A red and black flag

Description automatically generated with low confidence

**Nijmegen School of Management  
Department of Economics and Business Economics**

**Research Proposal**

By Hidde Nijland, Deniz Aydemir, Christina Breg, Adaba Al Res

Nijmegen, 10 March 2025



**Table of Contents**

[1 First Level Heading – The Style is Named Heading 1 3](#_Toc92697171)

[1.1 Second Level Heading – The Style is Named Heading 2 3](#_Toc92697172)

[1.1.1 *Third Level Heading* – The style is named Heading 3. 3](#_Toc92697173)

[1.2 Footnotes 3](#_Toc92697174)

[1.3 List Styles 3](#_Toc92697175)

[1.4 References 4](#_Toc92697176)

[2 Sample Figure 5](#_Toc92697177)

[3 Sample Table 6](#_Toc92697178)

# Larger (Socio-)Economic Issue

Econoomist and policymakers have long been interested in the declining savings rate in the USA. Understanding the key determinants of savings behavior is crucial for shaping effective economic policies. Among these determinants, real interest rates (adjusted for inflation) are traditionally believed to influence individuals’ incentives to save or spend. According to Barro & Sala-I-Martin (1990), a one-percentage-point increase in real interest rates should, theoretically, raise the saving ration by about one-third of a percentage point. However, despite fluctuating interest rates, savings rates have continued to decline in recent decades (Kirik & Ulusoy, 2022; Lunsford & West, 2017; Sheshinski & Tanzi, 1989)

This continuing trend raises a question: Is there still a meaningful relationship between real interest rates and savings rates in the USA? If not, what alternative explanations, such as demographic shifts, policy changes, or financial market transformations, account for this trend?

A graph of two people

AI-generated content may be incorrect.

# Research Question & Hypothesis

Our research aims to investigate the relationship between real interest rates and the savings rate in the United States, focusing on the post-1980s period of declining savings. We propose the following research question: “To what extent do real interest rates influence savings behavior in the modern U.S economy, and what alternative factors may better explain changes in the savings rate?”

We hypothesize that the classical assumption that higher real interest rates lead to higher savings no longer holds in the modern U.S. economy due to demographic changes, wealth effects, and financial market developments. While traditional economic theory posits that an increase in real interest rates encourages greater savings, contemporary trends suggest that this relationship has weakened or become more complex (Lunsford & West, 2017). Several factors may account for this shift.

First, demographic changes play a crucial role in shaping savings behavior (Rezaei, 2021). The U.S. population is aging, and the Life-Cycle Hypothesis suggests that older individuals dissave after retirement (Krupová, 2024). With an increasing proportion of ritrees, national savings rates may naturally decline. Furthermore, younger generations who face different economic realities may save less that previous generations.

Second, macroeconomic conditions such as inflation, unemployment and income inequality influence saving trends (Singh et al., 2018). A long time of low inflation may reduce the incentive to save.

Third, wealth and portfolio effects have become more pronounced in recent decades. As more people hold investments. The current rising house prices and stock market grow may make people feel that saving money ‘loses’ them money.

Finally, behavioural and psychological factors must be considered. We need to look at how financial literacy levels and the trust in financial institutions may have changed the savings behaviour.

Given these factors, we will critically assess the extent to which real interest rates still influence savings behavior in the USA and whether alternative explanations better account for the observed trends in declining saving rates. This research is very relevant given the current financial vulnerability of many Americans. A 2016 study by Forbes (McGrath, 2016) found that 63% of amaricans lack sufficient savings to cover a 500 dollar emergency expense. This suggest a high need to understand the underlying causes of this low savings rates.

# Methodology

We aim to investigate the relationship between real interest rates and savings rates in the U.S. by analyzing relevant data and combining it with demographic insights. Our approach will consider the impact of an againg population on this relationship, focusing on the savings ratio rather than the savings rate. Additionally, we will examine the role of advanced capital marketing in the U.S., which may offer unique perspectives on this issue.

Our analytical framework will be based on the Keynesian Consumption Function and the Loanable Funds Hypothesis. This dual approach will allow us to explore both the demand and the supply side of the economy.

We will also employ the previously mentioned Life-Cycle Hypothesis to analyze how different age groups vary in their consumption and savings behaviour. This will help us identify patterns between demographic shifts in the U.S. and the observed changes in the relationship between real interest rate sand savings rates.

Furthermore, we will incorporate the Permanent income Hypothesis, which posits that individuals save based on their expected long-term income rather than their current income. By integrating this with Friedman’s theory of consumption, we aim to understand how rael interest rates and anticipated future incomes influence the savings rate.

Our study will focus on the entire U.S. population, particularly in the post-COVID era. We will divide the population into age brackets to align with our theoretical framework, providing good context for our findings.

# Literature overview

Loanable funds will be the mainframe of this paper as we fundamentally think interest rates ought to have a marginal impacto n savings as savings ought to be increased in higher interest rate environments, as proven by many other studies (Kirik & Ulusoy, 2022; Joshua Aizenman et al., 2017), although we will also consider studies that falsify this notion such as (Douglas W. Elmentdorf, 1996) as this paper found that each model has shown to be describing of one group but every model fails to explain the average person. We will use other approaches such as LCH as mentioned above.

