

Axiom of  
markets

P20 LUCAS: MODELS OF BUSINESS  
CYCLES:

### The Essential Characterist

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Non-neutrality in different way in different aggregate demand into i sets of prices; the prices and the prices of capita

Whereas money c investment theory, mon his theory of consumpti

2. We are all famili money wage IS-LM mod

model without a labour

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The model I will present may be considered as a variation of the above  
A bit of the history of thought. Pigou had a labour market determination of output prior to Keynes. One objective of the General Theory was to create a model of the economy in which the standard labour market equilibrium was not the determinant of an economy's normal state or centre of gravity. Most well trained economists were unwilling to give the monetary-financial sphere the full partnership in determining aggregate demand that Keynes's work pointed towards.

Recent work by Caskey and Fazzari, Delong and Summers, Solow and Hahn tend to validate the Keynesian Theorem that if appropriate circumstances rule then an initial condition of unemployment is likely to be made worse, not better, by price level flexibility. In this work, if  $dp/dt < 0$  then either or both of the burden of private debts increases or the real (price level adjusted) interest rate increases.

Keynesians and macro-economists in general need to distinguish between relative price flexibility and price level flexibility. Relative price flexibility serves a useful purpose in resource allocation whereas the usefulness of price level flexibility in response to excess supply is questionable.

3 The burden of debt is a useful concept for macroeconomic research. We distinguish classes of units in debt: business, households, government and international. During each accounting period a portion of the revenues of each economic agent has been prior committed by debt, equity and lease contracts: these

Any economic model is going to have at its center a collection of hypothetical consumers whose decisions, together with the technology and ~~the~~ market structures, determine the operating characteristics of the system and whose welfare is the explicit subject of normative analysis

$$E \left\{ \sum_{t=0}^{\infty} B^t U(C_t) \right\}$$

Consumption sequences  $C_t$   
as the objective

## The Essential Characteristics of Post - Keynesian Economics

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*A Summary  
MP.*

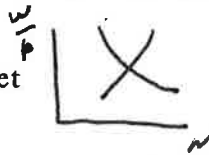
1. On an abstract plane the problem set by Keynes is to develop an economic theory which has the non neutrality of money as an essential theorem. Recall Frank Hahn's position to the effect that the Arrow Debreau model finds no place for money.

Non-neutrality implies that the monetary variables enter in an essentially different way in different parts of the system. Keynes did this by separating aggregate demand into investment and consumption demand and by having two sets of prices; the prices of current output, including investment output (the CPI) and the prices of capital and financial assets (the Dow Jones).

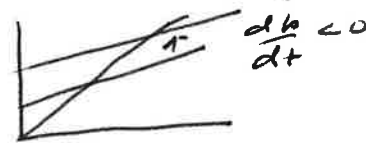
Whereas money or finance or credit enters in an essential way in Keynes's investment theory, money, credit and finance do not enter in an essential way in his theory of consumption. *on 2) we just saw in wage determination*

2. We are all familiar with one non-neutral money model. It is the fixed money wage IS-LM model of Hicks. The IS-LM

model without a labour market



and



without the Patinkin effect that has  $\Delta w$  shifting the C fn. in an appropriate way.

*The model I will present may be considered as a variant of the above*

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prior commitments are on account of both principle and interest. In the stripped General Theory - Kalecki derived model we have for business firms

$$P_i = I, \text{ Profits equals investment.}$$

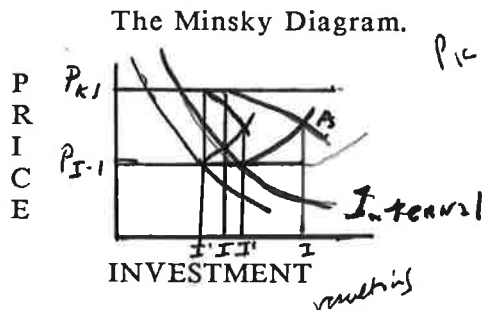
In the more complete statement we have

$$P_i = I + \text{Gov. Def} + \text{Bal Tr Def} + C(P_i) - S(w).$$

*error*

Internal finance is:

$$\text{Int Fin} = P_i - T_x(P_i) - (\text{Int} + \text{Prin}) \text{Bnds} - (\text{Int} + P_{r,i})Lns - \text{Prin}Lns - \text{Cust Div.}$$



