

# Link between household saving and economic growth economics essay



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Economic growth refers to the positive change in the level of production of a country's goods and services over a certain point in time. It is also influenced by many factors but one of the pinnacles of economic history is the impact household saving and debt has on economic growth. Most working papers and journal articles on cross countries studies assume a positive relationship between household saving and economic growth and an adverse relationship between consumer debt and economic growth.

Household saving is defined as the difference between a household's disposable income (mainly wages received, revenue of the self-employed and net property income) and its consumption (expenditures on goods and services). The household savings rate is calculated by dividing household saving by household disposable income. A negative saving rate indicates that a household spends more than it receives as regular income and finances some of the expenditure through credit (increasing debt), through gains arising from the sale of assets (financial or non-financial), or by running down cash and deposits.

These differences are partly due to institutional differences between countries. These include the extent to which old-age pensions are funded by government rather than through personal savings, and the extent to which governments provide insurance against sickness and unemployment. The age composition of the population is also relevant, as the elderly tend to run down financial assets acquired during their working life. This implies that a country with a high share of retired persons will usually have a low household saving rate.

The conformist view is that savings contribute to higher investment and hence higher GDP growth in the short run (Bacha, 1990; DeGregorio, 1992; Jappelli and Pagano, 1994). The central idea of Lewis's (1955) traditional development theory was that increasing savings would accelerate growth. Kaldor (1956) and Samuelson and Modigliani (1966) studied how different savings behaviors induced growth. On the other hand, many recent studies have concluded that economic growth contributes to savings (Sinha and Sinha, 1998; Salz, 1999; Anoruo and Ahmad, 2001).

Over the last 10-15 years, household saving rates have increased in Austria, Germany and Sweden and remained stable in Belgium, France and Switzerland. A downward trend over the same period has occurred in Canada, Italy, Japan, Korea, Poland and the United States. (OECD (2010), National Accounts of OECD Countries, OECD, Paris)

The main factors contributing to differences among countries are listed below:

The income effect: in general higher income leads to a higher saving rate;

The wealth effect: gains/losses on financial and non-financial assets and liabilities impact on accumulated wealth, and therefore possibly spending, but not on income. Higher wealth may then lower the saving rate;

Credit facilities: in countries (e. g. UK and US) where consumption credit was easier to finance, saving rates may be comparatively lower;

Institutional factors such as differences in social security schemes, especially pension schemes and the tax system;  
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The proportion of own-account entrepreneurs and small unincorporated enterprises, within the household sector, because producers may have a different saving behaviour;

Households' expectations as regards the future economic situation;

Cultural and social factors.

Hondroyannis (2004) investigates the long- and short-run determinants of aggregate private

savings in Greece employing data over the period 1961-2000. A long-run saving function sensitive to fertility changes, old dependency ratio, real interest rate, liquidity and public finances is found to exist and the importance of short-run deviations is presented using vector error-correction model estimation. The empirical evidence suggests the existence of a stable long-run savings function in Greece both in the long- and short-run periods and the policy implications of such a relationship are presented.

According to Barba and Pivetti (2008), rising household debt in USA made low wages and increasing aggregate demand to arise simultaneously. In the USA, according to the figures of the Federal Reserve Board, consumer credit outstanding reached 25% of disposable personal income (DPI) in 2006. This was the peak of an upward trend that has characterised the period since the first half of the 1980s, following 15 years during which the consumer credit-income ratio averaged around 18%. Increasing household debt in developed countries like USA has been mostly due to the noticeable fall in household savings and this had an adverse effect on economic growth.

