A CRITICAL ANALYSIS OF THE SECULAR STAGNATION THEORY

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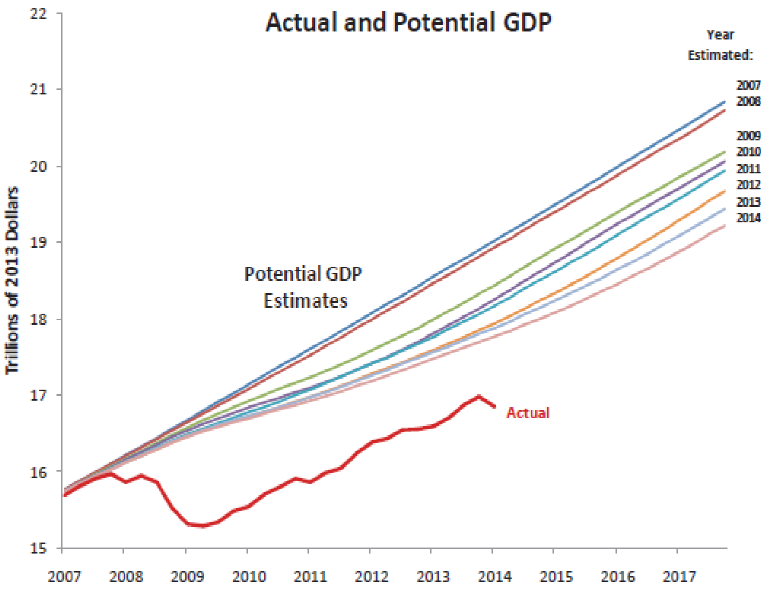
TOPIC PRESENTATION

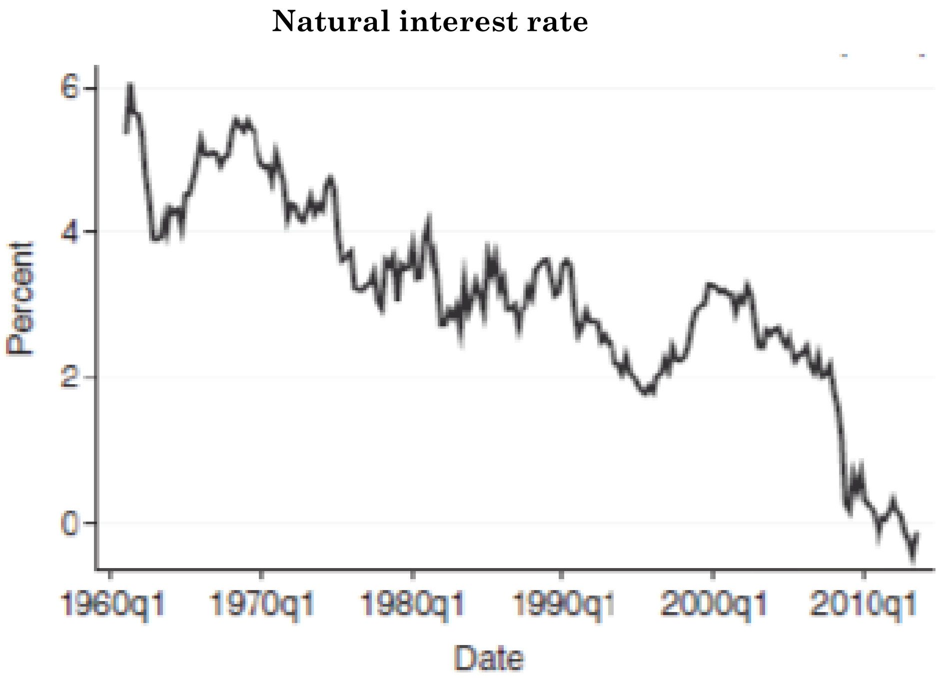
- What is the «*Secular Stagnation hypothesis*»?

