The Axiom of Interdependence

The Role of Aggregate Demand and Aggregate Supply in the New Economics

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By

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Outline

- Introduction
  – The outbreak of the 2008-2009 financial crisis and the return of Keynesian economics
- Keynesian Economics is the Economics of Non-Self-Regulating Capitalism
  – Keynesian economics versus neoclassical economics
  – The distinctive features of Keynesian economics
  – Varieties of Keynesian economics
- The Modern New Consensus Macroeconomics (NCM) Model
  – Three-equation model and its two transmission channels
  – Internal and external criticisms of the NCM model
  – The axiom of independence of aggregate demand and aggregate supply
- “New Economics” for the Future
  – Current policy issues
  – Theoretical building blocks: The axiom of interdependence of aggregate demand and aggregate supply …

Keynesian Economics is …

- The distinctive features of Keynesian economics (Fontana 2009)
  - *Proposition I (the possibility of involuntary unemployment):* the economy does not automatically and effectively self-adjust towards the social macroeconomic optimum.
  - *Proposition II (the principle of effective demand):* aggregate demand plays an important role in determining the adjustment path of the economy.
  - *Proposition III (the principle of policy effectiveness):* fiscal and monetary policies are effective for determining, under certain circumstances, the level of output and employment in the economy.

Varieties of Keynesianism

- The NCM and its New Keynesian roots
  - Proposition I-III are only valid in the short run, never in the long run:
    - *PI (the possibility of involuntary unemployment)* $\rightarrow$ Acceptance of Say's Law
    - *PII (the principle of effective demand)* $\rightarrow$ Aggregate demand has (if any) only a transitory impact on the degree of utilization of existing productive resources and their rate of expansion over time
    - *PIII (the principle of policy effectiveness)* $\rightarrow$ Fiscal policy is rejected in favour of monetary policy Acceptance of the classical axiom of neutrality of money and monetary policy

There are two persistent grand themes in macroeconomics. One is the explanation of short-run fluctuations … in business activity, the year-to-year or month-to-month changes that add up to prosperity or recession, inflation or deflation. The other is the explanation of long-run economic trends, the rate of progress of an economy over the decades.
By and large, the short-run fluctuations are not changes in the productive capacity of an economy but in the degree of utilization of capacity, due in turn to changes in *aggregate demand* for goods and services. But long-run trend – the Great Depression excepted – are generally dominated by changes in productive capacity, *somehow, in the long-run demand adapts* so that over the decades changes in the degree of utilization of resources are small relative to changes in the supply and productivity of the resources. The theory of long-run growth is essentially a theory of *aggregate supply* (Tobin, 1987, p. ix).

Varieties of Keynesianism

- Beyond the NCM and its New Keynesian roots (e.g. Fontana and Palacio Vera, 2007)
  - Proposition I-III are valid both in the short run and in the long run
    - *PI (the possibility of involuntary unemployment)* $\rightarrow$ Rejection of Say's Law
    - *PII (the principle of effective demand)* $\rightarrow$ Aggregate demand can have a permanent impact on the degree of utilization of existing productive resources and their rate of expansion over time
    - *PIII (the principle of policy effectiveness)* $\rightarrow$ Rejection of the classical axiom of neutrality of money and monetary policy

      Fiscal policy can be very effective (ask car markers!)

Following the completion of my Ph.D. programme in 1958 … I set as my task the discovery of the reasons why developed capitalist economies had (until then) experienced only one period of both prolonged and severe recessions. An important part of my explanation considered how in the real world the supply-side of the economy adjusted to demand (in contrast to the mainstream view that supply is exogenously determined), a position that was to become a common theme of most of my writings (Cornwall, 1992, p. 98)

New Consensus Macroeconomics (NCM) Model

- Three-equation (closed economy) Model
  - *IS*-type equation
  - Phillips equation
  - Monetary policy rule
- Two Transmission Channels
  - Aggregate Demand (AD) channel

$$\Delta i \Rightarrow \Delta r \Rightarrow \Delta C \,\&\, \Delta I \Rightarrow \Delta AD \Rightarrow \Delta Y \,\&\, \Delta UN \Rightarrow \Delta\left(y - \bar{y}\right) \Rightarrow \Delta\pi$$

  - Inflation Expectations (IE) channel

$$(y-\bar{y})_t = a_0 + a_1(y-\bar{y})_{t-1} + a_2 E_t (y-\bar{y})_{t+1} + a_3\left(i_t - E_t(\pi)_{t+1}\right) + s_1$$

$$\pi_t = b_1 \pi_{t-1} + b_2 E_t(\pi_{t+1}) + b_3 (y-\bar{y})_t + s_2$$

$$i_t = r^* + c_1(\pi - \pi^T) + c_2 (y-\bar{y})$$

Insiders' Criticisms of NCM

- How to transform a 'fair weather' model into a 'all-season' model
  - Posen: rational expectations or adaptive expectations?
  - Blanchard: more realistic analysis of financial markets, labour market, goods market, open economy extensions

