Real Business Cycle Theory

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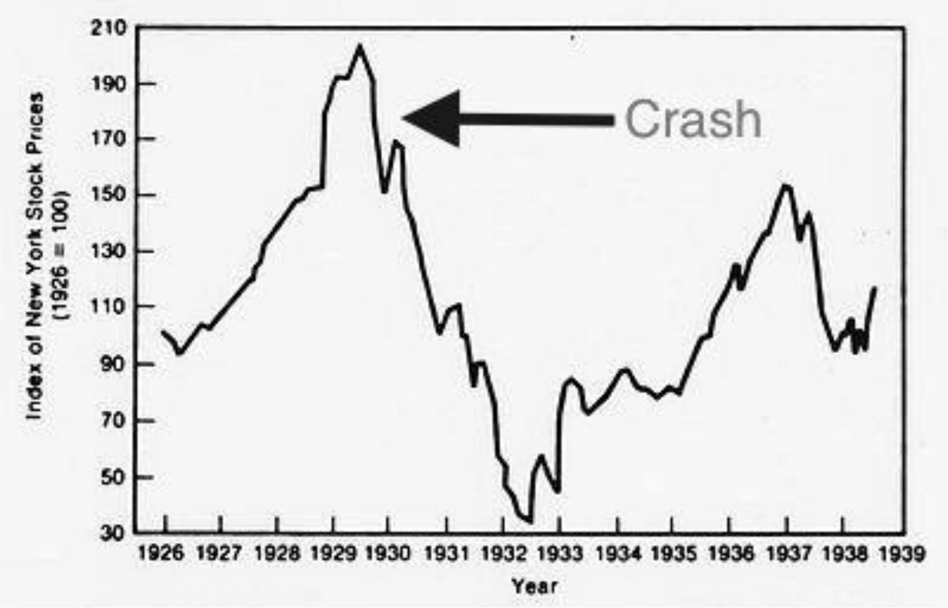
Introduction

Real Business Cycle theory is a predominantly US school of thought evolved out of New Classical School in 1980. This kind of research programme, associated with this 2nd phase of equilibrium theorizing, was initiated by Kydland and Prescott’s seminal article (1982) and Long and Plosser (1983) have come to referred to as the real business cycle approach.

- They reject the view that unanticipated monetary shocks generate fluctuation in output and employment in contrast to earlier classical economists.
- Instead of monetary (demand side shock), Real Business Cycle economists behave in supply side shocks.
- In some model, Barro and Grilli (1994) emphasize on the shock in government expenditure.
- Real shock involve random fluctuations in rate of technological progress that causes production function to shift.
- Rational economic agents are held to optimally behave to the resultant fluctuations in relative prices by altering supply of labor and consumption.
- This type of fluctuations in output and employment are regarded as Pareto efficient response to real technological shocks to the aggregate production function.
- These kinds of fluctuations in output are viewed as fluctuations in natural rate of output rather than deterministic trend. Resulting abandonment of distinguishing between short run and long run trend.
- Prescott suggests these type of fluctuations are optimal and all are equilibrium as well.

The Great Depression & RBC Theory

- The **Great Depression** (1929–1939) was a severe global economic downturn that affected many countries across the world. It became evident after a sharp decline in stock prices in the United States, the largest economy in the world at the time, leading to a period of economic depression.
- Cole and Ohanian studied the Great Depression accounting the downturn of GDP in the period 1929-33 and contribution of real and monetary aggregate demand shocks in initiating the Great Depression.
- Conventional models predict a rapid recovery from such shocks after 1933, the elimination of bank failures and deflation, and the significant rise in total factor productivity.
- Given these changes, output should have returned to trend by 1936, but US output remained up to 30 per cent below trend throughout the 1930s. This failure is due to the adverse consequences of New Deal policies, particularly policies related to the National Industrial Recovery Act (NIRA) of 1933.
- Prescott (1999) provides a similar perspective for the US economy, arguing that the Great Depression was 'largely the result of changes in economic institutions that lowered the normal steady-state market hours per person over 16'.
- A collapse of investment did not cause the decline in employment, it declined as a result of changes in industrial and labor market policies that lowered employment.
- A liquidity preference shock rather than technology shocks played an important role in the contraction phase of the Great Depression in the USA. The recovery of employment in the USA during the 1930s was adversely affected by President Roosevelt's 'New Deal' policies.