- Is it a novelty? No: Hansen (1939), Steindl (1952) are its 'historical founders';

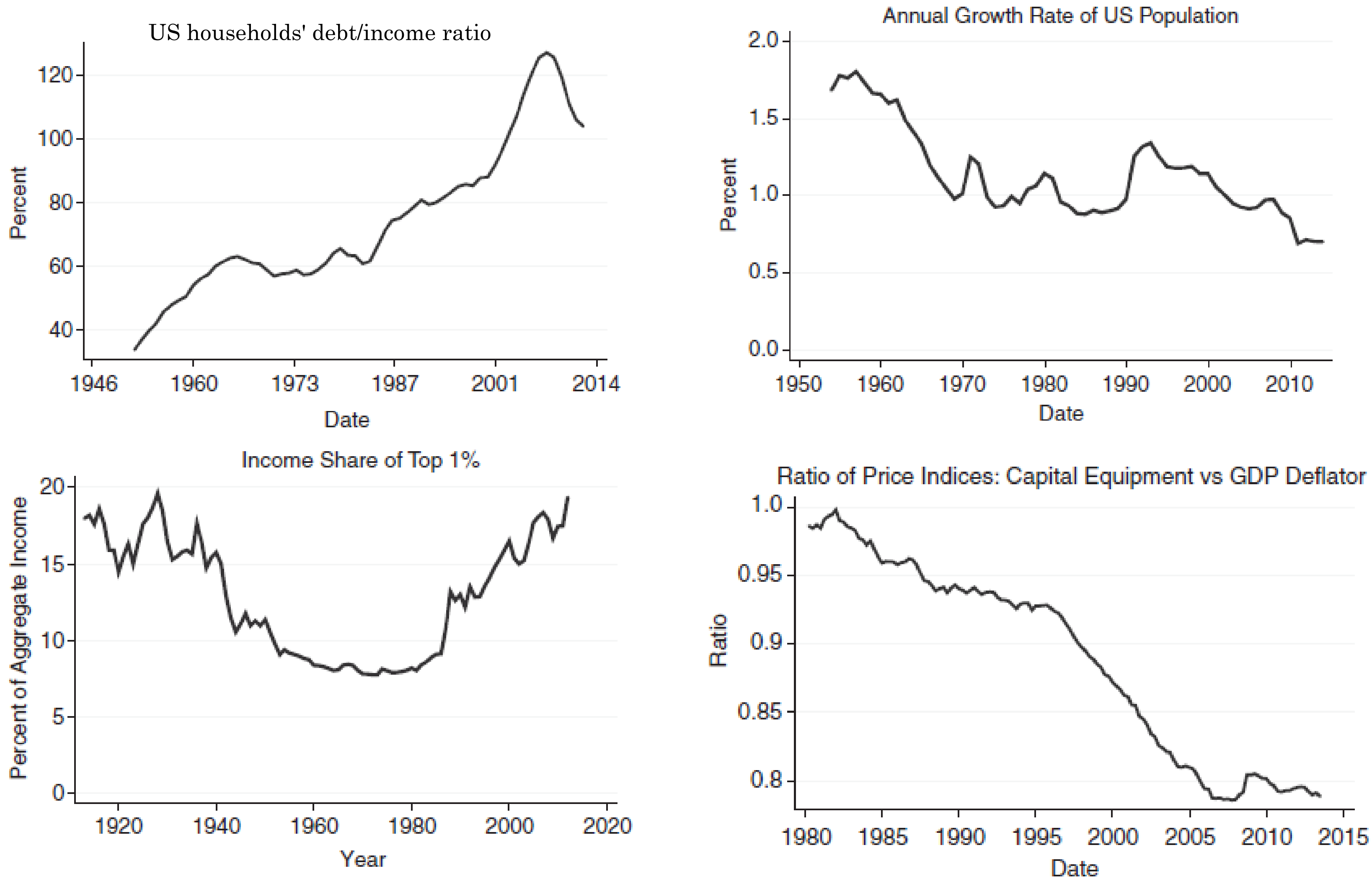
- Summers brought it back on the scene in the 2013 IMF speech, successively in scientific journals (2014, 2015, 2018).

