Secular Stagnation: Facts, Causes, and Cures—Analyzing the Post-2008 Era of Low Growth and Low Interest Rates

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Abstract:
The period following the global financial crisis of 2008 has seen a trend of very slow economic growth, low inflation rates, poor investments, and low real interest rates around the world. These phenomena have brought about the idea of secular stagnation, which was first coined by Alvin Hansen in the late 1930s and then again in modern economics by Lawrence Summers. This paper analyses the empirical evidence behind the idea of secular stagnation, explains various alternative theories as to why demand is weak in such an environment, and describes possible solutions proposed by academics before 2018. The paper shows that secular stagnation is a product of structural changes in demographic factors, productivity rates, income inequality, and savings rates globally.

Keywords: secular stagnation, low interest rates, post-2008 economy, productivity slowdown, macroeconomic policy.

1. Introduction

The financial crisis that erupted in the year 2008 stands out in the annals of modern economic history as a defining moment, leading to massive financial instability, contraction of output and disruption in global trade and investments. The cause of the crisis has been attributed to the burst of the bubble in the US housing sector, with some major financial institutions collapsing soon after. The crisis spread quickly through the interlinking financial systems to numerous other developed economies and developing nations. In response to the same, the government introduced several measures including stimulus packages, recapitalizing of banks, and adoption of unconventional monetary policies in an effort to ensure that the situation did not spiral out of control leading to another great depression experienced during the 1930s.

Nevertheless, the ensuing recovery was distinct from those observed following the previous recessions. The recovery process entailed extended periods of economic underperformance where output grew slowly and investments were subdued in advanced economies. Moreover, there was significant slowdown in productivity growth within most developed countries alongside very low inflation levels despite loose monetary policies. Interest rates touched near zero and were sustained at the same level for almost a decade in certain economies. Even while financial market recoveries were experienced, it was evident that the real economy did not manage to recover to its previous levels leading to questions on the appropriateness of existing methods of macroeconomic analysis.

In the context of the above developments, the notion of secular stagnation became one of the key issues in the discussion about changes in the economy. As can be seen, this term has been used since the 1930s when Alvin Hansen applied it to describe his concerns over the possible prolonged stagnation in the economy due to a decrease in population growth and investment opportunities. However, in modern economics, the idea of secular stagnation was introduced by Lawrence Summers in 2013, when he argued that the inability of advanced economies to generate enough employment without creating bubbles or using very expansive monetary policy suggested a serious mismatch between savings and investments in the economy. In other

words, according to this approach, the equilibrium real interest rate was pushed to very low or even negative values. The idea of secular stagnation is a challenge to the old orthodoxy which holds that market economies will automatically revert back to full employment in the wake of economic disruptions. Rather, it posits that underlying factors such as demographics, growing inequality, poor productivity growth, and savings-investment imbalances worldwide can undermine the forces of demand generation on a permanent basis. Indeed, the combination of low rates of inflation, modest wage increases, and anemic capital investment observed after the crisis reinforced suspicions that advanced countries could be embarking on an era of structurally induced growth rather than merely experiencing a transitional phase following the crisis.

The post-crisis economic landscape, therefore, poses a basic question for economists and policymakers alike: Is the trend towards low growth temporary or is it indicative of a new reality in the way advanced capitalist economies behave? Answering this question is vital since it will determine the proper response required from policy-makers. Taking into consideration all these discussions, the present work seeks to explore the idea of secular stagnation through three main goals. Firstly, an empirical definition will be provided in regard to the topic, based on the analysis of post-crisis trends in growth, investments, productivity, inflation, and interest rates. Secondly, an assessment will be made of structural reasons for slow growth and falling equilibrium interest rates, suggested by academic research before 2018. Finally, possible solutions to the problem suggested by economists will be explored, such as fiscal and monetary policies, redistribution, and productivity policies.

Overall, this work is designed to provide both theoretical insights and empirical conclusions about secular stagnation as an explanation for modern macroeconomic processes.

2. Historical Origins of the Secular Stagnation Hypothesis

The roots of the idea of secular stagnation are to be found in the late interwar period when discussions began about the problems with sustainability of long-run growth in the most economically developed countries. This idea was systematically formulated for the first time by the American economist Alvin Hansen who presented his thoughts at the presidential address to the American Economic Association in 1938 and also published several papers in 1939. According to Hansen, certain structural factors – including slower population growth, limited territorial expansion, and fewer possibilities for substantial investments into large enterprises – could put mature economies on a path of prolonged insufficiency of aggregate demand. Thus, the problem of economic growth could turn out to be not just cyclical but also secular in nature because of some demographical and technological barriers.