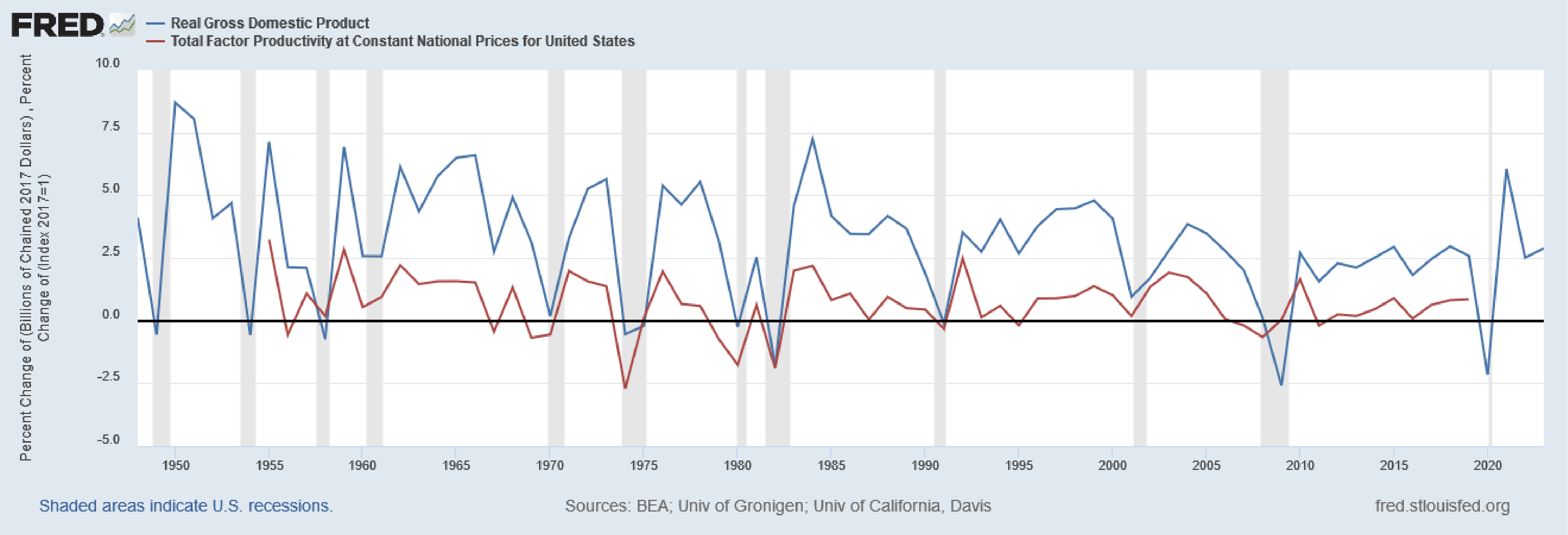
The Great Depression & RBC Theory

- Economists Cole and Ohanian were of the opinion that the recovery in output and employment after the Great Depression was mainly contributed by the New Deal Policies adopted by the then U.S president Franklin D. Roosevelt.
- These economists through their study observed that after 1933, GDP in the U.S economy changed, representing fluctuations around natural rate of output itself over time.
- These fluctuations were not caused by demand side shocks such as expansionary monetary policies. Rather, this was caused by supply side shocks or productivity shocks posed by the labour laws included in the New Deal policies.
- Steps taken to improve the labour market's condition such as fixing minimum wages, worker's compensation, unemployment compensation, direct federal aid for unemployment relief and others, depressed employment and output during the recovery, thereby lengthening the Great Depression.
- Contradicting Keynesian explanation that low levels of aggregate investment cause a decline in employment level, economist Prescott explained that the decline in employment was a result of changes in industrial and labour market policies.
- Cole and Ohanian in an attempt to explain why the Great Depression lasted for a long period, talked about the negative impacts of National Industrial Recovery Act (NIRA) of 1933 and the NLRA (National Labour Relations Act, 1935) in the USA. These 2 Acts promoted the dominance of monopoly power in the markets thereby compromising on the efficiency of these markets while in case of UK economy it was increase in unemployment benefits.
- Proponents of the RBC theory believed that policies enhancing total productivity were the key to economic prosperity.
- However this supply side approach for explaining depression in an economy was highly criticised by proponents of the theory of demand driven fluctuations in output and employment in an economy.

Case Study I

The Solow Residual & the Business Cycle

- Using the approach of Prescott (1986) and Plosser (1989) to measure technological shocks, i.e. using the Solow residual, we illustrate the case of the USA in the figure below
- The findings *appear* to support the real business cycle view that aggregate fluctuations are majorly induced by technological disturbances
- However, this approach is not devoid of criticisms – Large variations in Solow residual may be attributed to 'off the production function' behavior, like labor hoarding (Summers, 1986)



Case Study II

Testing the Monetary Neutrality

- Friedman and Schwartz (1963) analyzes the money stock movements in 1867-1960; monetary movements were followed by output movements in the same direction; the Fed could not respond adequately as economic conditions deteriorated – one cause of the Great Depression