US ECONOMIC PROSPECTS



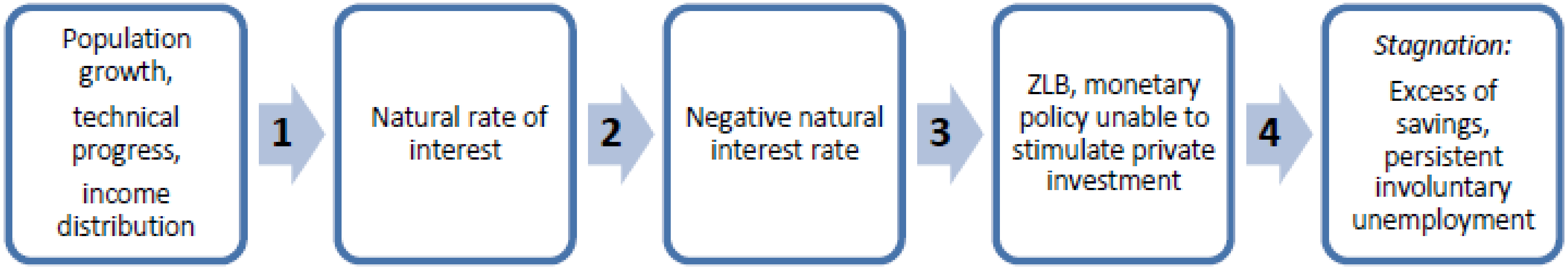


US potential output and natural interest rate estimations, from Summers (2014b). There is a huge literature on the natural interest rate estimates (cf. Levrero, 2019).



US households' debt/income ratio, population growth rate, top 1% share of income, relative price of capital goods, from Summers (2014).

The demand side version



The steps towards stagnation involve:

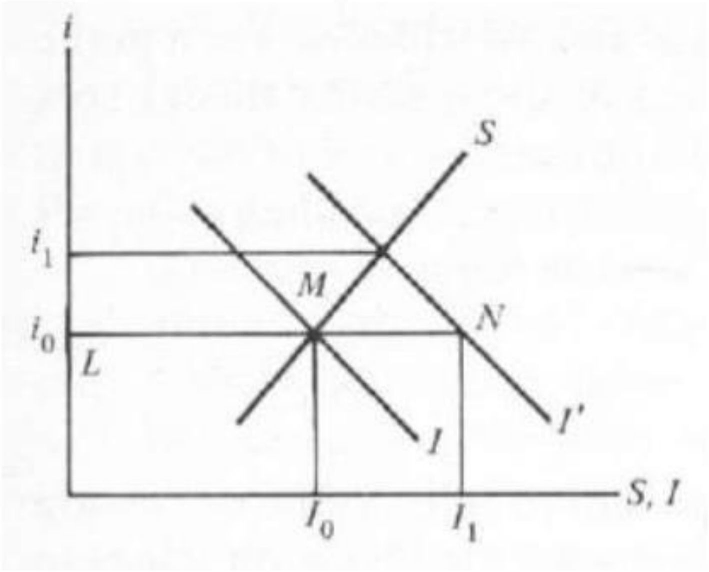
1. the acceptance of a natural interest rate determined at the intersection between the investment demand and savings' supply curves (we are going to neglect the 'Cambridge capital controversies');
2. the supposition that in a long run equilibrium position the natural interest rate can be negative;
3. the supposition that without the ZLB it could be possible to exploit the inverse relation between the interest rate and investment .

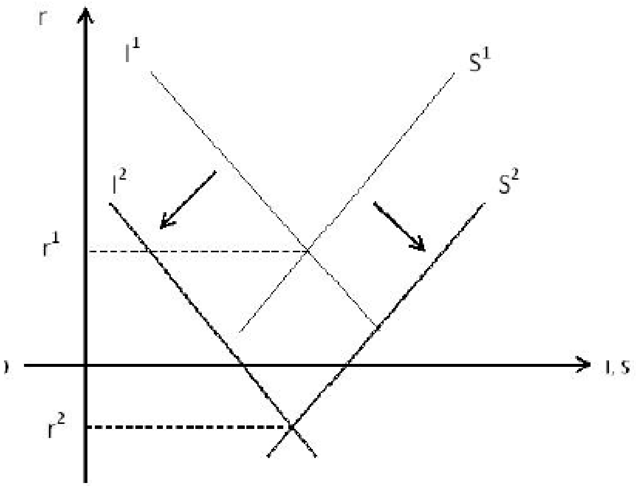
The "supply side" version of the theory will not be discussed (Gordon, 2015).

