²⁴

Conclusion: loans and deposits do *not* necessarily grow together

The composition of UK banks' assets has changed radically since the end of the Second World War. In 2003 Moore conjectured, in the context of his influential theory of "credit money", that "total loans equal total deposits", where the word "loans" makes sense only if they are to the private sector. But in the late 1940s, in the War's immediate aftermath, the advances of the London clearing banks were a mere sixth of their gross deposits and were overshadowed on banks' balance sheets by their holdings of claims on the government, almost entirely in the form of securities. Lending to the private sector was less than a tenth of GDP. Government securities were still a major element in banks' assets in 1970, ahead of the period of financial liberalisation inaugurated by the Bank of England's CCC reforms. Indeed, at that time the size of their claims on the private sector was only just beginning to edge ahead of that of their claims on the state.

Over the next 38%, an astonishing revolution was to occur. We have seen that, whereas in 1945 bank lending to the private sector was less than a tenth of GDP and even in 1971 it was still less than a third of GDP, by early 2009 the figure had climbed to 145% of GDP. At the end of the Second World War UK resident banks' deposit liabilities were about six times their loans to the private sector, but at the time of the Great Recession, they exceeded such deposits.²⁵ The claim of a one-to-one correspondence between loans and deposits is plainly false. Although the years since the Great Recession have seen a partial reversal of the long credit boom from 1971 to 2009 and have brought about a closer alignment between the levels of domestically-held deposits and loans, the counter-revolution in banks' balance-sheet composition contradicts the notion that loans and deposits rise in tandem. Indeed, both before and since the Great Recession the changes in banks' loan portfolios and their deposit liabilities have been not only of different sizes but sometimes in opposite directions, as shown in Figure 8.3.²⁶

The explanation before 2007 was that the growth of loan portfolios was so rapid that it was financed to a considerable extent not from UK deposit sources, but from the international wholesale markets. (When financed from these markets, the funds were often obtained by issuing securities rather than deposits. Northern Rock's failure is only one unhappy example of the dangers of such "securitisation".)²⁷ By contrast, in the sequel to the Great

Recession deposits kept on growing, while – for a few years – the stock of lending was falling. The divergence was mostly due to the Bank of England’s “quantitative easing” exercises. QE involved a combination of transactions, with the Bank of England issuing new cash reserves to the banks and using the proceeds to acquire government bonds from private sector non-banks. The deliberate intention was to create extra money, with the consequence that the contraction of banks’ risky claims on the private sector did not in the event reduce the quantity of money.²⁸ It is difficult conceptually to fit QE-type operations into the horizontalist view of money creation. Arguably, the money balances produced by QE have to be viewed as “exogenous” in nature. As Chick has warned, “...money is neither purely exogenous nor purely endogenous. Which is the better description depends on circumstances.”²⁹ At any rate, the data in Figure 8.3 disprove Moore’s 2003 claim about the identicalness of changes in loans and deposits.

The paper has shown that Moore’s identicalness claim was – and remains – wrong for two main reasons. The first is that securities as well as loans constitute part of banks’ assets and that to some extent this pattern is inevitable because available-for-sale securities facilitate the imperative task of managing liquidity; the second is that the public sector as well as the private sector borrows from the banking system, and the ratio of banks’ holdings of

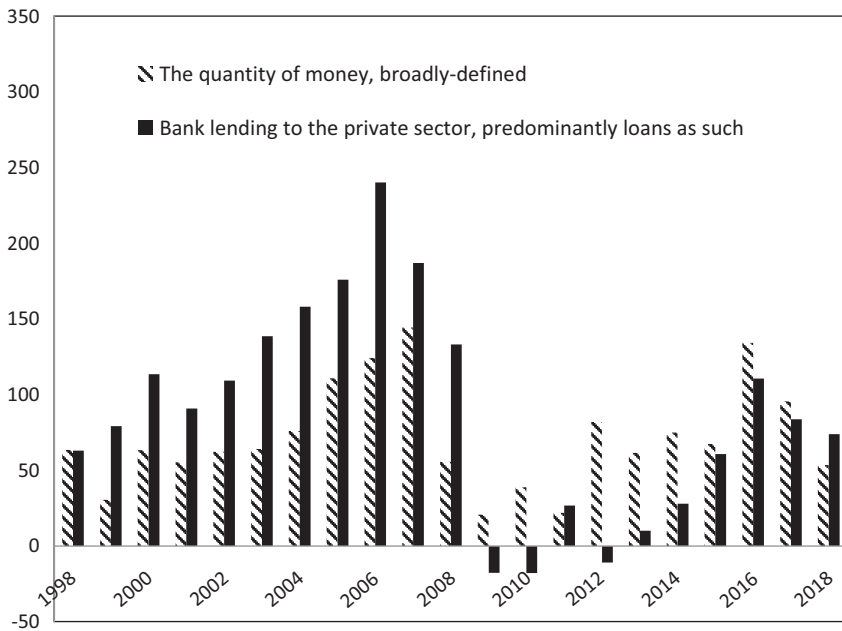


Figure 8.3 Changes in the quantity of money and bank lending in the UK in the 21st century.

Source: Bank of England database. Data are annual totals in GBP billions.

government securities to their total assets can sometimes be very high as well as volatile. This paper has demonstrated that the past eight decades have seen wide divergences between the growth of loans to the private sector and that of the deposits that form most of the quantity of money. Crucially, banks' claims on the public sector collapsed relative to total assets between 1945 and 2008 but became somewhat more important again after the Great Recession.

A case can be made that the phrase "credit money" is an impostor and, by extension, that using this phrase on the x axis of the horizontalist diagram is illegitimate. To quote Chick and Dow in a criticism of the more extreme horizontalist accounts, "...credit-money becomes a compound noun: credit or advances are conflated with deposits, and a particular type of money is confused with a method of generating money."³⁰ In a definitive geometry monetary equilibrium ought to be depicted by *both* a money-interest space *and* a separate credit-interest space.³¹ The horizontalist view of money creation has made a major contribution to post-Keynesian thinking, but it needs to be handled with care. Business, finance and politics are full of roughness and injustice, and the key players do not reliably help or "accommodate" each other. The state and the private sector compete for resources; central banks are not always nice to their clientele, the commercial banks; and commercial banks are far from generous – or even predictable – in dealings with their customers. The neat diagrams of the accommodationists may caricature an often antagonistic and messy reality.

Acknowledgements

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Notes

- 1 In five diagrams in Basil Moore, *Horizontalists and Verticalists: The Macroeconomics of Credit Money* (Cambridge: Cambridge University Press, 1988), "loans" and "deposits" appear as the same thing on their x axes. See Figure 3.1 (p. 61), Figure 3.2 (p. 62), Figure 3.3 (p. 66), Figure 13.1 (p. 336) and Figure 13.2 (p. 338).
- 2 In the textbook account the quantity of money is seen as a multiple (usually a stable multiple) of the monetary base. The monetary base – commonly defined as the sum of notes and coins held by the general public and banks' cash reserves at the central bank – represents the bulk of the central bank's liabilities. According to the standard view, the central bank can fix the monetary base and – because of the stable multiplier – it can exert "exogenous" control over the quantity of money. So the supply curves of both central bank money and the quantity of money are shown as a straight line vertical to the x axis in diagrams for the money/interest space. The construction is then said to depict the "verticalism" that Moore opposed in his 1988 book.

- 3 Moore, *Horizontalists and Verticalists*, p. 88.
- 4 Basil Moore, “Endogenous money”, pp. 117–21, in John King (ed.) *The Elgar Companion to Post-Keynesian Economics* (Cheltenham, and Northampton, MA: Edward Elgar Publishing, 2003). The quotations are from p. 121 and p. 120, respectively.
- 5 Shelagh Heffernan, *Modern Banking* (Chichester: John Wiley & Sons, 2006), p. 124.
- 6 Keynes, *Collected Works*, vol. VI, 1971 (originally published 1930), *Treatise on Money*, vol. 2 *The Applied Theory of Money*, p. 196.
- 7 At December 2005 UK banks’ total sterling deposit liabilities were £2,139,217 million. Their cash – consisting of “cash ratio deposits” at the Bank of England (£1,953 million), other deposits at the Bank of England (£1,388 million), and notes and coins in vaults and tills (£9,500 million) – totaled £12,841 million. The ratio of cash to deposits was therefore 0.6%. Natu Patel (ed.), *Financial Statistics* (Newport: Palgrave Macmillan, for the Office for National Statistics), January 2007 issue, Table 4.3A, pp. 87–9.
- 8 See Sheila Dow, “Endogenous money: structuralist”, pp. 35–51, in Philip Arestis and Malcolm Sawyer (eds.) *A Handbook of Alternative Monetary Economics* (Cheltenham, and Northampton, MA: Edward Elgar Publishing, 2006). Note, especially, page 36 where the structuralist approach to post-Keynesianism is said: “to include explicitly the role of liquidity preference as a major influence on the volume of credit created by the banks”.
- 9 The discussion here is about commercial banks, not investment banks. Investment banks’ dominant assets are of course securities. They have trading books that enable them to buy and sell these securities with customers. Note however that commercial banks may sometimes acquire securities, often as part of their arrangements with corporate customers. In the Bank of England database, the term “lending” refers to the total of loans *and securities* that constitute bank assets. Money is created if a bank buys a security from a company by crediting a sum to the company’s account. There is no need for a “loan”, in the proper legal sense, as such.
- 10 This pattern is found particularly in developing economies with inefficient markets in public debt. For example, in India in the 1970s and 1980s banks were subject to an increase in their statutory liquidity ratio. The effect was that banks were forced, regardless of their own asset preferences, to acquire claims on the government, in order to cover its deficit. Rakesh Mohan, *Growth with Financial Stability: Central Banking in an Emerging Market* (Oxford: Oxford University Press, 2011), p. 46.
- 11 One tactic for dealing with this criticism of horizontalist thinking is to say that the assumed economy has neither a government nor a central bank. See Marc Lavoie “Post-Keynesian monetary economics, Godley-like”, Harcourt and Kriesler (eds.) 2013. *Oxford Handbook of Post-Keynesian Economics*, vol. 1, *Theory and Origins*, pp. 203–17. To quote (p. 211),

the essentials of a monetary economy are described in any case without a government or a central bank, so that we have a pure credit economy, where private agents can only hold their wealth in the form of bank deposits.
- 12 Sheila Dow, “Endogenous money”, Chapter 28, pp. 61–78, in G. C. Harcourt and P.A. Riach (eds.) 2013. *A “Second Edition” of The General Theory* (London and New York: Routledge, 1997), vol. 2, notes that from the 1980s official direction of banking moved away from cash reserves towards capital. Capital regulation increasingly became “the fulcrum of influence” (p. 69).
- 13 Note that either a shortage of capital, relative to official rules on capital/assets ratio, or of cash, relative to banks’ liquidity preferences, could explain an upward-sloping supply curve of bank credit. Dow has tended to emphasize the

- importance of banks' liquidity preferences, but see her "Endogenous money: structuralist", 2006, pp. 41–2 where she says that both cash and capital matter.
- 14 Edward Nevin and E. W. Davis, *The London Clearing Banks* (London: Elek Books, 1970), p. 303, has the numbers cited in this paragraph.
 - 15 R.J. Ball and T. Burns "The inflationary mechanism in the U.K. economy", *American Economic Review* (American Economic Association: Nashville, Tennessee, 1976), vol. 66, no. 4, pp. 467–84.
 - 16 For the damage done to developing economies by financial repression, see – for example – Edward Shaw, *Financial Deepening in Economic Development* (Oxford: Oxford University Press, 1973). But many post-Keynesians deplore financial liberalization. See, again, for example, Philip Arestis and Panicos Demetriades "Financial liberalization: myth or reality?" pp. 205–25, in Arestis (ed.) *Method, Theory and Policy in Keynes: Essays in Honour of Paul Davidson* (Cheltenham, and Northampton, MA: Edward Elgar Publishing, 1998), vol. 3.
 - 17 Forrest Capie, *The Bank of England: 1950s to 1979* (Cambridge: Cambridge University Press, 2010), pp. 427–47.
 - 18 *Financial Statistics* (London: Her Majesty's Stationery Office), August 1983 issue, Table 6.1 on p. 61, and *Financial Statistics*, January 1987 issue, Table 6.1 on p. 64.
 - 19 A figure starting in 1970 and continuing to today would be ideal. But official data series are subject to so many redefinitions and discontinuities that the author could not compile a consistent series over the whole period.
 - 20 *Financial Statistics*, September 1972 issue, Table 70, p. 82.
 - 21 The "loans" concept is M4 lending to the private sector, that is, lending by "monetary financial institutions" (or banks and building societies), minus M4 lending to "intermediate other financial corporations" (that is, quasi-banks, which should be regarded as genuine non-bank agents). Note that this concept includes banks' holdings of claims on the private sector in the form of securities. The figures are from the Bank of England's database, with the author's calculations. They are available from the author at timcongdon@btinternet.com.
 - 22 Because of the varying range of components (and then problems of defining aggregates with the components) in such notions as "risk-weighted assets", and "Tier 1" and "Tier 2" capital, no simple summary measure is available for the change from the pre-2008 Basel II regulatory regime to the post-2010 Basel III arrangements. However, the proposition that the minimum level of equity capital to risk assets rose from 4% towards 7% is a reasonable generalization.
 - 23 The loans concept is the same as that described in footnote 20.
 - 24 The fall in bank lending inclusive of the intermediate other financial corporations as a ratio of GDP was much larger, amounting to about half of GDP. But the IOFC activity could be deemed artificial and of little significance outside the banking industry.
 - 25 In July 2009 M4x – that is, sterling money balances held by genuine non-bank private sector UK agents (exclusive of IOFCs) – came to £1,537 billion, whereas M4xL (sterling lending to the UK genuine non-bank private sector) was £2,118 billion. (The data are from the Bank of England database, with M4x carrying the mnemonic B53Q and M4xL that of B57Q.) The difference was funded largely by sterling deposits held by foreign residents.
 - 26 Note that the series in Figure 3 refers to M4x, that is, the quantity of money broadly-defined, but exclusive of "intermediate other financial corporations", and to M4xL, that is, sterling bank lending to the UK private sector by UK monetary institutions, excluding lending to IOFCs. For more on the vexed topic of the distortions caused by the IOFCs, see Norbert Jansen "Measures of M4 and M4 lending excluding intermediate other financial corporations", pp. 1–4, *Monetary & Financial Statistics* (London: Bank of England), May 2009 issue.

27 The ability of banks to fund their assets by issuing securities rather than by extending loans is another difficulty with Moore’s “loans equal deposits” notion. Furthermore, the Northern Rock crisis demonstrated in a decisive fashion that banks cannot take for granted that any loans they extend will be readily funded from retail deposits or the wholesale markets.

28 See Mervyn King’s “Speech given to the South Wales Chamber of Commerce, at the Millenium Centre, Cardiff”, 23 October 2012, available on the Bank of England website. To quote,

When banks extend loans to their customers, they create money by crediting their customers’ accounts. The usual role of a central bank is to limit this rate of money creation, so that an excessive expansion of money spending does not lead to inflation. But a damaged banking system means that today banks aren’t creating enough money. We have to do it for them. And as private sector balance sheets contract, public sector (government and central bank) balance sheets have to take the strain. The way in which the Bank of England expands the money supply is to purchase government gilts from the non-bank private sector and credit the bank accounts of people from whom the gilts are purchased.

For more on the UK approach to QE, see the author’s Chapter 2 “The debate over ‘quantitative easing’ in the UK’s Great Recession and afterwards”, pp. 57–77, in Tim Congdon (ed.) *Money in the Great Recession* (Cheltenham, and Northampton, MA: Edward Elgar Publishing, 2017).

29 Victoria Chick, *Macroeconomics after Keynes* (Cambridge, MA: MIT Press, Classic edition, 1991, originally published in 1983), p. 236.

30 Victoria Chick and Sheila Dow, “Post-Keynesian theories of money and credit: conflicts and (some) resolutions”, pp. 152–66, in G. C. Harcourt and Peter Kriesler (eds.) *Post-Keynesian Economics*. Vol. 1: *Theory and Origins* (Oxford: Oxford University Press, 2013). The quotation is from p. 160.

31 Dow has advocated separate conceptualizations of the money and credit markets in several places. See, for example, Figure 28.1 on page 73 of Sheila Dow, “Endogenous money”, in Harcourt and Riach (eds.) *A “Second Edition” of The General Theory*. The author has proposed a diagrammatic construction, with altogether eight quadrants, that respects this separate conceptualization. See Tim Congdon “On some principles to fix the quantity of bank money”, pp. 98–115, Chapter 8, in Sheila Dow, Jesper Jespersen and Geoff Tily (eds.) *The General Theory and Keynes in the 21st Century* (Cheltenham, and Northampton, MA: Edward Elgar Publishing, 2018).

9 The endogeneity of the money supply in *The General Theory*

G.C. Harcourt and Peter Kriesler¹

Introduction²

Although the endogeneity of the money supply is generally accepted in today's economic environment, for the second half of the last century there was much debate about the extent to which the money supply was controlled by the central bank. Post-Keynesian economists, in particular, have long argued that the money supply responds to the needs of the private sector, and so should be considered to be endogenous.

Keynes, prior to the publication of *The General Theory*, in a number of places appears to have accepted the idea that the monetary aggregate responds to the demands of the private sector (Moore 1984, 1988, Chapter 8, de Carvalho 2003, p. 432). However, it has generally been accepted that in *The General Theory*, the money supply is assumed to be exogenous, and its exogeneity plays an important part in the analysis.

Many economists who agree that Keynes's earlier work treated the money supply as endogenous, suggest that the exogenous treatment in *The General Theory* was "an aberration" (Dow 1997, p. 64). This view was shared by many of Keynes's Cambridge colleagues, who were involved either in the discussions around *The General Theory* (the "Circus"), including Joan Robinson, or in subsequent debates such as Kaldor.

Joan Robinson has argued that Keynes's acceptance of money supply exogeneity was tactical, accepting the orthodox position on this so as to strengthen the rest of his critique (Robinson 1971, pp. 79–82, see also Harcourt 1987, Chick and Dow 2001, p. 159).

According to Kaldor, the assumption of an exogenous money supply is a major limitation of *The General Theory*:

Keynes ... retained the assumption that the 'money supply' – the amount of bank money in circulation whether in the form of bank notes, or bank deposits – is exogenous, it is independently determined by the monetary authority.

(Kaldor, 1982, p. 77)

For Goodhart (1983, p.75), Keynes's treatment of the "money stock ... as exogenously fixed" was the result of his being "blind to its importance".

Moore, who has considered the question of the endogeneity of the money supply throughout Keynes's works stated "As is well known, Keynes in *The General Theory* explicitly assumed that the money supply was exogenously determined" (Moore, 1996, p. 92. See also Rousseas, 1996, pp. 672–3).

Chick argued that

Keynes's assumption that money was largely exogenous could be justified for his own time by the facts that investment was at a low ebb and that firms did not use bank finance to the extent that they have done in the last few years.

(Chick 1983, p.236)

and that "Keynes's theory of money, interest and investment is undermined if money is not exogenous", *ibid.*, p. 248 and also p. 328).

According to Hirai 2008, p. 182, exogeneity in *The General Theory* is the result of "both its 'elasticity of production' and its 'elasticity of substitution' [being] zero, so that the supply of money is fixed. Keynes consistently assumes the exogeneity of the money supply, a move he justifies on the basis of these properties."

Docherty, by contrast, examines these properties of money in considering the countervailing forces to the Keynes effect (discussed below), and concludes that Keynes runs into trouble showing that unemployment equilibrium can occur with flexible prices and wages due to his assumption of monetary exogeneity (Docherty 2005, Chapter 3).

This is a sample of the consensus, which has been challenged, since the mid-1990s by Sheila Dow, who has argued that while Keynes takes the money supply as given, this does not necessarily mean that it is exogenously determined.

In her Chapter on "Endogenous money" in *A 'Second Edition' of the General Theory* (Dow 1997), Sheila Dow explicitly challenges "the conventional wisdom that Keynes in *The General Theory* understood the money supply to be exogenous" (p. 61). To demonstrate this, Dow makes much of the distinction between given and exogenous variables, arguing that these need not be the same. This distinction is examined in the next section. In the third section, Keynes's treatment of the money supply in *The General Theory* is reconsidered in the light of this distinction.³

"Given" v "exogenous"⁴

The concept of "given" variables received its most prominent exposition in the work of Alfred Marshall in his emphasis on partial equilibrium. For Marshall, the use of partial equilibrium was important in allowing for policy and to aid in the analysis of actual problems. Partial equilibrium analysis

divided the economy into isolated sections – usually markets – each of which was considered to be separate and independent of the rest of the economy. In other words, due to the extreme complexity and the interrelated nature of economic phenomena, partial equilibrium concentrates on key relations abstracting from the others by assuming that they remain constant. In effect, they are held in the appropriate *ceteris paribus* pound for the sake of the analysis. As Marshall stated in 1922:

The forces to be dealt with are however so numerous, that it is best to take a few at a time: and to work out a number of partial solutions ... Thus we begin by isolating the primary relations of supply, demand and price in regards to a particular commodity. We reduce to inaction all other forces by the phrase “other things being equal”: we do not suppose that they are inert, but for the time being we ignore their activity. ... In the second stage more forces are released from the hypothetical slumber that had been imposed on them.

(pp. xiv–xv)

The element of time is a chief cause of those difficulties in economic investigations which make it necessary for a man with limited powers to go step by step; breaking up a complex question, studying one bit at a time, and at last combining his partial solutions into a more or less complete solution of the whole riddle. In breaking it up, he segregates those disturbing causes, whose wanderings happen to be inconvenient, for the time in a pound called *Cæteris Paribus*. The study of some groups of tendencies is isolated by the assumption other things being equal With each step more things can be let out of the pound.

(Marshall 1922, p. 366)

It is important to note that the factors being held constant were only done so for the sake of the analysis – rather than from a belief that they would not change. This was an attempt to render the complexities caused by the essential interdependence of all economic activity manageable in order to isolate the main causal factors. The factors in the *ceteris paribus* pound were regarded as “givens” for the sake of the particular analysis being undertaken – though this does not mean that they remained unchanging in general. It was only for the current analysis that they were to be regarded as such.

The question of which factors were to be regarded as given depended on the problem at hand and also, importantly, on the time period of the analysis. In particular, whether this length of time was sufficient to allow these factors to respond to changed conditions is an important consideration in whether or not they could be considered as given. Marshall distinguished between four different time periods of economic analysis, differentiated on the basis of which factors were held constant in each case. Of relevance to the discussion of Keynes’s use of given is the distinction between the short period and the

long period. In the short period, a number of factors are usually assumed to be given including the quantity and structure of fixed capital, and the supply and skills of the labour force. In contrast, in the long period, these as well as other major economic factors can vary though knowledge, technology and tastes are assumed to be given (varying only in the “secular long period”).

The debate over the endogeneity of the money supply uses the terms “endogenous” and “exogenous” in a slightly different way to that usually utilised by economists. Typically, these terms refer to variables within a mathematical model, with the values of endogenous variables being determined within the model, while exogenous variables have their values determined elsewhere.

With respect to the money supply, we are no longer considering a mathematical model, or even the question of whether it is determined by economic considerations – which is an alternate meaning of the term. Rather, the question is whether it is determined outside the private sector, mainly by the action of the country’s central bank – in which case the money supply may be considered to be exogenous. Following Bibow, we can define money supply exogeneity when “changes in the supply of money can occur or normally occur, presumably at the discretion of the monetary authority or the banks, independently of changes in the variables affecting the demand for money” (Bibow, 2009, p. 97).⁵ On the other hand, if the money supply responds to changes in demand from the private sector and is not predominantly under the control of the monetary authority, then it is considered to be endogenous.

In the light of this discussion, we can distinguish endogenous “given variables”, which, although constant in the short run, may change in the long term as a result of changes in the other variables being examined, from “exogenous variables” which, although they may change, will not change as a result of changes in other variables considered in the analysis.

Keynes was clearly influenced by Marshall’s work in this area. The list of variables he takes as given clearly signals that his analysis is within the Marshallian short period:

We take as given the existing skill and quantity of available labour, the existing quality and quantity of available equipment, the existing technique, the degree of competition, the tastes and habits of the consumer, the disutility of different intensities of labour and of the activities of supervision and organisation, as well as the social structure including the forces, other than our variables set forth below, which determine the distribution of the national income. This does not mean that we assume these factors to be constant; but merely that, in this place and context, we are not considering or taking into account the effects and consequences of changes in them.

(Keynes 1936, p. 245)

The last sentence indicates that, although these are taken as given for the sake of the analysis, they can vary. In fact, Keynes does, in various places, consider

what might happen if some of these do change. In other words, given variables need not be exogenous, in the conventional sense. Rather, they do not change in the period under consideration. Clearly, decisions taken in this period may lead to them changing in the next period, or in the long run. A good example of this is the size of the capital stock, which Keynes takes as given. However, investment decisions in this period will lead to changes in capital stock in subsequent periods – so it is clearly not exogenous.

The difference between given and exogenous is a question of control. For the money supply, it is not a question of whether it is variable in the long run, but, rather, whether it is under the control of the central bank, in which case it is exogenous to the private sector, or whether the private sector directly influences it, in which case it is endogenous.⁶ Clearly, as well as absolutes, there will be degrees of influence. Our question is not about where the determination of the money supply actually lies, but rather where Keynes in *The General Theory* posited it.

In Chapter 18, Keynes included the “the quantity of money” as one of “the ultimate independent variables” and distinguished these from the “given factors” although commenting that this “division ... is, of course, quite arbitrary from any absolute standpoint.” (Keynes 1936, p. 247). According to Dow, this passage “should be interpreted as taking the money supply to be *given* not *exogenous*.” (Dow 1997, p. 63). In other words, drawing a distinction between given and exogenous variables, Dow argues that for *The General Theory*, money is the former but not the latter. This distinction is examined in the next section, before considering Dow’s argument in more detail.

Evidence from *The General Theory*

Keynes commences his overview of the arguments by listing the factors he takes as given. Interestingly, the money supply is not included in this list (1936, p. 245). As has been noted, it is listed, instead as one of the three “ultimate independent variables”, and he suggests that it is exogenously determined:

Thus we can sometimes regard our ultimate independent variables as consisting of (3) the quantity of money as determined by the action of the central bank; so that, if we take as given the factors specified above, these variables determine the national income and the quantity of employ.

(Keynes 1936, pp. 246–7)

The other two “ultimate independent variables” listed, the “psychological factors” and the “wage-unit as determined by the bargain reached between employers and employed” (ibid., pp. 246–7) are also exogenously determined, although Keynes argues that they are capable of “being subjected to further analysis, and are not, so to speak, our ultimate atomic independent elements.” (ibid., p. 247).

The main role that the money supply plays in the analysis of effective demand is in the determination of the rate of interest. It is the supply of money in conjunction with its demand (aka liquidity preference) that together determine the interest rate. However, it is important to note that it is not the total quantity of money that plays a role in determining interest rates, but, rather, the quantity of money remaining after the transactions demand for money has been satisfied (see, for example, *ibid.*, p. 74).

The clearest discussion of the role of the money supply and its exogeneity occurs in Chapter 19 where Keynes examines the impact of changes in money wages to demonstrate that wage flexibility will not cure unemployment. In this context, an important mechanism that allows changes in money wages to influence the level of employment operates through the money supply. According to Keynes, a reduction in money wages “accompanied by some reduction in prices and in money-incomes generally, will diminish the need for cash for income and business purposes” (*ibid.*, p. 263). This reduced transactions demand for money will make more money available for speculative purposes, which will reduce the rate of interest, and therefore, *ceteris paribus* will increase the level of investment and subsequently of output and employment. This effect of a reduction in wages is known in the literature as the Keynes effect (Kriesler 1997, Docherty 2005, pp. 13–5). As Keynes admits, it depends on the exogeneity of money as, “If the money supply is itself a function of the wage- or price- level, there is indeed, nothing to hope in this direction.” (*ibid.*, p. 266). In other words, Keynes here considers and rejects the possibility of endogenous money. “But if the quantity of money is virtually fixed, it is evident that its quantity in terms of wage-units can be indefinitely increased by a sufficient reduction in money-wages” (*ibid.*, p. 266). However, Keynes argues that monetary policy increasing the money supply would achieve the same result, without the negative side effects. Both of these aspects of the argument suggest that Keynes considered the money supply to be exogenous, under the control of the monetary authority in *The General Theory*.

According to Dow, “For the money supply to be regarded as exogenous to the private sector, there must be a belief in the capacity of the monetary authorities to control it.” (Dow 1997 p. 63).⁷ In addition to the case just discussed, in a number of places in *The General Theory* Keynes makes it clear that money supply is controlled by central bank and not responsive to private sector demand.

At the end of Chapter 13, “The general theory of the rate of interest”, Keynes argues that the decisions of the public to hold or hoard cash, which is the equivalent to the concept of liquidity-preference (*ibid.*, p. 174), together with the quantity of money will determine the interest rate. His statements about money supply indicate that he does not believe that the private sector can influence its quantity:

it is impossible for the actual amount of hoarding to change as a result of decisions on the part of the public, as long as we mean by ‘hoarding’ the actual holding of cash. For the amount of hoarding must be equal to the

quantity of money (or – on some definitions – to the quantity of money *minus* what is required to satisfy the transactions-motive); and the quantity of money is not determined by the public.

(*ibid.*, p. 174)

In his discussion of the “properties of interest and money” in Chapter 17 Keynes concedes that “an assumption that [the quantity of money’s] effective supply is rigidly fixed would be inaccurate” (*ibid.*, p. 232). However, this is for the reasons discussed above, namely, that reductions in money wages will reduce transactions demand for money, freeing it for speculative purposes. The implications being that otherwise it is fixed.

According to Chick and Dow 2013, even if the money supply is initially exogenously determined, with the money stock given at the beginning of the period, the creation of new credit will lead to the creation of new deposits which increases that supply, so that “the money supply is created by bank credit” (*ibid.*, p. 156). However, although this argument supports the compatibility of liquidity preference with endogenous money, as Chick and Dow suggest, since Keynes does not really deal with bank credit in *The General Theory*, it is not an argument for endogeneity in that book. Chick elsewhere has argued that the approach treating “money as exogenous ... implicitly is closer to *The General Theory*, for Keynes gave the banking system scant treatment there.” (Chick 1983, p. 232).⁸

The Pigou or real balances effect

In 1943, Pigou published an important rejoinder to Keynes, outlining another mechanism whereby downward movements in wages could restore full employment. This has been called the Pigou or real balance effect in the literature (Pigou 1943, Patinkin 1948, Kriesler, 1997). The essence of Pigou’s argument was focused on the inclusion of wealth as part of the consumption decision. The real value of that part of wealth that was held in monetary assets would be influenced by changes in money wages and the subsequent impact on prices. A reduction in money wages leading to a reduction in the price level would increase the real value of monetary assets, which were part of an individual’s wealth portfolio. This increase in wealth, *ceteris paribus*, would increase consumption, increasing output and employment. Pigou and Patinkin argued that this process would continue until full employment was restored and there was no further change in money wages.

The point of raising the Pigou effect in this paper is due to the fact that it relies on individuals holding excess money balances as a result of the impact of falling prices on the real value of those balances. It is the attempt to reduce these excess balances by increasing consumption that increases employment. However, this can only arise if the money supply is exogenously determined. If it is endogenous, determined by private sector demand, then such excess balances could not arise.⁹

Conclusion and extension

For analytical purposes, throughout the analysis of *The General Theory* Keynes considers a number of variables whose values are given. However, this does not mean that they are given for all time, nor does the fact that they are given mean that they are exogenous. An important example of this is the capital stock, which, although one of the variables assumed to be given – a condition helping identify the analysis of *The General Theory* as being in the Marshallian short run – is clearly influenced by other variables in the analysis, particularly the level of investment. Investment decisions determined within the short period analysis of *The General Theory* will lead to changes, over time, in the given capital stock. In this sense, the capital stock should be seen as given in the short run, but endogenous over time.

Following Marshall, the purpose of assuming variables as given for particular analysis is to make the problem being considered trackable – to reduce the complexity of that problem to one capable of analysis. The idea being that, as the analysis moves out of the short run, then the *ceteris paribus* assumptions can be gradually relaxed to allow the full complexity of the problem to be considered. However, there are some variables whose values are considered as given for other reasons. These may be because the variables are not determined by economic factors – this would include important factors such as the weather and tastes – or because they are not determined within the domestic economic environment being examined. The obvious example here is exports. However, the supply of money has also been included in this category, particularly by quantity theorists. This is due to the assumption that the money supply is determined outside private sector activity by the central bank. We have argued that Keynes included this assumption in *The General Theory*, so that the money supply should be regarded as both given and exogenous. Exogenous because, in *The General Theory*, although not in Keynes's other writings, it is determined by the central bank and not by the public. As noted above, other authors have speculated as to his motives, the most likely being that it was tactical, to demonstrate the main principles of effective demand even when money supply was exogenous.

An important question arising from this is how the now generally accepted position that the money supply is endogenous would affect the conclusions of *The General Theory*. According to Dow, Keynes's monetary theory and the concept of liquidity preference “would apply as long as the money supply function had an upward slope with respect to the interest rate; it only loses force as the function approaches the position of the modern endogenous money theorists” (Dow 1997, p. 65). To illustrate this, she develops a framework in which liquidity preference plays a role despite the money supply being endogenous. In this case, “liquidity preference [plays] an active part in determining the volume and price of credit, together with a limited role for the monetary authorities.” (ibid., p. 78). So, as long as the monetary authority has some influence over money supply or credit, Keynes's liquidity preference has a role in explaining monetary phenomena.

In the case of complete endogeneity of the money supply, where the central monetary authority sets the interest rate and credit/money is solely determined by demand – the horizontalist position – it is argued that there is no role for liquidity preference (*ibid.*, p. 78). In Harcourt and Kriesler (2011), we have disputed this position with respect to the supply and demand for international currency. There we argued that liquidity preference theory, in particular the motives for demand for money analysed by Keynes in *The General Theory*, supplemented by the finance motive which he subsequently introduced as a response to his critics, provides the most appropriate framework for understanding the determination of exchange rates under the current exchange rate regime.

As a result, given the endogeneity of the supply of money and credit in contemporary capitalist economies, while Keynes's liquidity preference theory plays a less complete role in explaining domestic money and interest rate determination, it remains a powerful tool for the understanding of exchange rate determination.

