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Foundations and History of post-Keynesian Macroeconomics

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Main features and contents of the presentation

- I will:
- approach the topic from an historical point of view looking at the analytical issues more than at individuals' contributions in the history of PK economics (to avoid long lists of names and contributions or alternatively unfair short lists I will make almost no references - suggest some readings at the end)
- state what I regard as the main common views as well as differences, and often present my on views on debated issues;
- start from analytical issues emerging from Keynes's *General Theory* and its reception, and then move to the present to give a sense of what are the main answers given to those issues and what are the current achievements and directions of research;
- treat 'post-Keynesian' economics with a 'broad-tent' approach (Lavoie, 2022): comprising a plurality of strands within non-mainstream economics

Foundational propositions

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- What I regard as the two main foundational and shared pillars of 'post-Keynesian' (PK) economics broadly understood are:

- **The principle of effective demand as *the* theory of *output* and *employment***
- **An explanation of income distribution based on institutional factors and power relations and NOT on factor demand functions based on neoclassical 'well-behaved' substitution.**

- Accordingly, I regard as the **fundamental dividing line** between post-Keynesian and mainstream approaches the reference to decreasing demand curves for labor and/or capital and investment to determine wages, (un)employment, interest rate and investment (demand for capital).

Some other themes in PK tradition

Several other views concerning the functioning of the economic system are broadly shared, for example:

- *money endogeneity* and the role of Central banks in determining the interest rate;
- *the refusal of methodological individualism* as the correct approach to interpret the working of the economy and society at large.

In addition, post-Keynesian economists have provided important contributions to the understanding of *financial markets and their instability*, and to the analysis of *open economies*

But I regard the views on effective demand and distribution as the foundational ones and the necessary premises for the others - including the methodological approach.

Brief detour on a personal and not widespread view: methodology I believe to be the *consequence* of theory, more than its 'cause'.

To the extent neoclassical theory is believed to demonstrate that starting from individual choices all economic variables of interest can be determined, then methodological individualism can be defended

BUT: If starting from individual choices important economic variables such as distribution and relative prices, *cannot be determined*, then methodological individualism could not be justified.

The General Theory: achievements and shortcomings (1)

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- The principle of effective demand was proposed by Keynes as a *general* theory of output and employment and NOT as a theory of depressions or cyclical fluctuations. This is very clearly stated:

- **"I have called this book *The General Theory of Employment, Interest and Money*, placing the emphasis on the prefix *general* [...] I shall argue that the postulates of the classical theory are applicable to a special case only and are not the general case, the situation which it assumes being a limiting point of the possible positions of equilibrium" (GT, Chapter 1)**

- **"…the pure theory of what determines the actual employment of available resources has seldom been examined in great detail…every discussion concerning fluctuations of employment, of which there have been many, has been concerned with it…but I mean…that the fundamental theory underlying it has been deemed so simple and obvious that it has received at most a bare mention." (GT, Chapt 2, pp 4-5)**

- These I read to mean that the aim is to prove that below-full-employment *equilibria* are possible, that is: persistent, average positions of the economy (around which there may be cyclical fluctuations)

The General Theory: achievements and shortcomings (2)

- Did Keynes succeed in proving the persistence and ‘normality’ and persistence of involuntary unemployment and uder-utilization of capacity? Only partly, it may be contended.

- The principle of effective demand is extremely important and path-breaking in finding definite answers to questions that had been debated ever since (e.g. Malthus and Ricardo, the evolution of economic crises in Marx and the Marxist tradition).

The General Theory: *achievements* and shortcomings (3)

Taking investments as given, the theory says that, in an open economy

- $E = Y/q = [A / (1-c(1-t) + m)] * (1/q)$

With **A** the autonomous components of demand (autonomous from current GDP), **t** the tax rate and **m** the propensity to import, **E** the employment level and **q** the average output per worker.

This simple model is very rich and very ‘revolutionary’ with respect to neoclassical theory:

- a macroeconomic equilibrium between aggregate demand and supply can emerge from the spontaneous working of market forces, which is not, in general, a full-employment equilibrium.