Research questions: is the long run position acceptable? What is the role of demand within this theory of stagnation?

The renewed version of Summers

Wicksell (1935): "The rate of interest at which *the demand for loan capital and the supply of savings* exactly agree, and which more or less corresponds to the expected yield on the newly created capital, will then be the normal or natural real rate."





The natural interest rate as determined in Wicksell, with the financial friction due to banks' behaviour.

The version of Summers, in which the financial friction is the ZLB.

THE FORCES BEHIND THE NEGATIVE NATURAL INTEREST RATE

Major aspects shifting the two schedules:

- *Slowdown of population growth*. For a certain supply of savings, a smaller population growth rate means less demand for investment in housing and capital to labourers and so a diminution of the interest rate;

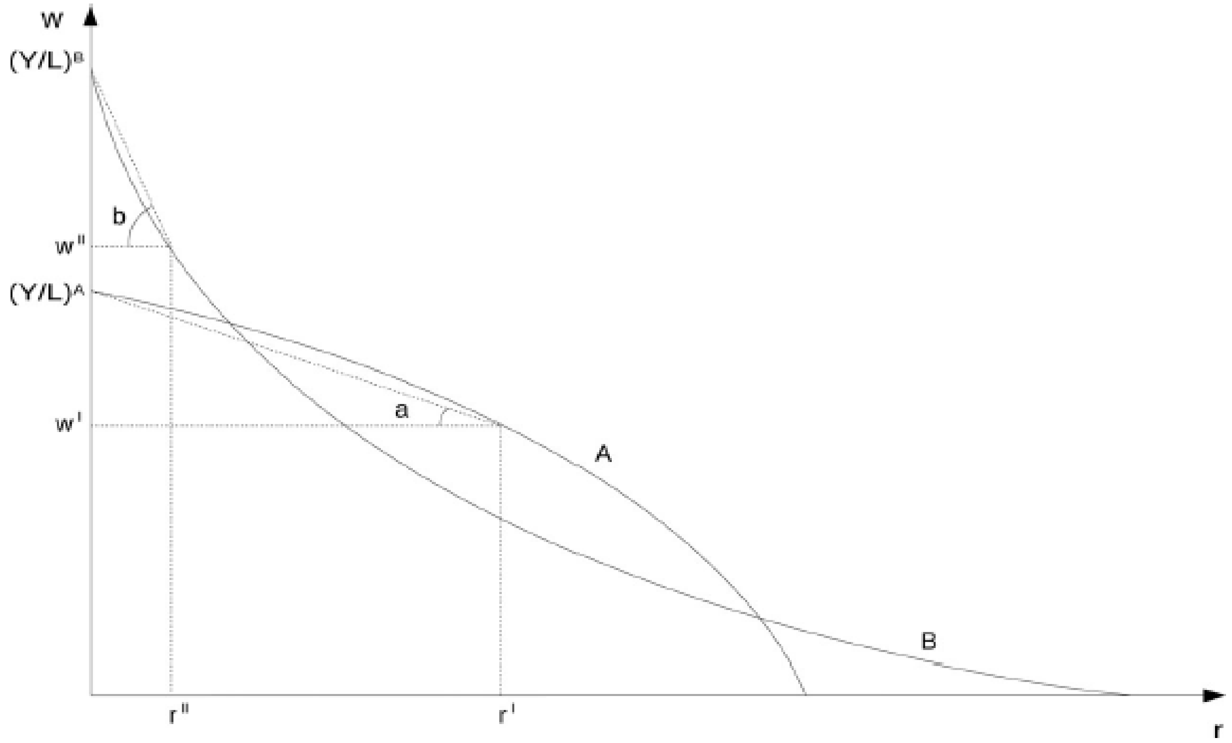
- *Income inequality*. An increasing saving supply coming from the redistribution towards a social class characterized by a lower propensity to spend further depresses the natural rate;

- *Relative price capital goods*. A lower price means that a certain amount of desired investment can be financed with a smaller amount of savings, so the demand for investment is weakened;

- *Deleveraging*. The collapse of the debt limit forces a spending reduction. This involves a consistent reduction of the demand for loans in the face of an unchanged supply of savings.