Notes

- 1 We would like to thank, but not implicate, Louis-Philippe Rochon, Laurentian University, Ontario, Canada and Peter Docherty, University of Technology, Sydney Australia for their helpful comments. It is with great sadness we note that Geoff Harcourt died in Sydney, Australia on the 7th of December 2021.
- 2 We would like to thank Sheila for being such a warm and enthusiastic friend and encouraging colleague. We have learnt so much from our conversations with her, and from her papers and books. We feel that we come away from encounters with Sheila understanding our discipline a bit better, even, as this paper demonstrates, when we disagree with her.
- 3 We only consider Keynes's arguments in *The General Theory*, as we agree that elsewhere he did accept a degree of endogeneity for money.
- 4 The first part of this sections draws on Kriesler (2008).
- 5 Bibow (2009, Chapter 5) argues for money supply exogeneity in *The General Theory* based on the behaviour of banks.
- 6 See also Docherty (2005) which discusses the “semantics of exogeneity and endogeneity” and considers Dow's distinction which centres on the question of controllability (pp. 5–9).
- 7 See also Chick and Dow (2013 pp. 155–7).
- 8 Kalecki in his response to the Pigou effect (Kalecki 1944) stresses the role of credit money and the likely bankruptcies resulting from the increase in the real value of debt if wages and prices fall, as a counter to the employment increasing influence (Kriesler 1997, p. 309). In discussions with Kalecki about this article, it is clear that Keynes had not incorporated these considerations into *The General Theory* (Osiatynsky 1990, pp. 566–8).
- 9 Kalecki (1944) provided an important response to Pigou based on endogenous credit money, as discussed in the previous footnote.

References

- Bibow, J. 2009, *Keynes on Monetary Policy, Finance and Uncertainty: Liquidity Preference Theory and the Global Financial Crisis*, Routledge, London.

- Chick, V. 1983, *Macroeconomics after Keynes: A Reconsideration of The General Theory*, The MIT Press, Cambridge, MA.
- Chick, V. and Dow, S. 2001, "Formalism, logic and reality: A Keynesian analysis", *Cambridge Journal of Economics* 25, reprinted in *Foundations for New Economic Thinking: A Collection of Essays*, Dow, S., 2012, Palgrave Macmillan, Houndmills, pp. 140–61.
- Chick, V. and Dow, S. 2013, "Post-Keynesian theories of money and credit: Conflicts and (some) resolutions", in *The Oxford Handbook of Post-Keynesian Economics Volume 1: Theory and Origins*, Harcourt, G.C. and Kriesler, P. (eds.). Oxford University Press, New York, pp. 152–66.
- de Carvalho, F.J.C. 2003, "Keynes and the endogeneity of money", *Review of Keynesian Economics*, 1: pp. 431–46.
- Docherty, P. 2005, *Money and Employment: A Study of the Implications of Endogenous Money*. Edward Elgar, Cheltenham.
- Dow, C. 1997, "Endogenous money", in *A 'Second Edition' of The General Theory Vol. 2*, Harcourt, G.C. and Riach, P.A. (eds.). Routledge, London, pp. 61–78.
- Goodhart, C.A.E. 1983, "Comment on Meltzer "On Keynes and monetarism", in *Keynes and the Modern World*, Worswick, D. and Trevithick, J. (eds.). Cambridge University Press, Cambridge, pp. 75–81.
- Harcourt, G.C. 1987, "The legacy of Keynes: theoretical methods and unfinished business", in *Nobel Conference XXII: The Legacy of Keynes*, Reese, D.A. (ed.). Harper and Row, San Francisco, CA, reprinted in *On Political Economists and Modern Political Economy: Selected Essays of G.C., Harcourt*, Sardoni, C. (ed.). 1992, London, pp. 235–49.
- Harcourt, G.C. and Kriesler, P. 2011, "The enduring importance of *The General Theory*", *Review of Political Economy*, 23: 4, 503–20, reprinted in *Post-Keynesian Essays from Down Under Volume I: Essays on Keynes, Harrod and Kalecki: Theory and Policy in an Historical Context*, Halevi, J., Harcourt, G.C. and Nevile, J. (eds.). 2016, Palgrave Macmillan, Houndmills, pp. 15–33.
- Hirai, T. 2008 *Keynes's Theoretical Development: From the Tract to the General Theory*. Routledge, Abingdon.
- Kaldor, N. 1982, "Limitations of The general theory" The Keynes lecture to the British Academy reprinted in *Further Essays on Economic Theory and Policy Nicholas Kaldor*, Targetti, F. and Thirlwall, A.P. (eds.). Duckworth, Gloucester, pp. 74–89.
- Kalecki M. 1944, "Professor Pigou on 'The classical stationary state'", *The Economic Journal*, 54: 131–2, reprinted in *Collected Works of Michal Kalecki*, Vol. I, Osiatynsky, J. (ed.). 1990, Oxford University Press, Oxford, 342–3.
- Keynes, J.M. 1936 (1973), *The General Theory of Employment, Interest and Money: The Collected Writings of John Maynard Keynes*, Vol. 7, Macmillan for the Royal Economic Society, London.
- Kriesler, P. 1997, "Keynes, Kalecki and The General Theory" in *A 'Second Edition' of The General Theory*, Vol. 2, Harcourt, G.C. & Riach, P.A. (eds.). Routledge, London, pp. 300–22, reprinted in *Post-Keynesian Essays from Down Under Volume I: Essays on Keynes, Harrod and Kalecki: Theory and Policy in an Historical Context*, Halevi, J., Harcourt, G.C., and Nevile, J. (eds.). 2016, Palgrave Macmillan, Houndmills, pp. 81–104.
- Kriesler, P. 2008, "Partial equilibrium analysis", *International Encyclopedia of the Social Sciences*, 2nd ed. William A. Darity Jr. (ed.). Macmillan Reference USA, pp. 151–3, reprinted in *Post-Keynesian Essays from Down Under Volume IV: Essays on Theory: Theory and Policy in an Historical Context*, Halevi, J., Harcourt, G.C., and Nevile, J. (eds.). 2016, Palgrave Macmillan, Houndmills, pp. 33–7.

- Marshall, A. 1922 (8th edition), *Principles of Economics: An Introductory Analysis*. Macmillan and Co. Ltd, London.
- Moore, B.J. 1984, "Keynes and the endogeneity of the money stock", *Studi Economici*, 22: pp. 23–68.
- Moore, B.J. 1988, *Horizontalists and Verticalists: The Macroeconomics of Credit Money*. Cambridge University Press, Cambridge.
- Moore, B.J. 1996, "The money supply process: A historical reinterpretation", in *Money in Motion*. Deleplace, G. and Nell E.J. (eds.). St. Martins Press, New York, pp. 89–101.
- Osiatynsky, J (ed.) 1990, *Collected Works of Michal Kalecki*, Vol. I. Oxford University Press, Oxford.
- Patinkin, D. 1948, "Price flexibility and full employment". *The American Economic Review*, 38: pp. 543–64.
- Pigou, A.C. 1943, "The classical stationary state". *Economic Journal*, 53: pp. 343–51.
- Robinson, Joan, 1971, *Economic Heresies: Some Old Fashioned Questions in Economic Theory*, Macmillan, London.
- Rousseas, S. 1996, "The spheres of industrial and financial circulation revisited, and their implications for Keynesian economic policy", in *Money in Motion*. Deleplace, G. and Nell E.J. (eds.). St. Martins Press, New York, pp. 672–83.

10 Liquidity preference and the digital financial inclusion illusion

Penelope Hawkins

Introduction

The digitalisation of financial services has dovetailed with increasing national and global determination to address the problem of financial exclusion. Financial inclusion has become synonymous with reducing poverty and inequality as well as enabling access to social transfers and health services. Governments and international organisations have adopted the mantra of the benefits of financial inclusion, with financial inclusion described as a public good – as important and basic as access to say, safe water or primary education (Khan, 2012). Best case scenarios for widespread financial inclusion are projected with multiplier effects as savings are pooled¹ and capacities for households to build assets are enhanced, and the resilience to shocks like death or disease are strengthened. It is no wonder then that the delivery of financial services through digital channels has been hailed as an ideal outcome.

Digital finance can be described as the new technologies being applied to the financial services industry. It includes a system of platforms, products, applications, processes and business models that transform the way banking and financial services are provided (European Commission, 2021). At face value, digital finance involves a move from traditional financial activities to digital equivalents. Consumers now undertake financial activities using mobile phones or laptops, with the industry employing big data analytics, including artificial intelligence (AI), machine learning, social network preferences, and various other technologies (such as cloud computing), to offer financial services. While the loss of privacy seems to be part of the trade-off for consumers the claims for innovation and the potential to make payments and transactions more accessible and cheaper, paired with a narrative that digital finance is better than cash, might lead one to believe that the matter of financial inclusion has largely been resolved.

Voices of disquiet argue that the nature of such financial inclusion is a far cry from the original idea of addressing financial exclusion. The number of bank accounts or e-wallets is the usual proxy for financial inclusion in a country, as bank accounts provide access to first-order financial services, such as an ability to transact, receive funds, make payments and save. Moreover,

without a bank account, it is more difficult and costlier to establish credit or qualify for a loan or send or receive remittances. However, people are becoming more aware that there is a difference between owning a mobile account or e-wallet and making sustained use of it or getting access to credit. Having a basic account does not necessarily lead to access to an extended range of financial services. For example, even the Consultative Group to Assist the Poorest (CGAP) – a staunch cheerleader of financial inclusion – acknowledges that there is no discernible welfare benefit from access to a basic account alone (El-Zoghbi et al., 2019). In addition, as access to cash may be undermined as digital alternatives are promoted, the plight of the unbanked may become worse. This chapter re-examines the claims for both financial inclusion and its digitalisation and suggests that an inclusion illusion is at play, with the number of basic accounts opened masking the fact that little improvement to financial inclusion is taking place in reality. Moreover, with digital providers of all sorts calling for exceptional (non) treatment from regulators, the most disadvantaged by financial exclusion may not benefit from the wave of digital finance.

This chapter frames financial inclusion and the differential provision of financial services to different borrowers within an understanding of banks as active managers of their balance sheets as guided by their preference for liquidity (Hawkins, 2002b). Hence, a conditionally endogenous money supply, as associated with the work of Minsky (1982), Chick (1983), Dow (1993, 1996), Dow and Dow (1989) and Carvalho (1992, 1999), applies, in contrast to the passive accommodation of the banking sector put forward by Moore (1988) and the horizontalists (who see the money supply accommodating completely to demand). While some borrowers have first call on a bank's resources, others are unable to obtain credit, and hence are unable to obtain credit and remain constrained by financial exclusion. Still, others remain on the 'fringe of unsatisfied borrowers' (Keynes, 1971:327), with capricious access to financial services leaving them financially vulnerable. For Keynes, the fringe was excluded on the grounds of eligibility rather than lack of security or the rate of interest.

In Section 'Banks' evaluation of borrower creditworthiness and the spectrum of financial provision', the discussion sets out the spectrum of financial inclusion and the role of liquidity preference in determining borrower access to liquidity. This contrast with the mainstream understanding of the fringe – as explained by credit rationing – occurs as a reaction to asymmetrical information. Here, borrowers typically know and conceal their risk, while lenders take the conservative route and ration credit – rather than raise interest rates to cover such unknowns (Stiglitz and Weiss, 1981). In this view, full information could remedy the unsatisfied demand. But in a world with uncertainty and power relations between borrower and lender, knowledge of borrowers – dependent on convention and judgement – and held with varying degrees of certainty, is more applicable than information (Dow, 2004). The liquidity preference of banks – within a framing of a conditionally

endogenous money supply – provides a more useful point of departure to interpret expanding (and shrinking) access to financial services. It also helps explain why certain cohorts are generally excluded.

The chapter also identifies two periods of financial inclusion in recent decades in which the basis of knowledge of borrowers' creditworthiness has changed. While knowledge of customers is necessary for the evaluation of creditworthiness, the ways of acquiring such knowledge has changed over time. Next, Section 'Proximity matters' describes the first wave – so named as knowledge of the consumer relies on the loan officer's personal knowledge of the client for which geographical proximity could be seen as a proxy. This conventional way of assessing creditworthiness, knowing the bank manager, is familiar to us – but is of particular importance once there is widespread acceptance of chequing accounts opened for those deemed creditworthy – i.e., in Chick's third and fourth stages of banking – see Chick (1992, 1993) and Hawkins (2018). The fifth stage of banking is associated with active management of both sides of the balance sheet and aggressive expansion of credit, thanks to credit scoring which allows quicker processing. Section 'Connection matters' presents the second wave in which a reliance on data analytics rather than personal knowledge, dominates. The systemic over-estimation of creditworthiness in the lead up to the sub-prime credit is an example of this. Further examples are the launch of M-Pesa in Kenya, and payments services and credit linked to mobile phone connectivity. We consider 2007 as the period in which data analytics became generally used as the basis for the assessment creditworthiness. This has spawned a host of innovations – mobile and digital innovations like branchless banking, digital banks, FinTech, the platforms on which they operate, even the emergence of cryptocurrency and Central Bank Digital Currencies (CBDCs). While cryptocurrency has used the mantle of financial inclusion in its self-promotion, in the narrative presented here cryptocurrencies are seen as an important catalyst for CBDCs, rather than a means of inclusion themselves.

While the knowledge source for banks' evaluation of creditworthiness may have changed with digitalisation of financial services (from proximity to analysis of data metrics), the way banks evaluate creditworthiness is still bound up with their liquidity preference. This is explored in Section 'Problem solved?' which examines some of the reasons to be cautious about the claims made for digital financial inclusion. Section 'Conclusion' concludes.

Banks' evaluation of borrower creditworthiness and the spectrum of financial provision

Uncertainty may be seen as a relative concept (Dow, 1993:166) with liquidity preference higher if there is a higher degree of uncertainty, or indeed there is a higher incidence of uncertainty. Traditionally, liquidity preference has come to refer to the preferred constitution of portfolio assets (Keynes, 1936:166). With the extension of the concept of liquidity preference to banks

(which have the capacity to create liabilities as they create assets), the concept has also come to embrace the size of the portfolio (Dow, 1993:165).

Liquidity preference of banks has been argued to be a consequence of the three motives for the demand for money (Hawkins, 2003:59) – transactions demand (in holding adequate reserves for daily balances so as to avoid having to call on the central bank’s discount window), speculative demand (liability management in the case of up and downturns during the cycle and precautionary demand (in terms of holding of liquid assets such as short-term securities, treasury bills and reserves). During a cyclical upturn, for example, as banks become less uncertain about the future and their liquidity preference falls, they may re-evaluate the credit applications of projects and households that they previously rejected and extend more credit to more borrowers. Indeed, they may ‘beat the bushes’ (Davidson, 1978, p 330) to flush out borrowers and projects from the fringe when liquidity preference falls, or when they seek to crowd-out competitors. Lenders typically express the change in liquidity preference as tightening or loosening of credit extension standards (Lown et al., 2000:3). The endogenous money supply view suggests that while banks respond to demand for credit, they are not automatically or unconditionally accommodating. Instead, their perceptions of creditworthiness vary not only according to convention around wealth, status and standing, also but also according to external factors and the business cycle within the background of systemic uncertainty (Hawkins, 2002b).

The spectrum of financial inclusion tries to capture the breadth (and depth) of financial provision. The breadth is described by the range of clientele. At the one extreme are those with a first call on banks’ services – who receive preferential rates and waived charges – known as the super-included (Dymski, 1996:93), followed by those who are included, but not with any privilege. Then follows the fringe who are vulnerable to withdrawal of credit as and when bankers’ liquidity preference changes. In addition, the fringe may be charged a premium for access to credit which exacerbates their financial fragility. Finally, at the other extreme are those who are typically excluded from borrowing, even when the liquidity preference of banks is low. Standards are likely to vary along the spectrum. The depth of financial provision has to do with the quantum of credit – which may rise and fall in line with uncertainty and systemic conditions, with low-liquidity preference associated with higher levels of credit extension to a larger range of clientele along the spectrum than high- or medium-liquidity preference (Hawkins, 2002a, 2003).

A discontinuity between the fringe and the ‘over-excluded’, as only in times of exceptional circumstance are the unsatisfied needs of the over-excluded met (such as the extension of credit to households prior to the sub-prime crisis). For the most part, such borrowers are deemed uncreditworthy based on rules of thumb that designate them poor, unconventional, and so on. In the digital age, these rules of thumb are built into the algorithms (Croxon et al., 2022). Borrowers themselves will express their own liquidity preference through the use of different instruments which are deemed profitable, liquid

or secure. New products and services, together with marketing strategies of credit providers in good times, can encourage lower liquidity preference amongst borrowers for a time. The over-excluded may have relatively higher liquidity preference, retaining cash under the mattress, or high levels of foreign reserves, in the case of a small country (Dow, 1995:9).

We turn now to the evaluation of creditworthiness in the pre- and post-digital phases.

Phase 1: Proximity matters

The concept of financial inclusion sprang into general parlance in the 1990s, when the consequences of financial exclusion in developed countries (such as the UK, Germany, Portugal and the US) emerged as an economic concern. Exclusion from a current account or home contents insurance contributed to more general social exclusion (Kempson and Whyley, 1999) with up to 17% of developed country households (mostly the vulnerable and ethnic-minority households, as well as the elderly or young) affected (Kempson et al., 2004). For those on the margins of provision, the most likely formal financial product was a savings account or transaction account for receiving funds, but they were denied the overdrafts and prime loans of formal providers.

Defined as ‘the inability to access necessary financial services in appropriate form’ (Kempson and Whyley, 1999), financial exclusion included aspects of affordability, eligibility and appropriateness of products and services. The Financial Services Authority in the UK (FSA, 2000) provided a taxonomy that identified five categories of exclusion reinforcing each other and creating a complex set of barriers to entry. These included access exclusion (lack of creditworthiness), condition exclusion (eligibility, location), price exclusion (affordability), market exclusion (lack of awareness or understanding) and self-exclusion (primarily due to expecting to be refused access).

Stage four of banking development (Chick, 1993) is associated with the central bank accepting the role of lender of last resort in order to establish confidence in the system. Here, the stock of reserves are no longer a binding constraint on credit creation as banks can always pay the repo rate if they have a shortage (Dow, 1997:68), and the expansion of credit through chequing and current accounts becomes more widespread (Hawkins, 2018). Ironically, the widespread acceptance of such accounts makes management of personal finances using cash only more and more costly and inconvenient for those excluded from the formal system (Kempson et al., 2004). Current accounts – which provided credit through an overdraft feature, are offered only to those deemed creditworthy (FSA, 2000). Reasons for exclusion of clientele included obstacles related to personal characteristics (unsalaried or irregular employment, location of residence), documentation (lack of identity cards or ethnicity), and lack of affordability of bank fees and charges (Kempson et al., 2004), all of which undermined knowledge of potential clients. The proximity problem is worsened by structural change in the financial

sector – such as occurred in the US from the 1980s with deregulation of banking leading to over 4,300 mergers in the 1980s and 6,000 in the 1990s.² This undermined proximity to local communities and hence knowledge of their financial needs, which ultimately led to lower access to financial services and credit (Campen, 1998).

Developing countries have also been grappling with financial exclusion for some time. The proximity to banks and affordability of their services have been the key concerns affecting rural and remote populations, as well as the poor, women and the elderly. Policy solutions have tended to focus on cheaper accounts with minimum balances and maintenance fees waived – as in South Africa's *Financial Sector Charter Access Standards* – rather than fundamentally addressing the employment or income of consumers (Feasibility, 2005). In India, the 14 largest commercial banks were nationalised in 1969 to improve financial provision and access to financial services. A social banking experiment in 1977 followed which required four rural bank branches to be opened for each branch in an urban area. Known as the 1:4 licence rule this directly addressed the proximity barrier in India (Burgess and Pande, 2005) and increased access to bank credit by rural households. By the time the rule was disbanded in 1991, 29% of rural credit was sourced from banks compared to only 1.1% of rural household debt prior to implementation. A point of transaction within 10 km of 80% of the population was set as a target for South African banks (Feasibility, 2005). In 2008, the State Bank of Pakistan began to licence 'branchless banks' – essentially banks that worked through agents – primarily as a drive to reduce the 'cost and time spent by low-income people to reach out to distantly located bank branches for carrying out their small value transactions' (State Bank of Pakistan, 2013:3). In Brazil, agency banking was successfully used to extend financial services through post offices where bank branches would have been uneconomical, transforming nearly 6,000 post offices into banking branches between 2002 and 2008 (Banco central do Brazil, 2010).

Unbanked people in developing countries manage a complex set of informal alternatives, or complements, to the formal financial providers, including money guards (who store cash for others in their homes), savings clubs, funeral societies and money lenders (Collins, 2004). Studies show positive correlations between higher income levels and greater usage of formal financial services products, as well as formality of employment and higher use of formal financial services underlining the conventional assessment of credit-worthiness of borrowers (Ardington et al., 2004).

Phase 2: Connection matters

Addressing proximity was the challenge of the pre-digital phase of financial inclusion. In the digital phase, the distance between provider and customer is made irrelevant – as financial services are delivered through mobile phones and internet access – and unavoidable, as branches are closed and

services are delivered through branchless and digital banks. Now, the ability to assess creditworthiness is dependent on data analytics and mining, including user behavioural statistics enabled by the gathering of personal data on e-commerce, search and social media platforms. Digital finance embraces FinTech companies – many of which are start-ups offering services (like payments services) to a specific clientele – and Big Tech – which are existing digital platform companies (Like Google, Tencent and Facebook (now Meta)). Big Tech companies combine information from different applications and also provide financial services themselves to leverage positive network effects to their advantage in much the same way that the dominant credit card networks (Mastercard and Visa) have done.³ As the number of merchants or social networks using a platform grows, more data are collected and analysed, drawing in more merchants and their applications, and so on.

The capacity of fintech and Big Tech companies to extract and combine different kinds of data, often without users' consent has been noted (Boissay et al., 2021), with the payoff for compromised privacy the promise of lower credit costs for the consumer. Data analysis can reduce the asymmetry between consumers and financial institutions, leading to better priced offers and possibly extending financial services to more people (Philippon, 2020).

The iconic success of M-Pesa, offered by a non-bank (Safaricom) and telecom company (Vodacom) and permitted in 2007 by the Central Bank of Kenya through a pilot project, can be seen as the start of the trend towards lower fees for foreign and internal remittances in developing countries. M-Pesa allowed for money transmission through mobile telephony, with cash-out points provided by thousands of agents (often small shop owners) throughout Kenya. The rapid take-up of the service encouraged other countries such as Zambia and India to allow for licencing of telecom companies into the payments system.

The use of AI, combining the metrics and machine learning on consumer payments information, already allows for better prediction of default than credit registry data (Beck, 2020:13). Such data analysis gilds the paved way for unsolicited offers of credit to profiled customers and once in the credit-fold, AI provides the possibility of de-risking people on the fringe who would otherwise be too risky to lend to, by shaping the behaviours of such clients in real-time through prompts and nudges (such as reminders sent to the mobile phone before payday, or as on-line purchases are being made). This capacity of firms to manipulate behaviour by identifying consumer weaknesses and exploiting them for their advantage can be interpreted as both positive and negative (Acemoglu, 2021). But if nudges fail, surveillance of consumers identifies potentially bad loans, allowing for pre-emptive on-selling of the loan and de-risking (Kaminska, 2015, Gabor and Brooks, 2017:433). In essence, use of personal data and AI amounts can be interpreted to reverse the asymmetry of information to the benefit of the providers. This has led to claims that AI empowers large corporations at the expense of citizens and workers, with data on various platforms being excessively shared and gains

being captured exclusively by the AI platform (Acemoglu, 2021). It provides competitive advantages for larger platforms that have relatively more information about consumers to exploit. Consumers who visit gambling sites, for example, may be deemed riskier and not offered insurance. These advantages translate quickly into market concentration – such as witnessed through Alipay and TenPay that control 94 % of the mobile payments services in China (Croxson et al., 2022).

In the pre-digital phase, as access to current accounts and overdrafts became the norm, it was costly and inconvenient for those excluded to manage their finances solely using cash. A solution was publicly provided accounts (such as by the post office). In the digital phase, lack of access to the internet and a smart phone is associated with a digital divide which becomes more problematic as access to digital finance becomes the norm. Public provision of digital accounts linked to a fast real-time payments system or CBDC can help address the problem (UNCTAD, 2022).

Problem solved?

National strategies (dealing with digital financial inclusion) typically involve targeting a level of access to financial services, as measured by the percentage of the population with access to a bank account or e-wallet. The number of bank accounts or e-wallets is a proxy for a fuller understanding of financial inclusion in a country, as bank accounts provide access to first-order financial services, such as an ability to transact, receive funds and make payments as well as an ability to save. However, this first-order provision does not automatically generate access to other financial services. High levels of dormancy of bank accounts raise questions of relevance and appropriateness (e.g., Tanzanian National Financial Inclusion Framework, 2018–2022).

While it is an incomplete and imperfect proxy, the de facto measure of global financial inclusion has become access to a bank account or e-wallet. Since 2011, the World Bank has regularly monitored financial inclusion on this basis, through its Findex, with data for 2014 and 2017 showing an improvement in financial inclusion. While around half of all adults had a bank account or e-wallet in 2011, this rose to 69% in 2017 for developed countries. For developing countries, the improvement went from 41% in 2011 to 63% in 2017. While shifting from cash into accounts, e-wallets or digital alternatives improves efficiency and speed of payments, and may reduce costs and enhance security, there have also been very large rates of dormancy of accounts as shown by experiences in Chile, Uganda, Malawi and India, for example (Dupas et al., 2018). Adjusting the Findex 2017 headline figure of 69% for inactive accounts, the number of adults in developed countries regularly using first-order financial services falls to 55%, and only 48% for adults in developing countries (Rhyne and Kelly, 2018).

The restrictions on movement and lock downs amid the COVID-19 pandemic served to support a shift to digital payments and transfers. Social

transfers made through digital means, e-commerce transactions and contactless payments were encouraged in various ways. The success of these innovations has appeared to rest on the extent to which prior public and private provision had already addressed financial inclusion. The response of 150 countries to the pandemic through some change to social transfers (Gentilini et al., 2020), demonstrated the essential role of public infrastructure in establishing and maintaining digital ID systems, ensuring functional mobile communications, and providing digital payment systems for the Government to person (G2P) payments (Gelb and Mukherjee, 2020). But without publicly issued bank accounts to facilitate these social transfers (such as in Brazil with its Caixa Econômica Federal Bank, see Caixa, 2021) the impact on financial inclusion was transient, with most benefits being cashed out immediately by recipients (*ibid.*). Where there was no such public infrastructure, the distribution of this social assistance remained weighted towards cash-based transfers (Auer et al., 2021). In the United States, where account ownership is limited to only 79% of adults in the poorest 20% of households (World Bank, 2017), the unbanked had to pay away 10% of the value of their CARES Act stimulus transfers in fees to check cashers, as they had no access to a deposit account (Baradaran, 2020).

The top three reasons given by people in developing countries in the Findex 2017 survey for not using a bank account or letting it lapse are heavily biased towards financial ones – 77% of respondents in LICs and 60% in MICs indicated that the key reason for their exclusion from formal financial services was due to ‘insufficient funds’, followed by ‘financial services are too expensive’ in LICs. Respondents in MICs indicate ‘financial services are too expensive’ as their third most common reason after ‘someone (else in the household) has an account’. These responses are consistent with the long-held understanding that financial exclusion from basic accounts is primarily due to low income and poverty even when minimum balance requirements and maintenance fees are scrapped (Dupas et al., 2018). For poorer respondents, the value proposition of a bank account or e-wallet appears to be neither compelling nor relevant.

A regional analysis of the Findex 2017 data (looking at East Asia & Pacific (EAP), Europe and Central Asia (ECA), Latin America and the Caribbean (LAC) and Sub-Saharan Africa (SSA)) – in Figure 10.1 – shows that LAC and SSA countries lag the other two regions in terms of access to bank accounts. Moreover, while access to bank accounts improved (albeit modestly) in all regions between 2014 and 2017, proportionately fewer respondents made any savings in 2017 than they did in 2014. The declining trend is of concern, as the ability to save is arguably the most critical factor in reducing reliance on high-cost, short-term credit and lowering the risk of financial dislocation resulting from unemployment or injury. Figure 10.1 shows the largest declines in saving are in EAP and SSA and that in SSA, respondents were least likely to save in a bank or formal institution, and relatively more likely to save in a savings club. This pattern may have to do with historically high fees in

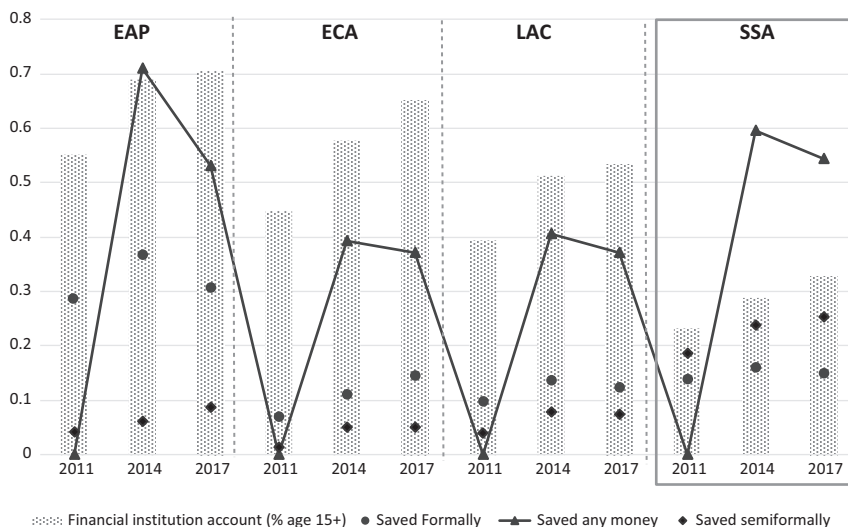


Figure 10.1 Ownership of accounts and savings in LICs and MICs by region. Source: World Bank Findex Index, 2011, 2014 and 2017.⁴

banks, or lack of trust of formal institutions, or that in SSA, the rise in access to an account or payments stream maybe by e-wallet – which customers may not associate with saving. The Findex 2017 data show that only in SSA did mobile e-wallets contribute markedly to the number of accounts – with 5% in 2014 and 10% in 2017 of respondents indicating that they had access only to mobile e-wallets.

In the case of borrowing, respondents in LICs and MICs are far more likely to seek funds from family or friends than a formal financial institution, with fewer than 10% of respondents indicating they had obtained funds from a financial institution.

Much is also claimed for the inclusion of women by digital finance, as it is common cause that fewer women than men have access to formal bank accounts and mobile technology. In developing countries, 59% of women have access to an account, compared to 67% of men, although the gender gap can be up to 30% in some countries. On a regional basis, while the sub-Saharan Africa gender gap for bank account ownership is 15%, it is 28% in South Asia (World Bank, 2017). Globally, 197 million fewer women own a phone than men (Arnold, 2021). In the same way that mere ownership of an account does not necessarily imply financial inclusion, ownership of a mobile account does not imply gender equality. For example, women tend to pay more fees than men to use mobile transfers (FSD Kenya, 2020), in part a consequence of the regressive fee structure, which penalises the smaller transactions typically made by those with lower incomes – which includes most women (Holloway et al., 2017).

In India, while the public sector push to open accounts for the distribution of Direct Benefit Transfers has done much to shrink the gender gap in account ownership to just under 5%, the meaningful use of such accounts remains elusive. While 77% of women have such an account, only 35% have used it in the previous year (World Bank, 2017). Around 45% of men own digital accounts in India, compared to 29% in the case of women (Financial Inclusion Insights, 2018). With a mobile phone ownership gender gap of 33%, only 38% of women owned a mobile phone in 2016, compared to 71% of men (Barboni et al., 2018). Apart from a technological gap, lack of trust in financial service providers and confidence in the system, mobility restrictions and illiteracy are also at play (Sabherwal et al., 2019, Azergun, 2021).

Even with digital advances, financial inclusion is far from automatic (Arnold and Gammage, 2019), and the drive to improve use of financial services by women requires design sensitivity, investment in women's literacy and numeracy, and most fundamentally power and capacity to negotiate control within the household and society. While data analysis and data mining might provide sufficient information for credit to be offered, confidence and trust in the take up of credit offers is a more difficult matter for digital technology to address. Such confidence cannot be achieved without sound regulation (Dow, 1996).

The apparent lack of relevance of financial services (as seen in dormancy of accounts) calls into question the benefits of digital finance relative to the cost of the erosion of privacy. While certain jurisdictions (such as the EU) remain committed to protecting privacy to some extent – with its General Data Protection Regulation, effective since May 2018, many others have failed to apply any standards. The challenge is profound, with Deloitte (2019) admitting 'rapid penetration of digital technologies in almost every sphere of life has revealed how fundamentally limited privacy protections for the analogue age are today'.

The rise of platforms and of the applications that feed them may lead to on-going consolidation in the market and the squeezing out of non-digital providers, with possible invidious outcomes as far as market power is concerned. Where there are no public alternatives, consumers are more vulnerable in the long term to being locked-in to these providers. For example, M-Pesa is now widely acknowledged to have quasi-monopoly status (Pon, 2021). This tendency of networks to support the rise of a few powerful players that will ultimately be price-setters is also fomented by the 'Cash-less' narrative. Cash, being subsidised by the sovereign issuer, is essentially free to use for consumers – except perhaps for an initial withdrawal fee from an ATM or bank teller. This is where public provision of access to accounts and digital payments facilities may be essential.⁵

Regulatory responses are long overdue, not only to shape the best possible outcomes of the innovation at the heart of digital finance, but also to ensure consumer protection and the proper use of financial services that benefit women and others. Without economic development and structural transformation of economies, however, digital finance is unlikely to address the

challenges faced by poor and rural populations, or indeed address liquidity preferences of credit providers and the excluded.

Conclusion

The key factor distinguishing the two periods of financial inclusion is how knowledge of creditworthiness is ascertained. In the first wave, the imperative for physical proximity to a bank underpins customer knowledge. During the second wave, however, data analytics is the basis for consumer knowledge, with the ownership of a mobile device superseding proximity.

While there is much promise in the technology, regulators should not be blinded by the inclusion illusion. Digital finance changes delivery mechanisms but brings its own demands – such as a need for privacy regulation, digital infrastructure and connectivity, and strategies to address the continual technological advances required by FinTech providers in serving consumers, among others. Moreover, financial digitalisation has clear limitations in providing meaningful services to women, the elderly and rural populations. Arguments that the benefits of digital finance are so great that providers should not be regulated amount to ‘inclusion washing’. Without enhanced regulation – particularly of privacy and data mining and the predatory and market concentration aspects of digital applications – digital finance risks becoming discredited.

