The Structure of Post-Keynesian Economics: The Core Contributions of the Pioneers

G. C. Harcourt*

***Abstract*:** This paper summarises the key elements of Geoffrey Harcourt's (2006) book of the same title. Special emphasis is given to the contribution of the Cambridge pioneers, such as John Maynard Keynes, Richard Kahn, Joan Robinson, Nicholas Kaldor, Michal Kalecki, Richard Goodwin, Piero Sraffa, Luigi Pasinetti, and Dennis Robertson. The objective of their approaches is to comprehend the dynamics of an advanced capitalist economy, particularly in the context of a monetary system of production. Here, investment leads and saving follows, while the marginal propensity to save of capitalists is greater than that of workers. The economic surplus is produced in the consumption goods sector, and utilised in the capital goods sector. Mark-up pricing is important for the determination of the surplus, as is the trade off between profit-margins and sales. Kalecki's principle of increasing risk plays a role in the cyclical dynamics, as does the two-sided relationship between profitability and accumulation. The prevailing business climate is important in determining future expectations, while endogenous money and credit help to finance investment. Growth is thus endogenous in these models of finance, accumulation and profit, while potential conflict plays a role in the pricing and investment decisions and in the process of inflation. A general policy vision emanates from these foundations.

1 Introduction

I start, first, by thanking the original inhabitants of the land on which we are now meeting for their courtesy in having us as their guests. Secondly, I must apologise to Peter Groenewegen and John King as they have already heard me talking on the present topic at the ESHET Conference in Porto in April 2006. Also, following John King's comments as discussant of the paper at Porto (I thoughtfully lent him the page proofs of the book on which the paper was based, Harcourt (2006), to read on the day the paper was presented), I feel I should have subtitled the book, *The Core Contributions of the Cambridge Pioneers.* But, as I quote Dennis Robertson in the Preface to the book as saying, 'it can't be helped now' (Robertson 1957, p. 7).

When writing the book, I had in mind two sets of readers: first, undergraduate and graduate students who may be looking for alternative approaches to thinking about theoretical, applied and policy issues in economics. By presenting a structure of the thought (and its origins) that I have found so helpful over my working life I hope at least to interest and possibly even enthuse this first set. Second, I also hope that what I have written may interest teachers and researchers in economics, not so much perhaps for the details of the analysis, with which many would be familiar, but for the way in which one person at least sees the interconnections and interrelationships that have emerged as our discipline has evolved and developed.

The ideas in the book themselves have evolved and developed for me over the past fifty years, in both lectures and research. My model is not exactly Dennis

Robertson's three volumes of *Lectures on Economic Principles* in Cambridge (1957, 1958, 1959); but I suppose it has something in common with them, even with his admission that 'if it is all wrong, it can't be helped now' (Robertson 1957, p. 7). I trust, though, that I have not written in quite so querulous a tone as that into which Robertson sometimes lapsed, for I remain, as ever, a happy and enthusiastic, even optimistic, person who nevertheless is willing to admit that he may be wrong.

I wrote the first draft of the Preface in April 2005, in the fiftieth year since I first came to Cambridge in September 1955. Half my working life has been spent here (the other half in Adelaide, most happy years) and I count myself most fortunate to have studied and taught in such a stimulating and satisfying, even if sometimes so cantankerous an environment.

Much more than this, though, in 2005 Joan and I celebrated our Golden Wedding anniversary on 30th July. As ever, her love and support made possible the writing of the book, much of which occurred in the study she imaginatively prepared for me in our New Square home when, having had three years' grace over and above the obligatory seventy years' constraint, I no longer had a room at Jesus. I dedicated the book to her with my love.