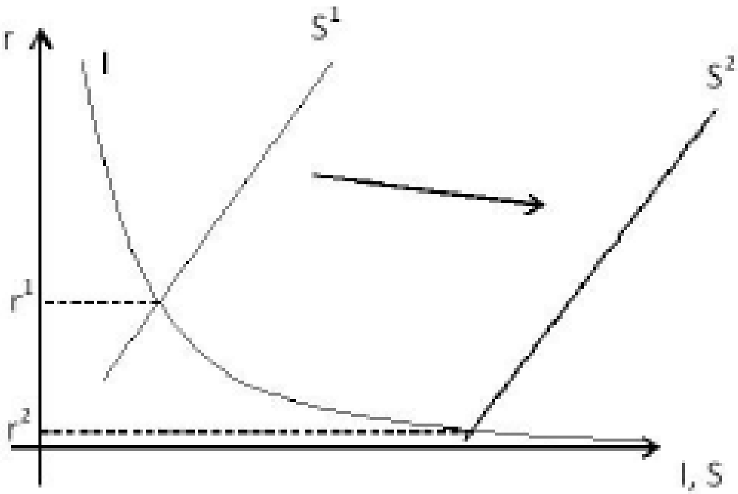
Existence of the natural interest rate

- A long-lasting (and not recent) discussion. According to Sraffa (1960), Garegnani (1970), Pasinetti (1966) there is no uniquely defined 'natural interest rate' (reswitching, reverse capital deepening);



- However, we will be interested only in discussing the supposition that the natural interest rate can turn negative.

The plausibility of a NNRIR



$$Y = AF(K, L) = AK^{\alpha}L^{1-\alpha}, \qquad 0 < \alpha < 1$$

$$y = Af(k,1) = A\left(\frac{K}{L}\right)^{\alpha}\left(\frac{L}{L}\right)^{1-\alpha} = Ak^{\alpha}$$

$$f'(k) = A\alpha k^{\alpha-1}$$

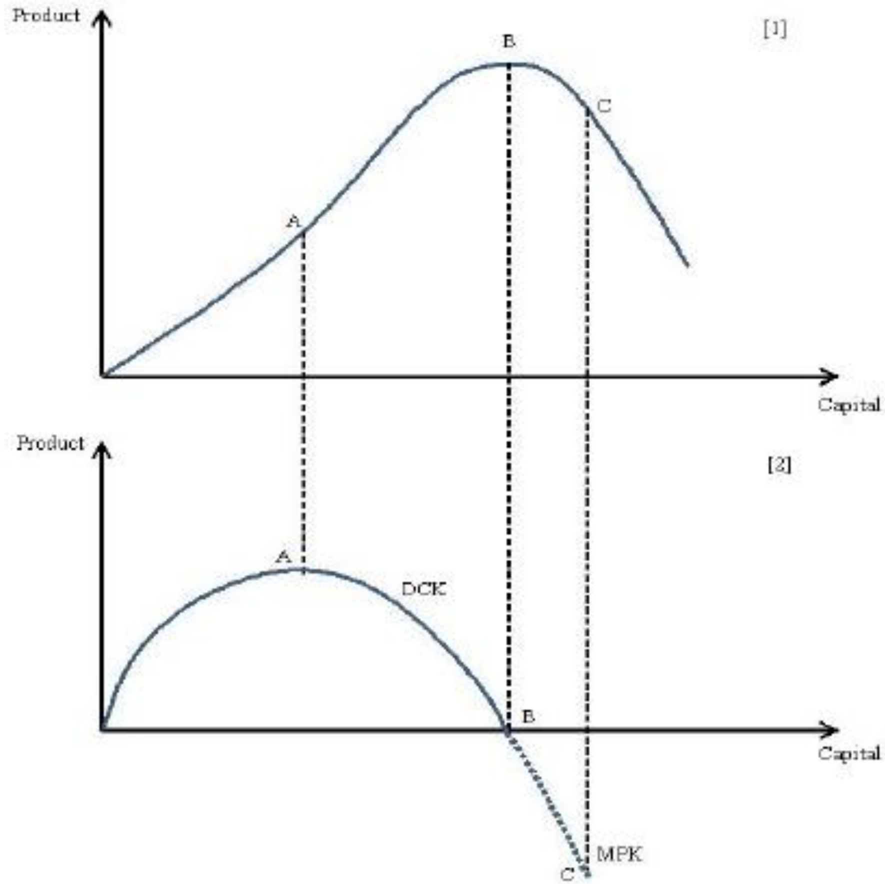
- By employing the commonly used Cobb – Douglas production function, we see how as the capital/labour ratio tends to infinity, in the limit the interest rate tends to zero. The same holds true for the family of CES production functions;