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Salotti (2009) claims that fluctuations in US private savings help to create and to sustain global imbalances due to their influence on the current account deficit. To test this claim, he investigates the determinants of aggregate household savings using a panel of 18 developed countries for the period 1980-2005. They weave two strands of literature: the first strand from consumer theory, considering specifically the 'wealth effect', the second strand from aggregate private savings theory. To find the best technique to estimate the long run savings function, unit root and cointegration tests are carried out, from which evidence of a cointegrating relationship is found. The group means FMOLS is used to estimate the model. The empirical evidence suggests effects consistent with theory: an increase in wealth negatively affects household savings. Furthermore, when important explanatory variables, such as government savings and population dependency ratios, are included in the model, tangible wealth becomes the only kind of wealth to (weakly and negatively) influence household savings in developed countries.

Howitt, Agnion, Comin and Tecu (2009) wanted to test if a country can grow faster by saving more as they believe that household saving is of deep concern as it allows entrepreneurs to undertake their business and also reducing the agency cost that usually acts a hindrance for foreign investors. Since domestic saving matters for innovation, and therefore growth, it thus enables the local entrepreneur to put equity into this cooperative venture, which lessens an agency problem that would otherwise deter the foreign investor from participating. In rich countries, domestic entrepreneurs are already familiar with frontier technology and therefore do not need to attract

foreign investment to innovate, so domestic saving does not matter for growth. The higher the household savings and the lower the household debt a country has, the more economic growth it can at least forecast to make. The finding is based on a cross-country non-overlapping panel over the period from 1960 to 2000. They use a sample of 118 countries, all those for which there exists data on per-worker GDP and on the saving rate. The cross-country regression shows that lagged savings is positively associated with productivity growth in poor countries but not in rich countries.

## **2. 0 EMPIRICAL EVIDENCE**

Empirical evidence deals mainly with the previous works of various authors all around the world. There have been many works carried out by different authors and they reached certain conclusions which may be further developed and their results vary among the countries. The first case considered is on the United States of America (USA) and then they further scrutinise what happened in the developed and emerging countries.

### **2. 1 STUDIES ON THE USA**

As noted in Thomas and Towe (1996), research into household saving/consumption behaviour in recent years has inclined to centre on probing for long-run relationships between saving (or consumption) and selected macroeconomic variables. In large part, this shows the fact that the data involved have been found to be non-stationary. This implies that conventional statistical methods cannot be used to test relationships between movements in the savings rate and other (non stationary) macro variables. This approach also implies that short-run movements in the

savings rate may be driven by deviations from the long-run relationship between saving and its fundamental determinants.

Callen and Thimann (1997) studied the empirical determinants of household saving in USA using cross sectional and panel data from 21 OECD countries for 1975-95.) They find that household saving fell from 13% during 1975-81 to only 11% in 1982-89 but it has then stayed stable in general. Variables that capture the structure of the tax system and the financing and generosity of the social security and welfare system are added to the set of potential explanatory variables. The results indicate that there is an central role for public and corporate saving, growth, and demographics in controlling household saving, while some role is also established for inflation, unemployment, the real interest rate, and financial deregulation. The results also propose that the tax and the social security and welfare systems have an important impact on household saving

Bérubé and Côté (2000) examine the structural factors of the personal savings rate in Canada over the last 30 years, using co integration techniques. The main result is that the real interest rate, expected inflation, the ratio of the all-government fiscal balances to nominal GDP, and the ratio of household net worth to personal disposable income are the most significant determinants of the trend in the personal savings rate, as measured in the National Income and Expenditure Accounts (NIEA). The results also recommend that the rapid decline in the NIEA personal savings rate in recent years largely shows a change in the trend constituent of the savings rate, rather than a transitory different approach from the trend.

Tipett (2010) uses a range of methodological approaches and drawing on longitudinal data from the National Longitudinal Survey of Youth 1979 and also uses multilevel logistic regressions to investigate the relationship between the hypothesized mechanisms and the probability of holding non-collateralized debt. Analysis of Survey of Consumer Finance data shows that the amount of household debt increased faster than household asset increases (see also Bucks, Kennickell, Moore, Fries, and Neal 2006; Kennickell 2009), and Keister (2000) shows that overall wealth has been growing at the same time that the percentage of households with zero or negative net worth has also been rising.