2 The Cambridge Pioneers

Why post-Keynesian economics and who were its Cambridge pioneers? Maynard Keynes, Richard Kahn, Richard Goodwin, Nicholas Kaldor, Luigi Pasinetti, Joan Robinson and Piero Sraffa all started initially, at least in some degree, within the mainstream of their time. They all moved well and truly outside it, attempting to create either a revolutionary alternative or to rehabilitate the classical Marxian tradition, in most cases in the light of the Keynesian revolution. The one exception is Michal Kalecki, whose personal history and independent mind combined to place him virtually always outside the mainstream. The book, though, is not principally concerned with why and how the discontents that led them to change their minds arose. Rather, its principal object is to set out the structures of their alternative approaches in order to suggest modes of thinking about theoretical and policy issues in political economy.[1]

The structures presented here are based on over forty years of teaching and researching under the rubric of what is now called post-Keynesian economics. I certainly was not aware that it was so called when I started on this track in the 1950s. In fact, I have much sympathy with the stance of my old friend, the late Athanasios (Tom) Asimakopulos, who declined an invitation to be included in the first edition of Philip Arestis and Malcolm Sawyer's admirable *A Biographical Dictionary of Dissenting Economists* (1992), because he regarded his views and contributions as belonging fully within the mainstream of economics proper, not in a dissenting stream.[2] It was only in order to provide a suitable tribute to his influential contributions and splendid personal example as a teacher and human being that his widow, Marika, allowed the entry on Tom to be included in the second edition of Arestis and Sawyer (see Harcourt 2000). However, it must be admitted that when I first wrote this (August 2004), though something of a backlash/comeback may be discerned (see Harcourt 2001 for reasons why), the views and approaches taken in the book still continue to be regarded by the bulk of the profession as those of dissenters.

The most succinct definition of post-Keynesian economics comes from Joan Robinson (1978; *CEP*, volume V, 1979, p. 210): 'To me, the expression *post-*

Keynesian has a definite meaning; it applies to an economic theory or method of analysis which takes account of the difference between the future and the past' (emphasis in the original).

I obviously have no quarrel with this; but, as I try to be ever-mindful of historical developments, I also wish to stress that the approaches to political economy that reflect post-Keynesian thought are there partly for historical reasons and partly because of logical associations. Post-Keynesianism is an extremely broad church. The overlaps at each end of a long spectrum of views are marginal (*sic*), often reflecting little more than a shared hostility towards mainstream neoclassical economics and methodology, *IS/LM* Keynesianism and the 'fix-price' Keynesianism of the 'New Keynesians' and certain French economists. Some post-Keynesians are working actively towards a synthesis of the principal strands.[3] Others regard the search for a synthesis, for a general all-embracing structure, as a profound mistake: to quote Joan Robinson (1974; *CEP*, volume V, 1979, p. 119), a founding mother, a misguided attempt to replace 'one box of tricks' by another. Post-Keynesianism should be a situation-and-issue-specific method of doing political economy, a 'horses for courses' approach, itself an all-embracing structure at the methodological level (see Harcourt 2001, Essay 19).

The principal object of analysis is the advanced capitalist economies of the twentieth and twenty-first centuries. The central aim is to provide a framework within which to understand and explain their macroeconomic and/or microeconomic processes over time. It must be admitted that the tradition within which they are presented objects vigorously to the microeconomic/macroeconomic dichotomy of mainstream economics (see Joan Robinson 1977b; *CEP*, volume V, 1979, pp. 4-5 for a typically forceful argument why.) Basically, neither individual nor group/class behaviour may be understood without making explicit the economy-wide structures and relationships that provide the backdrop to their behaviour. Similarly, economy-wide structures and relationships not only influence but also are influenced by individual and group/class motivations and behaviour. Thus the microeconomic foundations of macroeconomics must always be complemented with—indeed, it could be argued, dominated by—the macroeconomic foundations of microeconomics, see Crotty (1980).[4]

The particular subsets of the mainstream literature that this happy band became increasingly dissatisfied with were the theory of distribution, especially the marginal productivity theory in its aggregative form (but also the supply and demand approach in general, see Bharadwaj 1978); the theory of pricing at the level of the firm and the industry, principally as it came down from Marshall and Pigou; the theory of investment behaviour and expenditure that is implied in Marshall and Pigou and, more explicitly, in the writings of Irving Fisher; and the theory of growth, to which is allied the theory of the trade cycle (the business cycle to our North American cousins), as it has been developed in the postwar period by leading neoclassical economists (some of whom, for example, James Meade, Robert Solow and Trevor Swan were/are also leading Keynesians). In doing so, they were inspired and stimulated – even irritated – by Roy Harrod's and Evsey Domar's seminal contributions in the late prewar and early postwar years. The final objective of the book was to show how the alternative theories of the post-Keynesians under each of these heads may be combined into an overarching general framework that may then be applied in explanations of postwar happenings in the advanced capitalist world. This same framework, together with its constituent parts, may be used to rationalise various policy proposals that tackled, or should have been used to tackle, some of the major malfunctions of these economies in the same period.