This theory emerged during the era of the Great Depression, where the presence of unemployment rates and low investments had led people to question whether a self-sufficient economy is capable of functioning. Hansen argued that previous economic booms had taken place due to the presence of transformative elements such as expansion of territory, innovations, and a rapid rise in the size of the population. With the exhaustion of these growth catalysts, the demand for investments becomes structurally deficient.

However, despite the importance attached to Hansen's secular stagnation theory, its importance fell off considerably after the end of the World War II era. This era was marked by unprecedented economic development within regions including North America, Western Europe, and Japan. Growth in income levels and employment occurred due to factors including industrialization, rebuilding activities, technological advancements, efficiency gains, and population growth. It seemed as though the use of effective demand management policies and growing welfare economies and international cooperation had rendered the notion of secular stagnation irrelevant. The discipline of macroeconomics focused mainly on business cycle, inflation, and economic growth during many years.

It came back into play through the downturn in the Japanese economy that began in the early 1990s. As the bubble burst in the real estate market and in stock investments, Japan entered a period described as “lost decades” because the economy stagnated despite significant stimulants applied. It was observed that there were repeating factors in the scenario that resembled those mentioned by Hansen before in his concerns –

slow GDP growth, poor private investment performance, negative productivity growth, subdued inflation expectations, and central bank policy rates near zero. The Japanese economy demonstrated that a developed economy can be stuck in such an equilibrium regardless of continued macroeconomic stimulants.

Following the Great Recession of 2008, the similarities between the situation with the Japanese economy for many years and the current situation in the US and Europe sparked off a renewed interest in studying secular stagnation. Some common symptoms were evident in all advanced economies:

1. slow GDP growth compared to pre-crisis levels,
2. diminishing or steady productivity growth,
3. low inflationary pressure despite monetary easing measures,
4. central bank policy interest rates at or near zero.

These commonalities motivated economists to explore if there were indeed structural impediments to aggregate demand in the global economy as opposed to a single country. The new discussion came into focus when Larry Summers revived the theory of secular stagnation in 2013, contending that developed economies would have to maintain very low interest rates or experience recurring financial bubbles to reach full employment.

Later empirical studies, including those performed by OECD economists, have helped refine the concept of secular stagnation in modern times. In contrast to the previous definition based only on population aging, current definitions consider the interplay between high savings in the global economy, poor investment demand, finance sector behavior, and falling real equilibrium interest rates. Secular stagnation can thus be seen as a macroeconomic phenomenon in which even ultra-low or zero interest rates do not lead to enough private investment and consumption to keep full employment and stable inflation.

3. Empirical Facts of the Post-2008 Economy

The recent discussions regarding the issue of secular stagnation can be explained through various empirical factors that have arisen in advanced economies since the occurrence of the global financial crisis in 2008. These empirical factors include macroeconomic conditions that were quite different from those observed in previous recoveries. This has led researchers to believe that such economic phenomena indicate the existence of structural changes in the economy rather than a simple cyclical disturbance. In particular, three major empirical factors can be highlighted:

3.1 Persistently Low Economic Growth

In general, past recessions have always been characterized by fast economic growth stimulated by high levels of demand, investment, and employment. However, this trend has changed since the 2008 global recession, during which all advanced economies experienced sluggish economic growth for several years. For example, the economic growth of the US, Europe, and other developed economies has constantly been below their pre-recession levels. A number of stylized facts about macroeconomics became apparent during this time. First, the growth rate of productivity slowed sharply compared to the late twentieth century; the progress in digital technology did not result in increased productivity similar to previous technological advances. Second, the participation rate of the labor force fell in many developed countries due to demographic changes, lack of skills, and lingering impact of unemployment caused by the crisis. Third, capital accumulation remained low despite record-low interest rates; firms built up their cash holdings without investing productively, signaling their pessimistic outlook on the growth in demand in the future.

Moreover, international organizations and official statistics agencies lowered potential GDP forecasts on several occasions, which suggested that the implications of the crisis would be permanent. These trends all supported the case for persistent under-demand in the advanced countries; instead of a usual business-cycle upturn, the performance of economies seemed to be limited by structural problems reducing investments and expenditures.

3.2 Fall in Real Interest Rates

One of the most compelling pieces of empirical data that validate the hypothesis of secular stagnation is the gradual decline in real interest rates over a period of many decades, especially since the economic crisis. Findings from studies carried out by bodies such as the National Bureau of Economic Research have shown that the equilibrium real interest rate in industrialized economies fell drastically from positive values in the later parts of the twentieth century to near-zero or even negative levels after 2008.

