Business Cycle during Structural Change: Arthur Lewis' Theory from a Neoclassical Perspective

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Discussion

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Economic Development with Unlimited Supplies of Labour

1. This essay is written in the classical tradition, making the classical assumption, and asking the classical question. The classics, from Smith to Marx, all assumed, or argued, that an unlimited supply of labour was available at subsistence wages. They then enquired how production grows through time. They found the answer in capital accumulation, which they explained in terms of their analysis of the distribution of income. Classical systems thus determined simultaneously income distribution and income growth, with the relative prices of commodities as a minor bye-product.

- Lewis (1954) - one of the most influential models that did not have a formal model

- In many economies an unlimited supply of labour is available at a subsistence wage. This was the classical model. The neoclassical model .. when applied to such economies gives erroneous results.

- The main sources from which workers come as economic development proceeds are subsistence agriculture, casual labour, petty trade, domestic service, wives and daughter in the household, and the increase of population. In most but not all of these sectors, if the country is over- populated relatively to its natural resources, the marginal productivity of labour is negligible, zero, or even negative.

- The subsistence wage at which this surplus labour is available for employment may be determined by a conventional view of the minimum required for subsistence ; or it may be equal to the average product per man in subsistence agriculture, plus a margin."

- In such an economy employment expands in a capitalist sector as capital formation occurs.

- Capital formation and technical progress result not in raising wages, but in raising the share of profits in the national income.

- The reason why savings are low in an undeveloped economy relatively to national income is not that the people are poor, but that capitalist profits are low relatively to national income. As the capitalist sector expands, profits grow relatively, and an increasing proportion of national income is re-invested.

- The capitalist sector cannot expand in these ways indefinitely, since capital accumulation can proceed faster than population can grow. When the surplus is exhausted, wages begin to rise above the subsistence level.

- The current paper does an excellent job integrating the Lewis model into a two-sector neoclassical model of growth and structural transformation, with a representative agent

- It goes on to study nature of business cycles over the process of development

- Structural change accelerates during booms and stagnates during recessions, implying employment is:

  – countercyclical in agriculture

  – procyclical in non-agriculture

  – uncorrelated with GDP in aggregate

First Comment

- There are two moving pieces that are part of Lewis' vision of the growth process that are not directly captured
  - Behaviour of savings
  - The income distribution (e.g., the shares of profit & wage income)

- Consider the following much-used quote from Lewis (1954)

  "The central problem in the theory of economic development is to understand the process by which a community which was previously saving and investing 4 or 5 per cent. of its national income or less, converts itself into an economy where voluntary saving is running at about 12 to 15 per cent. of national income or more. This is the central problem because the central fact of economic development is rapid capital accumulation (including knowledge and skills with capital). We cannot explain any “industrial” revolution (as the economic historians pretend to do) until we can explain why saving increased relatively to national income"

- The central fact of economic development is that the distribution of incomes is altered in favour of the saving class. Practically all saving is done by people who receive profits or rents, workers' savings are very small.

- The major source of savings is profits, and if we find that savings are increasing as a proportion of national income, then it is because the share of profits in the national income is increasing.