LCH hypothesis has two different approaches to it, one being the Ramsey-Cass Koopmans model, wich assumes there are intentions behind saving money, in contreast to the Diamond model, which ignores the motivation begind the savings (Dalgaard & Jensen, 2009). We lean into the Ramsey-Cass-Koopmans model as we believe there is a motivation behind the savings, and this can be shown by recent developments in the relationships between savings rates and real interest rate getting redundant in the US> ther must be more than meets the eye, as the interest rates alone do not effectively address the savings rates anymore. LCH theory can help us to reveal the relationship between the different age groups and their savings decisions. The notation tht retirees push down savings rate, as they are more keen to spend their savings rather than save up, has been proven by many studies (Modigliani, 2993; Jappelli & Mondigliani, 1998).

# What’s ahead for our group

In the coming weeks, we will need to read numerous papers and decide on frameworks to work within. This process will involve extensive discussions and brainstorming unique ideas. There is a ton of information to unpack and analyze

# Roadmap

*Phase 1: refining research scope and hypothesis*

1. Review literature thoroughly

* Conduct an exhaustive review of existing studies on the relationship between real interest rates and savings
* Identify key gaps in prior research that our study will address
* Summarize contrasting findings (e.g., studies supporting vs. contradicting the expected relationship between interest rates and savings)

1. Develop hypotheses

*Phase 2: data collection and methodology development*

1. Data acquisition

* Gather historical data from reliable sources
* Focus on real interest rates, savings rates, and demographic data
* Obtain relevant macroeconomic indicators like, inflation rates, unemployment rates, GDP growth, financial market indices etc.

1. Analytical framework selection

* We will use a combination of multiple analytical frameworks to support/contradict our research question, we are not completely sure which ones we will use.

*Phase 3: analysis and interpretation:*

1. Data processing & testing
2. Result interpretation

*Phase 4: finalization and presentation*

1. Draft research paper

* Structure paper into introduction, literature review, methodology, data analysis, results, discussion, conclusion, and policy implications

1. Peer review and refinement

* Look for peer review
* Incorporate feedback to improve clarity, quality and argumentation of the paper

# References

Barro, R., & Sala-I-Martin, X. (1990). World real interest rates. *NBER Macroeconomics Annual.* <https://doi.org/10.3386/W3317>

Dalgaard, C.-J., & Jensen, M. K. (2009). Life-cycle savings, bequest, and a diminishing impact of scale on growth. *Journal of Economic Dynamics and Control, 33*(9), 1639–1647. <https://doi.org/10.1016/j.jedc.2009.03.002>

Douglas, W. E. (1996). The effect of interest-rate changes on household saving and consumption: A survey. *Federal Reserve Board.* <https://www.federalreserve.gov/pubs/feds/1996/199627/199627pap.pdf>

Evans, O. J. (1983). Tax policy, the interest elasticity of saving, and capital accumulation: Numerical analysis of theoretical models. *The American Economic Review, 73*(3), 398–410. JSTOR.

FRED. (2025). *1-year real interest rates, personal savings rate, and 10-year real interest rate* [Dataset]. [https://fred.stlouisfed.org/series/REAINTRATREARAT1YE#](https://fred.stlouisfed.org/series/REAINTRATREARAT1YE)

Jappelli, T., & Modigliani, F. (1998). The age-saving profile and the life-cycle hypothesis. <https://doi.org/10.4337/9781781950500.00007>

Kirik, A., & Ulusoy, V. (2022). Winds of tapering, financial gravity and COVID-19. *The North American Journal of Economics and Finance, 62*, 101719. <https://doi.org/10.1016/j.najef.2022.101719>

Lunsford, K., & West, K. (2017). Some evidence on secular drivers of U.S. safe real rates. *National Bureau of Economic Research.* <https://doi.org/10.3386/W25288>

Lunsford, K., & West, K. (2019). Some evidence on secular drivers of U.S. safe real rates. *American Economic Journal: Macroeconomics.* <https://doi.org/10.1257/mac.20180005>

Maggie, M. (n.d.). 63% of Americans don’t have enough savings to cover a $500 emergency. *Forbes.* <https://www.forbes.com/sites/maggiemcgrath/2016/01/06/63-of-americans-dont-have-enough-savings-to-cover-a-500-emergency/>

Michael, F., & Brigitte, D. (n.d.). Global savings, investment, and world real interest rates. *Bank of Canada Review, Winter 2006-2007.*

Modigliani, F. (1993). Recent declines in the savings rate: A life-cycle perspective. In *The Collected Papers of Franco Modigliani* (pp. 249–286). <https://doi.org/10.1007/978-1-349-22925-3_8>

Rezaei, E. (2021). Demographic changes and savings behavior: The experience of a developing country. *Journal of Economic Studies.* <https://doi.org/10.1108/JES-01-2021-0021>

Robertson, D. H. (1934). Industrial fluctuation and the natural rate of interest. *The Economic Journal, 44*(176), 650–656. JSTOR. <https://doi.org/10.2307/2224848>

Rupová, P. (2024). Wealth, consumption, and saving patterns in retirement: A challenge to the life-cycle hypothesis. *Economic Review, 53*(3), 176–195. <https://doi.org/10.53465/ER.2644-7185.2024.3.176-195>

Sheshinski, E., & Tanzi, V. (1989). An explanation of the behavior of personal savings in the United States in recent years. *Macroeconomics eJournal.* <https://doi.org/10.3386/W3040>

Singh, A. K., Jham, J., & Kaur, A. (2018). Private savings: Trend analysis and determinants. *LBS Journal of Management & Research, 16*(1–2), 11. <https://doi.org/10.5958/0974-1852.2018.00002.0>

Aizenman, J., Cheung, Y.-W., & Ito, H. (2017). The interest rate effect on private saving: Alternative perspectives. *Asian Development Bank Institute.* <https://www.adb.org/publications/interest-rate-effect-private-saving-alternative-perspectives>