The equilibrium real interest rate, also referred to as the natural rate of interest, is the level of interest at which inflation and unemployment levels are steady. The reduction in the natural rate of interest indicates a mismatch in the supply and demand for funds. Some of the reasons for the fall in real interest rates include high saving rates worldwide, aging population trends, enhanced caution owing to uncertainties in financial markets, and the lack of productive investment opportunities.

Nonetheless, what made the post-crisis era unique was the situation where the interest rate was still low despite being in the growth stage of economic activity. Normally, the interest rate rises as the economy comes out of recession and the level of aggregate demand becomes robust. Nonetheless, in the developed world, periods of low interest rates were observed without an investment boom following them. It is evident that other elements besides monetary policy affected global finance.

3.3 Weak Inflation and Monetary Policy Constraints

In addition to the above-mentioned characteristics of the economic environment during the post-crisis period, it is worth noting the persistency with which the rate of inflation did not return to normal levels despite several stimuli introduced by monetary institutions. To address the collapse of their financial system and reduction in the level of aggregate demand, the Fed, ECB, and Japanese Bank resorted to unprecedented methods in monetary policy management.

The policies entailed the massive purchase of securities referred to as quantitative easing, forward guidance meant to manage expectations concerning future interest rates, and in some instances even negative interest rates. Nevertheless, persistent deflation continued in most advanced economies. Wage increases were tepid, inflation pressures continued to be low, and expectations of future inflation usually fell instead of rising. The existence of persistently low inflation implied that monetary policy would not work in bringing aggregate demand back. The economy seemed to be caught at the zero lower bound on nominal interest rates, where monetary policy becomes less effective.

Taken together, weak economic growth, falling real interest rates, and low inflation offer robust evidence for the secular stagnation hypothesis. All three factors suggest that the situation since 2008 may have been the result of fundamental changes in the structure of the advanced economies, where the problem of demand deficiency persists.

4. Causes of Secular Stagnation

The secular stagnation theory is not based on one cause alone but rather highlights a number of structural reasons which act together to cause aggregate demand weakness, low investment levels and low equilibrium interest rates. The interrelationship between changes in demographics, international financial imbalances, income distribution, technology and financial crisis aftermath is considered to be key to explaining the poor recovery experienced by advanced countries despite accommodating economic policies.

4.1 Demographics

Demographic factors have been mentioned quite frequently as the major cause behind the phenomenon of secular stagnation. Economists highlight the impact of an aging population on savings and investment demand. Higher life expectancy and lower birth rates result in slower growth of the working age population.

Aggregate savings increase due to the fact that households save to fund their retirement period. On the other hand, slower population growth decreases the need for investments such as new housing or building more infrastructure. Expectations regarding weaker demand going forward reduce investment incentives.

4.2 Global Savings Glut

Another theory associated with secular stagnation is that of "global savings glut" proposed by Ben Bernanke prior to the crisis. The underlying concept of this theory posits that the transformation of the global economy created more savings than the investment opportunities could absorb.

Emerging and surplus economies had been creating substantial foreign currency reserves for themselves and sustaining high savings rate levels. Capital from such economies found its way into financial markets in advanced nations, especially the government bonds market in the U.S. and Europe. This created excess loanable funds in the global economy and resulted in falling real interest rates even prior to the economic crisis of 2008. In the context of secular stagnation theory, the concept of the global savings glut plays an important role because the global flow of capital is a significant link between international capital flows and domestic macroeconomic results. If saving continues exceeding investment, then very low interest rates are needed to sustain equilibrium of demand.

4.3 Increasing Inequality

Another factor highlighted in the literature before 2018 is income and wealth inequality. The distribution of income affects aggregate demand since households with varying incomes have different spending habits. Households with high incomes tend to allocate more money toward savings than those with low and middle incomes, which allocate more income to consumption.

As income concentrates among households with higher incomes, there is an increase in aggregate savings compared to aggregate consumption demand. A slowdown in consumption demand lowers the projected sales revenue for firms, hence lowering investment and employment. Some economists believe that increasing inequality leads to demand deficiency and stagnation.
In this regard, secular stagnation has an aspect of distribution. This problem results not from insufficient productive capacity but from insufficient demand within the economy.