An equally important aim of the volume was to rescue the pioneering contributions of this first generation from the benign neglect and misunderstandings that are starting to occur as the time from their respective deaths lengthens. It is important to have recorded for posterity the background and the nuances to the making of the theories by people who knew these pioneers personally and who were present for at least part of the time when the ideas were developed, not only to restore them to their correct place in the narrative but also to correct the misconceptions and often neglect they suffer or experience as the third and even fourth generation of post-Keynesians increasingly come to constitute the post-Keynesian literature and canon. I do not mean to denigrate the contributions of the latter groups; but I would like to restore to their rightful place the fundamental pioneering contributions of the first contributors.[5]

3 Structure and Main Themes of the Book

The structure of the book is as follows: in chapter 2 I discuss post-Keynesian macroeconomic theories of distribution. I start with Kaldor's 1955-6 paper, as it is the best known. I use it and its characteristics as the backdrop to discussions of Kalecki's earlier contributions, including his review of Keynes's *General Theory*, Joan Robinson's eclectic approach and Frank Hahn's macro theory of employment and distribution, which was initially developed in his PhD dissertation at the LSE in the later 1940s and early 1950s.

I start with Kaldor's paper not only because it is the best known but also because it is the most idiosyncratic. For here was Kaldor, an eminent Keynesian, arguing that a growing capitalist economy, if it is in equilibrium, must be at full employment, and that the theory he developed is a long-period one. The theory is Keynesian because he insists that investment leads and saving responds. But his first two assumptions led Paul Samuelson (1964) to dub him Jean-Baptiste Kaldor. Kaldor used two empirical generalisations to complete his model: first, that prices are more flexible than money wages in the long term, and so change more rapidly than money wages in situations of excess demand or supply; secondly, that the marginal prosperity to save of profit-receivers (profits) is greater than the marginal prosperity to save of wage-earners (wages).[6] This allowed total saving (as a proportion of full employment long-period income) to change as the distribution of income changed in response to discrepancies between planned investment (as a proportion of full employment long-period income) and the initial value of planned saving (also as a proportion of full employment long-period income), until planned saving and planned investment were equal to one another.

In Kalecki's earlier account of a macro theory of distribution, the analysis applied to the short period, in which there is not necessarily full employment, so that both the distribution of income and the levels of activity and employment may be determined simultaneously. An explicit connection is made between the pricing practices of firms and the overall distribution of income. (In Kaldor's early models on these themes price-setting behaviour is not explicitly discussed.)

In my book I use Joan Robinson's well-known exposition of Kalecki's theory (see Joan Robinson 1977a; *CEP*, volume V, 1979). It is presented in a neat diagram on which several generations of Cambridge undergraduates have been brought up, first by Joan Robinson and then, later, by me in my lectures in the 1980s and 1990s on post-Keynesian economics.

As we have already noted, Joan Robinson's approach over the years to the theory of distribution was eclectic. By the time she published her *magnum opus, The Accumulation of Capital,* in 1956, she was working within Kalecki's structure, which had applications not only to an understanding of how capitalism works but also to how a democratic socialist regime could work too. (Alas, the Stalinists in charge of Kalecki's native Poland never gave him a chance to put his suggestions into practice when he returned there in the 1950s.)