## **2. 2 STUDIES ON DEVELOPED ECONOMIES**

Carroll and Weil (1994) present Granger-causality tests for 38 countries for which they have fine data, and show that increases in growth radically head increases in saving. Dekle (1993) presents comparable Granger causality regressions for a group of fast-growing countries and finds that growth positively Granger-causes saving in every country in his sample.

Edwards (1995) looked at data from a panel of 36 countries over the period 1970-92. Using lagged population growth, openness, political instability, and other lagged variables as instruments, he concludes that the rate of output growth has an important, positive effect on saving.

Andersson (1999) believes that the temporal interdependence between saving and output has been measured in recent empirical studies which obliged some authors to question the conventional idea of a causal chain where saving leads growth through capital growth. As divergent to the



previous studies, which have mainly used panel-estimation methods, the tests of causal chains are carried out in time-series settings. Saving and GDP are estimated in bivariate vector autoregressive or vector error-correction models for Sweden, UK, and USA, and tests of Granger non-causality are executed within the estimated systems. The core results show that the causal chains linking saving and output differ across countries, and also that causality associated with adjustments to long-run relations might go in different directions than causality associated with short-term disturbances.

Jappelli and Padula (2007) reconsidered savings inclinations in Italy, summarizing existing empirical evidence on Italians' motives to save, relying on macroeconomic indicators as well as on data drawn from the Bank of Italy's Survey of Household Income and Wealth from 1984 to 2004. The macroeconomic data indicate that households' saving has fallen considerably, although Italy continues to class above most other countries in terms of saving. The microeconomic data show a strong correlation between the propensity to save and the level of current income, as well as a strong correlation between income and indebtedness. International panel data put forward that saving is strongly correlated with the growth rate of income, and that saving changes parallel growth change, as shown by Attanasio, Picci and Scorcu (2000) using the 150 countries of the World Bank Saving Database.

## **2. 3 STUDIES ON EMERGING MARKETS**

Emerging markets are economies which are currently in the process of fast growth and industrialisation. There are at present 28 emerging markets in the world with the economies of China and India being considered certainly <https://assignbuster.com/link-between-household-saving-and-economic-growth-economics-essay/>

as the two largest. New conditions were surfaced in recent years to portray the largest developing countries such as BRIC standing for Brazil, Russia, India, and China.

The relationship between savings and economic growth has received increased notice in recent years especially in developed and emerging economies [see Bacha (1990), DeGregorio (1992), Levine and Renelt (1992), and Jappelli and Pagano (1994)]. This might not be distinct to the central foundation of Lewis's (1955) traditional development theory that increasing savings would accelerate economic growth. Research efforts by Kaldor (1956) and Samuelson and Modigliani (1966) examined how different savings behaviours would induce economic growth.

Jappelli, Tullio and Marco Pagano (1994) test whether the measures of liquidity

constraints help to explain the international differences in national saving rates, as forecasted by their model. They also test an outcome of that model, namely that the effect of growth on saving is greater where liquidity constraints are more determined. The data cover a panel of 19 countries (all the main OECD countries are included) and are drawn from Modigliani [1990]. Observations are averages of annual data for three periods: 1960-1970, 1971-1980, and 1981-1987). Findings show that the two variables are negatively linked (the correlation coefficient for the entire sample is -0.55). They have empirically measured the soundness of three propositions, namely that liquidity constraints on households raise the saving rate,

strengthen the effect of growth on saving, and promote productivity growth in models in which growth is endogenous.

Carroll and Weil (1994) used five year averages of the economic growth rate and savings for OECD countries and found that economic growth Granger caused savings. However, the reverse was obtained when dummies were included in their estimation. Using Granger causality tests, findings by Sinha and Sinha (1998) and Sinha (1999) found that economic growth rate Granger caused the savings growth rate for Mexico and Sri Lanka respectively.