Finally, for the technology to deliver sustainable solutions, a real understanding of the financial needs of the excluded is necessary, with gender-sensitive provision a key issue. Only by improving financial services through concerted efforts to make them appropriate, will low-income communities and households see potential economic benefits from inclusion, benefits that will ultimately ensure the sustainability of the industry.

Notes

- 1 Manyika and Voorhies (2016) claim that through the extension of credit to households, financial inclusion will add US\$3.7 trillion or 6% to the GDP of emerging markets, and 10 or 12% to LICs by 2025.
- 2 <https://www.bankingstrategist.com/bank-merger-trends>, accessed 24 April 2021
- 3 Visa and Mastercard generated efficiencies and network effects that have driven convergence to their advantage in becoming the ‘only players that matter’ (see Banking Enquiry Report for Competition Commissioner, p. 257).
- 4 The 2017 Findex survey had 154,000 participants, of which 111,248 were in low income, lower middle-income and upper middle-income countries. ‘Saved formally’ indicates at a bank or another type of financial institution. ‘Semi formally’ indicates using a savings club or a person outside the family. Data for ‘saved any money’ only for 2014 and 2017.
- 5 CBDCs are part of this but being cautiously assessed by central banks around the world – as of December 2021, three CBDC projects were already launched in the Bahamas, the Eastern Caribbean Central Bank, and Nigeria. Fourteen countries are in the pilot stage of their CBDC, and 87 nations are exploring the benefits and drawbacks of CBDC. <https://www.atlanticcouncil.org/cbdctracker/>

References

- Acemoglu, D. 2021. AI, *Regulating Big Tech*. BIS Conference 7 October 2021. https://www.youtube.com/watch?v=Zy1yf8B2cZw&ab_channel=BankforInternationalSettlements
- Ardington, C., D. Lam, M. Leibbrandt, and J. Levinsohn, 2004. Savings, insurance and debt over the post-apartheid period: a review of recent research, *The South African Journal of Economics*, 72:3, 604.
- Arnold, J., 2021. The case of a gender-intelligent approach. January. <https://www.centerforfinancialinclusion.org/the-case-for-a-gender-intelligent-approach-an-opportunity-for-inclusive-fintechs>
- Arnold, J. and S. Gammage, 2019. Gender and financial inclusion: the critical role for holistic programming, *Development in Practice*, 29:8, 965–73.
- Auer, R., J. Frost, T. Lammer, T. Rice, and A. Wadsworth, 2021. Inclusive payments for the post-pandemic world, SUERF Policy Note Issue No 193, September 2020.
- Azergun, N., 2021. The exclusionary politics of digital financial inclusion: Mobile money, gendered walls, *Journal of Cultural Economy*, Vol. 14:4, pp. 509–512.
- Banco central do Brazil, 2010. *Report on Financial Inclusion*, no. 1. https://www.bcb.gov.br/Nor/relinclin/report_on_financial_inclusion_n1_2010.pdf
- Baradaran, M., 2020. Rethinking financial inclusion: designing an equitable financial system with public policy, New York: Roosevelt Institute.
- Barboni, G., E. Field, R. Pande, N. Rigol, S. Schaner, and C. T. Moore, 2018. *A Tough Call: Understanding Barriers to and Impacts of Women's Mobile Phone Adoption in India*, Harvard: Harvard Kennedy School. pp. 1–44.
- Beck, T., 2020. Fintech and financial inclusion: opportunities and pitfalls. ADBI working paper series, No 1165. July.
- Boissay, F., T. Ehlers, L. Gambacorta and H. S. Shin, 2021. Big techs in Finance: on the new nexus between data privacy and competition, BIS Working Papers, no 970. October.
- Burgess, R., and R. Pande, 2005. Do rural banks matter? Evidence from the Indian social banking experiment, *American Economic Review*, 95:3, 780–95.
- Caixa Noticias, 2021. *CAIXA Tem disponibiliza serviços em conta gratuita para mais de 105 milhões de brasileiros*. 27 January. Available at: <https://caixanoticias.caixa.gov.br/noticia/24511/caixa-tem-disponibiliza-servicos-em-conta-gratuita-para-mais-de-105-milhoes-de-brasileiros> (Accessed 01 December 2021).
- Campen, J. T., 1998. Neighbourhoods, banks and capital flows: the transformation of the US financial system and the community re-investment movement, *Review of Radical Political Economics*, 30:4, 29–59.
- Carvalho, F., 1992. *Mr Keynes and the Post Keynesians*. Aldershot: Elgar.
- 1999. On banks liquidity preference, in P. Davidson and J. Kregel (eds.), *Full Employments and Price Stability in a Global Economy*, Cheltenham: Elgar, 123–38.
- Chick, V., 1983. *Macroeconomics after Keynes*, Cambridge, MA: MIT Press.
- 1992. The evolution of the Banking System and the Theory of saving, Investment and Interest, in P. Arestis and S. C. Dow (eds.), *On Money, Method, and Keynes: Selected Essays of Victoria Chick*, Basingstoke: Macmillan. pp. 193–206.
- 1993. The evolution of the banking system and the theory of monetary policy, in S. F. Frowen (ed.), *Monetary Theory and Monetary Policy: New Tracks for the 1990s*, London: Macmillan, 72–92.

- Collins, D. 2004. *The Financial Diaries Project*. Paper delivered to Workshop on Tiered Banking, November. Pretoria.
- Croxson, K., J. Frost, L. Gambacorta and T. Valletti, 2022. Platform-based business models and financial inclusion. BIS Working Papers No 986. January.
- Davidson, P. 1978. *Money and the real world*, 2nd edition. London: Macmillan.
- Deloitte. 2019. *Reimagining Consumer Privacy for the Digital Age*. <https://www2.deloitte.com/content/dam/Deloitte/br/Documents/financial-services/Deloitte-reimagining-consumer-privacy-for-digital-age.pdf>
- Dow, S. C. 1993. *Money and the Economic Process*, Cheltenham: Elgar.
- 1995. Uncertainty about Uncertainty, in Dow, S. C. and Hillard, J. (eds), *Keynes, Knowledge and Uncertainty*, Cheltenham: Elgar, pp. 117–36.
- 1996. Why the banking system should be regulated, *Economic Journal*, 104:436, 698–707. <http://hdl.handle.net/1893/25153>
- 1997. Endogenous money, in G. C. Harcourt, and P. Riach (eds.), *The Second Edition of The General Theory*, Vol. 2, Routledge. 61–78.
- 2004. Knowledge, information and credit creation: the impact of monetary policy, *Papeles de Economía Española, Special Issue on Money, Financial System and Economic Growth*, 101, 99–113.
- Dow, A. C. and S. C. Dow, 1989. Endogenous money creation and idle balances, in J. Pheby (ed.), *New Directions in Post Keynesian Economics*, Cheltenham: Edward Elgar, 147–64.
- Dymski, G., 1996. Money as a ‘time-machine’ in the new financial world, in P. Ar-estis (ed.), *Keynes, Money and the Open Economy: Essays in Honour of Paul Davidson*, Cheltenham: Elgar, 85–104.
- Dupas, P, D. Karlan, J. Robinson, and D. Ubfal. 2018. Banking the unbanked? Evidence from Three countries. *American Economic Journal: Applied Economics*. Vol. 10, No. 2. pp. 257–97.
- El-Zogghbi, M., N. Holle and M. Sousourlan, 2019. Emerging evidence on financial inclusion: moving from black and white to color. CGAP, July.
- European Commission, 2021, Digital finance. https://ec.europa.eu/info/business-economy-euro/banking-and-finance/digital-finance_en Access 30 November 2021.
- Feasibility, 2005. Access Standards Project: A report for the Access Committee of the Financial Sector Charter Council. Johannesburg
- Financial Inclusion Insights, 2018. India quicksights report: fifth annual FII tracker survey. Intermedia.
- Financial Services Authority (FSA), 2000. *In or Out? Financial Exclusion: A Literature and Research Review*. Consumer Research 3. July.
- FSD Kenya, 2020. How can digital financial services better serve women in Kenya? November. [fsdkenya/wp-content/uploads/2021/03/How-can-digital-financial-services-better-serve-womens-in-Kenya.pdf](https://www.fsdkenya.org/wp-content/uploads/2021/03/How-can-digital-financial-services-better-serve-womens-in-Kenya.pdf)
- Gabor, D. and S. Brooks, 2017. The digital revolution in financial inclusion: international development in the fintech era. *New Political Economy*, 22:4, 423–36.
- Gelb, A. and M. Mukherjee, 2020. Digital technology in social assistance transfers for COVID-19 relief: lessons from selected Cases. *CGD Policy paper 181*. September.
- Gentilini, U., M. Almenfi, I. Orton, and P. Dale, 2020. *Social Protection and Jobs Responses to COVID-19: A Real-Time Review of Country Measures*. Washington, DC: World Bank.

- Hawkins P. 2002a. Banks and small business, *South African Journal of Economics*, 70:3, 1–28.
- 2002b. Banks' liquidity preference and financial provision, in D. Paul (ed.), *A Post-Keynesian Perspective on Twenty-First Century Economic Problems*, Cheltenham: Elgar. pp. 108–125.
- 2003. *The Open Economy and Its Financial Constraints*, Cheltenham: Elgar.
- 2018. The evolutionary approach to banking and the credit-hungry consumer: a view of the failure of African Bank, in S. C. Dow, J. Jespersen and G. Tily (eds.), *Money, Method and Contemporary Post-Keynesian Economics*, Cheltenham: Elgar.
- Holloway, K., R. Rouse and W. Cook, 2017. How do mobile money fee structures impact the poor? *Innovations for Poverty Action*. Poverty-action.org/blog/how-do-mobile-money-fee-structures-impact-poor
- Kaminska, I. 2015. When financial inclusion stands for financial intrusion. *FT Alphaville*. 31 July. <https://www.ft.com/content/fd319ea7-e0fd-32cf-a50a-776ae22f0f0c>. Accessed 21 December 2021.
- Kempson, E and C. Whyley, 1999. *Kept Out or Opted Out? Understanding and Combating Financial Exclusion*, Bristol: Policy Press.
- Kempson, E., A. Atkinson, and O. Pilley, 2004. *Policy Level Response to Financial Exclusion in Developed Economies: Lessons for Developing Countries*, Bristol University: The Personal Finance Research Centre University of Bristol.
- Keynes, J. M., 1936. *The General Theory of Employment, Interest and Money*, London: Macmillan.
- 1971. *A Treatise on Money: The Applied Theory of Money*. The Collected Writings of John Maynard Keynes, Volume VI, London: Macmillan for the Royal Economic Society.
- Khan, H. R., 2012. Issues and challenges in financial inclusion: Policies, Partnerships, Processes and Products. RBI Monthly Bulletin, August.
- Lown, C. S., D. P. Morgan and S. Rohatgi, 2000. Listening to Loan Officers: The impact of commercial credit standards on lending and output. *Federal Reserve Bank of New York Economic Policy Review*, July, pp. 1–16.
- Manyika, J and R. Voorhies, 2016. What digital finance means for emerging economies. *Fortune*. Available at <https://www.mckinsey.com/mgi/overview/in-the-news/what-digital-finance-means-for-emerging-economies>
- Minsky, H., 1982. *Inflation, Recession and Economic Policy*, Brighton: Wheatsheaf Books.
- Moore, B., 1988. *Horizontalists and Verticalists: The Macroeconomics of Credit Money*, Cambridge: Cambridge University.
- Philippou, T., 2020, On fintech and financial inclusion, BIS Working Paper no 841, February.
- Pon, B., 2021. Women are paying more for M-Pesa: a gender analysis of mobile money fees in Kenya. Netbillion. 21 April. netbillion.net/women-mobile-money-fees-mpesa-kenya/
- Rhynne, E. and S. Kelly, 2018. Financial inclusion hype vs. reality deconstructing the 2017 Findex Results. Centre for Financial Inclusion. May. See: https://content.centerforfinancialinclusion.org/wp-content/uploads/sites/2/2018/09/FI_Hype_vs_Reality_Deconstructing_2017_Findex_Results-08032018-1.pdf
- Sabherwal, R., D. Sharma and N. Trivedi, 2019. Using direct benefit transfers to transfer benefits to women: a perspective from India, *Development in Practice*, 29:8, 1001–13.

- State Bank of Pakistan, 2013. *Access to Finance in Pakistan: Key Indicators on Gender-Mix*. Karachi.
- Stiglitz, J. E. and A. Weiss, 1981. Credit rationing in markets with imperfect information, *American Economic Review*, 71, 3939–410.
- Tanzanian National Financial Inclusion Framework, 2018–2022, National Financial Inclusion Council.
- UNCTAD. 2022. All that glitters is not gold: the high cost of leaving cryptocurrencies unregulated. *Policy Brief* 100
- World Bank, 2017. *Global Findex Database: Measuring Financial Inclusion and the Fintech Revolution*.

11 The rising importance of liquidity-premium analysis

Towards a regeneration of liquidity-preference theory?

Theodore Koutsobinas

Introduction

In recent years, there has been a growing interest in the pricing of financial assets on the macroeconomic process. For example, one significant debate within standard literature is related to the option of incorporating asset prices in the interest rate rule. There is also a growing interest in mainstream analysis of the development of behavioral macroeconomics in line with the original spirit of Keynes's *General Theory*. This trend emphasizes various psychological and sociological factors, such as cognitive bias, reciprocity, fairness, herding, and social status (Akerlof, 2002). Against standard theory and the so-called New Consensus Macroeconomics (or, New Neoclassical synthesis), behavioral macroeconomics has developed alternative explanations for the existence of involuntary employment. With the utilization of modest behavioral assumptions, they have demonstrated that monetary policy influences real outcomes just as Keynesian economics long ago asserted. Here, the role of behavioral finance becomes fundamental since its analysis of the actual working of global financial markets and speculative expectations rejects the efficient markets model, in which stock prices measure the present value of future returns adjusted for risk.

Financial markets and behavioral finance are not just substantive for their own sake. They are critically important because they influence the macroeconomic process. This happens according to Akerlof (2002) through at least three alternative routes. The first channel refers to wealth effects since the value of assets influences variations in wealth and, as a consequence, changes in consumption. A second channel refers to the impact of financial evaluations. In this connection, according to Akerlof, there is scope for using Tobin's q ratio, which is determined by the arbitrage between the price of new capital stock and the price of similar existing assets. Finally, asset prices influence the proportion of firms that default and aggregate investment.

Although this behavioral macroeconomic framework does not place any importance on the long-term interest rate and the liquidity preference, there is some similarity between the behavioral macroeconomic approach and post-Keynesian efforts to maintain the "pure Keynes" centrality of liquidity

preference for macroeconomic theory (Arestis and Sawyer, 2006). Contrary to standard neoclassical models, these two approaches reject the separation of real and monetary factors, the so-called “classical dichotomy”.

The importance of Keynes’s animal spirits and the speculative motive have been embraced by prominent mainstream economists in macroeconomics as a critical force to explain involuntary unemployment. At the same time, the foundation of Keynes’s monetary analysis in the *General Theory*, the theory of liquidity preference has all but disappeared even among the works of some contemporary post-Keynesian economists. For example, liquidity preference is inconsistent with the horizontal conception of endogenous money. For this reason, it was assigned a secondary role relative to the impact of endogenous money for the purpose of economic modeling. This view was criticized by Dow (1996), who successfully circumvented such a view by bringing forth the importance of liquidity preference of banks and Chick and Dow (2002), thus restoring the importance of liquidity preference relative to alternative conceptions of endogenous money. However, despite the global financial crisis (GFC) of 2008–2009 that rekindled interest by theorists both in standard and heterodox microeconomics, liquidity preference is still somewhat in the air. The ills of the GFC were attributed to expansionary monetary policy that fueled an irrational bubble, a view that undermines the role of speculative expectations and the ensuing distortions in financial engineering with the introduction of toxic assets. In the theoretical domain, the new consensus emphasis on the interest rate determined by Taylor’s rule diverted the attention from considerations related to liquidity preference.

As we will see below, during the last two decades there has been a greater emphasis on the impact of liquidity premia on prices or rates of financial assets rather than on the operation of liquidity preference as a traditional representation of demand for money. The emphasis on liquidity premia (or, their inverse, illiquidity discounts) implicitly highlights prices and rates of return on assets. As such, there is a potential link between liquidity-premium analysis and behavioral macroeconomics which is itself on the rise. The structure of the chapter is as follows: In the beginning, we explain the gradual decline of liquidity preference and the rising importance of liquidity premia in alternative standard and post-Keynesian approaches. Next, we evaluate the significance of those approaches for the purpose of macroeconomic modeling and we relate it to ideas from behavioral economics and finance. The chapter concludes with proposals regarding the future development of liquidity preference within a broader framework, which includes liquidity premium of assets in a multi-asset framework as an indispensable and critical feature of the analysis.

Liquidity preference and its diminishing importance in macroeconomics

Keynes (1936) supported the notion of a “monetary theory of interest and production” based on the influence of liquidity preference. Kregel argued

that liquidity preference and the multiplier are two sides of the same phenomenon (Kregel, 1988, pp. 236–8 and p. 243). Although liquidity preference was initially thought as identical to the demand for money, Keynes’s analysis in Chapter 17 of the *General Theory* implied that it also influences the demand for assets other than money because of the fact that all assets have own-rates of money interest (Keynes, 1936, pp. 225–8). Moreover, Keynes (1936, pp. 240–1) emphasized the significance of variations in “relative liquidity” across assets as a result of changes in the propensity towards liquidity, but he did not investigate the adjustment path of liquidity across assets. Those elements were used in later theoretical developments by Kahn (1954), Boulding (1944), Leijonhufvud (1968), and more recently by Kregel (1988) and other authors. Kahn (1954) introduced the view that all financial assets have different degrees of security and liquidity premia. Following Keynes, Kahn pointed to the influence of the degree of fundamental uncertainty experienced by financial investors and entrepreneurs, whose decisions, in turn, determine relative asset prices. As Bibow (1998) argued, besides the speculative motive about future rates of interest, liquidity preference applies also to the precautionary motive. The latter motive is relevant to the impact of organized securities markets. This happens because the entrepreneurial investors’ spontaneous urge to action rather than inaction (waiting) may be dimmed just when portfolio investors’ lack of confidence leads to rising illiquidity-discounts and interest rates.

Liquidity preference was an important analytical tool in the post-war analysis although it never really became a critical factor in macroeconomic modeling. It eventually transformed into a stochastic behavior towards risk (Tobin, 1958). Liquidity preference remained of importance because of the rise of the IS–LM model. But, during the 1970s and 1980s, liquidity preference was further constrained by developments such as the loanable funds debate, monetarists attacks on the all-effectiveness of money supply and the rational expectations revolution. Those developments left no place for the incorporation of speculative expectations and strong uncertainty. In the late 1980s and 1990s, the replacement of the IS–LM model with the DSGE model, the adoption of Taylor’s rule in standard theory as well as the emergence of endogenous money in post-Keynesian economics, led to the situation in which liquidity preference came under further attack and neglect. Nevertheless, liquidity preference remained alive because it retained its relevance for several reasons including portfolio considerations under strong uncertainty and the emergence of liquidity-premium analysis (Panico, 1988; Koutsobinas, 1993, 2002, 2011; Palley, 1996; Bibow, 2005), its relation to liquidity-risk and default-risk, the importance of liquidity preference of banks (Dow, 1996) and the implicit repercussions produced by linkages to the operation of “animal spirits” of all investors.

There is still considerable debate on the relevance of liquidity preference in post-Keynesian analysis (Lavoie and Reissl, 2019; Asensio, 2020). One could argue of course that while there are versions of stock–flow consistent (SFC) models, which rely on Tobin’s q ratio (see Lavoie and Godley, 2001), there

are other accounts that rely on other variables such as the long-term interest rate (see Godley and Lavoie, 2007). This latter approach highlights again the impact of liquidity preference and the importance to build behavioral micro-foundations such as those which relate to liquidity preference. This development marks a shift from (some) earlier post-Keynesian analyses, which were critical of liquidity preference and were associated with the adoption of the horizontalist view of endogenous money, although the latter never won the argument in many post-Keynesian circles.

Earlier-generation contributions: the contributions of Kahn and Tobin in relation to liquidity-premium analysis

The vacuum in Tobin's analysis regarding the influence of variable liquidity premia across assets on shifts of portfolio allocation was filled by Kahn in the analysis of his *Manchester School* paper on liquidity preference (Kahn, 1954). An important element of this article is Kahn's idea of price adjustment across assets in capital markets as a consequence of variations in the propensity towards liquidity that eventually contributes to the development of a "monetary theory of interest and production" (see Kahn, 1954, pp. 85–7). Kahn argued that the dependence of the expected long-term interest rate on the time pattern of short-term interest rates holds only in equilibrium, when investors' preferences become "marginal" between financial assets (see Kahn, 1954, p. 77). The working of price adjustments and quantity adjustments across assets towards equilibrium becomes a central issue in his analysis.

The idea of "marginal" equilibrium that Kahn proposed has been subsequently explained in terms of Keynes's idea of the equality of the own-rates of money interest (see, for example, Panico, 1988, p. 169). The price adjustment to which Kahn referred can be examined by analyzing changes in the components of money rates interest on assets and in the degrees of belief of investors. Kahn (1954) supported the view of a multi-asset framework rather than the standard two-asset framework of his times (capital-money). It has been shown that the analysis of Kahn's work relative to Tobin's theory produces an equivalent financial ratio to q (Koutsobinas, 2012). It is different however from standard q because this financial ratio is influenced by variations in illiquidity discounts (the inverse of liquidity premia). The implicit financial ratio is influenced both by changes in the relative liquidity preference across assets (i.e., illiquidity discounts) and by relative inflation premia across assets.

Variations in illiquidity discounts and inflation premia initiate portfolio flows that equalize the expected money yields across assets. This type of analysis is consistent with mainstream attempts to introduce liquidity premia as variables in financial markets (see Palmon and Parker, 1991, p. 467). Kahn's analysis also implies that the long-term interest rate cannot be targeted through the short-term interest rate because, at any moment, the long-term interest rate represents different expectations (see Kahn, 1954, p. 75).

This contrasts with Tobin's q model, which does not take account of the effect of changes in the illiquidity discounts of assets in response to changes in the state of confidence and perceived uncertainty of investors. However, with the introduction of the effect of illiquidity discounts on different categories of assets, there can be circumstances in which the term structure of interest rates and the underlying expectations reflect imbalances attributed to market sentiment or investors' confidence variations (see Shiller, 2000, pp. 49–51).

Modern developments in liquidity-premium analysis

While Kahn's analysis points out to the importance of liquidity premium and arbitrage across financial assets in earlier-generation economics, the modern interest in liquidity-premium analysis in heterodox economics relates to the work of Panico (1988), which attempted to reconcile Marx's analysis of the equality of rates of profits with Keynes's theory of own-rates of money interest in Chapter 17 of the *General Theory*. For this reason, Panico introduced liquidity premia by presenting Kahn's analysis of marginal no-arbitrage equilibrium of assets. This form of analysis utilized rates of return inclusive of liquidity premia (or, illiquidity-discounts) and was confined to a political economy based on classical theory. Koutsobinas (1993) broadened the argument by introducing Panico's treatment of Kahn's portfolio theory into Marshallian analysis. This approach took place through a reformulation of the IS–LM model (allowing for a variation in the case of endogenous money in which, the interest rate represented the rate of return of bonds), which highlighted the adjustment of liquidity premia across financial assets towards marginal portfolio equilibrium. Koutsobinas's utilization of marginal portfolio equilibrium in Marshallian analysis was adopted subsequently through a similar formulation a few years later by Palley (1996). Later, contributions on the relevance of this form of equilibrium across financial assets, or across financial and real assets include Koutsobinas (2002, 2011) and Palley (2019).

Around the same time, the growing interest in Minsky's work provided further insights. Dow (1996, pp. 503–4) demonstrated that the analysis of Minsky (1986) on corporate financial behavior is compatible with liquidity preference. In her explanation of Minsky's well-known diagram regarding partial credit market equilibrium, Dow contributes an additional "liquidity preference" share on both borrower's risk and lender's risk. Within Dow's framework, we offer a supplementary intuition, namely, that the "liquidity preference" component is a price rather than a quantity part. For this reason, it can be represented by liquidity premium (or by its opposite, that is, illiquidity discount). As a result, Minsky's famous diagram on investment determination is consistent with the idea of the equality of money-rates of interest of financial instruments (extended for corporate bonds) inclusive of liquidity premia, as argued by Koutsobinas (1993, 2002, 2011) and Panico (1988). The demand price of corporate bonds is expressed by the sum of the expected return on investment, the borrower's risk premium and the borrower's liquidity

premium. In essence, the credit market for corporations can be represented by a special class of financial assets, that is, corporate bonds. Safety margins represent discretionary “neighbourhood” bank mark-up on the demand price of corporate bonds.

To a great extent, most authors use the liquidity premium as an exogenous factor. For example, Dafermos (2012) includes the impact of liquidity premia as exogenous variables in the demand of financial assets in a stock-flow model. In other types of models, the change of the price of bonds depends on an exogenous liquidity premium and risk-premium (see, for example, Semmler, 2011, p. 19). A standard reference is the determination of liquidity premium by Dequech (1999), which is conceptual and does not allow their operationalization as endogenous variables. Exceptions are Koutsobinas (1993, 2002, 2011) and Palley (1996), who provide an endogenous explanation of the liquidity premia as a response to the behavior of agents in situations of strong uncertainty, especially in relation to a price adjustment to no-arbitrage equilibrium.

Recently, Palley (2019) introduces variables such as the marginal liquidity return on money to study zero lower bound (ZLB) policies and negative interest rates. Palley implicitly assumes that in equilibrium, firms act as Kahn’s marginal investors and this produces a no-arbitrage equality across marginal costs and benefits, which solves simultaneously firm’s capital allocation and financing choices. When the money market rate is sufficiently negative, companies switch completely to loan finance and become active in share buy-backs and special dividends that return all equity to shareholders. Palley utilizes in essence a workhorse classical block-recursive model, in which shifts of variables are exogenous, and adopts Keynes’s view in Chapter 17 of the *General Theory* of the importance of existing non-reproducible assets owned by a firm. For the determination of equilibrium in this model, the idea of portfolio equilibrium across returns of assets is also utilized, a feature that is surely inspired by the Kahn’s analysis.

Liquidity premia through mainstream eyes

While the liquidity-preference analysis was gradually ignored in standard earlier-generation macroeconomic theory, it held its importance in other areas because it implied liquidity premia for the purpose of asset evaluation in the analysis of money and banking. Specifically, the liquidity-preference theory provides a robust explanation for the upward-sloping yield curve. For simplicity and for the purpose of focusing solely on the impact of liquidity premia on the macroeconomic process, considerations arising in more complex accounts, which besides liquidity-premium analysis include market segmentation and preferred habitat¹ are beyond the scope of the present paper.

In standard theoretical treatments of the term structure, in which payments are assumed to be made continuously in time, the summation of values in the determination of yield that takes place in earlier-generation models is

replaced by an integer, which is a continuously compounded yield to maturity to take into consideration compounding for theoretical consistency to overcome problems arising from variable intervals between coupon dates (see Shiller and McCulloch, 1990). This type of analysis is consistent with mainstream attempts to introduce liquidity premia as variables in financial markets (see Palmon and Parker, 1991, p. 467).

Moreover, the impact of liquidity-preference theory has been retained and analyzed to some extent in mainstream textbooks of money and banking, through the notion of liquidity premium influenced by a portfolio motive, which is representative of the joint effect of Keynesian speculative and precautionary motives (see Cecchetti and Schoenholtz, 2014). For this reason, the prospective introduction of the liquidity premium in standard macroeconomics is feasible. A critical feature of this type of interest rate is that it is sloping upwards, thus, providing a theoretical explanation for the same result proposed in the analysis of the liquidity premium in textbook accounts of money and banking (see Cecchetti and Schoenholtz, 2014). This is compatible with the skepticism that emerged (see, for example, Cecchetti, 2008) about the efficacy of standard macroeconomic models to account for events such as the international financial crisis of 2008–2009 despite claims of theoretical purity and homogeneity in macroeconomic modeling.

The standard macroeconomic modeling does not include liquidity preference, or liquidity-premium analysis. However, there is extensive use of the notion of animal spirits to explain mainly the business cycle, and there are interesting implications from this sort of literature. For Farmer and Platonov (2019, p. 61), a macroeconomic theory, which is founded solely on preferences, technology and endowments is not sufficient to uniquely select an equilibrium. According to Farmer (2012, 2008), the standard macroeconomic representative agent model must be closed with the addition of the assumption that beliefs are a fundamental datum (see also Farmer and Platonov, 2019, p. 61).

This view was foretold in Keynes's idea of a monetary determination of the rate of interest, which was based on behavioral foundations (Koutsobinas, 2014). For Koutsobinas (2002, p. 1856) the most direct method to model "liquidity premia" or "illiquidity discounts" is to develop them as *independently* specified and measured (as opposed to being inferred from the behavior of long-term interest rates). Those premia depend on an independent factor affecting expectations such as variations in the state of confidence in situations of strong uncertainty. It is evident that what distinguishes a monetary theory of interest from the neoclassical theory of interest is the addition of this foundation, which is distinct from the standard data of technology, fixed preferences and wealth. Moreover, Kahn supported implicitly the distinctive nature of the state of confidence because changes in the degree of belief of investors and in liquidity preference shift expectations and equilibrium and influence the long-term interest rate as well as its difference from the short-term interest rate (Kahn, 1972, pp. 74–5 and p. 88), see Koutsobinas (2002, p. 1850). This implies that the variable degree of belief in strong uncertainty is an additional datum along the standard data in the neoclassical framework.

Moreover, the introduction of beliefs as an independent foundation is directly associated with the incorporation of a no-arbitrage equation between the money interest rate and the return to capital in the analysis of Farmer and Platonov (2019, p. 66). This equation represents the assumption that physical capital and government bonds pay the same rate of return. While Farmer and Platonov (2019, p. 66) argue that this treatment has no analog in the simplest version of the IS–LM model, it forgets the earlier contribution made by Koutsobinas (1993, 2002), who added a no-arbitrage equation of money interest rates in the simple version of the IS–LM model (as represented by Sargent, 1979). It is interesting to note that the no-arbitrage equation proposed by Farmer and Platonov is also foretold in Keynes’s analysis of the equality of money rates of interest in Chapter 17 of *General Theory* and Kahn’s analysis of marginal equilibrium, which was advanced in 1954.

Overall, it is evident that considerable convergence has taken place between a contemporary strand in post-Keynesian analysis that draws on Chapter 17 of the *General Theory* and on Kahn’s analysis and a rising school in modern standard theory as exemplified by the analysis of Farmer and his colleagues. This convergence has gone unnoticed by the leading circles in both camps, but it poses substantive methodological issues for a growing research agenda in the years to come. It must be noted that on the mainstream side, those advances are made more within the literature of boom-and-bust business cycles rather than on long-term equilibrium analysis (see for example De Grauwe, 2012).

Liquidity-premium analysis and heuristics

The proper endogenous determination of the liquidity premium is an important issue. Most frameworks consider liquidity premium as exogenous, while they mention its relation to uncertainty and the state of confidence (see, for example, Dequech, 1999; and, for an earlier treatment, Koutsobinas, 1993). However, Koutsobinas (2011, 764–5) shows that the liquidity premium is a strictly increasing function of strong uncertainty involved in different specificities of assets. In other words, greater uncertainty results in the acceleration of the value of the illiquidity-discount of illiquid assets. This implies for example that a typical no-arbitrage equation such as:

$$i_B = i_{MP} + l_B \tag{11.1}$$

where variables i_B , i_{MP} and l_B are the ten-year treasury bond rate, the interest rate determined by monetary policy following Taylor’s rule and the liquidity premium related to treasury bonds, respectively, may take alternative forms such as:

$$i_B = i_{MP} + b(i_{B(t-1)} + i_{B(t-2)}) \tag{11.2}$$

$$i_B = i_{MP} + b(i_{B(t-1)} + i_{MP(t-1)}) \tag{11.3}$$

where $b > 1$

Those equations imply an adaptive process, where the choice of b by financial participants is represented by a switching heuristic. For example, the following specification:

$$i_B = i_{MP} + 1.3(i_{B(t-1)} + i_{MP(t-1)})$$

signifies the choice of a heuristic in which the liquidity premium represents a strictly increasing function of uncertainty with a strong trend in the adaptive process and is consistent with the anchoring heuristic. This form of heuristic is more relevant for switching during the bust period. This specification, which is consistent with recent empirical work (see, for example, Hommes, Massaro and Weber, 2019) on heuristics may be more relevant to introduce liquidity premia during periods of economic and financial distress. The utilization of heuristics occupies a major place in behavioral economics after the seminal works of Tversky and Kahneman (see, for example, Gilovich et al, 2002; Camerer, et al, 2004; Gigerenzer et al, 2011). For example, these results add to the rapidly growing literature on the effects of liquidity on security prices. Empirical evidence to form heuristics for liquidity-premium time variations can be drawn by bid/ask spreads, which influence the equilibrium cost of debt. The nondefault component of spreads is strongly related to measures of bond-specific illiquidity such as the bid/ask spread. It explains also why firms take less debt in their capital structure (Longstaff, Mithal and Neis, 2005).

This type of simple heuristics that relates to the term structure of interest rates is another reason that explains the practicality of utilizing liquidity premia. This happens even when we use financial price or rate of return yardsticks, which are more observable, reliable, and easier to apply. The use of heuristics also links heterodox approaches in macroeconomics to behavioral economics. Any variation of the adaptive heuristic can be considered as relevant to liquidity premium, as it happens in situations of under-confidence or over-confidence.

Towards a reconciliation?

In the contemporary era, liquidity preference has been unnoticed not only because of detrimental considerations regarding the reliability of money demand but also because the centrality of money supply lost its importance too. Developments in central bank policy formation that took place during the last decades resulted in a new policy regime in which monetary aggregates are less important than in previous eras. Narrow monetary aggregates do not matter also in terms of standard macroeconomic theorizing. The canonical DSGE framework of the new neoclassical synthesis describes a non-monetary, non-banking, system in which purely monetary variables such as monetary aggregates (Goodhart, 2009), including the impact of liquidity preference,

are ignored. Moreover, the prevailing influence of rational expectations in the late 1970s led to further loss of interest in the idea of a behaviorally generated liquidity preference.