In the 1980s and into the 1990s, the forward-looking rational-expectations models applied to monetary policy by conservative economists like Robert Barro, Alan Meltzer, and Alex Cukierman showed that whenever any central bank looked the least bit dovish by having too much concern for real output versus inflation goals, inflationary expectations would shoot up with no growth benefit. … *That characterization turned out to be not just an exaggeration through simplification, it was completely misleading*. … So you can have a very activist monetary policy with respect to stabilizing the real economy - which, frankly, the Bernanke Fed seems to have adopted - without worrying that inflation is going to explode by so doing (Posen, 2008, p. 20).

Outsiders’ Criticisms of NCM

- Monetary Policy
  - Unemployment bias
  - Distributional effects
  - Financial instability
- Fiscal Policy
  - Historical heritage
  - Ricardian Equivalence hypothesis
  - Practical / political features

Further Criticisms of NCM

- The Axiom of Independence …
  - "Wicksell's sin" and his modern version
  - The role of aggregate demand and aggregate supply in the NCM model
- … and The Notion of an Exogenous Supply-determined Equilibrium Analysis
  - The existence of a long-run, full-employment equilibrium
  - The self-adjusting properties of this equilibrium
  - The stability of this long-run equilibrium

The objection has been raised to the whole of the above reasoning that a lowering of the loan rate must also depress the real rate so that the difference between them is more and more levelled out and thus the stimulus to a continued rise in prices is eliminated. This possibility certainly cannot be entirely rejected. *Ceteris paribus* a lowering of the real rate unconditionally demands new real capital, i.e. increased saving. But this would certainly occur, even if involuntarily, owing to the fact that higher prices would compel a restriction of consumption on the part of those people who had fixed money incomes … [if this] prevails, and if production is unable to absorb unlimited quantities of new capital without a reduction in net yield, then the incipient rise in prices, though it would certainly not recede, might yet be arrested, unless the banks reduced their rate still further. … *We may assume that the above-mentioned counteracting forces may be referred to what we have described as the secondary factors of the problem* (Wicksell 1935, pp. 198-199).

The real interest factor [i.e. NRI (ρ)] in a certain period can be expressed as the relation between anticipated future product values and the values invested during the period. The prices of invested services are, however, influenced by the demands of entrepreneurs, and these in turns are influenced by the loan rate of interest itself [i.e. the short-run real interest rate (r)]. … *We accordingly find that the real interest rate on capital, as here defined, has a tendency to adjust itself to the actual loan rate of interest in every period* (Lindahl 1939, pp. 248-249).

.. a key question for Germany (and France and much of Europe) today is this: how much scope is there for deliberate expansion of demand? To put it more explicitly: by *how much could the level of production and income rise without pressing on productive capacity and stimulating inflation?* For economists this very same question appears in a slightly different form: what is the gap between the current level of aggregate output and *potential* output, the level of GDP that would employ capital and labor fully, without stretching or overheating?

It seems to me that, in Germany, both the Bundesbank and the Sachverständigenrat answer that question in a doctrinaire way. They simply *assume* that the gap is almost never more than trivial. In other words, they take it for granted that, in the absence of inflation, the economy is always producing just about the right amount, employing just about the right number of people, utilizing its capital at just about the right intensity, given the rules governing the labor market. In that view it is essentially never correct to use fiscal and monetary policy to create additional demand for goods and services in order to induce higher production. At least it is never correct *now*, whenever now is.

There is a very strange *asymmetry* at work here, however. I suspect we could all easily imagine circumstances in which the Bundesbank would think it appropriate, even necessary, to use monetary policy to eliminate excess demand, i.e., to cause the economy to contract. It is therefore possible for demand to exceed supply in the aggregate. But *somehow it never happens that demand falls short of supply persistently enough to call for offsetting policy. I think there is no good theoretical argument to support this view. It is at best an article of faith*. Where I come from, many economists think that the gap between actual and potential output is a quantity that may be positive or negative, depending on circumstances. In any case it is a quantity to be imperfectly estimated, not something known by divine intuition (Solow, 1999).

