ACTUARIAL SOCIETY OF SOUTH AFRICA

QUANTIFYING RISK, ENABLING OPPORTUNITY

# International Evidence on the Determinants of Savings


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# The Role of Savings

- A source of funds for capital accumulation and long run economic growth.
- Classical growth theory (Ricardo and Marx, etc.): long run economic growth is the product of the savings rate and the rate of profit.
- Endogenous growth theory (Romer, 1986): long run growth rate is a product of the state of the savings rate and the state of technology.
- Consumption smoothing and provision for bequests for households: Keynes (1997:107), Modigliani and Brumberg (1954), Deaton (1990).
- The motives of enterprise, liquidity, improvement, financial prudence for firms: Keynes (1997:109).

# Theories of Savings Behaviour I

Macroeconomic balance approach to private savings

$$\frac{S_t}{Y_t} = \frac{I_t}{Y_t} + \left(\frac{G_t - T_t}{Y_t}\right) - \left(\frac{Z_t - X_t}{Y_t}\right) + \left(\frac{NCF_t - \Delta R_t^i}{Y_t}\right)$$

Keynes' (1936) theory

$$\frac{S_t}{Y_t} = -\frac{C_o}{Y_t} + s$$

Kaldor's (1956) classical extension of Keynesian theory

$$\frac{S_t}{Y_t} = -\frac{C_o}{Y_t} + s_c(1-u) + s_w u$$

$$s_c > s_w$$

# Theories of Savings Behaviour II

The Life Cycle Hypothesis (Modigliani and Brumberg (1954))

$$\frac{S_t}{Y_t} = F\left(\overset{+}{G_t}, \overset{-}{\Omega_t}, (\overset{-}{r} - \overset{+}{E_t \pi_{t+1}}), \overset{-}{D_t}\right)$$

The Permanent Income Hypothesis (Friedman (1957))

$$\frac{S_t}{Y_t} = (1-\alpha)\frac{Y_t^p}{Y_t} + \left(\frac{Y_t - Y_t^p}{Y_t}\right)$$

Random Walk of Consumption (Hall, 1978)

$$\frac{S_t}{Y_t} = 1 - e^{\delta + \varepsilon_t}\frac{C_t - 1}{Y_t}$$

# Empirical Evidence

- Macro-balance evidence: public saving partially offsets private savings, current account deficits lower private savings.
- Growth: economic growth drives savings rate rate, per capita income levels drive private savings.
- Inflation and interest rates: ambiguous effects, not robust, sometimes very weak effects on the private savings rate.
- Terms of trade: Adverse terms of trade shocks lower the savings rate.
- Demographics: Dependency lowers the private savings rate, urbanisation lowers savings.

# Empirical Evidence (continued)

- Access to credit: Credit constraints raise the private savings rate.
- Financial development: raises the private savings rate, access to financial instruments.
- Wealth: lowers the private savings rate, collateral increases access to credit.
- Financial liberalisation: lower the private savings rate
- Social security: structure and financing affect saving rates ambiguously.

# The South African Case

- Financial liberalisation lowers private savings (Aron and Muellbauer, 2000)
- Corporate savings rose as a result of financial liberalisation, driven by rising real interest rate and the redistribution of income from workers to corporations.
- Growth rate drives private savings (Odhiambo, 2007).
- Real interest rate effects are ambiguous (Odhiambo (2007) finds a positive effect, while Simleit et al.(2011) find a negative effect for household saving).
- Partial offset of household savings by public savings (Simleit et al.(2011)).
- No consideration of demographic variables.
- No consideration of social security structure and financing.

# Conclusion and Some Policy Lessons

Demographics matter. Population planning and forecasting, managing urbanisation through public infrastructure and services.

Growth rate drives saving rates: Growth policy should be the foundation of savings policy. Raise entrepreneurial profit rates.

Inflation and real interest rates have ambiguous effects. Ambiguous link between these and savings rates.

Fiscal surpluses raise national savings rate. Beware of perverse Keynesian effects, consider developmental deficit financing.

The structure and financing of social security matters.

Structural current account deficits lower savings rates. The role of industrial policy and foreign ownership, foreign exchange controls.

Institutional reforms. Sovereign Wealth Funds. Require state ownership of natural resources (Chile, Nigeria, Botswana, etc.).

Unemployment raises the dependency ratio and lowers saving rates.

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Thank You

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