- savings are not the ‘source’ of investments but are *determined by* investments and the other autonomous components of demand through the changes in output level – hence the *paradox of thrift*.

- Employment depends on effective demand, including the propensity to consume (hence, positively on real wages and the wage share, since wage earners have a higher propensity to consume than wealthier social groups).

The General Theory: achievements and *shortcomings* (4)

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If the economy is below full-employment level, would a competitive decline of money wages allow the economy to reach the full employment equilibrium?

Keynes discusses this in chapt 19 of the *General Theory:*

- *denies* that a fall in *nominal* wages – the ones workers negotiate – can bring about changes in the relevant variables: propensity to consume, marginal efficiency of capital (the investment function) and the rate of interest, such as to lead to an increase in consumption or investment and hence of employment.
- Although the arguments developed by Keynes in this chapter are relevant and interesting, they did not completely overcome some underlying weaknesses of his analysis.

The General Theory: achievements and *shortcomings* (5)

The weaknesses are connected with the fact he provided a theory that overturned neoclassical *conclusions* but did not question the Marshallian *foundations:*

- retained the neoclassical decreasing demand curves for labour and capital, hence for **investment**.
- This paved the way for the '**Keynes's effect**' that he described and downplayed in chapter 19, but was soon used (by Hicks, Modigliani, and other economists of the '*neoclassical synthesis*') to show that the economic system has self-adjusting mechanisms toward full employment.
- The argument runs as follows: if there is involuntary unemployment, a decline in nominal wages and hence in costs of production and prices (the price level) will lead to a decrease in the demand for money for transaction purposes, hence a decline in the interest rate and an increase in investment:
- **U => $\downarrow$ Wn => $\downarrow$ P => $\downarrow$ Md => $\downarrow$ i => $\uparrow$ I**

The General Theory: achievements and *shortcomings* (6)

- The 'Keynes effect' was the foundation of the neoclassical synthesis and most mainstream varieties of macro models since then.
- To the 'Keynes effect' others were added – such as the Pigou's or wealth effect on consumption – but these cannot bear the weight of ensuring tendency to full-employment equilibrium (or Un or NAIRU) without the effect of interest rate on investment.
- The 'Keynes effect' as developed in the neoclassical synthesis, saved the notion that there is an embedded tendency toward full employment and hence, efficiency, in market economies.
- For practical purposes, it was generally admitted that adjustment through the fall in nominal wages and price level might be slow and problematic, but *fine tuning of interest rates by the Central bank would be sufficient to keep the economy at or close to full (or maximum) employment*.
- Despite decades of mainstream macroeconomic models and re-definitions of equilibrium (un)employment, we are still there, with the Taylor rule as the guide for central banking

The GT viewed by the neoclassical syntesis

Keynes argued that monetary policy was not an effective enough tool for full employment policy owing to:

- i) the limits encountered by the central bank in lowering interest rates in largely speculative financial markets
- ii) a limited elasticity of investments to interest rate – given the importance of entrepreneurial expectations.

These were criticized by mainstream economists as:

- ‘ad hoc’ arguments,
- arguments that would *hold only in the short run.* Over longer periods of time:

expectations on interest rate at the basis of the liquidity trap could be overcome by the central bank consistently pursuing lower interest rates; ‘depressed’ expectations of investors could not forever prevail on the underling forces of profit maximization, that would push for higher investments at lower interest rates.

Keynes’s theory came to be regarded as a short run theory of depressions or business cycles or valid under the assumption of rigid wages - but in this case, easily overcome by appropriate interest rate policies.

Thus, the impact of interest rate changes on investment and effective demand is a crucial point

PK ‘responses’ to the issues arising from the neoclassical synthesis (1)

One of the strands (called ‘fundamentalists’) have tended to defend Keynes on his own grounds: emphasize financial instability and subjective ‘animal spirits’ as the guide for investment decisions in a fundamentally uncertain world.

They have not only accepted but vindicated the ‘short run’ as the only relevant framework of analysis, refusing the terrain of long-period tendencies or normal positions and ‘equilibria’.