While in the post-Keynesian framework, liquidity preference came under the attack too from proponents of horizontal endogenous money, this theoretical debate went unnoticed because active monetary policy started relying on monetary endogeneity policy rules for practical reasons. For mainstream economists, monetary aggregates could not be controlled because they were empirically unreliable. Financial innovations distorted any presumption of reliability because they gave consumers more options for holding liquid balances and caused regulatory changes that resulted in sharp variations in the relative demands for liquid financial assets and volatile velocity (Hafer and Wheelock, 2001). Those variations have been exacerbated because of the burgeoning rise of global financial markets, massive international financial flows, and the activities of mega-banks. However, the adoption of Taylor's rule for interest rate determination in the canonical New-Neoclassical synthesis made redundant monetary aggregates including the demand for money influenced by liquidity preference.

As we mentioned above, contrary to the evaporation of liquidity preference in standard macroeconomic analysis, its corollary, the liquidity premium maintained its importance for money and banking. Keynes's theory of liquidity preference remains relevant because of the impact of the portfolio motive, which represents the joint effect of Keynes's speculative and precautionary motives on liquidity premium (see Cecchetti and Schoenholtz, 2014). This view is the same as the traditional account of the Cambridge, UK strand of post-Keynesian analysis, which attributed great importance to both the speculative and precautionary motives (see Kahn (1954).

It is indisputable therefore that while the importance of liquidity preference as a quantity-adjustment process has stalled and even has been deteriorated, its corollary, that is, the liquidity-premium analysis, has maintained its relevance in standard analysis. This happens also because the standard three-equation macro-economic modeling favors the analysis of price adjustment rather than quantity adjustment in the monetary sector. Yet, despite saving face in the money and banking literature, liquidity-premium analysis has not been incorporated as an endogenous variable both in standard macroeconomic theory and post-Keynesian analysis. There are few theoretical attempts to incorporate liquidity premium (or, its corollary illiquidity-discount) in macroeconomic analysis. Those include the work of Koutsobinas (1993, 2002) using the standard IS-LM model of Sargent (1979), substituting the demand and the supply of money with the demand and supply of financial assets and adding the condition of no-arbitrage of money-interest rates of financial assets as well as Palley's analysis of portfolio equilibrium of equal monetary returns for firms (Palley, 1996, 2019), inclusive of the case of macroeconomic equilibrium in ZLB regime, which implies variable liquidity premia across assets. The preceding section on the relation between liquidity premia and

heuristics advances our understanding of the endogenous determination of liquidity premia.

In contrast, the inclusion of liquidity premium as an exogenous factor and the absence of a no-arbitrage equilibrium condition holds not only for SFC-type of models but also in the analysis of applied non-linear macrodynamic frameworks of the business cycle that seek to confront simpler models with the data, especially in relation to financial fragility (see, for example, Charpe et al., 2011). In such models, the change in the price of bonds depends on interest rate differentials plus an exogenous liquidity premium and risk premium (Charpe et al., 2011, p. 186).

In the mainstream modern literature, the inclusion of the state of confidence as a determinant of standard macroeconomic equilibrium in an overlapping generation model by Farmer and Platonov (2019, p. 68) could be represented by a liquidity premium variable. Here, changes in confidence are used as a corollary of animal spirits. Unfortunately, since this variable appears as exogenous, not much further clarification can be derived, as they are extraneous (see Azariadis, 1981, p. 380). Other mainstream models of “animal spirits” with heterogeneous agents could explicitly include liquidity-premia. This somewhat disperses literature on liquidity premia, or on the possible implications of liquidity premium deviations from radical forecasts point out an interesting methodological point. Koutsobinas (1993, 2002, 2011) and Farmer (2011, 2018) argue that macroeconomic modeling could improve if it considers beliefs as a fundamental datum like technology, preferences and sentiment. Although Farmer (2017) made a case for a possible integration of post-Keynesian economics and DSGE models, his analysis is largely ignored by post-Keynesians. Apart from considerations of model preference (i.e., stock-flow model vs. DSGE model), post-Keynesian economics stresses the independent datum of beliefs influenced by the state of confidence which is not consistent with rational expectations, and is retained in Farmer’s analysis.

An important question regarding the relevance of variable liquidity premia across assets is the possible inclusion of price adjustment towards a no-arbitrage condition for the purpose of macroeconomic equilibrium. For example, the arbitrage process can be viewed as a mechanism that adds further flexibility to the closure of the model. This flexibility absorbs pressure from assuming an exogenous interest rate through the Taylor rule, or from assuming money wage rigidities. Palley (1996, pp. 43, 150–7) also considers a portfolio equilibrium in the determination of macroeconomic equilibrium. A critical question, which arises is whether the no-arbitrage condition across financial assets, or across financial and real assets is necessary. One may rely on the portfolio choice between financial assets as introduced in terms of wealth allocated exclusively among them on Tobinesque principles (Tobin, 1969) of “rate-of-return” equations (which have been broadly adopted in the stock-flow model) so that no equilibrium condition is necessary to bring the demand for money into equality with its supply. However, in the presence of an exogenously given interest rate through Taylor’s rule, there are many

interest rates, which are not necessarily consistent with each other. For example, the equilibrium long-term interest rate on Treasury bonds may be different in equilibrium than the implied long-term rate, which is consistent with Taylor's rule. Theoretically by-passing this issue confines macroeconomic analysis to disequilibrium analysis, or special theories of the business cycle.

Concluding remarks

The analysis in the present chapter suggests that the potential incorporation of liquidity-premium analysis in behavioral macroeconomics is largely justified. The examination of the rising importance of liquidity premia in alternative standards and post-Keynesian approach highlighted that a new type of macroeconomic analysis, which considers the state of confidence as an independent datum, is on the rise. This consideration alters the map of macroeconomic modeling because it supports the future development of liquidity-preference analysis within a broader framework, which includes variations of liquidity premia of assets and the incorporation of no-arbitrage condition in equilibrium analysis, which stands distinct from boom-and-bust business cycle theory. Those variations can take the form of switching heuristics in a multi-asset framework as an indispensable and critical feature of analysis. Thus, the re-generation of liquidity-preference theory may potentially be supported by elements of behavioral macroeconomics, which is itself on the rise. We conclude that current theoretical advances and empirical evidence from behavioral economics and finance for the incorporation of heuristics can be used to model liquidity premia as endogenous variables influenced by the state of confidence. This points out the opening of a methodological window for a nascent research agenda in modern Keynesian macroeconomics.

Note

- 1 See for example, Shiller and McCulloch (1990).

References

- Akerlof, G.A. (2002). Behavioral macroeconomics and macroeconomic behavior. *American Economic Review*, 92(3), 411–33. <https://doi.org/10.1257/00028280260136192>
- Arestis, P., & Sawyer, M. (2006). The nature and role of monetary policy when money is endogenous. *Cambridge Journal of Economics*, 30(6), 847–60. <https://doi.org/10.1093/cje/bel023>
- Asensio, A. (2020). SFC modeling and the liquidity-preference theory of interest. *Journal of Post Keynesian Economics*, 43(1), 28–35. <https://doi.org/10.1080/01603477.2019.1616564>
- Azariadis, C. (1981). Self-fulfilling prophecies. *Journal of Economic Theory*, 25(3), 380–96. [https://doi.org/10.1016/0022-0531\(81\)90038-7](https://doi.org/10.1016/0022-0531(81)90038-7)

- Bibow, J. (1998). On Keynesian theories of liquidity preference. *The Manchester School*, 66(2), 238–73. <https://doi.org/10.1111/1467-9957.00099>
- Bibow, J. (2005). Liquidity-preference theory revisited—to ditch or to build on it? Working Paper, No. 427, Levy Economics Institute of Bard College, Annandale-on Hudson, NY. <https://dx.doi.org/10.2139/ssrn.782968>
- Boulding, K. E. (1944). A liquidity-preference theory of market prices. *Economica*, 11(42), 55–6. <https://doi.org/10.2307/2549639>
- Camerer, C. F., Loewenstein, G., & Rabin, M. (Eds.) (2004). *Advances in Behavioral Economics*. Princeton, NJ: Princeton University Press. <https://doi.org/10.1515/9781400829118>
- Cecchetti, S. G. (2008). Monetary policy and the financial crisis of 2007–08. CEPR Policy Insight No. 21, Centre for Economic Policy Research, London.
- Cecchetti, S. G., & Schoenholtz, K. L. (2014). *Money, Banking, and Financial Markets* (Vol. 4). New York: McGraw-Hill/Irwin.
- Charpe, M., Chiarella, C., Flaschel, P., & Semmler, W. (2011). *Financial Assets, Debt and Liquidity Crises: A Keynesian Approach*. Cambridge, UK: Cambridge University Press. <http://hdl.handle.net/10453/17717>
- Chick, V., & Dow, S. (2002). Monetary policy with endogenous money and liquidity preference: A nondualistic treatment. *Journal of Post Keynesian Economics*, 24(4), 587–607. <https://doi.org/10.1080/01603477.2002.11490345>
- Dafermos, Y. (2012). Liquidity preference, uncertainty, and recession in a stock-flow consistent model. *Journal of Post Keynesian Economics*, 34(4), 749–76. <https://doi.org/10.2753/PKE0160-3477340407>
- De Grauwe, P. (2012). Booms and busts in economic activity: A behavioral explanation. *Journal of Economic Behavior & Organization*, 83(3), pp. 484–501. <https://doi.org/10.1016/j.jebo.2012.02.013>
- Dequech, D. (1999). Expectations and confidence under uncertainty. *Journal of Post Keynesian Economics*, 21(3), 415–30. <https://doi.org/10.1080/01603477.1999.11490205>
- Dow, S. C. (1996). Horizontalism: A critique. *Cambridge Journal of Economics*, 20(4), 497–508. <https://doi.org/10.1093/oxfordjournals.cje.a013629>
- Farmer, R. E. (2008). Old Keynesian economics. In R. E. A. Farmer (ed.). *Macroeconomics in the Small and the Large*, 23–43, Cheltenham: Edward Elgar. <https://doi.org/10.4337/9781848446021.00008>
- Farmer, R. E. (2011). Animal spirits, rational bubbles and unemployment in an old-Keynesian model. CEPR Discussion Series Paper no. 8439. <https://ssrn.com/abstract=1871550>
- Farmer, R. E. (2012). Confidence, crashes and animal spirits. *Economic Journal*, 122(559), 166–72. <https://doi.org/10.1111/j.1468-0297.2011.02474.x>
- Farmer, R. E. (2017). Post-Keynesian dynamic stochastic general equilibrium theory. *European Journal of Economics and Economic Policies: Intervention*, 14(2), 173–85. <https://doi.org/10.4337/ejeep.2017.02.02>
- Farmer, R. E. (2018). Pricing assets in a perpetual youth model. *Review of Economic Dynamics*, 30, 106–124. <https://doi.org/10.1016/j.red.2018.04.003>
- Farmer, R. E., & Platonov, K. (2019). Animal spirits in a monetary model. *European Economic Review*, 115, 60–77. <https://doi.org/10.1016/j.euroecorev.2019.02.005>
- Gigerenzer, G. E., Hertwig, R. E., & Pachur, T. E. (2011). *Heuristics: The Foundations of Adaptive Behavior*. New York: Oxford University Press. <https://doi.org/10.1093/acprof:oso/9780199744282.001.0001>

- Gilovich, T., Griffin, D., & Kahneman, D. (Eds.) (2002). *Heuristics and Biases: The Psychology of Intuitive Judgment*. New York: Cambridge University Press. <https://doi.org/10.1017/CBO9780511808098>
- Godley, W., & Lavoie, M. (2007). Fiscal policy in a stock-flow consistent (SFC) model. *Journal of Post-Keynesian Economics*, 30(1), 79–100. <https://doi.org/10.2753/PKE0160-3477300104>
- Goodhart, C.A.E. (2009). The continuing muddles of monetary theory: A steadfast refusal to face facts, *Economica*, 76, 821–830. <https://doi.org/10.1111/j.1468-0335.2009.00790.x>
- Hafer, R. W., & Wheelock, D. C. (2001). The rise and fall of a policy rule: Monetarism at the St. Louis Fed, 1968–1986. *Federal Reserve Bank of St. Louis Review*, January/February, 1–24. <https://doi.org/10.3886/icpsr01235.v1>
- Hommes, C., Massaro, D., & Weber, M. (2019). Monetary policy under behavioral expectations: Theory and experiment. *European Economic Review*, 118, 193–212. <https://doi.org/10.1016/j.euroecorev.2019.05.009>
- Kahn, R. F. (1954). Some notes on liquidity preference. *The Manchester School*, 22 (September); as reprinted in R. Kahn (1972), *Selected Essays on Employment and Growth*. London, UK: Cambridge University Press. <https://doi.org/10.1111/j.1467-9957.1954.tb00024.x>
- Keynes, J. M. (1936). *The General Theory of Employment, Interest and Money*. New York: Harcourt and Brace and World; as reprinted in D. E. Moggridge (ed.). (1978). *Collected Writings of J. M. Keynes*, Vol. VII, London: Macmillan for the Royal Economic Society. <https://doi.org/10.1017/UPO9781139524278>
- Kregel, J. (1988). The multiplier and the liquidity preference: Two sides of the theory of effective demand. In Barrere, A. (ed.), *The Foundations of Keynesian Analysis: Proceedings of a Conference Held at the University of Paris I-Pantheon-Sorbonne*. New York: St. Martin's Press. [https://doi.org/10.1007/978\[\[sbn\]\]1\[\[sbn\]\]349\[\[sbn\]\]08062\[\[sbn\]\]5_12](https://doi.org/10.1007/978[[sbn]]1[[sbn]]349[[sbn]]08062[[sbn]]5_12)
- Koutsobinas, T. T. (1993 [1995]). Liquidity premia and the money-rate of interest in a monetary theory of interest and production. Unpublished Ph.D. Dissertation, New School for Social Research, February 1993.
- Koutsobinas, T. T. (2002). The Role of liquidity in Keynes's monetary theory of interest and production. *Economies et Societes*, 36(11–12), 1847–70.
- Koutsobinas, T. T. (2011). Liquidity preference in a portfolio framework and the monetary theory of Kahn. *Cambridge Journal of Economics*, 35(4), 751–69. <https://doi.org/10.1093/cje/beq041>
- Koutsobinas, T. T. (2012). Portfolio allocation, liquidity-preference and the q ratio: A reassessment of the contributions of Tobin and Kahn. *Review of Political Economy*, 24(1), 69–86.
- Koutsobinas, T. T. (2014). Keynes as the first behavioral economist: The case of the attribute-substitution heuristic. *Journal of Post Keynesian Economics*, 37(2), 337–55. <https://doi.org/10.2753/PKE0160-3477370207>
- Lavoie, M., & Godley, W. (2001). Kaleckian models of growth in a coherent stock-flow monetary framework: A Kaldorian view. *Journal of Post-Keynesian Economics*, 24(2), 277–311. <https://doi.org/10.1080/01603477.2001.11490327>
- Lavoie, M., & Reissl, S. (2019). Further insights on endogenous money and the liquidity-preference theory of interest. *Journal of Post Keynesian Economics*, 42(4), 503–26. <https://doi.org/10.1080/01603477.2018.1548286>
- Leijonhufvud, A. (1968). *On Keynesian Economics and the Economics of Keynes: A Study of Monetary Theory*. New York: Oxford University Press.

- Longstaff, F. A., Mithal, S., & Neis, E. (2005). Corporate yield spreads: Default risk or liquidity? New evidence from the credit default swap market. *The Journal of Finance*, 60(5), 2213–53. <https://doi.org/10.1111/j.1540-6261.2005.00797.x>
- Minsky, H. P. (1986). *Stabilizing an Unstable Economy*. New Haven, CT: Yale University Press.
- Palley, T. (1996). *Post Keynesian Economics: Debt, Distribution and the Macro-Economy*. New York: St. Martin's Press. 10.1057/9780230374126
- Palley, T. (2019). The fallacy of the natural rate of interest and zero lower bound economics: Why negative interest rates may not remedy Keynesian unemployment. *Review of Keynesian Economics*, 7(2), 151–70. <https://doi.org/10.4337/roke.2019.02.03>
- Palmon, O., & Parker, J. (1991). Inflation uncertainty, real-interest-rate uncertainty, and the liquidity premium on government bonds. *The Financial Review*, 26, 459–77. <https://doi.org/10.1111/j.1540-6288.1991.tb00391.x>
- Panico, C. (1988). *Interest and Profit in the Theories of Value and Distribution*. New York: St. Martin's Press. [https://doi.org/10.1007/978\[\[sbn\]\]1\[\[sbn\]\]349\[\[sbn\]\]09199\[\[sbn\]\]7](https://doi.org/10.1007/978[[sbn]]1[[sbn]]349[[sbn]]09199[[sbn]]7)
- Sargent, T. (1979). *Macroeconomic Theory*. New York: Academic Press.
- Semmler, W. (2011). *Asset Prices, Booms and Recessions: Financial Economics from a Dynamic Perspective*. New York: Springer Science & Business Media. <https://doi.org/10.1007/b106192>
- Shiller, R. (2000). Measuring bubble expectations and investor confidence. *Journal of Psychology and Financial Markets*, 1, 49–60. https://doi.org/10.1207/s15327760jpfm0101_05
- Shiller, R. J., & McCulloch, J. H. (1990). The term structure of interest rates. *Handbook of Monetary Economics*, 1, 627–722. <https://doi.org/10.3386/w2341>
- Tobin, J. (1958). Liquidity preference as behavior towards risk. *Review of Economic Studies*, 25(2), 65–86. <https://doi.org/10.2307/2296205>
- Tobin, J. (1969). A general equilibrium approach to monetary theory. *Journal of Money, Credit and Banking*, 1(1), 15–29. <https://doi.org/10.2307/1991374>

12 “Regional finance”

Beyond theory and dualism

Carlos J. Rodríguez-Fuentes

My interest in methodology has been always from the perspective of practice, and in the spirit of inclusion rather than exclusion; [...] It should be made clear at the start that there is no neutral way of approaching methodology. [...] the best way of dealing with this is to be explicit about our own views, to be aware that there are other points of view, and to be open minded.

(Dow, 2002, p. viii)

Introduction

Since the publication of the article “Regional Finance: A Survey” in 1997, the literature addressing the influence of money and banking on regional development has experienced substantial growth. This chapter explores that literature through the lens of the original analytical framework developed by Professor Sheila Dow, which is sustained on three pillars: endogenous money, uncertainty, and methodological pluralism. Combining these three interrelated elements, Sheila Dow not only tries to persuade us of the crucial implications of the endogenous character of money and the uncertain nature of our knowledge about economic behaviour but also of her firm conviction that most (if not all) practical issues how money influences regional development are strongly rooted in methodological issues. Accepting this conviction allows us to judge the empirical results in the literature better and give more meaningful economic policy advice in this field. Though acknowledging the interesting and valuable contributions made in the regional finance literature so far, the analysis conducted in this chapter maintains that the most fruitful way to increase our knowledge about this issue is dependent on awareness and explicit recognition of differences in modes of thought and the adoption of methodological pluralism. Only a shift to this approach would allow us to go beyond the dualism implicit in those approaches that consider a theory is either right or wrong, and that empirical testing always provides unambiguous results.

The purpose of the arguments put forward in this chapter is to persuade the reader that the adoption of methodological pluralism will help us better

understand the “admixture of facts and ideas from different subdisciplines” involved in the study of the influence of monetary and financial system for regional development. It will also help to “draw together disparate sets of material within a coherent framework”, as Sheila Dow has claimed (Dow, 1990a, pp. 1–5).

The chapter is structured in three sections. The first section offers a brief and overall assessment of the developments within the regional finance literature since the publication of “Regional Finance: A Survey” in 1997. The second section concentrates on exploring what I personally consider to be the key elements in Sheila Dow’s analytical framework to study money’s influence on regional growth. Finally, Section “The obstacles to real progress” explores the obstacles that might hinder the adoption of true methodological pluralism in research and so explain the lack of real advances in our knowledge.

More regional money studies have not necessarily provided better understanding

Sheila Dow has not only contributed to the consolidation of the literature studying the implications of money and financial systems for regional development; she is also responsible for one of the most pioneering contributions to this field. Her first publications on regional finance date back to the early 1980s and appeared in a wide variety of journals that soon revealed the trans-disciplinary nature of her approach to the topic. In her article published in the *Scottish Journal of Political Economy* (Dow, 1982), she raised “the question of whether money does have a role to play in determining the regional composition of income and employment”. Subsequently, in 1986, in an article in the *Urban Studies Journal*, she directly questioned the balancing nature of interregional financial flows (Dow, 1986). One year later, she addressed the regional implications of segmentation of financial markets (Dow, 1987a) in a very innovative way, placing the emphasis on the liquidity preferences of economic agents (instead of on market imperfections, as in the mainstream literature) and on the interdependence of the regional supply of and demand for money. In 1987, she also published “Money and Regional Development”, where she developed the argument that “money and financial institutions play an active role in promoting uneven regional development in capitalist countries” (Dow, 1987b, p. 73). This argument was elaborated further in several directions in subsequent publications, such as Dow (1987c, 1988, 1990a) and Chick and Dow (1988). After a decade in which she seemed to concentrate her efforts on studying money and methodology, she returned to the regional finance topic in 1997 with the “Regional Finance: A Survey” article (Dow and Rodríguez-Fuentes, 1997), which is her second most cited publication ever. Although more than 20 years have passed since its publication, this chapter continues to attract the attention of those interested in studying the role of money and the financial system in regional development. This seems to be particularly true after 2009, when the Great Financial Crisis once

again brought to the forefront the economic discussion of the destabilising character of the financial system. The information provided by the Web of Science (WoS) database from Thomson Reuters supports this claim, since it reveals that this chapter has received an average of four citations per year during the decade 2009–2019, a figure that almost doubles the corresponding ones since its publication in 1997, which is 2.3.¹

Although the literature addressing the influence of money and banking on regional development has grown substantially since 1997, the assertion that the current literature keeps “underestimating the power of money and financial factors in the explanation for or widening of regional-income differences” (Dow and Rodríguez-Fuentes, 1997, p. 903) is still valid. This assertion can be sustained for two main reasons. Firstly, because most research still keeps overlooking the relevant implications arising from considering the endogenous character of money in developed economies, which we shall discuss further in the next section. Secondly, because most empirical research seems to be exclusively concentrated on conducting rigorous econometric tests, which are embedded in one single model, without being aware of the many possibilities that the practice of methodological pluralism might bring forward a better understanding of the facts.

It is true that thanks to the many contributions made over the last decades, our knowledge on regional finance has improved. However, it is also true that these advances have come, almost exclusively, in two areas. The first has involved broadening the geographical or temporal focus of literature by replicating previous research in different groups of economies or for different time periods. This area has delivered “more evidence” on what we already know but has not provided new knowledge about the topic itself. The second advance has consisted of the application of new (and more novel) statistical methods, which have increased the rigour and accuracy of empirical estimates, though once again these have been mistakenly identified as methodological advances in the field.

These two advances in the literature are clearly identified in Domínguez-Torres and Hierro (2019), who conduct an extensive survey of the empirical literature dealing with the regional effects of monetary policy. Their survey is full of examples of papers whose contributions are strictly limited to the novel statistical methods employed in the empirical tests (Ciccarelli et al., 2013, Barigozzi et al., 2014, Georgiadis, 2015, Mandalinci, 2015, among many others). On other occasions, the novelty of the reviewed contributions arises from the “territorial scope” of the empirical analysis conducted in the paper (Potts and Yerger, 2010, Rocha et al., 2011, Ridhwan et al., 2014, Georgiadis, 2015, Vespignani, 2015, Anagnostou and Papadamou, 2016, Guo and Tajul, 2017, among others).

Whether due to a large number of empirical papers available or because this empirical literature has provided more rigorous statistical results, there is no doubt that today we know more than 20 years ago about the influence of money and financial factors on regional growth. However, we would say that

to keep improving our understanding of the many, changing and not always systematic, ways through which money influences regional development, it is necessary to rebalance efforts towards the conceptual and methodological level, and particularly towards those three methodological issues that have been present in Sheila Dow's work: the endogenous character of money in developed economies; the uncertain nature of knowledge; and her constant advocacy for methodological pluralism.

As suggested in the next section, the consideration of these elements will help to conduct a much better judgment of the empirical results in the literature and also to provide more meaningful economic policy advice.

Regional finance when money and methodology really do matter

Sheila Dow's extensive scientific production can be grouped into three thematic areas: (i) economic thought and methodology, (ii) theory of money and banking and monetary policy, and (iii) regional and international finance. Researchers who have been interested in her contributions in each of these fields will have surely noticed the close links and constant feedback between these three fields of study. These links are most evident when we focus on the study of her contributions to the field of "regional finance", as we will suggest in this section.

The central nature of issues related to methodology in Sheila Dow's work can be seen in Table 12.1. The data show the total number of citations her works have received in the WoS and Scopus databases, once grouped into the three areas mentioned above: methodology, monetary theory, and regional finance.

Although we are aware of the limitations of the data shown in this table, since it only shows the works published in the scientific journals considered in the mentioned databases and ones that have received at least one citation, the information depicted in Table 12.1 reflects the outstanding importance of methodological issues in all of Dow's publications. Thus, her article in the field of methodology represent about 60% of her total scientific production (55% according to the WoS, and 61% according to the SCOPUS data), and 40% of the citations that her published works have received and that are collected in these two databases.

Another aspect of Table 12.1 that is worth highlighting is the high average of citations per work published in the regional finance field, ranging from 17.4 WoS to 26.1 for SCOPUS. In general, WoS data show that the average number of citations that her "regional finance" works have received double and triple the average number of citations for those in the field "monetary theory" and "methodology", respectively. Furthermore, SCOPUS raises these figures slightly higher, since it indicates that the average number of citations received by the works published in the field of "regional finance" are triple and fourfold those received for works on "monetary theory" and "methodology", respectively.

Table 12.1 Dow citations grouped by topics in WOS and SCOPUS

	<i>N° papers with quotes</i>	<i>%</i>	<i>Total quotes</i>	<i>%</i>	<i>Quotes per paper</i>
<i>Web of Science</i>					
Methodology	33	55	214	39	6.5
Monetary theory	17	28	156	29	9.2
Regional finance	10	17	174	32	17.4
<i>SCOPUS</i>					
Methodology	44	61	280	41	6.4
Monetary theory	20	28	193	28	9.7
Regional finance	8	11	209	31	26.1

Source: Author's calculations from data extracted from Web of Science and Scopus.

Table 12.2 Most cited Dow papers in WOS and SCOPUS

<i>Paper title (publication year)</i>	<i>WOS</i>				<i>SCOPUS</i>			
	<i>Total quotes</i>	<i>% group</i>	<i>% total</i>	<i>Quotes per year</i>	<i>Total quotes</i>	<i>% group</i>	<i>% total</i>	<i>Quotes per year</i>
<i>Methodology</i>								
Beyond Dualism (1990)	64	30	12	2.2	90	32	14	3.1
Formalism logic and reality (2001)	57	27	11	3.2	67	24	10	3.7
PK and Critical Realism (1999)	33	15	6	1.7	51	18	8	2.6
Mainstream Econ. Methodology (1997)	31	14	6	1.4	44	16	7	2.0
Variety of MET approach (2007)	29	14	5	2.4	28	10	4	2.3
<i>Monetary theory</i>								
Horizontalism (1996)	45	34	9	2.0	65	39	10	2.8
Cognition and financial stability (2011)	30	23	6	3.8	32	19	5	4.0
Mon. Pol. with endogenous (2002)	30	23	6	1.8	40	24	6	2.4
Endogenous money structuralist (2006)	27	20	5	2.1	28	17	4	2.2
Uncertainty and Mon. Pol. (2004)	24	18	5	1.6	28	17		1.9
<i>Regional finance</i>								
Regional finance survey (1997)	54	34%	10	2.5	62	33	9	2.8
Reg. financial sector Scotland (1992)	32	20	6	1.2	40	21	6	1.5
Reg. trans. UK Mon. Pol. (2007)	27	17	5	2.3	26	14	4	2.2
Treatment money in Reg. Sci. (1987)	26	16	5	0.8	39	21	6	1.2
Regional money multiplier (1982)	20	13	4	0.5	22	12	3	0.6

Source: Author's calculations from data extracted from Web of Science and Scopus.

Sheila Dow's interest in studying methodological issues has undoubtedly been stimulated by her ambition to better understand the functioning of the economic system and the discrepancies among economists in this regard, as well as her commitment to improving the diagnostic capacity of economists about the problems that concern society. Thus, she herself has said that "my interest in methodology has always been from the perspective of practice and

in the spirit of inclusion”, and that she “became interested in methodology for the practical purpose of understanding disagreement among economists” (Dow, 2002, p. 8).

Of course, the importance of methodological aspects can also be appreciated, with total clarity, in the analytical framework developed by Sheila Dow to study the influence of money and banking on regional development. Within this framework, the relevance of methodology is a logical consequence of the endogenous character of money and the uncertain nature of our knowledge about economic behaviour, which explains her claim for more methodological pluralism in the field.

The originality of the framework developed by Sheila Dow resides in it offering an analytical framework that allows researchers to make better judgments about the (often disparate) empirical results available in regional finance literature. It also helps researchers to develop a more coherent explanation for the “admixture of facts and ideas from different subdisciplines” involved in the study of the influence of monetary and financial systems on regional development. Although the theoretical framework provided by Sheila Dow considers money to be endogenous and this leads to uncertain knowledge about the way money affects economy, this framework does not rule out the possibility of money being exogenous under certain institutional or historical circumstances (level of development, regulation, ...), giving then the chance for other theories to be applied. Therefore, it is always up to the researcher to decide, once they have analysed the historical and institutional context related to the reality to be studied, which theoretical framework of analysis is more appropriate to study the effects of money and the banking system on regional growth.

In my opinion, Sheila Dow’s theoretical framework shares Victoria Chick’s view that the effect of any monetary change depends on how people behave: who issues the money and in exchange for what (Chick, 1978, pp. 55–8). For this reason, it becomes critical to study “the way money enters the income-generating process and the historical and institutional particularities of theory”. Indeed, it is

not only crucial for a better knowledge of the way a monetary economy works, but also for understanding the evolving character of the so-called ‘monetary transmission mechanism’ and the study of how a money and banking system affects the economy.

(Rodríguez-Fuentes, 2018, pp. 96–7)

Figure 12.1 aims at reproducing this argument by showing the implications our conceptualisation of money and knowledge might have for the methodological approach we use when studying the influence of money on regional development.

In order to explore the linkages among endogenous money, uncertainty and pluralism shown in Figure 12.1, we must start from the conceptualisation

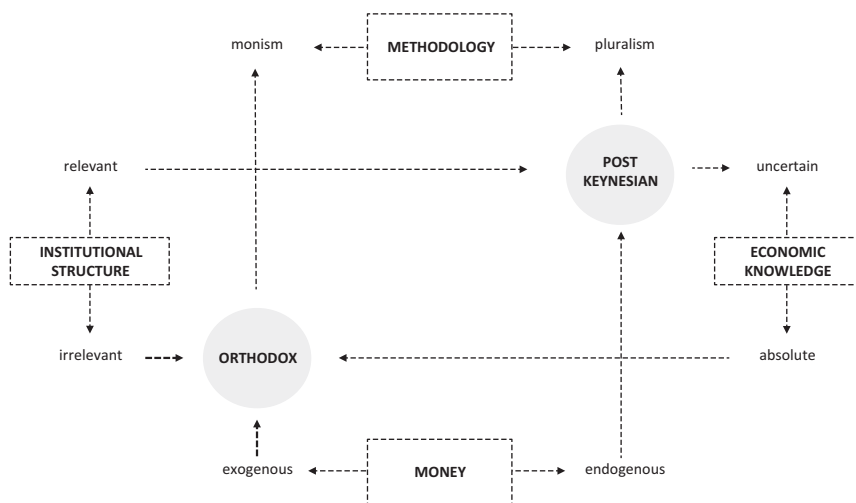


Figure 12.1 Endogenous money, uncertain knowledge, and methodological pluralism. Source: Author.

of money. As soon as we consider money to be endogenous, in the post-Keynesian sense, there is the necessity to explicitly incorporate in our analysis the historical and institutional dimension, as shown by Chick and Dow (1988). In practical terms, this means we cannot limit our analysis to one single theoretical framework but should choose (among several) the one we consider best fits the institutional setting we are trying to study. This means there are always different theories available, and the problem is to choose which model is “the” relevant (or most appropriate) to our given circumstances. The choice of theory is therefore contingent on context, both from a historical and a spatial perspective, as shown in Chick and Dow (1988).

The endogenous character of money and the need to refer to context also mean that our knowledge about the underlying economic model is always limited. Consequently, once we are aware of our limited knowledge, and assume the future is unforeseen and the information we have is scarce and heterogeneous, there is no better choice than methodological pluralism. That is so because the recourse to methodological pluralism can help us not only to choose among models, but also to incorporate “disparate sets of material within a coherent framework” (Dow, 1990a, p. 5) and so to develop a more persuasive “explanation” of our conclusions or empirical evidence.

To the contrary, the assumption of exogenous money implies money is separated from real variables (monetary neutrality), and fully controllable. Controllability and neutrality, thus, will allow us to develop a model that shows exactly how money interacts with real variables, but only when we assume full knowledge about the way monetary and real variables interact.

Post-Keynesian	METHODOLOGY	Orthodox
<ul style="list-style-type: none"> • Methodology isn't neutral (judgment is always present) • Economics as a Social Science • Many theories available (best choice depends on context) • Political Economy approach • Open system / Holistic approach 	<ul style="list-style-type: none"> • Methodology provides objective rules • Economics as a Positive Science (Value-free) • Many theories but only one is valid • Positivist approach • Closed system / Individualism approach 	
Post-Keynesian	KNOWLEDGE	Orthodox
<ul style="list-style-type: none"> • Knowledge is partial, fallible • There is model uncertainty • Future is unknown (open to unforeseen change) 	<ul style="list-style-type: none"> • Knowledge is infallible • Underlying economic model is known (or knowable) • Future is foreseen (subject to probabilities) / determinism 	
Post-Keynesian	MONEY CHARACTERIZATION	Orthodox
<ul style="list-style-type: none"> • Money is integral (no classical dichotomy) • It is credit availability (rather than money) that matters • Endogenous characterization of money depends on institutional and contextual factors • Regional credit availability depends critically on agents economic behaviour 	<ul style="list-style-type: none"> • Monetary versus Real variables distinction (classical dichotomy) • Money, credit ... are treated as equivalent variables • Money is exogenous and always neutral • Regional credit availability is the result of a multiplier process and the redistribution role played by banks 	
Post-Keynesian	EMPIRICAL WORK	Orthodox
<ul style="list-style-type: none"> • Data are always theory laden (ambiguity of meaning) • Explanation and persuasion (rather than "proof") • Empirical results don't provide proof (they do require explanation) 	<ul style="list-style-type: none"> • Every variable (concept) can be measured (data) • Empirical tests can always determine which theory is best • Empirical results always have one single reading (no need to provide further explanation) 	

Figure 12.2 Post-Keynesian and orthodox approaches to regional finance.