- The issue has also distributive repercussions: the wage share ought to exceed the net product of the economy

$$Y = rK + wL \rightarrow r = \frac{Y - wL}{K} < 0 \rightarrow wL > Y$$

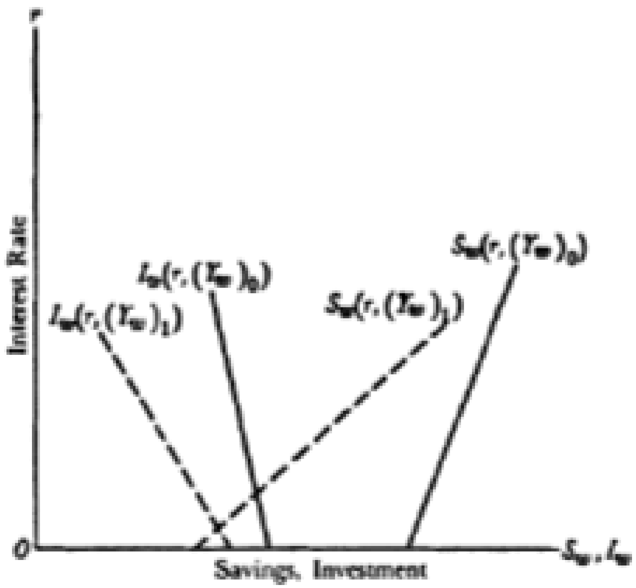
How to interpret this result in light of the relative scarcity of production factors?

The plausibility of a NNRIR



- The marginal productivity curve, seen in technical terms, can drop below zero. An overabundant amount of capital, if employed in production, might cause the marginal product to fall to negative values. The demand curve for capital cannot be supposed to follow it in the negative region.

THE PLAUSIBILITY OF A NNRIR



- Klein, in his 1966 book, described a situation in which there may be an excess of savings over investment at any positive interest rate. Yet, no long run position à-la Summers was hinted at.

- After all, we may consider the DSSS theory as a description of an underemployment equilibrium!

- According to my view, the DSSS theory is firmly grounded on the NNIR. The recent literature about the topic tends to confirm this claim. Summers et al. (2019), Fisher (2016), among others, study the responsiveness of the interest rate when the policy rate is set by CB below zero.

Role of aggregate demand and fiscal policy

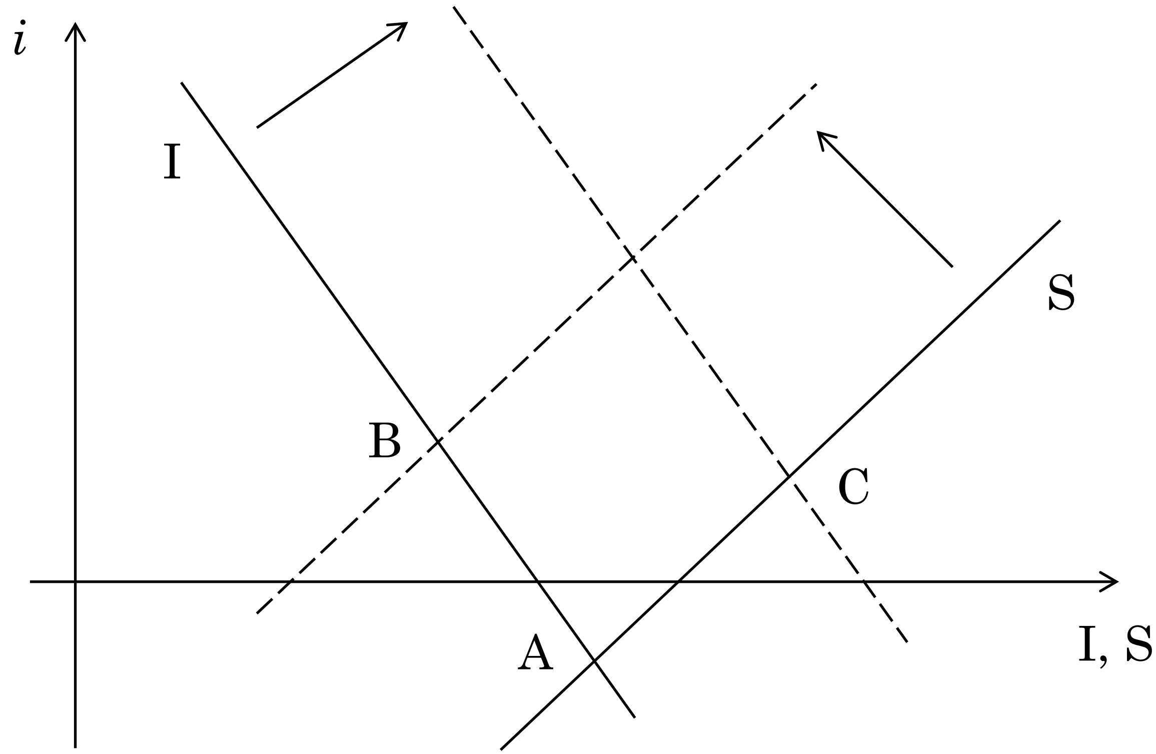
- Genuine effective-demand preoccupations ultimately permeate through the discussion of the DSSS, in spite of the whole question being wrapped up in neoclassical conceptual garments;