I illustrate Joan Robinson's approach in which she used his structure by examining the real aspects of the creation and extraction of a surplus from the consumption goods sector to be used by the workers in the investment goods sector. I show the crucial roles of productivity in the consumption goods sector and the size of the real wage in the determination of the *potential* rate of accumulation—whether it is *realised* or not depends, of course, on the planned investment behaviour of the capitalist class in given situations in capitalism and of planners and managers in socialism. The analysis follows David Worswick's 1959 stockade dictator version of Joan Robinson's model in *The Accumulation of Capital* (a representation with which she was not *that* pleased) and Harry Johnson's 1962 version of her model with one technique of production available and dominant at any moment of time. (She felt that the major propositions of her theory of growth could be established without explicitly incorporating an analysis of the choice of techniques.)

I also exposit Kalecki's extraordinary review article of *The General Theory*, which unfortunately was not published in full in English until December 1982.[7] The review not only shows conclusively that Kalecki independently discovered the principal propositions of *The General Theory* but also that he set the arguments in the most appropriate framework for analysing capitalism—Marx's schemas of production and reproduction. He showed explicitly both the microeconomic foundations of macroeconomics, including a macroeconomic theory of distribution and the reverse flow of macroeconomic foundations of microeconomics. In the process he showed that market structures were qualitatively unimportant in establishing the main systemic results (see also Shapiro 1997 and Marris 1997).

Post-Keynesian theories of the determination of the size of the mark-up were discussed in chapter 3. Adrian Wood's 'Golden Age' model (1975) was taken as the benchmark against which were assessed the 'historical time' model developed by Peter Kenyon and myself (1976) and the choice of technique in the investment decision in both the orthodox and the post-Keynesian approach.[8] Wood's model is explicitly Golden Age or steady state with expectations always realised so that the analysis is set in logical time. Harcourt and Kenyon's model is an attempt to set the same general problem in historical time, relating pricing and the investment decision to succeeding short-periods' behaviour of the firm. Discussion of the latter model is preceded by an analysis of the choice of technique in both an orthodox and a post-Keynesian setting, partly because Wood claimed that his analysis was unaffected by the choice of technique rule used, and partly in order to illustrate the different results obtained, according to whether the neoclassical axiomatic approach, or the post-Keynesian approach based on real-world decision-making rules, is employed.

Wood developed a relationship between the rate of growth of sales revenue of the firm and the size of the mark-up needed to provide internal finance to match the accumulation needed to sustain this rate of growth, given the supply of external finance in the existing situation. He identified an opportunity frontier and a finance frontier. The former takes in the opportunities for growth of the firm in terms of alternative pricing, investment and sales policies. At some point the firm encounters a trade-off between a higher profit margin on the one hand and a higher rate of sales on the other. Rates of accumulation are the clue to how fast sales may grow because they determine both capacity and costs of production. There is a unique opportunity frontier for the firm, which itself is usually taken to be a price leader in an oligopolistic setting operating in situations of given overall aggregate demand.

The finance frontier relates to the trade-off between mark-up levels, rates of growth of sales revenues and the investment needed to provide the capacity to produce the output associated with the sales. Where the two frontiers intersect determines both the mark-up set and the rate of growth of sales (and of accumulation to back them up).

When choice of techniques is possible the two frontiers become families, each member of which is associated with a given technique of production. Because the opportunity frontiers move out at a decreasing rate (convex to origin isoquants) while the finance frontiers fan out at a proportional rate, their intersections provide a locus that has a maximum rate of growth of sales revenue, size of mark-up combination. The chapter closes with a discussion of why internal finance is usually preferred to other forms of finance of investment expenditure. Kalecki's principle of increasing risk is taken as the most insightful explanation.

Chapter 4 is concerned with macroeconomic theories of accumulation. It starts with a critique of the details of Keynes's theory in *The General Theory* and after. The critique stems from the writings of Abba Lerner, Kalecki, Joan Robinson and Asimakopulos. The critique argues that Keynes had the right ingredients but the wrong recipe in his chapter 11 on the marginal efficiency of capital (*mec*). Lerner (1944) provided an internal critique by pointing out that Keynes failed to distinguish between the *mec* and the marginal efficiency of investment (*mei*), even though it was the latter in which he was principally interested because it related to the short-period equilibrium flow of aggregate investment. Lerner's conclusions may be stated in two propositions: (1) in full, stock-flow equilibrium, $mec = mei = i$, where i is the exogenously given value of the rate of interest; and (2) in short-period flow equilibrium, $mei = i < mec$.