Source: Author.

This view coincides with the orthodox approach, also shown in Figure 12.1, but is quite different to the post-Keynesian approach (Figure 12.2).

The obstacles to real progress

Over recent decades, the literature addressing the influence of money and banking on regional development has experienced substantial growth, particularly the literature that has approached the topic from an empirical perspective. As a result, the empirical results now available provide not only more rigorous statistical results, but also information for different groups of countries/economies or temporal periods about the effects of money and banking on regional growth. However, the majority of these results belong to what Figure 12.2 labels the orthodox approach, which is characterised by a closed-system view which assumes exogenous money and full knowledge about the underlying economic model that links monetary and real variables and the empirically testable hypotheses that guide empirical work. Despite recognising the value of the many contributions made by empirical work, we argue that to really make progress in our knowledge about the constantly changing, non-systematic ways through which money influences regional development, it is time to rebalance efforts towards the conceptual and methodological level.

This proposed conceptual and methodological approach would mean considering the three distinctive but interrelated elements that characterise

the Sheila Dow’s original work on regional finance: (i) the endogenous nature of money, (ii) our limited knowledge about the economic behaviour of agents (model uncertainty), and (iii) the wide range of possibilities that methodological pluralism may offer researchers not only to conduct their empirical work but also to draw more meaningful conclusions and provide better economic policy advice. As Sheila Dow has pointed out, such a conceptual and methodological focus would allow us to better manage the “admixture of facts and ideas from different subdisciplines” involved in the study of monetary and financial system influence on regional development and to “draw together disparate sets of material within a coherent framework” (Dow, 1990a, p. 5). However, the majority of research conducted in this field corresponds to the core or orthodox view shown in Figure 12.2.

A possible explanation for this can be provided by the combination of the three following elements: (i) the potential trade-off between knowing more (empirical work) and understanding better (conceptual and methodological work); (ii) the perversity implicit in the “publish or perish” motto; and (iii) the careless use of concepts that promotes ambiguity of meaning.

The first reason that we have identified as “the potential trade-off between knowing more and understanding better” aims to show that, on many occasions, the greater dedication to empirical work ends up hindering the desire to extend the frontiers of our knowledge by exploring new paradigms, since the empirical work is usually limited to the empirical testing of hypotheses derived from a concrete and consolidated theoretical framework.

So that this does not occur, it would be necessary that applied researchers are (i) fully aware of the explicit and implicit assumptions of their chosen model, and their corresponding implications for the empirical results obtained and their interpretations, also about the (ii) existence of other potentially useful models to conduct their research.

However, when these two conditions are unknown, or simply dismissed, empirical work ends up only paying attention to the ruling paradigm about the way money and financial system affect the economy. Empirical work, therefore, may lead to an increase in our stock of knowledge about that single paradigm at the cost of not exploring others, thus reducing our understanding about the complex and changing ways through which money can influence the economic system. This is why we have named it the *potential* trade-off between empiricism and understanding.

The second motive has to do with what we have labelled as the perversity implicit in the “publish or perish” motto. There is some concern among academics about the increased pressure (and perversity) that the “publish or perish” motto is placing on academics, whose efforts should be on creating knowledge, first, and second on its dissemination. The increasing relevance attributed to “publishing” influences academics individually, since job promotion is linked to publications in ranked journals. Thus, the obsession for publishing may drive research only on those topics with higher possibilities of “getting something published”, regardless of its contribution to

our substantive understanding on how economies really work. Indeed, the “publish or perish” motto also affects the whole university system, since university funding is also critically linked to this same goal. In the field of economics, in particular, the likely systemic effect of such pressure might explain the increase in rigorous developments, despite it being known that they are “unable to provide a systematic understanding of the structure and the operations of the real economic system” (Leontief, 1982, p. 107). In fact, they “become obstacles to intellectual advance” since “those with power often act as very restrictive gate keepers” within the academic world (Lawson, 2010, p. 15).

Consequently, it is fair to assert that the “publish or perish” motto is producing an impoverishment of our knowledge about the way money influences regional growth, as it stimulates empirical work within a conceptual framework that best fits empirical testing at the cost of sacrificing our intellectual ambition and curiosity by extending our analysis to other theoretical and conceptual frameworks.

Finally, we must remember that empirical works that study the influence of money and the banking system on regional development do not produce unequivocal results. This is because the influence of money on the economic system depends on changing institutional factors and because several empirical studies incur what we could call “ambiguity of meaning”. The ambiguity of meaning is the result of the use of statistical variables to test conceptual issues, without being aware that such correspondence may not exist.

This could happen not only because many concepts (for example, liquidity, or the banking system) can have several measures (for example, for liquidity, we have different monetary aggregates, whereas for the banking system, we can use a number of banks, branches, employment, credit, ...) but also because some variables are difficult, if not impossible, to measure (for example, liquidity preference, financial development, ...). This is relevant because empirical results are always obtained from certain statistical variables, but their conclusions always refer to concepts, without being aware that there might be little correspondence between the two. This shows the importance of paying attention to conceptual issues when conducting any empirical research.

It is obvious that more empirical work can always increase knowledge about the way money and the financial system influence regional growth. However, the argument put forward in this chapter suggests that to understand empirical work better, there needs to be greater awareness of the conceptual and methodological elements that characterise the Sheila Dow’s original analytical work on regional finance.

Table 12.2 shows the breakdown of the citations for the five articles with the highest number of citations in each of the three groups. In this case, the data reveal that the most cited article in the methodology group is that entitled “Beyond Dualism”, published in 1990 (Dow, 1990b), which accounts for 30% of total citations of the group (12% of total publications), and has received, on average, 2.2 citations per year since 1990 (3.1 according to Scopus).

In the monetary theory category, the most relevant article is “Horizontalism”, published in 1996 (Dow, 1996), with an average of almost three citations per year. In the regional finance group, the “Regional Finance: A Survey” article, published in 1997, represents more than 30% of total citations, and has received, on average, almost three citations per year (2.5 according to WoS, and 2.8 according to SCOPUS).

Note

- 1 The total citations (up to 2019) in the WoS database is 61, and the Scopus database (managed by Elsevier) shows a similar figure (61 total citations). However, the Google Scholar source offers a much higher figure of 183 citations, which means 8.3 citations per year from 1997 to 2019.

References

- Anagnostou, A. and Papadamou, S. (2016). Regional asymmetries in monetary transmission: the case of the Greek regions. *Environmental and Planning C: Government and Policy*, 34, 795–815. <https://doi.org/10.1177/0263774X15614679>
- Barigozzi, M., Conti, A. M. and Luciani, M. (2014). Do euro area countries respond asymmetrically to the common monetary policy? *Oxford Bulletin of Economics and Statistics*, 76 (5), 693–714. <https://doi.org/10.1111/obes.12038>
- Chick, V. (1978). Unresolved questions in monetary theory: a critical review. *De Economist*, 126 (1), 36–60. Reprinted in P. Arestis and S. Dow (eds.) (1992). *On money, method and Keynes: selected essays by Victoria Chick* (143–66). London: Macmillan/St Martin’s Press. <https://doi.org/10.1007/BF01718077>
- Chick, V. and S. Dow (1988). A post-keynesian perspective on the relation between banking and regional development. *Thames Papers in Political Economy*, Spring, 1–22. Reprinted in P. Arestis (ed.) (1988). *Post-Keynesian monetary economics: new approaches to financial modelling* (219–50). Cheltenham: Edward Elgar. <http://hdl.handle.net/1893/22686>
- Ciccarelli, M., Maddaloni, A. and Peydro, J. L. (2013). Heterogeneous transmission mechanism: monetary policy and financial fragility in the euro area. *Economic Policy*, 28 (75), 459–512. <https://doi.org/10.1111/1468-0327.12015>
- Domínguez-Torres, H. and Hierro, L. A. (2019). The regional effects of monetary policy: a survey of the empirical literature. *Journal of Economic Surveys*, 33 (2), 604–38, <https://doi.org/10.1111/joes.12288>
- Dow, S. C. (1982). The regional composition of the money multiplier process. *Scottish Journal of Political Economy*, 29 (1), 22–44. <https://doi.org/10.1111/j.1467-9485.1982.tb00434.x>
- Dow, S. C. (1986). The capital account and regional balance of payments problems. *Urban Studies*, 23 (3), 173–84. <https://doi.org/10.1080/00420988620080211>
- Dow, S. C. (1987a). The treatment of money in regional economics. *Journal of Regional Science*, 27 (1), 13–24. <https://doi.org/10.1111/j.1467-9787.1987.tb01141.x>
- Dow, S. C. (1987b). Money and regional development. *Studies in Political Economy*, 23 (1), 73–94. <https://doi.org/10.1080/19187033.1987.11675566>
- Dow, S. C. (1987c). Banking and regional development in Canada. *British Journal of Canadian Studies*, 21 (1), 16–40.

- Dow, S. C. (1988). Incorporating money in regional economic models. In F. Harrigan and P. McGregor (eds.). *Recent advances in regional economic modelling* (208–18). London Papers in Regional Science, 19. London: Pion.
- Dow, S. C. (1990a). *Financial markets and regional economic development: the Canadian experience*. Aldershot: Avebury.
- Dow, S. C. (1990b). Beyond dualism. *Cambridge Journal of Economics*, 14 (2), 143–57. <http://www.jstor.org/stable/23598234>
- Dow, S. C. (1996). *Horizontalism: a critique*. *Cambridge Journal of Economics*, 20 (4), 497–508. <https://doi.org/10.1093/oxfordjournals.cje.a013629>
- Dow, S. C. (2002). *Economic methodology: an inquiry*. Oxford: Oxford University Press. <https://global.oup.com/academic/product/economic-methodology-9780198776123?cc=gb?=en&lang=en&#>
- Dow, S. C. and Rodríguez-Fuentes, C. J. (1997). Regional finance: a survey. *Regional Studies*, 31 (9), 903–20. <https://doi.org/10.1080/00343409750130029>
- Georgiadis, G. (2015). Examining asymmetries in the transmission of monetary policy in the euro area: evidence from a mixed cross-section global VAR model. *European Economic Review*, 75, 195–215. <https://doi.org/10.1016/j.eurocorev.2014.12.007>
- Guo, X. and Tajul, A. M. (2017). Regional effects of monetary policy in China: evidence from China's provinces. *Bulletin of Economic Research*, 69 (2), 178–208. <https://doi.org/10.1111/boer.12095>
- Lawson, T. (2010). *Really reorienting modern economics*. Paper Presented at INET Conference, Kings College, Cambridge, April 8–11, 2010. <https://www.ineteconomics.org/research/research-papers/really-reorienting-modern-economics>
- Leontief (1982). Academic economics. *Science*, 217 (4555), 104–7. <https://doi.org/10.1126/science.217.4555.104>
- Mandalinci, Z. (2015). *Effects of monetary policy shocks on UK regional activity: a constrained MFVAR approach*. School of Economics and Finance Working Paper No. 758, Queen Mary University of London. <https://www.qmul.ac.uk/sef/research/workingpapers/2015/items/758.html>
- Potts, T. and Yergler, D. (2010). Variations across Canadian regions in the sensitivity to U.S. monetary policy. *Atlantic Economic Journal*, 38 (4), 443–54. <https://doi.org/10.1007/s11293-010-9248-9>
- Ridhwan, M. M., de Groot, H. L. F., Rietveld, P. and Nijkamp, P. (2014). The regional impact of monetary policy in Indonesia. *Growth and Change*, 45 (2), 240–62. <https://doi.org/10.1111/grow.12045>
- Rocha, R. M., Silva, M. E. A. and Gomes, S. M. F. P. O. (2011). Por que os estados brasileiros tem reações assimétricas a choques na política monetária? *Revista Brasileira de Economia*, 65 (4), 413–41. <http://dx.doi.org/10.1590/S0034-71402011000400006>
- Rodríguez-Fuentes, C. J. (2018). A personal interpretation of Victoria Chick's monetary thought: intellectual rigour, scientific innovation and common sense. In S. C. Dow, J. Jespersen and G. Tily (eds). *Money, method and contemporary post-keynesian economics* (96–107). Cheltenham: Edward Elgar. <https://www.e-elgar.com/shop/gbp/money-method-and-contemporary-post-keynesian-economics-9781786439857.html>
- Vespignani, J. L. (2015). On the differential impact of monetary policy across states/territories and its determinants in Australia: evidence and new methodology from a small open economy. *Journal of International Financial Markets, Institutions and Money*, 34, 1–13. <https://doi.org/10.1016/j.intfin.2014.10.001>

13 Money in the early years of the Soviet Union

Barter and back again – a short-lived experiment of transformation

Kobil Ruziev

Introduction

In the earlier drafts of the *General Theory*, Keynes explicitly argued that the classical tradition of distinguishing between real and monetary variables was not helpful in analysing the real-world capitalist economies which could only be examined in monetary terms. To explain his point, Keynes made a distinction between a cooperative (barter) economy and an entrepreneurial (monetary) economy. He then showed that in a barter economy, where goods are exchanged for goods, effective demand did not fluctuate and hence perpetual full employment was attainable. In contrast, in a monetary economy, by which he meant modern capitalist economies, effective demand was inherently unstable by default: a part of current income might not necessarily be spent and hence a part of current production might remain unsold. While developing his ideas about a monetary economy, Keynes agreed with Marx's analysis that parting with money (M) for a commodity (C) in order to earn more money (M') reflected the true nature of production in capitalist economies.

Although the early Soviet economists were inspired by Marx's writings, they seemed to agree with Keynes's observation that capitalist economies were inherently unstable precisely because of the role of money in the economic process. Since the Soviet authorities were committed to perpetual full employment, they experimented with eliminating money from the economic process altogether in the early years of the former Soviet Union (FSU). Indeed, it is reported that by 1921, the Soviet economy became effectively a barter economy as the exchange of goods between enterprises was measured in physical terms and more than 93% of all wages were paid in kind. This chapter aims to analyse the theoretical and philosophical foundations behind this radical and short-lived experiment with a moneyless society.

The chapter is organised as follows. We will start our investigation by looking into the nature of money and its peculiar role in the economic process in the next section. Drawing heavily on Sheila Dow's works on uncertainty, time and money, we will show that the very organisational structure of a

capitalist economy explains why money plays a facilitating as well as a constraining role in the economic process. The discussion then will be linked to Keynes's posthumously published works on the working of a co-operative economy, a neutral entrepreneur economy and an entrepreneur economy. In Section 'Disappearance of money and banks during the early years of the Soviet Union', we will examine Marx and Lenin's theoretical perspectives on stabilising an unstable economy, and in Sections 'War communism' and 'Money and banks in the period of NEP', we will discuss how practical difficulties associated with the implementation of Marx and Lenin's theoretical ideas and ideals about a stable socialist economy resulted in two contrasting approaches towards money and banks during the periods of War Communism and the New Economic Policy. Summary and conclusions are presented in Section 'Conclusion'.

Money, uncertainty and time

A real exchange economy of the neoclassical world is implicitly modelled as a barter economy operating under the conditions of certainty. Money, introduced as a 'veil' to the barter economy, eliminates the hassle of double coincidence of wants. By reducing search and transaction costs, it speeds up the pace of trade, enhances trade opportunities and facilitates specialisation in production (Drake, 1980). Once incorporated, however, money becomes neutral, leaving the real variables unaffected.

The neoclassical method of approaching the economic system in this way is based on dualism (Chick, 2003, p.323), which is the central feature of the Cartesian/Euclidean mode of thought (Dow, 1996, p.16). According to this tradition, knowledge is represented by information; facts and events are classified as either known or unknown. Even unknown facts about the future are knowable, at least probabilistically. Hence, uncertainty can be classified as something that is quantifiable (Dow, 1996, p.18). True uncertainty, however, is non-quantifiable and non-measurable (Knight, 1935, p.20). 'It refers to an absence of knowledge, a lack of confidence in one's predictions' (Dow, 1993, p.16).

Keynes uses a different method and mode of thought and thus produces a different theory (Chick, 1983, 2003). The atomism and dualism of the Cartesian/Euclidean mode of thought are replaced by organicism and a move beyond dualism¹ of the Babylonian mode of thought (Dow, 2012). Hence, the neoclassical dichotomy between monetary and real variables is rejected 'in favour of a vision of the economy in which the influence of money is pervasive' (Chick, 2003, p.315). The static method, with its corollary of certainty and perfect knowledge, is replaced by historical time, uncertainty and partial knowledge. As a result, a monetary theory of production is developed. This theory

is built on the unique properties of money, on expectations formation under uncertainty, and on historical rather than logical time, each of

which necessarily implies the other two; any analysis which involves only one or two of the factors is both logically incomplete and irrelevant to a monetary economy.

(Dow, 1993, p.6)

Keynes argued that ‘as soon as we pass to the problem of what determines output and employment as a whole, we require the complete theory of a Monetary Economy’ (Keynes, 1970, p.293). He then defines the monetary economy as ‘essentially one in which changing views about the future are capable of influencing the quantity of employment and not merely its direction’ (Keynes, 1970, p.vii).

In a monetary economy, money becomes central in analysing the working of the economic system. It comes into this system in ‘an essential and peculiar manner’ as ‘a subtle device linking the present to the future’ (Keynes, 1970, p.294). Dow (1993, p.19) argues that money is the outlet for the expression of uncertainty. In a neoclassical world where other assets yield some positive return, and money is ‘barren’, ‘[w]hy should anyone outside a lunatic asylum wish to use money as a store of wealth?’ (Keynes, 1937, pp.215–16). In contrast, in the real world, when expectations regarding future economic activities are weak, money enables individuals to preserve their purchasing power. In this sense, holding money can create a constraint on economic activity. Hence, ‘the very existence of money that is “non-neutral”, rather than simply variations in its quantity: an economy with actual money works quite differently from a barter economy with an arbitrarily selected numeraire labelled “money”’ (Cottrell, 1994, p.590).

Even though Keynes’s *Treatise on Money* was an early attempt to analyse the role and importance of money in the economic process, Keynes was already dissatisfied with the *Treatise* at the time of its publication (Rotheim, 1981, p.572). In the preface to the *General Theory*, Keynes notes that he ‘made some progress towards pushing monetary theory back to becoming a theory of output as a whole’ (Keynes, 1970, p.vi). He wanted to show that the fluctuations in effective demand were unavoidable in a monetary economy (Keynes, 1970, p.17).

Keynes’s posthumously published works reveal how his ideas about monetary analysis evolved between his *Treatise on Money* and *General Theory*. One of the early draft tables of contents of *The General Theory* shows that, initially Keynes named his new book *The Monetary Theory of Employment* (Keynes, 1979, p.62). Another draft table of contents of *The General Theory* (Keynes, 1973, p.421) shows that Keynes originally intended to include two chapters called ‘*The Distinction between a Co-operative and an Entrepreneur Economy*’ and ‘*The Characteristics of an Entrepreneur Economy*’ in *The General Theory*.² Dillard (1963), Torr (1980, 1988) and Rotheim (1981) suggest that the *General Theory* would have been more successful had Keynes included these early chapters in the final version of the book.

In the 1933 draft of the *General Theory*, Keynes makes the distinction between three types of economies: a co-operative economy, a

neutral entrepreneur economy, and an entrepreneur economy (Keynes, 1979, pp.77–8). In the co-operative economy, ‘the factors of production are re-warded by dividing up in agreed proportions the actual output of their co-operative efforts’ (ibid., p.77). In the neutral entrepreneur economy

the factors are hired by entrepreneurs for money but where there is a mechanism of some kind to ensure that the exchange value of the money incomes of the factors is always equal in the aggregate to the proportion of current output.

(ibid., p.78).

In contrast, in an entrepreneur economy ‘the entrepreneurs hire the factors for money but without such a mechanism as the above’ (ibid.).

Keynes starts his argument by explaining the functioning of a pure barter economy in which output is created by ‘co-operative efforts’. In a pure barter economy, where goods are exchanged for goods, there would not be effective demand failures as long as the ‘price’ ratios were perfectly flexible (Dow and Earl, 1982). Uncertainty would be dealt with ‘by holding on to one type of producible good as a store of value, before deciding when and how to exchange it for other goods’ (Dow, 1993, p.19). Any change in the relative ‘price’ of a particular good would make the production of that good more profitable and thus would attract more employment. As a consequence, any unemployment would be temporary due to time lags (Keynes, 1979, p.102) and therefore persistent unemployment would not result (Dow, 1993, p.17). Hence, in this type of an economy perpetual full employment is obtainable: ‘only miscalculation or stupid obstinacy can stand in the way of production, if the value of the expected real product exceeds real costs’ (Keynes, 1979, p.67).

He then shows that perpetual full employment is also obtainable in an entrepreneur economy, if it is ‘made to behave in the same manner as a co-operative economy’ (Keynes, 1979, p.79). Keynes calls this economy a neutral entrepreneur economy where ‘the starting up of productive processes largely depends on a class of entrepreneurs who hire the factors of production for money and look to their recoupment from selling the output for money’ (Keynes, 1979, p.77). Keynes argues that this economy is made to work as a co-operative economy by assuming that ‘the whole of the current incomes of the factors of production are necessarily spent, directly or indirectly on purchasing their own current output from the entrepreneurs’ (Keynes, 1979, p.77). Like in a co-operative economy, in a neutral entrepreneur economy unemployment would only be temporary due to time lags in the adjustment of demand in different sectors of the economy as long as everything that was earned was spent: there could not be ‘general’ unemployment (Rotheim, 1981, p.576). Hence, in this economy, the role of money is limited to facilitating exchange only and indeed money can be seen as a ‘veil’.

Next, Keynes depicts the special features of an entrepreneur economy in which ‘we actually live to-day’ (Keynes, 1979, p.78). In this economy,

money's role is *not* limited to facilitating exchange only and thus money is *not* held just for temporary convenience. Rather, 'money plays a part of its own and affects motives and decisions and is, in short, one of the operative factors in the situation, so that the course of events cannot be predicted, either in the long period or in the short, without a knowledge of the behaviour of money between the first state and the last' (Keynes, 1973, pp.408–9). The process of production 'will not be started up, unless the money proceeds expected from the sale of the output are at least equal to the money costs which could be avoided by not starting up the process' (Keynes, 1979, p.78).

The objective of an entrepreneur in starting up production, then, is nothing but to end up with more money than s/he started with. As will be discussed below, and in more detail in the next section, some of Keynes's thoughts on the inherent instability of a monetary economy are very similar to Marx's. Keynes himself also acknowledges the similarity of his conclusion to 'a pregnant observation made by Karl Marx' (Keynes, 1979, p.81). Keynes agrees with Marx that the concept of exchanging a commodity (C) for money (M) in order to obtain another commodity, i.e., C-M-C, is not 'the nature of production in the actual world' (ibid.). Rather, this concept may reflect 'the standpoint of the private consumer' (ibid.). For Keynes, this type of economic organisation at most can be likened to a *neutral entrepreneur economy* (Rotheim, 1981, p.576). The production process in an entrepreneur economy then requires 'the attitude of *business*, which is a case of M-C-M', i.e., of parting with money for commodity (or effort) in order to obtain more money' (Keynes, 1979, p.81, emphasis in the original).

By detailing the essential features of the entrepreneur economy, Keynes lays the foundations to show how effective demand can fluctuate in the real world where some part of the current income may not necessarily be spent and thus a part of the production may remain unsold. In the real world, an entrepreneur is not interested in 'the amount of the product, but in the amount of *money* which will fall to his share' (ibid., p.82, emphasis in the original). Thus, the instability of effective demand in capitalist economies is a monetary phenomenon. 'Money', emphasises Keynes, 'is *par excellence* the means of remuneration in an entrepreneur economy which lends itself to fluctuations in effective demand' (Keynes, 1979, p.86, emphasis in the original).

Stabilising an unstable economy: Marx and Lenin on money, banks and planning

As is the case with the works of many great economists, Marx's writings are interpreted in different ways. One interpretation of Marx that dominated in the FSU was that of a class struggle. The underlying assumption of this interpretation then was that a capitalist economy was not capable of achieving social justice objectives such as full employment, equal distribution of income and opportunities, etc. The organisational structure and design of a capitalist mode of production were blamed for such a failure. Marx's teachings,

especially the Soviet interpretation of them, implied that direct human interference in terms of planning all economic decisions in advance was necessary to ensure the stability of the system. The construction of a centrally planned economy in the FSU was, by and large, a fruit of this line of reasoning (Ellman, 1974; Temkin, 1994, pp.197–8, 1998).

Marx believed that one of the reasons why a capitalist economy was inherently unstable was the anarchy of production. In particular, capitalist overproduction or crisis was seen as a result of a class struggle associated with the lack of organisation and planning of the economic process. As an alternative to this economy, Marx advocated a communist economy, in which the anarchy of production would be replaced by central planning so that it would become an organised and orderly system (Temkin, 1998, p.308).³ The market exchange system of a capitalist economy would be replaced by production for use, not for exchange (Bukharin and Preobrazhensky, 1994). The centralisation of the entire process of production, in turn, would imply elimination of the market from the system.

Another important aspect of Marx's analysis of a capitalist economy was the role of money in the economic process. In the writings of the classical economists prior to Marx, money was seen as a neutral link, merely connecting transactions of purchase and sale. All transactions were 'spot transactions, taking place – somehow! – simultaneously' (Hicks, 1989, p.47). Money was seen only as a means of facilitating exchange; as was noted by Ricardo: 'Productions are always bought by productions, or by services; money is only the medium by which the exchange is effected' (quoted in Sardonì, 1987, p.16).

Marx did not accept this argument. Referring to Ricardo's above-mentioned statement, Marx said that it was 'the childish babbling' of Say 'but unworthy of Ricardo' (quoted in Sweezy, 1970, p.137). Marx disagreed with this point on the following grounds. Commodities are directly exchanged for commodities, i.e., C-C, in a simple barter economy. Here, a person who is selling his commodity is concurrently involved in buying somebody else's commodity. That is to say, acts of purchase and sale are necessarily inseparable, which in turn implies that supply creates its own demand. Hence, theoretically, a barter economy is an ideal case for Say's Law to apply.

Marx argued that in a commodity production economy, where money is employed to effect exchanges, Say's Law does not necessarily hold true. To explain this process, Marx uses his well-known metamorphosis 'C-M-C', where C stands for commodity and M stands for money. He shows that when money is used in an exchange transaction, the acts of sale and purchase for an individual trader do not necessarily have to be simultaneous. When the trader sells his commodity for money, money enables him to postpone the act of a new purchase. In Marx's own words 'The purchaser has the commodity, the seller has the money.... No one can sell unless someone purchases. But no one is forthwith bound to purchase because he has just sold' (quoted in De Brunhoff, 1976, p.42). Hence, money separates the transaction in time and space, i.e., C-M and M-C are separate transactions now. As a result, when

hoarded, money holds effective demand back and thus creates a possibility for general overproduction and thus crisis (De Brunhoff, 1976; Sardoni, 1987; Sweezy, 1970).

In reality, however, the nature of a commodity production economy dictates that the exchange values of C at the beginning and C at the end are identical. That is to say in this economy production is for consumption, implying the crisis of overproduction is unlikely to occur.

The conclusion is different in the case of a capitalist economy, in which the driving force of production is profit. In a capitalist economy, the dominant form of circulation is in the form of $M-C-M'$. Unless M' is expected to be greater than M , capitalists do not start up their businesses. It is more likely that overproduction and thus crisis can occur in this economy. If capitalists think that the rate of profit is not high enough to lure them to throw their capital into circulation, they may decide to hoard. As a result, some of the goods already produced will not be sold due to the lack of effective demand.

Hence, similar to Keynes, Marx was also well aware that the mere existence of money in a capitalist economy would make crises possible (De Brunhoff, 1976, p.40) and the contradiction of capitalist production could turn this possibility into reality (Geraschenko, 1970, p.117). Despite the methodological differences in their approaches (Sardoni, 1987), Marx's analysis of a capitalist economy and his rejection of Say's Law is similar to Keynes's analysis and his rejection of the same law. In this sense, there are many similarities between Keynes's co-operative, neutral entrepreneur, and entrepreneur economies and Marx's barter, commodity production and capitalist economies.

Marx also believed that money was a means by which the bourgeois class thrived by parasitically sucking the 'blood' of the working class. Since money served as a means of accumulation of capital, it was seen as a necessary evil and therefore relevant only to a capitalistic mode of production. Therefore, in a communistic society, Marx had in mind, there would be no room left for capitalist money (Marx, 1893: Ch.18). Lenin readily borrowed the idea of a moneyless society from Marx (see, for example, Lenin, 1938, p.96). An economy advocated by Marx and Lenin, therefore, had to be free from any of the instability that was seen as an inherent feature of a capitalist system. In a capitalist economy, decision-making is carried out in a decentralised way by millions of individual private proprietors. It is a free market response to uncertainty (which in itself is an inherent feature of a decentralised capitalist economy) that gives money its peculiarity and thus non-neutrality in the economic process (Rousseas, 1992).

In theory, the centralisation of the entire process of production and distribution would imply an elimination of a capitalist uncertainty, which is embedded in the very structure of a decentralised capitalist economy. Moreover, in an economy where the entire process of production and distribution is centrally planned, there is no need for a capitalist money anyway. In this sense, central planning can be seen as a socialist response to uncertainty.

Therefore, it is not surprising to see the rejection of money in a centrally planned socialist economy.

Essentially, in a socialist economy, central planning takes over the role of money to deal with uncertainty in the economic process. Thus, in principle, by means of planning the process of production and distribution, fluctuations in effective demand can be removed and the problem of chronic unemployment can be eliminated. Hence, Marx and Lenin advocated an economic system where the process of production and distribution would be planned. They also argued that in an economy organised in that way there would be no need for money, except perhaps for its use as a means of exchange.

Disappearance of money and banks during the early years of the Soviet Union

In this section, we will examine how practical difficulties associated with the implementation of Marx and Lenin's theoretical ideas resulted in two contrasting approaches towards money and banks during the periods of War Communism and the New Economic Policy.

War communism

War communism is 'the name commonly given to the period of extreme communization' (Nove, 1992, p.39). War Communism, full of revolutionary romanticism, lasted for only about three years until 1921. War Communism also gave the Bolsheviks a unique chance to implement Marx and Lenin's ideas of a communist economy. The Bolsheviks, led by Lenin, were keen to implement these ideas after the 1917 revolution. Lenin, for example, noted that 'The R.C.P. [Russian Communist Party] will strive as speedily as possible to introduce the most radical measures to pave the way for the abolishing of money' (quoted in Temkin, 1998, p.313).

Indeed, the idea of abolishing money was so widespread in the early years of the Bolshevik revolution that it was treated as an unquestionable attribute of an economy the Bolsheviks wanted to build. Summarising the debate on this issue, Yurovsky (1994) notes that this matter was not simply an intellectual debate among curious communist economists; it certainly had practical implications as the Bolsheviks set up several special study groups to investigate practical problems associated with the establishment of a moneyless economy.

Lenin also understood banks' role to be of high importance in the successful completion of the revolution and the regulation of economic life. In line with the Marxist teachings, he maintained that banks had to be nationalised. On the eve of the Bolshevik revolution in 1917, he noted that, 'a single state bank, the largest of the large, with branches in every parish and factory would already mean nine tenths of the socialistic apparatus' (Lenin, 1938, p.96). However, in an economy advocated by Lenin, the functions of banks

would only be limited to accounting and control. Although banks would become an important mechanism of the system, their role would be passive and accommodative.

Unsurprisingly, within the first few days of the revolution, the Bolshevik government sent the Red Guards to occupy *Gosbank* (the State Bank). By November 1917, all private banks were closed, the management of *Gosbank* was replaced with soviet commissars and further steps were taken towards the unification of the banking system into a single body. Within a few months, *Gosbank* was renamed *Narodny Bank* (the People's Bank) and the whole banking system was declared to be a state monopoly. By the end of 1917, all the major banks were liquidated and merged with *Narodny Bank*.

The centralisation of the banking system in a single body gave the young Soviet government a great advantage in terms of manipulating the entire financial system according to its needs. At the start of its activity, *Narodny Bank* served as the clearing centre of the economy; it was also in charge of money-issuing. In addition, the bank was engaged in providing short-term loans to the economy too. However, the bank's lending activity lost its importance after it was decided that all short- and long-term financing decisions would be undertaken through the State Budget. The centralisation of financial decisions in this way by the Commissariat of Finance was a prelude to giving a crucial importance to the physical distribution of goods, which inevitably downgraded the role of money and banks in the economic process.

With the completion of the nationalisation of the industrial sector, the Supreme Council for the National Economy (VSNK) became responsible for organising the production and distribution of industrial products. In other words, VSNK effectively became an official central body in charge of clearing moneyless exchange transactions in the socialised sector of the economy, which at this stage mainly consisted of the industrial sector.

As a result of these policies, not only the concepts of loss and profit but also the notion of market-determined prices became irrelevant (Kuschpeta, 1978, p.27). Money and credit ceased to play a role in inter-enterprise relations, and taxes and wages were also paid in kind. Economic relations among state enterprises were brought about predominantly in physical terms. Starting from 1919, money accounts of the enterprises ceased to be important too. The accounting of the movement of goods from an enterprise to an enterprise in their various stages of manufacture, and their final transfer to individual consumers, was done in physical terms (Davies, 1958, pp. 38–9). Towards the end of 1920, deliberate steps were made to abolish monetary charges for the use of a number of services: postal, telegraph and telephone facilities; water and electricity supply; housing accommodation in municipal dwellings; railway travel; supply of basic food rations, etc. (Dobb, 1966, p.106; Geraschenko, 1970, p.32). By 1921, 93% of all wages were paid in kind, compared with 7% in money (Geraschenko, 1970, p.31; Kuschpeta, 1978, p.28).

As the role of monetary exchanges steadily declined, so did the importance of the *Narodny Bank* in serving the interests of the Soviet government.

Narodny Bank became only a *de facto* central clearing office of the economy. As a result, on 19 January 1920, *Narodny Bank* 'was liquidated and its assets and liabilities were transferred to the Central Budgeting and Accounting Department of the Commissariat of Finance' (Baykov, 1946, p.35). The People's Commissar of Finance explained this by saying 'finance should not exist in a socialist community' (Garvy, 1977, p.26).