Uncertainty, instability and disequilibrium are the ‘keywords’ in this line of PK economics.

Economists in this strand usually do not refuse the inverse relation between interest rate and investment, but they regard the investment function as *unstable*;

many claim that that relation is not based on neoclassical principles (factor substitution) but on the array of investment projects theory (Pasinetti and others).

However, the latter is not consistent with, and does not hold water, under the assumption of free capital mobility (Ackley).

PK 'responses' to the issues arising from the neoclassical synthesis (2)

This strand (the 'fundamentalists) has contributed to the uberstanding of financial markets and their interactions with the real economy, but in my view suffers from a self-inflicted limitation:

- the short run frame gives-up one of the objectives clearly stated by Keynes of providing a *general* theory of output and employment that would be able to determine *persistent* levels of the latter around which the economy would fluctuate.

In addition, it is inconsistent with two views that are currently widely shared among post-Keynesian economists:

- the idea that Central bank normally *control* short term interest rates and through this also the entire interest rate term-structure;

- the extension of the principle of effective demand to the long run, both in the sense of Keynes of permanence, on average, across the cycle, of the output so determined, but also as the (sole, or main) driver of growth.

PK 'responses' to the issues arising from the neoclassical synthesis (3)

- Another, internally quite diverse, strand of post-Keynesian economists (including Kaleckians, Sraffians, Kaldorians) acknowledges that Keynes' theory comprises, along with highly innovative and relevant contributions, some elements inherited from the pre-Keynesian tradition that can no longer be accepted (e.g. the given money supply, the decreasing demand for labour, the decreasing demand for investments), and are often in tension, not fully consistent, with the former.
- Accordingly, they would rather select what to take from Keynes's contribution, and what to leave.

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PK 'responses' to the issues arising from the neoclassical synthesis (4)

Most PK economists would agree today that decreasing demand curves for factors of production, including investment as a function of the interest rate, should be abandoned:

- on the basis of the critique to neoclassical theory addressed in the 1960s and 1970s, and specifically to the possibility of deriving decreasing demand curves under the same assumptions usually made in neoclassical theory during the 'capital controversy';
- on empirical grounds, decreasing demand schedules for factors of production are not regarded as relevant.

Hence:

- no self-adjusting mechanisms such as those proposed in the neoclassical synthesis;
- no entrusting monetary policy with the ability to keep the economy at the desired employment level.

PK ‘responses’ to the issues arising from the neoclassical synthesis (5)

If the adjusting properties of the interest rate are unproven and/or empirically irrelevant, this opens the way to *effective demand* determining the ‘normal’ persistent level of output.

The adoption of the principle of effective demand as the theory of output – not necessarily confined to the short-run - has led several post-Keynesian economists to explore the *drivers of growth of output and employment*.

This of course also requires a theory of *what determines investments*.

PK views on *investments* and growth (1)

- **All PK economists regard Investments as independent of Savings (i.e. aggregate demand independent of aggregate supply)**.

- *Independent of savings, but determined by what*? Making a complex and long story short I would say that four main lines have emerged concerning the main determinants of investment:

1) ‘animal spirits’ or “the state of long-term expectations”

2) a function of current and expected profits (normal or actual)

3) fully or partly induced by the evolution of aggregate demand (income distribution and autonomous components of demand)

4) Schumpeterian competition in technical innovation

These four in turn are regarded by some as mutually exclusive; while other authors adopt a more eclectic approach, and regard investments as a function of more than one, or perhaps all the factors above

PK ‘views on *investments* and growth (2): expectations

- ‘Animal spirits’ and ‘the state of long term expectations’ *may* be used as equivalent expressions, indicating, that is, the independent and (wildly) **subjective** nature of the decisions to invest.

- However, the second has been interpreted in a variety of ways: expectations can be regarded as rooted in objective facts – for example current high profits could be expected to last in the future, or current high degree of capacity utilization could be associated to a higher expected demand level in the future as well and so on.