Let me just say very simply--this is really a repetition of what I’ve been saying in the past-that we have all been brought up to a greater or lesser extent on the presumption that the supply side is a very stable force. The assumption has been that the working-age population is increasing at a fairly predictable rate and that trend productivity is growing at a fairly stable one percent annual rate. So, the presumption has been that we could look at the supply side as an independent variable in the complex interaction of our equations. That presumption generally has been not challenged largely because it has worked. But what people around the table have been saying is that third-quarter growth has rebounded quite substantially. And indeed it has. So has productivity growth. *… In my judgment our models fail to account appropriately for the interaction between the supply side and the demand side* largely because historically it has not been necessary for them to do so (Greenspan, 1999, pp. 46-47).

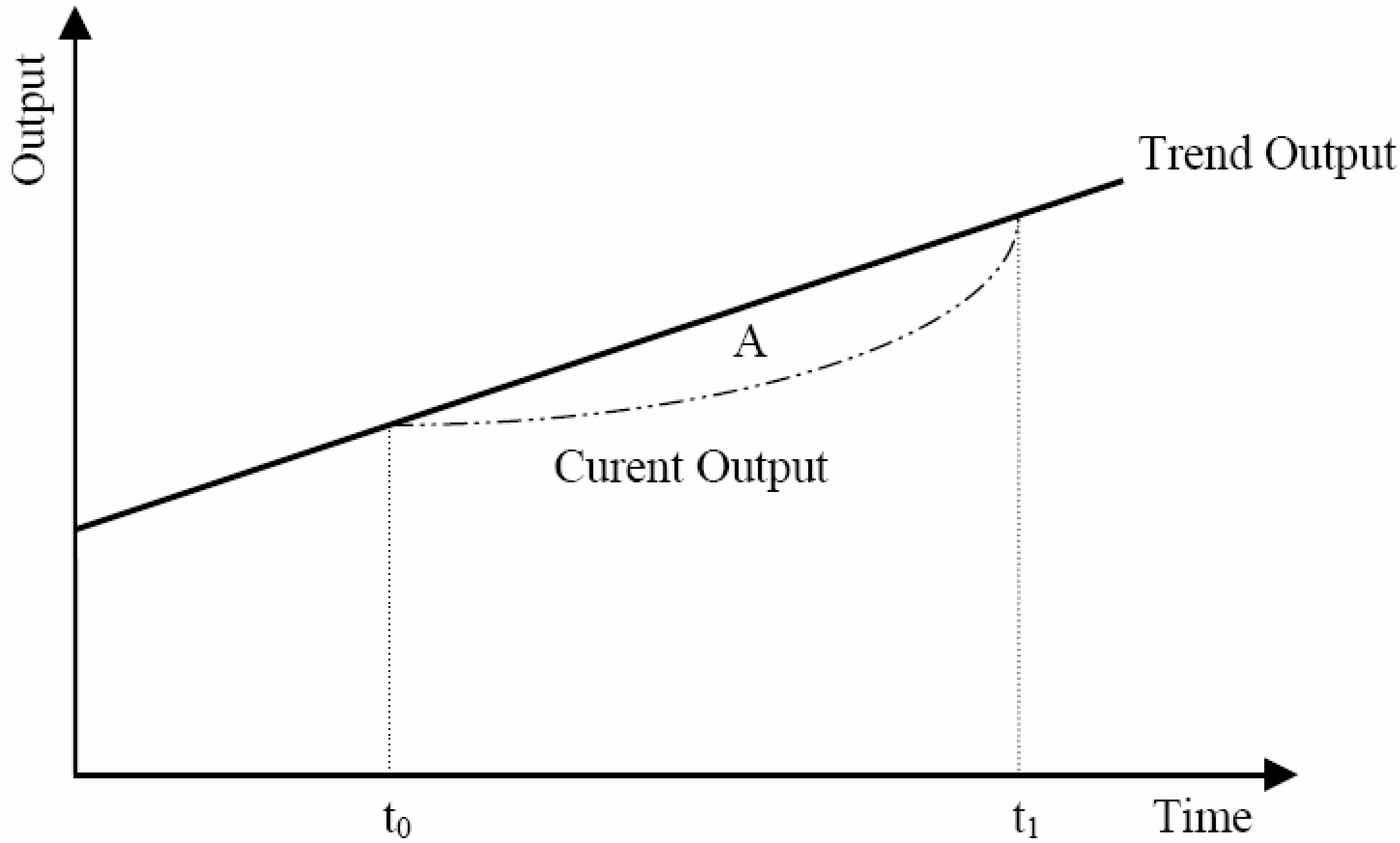
“New Economics” for the Future

- Current Policy Issues
  - Monetary policy beyond the New Consensus Macroeconomics (NCM)
  - Fiscal policy is back! … but for how long?
  - The role of macro-prudential regulation in financial markets
  - The ‘exit strategy’ from the current monetary and fiscal stimulus