Using cross section data between 1960 and 1997 and Granger causality methodology, Anoruo and Ahmadi (2001) observed the causal relationships between the growth rate of domestic savings and economic growth for seven African countries -namely Congo, Cote d'Ivoire, Ghana, Kenya, Nigeria, South Africa and Zambia. Their studies established that savings are co-integrated in all of the countries except for Nigeria and that economic growth Granger-causes the growth rate of domestic savings for all the countries considered except Congo where reverse causality was obtained.

Matos (2002) used among other parameters, the ratio of residents' funds deposited in the financial system to aggregate monetary asset M2 (1947-2000) as a proxy of financial development, empirical tests support the view that it is vital to maintain the public's confidence in domestic financial assets to improve GDP growth prospects. This ratio may reflect an intangible asset of the financial intermediaries, i. e. the general public's confidence that contracts between customers.

Using time series data between 1960 and 1997, Bhaharumshah et al (2003) found that savings does not Granger cause economic growth rate for Singapore, South Korea, Malaysia, Philippines and Thailand. Also, dealing with the relationship between domestic savings and economic growth for various economies with different income levels, Mohan (2006) concluded using cross section data from 1960 to 2001 and Granger causality methodology, that economic growth rate Granger caused savings growth rate in eight high income countries (HIC)-Sweden, Iceland, Finland, UK, Korea, Japan, Canada, and Norway- except in Singapore.

Kwack and Lee (2005) investigate the extent to which income growth and uncertainty and demographic factors affect the domestic real saving rate in Korea. They test an extended life cycle hypothesis and demography hypothesis with Korean time series data from 1975 to 2002. The results of the tests show that the aggregate saving rate is positively affected by the moving average of the growth rate of income and the variance of the income growth. The positive effect of the income growth differs from the negative effect found household survey data were used. The young and the older age dependency ratios have negative effects on the saving rate, suggesting that the age structure of the population has an impact on aggregate saving rates.

Adebiyi (2005) employed quarterly data spanning between 1970 and 1998 to examine savings and growth relationships in Nigeria using Granger causality tests and impulse response analysis and concluded that growth, using per capital income, is sensitive to, and has an inverse effect on savings.

Mohan (2008) believes that household savings in India has contributed significantly to its economic growth which recorded a steady rise over the last decades. Mohan found some empirical relations whereby in the argument that high levels of debt-GDP lead to high interest payments relative to GDP, which crowd out government capital expenditure and reduce the overall saving rate, two relationships are of critical importance: the responsiveness of changes in the saving ratio with respect to changes in the fiscal deficit levels; and the responsiveness of government capital expenditure to changes in the level of interest payments. Mohan (2006) tested the direction of causality between economic growth and savings in different economic income classes. The ADF test indicates that both log GDP and log GDS have unit roots in the level data. In the presence of unit roots, the variables need to be differenced in order for the series to be stationary. Without differencing the data, a causality test would lead to misspecification.

Oladipo (2009) employed the Toda and Yamamoto (1995) and Dolado and Lutkepohl (1996)

TYDL- methodology to examine the direction of causal relationship between savings and economic growth in Nigeria between 1970 and 2006. The empirical results proposed that savings and economic growth are positively cointegrated indicating a steady long run equilibrium relationship. Further, the findings revealed a unidirectional causality between savings and economic growth and the corresponding role of FDI in growth.

Abu (2010) was motivated by the debate adjoining the direction of causality between saving and economic growth and employed the Granger-causality

and co-integration techniques to evaluate the relationship between saving and economic growth in Nigeria during the period 1970-2007. The Johansen co-integration test shows that the variables (economic growth and saving) are co-integrated, and that a long-run equilibrium exists between them. Additionally, the Granger causality test discloses that causality runs from economic growth to saving, implying that economic growth precedes and Granger causes saving. Thus, they reject the Solow's hypothesis that saving precedes economic growth, and accept the Keynesian theory that it is economic growth that leads to higher saving.