Even these refinements would not suffice for Keynes's three other critics. Keynes had given two reasons why there is, in any given situation, a downward sloping relation between desired rates of accumulation and given values of i. The first, relating mainly to the short period, is associated with the assumption of rising marginal costs of production in the short period and marginal cost pricing being usually universal in all sectors of the economy. With given expectations about future flows of expected profits associated with possible investment projects, higher supply prices implied lower *mei*'s. But, his critics argued, this may only occur in the economy as a whole *if* individual business people in the calculations of their *mei*'s used, not known current market prices of investment goods, but rather their equilibrium prices which aggregate investment, if implemented, would bring about. That is to say, Keynes had assumed rational expectations for a second time in his life. (The first was when he planned to do just enough preparation to become 12th

Wrangler in the finals of the Mathematics Tripos at Cambridge in 1905, a respectable but not brilliant result which satisfied him but not his father.)

The second reason, a more long-period one, rested on the assumption that long-term demand curves for products were givens while short-period supply curves in future periods would be farther and farther out to the right, the greater were the levels of investment in the current short period (because they would supply greater and greater capacities in the future). The intersections of the supply and demand curves thus implied lower and lower expected prices and therefore expected profits and so lower *mei*'s, the larger the investment now.

But here Keynes was being untrue to his own self, as he always argued in other contexts that the present played a large role in determining expectations about the future. As higher levels of accumulation now would imply greater sales, higher prices and profits, these should be expected in the future and so longer-term demand curves could *not* be taken as givens. Therefore it was not inevitable that expected prices and profits would be lower and so *mei*'s less.

The solution of the critics was to take Keynes's ingredients and rewrite the recipe in terms of a two-sided relationship between profitability and accumulation. Thus, higher rates of accumulation now implied higher systemic profitability. Higher profitability now meant higher expected profitability in the future which would induce higher rates of desired accumulation. Where the two relationships intersected gave, in effect, through Joan Robinson's famous banana diagram (Joan Robinson 1962, p. 48), her version of Harrod's warranted rate of growth—for the expectations of business people in a given situation would be realised and so maintained. At least, this was so provided the relationships themselves remained unaffected over time by what Harold Macmillan once memorably called (in a different context, of course), 'events, dear boy, events'. All the ingredients involved in their criticism therefore come together in Joan Robinson's well-known banana diagram, an exposition of which ended the chapter.

Chapter 5 contains a brief discussion of money and finance—whether they are exogenous or endogenous in theory and real life. The narrative starts with Keynes's 1937 articles on the finance motive, which stress the distinction between finance and saving and the ordering, at individual and systemic level, of finance $\rightarrow$ investment $\rightarrow$ saving. On this base I erect the arguments of modern scholars—Kaldor (1983), Basil Moore (1988), Victoria Chick, Sheila Dow, Giuseppe Fontana (2003), for example—as to why finance, especially banking finance, is predominantly endogenous and that Keynes did *not* disagree with this. For his immediate purposes in *The General Theory*, he took the supply of money as a *given* but not as an exogenous variable. His liquidity preference theory may then be restated in an endogenous money framework as Sheila Dow (1997) showed. As I explain at the beginning of the chapter I have always found money and the theory of money something of a mystery but that does not mean that I regard them as unimportant. After all, one of Keynes's greatest innovations and achievements was to analyse a monetary production economy by integrating monetary and financial considerations with real ones right from the start of the analysis.

In chapter 6 all the previous developments are brought together in an explanation of postwar inflationary episodes, drawing on the conflict inflation models of Steve Marglin (1984a, 1984b) and Bob Rowthorn (1977). Although Rowthorn clearly had precedence, I chose Marglin's version as its components fitted so neatly with what had gone before in the earlier chapters. Both authors stressed the crucial insight that lasting but not accelerating inflation serves to bring about an uneasy truce between capital and labour. Neither completely achieved their aspirations (rates of accumulation for capital, real wage levels and rates of increase for labour) but through inflation the non-realisations of aspirations never tended to worsen either.