- However, the aggregate demand components matter only because they are tied to the NNIR;

- Most visible example: the concern about income distribution, is it a problem of savings or consumption?

- Private investment might be stimulated were it not for the ZLB (but… Shapiro *et al.* 1986, Chirinko 1993, Chirinko *et al.* 1999, Deleidi 2018 small responsiveness).

Role of aggregate demand and fiscal policy



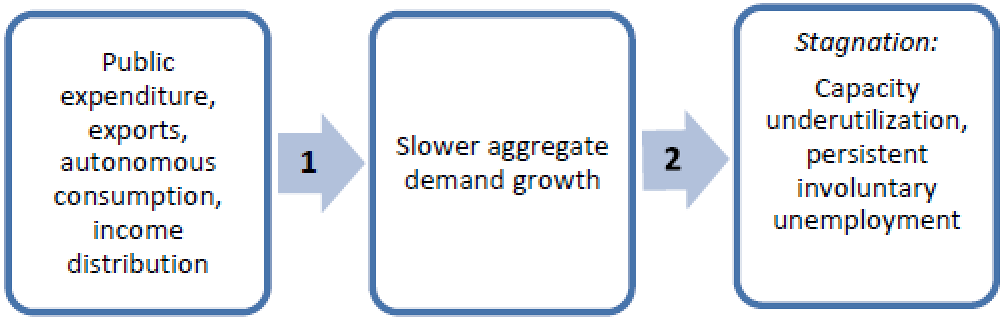
- Fiscal policy is effective because the economy needs the 'crowding out' effect to let the NNIR disappear. What if the NNIR is simply not there? Business as usual.

Other approaches

- The attempt of Summers is not the only one to be found in this strand of literature (Krugman 1998, Eggertsson et al. 2019, etc.);

- There are a variety of models and strategies to get a negative natural interest rate (Euler equation, IS-LM, OLG, Ramsey);

- My contribution lies in the critique of the major proposals utilizing the negative natural interest rate. Other authors such as Hein (2016), Skott (2016), Bertocco (2018) either contend that the 'Capital critiques' suffice, or that the variety of models allow the DSSS claims to be valid.



Occam's Razor
"The simplest solution tends to be the right one"

A conclusive assessment

- Even neglecting the Cambridge capital debates, the negative natural interest rate cannot be hosted by neoclassical models (Euler equation, IS-LM, Ramsey, OLG), and therefore the equilibrium position is not acceptable;

- Suggestion: It is outside the neoclassical realm that an analysis of the SS phenomenon has to be carried out;

- A more didactic discussion can be found online "Secular Stagnation:
  The limits of
  conventional wisdom"

Institute for New Economic Thinking

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THANK YOU FOR THE ATTENTION!

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