- Thus, the ‘state of long term expectations’ *may* also be seen to reflect a variety of *objective* economic variables that are deemed important in affecting investment decisions

PK views on *investments* and growth (3): profit and investment

- Investment has been modelled as a systematic positive function of the profit rate or the profit share *as a source of funding and/or as an incentive*.

- Some criticisms: while availability of external funds can be a constraints for some firms on some instances, it is doubtful that an aggregate regular decreasing relationship of relevant magnitude can be derived from this; concerning profitability as incentive the counter-argument is that capitalists ‘do not invest as a class’: competition would push them to preserve or increase market shares, provided they can earn a sufficient rate of profit (threshold, not function)

- Empirical work *investigating the role of distribution in affecting aggregate demand* has shown a very limited relevance, in practice, of the profit share (once controlling for the degree of utilization) in stimulating investment, so that a general conclusion of this important line of enquiry is that, in general, redistribution of income in favor of wages increases aggregate *domestic* demand.

- (In small open economies low wages may stimulate exports to a degree that more than compensates for the loss in domestic demand – thus, an export-led economy may be a tempting macroeconomic strategy for capitalists and pro-capital governments, since it allows high profits (low wages) without aggregate demand stagnation.)

PK ‘views on *investments* and growth (4): capacity utilization, demand, and investment

- There seems to be a fairly wide convergence at present on the fact that Investment depends on the degree of capacity utilization, hence on aggregate demand. In turn, this is affected by income distribution (as already discussed) and by the autonomous components of aggregate demand.

- The role of aggregate demand has in a sense been always understood as part of the ‘accelerator’ principle. However, the fact that the multiplier-accelerator interplay could give rise, as in Harrod’s model, to unrealistic explosive phenomena of booms and depressions, has for long time represented an obstacle to looking at such interplay as the *actual engine of accumulation and growth.*

- However, *demand-led growth models have recently been proposed that try to deal with this problem.*

PK views on *investments* and growth (5): technical innovation

- If investment is fully (or largely) induced by aggregate demand, there is not much scope for technical innovation to be the main driver of growth: since it is capacity creating, investment in new equipment cannot be self-sustaining

- Technical progress can stimulate demand through increased net exports or increased consumption of innovative consumer goods, but it cannot be presumed that the increase in demand will always be such as to justify the innovation-induced increase in capacity.

- If not justified by increased demand, innovation and additional capacity creation on the part of innovative firms will *supplant other firms or lines of production*, thus not necessarily increasing the macroeconomic level of investment and output.

PK views on investments and *growth* (6):

While in the area of investment and growth theory there still exists a variety of approaches, there seems to be increasing convergence on the *importance of the autonomous components of demand*:

- credit-financed consumption (real estate),
- exports,
- public spending,

not only in determining the **levels** of output and employment but also their growth over time

PK on growth (7): comparing 'warranted' paths in different PK growth models

- **Harrod**:

gw = s/vn ➔ a unique given path determined by the given propensity to save and normal capital/output coefficient vn, attained only by fluke, explosive processes outside

- **The 'Cambridge equation' as a response to Harrodian istability**:

*gw = rn*sc* ➔ the rate of profit increases with g and adjusts savings to investments (in a full employment economy) – currently not much used (issues concerning normal *versus* actual rate of profit)

- **Neo-kaleckian models**:

gw = a + B (Ua – Un) = s/vnn ➔ the capital/output coefficient vnn adjusts to actual capacity utilization determined by 'state of expectations' **a** and the additional investment caused by an initial departure from Un: **B(Ua – Un)** due to income distribution or autonomous components of demand. The new-normal vnn prevents Harrodian instability.

- **'Sraffian' super-multiplier**:

gw = gz = (s – Z/Yn) / vn ➔ the ratio of the autonomous components of demand to 'normal' output (at normal capacity) decreases as a consequence of an increase in g and consequent increase in the investment share I/Yn. Changes in Z/Yn is what adjusts savings to investments

PK on investment and growth (8): further research

- Diversity of analyses concerning the derminants of investment,
- Diversity of growth models
- The need for further assessments of stability
- Need to further assess consistency with empirical evidence

Are all good news for young scholars who can find scope for further contributions (expecially, in my view, in the area of investment theory)

PK views on the causes of income distribution (1)

- The removal of decreasing demand schedule from the analysis supports the role of effective demand as the theory of employment but also renders it necessary alternatives to neoclassical distribution theory.