4.4 Slowing Productivity Growth

The third theory emphasizes the role of decreasing productivity growth rates. According to economist Robert J. Gordon, the most revolutionary inventions, including the use of electricity, sanitation systems, internal combustion engines, and mass production processes, created extraordinary productivity growth in the period between the late nineteenth century and the early twentieth century. Such inventions completely restructured economic activities and people’s lives.

Today's innovations related to digitalization and information technology are capable of creating lower economy-wide productivity benefits. Digital innovations change the nature of communication and provide new possibilities for delivering services; however, their contribution to productivity growth seems lower than that of the previous industrial revolution.

Decreasing productivity growth lowers expectations from investments in capital. Lower productivity growth results in lower returns from capital investments, which leads to reluctance to invest and thus creates problems with aggregate demand and contributes to secular stagnation

4.5 Post-Financial Crisis Effects

The lasting effects of the global financial crisis in 2008 provide yet another essential element for understanding secular stagnation theories. Financial crises typically lead to ongoing economic losses even outside of the recessionary phase, an effect that has been referred to as "hysteresis."
Post-crisis household debt reduction aimed at restoring their financial positions amidst declining home and market prices. Banks implemented more stringent lending policies due to regulatory changes and increased

risk perceptions. Firms, confronted by uncertain consumer demands and their own financial instability, pursued conservative investments and cash build-ups instead of increasing production.

Balance sheet problems hindered consumer spending, credit formation, and private investments for years after the official end of the recession. This contributed to the impression that structural challenges, rather than transient factors, were limiting economic expansion.

4.6 Safe Asset Shortage

Another possible explanation found in earlier studies before 2018 is linked with the growth in demand for safe assets. During the post-crisis period, people were more interested in investing in highly safe securities such as government securities of developed countries. Increased risk aversion, regulations, demographic changes, and others have resulted in an increase in demand for safe assets.

Limited supply of safe assets as compared to demand led to lower yields on government securities and thus to low real interest rates. Economists think that this phenomenon of "shortage of safe assets" only made secular stagnation worse because of lower returns in financial markets without adequate investment.

On balance, all these interacting factors – demographic shift, global savings imbalance, growing inequality, declining productivity, financial crisis aftermath, and safe asset demands – offer a holistic view on why after the crisis in 2008 there appeared an environment of poor growth and low interest rates. It appears that the concept of secular stagnation itself is a result of several structural changes taking place simultaneously in advanced countries.

5. Policy Reactions and Remedies

The renewed debate on secular stagnation has led to intense discussions on how to react to it. Prior to 2018, mainstream economics largely agreed that traditional means of macroeconomic stabilization, primarily those involving the manipulation of short-term interest rates, were ineffective when real interest rates were low in equilibrium and demand deficient.

5.1 Expansionary Fiscal Policy

One of the main recommendations offered by secular stagnation theory is the use of fiscal measures. As long as nominal interest rates fall close to the zero lower bound, monetary policy loses its potency. Government spending could increase aggregate demand and crowd in private investment.

In particular, Lawrence Summers and Paul Krugman maintained that under the condition of sustained excess savings, the government enjoyed favorable debt dynamics and was thus able to run fiscal deficits without harming the sustainability of government finances in the long term.

Fiscal policies recommended include:

- infrastructure spending;
- education investment;
- public financing of science and technological innovation;
- environmental and green investments.

These forms of expenditures not only stimulate demand but also enhance long-run productivity and output potential by tackling both cyclical and structural features of stagnation.

5.2 Increasing Inflation Target Levels

Another well-known idea relates to re-thinking inflation targets set by the central banks of most developed nations at the 2 percent level. This target was determined back when the period of stable economic growth before the financial crisis took place. Under the secular stagnation framework, there might be equilibrium interest rates which are very low. Thus, there would be no possibility to cut nominal interest rates any further at central banks.

Olivier Blanchard et al. recommended increasing inflation targets up to 4 percent, allowing higher nominal interest rates in general. The idea was that with higher inflation expectations, it would be easier for the central banks to cut real interest rates during the recession periods, restoring the efficacy of monetary policy. Despite being criticized due to credibility and price instability considerations, this recommendation acknowledges that the current macroeconomic policy framework might not be appropriate in the case of secular stagnation.

5.3 Structural Reforms for Encouraging Investments

Besides demand management, however, many scholars also pointed out the need for structural reforms aimed at creating greater opportunities for profitable investments and increasing the natural rate of interest. In case the cause of secular stagnation is low levels of investment demand, it is crucial to increase incentives for investments.

Potential structural reforms could address the following issues:

- innovation and incentive systems for research;
- competition and deconcentration of markets;
- labor mobility and flexibility of the workforce;
- regulatory restrictions in slowly-growing industries.

