A New Approach to Macroeconomics

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Introduction

This is a very short outline of a new macroeconomic model, which turns many debates in economics into questions of testable fact. The model consists of the contents of, and the changes to, the balance sheets of everyone in an economy. By identifying invariants (statements which remain true no matter how the system changes), the model brings a mathematical rigour to the foundations of economics, previously dominated by narrative and intuition. The model also deals with debt, which is vital for analysing financial crises.

The Model

There are two aspects: static and dynamic. The static part consists of balance sheets of every person in the economy. In this document, *person* refers to either a natural person or a corporation (including governments, charitable organisations, etc. – any entity which has a balance sheet).

The dynamic part looks at the changes to these balance sheets over time.

Balance Sheets and Net Worth

Every person has:

- a collection of tangible things which they own: a house, a car a wristwatch, etc.,
- a collection of things which they are owed, and
- a collection of things which they owe.

The first two types of thing together are the person's *assets*, and the third type are the person's *liabilities*. They can be shown on a balance sheet for this person:

Balance Sheet for a person

Assets	Liabilities
House	Car dealer: £18,000 (car loan)
Car	Neighbour: Bag of sugar
Wristwatch	
Building society: £5,000 (savings account)	
	Net Worth = House + Car + Wristwatch – £13,000 – Bag of sugar
Total: House + Car + Wristwatch + £5,000	Total: House + Car + Wristwatch + £5,000

Note that the model consists of the *actual* assets and liabilities themselves, not their estimated value in money. This is important for the system invariants.

The most important part of a balance sheet is the *net worth* – assets minus liabilities. It shows how much of the world's wealth is allocated to the person.

Changes in Balance Sheets

- Balance sheet entries can be transferred from one person to another. Those people's combined net worth is unchanged.
- Creating or writing off debts leaves the combined net worth of the parties unchanged.
- Production adds to one person's net worth without changing anyone else's. Consumption subtracts from one person's net worth without changing anyone else's.

Some Results

- Apart from production and consumption, economics is a zero-sum game for net worth.
- In a closed economy, total debt assets equal total liabilities, and therefore total net worth equals total *owned* assets.
- If changes in monetary or fiscal policy, inflation or deflation, or laws *cause* an increase in one group's net worth, they *must* decrease the combined net worth of everyone else by the same amount.
- In Bastiat's broken window parable, the baker's net worth is reduced by one window, and nobody else's net worth is increased. Destruction is thus harmful. When the baker buys a window from the glazier, *that* has a zero-sum effect on their net worth. The fallacy is clarified by considering a case where it was the *glazier*'s shop window which was broken.
- The natural rate of interest is not, as Mervyn King claimed, that which creates enough demand to produce full employment. It is actually the rate which provides enough income to compensate for the loan defaults, and pay the running costs of the bank (plus a reasonable profit). If the rate is lower than this, the bank will eventually become insolvent.

Example Critique of Neo-Classical and Keynesian Economics

In the circular flow of income analysis, both theories argue that leakages from household savings reduce spending in the economy, and that if there is no compensating injection from a business investment, a depression ensues. The theories only differ in whether this happens automatically through a market for loanable funds, or if state intervention is required.

Both fail to recognise that household savings add to the stock of debts from banks to households, and borrowing by firms adds to the stock of debts from firms to banks, both of which appear prominently on balance sheets. The mainstream analysis completely ignores withdrawal injections and repayment leakages, modelling saving as a *donation* from households to banks and investment as a *donation* from banks to firms. Any conclusions drawn from their analysis are therefore almost certainly seriously erroneous, if not outright absurd.