Theories of growth from Adam Smith to 'modern' endogenous growth theory are discussed in chapter 7. We start with Smith and Ricardo's theories, move on to Marx and then to Harrod's theory. The reaction to Harrod's findings and problems by Solow and Swan, on the one hand, and Kaldor and Joan Robinson, on the other, are then discussed together with Richard Goodwin's eclectic theories and Pasinetti's grand synthesis. The chapter closes with discussions of Kaldor's later views in which he scraps many of his earlier ideas in order to stress the complementarity between the production of primary products and industrial products in the world economy, and of endogenous growth theory, emphasising how it relates to previous discussions from Smith on.

The concluding chapter 8 uses the approaches developed in earlier chapters to examine their application to policy issues. It discusses how 'vision', approach and method interrelate with policy recommendations. It closes with a proposed 'package deal' solution to a crucial dilemma raised by Kalecki in his classic 1943 paper on the political aspects of full employment, especially how it may be permanently sustained as opposed to attained from a deep slump.

The volume ends with two appendixes: biographical sketches of the pioneers—Keynes, Kalecki, Sraffa, Joan Robinson, Kahn and Kaldor—and an account of the conceptual core of the post-Keynesian discontent with the orthodox theories of value, distribution and growth. I not only discuss the theoretical core and results of the Cambridge–Cambridge controversies in capital theory but also the implications of the Cambridge, England, findings for econometric theory and practice. In particular, I stress the dangers for econometric specification of collapsing the long period and short period into one, even within the neoclassical framework. The reason why I confine these criticisms to an appendix is because I want to emphasise in the text the positive aspects of the post-Keynesian approach and structure.

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Notes

1 Some of the reasons for their discontent are given in the appendixes to the volume: these contain short intellectual biographies of the main contributors (Appendix 1) and a sketch of some of their principal arguments (Appendix 2).

2 As with Brian Reddaway and Austin Robinson, Tom's contributions are erected firmly and securely on the base of a thorough knowledge of the writings of Marshall and Keynes and, in Tom's case, of Kalecki and Joan Robinson, as well as on a deep critical understanding of the content and method of neoclassical economics.

3 The deepest and most profound example of the attempts to provide a coherent synthesis is the splendid monograph by Heinrich Bortis, *Institutions, Behaviour and Economic Theory: A Contribution to Classical-Keynesian Political Economy* (1997).

Reading successive drafts of Henry's book taught me so much. If I were ever to be persuaded that a synthesis were possible, it would be because of his arguments. A referee suggested Marc Lavoie's *Foundations of Post-Keynesian Economics* (1992) as the other significant work that should be mentioned.

4 A referee points out that in Kalecki's approach, 'certain key elements are determined at the micro level, while others are determined at the macro level, so that [the determination of] the level of total employment … requires both micro and macro. [Hence] it does not make sense to talk about either being a "foundation" for the other'. I do not completely agree; see my discussion of Kalecki's model in Harcourt (2006).

5 Paul Davidson (2003-4) has written a most idiosyncratic review article of John King's history of post-Keynesian economics since 1936 (King 2002). It was entitled 'Setting the record straight . . .' I was tempted to write a reply with Luigi Pasinetti entitled '*Really* setting the record straight' but desisted after I read the courteous but powerful replies to Davidson by Marc Lavoie and King himself.

6 Luigi Pasinetti's famous 1962 paper analyses what happens when wages are not the sole source of income of wage-earners because they have saved in the past and acquired financial and other assets.

7 I asked a former Cambridge graduate student of mine, Ferdinando Targetti, and his Polish wife, Boguslawa Kinder-Hass, to translate the article for publication in *Australian Economic Papers*, with a commentary by them (see Targetti and Kinder-Hass 1982). I regard it as the most important article published during my years as joint editor of *Australian Economic Papers*.

8 A referee has pointed out that in the literature relating to these issues there is a debate concerning the appropriate notion of costs as well as what determines the mark-up. There are also two broad approaches to the latter: one which follows Kalecki in locating it in the oligopolistic conditions facing the firm, the other, which is exposited in the book, locates it in the investment plans of the firm.

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