Hence, within the first few years of ruling the country, the Bolsheviks largely demonetised the economy, put an end to the banking system, and effectively transformed the economy from a monetary economy into a barter one (or from an entrepreneur economy to a co-operative economy, to use Keynes's analogy).

The experiment, however, turned out to be a disaster. When the civil war finally ended in 1920, the total production of the country was well below its pre-war 1913 level. By the end of 1920, the industrial output was equal to only one-fifth, agricultural production to almost two-thirds, and transportation to a little over one-fifth of their pre-war levels (Gregory and Stuart, 1998, p.48). Along with the civil war, the attempts to abolish money and banks from the economic process contributed significantly to the collapse of the economy (Garvy, 1977). As the political situation deteriorated and got unfavourable for the new government, Lenin assessed the situation quickly and drastically changed the course of events by announcing the New Economic Policy (NEP) in 1921.

Money and banks in the period of NEP

NEP was to develop a mixed economy with the elements of state socialism and a free market, sometimes referred to as 'state capitalism'. Private entities were permitted to engage in both wholesale and retail trade. In the agricultural sector, the system of compulsory requisitioning was replaced with an in-kind food tax. In the industrial sector, small-scale production entities were transferred to private hands.⁴ The government kept control over the 'commanding heights' of the economy, which included military production, metallurgy, transportation, foreign trade, and banking. Thus, the state control over the production and distribution of goods among different sectors of the economy, except for the 'commanding heights', was partially replaced by free market forces. As a pragmatic leader, Lenin also reconsidered his call to abolish money by noting: 'the immediate abolition of money is not possible. In order to abolish money, it is necessary to organise distribution of commodities for hundreds of millions of people. It is the work of many years' (quoted in Geraschenko, 1970, p.32).⁵

The restoration of property rights and re-introduction of monetary exchange helped with the revival of trade. Subsequently, the need for banking services was reconsidered too. *Gosbank* was re-established in October 1921 and began its operations in November 1921. It was re-established 'to assist the development of industry, agriculture and trade as well as to concentrate monetary transactions and apply measures aimed at the establishment of a sound

monetary circulation' (Baykov, 1946, p.83). *Gosbank* was allowed to carry out standard banking operations, including extending loans not only to the state but also to private and co-operative entities. In October 1922, *Gosbank* was also awarded the right to issue the new currency – *chervonets* (equal to ten pre-war golden roubles). In order to promote confidence in the new currency, the government decided that *chervonets* would be backed by gold and foreign currency. A number of other specialised banks and credit institutions were also created in 1922. In short, during the first three years of the NEP, a varied and widespread system of banking and credit institutions emerged. By the end of 1923, there were more than 150 commercial banks and credit societies with over 750 branches in the country.

NEP also brought changes to the state-owned industrial sector too. The basic market principles of profit and loss were reintroduced. The relationships between enterprises and central regulating state bodies were reorganised. Enterprises were given financial autonomy to some considerable degree and workers were again paid money wages.

Hence, NEP was developed to revive the economy torn apart by both the civil war as well as the radical economic changes introduced by the Bolsheviks during the period of War Communism. In many sectors of the economy, private ownership of production was re-introduced. Those enterprises which were kept under the direct control of the government were also encouraged to operate their business strictly under the principles of profit and loss. As a result, trade revived, which in turn necessitated the restoration of money and banks. These reforms restored confidence in market exchange and helped the economy to grow. However, the NEP was only a 'temporary retreat' from comprehensive central planning. Towards the end of the 1920s, NEP was replaced by central planning, which focused industrialisation of the economy and the collectivisation of agriculture.

Conclusion

Early experiments in the FSU to remove money and banks from the economic process proved to be unimaginably difficult and hence unfeasible, resulting in massively reduced output. As a result, money and banks were reintroduced to the system during NEP. Later, Stalin extended the lifespan of money by saying that money would remain in a socialist economy until full communism was reached. After Stalin, the issue of eliminating money from the economic system was never discussed seriously again. The matter was left to be resolved in due course. A later generation of soviet economists clarified that the functions of money in the soviet economy were quite different from those of a capitalist money (Lavrushin, 1984, 1991; Shenger, 1983). The functions of money were no longer of 'capital' but rather that of a planned and managed economy (Kuschpeta, 1978, p.13).

Although nominally there were such notions of money and banks in the traditional planned economy of the FSU, they were nothing like the money and

banks of a capitalist system. The soviet planners always argued that perpetual full employment was achievable only under central planning. In many ways, the working of the traditional soviet economy can be likened to Keynes's co-operative economy. The means of production belongs to the proletarian government and thus output is generated by 'collective efforts'. Because money per se was not employed in this economy, there could be no room for fluctuations in effective demand and no room for chronic, as distinct from temporary, unemployment. The role of the planning authorities in the process of production and redistribution could be seen such that continuous full employment was attainable unless authorities made some 'stupid miscalculations'.

Notes

- 1 Chick (2003) notes that using the term non-dualism would again represent dualism.
- 2 According to Rotheim (1981, p.572) Keynes made changes to his work taking into account the comments of his critics. However, Torr (1988, p.26) suggests that Keynes might have been afraid of being accused of plagiarism because D. H. Robertson had already been working in a similar direction.
- 3 Temkin (1998, p.308) suggests that actually Marx borrowed these ideas from Saint-Simon.
- 4 By the government decrees of 17 May and 10 December 1921 all enterprises with less than 20 workers reverted to their previous owners or were leased to new ones.
- 5 Author's translation from the original source in Russian.

References

- Baykov, A. (1946). *The Development of the Soviet Economic System*. Cambridge: Cambridge University Press.
- Bukharin, N. I. and E. A. Preobrazhensky (1994). The ABC of Communism. In: Nove, A. and Thatcher, I. D. (Eds.), *Markets and Socialism*. pp. 82–13. Aldershot: Edward Elgar.
- Chick, V. (1983). *Macroeconomics after Keynes: A Reconsideration of the General Theory*. Oxford: Phillip Allan.
- Chick, V. (2003). Theory, Method and Mode of Thought in Keynes's General Theory. *Journal of Economic Methodology*. 10(3), pp. 307–27.
- Cottrell, A. (1994). Post Keynesian Monetary Economics. *Cambridge Journal of Economics*. 18(6), pp. 587–605.
- Davies, R. W. (1958). *The Development of the Soviet Budgetary System*. Cambridge: Cambridge University Press.
- De Brunhoff, S. (1976) *Marx on Money*. New York: Urizen Books.
- Dillard, D. D. (1966). *The Economics of John Maynard Keynes: The Theory of Monetary Economy*. London: Butler and Tanner.
- Dobb, M. (1966). *Soviet Economic Development since 1917*. London: Routledge & Kegan Paul.
- Dow, S. C. (1993). *Money and the Economic Process*. Aldershot: Edward Elgar.
- Dow, S. C. (1996). *The Methodology of Macroeconomic Thought: A Conceptual Analysis of Schools of Thoughts in Economics*. Cheltenham: Edward Elgar.

- Dow, S. C. (2012). Babylonian Mode of Thought. In: King, J. (Ed.), *The Elgar Companion to Post Keynesian Economics*. pp. 15–19. Cheltenham: Edward Elgar.
- Dow, S. C. and P. E. Earl (1982). *Money Matters. A Keynesian Approach to Monetary Economics*. Oxford: Martin Robertson.
- Drake, P. J. (1980). *Money, Finance and Development*. Baltimore, MD: Martin Robertson.
- Ellman, M. (1974). Consistency of Soviet Plans. In: Bornstein, M. and Fusfeld, D. R. (Eds.), *The Soviet Economy: A Book of Readings*. pp. 62–83. Homewood, IL: Richard D. Irwin.
- Garvy, G. (1977). *Money, Financial Flows, and Credit in the Soviet Union*. Cambridge, MA: Ballinger Publishing Company.
- Geraschenko, V. S. (1970) *Deneznoe Obrashenie i Kredit SSSR [Money Circulation and Credit in the USSR]*. Moscow: Finansi.
- Gregory, P. R. and Stuart, R. C. (1998) *Russian and Soviet Economic Performance and Structure*. Sixth edition. Reading, MA: Addison-Wesley.
- Hicks, J. (1989). *A Market Theory of Money*. Oxford: Clarendon Press.
- Keynes, J. M. (1937). The General Theory of Employment. *Quarterly Journal of Economics*. 51(2), pp. 209–23.
- Keynes, J. M. (1970). *The General Theory of Employment, Interest and Money*. London: Macmillan St Martin's Press.
- Keynes, J. M. (1973). *The General Theory and After. Collected Writings of John Maynard Keynes*. London: Macmillan.
- Keynes, J. M. (1979). *The General Theory and After: A Supplement. Collected Writings of John Maynard Keynes*. Vol. XXIX. London: Macmillan.
- Knight, F. (1935). *Risk, Uncertainty and Profit*. London: Percy Lund.
- Kuschpeta, O. (1978). *The Banking and Credit System of the USSR*. Leiden: Martinus Nijhoff Social Sciences Division.
- Lavrushin, O. I. (1984). *Den'gi i Kredit v Sotsialisticheskom Obshestve*. [Money and Credit in the Socialist Society]. Moscow: Finansi i Statistika.
- Lavrushin, O. I. (1991) *Organizatsiya i planirovaniye kredita*. [Organisation and Planning of Credit]. Moscow: Finansi i Statistika
- Lenin, V. (1938) *Extracts from Lenin's The State and Revolution (August-September 1917)*. Appendix III of Critique of the Gotha Programme: With Appendices by Marx, Engels and Lenin. London: Lawrence & Wishart.
- Marx, K. (1893). *Capital*. Volume II, Chapter 18. From revised second edition in 1893. [Online] Available: <http://www.marxists.org/archive/marx/works/1885-c2/index.htm> [Accessed 26 March 2021].
- Nove, A. (1992). *An Economic History of the USSR: 1917–1991*. London: Penguin Books.
- Rotheim, R. J. (1981). Keynes's Monetary Theory of Value. *Journal of Post Keynesian Economics*. 3, pp. 568–85.
- Rousseas, S. (1992). *Post Keynesian Monetary Economics*. Armonk: M. E. Sharpe.
- Sardoni, C. (1987). *Marx and Keynes on Economic Recession: The Theory of Unemployment and Effective Demand*. Brighton: Wheatsheaf.
- Shenger, Y. (1983). *Problemi Deneznogo Obrasheniya i Kredita v Sotsialisticheskom Obshestve [Problems of Money Circulation and Credit in the Socialist Society]*. Tashkent: Fan.
- Sweezy, P. M. (1970). *The Theory of Capitalist Development*. London: Modern Reader Paperbacks.
- Temkin, G. (1994). On Economic Reform in Socialist Countries: The Debate on Economic Calculation Under Socialism Revisited. In: Nove, A. and Thatcher, I. D. (Eds.), *Markets and Socialism*. pp. 299–324. Aldershot: Edward Elgar.

- Temkin, G. (1998). Karl Marx and the Economics of Communism: Anniversary Recollections. *Communist and Post-Communist Studies*, 31(4), pp. 303–28.
- Torr, C. S. W. (1980). The Distinction between an Entrepreneur Economy and a Co-operative Economy. *The South African Journal of Economics*, 48(4), pp. 429–34.
- Torr, C. S. W. (1988). *Equilibrium, Expectations and Information*. Cambridge: Polity Press.
- Yurovsky, L. N. (1994). Problems of a Moneyless Economy. In: Nove, A. and Thatcher, I. D. (Eds.), *Markets and Socialism*, pp. 63–87. Aldershot: Edward Elgar.

14 The practicality of pluralism in the economic analysis of the least developed countries

Daniel Gay

Introduction

Sheila's contributions to economic methodology originate with her seminal *The Methodology of Macroeconomic Thought* (1996), which for the first time systematically compared the methodological approaches of various heterodox and mainstream positions, showing among other things that methodology had a clear impact on not only the choice of methods used, but on policy conclusions. This persuasive and practical defence of pluralism – in contrast to the monism of the mainstream – led to a series of works on pluralism in economics (for example, Dow 2002, 2003, 2004, 2012a, 2012b) which emphasised, in common with various other post-Keynesian approaches, the importance of non-ergodic uncertainty, open systems and the need to accommodate unknowability in analysis. Pluralism is understood in terms of categories, connections and absence of connections, which can be applied at a variety of levels. It is thus contrasted with Harcourt's (1997) 'horses for courses' approach, in that rather than 'anything goes', a set range of possibilities is viable at any one time, delimited by the possibilities prescribed in particular economic methodologies.

One advantage of Sheila's approach is that applies to the real world rather than being only philosophical or academic. Pinning all hopes to a single school of thought to the exclusion of others is unlikely to identify all solutions. Accuracy and progress are best served by allowing for a range of possibilities, provisionally constrained by sensible methodological principles. This kind of pluralism is thus largely a realist endeavour. But it is also a moral stance, allowing for the more realistic position that human knowledge might be fallible; that no single school of thought has a monopoly on truth; that the subjects of economic policy deserve the benefit of a variety of methods; and that the mass immiseration manifested in global poverty may merit unconventional answers. Sheila was also prophetic. The current moment of disjuncture and global discord is one in which certainties about 'expert' mechanistic solutions are coming under question, particularly those of mainstream economists. This theme was revisited in Dow (2017).

The need for pluralism has special relevance in development economics (Dow 2002, Dow and Dow 2005), which is characterised by a singularity of approach and corresponding methods, particularly that of formalism. Positivism is at least as pervasive in development economics as elsewhere in the discipline. For instance, the most prominent mainstream approach to development as practiced in developing countries over the 1980s into the 2000s, the truth of the Washington Consensus, was described as: ‘the proof may not be quite as conclusive as proof that the earth is not flat... But it is sufficiently well-established as to give sensible people better things to do than to challenge its veracity’ (Williamson 1993).

This monism of approach continues to be reflected in mainstream economics journals. A sample of 76,000 papers published between 1985 and 2005 shows that more papers were written about the United States than on Europe, Asia, Latin America, the Middle East and Africa combined. The *American Economic Review* published one paper on India every two years (The Economist 2014). It is imagined that the findings from the predominantly neoclassical, formal methods of United States economics departments apply everywhere, and that there is little need to examine them in context because the findings are axiomatically true.

Even the recent developments within the discipline that react to this methodological monism rely on a narrow range of techniques. Randomised controlled trials (RCTs) have become more prominent in recent years. Several authors have argued that RCTs in economics are neoclassical, even neoliberal (Abdelghafour 2017, Servet and Tinel 2020). Others have criticised their efficacy, replicability and range of ambition (Deaton and Cartwright 2018). Their narrowness of method allows for only a small range of possible interventions. Macro tools such as interest or exchange rates, or state versus private ownership, are off the agenda because they are almost impossible to study via experimentation.

Yet development economics, which deals with the broad multiplicity and variety of human activity across time and place, surely requires pluralism and macro tools. If all kinds of economic thinking (and beyond) were ever to be needed, it would most likely be in the field of development economics and policy.

The least developed countries

The least developed countries (LDCs) are a group defined by the United Nations as having low incomes and confronting severe structural impediments to sustainable development. The LDCs, numbering 46 at the time of writing and encompassing a billion people, are considered highly vulnerable to economic and environmental shocks, with low levels of human assets. A committee of development specialists, the UN Committee for Development Policy, meets annually to monitor and assess the group, every three years recommending countries for graduation or inclusion according to three

criteria: a per capita income threshold, a human assets index and an economic and environmental vulnerability index.

The LDC grouping carries the advantage that it is the only official country category with recognition in UN and multilateral legal texts according to objective criteria. For instance, the World Trade Organisation agreements pledge ‘special and differential treatment’ for LDCs; official donors pledged to commit a certain proportion of Official Development Assistance (ODA) to the group; dedicated climate financing is available; and trading partners offer preferences such as the European Union’s duty-free, quota-free market access scheme. Although donor countries have consistently failed to reach ODA targets (UNCTAD 2019), and these international support measures are either contested or do not go far enough (Gay 2020), they are possible because the grouping is officially recognised in the UN system. No other country category has the same legal bearing.

The group is large and diverse, and the specific challenges facing different LDCs, located in Asia, Africa and the South Pacific (one, Haiti, is in the Caribbean), are often overlooked. The Pacific LDCs, for example, are small, highly-aid dependent, services-orientated economies with large state sectors, featuring extremes of distance and dispersion. All but two of the nine much bigger Asian LDCs have performed well on the LDC development criteria, driven by manufacturing and trade, and are likely to leave the category in coming years. The economies of many of the 33 sub-Saharan African LDCs are often commodity-dependent, less connected to world markets, receive less aid per capita, face difficult and uncertain national political situations and in some cases humanitarian crises. Country-specific analysis of these mostly smaller and more peripheral countries is typically scarce. Analysis often comes from large ‘emerging’ or higher-income country contexts.

International institutions and, often, governments, continue to operate using a neoclassical approach which is positivist, universalist, essentialist and determinist, the ‘closed systems’ nature of which has been well discussed in Chick and Dow (2005) and elsewhere. The most recent techniques in development economics, such as RCTs, also use a closed systems strategy. This methodological approach underlies the use of techniques like computable general equilibrium (CGE), which uses a high level of abstraction along with formal modelling (Dow 2021) to determine the supposed impact of policy interventions in developing countries. CGE is still used widely in LDCs (Arenas et al. 2018).

The Washington Consensus and its revised versions are also still practiced in LDCs, despite criticisms in recent decades. It is quite normal for international development institutions, donor partners and governments to enact neoliberal policy reform programmes which broadly comply with the Washington Consensus, including current and capital account liberalisation, privatisation or corporatisation, and fiscal restraint. Despite well-publicised countercurrents emerging within the research departments of institutions like the International Monetary Fund (e.g., Ostry et al. 2016) in recent years,

the conditionalities associated with lending activities remain more or less the same.

If the mainstream neoliberal approach ‘worked’ according to its own criteria, perhaps it would be possible to conclude that methodological monism was appropriate, that the answers have been found. The results, however, are disappointing. From 1971 to the early 2000s, the LDC category doubled in size, with many more countries joining rather than leaving (although in some cases for statistical rather than economic reasons). Economic output in Sub-Saharan Africa fell during the heyday of structural adjustment in the 1980s. By 2022, only six LDCs had graduated from the category. While some LDCs were doing well until being hit by Covid-19, real income growth was disappointing. Most LDCs are making no progress on the economic vulnerability criteria used by the UN, and the vulnerability scores of 19 LDCs deteriorated between the 2012 and 2018 reviews. As a result of Covid-19, many LDCs were in states of severe financial stress, raising the all-too-familiar scenarios of sovereign debt default, economic decline and rising poverty. UNCTAD (2020) estimated that as a result of Covid, up to 130 million people worldwide would fall back below the World Bank extreme poverty threshold of US\$1.90 per day on a purchasing power parity basis during 2020 and 2021. Valensisi (2020) found that nearly half of the newly extreme poor would be in sub-Saharan Africa. If nothing else, these failures suggest that other schools of thought – particularly those which discuss the systemic nature of the global economy and which are concerned with resilience to international crises – might have something to contribute.

Incipient signs of progress are emerging. The so-called ‘empirical turn’ in economics is an advance on the theory-bound 1980s and 1990s. Despite its formalism and reliance on data that often does not exist or is unreliable in many countries on the global periphery, it could at least pave the way for more context-specific development analyses. A ‘decolonisation’ movement has yielded new ways of understanding and doing development economics. The rise of southern lending institutions like the Asian Infrastructure Investment Bank should in theory generate fresh impetus. Chinese aid and the ‘Belt and Road’ initiative brings with it a different vision; one which acknowledges the importance of infrastructure and the role of the state.

Breaking the ice

It is not necessarily just the policy substance of mainstream approaches and programmes that is the subject of pluralists’ criticisms, nor is it only the content of conditionalities. Alternative monisms encounter the same drawbacks, namely that they miss out a range of possibilities and do not consider context, remaining insensitive to the heterogeneity of human experience. It would be no good replacing neoliberalism with another positivist orthodoxy. This was a point emphasised by Hirschman, who pointed to the success of Keynes

in ‘breaking the ice of mono-economics’ by showing that different kinds of economics applied to developing and developed countries, and between developing countries (Hirschman 1980). Kalecki was similarly pluralistic, acknowledging that a single ‘answer’ was unlikely ever to be possible and that a variety of methods was usually relevant, including political analysis (Kalecki 1976). Pluralism is in this sense a response to Knightian and Keynesian uncertainty. In many areas, we simply do not know.

To explore what schools of thought say about development, and what this might imply in different contexts, the methodological stances and policy conclusions of several non-mainstream schools of thought – structuralism and neo-structuralism; dependency theories; feminism and neoliberalism – are considered below in the context of case studies on Myanmar and Solomon Islands. The influence of Keynesian and post-Keynesian approaches implicitly appears in structuralism, neo-structuralism, dependency and feminism.

No school of thought sits in isolation. Dependency theory has recently been characterised as a series of research programmes containing common strands, rather than a school of thought or a single approach (Kvangraven 2020), and there are significant overlaps with structuralism and Marxism. Some feminists are Marxists and/or use features of structuralist thought, while some repudiate both.

Many schools of thought and approaches consider different dimensions to be important, and as such are difficult to compare. Marxists, for instance, have less to say about the precise content of policies because the specifics are less relevant than conditions of production and exchange, and many Marxists consider reform to have little impact on the underlying dynamics of capitalism. Some dependency theorists are more concerned with the relationship between all peripheral countries and the core than with policy in a particular country. Exchange rates and monetary policy tend to be secondary priorities. Neoliberals similarly often do not give a strong role to government policy in the belief that interference with market outcomes worsens welfare. Neoliberals tend not to think of economies having a ‘structure’ as such, capable of alteration through government strategy. It is thus difficult to contrast the approach to structure with that of the structuralists and neo-structuralists.

Another form of unavoidable bias comes with the recognition that LDCs are by definition structurally constrained and vulnerable, so it is likely that schools of thought that deal with these issues will be more relevant, namely, structuralism and feminism – which recognised environmental breakdown earlier than others and tends to have more to say about its consequences.

Yet acknowledging the existence of different ideal types, and comparing and contrasting the advantages and disadvantages of each, can lead to new syntheses. ‘Creation ... is the re-mixing of many different known components, coupled with the addition of some new elements and others which had been forgotten’ (French-Davis 1988, 38). This, incidentally, fits with the dialectical approach proposed in Dow (2001).

Case studies

What might pluralism imply in practice? Here, the cases of Myanmar and Solomon Islands are sketched out very briefly, showing how certain alternative schools of thought might have led to different methodological and policy approaches in each country.

Myanmar

With a population of 54.8 million, Myanmar is the fifth-largest LDC. Isolated under a military dictatorship since 1962, Myanmar began to democratise and open up to trade and investment in 2011. Immediately afterwards the economy grew quickly, as would be expected for a large country rich in natural resources and previously closed to the outside world. Foreign direct investment flooded in, mostly in oil, gas and power, peaking at over US\$9 billion in 2015. International sanctions were removed and doing business in Myanmar became more acceptable. The investment environment was liberalised.

Structural transformation occurred more quickly than the LDC average although more slowly than other East Asian neighbours during their most dynamic years. The share of industry in gross domestic product grew from 31% in 2010 to 39% in 2020, while the contribution of agriculture diminished from 33% to 22%. Large volumes of incoming aid also had a macroeconomic impact. During the period health and education improved and economic vulnerability declined. Myanmar could have become eligible to leave the LDC category as soon as 2024 although the decision was delayed in 2021.

Following several years of high economic growth from 2011 onwards, however, growth began to decline. A fall in incoming investment around 2015 was perhaps inevitable as the early opportunities dried up. Tax revenue generation stagnated; the rate of domestic investment fell; and exports began to grow less quickly. Inequality remained high – many of the aggregate gains in economic output accrued to a select, often urban, elite – and in 2017 the rate of extreme poverty was estimated at one in four. Women are more vulnerable and have benefited the least from the reform process. Myanmar is classified as one of the countries most vulnerable to climate breakdown.

The overall economic programme can be said to be largely neoliberal in orientation, including corporatisation, privatisation, liberalisation of the current and capital accounts and fiscal conservatism. A series of new laws from 2011 onwards opened the economy to investment and trade, accompanied by a US\$6 billion debt relief programme in 2013. The 2018 Myanmar Sustainable Development Plan was typical in its emphasis on austerity and market-orientated reforms, and its absence of active measures for social support or gender equality (Government of Myanmar 2018).

Like in most newly-democratising countries, economic policy advice was considered a formal, deductive and mono-disciplinary matter, based on the

progressive accumulation of knowledge using neutral, scientific techniques. The main international entities engaging with the country after 2011 recommended a similar combination of policies as in other countries. Liberalisation was considered most likely to lead to rapid and spontaneous structural change.

Following a landslide victory for the National League for Democracy in the seats that the party was permitted to contest at the December 2020 general election, the army disputed the results, pointing to unproven electoral interference. This was in a context where Covid-19 had devastated the economy as exports collapsed, especially in the emerging garment sector (where the workforce is mostly female); remittances fell; tourism almost ceased and incoming investment stalled. In February 2021 (days after the IMF supplied an unconditional US\$39 million grant to deal with the impact of Covid-19) the military overthrew the government in a coup d'état.

The realities of international political economy made Myanmar inevitably predisposed toward neoliberal-type policies (and confirming declarations of the death of the Washington Consensus premature). But a narrowly focussed, resource-seeking strategy based on attracting FDI founded on standard neo-classical-type economics that assumed rapid adjustment in a homogeneous economy was not conducive to long-term economic growth. Myanmar was, and remains, extremely fragmented and fractious. Some regions do not consider themselves part of the nation. Fiscal austerity ultimately weakened the capacity of the state to enact policy, in turn rendering the economy more vulnerable to international crises and national political instability.

An approach that derived insight from other more inclusive and expansionary schools of thought such as feminism, structuralism and dependency theories would have had practical benefits, including sustainable growth, longer-term resilience, and more widespread distribution of the benefits of economic advance. A more pluralistic approach would have allowed for fallibility in policy advice, context-specificity and greater disaggregation of policy impacts according to social and regional groups and gender.

Structuralists and neo-structuralists (e.g., Ffrench-Davis 1988, Hirschman 1958, 1980, Kalecki 1976, Prebisch 1950, Singer 1950) have tended to suggest that answers may vary according to time and prevailing institutional structure, implying that a much more creative and tailored economic policy approach should have been possible. Conditional findings may be dependent on context, and various methods are used. Contrary to the methodological approach implicit in the mainstream, it is accepted that adjustments are slow and may produce multiple disequilibria in a heterogeneous national economy.

The structuralist insight that withdrawal of the state in investment programmes does not mean that the private sector fills the gap, may have ensured greater awareness of the need for the direction of investment towards the productive sectors as well as industrial policies. Selective and sequenced tariff reductions, with measures to promote processing, could have allowed greater trade diversification and ultimately resilience. The imposition of a progressive tax system might have reduced inequality, including gender imbalances.

The structuralist allowance for the regulation of capital movements might have permitted selectivity towards foreign investment, promoting technological inputs, diversification away from resources, and greater long-term sustainability.

Incoming investment should have been better integrated with emerging local small and medium-sized industries, possibly creating jobs and opportunities for growth. Incentives for processing and diversification should have been put in place. Although manufacturing increased, it mostly did not create much new employment and was not well-paid. Hirschman-type backward and forward linkages are weak. A more inclusive economy and society in which a broader range of people and small enterprises shared in economic gains might even have further cemented support for democracy, healed regional divisions and further reduced tolerance of the military.

An economy as dependent as Myanmar's on gas and oil would always be vulnerable to the international commodity cycle (although this vulnerability may take a different form as renewable energy becomes cheaper and more available, and oil and gas-rich economies are left with so-called 'stranded assets'). The dependency theorists' (e.g., Amin 1976, Frank 1967, Prebisch 1950) insights on the unequal global nature of exchange retain particularly validity here, as does the Prebisch–Singer hypothesis (that the price of primary commodities falls relative to the price of manufactured goods, leading to deterioration in the terms of trade of economies relying on primary products). Diversification and multilateral reforms to smooth commodity cycles should have been immediate priorities – as should policies to wean the economy off commodity dependence. Attention should also have been given to resilience. A crisis like Covid-19 may be catastrophic but it is not a one-off. LDCs must put in place strategies – and push for multilateral reforms – to shield them from the repeated shocks emanating from the global economy, and to which liberalisation exposes them.

Dependency theorists are united by a belief in the need to focus not just on national policies but on international architecture and core-periphery relations. Whilst there are a range of approaches, from Amin's 'de-linking' to more cooperative multilateral stances, some dependency theorists suggest that a global trade system that permits active coordination is imperative, including measures such as tariffs, subsidies and quantitative restrictions in order to address deterioration in the terms of trade. Commodity markets must be regulated, alongside exchange rates and capital movements. There is a selective stance toward foreign investment, while the belief in the need to consider the world economy in its totality means that attention is paid towards global institutional structures (Jomo and Reinert 2005). A better-coordinated world economy would certainly have been in Myanmar's interests.

Unfortunately, Myanmar remains more vulnerable than before, with a lack of external coordination contributing to domestic instability. According to the World Bank, the economy collapsed by 18% in the year of the coup, a much more severe downturn than in neighbouring countries, and undoing

much of the progress of previous years. Taking into account the coup and Covid-19, by 2022 the economy was estimated as being a third smaller than it otherwise would have been. The outlook at the time of writing was very bleak – and the collapse of democracy has its roots at least partly in economic policy and methodological monism. Myanmar's experience over the decade is a case of high hopes encouraged by those who peddled simplistic economic outcomes, followed by crushed expectations.

Solomon Islands

Solomon Islands is a small Pacific Island LDC in the region of Melanesia with a population of just over half a million. The archipelago comprises approximately 1,000 islands spanning an area of 28,400 km². One of the most prominent political and economic events in its recent history was a period from 1999 to 2002 known as 'the Tensions', partly linked to the control of logging revenues and the gains from dwindling economic growth by different island groups. The civil war led to 20,000 or more people being displaced and up to 200 killed. The economy shrank by a quarter. As revenue collection dwindled and the currency devalued by 20%, the government defaulted on domestic and foreign debt and became unable to finance its operations.

Regional neighbours and Australia led an international armed force – the Regional Assistance Mission to the Solomon Islands (RAMSI) – to improve security and to stabilise the economy and political situation. After visiting the country, Francis Fukuyama (2008) argued that Australia should take over several parts of government and run the country in a form of 'shared sovereignty', although such arguments were not adopted. Development aid under RAMSI totalled A\$2.6 billion from 2003 to 2013, equivalent to a third of GDP and higher than government spending over the decade, with a major macroeconomic effect. The sum has been calculated as being enough to cover the basic needs of the entire adult population over the decade.

Economic reforms during the next ten years were ostensibly led by the government but were heavily influenced by RAMSI. An Economic Reform Unit mostly staffed by international consultants in the Ministry of Finance passed reforms to improve 'governance', control government expenditure, and lower and simplify the import tariff structure (Gay 2009). Before and during the reform period Solomon Islands signed a series of bilateral and regional trade agreements. Some public companies were privatised and obstacles to incoming investment lowered. These were standard, neoliberal-type reforms aimed at reducing the influence of government and increasing the role of markets. The reform programme was technocratic, making use of what were believed to be 'neutral' scientific economic truths.

Although the economy stabilised and the country was scheduled to leave the LDC category in 2024, it prospered more slowly than its regional neighbours. Gross national income (GNI) per capita in 2012 was no higher than a decade earlier. Human development indicators declined (Gay 2016). Almost

no structural transformation took place, with a small increase in services at the expense of agriculture. Inequality is very high, and there is a need to redistribute income in favour of marginalised groups, particularly women. Gender-based violence is a serious problem and requires active government policy to address it.

Contrary to the arguments of Dinh and Lin (2014) and others, the usual findings of a ‘new’, or neo-structuralist approach are less relevant in the Pacific islands than in some other contexts. The inbuilt challenges of isolation, fragmentation, smallness and vulnerability to natural disasters hamper any widespread structural transformation. Historically, the state has had to play a strong role because the islands are so small and spread apart, and because much economic activity is subsistence or based on gift exchange rather than being market-based. In the Solomon Islands government expenditure, although below its historical highs, averaged 46% of GDP for the six most recent years for which data is available. In other Pacific Island states the figure is over 100%. Donor spending per capita is among the highest in the world, and the Pacific Island countries depend heavily on other transfers including aid, remittances and income from trust funds (Gay 2021). The neoclassical economist Alan Winters has suggested that inbuilt costs such as transport are so high in the Pacific islands that ‘comparative advantage is not enough’ (Winters and Martin 2004), with the implication that government must maintain a large presence in the economy and that active measures must be taken to stimulate productive capacity. State capabilities immediately following the Tensions were weak, and detailed technical proposals for industrial policy and macroeconomic management would have been inappropriate – although this is an argument for building future state competencies rather than accepting that the state cannot enact policies in perpetuity.

A more heterogeneous stance, drawing on a plurality of perspectives, would have had practical advantages. Feminist economists (e.g., Elson 1995, Sparr 1994, Waring 1988) view traditional economics as gendered and male-biased, with its methods influencing theory and policy. Normative assumptions underlie all analysis, highlighting the importance of power relations. Feminists tend to be critical of the narrowness and gender bias of mainstream modelling. At the level of policy, feminists are among the main critics of neoclassical equilibrium theory, focussing on the negative gender impact of trade liberalisation, and the unequal impact of globalisation on gender, class and ethnic groups. For example, a move from subsistence to cash crops – particularly relevant to the Solomon Islands – forces women into the dual role of paid worker and unpaid household labourer. Moreover, structural adjustment has negative effects on women, via unemployment, working conditions, wages, poverty, unpaid work, girls’ education, health, fertility, domestic violence and stress. As a result, active, redistributive policies are needed to redress gender and power imbalances, including capital controls and fixed or managed exchange rates. The revenues from resource extraction, a major source of gender and power inequity (Herbert 2007), are usually channelled straight offshore or never arrive in the country. They should be used to benefit local

communities, ideally via requirements to invest a certain proportion of revenue onshore or restrictions on the exit of capital.