- C. Romer and D. Romer (1989) add to the evidence along the same lines; searching the records of meetings of Federal Reserve’s Open Market Committee, they identified dates were Fed appears to have shifted its policy toward reducing inflation that were not motivated by developments on the ‘real’ side of the economy; six such shifts were found to be followed by recessions

If these theories are correct, they imply that the macroeconomics developed in the wake of Keynesian Revolution is well confined to the ashbin of history. (Summers, 1986)

Criticism

- Real Business Cycle Theory depends on mainly unobservable technology shocks.
- Real Business Cycle Theory assumes that markets clear almost instantaneously, meaning prices and wages are flexible. However, in reality prices and wages are "sticky" in the short term, meaning they adjust slowly. This stickiness can result in unemployment and other inefficiencies during downturns, which Real Business Cycle models fail to account for.
- The Real Business Cycle Theory focus heavily on supply-side factors like technology shocks, while downplaying the significance of demand shocks.
- In Real Business Cycle Theory unemployment is either entirely absent or is voluntary.
- Real Business Cycle Theory relates to the neutrality of money and the irrelevance of monetary policy for real outcomes.

Conclusion

The real business cycle theory is different from other branches of this topic "*Schools of Thoughts*", in the sense that this considers that every position on the business cycle is at optimum level. That means when economies experience booms or recessions, these are <u>natural responses to shifts in productive efficiency—such as technological advancements or disruptions—that affect the supply side of the economy</u>. The term "*Real*" is due to the real factors (e.g. *changes in technology and productivity*), rather than monetary or demand-driven causes.

According to RBC theory, people and businesses adapt rationally to these changes, adjusting their behaviour in ways that maintain equilibrium in markets. The theory considers that the government intervention is irrelevant since business cycles are natural way of adjusting external shocks and *government intervention may harm the natural adjustments.*

In short, the Real Business Cycle theory states that,

- Economic cycles are caused by the real, supply side shocks like changes in technology and productivity.
- Market actors respond optimally to these changes.
- Government interventions may cause harmful effect on the natural fluctuations of the business cycles.
- However, many times there were such situations in the economy where Government interventions was required to get rid of market failure which was totally ignored by the theory.

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