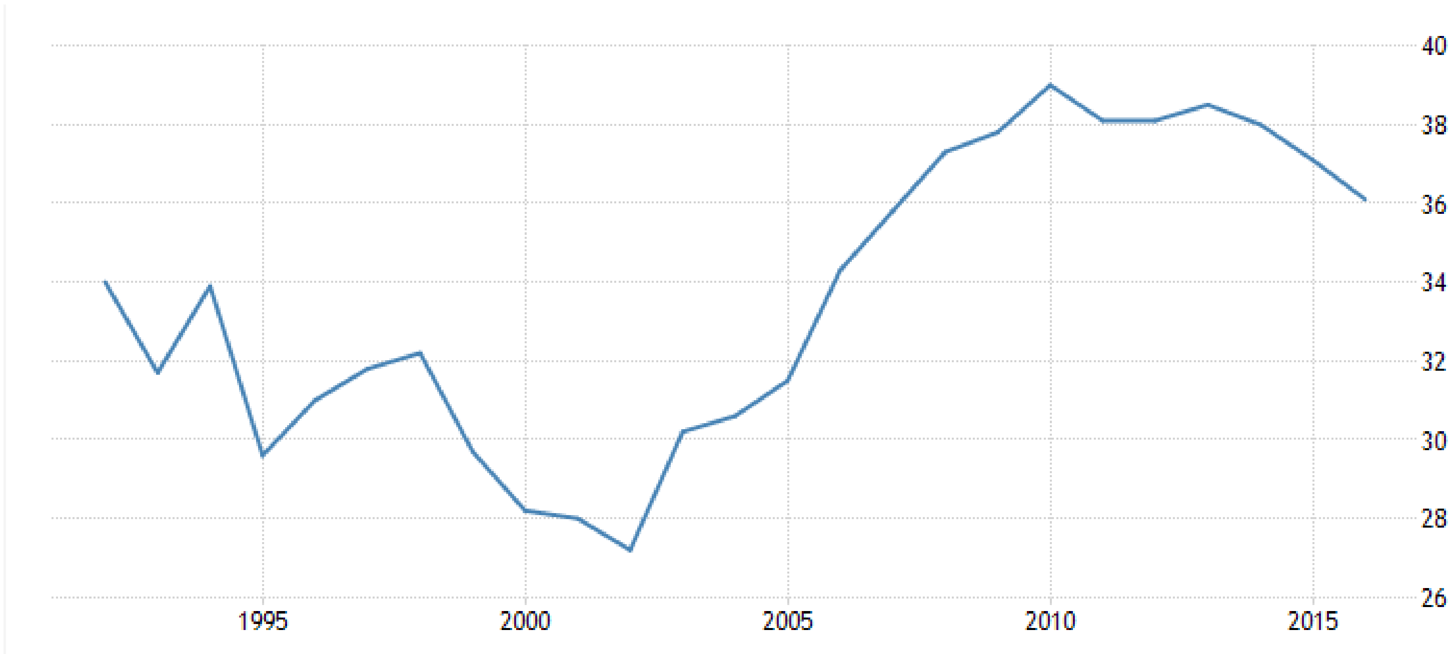
- The model says, in effect, that if unlimited supplies of labour are available at a constant real wage, and if any part of profits is reinvested in productive capacity, profits will grow continuously relatively to the national income, and capital formation will also grow relatively to the national income.

- The assumptions of a) a representative agent and b) homothetic utility function allows the present paper to abstract from distributional issues

- Non-homothetic preferences, heterogeneity of skills and factor endowments are possible ways to get richer distribution dynamics (e.g., Caselli & Ventura, 2000)

- Even in the context of standard representative agent models and with iso-elastic (CRRA) utility functions, the behaviour of the saving rate may be non-trivial (Smetters, 2003, Gomez, 2008, Guha 2008, Litina-Palivos, 2010)

- It would be interesting to explore in the current set-up if the saving rate is monotonic or not



- If not, can it throw interesting light on the question of the behaviour of the saving rate in China - see graph above that plots the household saving rate from 1992 to 2016?

Second Comment

- Can there be other explanations to the fact that agricultural employment is volatile and countercyclical in China, but there is no such pattern in the US in the same period, where the correlation is positive rather than negative, while the cyclical pattern of nonagricultural employment is very similar in the US and in China?

- Rodrik (2013) show that unlike economies as a whole, manufacturing industries exhibit strong unconditional convergence in labor productivity but despite strong convergence within manufacturing, aggregate convergence fails due to the small share of manufacturing employment in low-income countries and the slow pace of industrialization.

General Thoughts on Connections with Development Economics

- Part of a Macro-Development literature that looks at structural transformation and misallocation in the presence of various frictions - themes from an earlier era (e.g., Kuznets, Lewis, Schultz), compared to mainstream Development Economics, whose focus is micro & empirical (specifically, causal identification).

- There is an earlier literature in development theory that looks at wealth distribution dynamics with capital/insurance market frictions and there may be some profitable exchange (Galor-Zeira, 1993, Banerjee-Newman, 1993)

- For example, Banerjee and Newman (1998) in "Information, the Dual Economy, and Development" examine the interactions between different institutional arrangements in a general equilibrium model of a modernizing economy.

- There is a modern sector, where productivity is high but information asymmetries are large, and a traditional sector where productivity is low but information asymmetries are small.

- Consequently, agency costs in the modern sector make consumption lending difficult, while such lending is readily done in the traditional sector.

- The resulting trade-off between credit availability and productivity implies that not everyone will move to the modern sector.

- In a dynamic version of the model, a "trickle-down" effect links the process of modernization with reduction in modern sector agency costs.

- This effect may be too weak and the economy may get stuck in a trap and never fully modernize.

- The two-sector structure also yields a natural theoretical testing ground for the Kuznets inverted-U hypothesis