Feminists have been particularly critical of the tendency of outside development agencies and multilateral institutions to impose external norms and values without fully taking into account national conditions. They have emphasised the need to contextualise analysis to local social and economic circumstances. The kind of inductive methods advocated by some feminists, structuralists and dependency theorists would have been useful in determining the schools of thought or theories that would determine policy stances. For instance, the RAMSI ‘People’s Surveys’ – a social survey soliciting popular views about the programme – only began in 2007, four years after the start of the mission and too late to influence its main priorities. Policies towards education, health and wealth consistently featured as more important in the survey results than would be suggested by the allocation of funding under RAMSI. Feminist economists were among the first to fully recognise the importance of ecological sustainability and the potential impact of climate breakdown which is having such a devastating impact on countries like the Solomon Islands.

The assumptions of mainstream economic theory about the rational, maximising, – and male – economic actor have been shown to be especially inappropriate in subsistence societies with traditions of reciprocity and mutualism. After decades of disappointing engagement with external agencies and mainstream economic ideas, some groups in the Solomon Islands now even advocate a return to subsistence and mutual self-help, rejecting economic materialism and engagement with the world economy.

A crack in everything

One of the most striking features of both case studies is that ODA was so high. During a ten-year period in the Solomon Islands, aid was higher than government expenditure. From 2000 to 2019 the average was 24% of GNI according to OECD data, in some years exceeding 40%. Myanmar received a total of \$6.75 billion in development assistance over the decade concerned, with ODA peaking at 6.7% of GNI in 2013. The LDC average from 2000 to 2019 is 6.3%. Under the mainstream approach, international donors often support service provision and, in some cases, spend directly to support economic stability. The macroeconomic impact of donor expenditure is paradoxical in a neoliberal context. Despite the anti-government, pro-market rhetoric, the reality requires heavy (by definition non-market) donor spending – an implicit, if contradictory and even negative recognition of fallibility. ODA is also often channelled not through domestic public finances but independently, direct from donors, benefitting donor firms and entities and leading to accusations that aid is donor-led rather than nationally owned (UNCTAD 2019).

All three countries would benefit from improved multilateral coordination and better global economic management, which remains the biggest

single issue facing the LDCs. These are not features generally prioritised under the contemporary mainstream approach to development, which focuses on the national economy rather than the international system. Deriving from the structuralist, developmentalist and Marxist tradition, some of the most helpful things that the world could do for LDCs would be to put in place measures to address the global forces for domestic resource erosion such as free-wheeling global finance; commodity price volatility; and tax havens. More generally, multilateral coordination is needed to reduce carbon emissions; agricultural subsidies and immigration restrictions. However much focus is placed on domestic matters, the LDCs and others operate in a volatile and often hostile international context where coordination and multilateralism are breaking down. LDCs are particularly susceptible to being blown by the winds of the world economy. This lack of attention to global structures is partly because the interests of the larger, more powerful countries often win out, – but it is also partly methodological, the result of the non-recognition of alternative schools of economic thought which emphasise the systemic and interdependent nature of the global economy.

This chapter has tried very briefly to show that Sheila's work has implications that go beyond the methodological or philosophical, which were ahead of their time, and which can be practically relevant. The sidelining and, often, total disregard of alternative schools of thought meant that the policies proposed and put into practice were frequently inadequate or even counter-productive. The narrowness and singularity of the dominant practice of development economics is in some senses a straightforward refusal to recognise the diverse and rich breadth of development thinking, but it is also impractical and inaccurate, failing to accommodate fallibility and uncertainty. In this vein, none of the alternatives touched upon so briefly here individually have all the answers. It is likely that many schools have something to contribute.

Proposals about pluralism in development might be considered naïve. It may be unrealistic to expect a sudden conversion of the IMF and World Bank's operational practitioners to feminism and structuralism. As Stiglitz and others have pointed out, lending comes with conditions of austerity and tight money because creditors want their money back. Neoliberalism is part of capitalism's financial furniture. Yet change happens, and one of the practicalities of pluralism is that it can reveal ideas that otherwise might not have been considered or throw into sharp relief beliefs and practices that are currently failing. New syntheses can arise from re-examining existing knowledge. If it is at times of disruption that disaster capitalists strike, it is also at such time that fresh thinking can flourish, and some new ideas can even find their way into international advice.

The eternal cynic is just as inaccurate as the boundless optimist. Emerging signs of fragmentation – the so-called 'empirical turn', the 'decolonisation' movement, the rise of the South – open up new vistas, even if they are yet to fully emerge in practice. As Leonard Cohen sang: 'There is a crack, a crack in everything. That's how the light gets in'.

References

- Abdelghafour, N. (2017) 'Randomized Controlled Experiments to End Poverty? A Sociotechnical Analysis,' *Sociotechnical Myths in Development*, 46–47: 235–62. <https://doi.org/10.4000/anthropodev.611>
- Amin, S. (1976) *Unequal Development: An Essay on the Social Formations of Peripheral Capitalism*, New York: Monthly Review Press. <https://doi.org/10.1017/S0364168600051598>
- Arenas, G. J. Engel, B. Kotschwar and M. Maliszewska (2018) *Supporting Lesotho's Economic Diversification and Trade Integration: Structural Transformation through Greater Export Competitiveness*, Washington, DC: World Bank. <http://hdl.handle.net/10986/30178>
- Chick, V. and S.C. Dow (2005) 'The Meaning of Open Systems,' *Journal of Economic Methodology*, 12(3): 363–81. <https://doi.org/10.1080/13501780500223585>
- Deaton A. and N. Cartwright (2018) 'Understanding and Misunderstanding Randomized Controlled Trials,' *Social Science & Medicine*, 210: 2–21. <https://doi.org/10.1016/j.socscimed.2017.12.005>
- Dinh, J. and J.Y. Lin (2014) 'The New Structural Economics and Strategies for Sustained Economic Development in the Pacific Island Countries,' in Kaur, I. and N. Singh (2014), *The Oxford Handbook of the Economics of the Pacific Rim*, pp. 198–229. Oxford: Oxford University Press. <https://doi.org/10.1093/oxfordhb/9780199751990.013.009>
- Dow, S.C (1996) *The Methodology of Macroeconomic Thought: A Conceptual Analysis of Schools of Thought in Economics*, Cheltenham: Edward Elgar. <http://www.e-elgar.com/shop/isbn/9781852789800>
- (2001) 'Modernism and Postmodernism: A Dialectical Analysis', in S. Cullenberg, J. Amariglio and D.F. Ruccio (eds.), *Postmodernism, Economics and Knowledge*, London: Routledge, pp. 61–76. <https://www.routledge.com/Post-Modernism-Economics-and-Knowledge/Amariglio-Cullenberg-Ruccio/p/book/9780415110266>
- (2002) 'Methodological pluralism and pluralism of method,' in *A Modern Reader in Institutional and Evolutionary Economics*, ch.8: pp. 129–140. Cheltenham: Edward Elgar. https://doi.org/10.1057/9781137000729_8
- (2003) 'The Future for Schools of Thought in Pluralist Economics', No 005/2003, Stirling Centre for Economic Methodology Working Papers: Advances in Economic Methodology. <https://econpapers.repec.org/RePEc:sti:wpaper:005/2003>
- (2004) 'Structured Pluralism,' *Journal of Economic Methodology*, 11(3): 275–90. <https://doi.org/10.1080/1350178042000252965>
- (2012a) 'Structured Pluralism', in *Foundations for New Economic Thinking*, pp.162–177.London:PalgraveMacmillan.https://doi.org/10.1057/9781137000729_10
- (2012b) 'Variety of Methodological Approach in Economics', in *Foundations for New Economic Thinking*, pp. 210–230. London: Palgrave. https://doi.org/10.1057/9781137000729_13
- (2017) 'People Have Had Enough of Experts,' Institute for New Economic Thinking, 6 February 2017. <https://www.ineteconomics.org/perspectives/blog/people-have-had-enough-of-experts>
- (2021) 'The Future of Macroeconomics,' Institute for New Economic Thinking, 1 February 2021. <https://www.ineteconomics.org/perspectives/blog/the-future-of-macroeconomics>

- Dow A. and S.C. Dow (2005) 'The Application of Development Economics: General Principles and Context Specificity,' *Cambridge Journal of Economics*, 29(6): 1129. <https://doi.org/10.1093/cje/bei072>
- The Economist (2014) 'The Useful Science?', *The Economist*, 4 January 2014. <https://www.economist.com/finance-and-economics/2014/01/04/the-useful-science>
- Elson, D. (1995) *Male Bias in the Development Process*, Manchester: Manchester University Press. <https://doi.org/10.1002/pad.4230130111>
- Ffrench-Davis, R. (1988) 'An Outline of a Neo-Structuralist Approach,' *CEPAL Review*, 34: 37–44. https://repositorio.cepal.org/bitstream/handle/11362/10233/34037044I_en.pdf?sequence=1&isAllowed=y
- Frank, A.G. (1967) *Capitalism and Underdevelopment in Latin America: Historical Studies of Chile and Brazil*, New York: Monthly Review Press. https://monthlyreview.org/product/capitalism_and_underdevelopment_in_latin_america/
- Fukuyama, F. (2008) "State Building in the Solomon Islands", *Pacific Economic Bulletin*, 23(3): 1–17. <http://devpolicy.org/PEB/2019/07/03/state-building-in-solomon-islands/>
- Gay, D. (ed.) (2009) 'Solomon Islands Diagnostic Trade Integration Study,' Geneva: Enhanced Integrated Framework for Trade. <https://www.oecd.org/aidfortrade/countryprofiles/dtis/Solomon%20Islands-DTIS-2009.pdf>
- (2016) 'Productive Capacity and Trade in the Solomon Islands,' New York: United Nations Department of Economic and Social Affairs, Committee for Development Policy Background Paper No. 31. <https://www.un.org/development/desa/dpad/publication/background-paper-31/>
- (2020) 'A Critical Reflection on International Support for Least Developed Countries,' *International Trade Working Paper 2020/02*. London: Commonwealth Secretariat.
- (2021) 'Structural Transformation in Graduating Pacific Least Developed Countries (LDCs),' UN Economic and Social Commission for Asia and the Pacific (UNESCAP) MPFD Working Paper Series, No. ESCAP / 1-WP / 2.
- Government of Myanmar (2018) 'Myanmar Sustainable Development Plan (2018–30),' https://themimu.info/sites/themimu.info/files/documents/Core_Doc_Myanmar_Sustainable_Development_Plan_2018_-_2030_Aug2018.pdf
- Harcourt, G.C. (1997) *Horses for Courses: The Making of a Post-Keynesian Economist*, Canberra: Australian National University, Centre for Economic Policy Research, Discussion paper no. 370. <https://ideas.repec.org/p/auu/dpaper/370.html>
- Herbert, T. (2007) 'Commercial Sexual Exploitation of Children in the Solomon Islands: A Report Focusing on the Presence of the Logging Industry in a Remote Region,' Christian Care Centre, Church of Melanesia, Honiara.
- Hirschman, A.O. (1958) *The Strategy of Economic Development*, New York: Norton. <https://doi.org/10.2307/1235188>
- Hirschman, A.O. (1980) *Essays in Trespassing: Economics to Politics and Beyond*, Cambridge: Cambridge University Press. <https://www.cambridge.org/fr/academic/subjects/economics/microeconomics/essays-trespassing-economics-politics-and-beyond?format=PB&isbn=9780521282437#>
- Jomo, K.S. and E. Reinert (eds.) (2005) *The Origins of Development Economics: How schools of Economic Thought Have Addressed Economic Development*, London: Zed Books. <https://www.zedbooks.net/shop/book/the-origins-of-development-economics/>
- Kalecki, M. (1976) *Essays on Developing Economies*, Brighton: Harvester. https://books.google.fr/books/about/Essays_on_Developing_Economies.html?id=MhG8AAAAIAAJ&redir_esc=y

- Kvangraven, I. (2020) 'Beyond the Stereotype: Restating the Relevance of the Dependency Research Programme,' *Development and Change*, 52: 1–37. <https://doi.org/10.1111/dech.12593>
- Ostry, J. Loungani, P. and D. Furceri (2016) 'Neoliberalism: Oversold?' *Finance & Development*, 53(2): 38–41. <https://www.imf.org/external/pubs/ft/fandd/2016/06/ostry.htm>
- Prebisch, R. (1950) *The Economic Development of Latin America and Its Principal Problems*, UN Document E/ CN.12/89/Rev.1. Lake Success, NY: UN. https://repositorio.cepal.org/bitstream/handle/11362/29973/002_en.pdf?sequence=1&isAllowed=y
- Servet, J. and B. Tinel (2020) 'The Behavioral and Neoliberal Foundations of Randomizations,' *Strategic Change*, 29(3): 293–99. <https://halshs.archives-ouvertes.fr/halshs-02562758/document>
- Singer, H. (1950) 'The Distribution of Gains between Investing and Borrowing Countries', in *The Strategy of International Development: Essays in the Economics of Backwardness*, pp. 473–485. London: Macmillan. <https://sta.uwi.edu/iir/normangirvanlibrary/sites/default/files/normangirvanlibrary/documents/The%20Distribution%20of%20Gains%20between%20Investing%20and%20Borrowing%20Countries.pdf>
- Sparr, P. (ed.) (1994) *Mortgaging Women's Lives: Feminist Critiques of Structural Adjustment*, London: Zed Books. <https://www.zedbooks.net/shop/book/mortgaging-womens-lives/>
- UNCTAD (2019) 'Financing for Development: International Development Co-Operation and Interrelated Systemic Issues,' Note by the UNCTAD Secretariat, Trade and Development Board, Intergovernmental Group of Experts on Financing for Development, Third session, Geneva, 4–6 November 2019.
- UNCTAD (2020) 'Impact of the Pandemic on Trade and Development: Transitioning to a New Normal,' Geneva: UNCTAD. https://unctad.org/system/files/official-document/osg2020d1_en.pdf
- Valensisi, G. (2020) 'COVID-19 and Global Poverty: Are LDCs Being Left Behind?' WIDER Working Paper 2020/73. <https://www.wider.unu.edu/sites/default/files/Publications/Working-paper/PDF/wp2020-73.pdf>
- Waring, M. (1988) *If Women Counted: A New Feminist Economics*, London: HarperCollins. <https://www.marilynwarings.com/publications/if-women-counted.asp#:~:text=This%20is%20a%20revolutionary%20and,from%20value%20in%20economic%20theory>
- Williamson, J. (1993) 'Democracy and the "Washington consensus",' *World Development*, 21 (8): 1329–1336, [https://doi.org/10.1016/0305-750X\(93\)90046-C](https://doi.org/10.1016/0305-750X(93)90046-C).
- Winters, A. and P. Martins (2004) 'When Comparative Advantage Is Not Enough: Business Costs in Small Remote Economies,' *World Trade Review*, 3(3): 347–83. <https://doi.org/10.1017/S1474745604001922>

15 The body of work of Sheila Dow – publications from 1980 to 2022

Authored books

- With P E Earl, *Money Matters: A Keynesian Approach to Monetary Economics*, Martin Robertson, 1982, 270.
- Macroeconomic Thought: A Methodological Approach*, Basil Blackwell, 1985, 278.
- Financial Markets and Regional Economic Development: The Canadian Experience*, Gower, 1990, 188.
- Macroeconomic Thought: A Methodological Approach* – Japanese translation, Nihon Keizai Hyeronsh, 1991, 350.
- Money and the Economic Process*, Elgar, 1993, 219.
- The Methodology of Macroeconomic Thought*, Elgar, 1996, 255. Reprinted and issued in paperback 1998.
- Economic Methodology: An Inquiry*, Oxford: Oxford University Press, 2002, 216. Chinese translation published in 2004 by Shanghai University of Finance & Economics Press.
- Foundations for New Economic Thinking: A Collection of Essays*, London: Palgrave Macmillan, 2012.

Edited books

- With P Arestis, *Money, Method and Keynes: Selected Essays by Victoria Chick*, Macmillan, 1992. Portuguese translation 2010.
- With J Hillard, *Keynes, Knowledge and Uncertainty*, Elgar, 1995.
- With P E Earl, *Economic Organisation and Economic Knowledge: Essays in Honour of Brian J Loasby*, Vol 1, Aldershot: Elgar, 1999.
- With P E Earl, *Contingency, Complexity and the Theory of the Firm: Essays in Honour of Brian J Loasby*, Vol 11, Aldershot: Elgar, 1999.
- With P Arestis and M Desai, *Money, Macroeconomics and Keynes*, Routledge, 2002.
- With P Arestis and M Desai, *Methodology, Microeconomics and Keynes*, Routledge, 2002.
- With J Hillard, *Post Keynesian Econometrics, Microeconomics and the Theory of the Firm: Beyond Keynes*, Vol I, Cheltenham: Elgar, 2002.

- With J Hillard, *Keynes, Uncertainty and the Global Economy: Beyond Keynes*, Vol II, Cheltenham: Elgar, 2002.
- With A C Dow, *A History of Scottish Economic Thought*, London: Routledge, 2006; paperback edition published in 2009.
- With R Arena and M Klaes (eds), *Open Economics: Economics in Relation to Other Disciplines*, Routledge, 2009.
- S Dow, J Jespersen and G Tily (eds), *The General Theory and Keynes for the 21st Century*, Cheltenham: Edward Elgar, 2018.
- S Dow, J Jespersen and G Tily (eds), *Money, Method and Post-Keynesian Economics for the 21st Century*, Cheltenham: Edward Elgar, 2018.

Refereed academic journal papers

- Methodological Morality in the Cambridge Controversies, *Journal of Post Keynesian Economics*, 2.3.368–80, 1980. <http://hdl.handle.net/1893/22744>
- Weintraub and Wiles: The Methodological Basis of Policy Conflict, *Journal of Post Keynesian Economics*, 3:3.325–39, 1981. <http://hdl.handle.net/1893/22738>
- The Regional Composition of the Money Multiplier Process, *Scottish Journal of Political Economy*, 29.1.22–44, 1982.
- Schools of Thought in Macroeconomics: The Method Is the Message, *Australian Economic Papers*, 22.2.30–47, 1983. <http://hdl.handle.net/1893/25151>
- Methodology and the Analysis of a Monetary Economy, *Economies et Societes, Monnaie et Production*, 18.1.7–35, 1984.
- With P E Earl, Methodology and Orthodox Monetary Policy, *Economie Appliquee*, 37.1.143–63, 1984.
- Microfoundations: A Diversity of Treatments, *Eastern Economic Journal*, 1.4.342–60, 1984.
- The Capital Account and Regional Balance of Payments Problems, *Urban Studies*, 23.3.173–84, 1986. <http://hdl.handle.net/1893/26289>
- Speculation and the Monetary Circuit: With Particular Attention to the EuroCurrency Market, *Economies et Societes, Monnaie et Production*, 20.3.95–109, 1986.
- Post Keynesian Monetary Theory for an Open Economy, *Journal of Post Keynesian Economics*, 9.2.237–59, 1986–1987. <http://hdl.handle.net/1893/22745>
- The Treatment of Money in Regional Economics, *Journal of Regional Science*, 27.1.13–24, 1987. <http://hdl.handle.net/1893/25160>
- Money and Regional Development, *Studies in Political Economy*, 23.1.73–94, 1987. <http://hdl.handle.net/1893/25175>
- Banking and Regional Development in Canada, *British Journal of Canadian Studies*, 21.1.16–40, 1987.
- The Scottish Political Economy Tradition, *Scottish Journal of Political Economy*, 34.4.335–48, 1987.

- With V Chick, A Post Keynesian Perspective on Banking and Regional Development, *Thames Papers*, Spring 1–22, 1988. <http://hdl.handle.net/1893/22686>
- Money Supply Endogeneity, *Economie Appliquee*, 41.1.19–39, 1988.
- With A C Dow, Idle Balances in Keynesian Theory, *Scottish Journal of Political Economy*, 35.3.193–207, 1988. <http://hdl.handle.net/1893/25174>
- Incorporating Money in Regional Economic Models, *London Papers in Regional Science: Recent Advances in Regional Economic Modelling*, 19. 208–18, 1988.
- Post Keynesian Economics: Conceptual Underpinnings, *British Review of Economic Issues*, 10.3.1–18, 1988.
- Beyond Dualism, *Cambridge Journal of Economics*, 14.2.143–58, 1990. <http://hdl.handle.net/1893/22693>
- Post Keynesianism as Political Economy: A Methodological Discussion, *Review of Political Economy*, 2.3.345–58, 1990. <http://hdl.handle.net/1893/25152>
- Are There Any Signs of Postmodernism within Economics? *Methodus*, 3.1.81–5, 1991.
- Money, Finance and the Role of the State, *Journal of Economic Surveys*, 6.2. 195–200, 1992. <http://hdl.handle.net/1893/25156>
- The Regional Financial Sector: A Scottish Case Study, *Regional Studies*, 26.7.619–31, 1992. <http://hdl.handle.net/1893/25161>
- With J Smithin, Free Banking in Scotland, 1695–1845, *Scottish Journal of Political Economy*, 39.4.374–90, 1992. <http://hdl.handle.net/1893/22740>
- With DNF Bell, Economic Policy Options for a Scottish Parliament, *Scottish Affairs*, 13.Autumn.42–67, 1995.
- The Appeal of Neo-Classical Economics: Some Insights from Keynes's Epistemology, *Cambridge Journal of Economics*, 19.6.715–34, 1995. <http://hdl.handle.net/1893/22683>
- Why the Banking System Should be Regulated, *Economic Journal*, 104.436. 698–707, 1996. <http://hdl.handle.net/1893/25153>
- Horizontalism: A Critique, *Cambridge Journal of Economics*, 20.4.497–508, 1996. <http://hdl.handle.net/1893/22694>
- With V Chick, Regulation and Differences in Financial Institutions, *Journal of Economic Issues*, 30.2.517–23, 1996. <http://hdl.handle.net/1893/25155>
- Mainstream Economic Methodology, *Cambridge Journal of Economics*, 21.1. 73–93, 1997. <http://hdl.handle.net/1893/22692>
- With A Dow and A Hutton, Scottish Political Economy and Modern Economics, *Scottish Journal of Political Economy*, 44.4.368–83, September 1997. <http://hdl.handle.net/1893/25162>
- With C Rodriguez Fuentes, Regional Finance: A Survey, *Regional Studies*, 31.9.903–20, December 1997. <http://hdl.handle.net/1893/22700>
- The Exogenous Money Supply Assumption in Monetary Theory and Policy, *Archives of Economic History*, 8.1–2.7–36, December 1997.
- With A Dow, A Hutton, and M Keaney, Traditions in Economics: The Case of Scottish Political Economy, *New Political Economy* 3.1.45–58, 1998. <http://hdl.handle.net/1893/22746>

- Monetary Interpretations of the Great Depression: A Review Essay, *Research in the History of Economic Thought and Methodology*, 16.257–62, 1998.
- With J Smithin, Change in Financial Markets and the First Principles of Monetary Economics, *Scottish Journal of Political Economy*, 46.1.72–90, February 1999. <http://hdl.handle.net/1893/25163>
- Post Keynesianism and Critical Realism: What Is the Connection? *Journal of Post Keynesian Economics*, 22.1.15–33, 1999. <http://hdl.handle.net/1893/22747>
- Prospects for the Progress of Heterodox Economics, *Journal of the History of Economic Thought*, 22.2.157–70, 2000. <http://hdl.handle.net/1893/24906>
- With C Rodriguez Fuentes, Integración monetaria y estructura financiera. Implicaciones para los mercados regionales de crédito, *Información Comercial Española*, 785.133–45, 2000.
- With A C Dow and A Hutton, Applied Economics in a Political Economy Tradition: The Case of Scotland from the 1890s to the 1950s, *History of Political Economy*, 32 (Annual Supplement), pp. 177–98. 2000. <http://hdl.handle.net/1893/25164>
- With V Chick, Financial Integration in Europe: A Post Keynesian Perspective, *Archives in Economic History*, 11.1–2.21–40, 2000. <http://hdl.handle.net/1893/25154>
- Methodology in a Pluralist Environment, *Journal of Economic Methodology*, 8.1.33–40, 2001. <http://hdl.handle.net/1893/22762>
- With V Chick, Formalism, Logic and Reality: A Keynesian Analysis, *Cambridge Journal of Economics*, 25.6.705–22, 2001, reprinted in G M Hodgson (ed.), *Mathematics and Modern Economics*. Cheltenham: Edward Elgar, 2012. <http://hdl.handle.net/1893/22690>
- Interpretation: The Case of Hume, *History of Political Economy*, 34.2.399–420, 2002. <http://hdl.handle.net/1893/22689>
- With V Chick, Monetary Policy with Endogenous Money and Liquidity Preference: A Nondualistic Treatment, *Journal of Post Keynesian Economics*, 24.4.587–608, 2002. <http://hdl.handle.net/1893/22763>
- Postmodernism and Analysis of the Development Process, *International Journal of Development Issues*, 1.1.27–34, 2002. <http://hdl.handle.net/1893/22768>
- Historical Reference: Hume and Critical Realism, *Cambridge Journal of Economics*, 26.6.683–97, Nov 2002. <http://hdl.handle.net/1893/22701>
- History of Economic Thought in the Post Keynesian Tradition, *History of Political Economy*, 34. Annual Supplement.319–36, 2002. <http://hdl.handle.net/1893/22764>
- The Relationship between Mathematics and Economics, *Journal of Post Keynesian Economics*, 25.4.545–8, 2003. <http://hdl.handle.net/1893/22765>
- The Prospects Facing an Independent Scotland in the Euro-Zone Alongside the Rest of the UK, *Scottish Affairs* 45.(Autumn).60–71, 2003. <http://hdl.handle.net/1893/22685>
- With C Rodriguez Fuentes, EMU and the Regional Impact of Monetary Policy, *Regional Studies*, 37.9.969–80, 2003. <http://hdl.handle.net/1893/22703>

- Uncertainty and Monetary Policy, *Oxford Economic Papers*, 56.539–61, 2004. <http://hdl.handle.net/1893/22684>
- Reorienting Economics: Some Epistemological Issues, *Journal of Economic Methodology*, 11.3.307–12, 2004. <http://hdl.handle.net/1893/22703>
- Structured Pluralism, *Journal of Economic Methodology*, 11.3.275–90, 2004. Reprinted in W Olsen (ed.), *Realist Methodology*, Sage, 2010. <http://hdl.handle.net/1893/22704>
- Knowledge, Information and Credit Creation: The Impact of Monetary Policy, *Papales de Economía Española*, (special issue on Money, Financial System and Economic Growth), 101.99–113, 2004. <http://hdl.handle.net/1893/22769>
- With V Chick, The Meaning of Open Systems, *Journal of Economic Methodology*, 12(3).363–81, 2005. <http://hdl.handle.net/1893/22766>
- With A Dow, The Application of Development Economics: General Principles and Context Specificity, *Cambridge Journal of Economics*, 29.1129–43, 2005. [<http://hdl.handle.net/1893/22670>] <http://hdl.handle.net/1893/22688>
- Why the Banking System Should be Regulated, republished in Chinese, *Investment Order Review*.
- Mathematics in Economic Theory: Historical and Methodological Analysis, translated into Russian, *Voprosy Ekonomiki*, 7, 2006.
- Variety of Methodological Approach in Economics, *Journal of Economic Surveys*, 21.3447–19, 2007. <http://hdl.handle.net/1893/592>
- With K Ruziev and D Ghosh, The Uzbek Puzzle Revisited: Analysis of Economic Performance in Uzbekistan Since 1991, *Central Asian Survey*, 26.1.7–30, 2007. <http://hdl.handle.net/1893/650>
- With A Montagnoli, The Regional Transmission of UK Monetary Policy, *Regional Studies*, 41.6.797–808, 2007. <http://hdl.handle.net/1893/594>
- Mainstream Methodology, Financial Markets and Global Political Economy, *Contributions to Political Economy*, 27.13–29, 2008. <http://hdl.handle.net/1893/595>
- Plurality in Orthodox and Heterodox Economics, *Journal of Philosophical Economics*, 1.2.73–96, 2008. <http://hdl.handle.net/1893/1090>
- With D Ghosh and K Ruziev, A Stages Approach to Banking in Transition Economies, *Journal of Post Keynesian Economics*, 31.1.3–34, 2008. <http://hdl.handle.net/1893/989>
- With D Ghosh, Fuzzy Logic and Keynes's Speculative Demand for Money, *Journal of Economic Methodology*, 16.1.57–69, 2009. <http://hdl.handle.net/1893/983>
- With M Klaes and A Montagnoli, Risk and Uncertainty in Central Bank Signals: An Analysis of Monetary Policy Committee Minutes, *Metroeconomica*, 60.2.584–618, 2009. <http://hdl.handle.net/1893/9209>
- David Hume and Modern Economics, *Capitalism and Society*, 4.1.Article 1, 2009. <http://www.bepress.com/cas/vol4/iss1/art1>
- History of Thought and Methodology in Pluralist Economics Education, *International Review of Economics Education*, 8.2.41–57, 2009. <http://hdl.handle.net/1893/3038>

- Knowledge, Communication and the Scottish Enlightenment, *Revue de Philosophie Economique/Review of Philosophical Economics*, 10.2.3–23, 2009. <http://hdl.handle.net/1893/3126>
- Psikhologiya finansovykh rynkov: Keynes, Minski i povedencheskiye finansy (Psychology of Financial Markets: Keynes, Minsky and Emotional Finance), in Russian translation, *Voprosy Ekonomiki*, 1.99–113, 2010.
- Hume and the Scottish Enlightenment – Two Cultures, *Revista de Economia*, 35.3.7–20, 2009. <http://hdl.handle.net/1893/3168>
- Cognition, Sentiment and Financial Instability: Psychology in a Minsky Framework, *Cambridge Journal of Economics*, 35.2.233–50, 2011. <http://hdl.handle.net/1893/3059>
- Heterodox Economics: History and Prospects, *Cambridge Journal of Economics*, 35.6.1151–66, 2011. <http://hdl.handle.net/1893/3578>
- With A Dow, Animal Spirits Revisited, *Capitalism and Society*, 6.2.Article 1, 2011. <http://www.bepress.com/cas/vol6/iss2/art1/>. <http://hdl.handle.net/1893/3643>
- Policy in the Wake of the Banking Crisis: Taking Pluralism Seriously, *International Review of Applied Economics*, 26.2.161–75, 2012. <http://hdl.handle.net/1893/22625>
- What Are Banks and Bank Regulation for? A Consideration of the Foundations for Reform, *European Journal of Economics and Economic Policies: Intervention*, 9.1.39–56, 2012. <http://hdl.handle.net/1893/22594>
- With V Chick, On Causes and Outcomes of the European Crisis: Ideas, Institutions and Reality, *Contributions to Political Economy*, 31.1.51–66, 2012. <http://hdl.handle.net/1893/10324>
- With A Montagnoli and O Napolitano, Interest Rates and Convergence Across Italian Regions’, *Regional Studies*, 46.7.893–905, 2012. <http://hdl.handle.net/1893/22641>
- ‘Different Approaches to the Economic Crisis’, *Economic Thought: History, Philosophy and Methodology*, 1.1, 2012. <http://et.worldeconomicssociation.org/index>
- Andrew Skinner 1935–2011, *History of Political Economy*, 44.4.583–94, 2012. <http://hdl.handle.net/1893/15922>
- Codes of Ethics for Economists: A Pluralist View, *Economic Thought*, 2.1, 2013. <http://et.worldeconomicssociation.org/article/view/65>
- With A Dow, Economic History and Economic Theory: The Staples Approach to Economic Development, *Cambridge Journal of Economics*, 38.6.1339–54, 2014. doi: 10.1093/cje/bet021, online 5 June 2013. <http://hdl.handle.net/1893/18208>
- With V Chick and C Rodriguez Fuentes, Good Banks and Bad Banks, Centralised Banks and Local Banks and Economic Growth, *Ekonomiaz*, 84.3.110–27, 2013. <http://hdl.handle.net/1893/18209>
- With V Chick, Keynes, the Long Run and the Present Crisis, *International Journal of Political Economy*, 42.1.13–25, 2013. <http://hdl.handle.net/1893/22638>

- Formalism, Rationality and Evidence: The Case of Behavioural Economics, *Erasmus Journal for Philosophy and Economics*, 6.3.26–43, 2013. <http://ejpe.org/pdf/6-3-art-2.pdf> <http://hdl.handle.net/1893/19497>
- Addressing Uncertainty in Economics and in the Economy, *Cambridge Journal of Economics*, 39.1.33–48, 2015. doi: 10.1093/cje/beu022, online 7/7/14 <http://hdl.handle.net/1893/21040>
- Animal Spirits and Organization, *Journal of Post Keynesian Economics*, 37.2.211–32, 2014. <http://hdl.handle.net/1893/21330>
- The Role of Belief in the Case for Austerity Policies, *Economic and Labour Relations Review*, 26.March. 29–42, 2015. <http://dx.doi.org/10.1177/1035304614567262> online 7 January 2015 <http://hdl.handle.net/1893/21626>
- The Economist's Oath: A Review Essay, *International Review of Applied Economics*, 29.1.125–8, 2015. <http://hdl.handle.net/1893/22503>
- Ontology and Theory for a Redesign of European Monetary Union, *World Economic Review*, 6.1–11, 2016. <http://hdl.handle.net/1893/23630>
- Uncertainty: A Diagrammatic Treatment, *Economics: The Open-Access, Open-Assessment E-Journal*, 10.1–25, 2016. <http://dx.doi.org/10.5018/economics-ejournal.ja.2016-3> <http://hdl.handle.net/1893/22811>
- The Political Economy of Monetary Reform, *Cambridge Journal of Economics*, 40.5.1363–76, 2016. <http://dx.doi.org/10.1093/cje/bew013>. Advance Access publication 26 April <http://hdl.handle.net/1893/23503>
- Framing Financial Markets: A Methodological Account, *Brazilian Keynesian Review*, 2.2.160–73, 2016. <http://hdl.handle.net/1893/25144>
- Keynes and Gesell: Political and Social Philosophy, Epistemology and Monetary Reform, *Annals of the Fondazione Luigi Einaudi*, 1.1.77–92, 2017. <http://hdl.handle.net/1893/27245>
- Global Currency Reform: A Proposal, *JKAU: Islamic Econ.*, 30.2.79–82. <http://dx.doi.org/10.4197>
- With R McMaster and A Cumbers, *Sine praesudicio?* Economics and the 2014 Scottish Independence Referendum, *Cambridge Journal of Economics*, <https://doi.org/10.1093/cje/bex091>, online 24 January 2018. <http://hdl.handle.net/1893/26951>
- Monetary Reform, Central Banks and Digital Currencies, *International Journal of Political Economy*, 48.2.153–73.
- Gender and the Future of Macroeconomics: An Evolutionary Approach, *Review of Evolutionary Political Economy*, 1.1.55–66, 2020.
- With C Rodriguez-Fuentes, The Role of Credit in Regional Divergence: Spanish Regions and Eurozone Countries, *Brazilian Journal of Political Economy/Revista de Economia Política*, 40.4.712–27.
- Endogenous Money and Ideas for Monetary Reform, *European Journal of Economics and Economic Policies: Intervention*, 17.3.367–80.
- Scottish Enlightenment Historical Epistemology and Modern Challenges for Economic Thought, *Review of Economic Philosophy*, 22.1.17–38, 2021.
- A Deeper Struggle for the Soul of Economics, *Journal of Economic Methodology*. <http://dx.doi.org/10.1080/1350178X.2021.2010282>; online 16 Dec 2021

- The Pursuit of Coherence in Mainstream Macroeconomic Methodology, *Capitalism and Society*, 15.1.article 3, 2021.
- Economic Methodology, the Philosophy of Economics and the Economy: Another Turn? *Journal of Economic Methodology*, 28.1.46–53. <http://dx.doi.org/10.1080/1350178X.2020.1868771>, published online 15 Jan 2021.
- Endogenising Uncertainty, *Journal of New Economics*, 2021.