- The ratio of employment to labour force (or to population) is likely to have important influences on distribution, but unlike the interplay of demand and supply *schedules* it cannot ‘determine’ wages. An alternative view must be proposed.

- The shared view is that r and wr are determined by *power relations*. However, this may be consistent with different ideas about in what ways and in favor of whom this power is acted.

- Many post-Keynesian in their baseline models assume imperfectly competitive markets in which firms can set their m-ups (and hence, at the aggregate level, *the profit share in output*) according to their own objectives (financing, growth), under constraints coming from the degree of real wage resistance (strength of unions and likewise factors) and the degree of competition

PK views on the causes of income distribution (2)

Despite acknowledgement of the constraints, this approach as actually used in modelling in my view tends to downplay or neglect:

- the role of competition among firms, even in imperfectly competitive markets,
- the role of action on the part of workers, as well as the role of habit, institutions and social norms in defining the range of feasible real wages
- The importance of intra-firm exchanges

I think that power should be better understood and modelled as bargaining power (affected by many factors, including monetary policy) operating within boundaries set but habits, institutions and norms.

Actually, in empirical analyses of changes in income distributions, PK economists have generally followed this line: investigated, and often found to be relevant, a *plurality of institutional and economic factors* such as unemployment, EPL, union density, international trade and international financial flows.

Further research might assess the actual weight of such diverse circumstances and attempt to provide a taxonomy of under what conditions they are relevant.

PK views on the causes of income distribution (3): Distribution and macroeconomic policies

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- Among the factors affecting income distribution, unemployment (broad definition) is certainly very important as a disciplining device.

- Kalecki emphasized how full employment can put at risk workers' discipline, the political influence of capitalists and (because of government spending) the scope for profitable private investments – all of these extremely relevant today.

- To those it should be added that low unemployment is generally associated (at least in non-repressive political environments) with high wages – ad though this may support ED, *it decreases the normal rate of profit*, i.e. the rate of profit that can be earned when capacity is utilized in the desired/planned degree (Garegnani).

- Both distributive and power considerations may be very influential on macroeconomic policies.

- These insights are very useful for understanding economic policy in the last decades.

A target ‘equilibrium’ unemployment?

Most PK economists would consider that unemployment may be necessary, or desirable, for some powerful section of society, as a disciplining device.

There may be differences however concerning whether and how this should be comprised in macroeconomic modelling, for example as a given NAIRU.

I share the view it should **not**, and conflicts of interest around the conduct of economic policy should be left to economic history type of enquiries rather than modelled:

- low unemployment is not necessarily (hyper)inflationary.

- economic policy is a broad political and social process; the timing and degree of success of pro-capital policies cannot be taken for granted and represented as a set ‘mechanism’ (as in models).

- There can be a plurality of influences on economic policies and aggregate demand besides the preoccupations with employment and income distribution, particularly of a geopolitical nature (wars, international technological competition, international alliances).

Political aspects of full employment….

- In the post WWII period very low unemployment rates were experienced for a fairly long while (staying even as low as 2% in UK, Sweden) – for long enough to cause social, cultural, and political changes that were to some extent irreversible – concerning living standards for the workers and their dignity, as well as the rights of youth and women.

- The reversal of that situation, and the creation of a wide ‘reserve army’ took a while and required a change in politics, institutions and macroeconomic policies, in turn supported by think-tanks, foundations, universities (and money flows to those).
- Thus, I think it is better to be aware of the complexity and historical nature of these processes, in which the action undertaken by the parties involved is not irrelevant, rather than construct models where it is assumed that the economy will always return (even though by means of discretional policies) to the targeted (by some) unemployment rate.

Some references (in alphabetic order)

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