Through creating more opportunities and higher rewards for investments, reforms could help balance saving and investments and thus reduce pressures on interest rates.

5.4 Redistribution and Increasing Demand

Many researchers before 2018 noted that secular stagnation is often associated with increased inequality between income groups. Because high-income groups save more of their money than lower income groups do, inequality leads to a reduction in aggregate demand. Thus, redistributing incomes in favor of households with a high propensity to consume could stimulate economic growth.
Potential methods of redistribution include:

- tax progressivity;
- expanding social services;
- transfer payments;
- income support programs.

In this context, redistribution is not only a matter of social policy but also a method of macroeconomic regulation.

5.5 Financial Sector Reforms

From the global financial crisis, one of the lessons learned was that economic instability could generate permanent damage. In light of this, many economists contended that measures to prevent crises in the future were necessary to avoid economic stagnation.
Financial sector reforms involve:

1. improved banking regulations,
2. better macroprudential management,
3. deleveraging,
4. and stable provision of credit to productive activities.

Stable financial systems discourage precautionary savings, lower risk aversion and foster sustained investments and economic growth.

6. Consequences for Modern Macroeconomic Theory

There are significant consequences associated with the idea of secular stagnation in terms of modern macroeconomic theory and policy formulation. Market economics in standard models tend to reach a full employment equilibrium via prices and interest adjustments. This does not appear to hold true based on the period after 2008.

Three main theoretical conclusions can be drawn here.

One, an economy need not necessarily return to a full employment equilibrium. There may be persistent demand deficiencies leading to low growth levels even without any disturbances, implying an active policy response is necessary.

Two, equilibrium interest rates may stay permanently low.
Thirdly, monetary policy alone is insufficient to ensure economic stability during periods of secular stagnation due to the diminishing effectiveness of monetary interventions in the face of extended quantitative easing without inflation.

This leads to a situation whereby the theory of secular stagnation calls for a new macroeconomic approach to policy-making that includes:

1. active fiscal policy,
2. productive restructuring,
3. efforts at financial stability,
4. and redistribution policies to bolster demand.

Thus, macroeconomic stability becomes a joint effort on the part of the relevant fiscal, monetary, and structural policy agencies as opposed to a function of monetary policy alone. In sum, the theory not only provides a rationale for economic performance after 2008 but also a blueprint for changing the way economic policy is conducted in developed nations.

7. Conclusion

However, the reality of the global economy since the onset of the financial crisis in 2008 has brought about a complete rethinking of macroeconomic discussions today. In advanced countries, while there was no significant growth in output, weak economic performance was reflected in other indicators, including slow growth rates, weak investments, deflation, and unprecedented low real interest rates. These features of modern economies are consistent with the theory of secular stagnation as proposed by Lawrence Summers. Based on the analysis carried out above, it can be concluded that secular stagnation results from several structural factors. First of all, demographic aging is responsible for lower workforce participation and higher precautionary savings. Secondly, inequality is responsible for weaker consumer demand. Thirdly, productivity growth is weaker compared to previous technological periods as pointed out by Robert J. Gordon. Fourth, savings imbalances discussed by Ben Bernanke create permanent pressures towards lower interest rates. In addition, the aftermath of the financial crisis reinforced these trends due to deleveraging and increased risks. When analyzed together, these variables point out to the fact that the low growth, low interest rates period following 2008 cannot be seen as an aberration from normality in economic behavior. Instead, it can be considered as a manifestation of secular stagnation – that is, as a new economic regime where natural interest rates remain low and private investment is not enough to generate full employment. In this sense, however, the tools of traditional monetary policy become increasingly obsolete. As far as implications for policy making go, then, the issue is significant. The current consensus, which was formulated prior to 2018 within the framework of economic literature, is that a comprehensive policy framework is needed for addressing the challenge posed by secular stagnation. Such an approach involves the use of expansionary fiscal policies, government investments in infrastructure and innovations, incentives for investment, as well as redistribution to increase aggregate demand. Among other crucial elements, there are financial stability and institutional changes aimed at promoting growth over the long term thanks to

lower uncertainty and risk-taking propensity. Finally, it should be noted that in the broad sense of the term, the issue of secular stagnation reflects one of the most essential trends occurring in advanced capitalism of the modern era. In this regard, therefore, it can be argued that the concept of secular stagnation in its refined form can be seen not only as an assessment of the situation in light of the recent crisis but also as an alternative macroeconomic paradigm.

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