Forthcoming

- Alfred Marshall, Evolutionary Economics and Climate Change, *Review of Political Economy*, July 2022. <http://dx.doi.org/10.1080/09538259.2021.1987088>
- With A C Dow, Coase and the Scottish Enlightenment, *Journal of the Aurora Philosophy Institute*.
- Comment on John Davis's 'A methodological Perspective on Economic Modelling and the Global Pandemic: Commentary', *Economic Thought: History, Philosophy, and Methodology*.

Contributions to edited works

- Substantive Mountains and Methodological Molehills: A Rejoinder, in Caldwell, B J (ed), *Appraisal and Criticism in Economics*, Allen and Unwin, 1984, 433–7.
- With P E Earl, Monetary Policy in a Speculative Environment, in Hare, P and Kirby, M (eds), *An Introduction to British Economic Policy*, Wheatsheaf, 1984, 61–75.
- With A C Dow, Animal Spirits and Rationality, in Lawson, T and Pesaran, H (eds), *Keynes' Economics: Methodological Issues*, Croom Helm, 1985, 46–65.
- What Happened to Keynes' Economics, in Hamouda, O and Smithin, J, *Keynes and Public Policy after Fifty Years*, Vol I, Edward Elgar, 1988, 101–10.
- With V Chick, A Post Keynesian Perspective on Banking and Regional Development, in Arestis, P (ed), *Post Keynesian Monetary Economics*, Edward Elgar, 1988, 219–50.
- With A C Dow, Endogenous Money Creation and Idle Balances, in Pheby, J (ed.), *New Directions in Post Keynesian Economics*, Edward Elgar, 1989, 147–64.
- Comment on Goodhart, C A E, Keynes, Money and Monetarism, in Hill, R (ed.), *Proceedings of Eighth Keynes Seminar*, Macmillan, 1989, 129–30.
- Hermeneutics, Subjectivity and the Lester/Machlup Debate: A Comment, in Samuels, W J (ed), *Economics as Discourse*, Kluwer, 1990, 185–187.
- The Scottish Political Economy Tradition, in Mair, D (ed), *The Scottish Contribution to Modern Economic Thought*, Aberdeen University Press, 1990, 19–32.
- Keynes's Epistemology and Economic Methodology, in R O'Donnell (ed), *Keynes as Philosopher – Economist*, Macmillan, 1991, 144–167. <http://hdl.handle.net/1893/25147>

- The Post Keynesian School, in Mair D and Millar A (eds), *A Modern Guide to Economic Thought*, Elgar, 1991, 176–206.
- The Scottish Political Economy Tradition as a Mode of Thought, *Economic History and Economic Theory: Festschrift in Honour of L Humanidis*, University of Piraeus, 1991, 94–107.
- The Scottish Political Economy Tradition, in Blaug, M (ed), *William Whewell (1794–1866), Dionysius Lardner (1793–1859), William Lloyd (1795–1852) and Charles Babbage (1792–1871), Pioneers in Economics* Section II, Vol 19, Elgar, 1991.
- With A C Dow, Idle Balances in Keynesian Theory, in Blaug, M (ed), *John Maynard Keynes (1883–1946), Pioneers in Economics* Section IV, Vol 48.2, Elgar, 1991.
- Postmodernism and Economics, Graham, E, Doherty, J and Malek, M (eds), *Postmodernism and the Social Sciences*, Macmillan, 1992.
- Monetary Theory, in G Hodgson, W Samuels & M Tool (eds), *Elgar Companion to Institutional and Evolutionary Economics*, Elgar, 1994.
- European Monetary Integration and the Distribution of Credit Availability, in Corbridge, S, Martin, R and Thrift, N (eds), *Money, Power and Space*, Blackwell, 1993.
- Uncertainty, *Elgar Companion to Radical Political Economy*, in Arestis, P and Sawyer, M (eds), Elgar, 1994.
- The Religious Content of Economics, in H G Brennan and A M C Waterman (eds), *Economics and Religion*, Kluwer, 1994, 215–28.
- Uncertainty about Uncertainty, in Dow, S C and Hillard, J (eds), *Keynes, Knowledge and Uncertainty*, Elgar, 1995, 117–36.
- With V Chick, Wettbewerb und die Zukunft des europäischen Banken- und Finanzsystems, in Thomasberger, C (ed.), *Europäische Geldpolitik zwischen Marktzwängen und neuen institutionellen Regelungen*, Metropolis-Verlag, 1995.
- Liquidity Preference in International Finance: The Case of Developing Countries, in Wells, P (ed), *Post Keynesian Economic Theory*, Kluwer, 1995, 1–16. <http://hdl.handle.net/1893/26297>
- With A C Dow, Endogenous Money Creation and Idle Balances, in Musella, M and Panico, C (eds), *The Supply of Money in the Economic Process: A Post Keynesian Perspective*, Elgar, 1995, 473–90.
- European Monetary Integration, Endogenous Credit Creation and Regional Economic Development, in X Vence-Deza and J S Metcalfe (eds), *Wealth from Diversity: Innovation and Structural Change and Finance for Regional Development in Europe*, Kluwer, 1996, 293–306.
- Keynes's Philosophy and Post Keynesian Monetary Theory, in P Arestis (ed.), *Keynes, Money and the Open Economy: Essays in Honour of Paul Davidson*, Vol I, Elgar, 1996, 34–49.
- Economics and Religion, in P Arestis, G Palma and M Sawyer (eds), *Capital Controversy, Post-Keynesian Economics and the History of Economics: Essays in Honour of Geoff Harcourt* Vol 1, Elgar, 1996, 466–73.

- Methodological Pluralism and Pluralism of Method, in Salanti, A and E Screpanti (eds), *Pluralism in Economics: Theory, History and Methodology*, Elgar, 1997, 89–99. <http://hdl.handle.net/1893/25157>
- Endogenous Money, in Harcourt, G C and Riach, P (eds), *The Second Edition of the General Theory*, Vol 2, Routledge, 1997, 61–78.
- With V Chick, Competition and Integration in European Banking, in A Cohen, Hagemann, H and J Smithin (eds), *Money, Financial Institutions and Macroeconomics*, Kluwer, 1997, 253–70.
- Scottish Devolution and the Financial Sector, in M Danson, S Hill and G Lloyd (eds), *Regional Governance and Economic Development, European Research in Regional Science*, Vol 7, 1997, 229–41. <http://hdl.handle.net/1893/25158>
- Rationalisation in Economics, in K Dennis (ed.), *Rationality in Economics: Alternative Perspectives*, Kluwer, 1998, 5–16. <http://hdl.handle.net/1893/25173>
- Knowledge, Information and Credit Creation, in Rotheim, R (ed), *New Keynesian Economics*, Routledge, 1998, 214–26.
- Post Keynesian Methodology, in Davis, T B et al (eds), *The Handbook of Economic Methodology*, Elgar, 1998, 378–82.
- With A Dow, A Hutton, and M Keaney, John Rae and the Tradition of Scottish Political Economy, in O F Hamouda, C Lee and D Mair (eds), *The Economics of John Rae*, Routledge, 1998, 243–58. <http://hdl.handle.net/1893/25172>
- Financial Structure and the Economic Performance of Peripheral Economies: The Case of Europe, in Hill, S and Morgan, B (eds), *Inward Investment, Business Finance and Regional Development*, London: Macmillan, 1998, 170–85.
- With Carlos Rodriguez Fuentes, The Political Economy of Monetary Policy, in P Arestis and M C Sawyer (eds), *The Political Economy of Central Banking*, Elgar, 1998, 1–19.
- Economics, Ethics and Knowledge, in J Dean and A Waterman (eds), *Economics and Religion: Normative Social Theory*. Boston: Kluwer, 1999, 123–30. <http://hdl.handle.net/1893/25179>
- Stages of Banking Development and the Spatial Development of Financial Systems, R Martin (ed.), *Money and the Space Economy*, Wiley, 1999, 31–48.
- Keynesian Monetary Theory and the Debt Crisis, in Hamouda, O and Price, B (eds), *Keynesianism and the Keynesian Revolution in America*, Elgar, 1999, 103–15.
- International Liquidity Preference and Endogenous Credit Creation, in Deprez, J and Harvey, J (eds), *Foundations of International Economics*, London: Routledge, 1999, 153–70. <http://hdl.handle.net/1893/25159>
- Rationality and Rhetoric in Smith and Keynes, in R Rossini, G Sandri and R Scazzieri (eds), *Incommensurability and Translation*. Aldershot: Elgar, 1999, 189–200. <http://hdl.handle.net/1893/22699>
- With D N F Bell, The Financial Powers of the Parliament, I G Hassan and C Warhurst (eds), *The New Scottish Politics*. The Stationary Office, 2000, 93–97.

- Hume: A Re-assessment, in P L Porta, R Scazzieri, and A S Skinner (eds), *Knowledge, Division of Labour and Social Institutions*, Elgar, 2001, 75–92.
- With C J Rodriguez Fuentes, Desregulacion Financiera y Competencia Bancaria: Implicaciones para el Desarrollo Regional, in F Calero Garcia, R Lorenzo Alegria and S Morini Marrero (eds), *Economia y Finanzas*, Gobierno de Canarias, S/C de Tenerife.
- Modernism and Postmodernism: A Dialectical Process, in S Cullenberg, J Amariglio and D F Ruccio, (eds), *Postmodernism, Economics and Knowledge*, Routledge, 2001, 61–76. Japanese language edition, Ochanomizu Shobo.
- The ECB, Banking, Monetary Policy, and Unemployment, in L Magnusson and B Stråth (eds), *From the Werner Plan to EMU: In Search of a Political Economy for Europe*, Presses Universitaires Europeennes, 2001, 179–92.
- Post Keynesian Methodology, in R Holt and S Pressman, *A New Guide to Post Keynesian Economics*, Routledge, 2001, 11–20.
- Liquidity Preference in International Finance: The Case of Developing Countries, in Wells, P (ed), *Post Keynesian Economic Theory*. New edition in Chinese, 2001.
- With A C Dow, The Relevance of Historical Experience for Economics, in P Arestis, M Desai and S C Dow (eds) *Methodology, Microeconomics and Keynes*, London: Routledge, 2002, 39–50.
- Keynes, The Post Keynesians and Methodology, in Dow, S and Hillard, J (eds), *Beyond Keynes: Post Keynesian Econometrics, Microeconomics and the Theory of the Firm*, Aldershot: Elgar, 2002, 162–75.
- Methodological Pluralism and Pluralism of Method, in G M Hodgson (ed.), *A Modern Reader in Institutional and Evolutionary Economics: Key Concepts*, Cheltenham: Elgar, 2002, 136–46.
- With A C Dow and A Hutton, Thomas Chalmers and the Economics and Religion Debate, in D Hum (ed.), *Faith, Reason and Economics*, Winnipeg: St John's College Press, 2003, 47–58.
- The Relevance of Controversies for Practice as well as Teaching', in E Fullbrook (ed.), *The Crisis in Economics: The Post-Autistic Economics Movement: The First 600 Days*, London: Routledge, 2003, 132–4.
- Economists' Knowledge and the Knowledge of Economic Actors, in J Runde and S Mizuhara (eds), *Perspectives on the Philosophy of Keynes's Economics: Probability, Uncertainty and Convention*, London: Routledge, 2003.
- Postwar Heterodox Economics: Post Keynesian, in J Biddle, J B Davis and W Samuels (eds), *The Blackwell Companion to the History of Economic Thought*, Oxford: Blackwell, 2003, 471–8.
- Critical Realism and Economics, in P Downward (ed.), *Applied Economics and the Critical Realist Critique*, London: Routledge, 2003, 12–26. <http://hdl.handle.net/1893/25182>
- A teoria monetária pós-keynesiana para uma economia aberta (Post Keynesian Monetary Theory for an Open Economy), in F Ferrari-Filho and L F de Paulo (eds), *Globalizacao Financeira: ensaios de macroeconomia aberta*

(*Financial Globalisation: Essays on Open Macroeconomics*), Petropolis: Editora Vozes, 2004, 78–105.

The Issue of Uncertainty in Economics, in P Mooslechner, H Schubert and M Schuerz (eds), *Economic Policy-making under Uncertainty: The Role of Truth and Accountability in Policy Advice*, Cheltenham: Edward Elgar, 2005, 191–203. <http://hdl.handle.net/1893/25184>

With A C Dow, ‘The Importance of Context for Economic Policy: The Case of Scotland’, in A Haroon Akram-Lodhi, R Chernomas and A Sepheri (eds), *Globalization: Neoconservative Failure and the Democratic Alternatives*, Winnipeg: Arbeiter Ring, 2005, 287–302. <http://hdl.handle.net/1893/25183>

Beyond Dualism, in J B Davis (ed.), *Recent Developments in Economic Methodology*, Vol II, Cheltenham: Edward Elgar, 2006, 261–75.

With C. Rodriguez-Fuentes, Um ‘survey’ da literatura de finanças regionais, in Crocco, M. and Jayme Júnior, F. (eds), *Moeda e Território: uma interpretação da dinâmica regional brasileira (Money and Territory: An Interpretation of the Brazilian Regional Dynamics)*. Editora Autêntica: Belo Horizonte, 2006.

Endogenous Money: Structuralist, in P Arestis and M Sawyer (eds), *Handbook of Alternative Monetary Economics*. Cheltenham: Edward Elgar, 2006, 35–51. http://www.e-elgar.co.uk/bookentry_main.lasso?id=3506

Heterodox Economics: A Common Challenge to Mainstream Economics?, in E. Hein and A. Truger (eds), *Money, Distribution and Economic Policy – Alternatives to Orthodox Macroeconomics*, Cheltenham: Elgar, 2007, 31–46. <http://hdl.handle.net/1893/22619>

Pluralism in Economics, in J Groenewegen (ed.), *Teaching Pluralism in Economics*, Cheltenham: Edward Elgar, 2007. <http://hdl.handle.net/1893/22644>

With M Klaes and A Montagnoli, Monetary Policy by Signal, in D G Mayes and J Toporowski (eds), *Open Market Operations and the Financial Markets*, London: Routledge, 2007. <http://hdl.handle.net/1893/22632>

With A C Dow, History for Economics: Learning from the Past, in P E Earl and B Littleboy (eds), *Regarding the Past*, Brisbane: University of Queensland, 2008, 1–8.

With A Dow, Theories of Economic Development in the Scottish Enlightenment, in P E Earl and B Littleboy (eds), *Regarding the Past*, Brisbane: University of Queensland, 2008, 9–24.

The Future of Schools of Thought within Pluralist Economics, in J T Harvey and R F Garnett (eds), *Future Directions for Heterodox Economics*, Ann Arbor: University of Michigan Press, 2008, 9–26. <http://hdl.handle.net/1893/22642>

Monetary Policy, in J B Davis and W Dolfsma (eds) *The Elgar Companion to Socio-Economics*, Cheltenham: Edward Elgar, 2008, 463–77. Reprinted in W Dolfsma, M White, D Figart, E Mutari and R McMaster (eds), *Social Economics: Critical Concepts in Economics*, London: Routledge, 2016. <http://hdl.handle.net/1893/22650>

- History of Thought, Methodology and Pluralism, in Jack Reardon (ed.), *A Pluralist Handbook for Economics Education*, London: Routledge, 2009, 43–53. <http://hdl.handle.net/1893/22643>
- With M Klaes and A Montagnoli, Variety of Economic Judgement and Monetary Policy-Making by Committee, in E Hein, T Niechij and E Stockhammer (eds), *Macroeconomic Policies on Shaky Foundations: Whither Mainstream Economics?* Marburg: Metropolis-Verlag, 2009, 33–50. <http://hdl.handle.net/1893/22633>
- Smith's Philosophy and Economic Methodology, in J T Young (ed.), *Elgar Companion to Adam Smith*. Cheltenham: Edward Elgar, 2009: 100–11. <http://hdl.handle.net/1893/22651>
- Was There a (Methodological) Keynesian Revolution?, in B Dimand, R Mundell and A Vercelli (eds), *Keynes's General Theory after Seventy Years*, London: Palgrave Macmillan for the International Economic Association, 2010, 268–86. <http://hdl.handle.net/1893/22645>
- Psychology of Financial Markets: Keynes, Minsky and Emotional Finance, in D B Papadimitriou and L R Wray (eds), *The Elgar Companion to Hyman Minsky*, Cheltenham: Elgar, 2010. <http://hdl.handle.net/1893/22646>
- Economics and Moral Sentiments: The Case of Moral Hazard, in J C Caldas and V Neves (eds), *Facts, Values and Objectivity*, London: Routledge, 2012, 17–32. <http://hdl.handle.net/1893/22634>
- With P E Earl, J Foster, G C Harcourt, G M Hodgson, J Metcalfe, P Ormerod, B Rosewell, M C Sawyer and A Tylecote (2009), Letter to the Queen, 10 August, reprinted in G M Hodgson (ed.), *Mathematics and Modern Economics*, Cheltenham: Edward Elgar, 2012.
- Monetary Policy and Regulation of Financial Markets – A Keynesian View', in G Chaloupek and M Marterbauer (eds), *75 Jahre General Theory of Employment, Interest and Money, Wirtschaftswissenschaftliche Tagungen der AK-Wien*, reihe bd. 17, 2012, 43–60. <http://hdl.handle.net/1893/22640>
- The Methodology of Finance, in J Michell and J Toporowski (eds), *The Handbook of Critical Issues in Finance*, Cheltenham: Edward Elgar, 2012, 218–24. <http://hdl.handle.net/1893/22630>
- With P E Earl, J Foster, G C Harcourt, G M Hodgson, J S Metcalfe, P Ormerod, B Rosewell, M C Sawyer and A Tylecote, Letter to the Queen, 10 August, 2009, reprinted in G M Hodgson (ed), *Mathematics and Modern Economics*, Cheltenham: Edward Elgar, 2012.
- Keynes on Knowledge, Expectations and Rationality, in E S Phelps and R Frydman (eds), *Rethinking Expectations: The Way Forward for Macroeconomics*, Princeton, NJ: Princeton University Press, 2013. <http://hdl.handle.net/1893/10280>
- Policy in the Wake of the Banking Crisis: Taking Pluralism Seriously, in P Arestis and M Sawyer (eds), *Economic Policies of the New Thinking in Economics*, London: Routledge, 2013. <http://hdl.handle.net/1893/22627>
- Teaching Open System Economics, in J Jespersen and M O Madsen (eds), *Teaching Post-Keynesian Economics*, Cheltenham: Edward Elgar, 2013, 73–87. <http://hdl.handle.net/1893/18211>

- With V Chick, Financial Institutions and the State: A Re-Examination, in L-P Rochon and M Seccareccia (eds), *Monetary Economics of Production: Banking and Financial Circuits and the Role of the State*, Cheltenham: Edward Elgar, 2013, 99–111. <http://hdl.handle.net/1893/22628>
- The Real (Social?) Experience of Monetary Policy, in J Pixley and G C Harcourt (eds), *Financial Crises and the Nature of Capitalist Money: Mutual Developments from the Work of Geoffrey Ingham*, London: Palgrave Macmillan, 2013, 178–95. <http://hdl.handle.net/1893/18212>
- With V Chick, Post Keynesian Theories of Money and Credit: Conflicts and (Some) Resolutions, in G C Harcourt and P Kriesler (eds) *Handbook of Post-Keynesian Economics*, Oxford: Oxford University Press, 2013. <http://hdl.handle.net/1893/22629>
- Methodology and Post-Keynesian Economics, in G C Harcourt and P Kriesler (eds) *Handbook of Post-Keynesian Economics*, Oxford: Oxford University Press, 2013. <http://hdl.handle.net/1893/18210>
- Codes of Ethics for Economists, Pluralism, and the Nature of Economic Knowledge, in G DeMartino and D N McCloskey (eds), *Handbook on Professional Economic Ethics*, Oxford: Oxford University Press. Published online March 2014. oxfordhandbooks.com
- With A Dow, The Staples Approach and the Financial Crisis, in J Stanford (ed.), *The Staples Approach @ 50: Reflections on the Lasting Significance of Mel Watkins' 'A Staple Theory of Economic Growth'*. Toronto: CEPA, 2014, 114–7.
- With A Dow, Scotland, in V Barnett (ed.), *The Routledge Handbook to the History of Global Economic Thought*, London: Routledge, 2014, 38–47. <http://hdl.handle.net/1893/21077>
- The Role of Methodology in the Economics Curriculum, in M A Madi and J Reardon (eds), *The Economics Curriculum: Towards a Radical Reformulation*, London: College Publications, in collaboration with the WEA, 2014, 53–60. <http://hdl.handle.net/1893/21335>
- The Relationship Between Central Banks and Governments: What Are Central Banks for?, in C Goodhart, D Gabor, I Ertürk and J Vestergaard (eds), *Central Banking at a Crossroads: Europe and Beyond*, London, New York and Delhi: Anthem Press, 2014, 229–43. <http://hdl.handle.net/1893/22508>
- With A Dow, Economic Development in the Scottish Enlightenment: Ideas as Cause and Effect, in N Perdikis and K Ruziev (eds), *Development and Financial Reform in Emerging Economies*, London: Pickering and Chatto, 2015, 7–22. <http://hdl.handle.net/1893/21334>
- With K Ruziev, A Re-Evaluation of Banking Sector Reforms in Transition Economies: Intentions and Unintended Consequences, in N Perdikis and K Ruziev (eds), *Development and Financial Reform in Emerging Economies*, London: Pickering and Chatto, 2015, 81–98. <http://hdl.handle.net/1893/21333>
- Money, Banking and Deficits, in T Ali and D Ashiagbor (eds), *The Case for Full Employment*, London: Work Forum Press, 2015. <http://hdl.handle.net/1893/22504>

- Monetary Policy, in J B Davis and W Dolfsma (eds), *The Elgar Handbook of Socio-Economics* (second edition), Cheltenham: Edward Elgar, 2015, 533–47. <http://hdl.handle.net/1893/22506>
- Neoclassicism, Critical Realism and the Cambridge Methodological Tradition, in J Morgan (ed.), *What Is Neoclassical Economics?* London: Routledge, 2015, 102–18. [<http://hdl.handle.net/1893/22677>] <http://hdl.handle.net/1893/22695>
- Consistency in Pluralism and Microfoundations, in J Courvisanos, J Doughney and A Millmow (eds), *Reclaiming Pluralism in Economics*, London: Routledge, 2016, 32–46. ISBN 978-1-138-95176-1. <http://hdl.handle.net/1893/23344>
- Cambridge’s Contribution to Methodology in Economics, in R Cord (ed.), *The Palgrave Companion to Cambridge Economics*, London: Palgrave Macmillan, 2017, 27–49. ISBN 978-1-137-41232-4. <http://hdl.handle.net/1893/25165>
- Post Keynesian Economics: Conceptual Underpinnings, *British Review of Economic Issues*, 10.3.1–18, 1988, reprinted in L-P Rochon and S Rossi (eds), *Post-Keynesian Economics*, Cheltenham: Edward Elgar.
- Post Keynesianism as Political Economy: A Methodological Discussion, *Review of Political Economy*, 2.3.345–58, 1990, reprinted in L-P Rochon and S Rossi (eds), *Post-Keynesian Economics*, Cheltenham: Edward Elgar.
- Horizontalism: A Critique, *Cambridge Journal of Economics*, 20.4.497–508, 1996, reprinted in L-P Rochon and S Rossi (eds), *Post-Keynesian Economics*, Cheltenham: Edward Elgar, 2017.
- Post Keynesianism and Critical Realism: What Is the Connection? *Journal of Post Keynesian Economics*, 22.1.15–33, 1999, reprinted in L-P Rochon and S Rossi (eds), *Post-Keynesian Economics*, Cheltenham: Edward Elgar, 2017.
- Keynes on Domestic and International Monetary Reform, in S Dow, J Jespersen and G Tily (eds), *The General Theory and Keynes for the 21st Century*, Cheltenham: Edward Elgar, 2018, 132–44.
- Pluralist Economics: Is It Scientific?, in S Decker, W Elsner and S Flechtner (eds), *Advancing Pluralism in Teaching Economics: International Perspectives on a Textbook Science*, London: Routledge, 2018, 13–30.
- Why Regulate the Financial System?, in L A Lindman, M Storlie and A Crawford (eds), *Rethinking Finance*, Oslo: Rethinking Economics Norway, 2018, 36–44.
- Geoff Hodgson on Pluralism and Historical Specificity, in F Gagliardi and D Gindis (eds), *Institutions and Evolution of Capitalism: Essays in Honour of Geoffrey M. Hodgson*, Cheltenham: Edward Elgar, 2019, 14–28.
- Risk and Uncertainty, in R Dimand and H Hagemann (eds), *The Elgar Companion to John Maynard Keynes*, Cheltenham: Edward Elgar, 2019, 255–62.
- Opportunities and Challenges for Post-Keynesian Economics?, in J Jespersen and F Oleson (eds), *Progressive Post-Keynesian Economics: Dealing with Reality*, Cheltenham: Edward Elgar, 2019, 1–15.
- ‘Forward’ to P Armstrong, Can Heterodox Economists Make a Difference? *Conversations with Key Thinkers*, Cheltenham: Edward Elgar, 2020, xxi–xxii. ISBN: 978 1 80037 088 3

- Interview in P Armstrong, *Can Heterodox Economists Make a Difference? Conversations with Key Thinkers*, Cheltenham: Edward Elgar, 2020, 302–15. ISBN: 978 1 80037 088 3
- Money, Finance and the Role of the State, in B Dunn (ed.), *A Research Agenda for Critical Political Economy*, Cheltenham: Edward Elgar, 2020.
- The Methodological Role of the History of Economic Thought, in G Dellepalle, M C Marcuzzo and P Paesani (eds), *New Perspectives on Political Economy and Its History*, London: Palgrave Macmillan, 2020, 21–38.
- Financialization, Money and the State, in P Mader, D Mertens and N van der Zwan (eds), *International Handbook of Financialization*, London: Routledge, 2020, 56–67.
- ‘Is Macro in Crisis?’ in H Bougrine and L-P Rochon (eds), *Money and Crises in Post-Keynesian Economics: Essays in honour of Marc Lavoie and Mario Seccareccia*, Vol. 1, Cheltenham: Edward Elgar, 2020, 231–45. ISBN: 978 1 78643 954 3
- Pluralism and Heterodox Economics, in A Hermann and S Mouatt (eds), *Contemporary Issues of Heterodox Economics: Implications for Theory and Policy Action*, London: Routledge, 2020, 275–81.
- ‘Preface’ to J Robinson, *Economic Philosophy*, London: Routledge, 2021, viii–xvi.
- With A Dimmelmeier, Paradigms and Research Programmes, in J-F Morin, C. Olsson and E. Ozlem Atikcan (eds), *Key Concepts in Research Methods*, Oxford: Oxford University Press, 209–13.
- Review Essay on M Schabas and C Wennerlind, *A Philosopher’s Economist: Hume and the Rise of Capitalism*, *Æconomia*. <https://journals.openedition.org/oeconomia/11048>

Forthcoming

- Unification and Pluralism, in B Caldwell, J Davis, U Mäki, and E-M Sent (eds), *Methodology and History of Economics: Reflections with and without Rules. Essays in Honour of D. Wade Hands*, London: Routledge, 2022.
- Uncertainty and Macroeconomic Methodology, in V Chick and J Jespersen (eds), *Handbook of Macroeconomic Methodology*.
- Economics, the Plastic Arts and Social Transformation, in C Repapis and S Myrogiannis (eds), *Economics and Art Theory*, London: Routledge.
- Marshallian, in B Haddad and B D Solomon (eds), *Dictionary of Ecological Economics*, Cheltenham: Edward Elgar.

Encyclopaedia/dictionary entries

- Geoff Harcourt, in Cate, T et al (eds), *Encyclopedia of Keynesian Economics*, Elgar, 1997, 226–9. Second edition 2009/2010.
- Liquidity Preference, in O’Hara, P et al (eds), *Encyclopedic Dictionary of Political Economy*, London: Routledge, 1999, 670–73.
- Money Supply: Endogenous or Exogenous?, in H Vane and B Snowdon (eds), *An Encyclopedia of Macroeconomics*, Elgar, 2002, 500–3.

- The Babylonian Mode of Thought, in J King (ed.), *The Elgar Companion to Post Keynesian Economics*, Cheltenham: Elgar, 2003, 11–5.
- David Hume, in J J McCusker (ed.), *Encyclopaedia of World Trade since 1450*, Farmington Mills, MI: Macmillan, 2005.
- Pluralism, in S Durlauf and L Blume (eds), *The New Palgrave Dictionary of Economics*, 2nd edition, London: Macmillan, 2008.
- Economic Methodology, in *The International Encyclopedia of the Social Sciences*, 2nd edition, London: Macmillan Reference/Thomson, 2008.
- The Babylonian Mode of Thought, in J King (ed.), *The Elgar Companion to Post Keynesian Economics*, second edition, Cheltenham: Edward Elgar, 2012. <http://hdl.handle.net/1893/22647>
- With V Chick, Choice under Uncertainty, in J King (ed.), *The Elgar Companion to Post Keynesian Economics*, Cheltenham: Edward Elgar, 2012. <http://hdl.handle.net/1893/22617>
- The Liquidity Trap, in L-P Rochon and S Rossi (eds) *Encyclopedia of Central Banking*, Cheltenham: Edward Elgar, 2015, 300–2. <http://hdl.handle.net/1893/22505>
- Regional Finance, *The International Encyclopedia of Geography: People, the Earth, Environment and Technology*, Wiley-AAG. <http://onlinelibrary.wiley.com/doi/10.1002/9781118786352.wbieg0472/pdf> <http://hdl.handle.net/1893/23502>
- Animal Spirits, in L-P Rochon and S Rossi (eds) *Encyclopedia of Post-Keynesian Economics*, Cheltenham: Edward Elgar.
- Methodology, in L-P Rochon and S Rossi (eds) *Encyclopedia of Post-Keynesian Economics*, Cheltenham: Edward Elgar.

Popular journal/website paper

- With A C Dow, The Balance of Payments and Economic Policy, *Canadian Forum*, 59.5.20–3, 1979.
- A Finance Policy for Scotland, *Fraser of Allander Quarterly Economic Commentary*, 17.2.61–3, 1991.
- The Relevance of Controversies for Practice as well as Teaching, *PAE Newsletter*, 6.6–8, 2001.
- The Forces Driving the Scottish Economy, *Perspectives*, Spring 2003.
- Redesigning Global Financial Institutions, *Perspectives*, Winter 2008.
- Economics for the Future, *RSA Journal*, Winter.24–7, 2010.
- Time to Accept Economic Known Unknowns? The Case for ‘Pluralism’, *Conversation*, 26 November 2011. <http://hdl.handle.net/1893/23492>
- ‘Policy in the Wake of the Banking Crisis’, *Australian Options*, Summer, 22–3, 2011/2012.
- Economic Thinking, www.usilive.org/economic-thinking/, April 2012.
- Perspectives on the Global Financial Crisis, *QFinance*, 5th edition, London: Bloomsbury 2014.

The Culture of Expertise in Macroeconomics, Rebuilding Macro blog 7 January 2018, <https://www.rebuildingmacroeconomics.ac.uk/culture-expertise-macroeconomics/>

Journal letters/notes/short papers/abstracts (in refereed academic journals)

- Reply: Neoclassical Tautologies and the Cambridge Controversies, *Journal of Post Keynesian Economics*, 5.1.132–4, 1982.
- Substantive Mountains and Methodological Molehills: A Rejoinder, *Journal of Post Keynesian Economics*, 5.2.304–8, 1982–1983.
- On Keynes's Method*, Anna Carabelli and *Keynes: Philosophy, Economics and Politics*, R M O'Donnell: Review Essay, April 1991. <http://hdl.handle.net/1893/26298>
- Post-Keynesian Methodology: A Comment, *Review of Political Economy*, 4.1.11–3, 1992.
- Scottish Business Affairs: A Comment, *Scottish Affairs*, 1.157–8, 1992.
- Kuhn's Paradigms and Neo-Classical Economics: A Comment, *Economics and Philosophy*, 28.2.221–2, Spring 1994.
- Comment on Kloten paper, in S Frowen and J Holscher (eds), *The German Currency Union of 1990: A Critical Assessment*, Macmillan, 1997, 200–2.
- Editorial Note for Controversy on Formalism in Economics, *Economic Journal*, 108.451.1826–8, 1998.
- The Foundations of Economics, Review Article, *Economic Issues*, 3.1.81–4, 1998.
- Brown Comment: A Reply, *Journal of Post Keynesian Economics*, 23.2.357–60, 2000–2001.
- Science Studies: An Exemplar, *Journal of Economic Methodology*, 8.3.423–8, 2001.
- Axioms and Babylonian Thought: A Reply, *Journal of Post Keynesian Economics*, 27(3), 2005, 383–9. <http://hdl.handle.net/1893/25177>
- Transforming Economics through Critical Realism, *Journal of Critical Realism*, 5.1.151–8, 167–8, 2006.
- Introduction: The Methodology of Development Economics, *Journal of Economic Methodology*, 14.1.1–4.
- Addressing the Psychology of Financial Markets: Comment, *Economics*, posted online 25/09/09.
- Economics and Ethics, *ISRF Bulletin* XI.10–14.
- People Have Had Enough of Experts, INET Symposium on Experts, February 2017. <https://www.ineteconomics.org/perspectives/blog/people-have-had-enough-of-experts> <http://hdl.handle.net/1893/25180>



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