“New Economics” for the Future

- Theoretical Building Blocks:
  - The axiom of interdependence of aggregate demand and aggregate supply
  - …

If there is to be a future for macroeconomics it must be Keynesian, and the first step is to persuade macroeconomists that their theories should be free of internal inconsistencies and be consistent with the historical record. This will be a difficult task … New Keynesian economics is trapped in an equilibrium framework that cannot provide an empirically respectable account of the stylized facts of the historical records. This we have traced to their insistence on adopting a framework in which aggregate demand merely adjust passively to the dictates of a supply determined equilibrium (Cornwall & Cornwall, 2006, pp. 403-404).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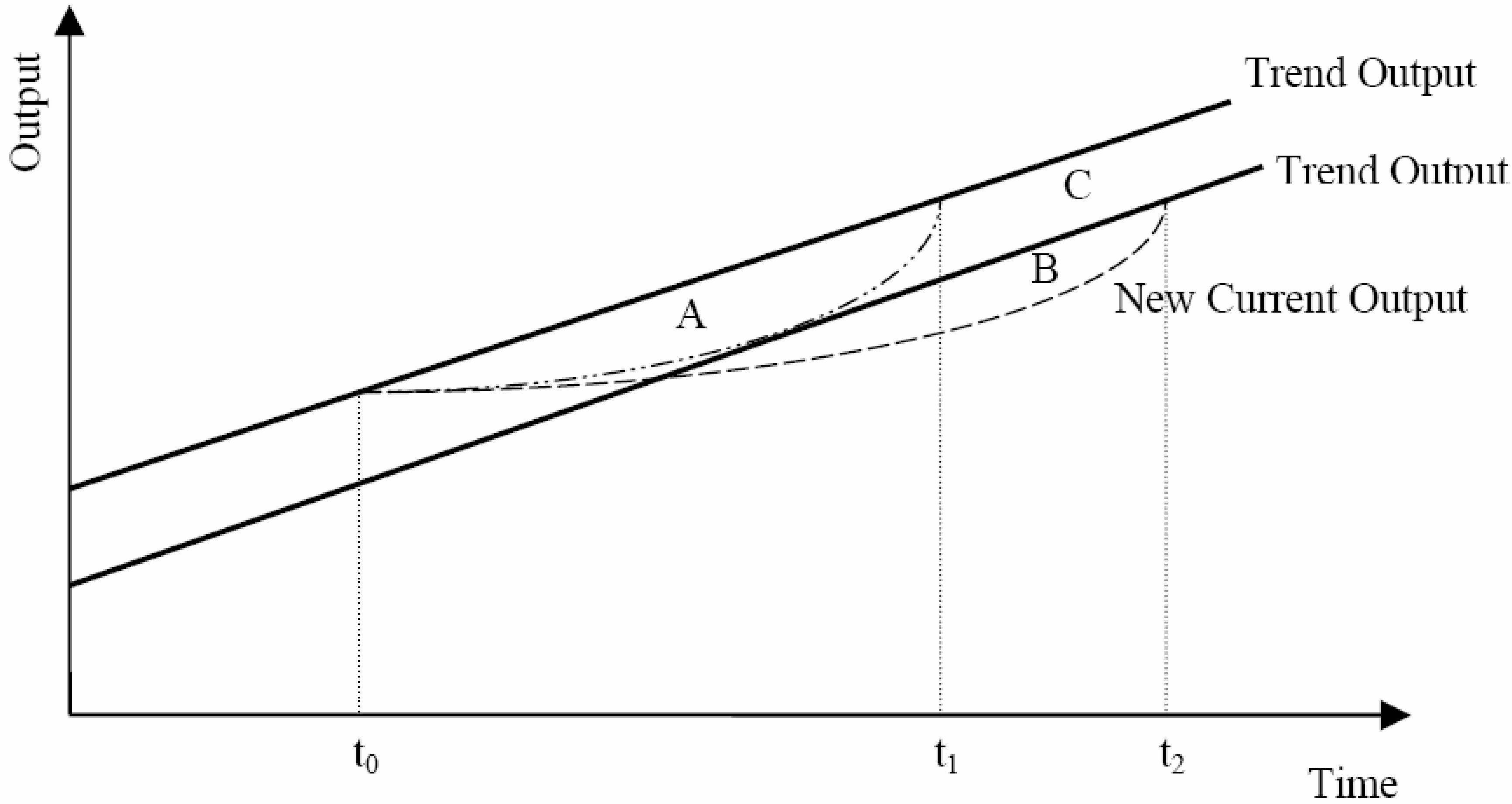
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