*P\_i = f(M, etc.)*

*decision on P & K & r*

*I + details about*

Aggregate internal funds is a rectangular hyperbola in the price-investment plane. For a fixed aggregate Profits ( $P_i$ ) the greater the tax rate on profits, the level of indebtedness, the interest rate and the traditional dividend the smaller the aggregate internal funds.

Lenders and borrowers risk enter into the determination of investment. The  $P_k$  depends upon expectations of future  $P_i$ , upon the model of the economy that the agents of the economy whose expectations are relevant to investment have.

Outline of the Post Keynesian View: *A prospective book*

1. The subject is capitalism

A. Characterization of Capitalism

This has taken on increased importance with the dissolution of the Stalinist model of socialism.

B. Varieties of Capitalism: *Big government, interventionist vs Hitler — Sweden etc capitalist economies*

2. Capitalist economy -> capital assets, bonds, firms as well as current output have prices: -> two sets of prices.

A.  $P(K) = K(q, c, l)$

1. money enters pricing of assets through  $l$  and  $c$

2. financial institutions integral to determining  $P(K)$ : *positions financial as monetary & production economy*

B.  $P(O) = C(W, r, \text{Mkt } P_w)$

1.  $W$  as a cost and  $P$  as a way of recapturing costs and a carrier of profits.

Treating  $P$  as a way of recovering costs and a carrier of profits immediately focuses on business and banker decisions as being vital. Whereas households may be viewed as being solely concerned with the future flow of consumption, business and bankers in particular are concerned with the future flows of money.

2. Wage setting institutions as anchoring  $P(O)$  that the link between aggregate demand and price level changes is conditional upon the institutional structure. *Weak w strong trade unions. Don't sell*

*Commodities w products*

3.  $M \rightarrow K \rightarrow M'$ ,  $K \Rightarrow \Pi$  (profits).  $\Pi$  validates the contracts that exchange  $M$  for  $M'$ . This cash flow perspective is an adaptation of points made by Marx.

4. Investment is the result of decisions made by business men that are financed. The standard Minsky diagram as taken up above.

5. The structure of payment commitments (liabilities), Hedge Speculative and Ponzi Finance as determining the vulnerability of the system to financial shocks.

6. Special Minsky Hypothesis w/r/t/ the structure of liabilities through time

A. Hedge  $\Rightarrow$  Speculative  $\Rightarrow$  Ponzi.

B. Profit seeking financial institutions as merchants of debt.

1. Profits equation for banks

2. The evolution of banking

3. Bankers as merchants of debt.

C. Making profits by selling assets  $\rightarrow \Pi$  collapse:  $\leftarrow$  A. to

7. Profits ( $\Pi$ ). Determination and prior commitment of through the liability structure. The complete Kalecki structure. (taken up above)

8. Yesterday, today, and tomorrow, Tomorrow introduces a subjective element in decision making Tomorrow can exist today only in the minds of decision makers. How are the relevant ideas about tomorrow formed today. The agents in the model have a model of the model. The two model hypothesis of Ben Friedman.

9. Hysteresis, chaos, deep structures; natural outgrowth of complex non linear dynamics.

A. Built in Stabilizers, Floors and ceilings.

B. Discretionary stabilizers

C. Thwarting incoherence

10. Intervention: the floors and ceilings arguments

A. Intervention can do nothing but mischief

B. intervention can be constructive

11. Requirements for a serious depression

12. Post war stabilization policy.

$\Pi$  collapse  
for Def  
finance  
 $\Pi$   
collapse