Interest Rate Developments and Their Impact on Households

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Abstract: Interest rates play an extremely important role in the economy, as over the years there has been a dependence on credit for the normal functioning of economic activity, both from the point of view of individuals and companies. The recent economic instability and the evidence of a period of the energy crisis with inflation reaching extremely high levels, the interest rate increase measures launched by the European Central Bank to control the rise in inflation, have a direct impact on economies and families. This paper focuses on analysing the evolution of the savings rate and the economic well-being index of Portuguese families between 2000 and 2022 about the evolution of the interest rate (3-month Euribor). The results show that interest rates are positively related to the savings rate and negatively related to the economic well-being index.

Keywords: Interest Rates; Household Savings Rates; Economic Well-Being Index.

THE IMPACT OF INTEREST RATES ON HOUSEHOLD SAVINGS LEVELS

Interest rates play a fundamental role in shaping household savings behaviour, exerting a significant influence on individuals' decisions regarding consumption, investment, and financial planning. Numerous economic theories have tried over time to systematise and clarify the relationship between interest rates and household savings.

Keynesian economics emphasises the role of aggregate demand in determining economic results (Keynes, 1936). Changes in interest rates can have an impact on consumption and investment, thus influencing aggregate demand and household savings. Lower interest rates can stimulate consumption and reduce the incentive to save, while higher interest rates can incentivise saving by increasing the opportunity cost of spending (Chugunov et al., 2021); [(Eichengreen, 2020); (Campbell & Mankiw, 1989); (Tobin, 1958)].

The theory of rational economic behaviour postulates that individuals make decisions to maximise their utility, considering their preferences and constraints, particularly in terms of disposable income. In the context of household savings, this implies that individuals distribute their income between consumption and savings to optimise their general well-being [(Herfeld, 2020); (Green, 2002); (Vriend, 1996); (Friedman, 1957)]. However, this decision-making process is subject to various factors, including interest rates, which affect the opportunity cost of saving about consumption.

On the other hand, the theory of intertemporal choice provides information on how individuals make decisions about the allocation of resources over time [(Echenique, 2020); (Ericson & Laibson, 2019); (Read et al., 2018); (Strotz, 1956)]. According to this theory, individuals discount future utility or consumption, considering the present value of future benefits about current costs. Interest rates play a crucial role in this decision-making process, influencing individuals' intertemporal preferences and shaping their savings behaviour [(Saługa et al., 2020); (Samuelson, 1937)].

Another relevant economic theory in this analysis is the Life Cycle Hypothesis. This theory suggests that individuals seek to smooth their consumption throughout their lives, adjusting their saving and spending patterns based on the stage of the life cycle and expectations of income evolution [(Shefrin & Thaler, 1988); (Danziger et al., 1982); (Modigliani, 1986)]. Changes in interest rates can affect these decisions by altering the trade-off between present and future consumption. For example, higher interest rates can encourage greater savings, particularly among families planning for retirement or other future expenses (Modigliani & Brumberg, 1954).

The Permanent Income Hypothesis assumes that individuals base their consumption decisions on expected long-term income and not on short-term fluctuations [(Mankiw, 1981); (Hall, 1978); (Friedman, 1957)]. Interest rates can influence households' assessment of their permanent income, affecting their savings behaviour accordingly. For example, lower interest rates can lead households to save less if they anticipate lower returns on their savings in the future (Friedman, 1957).

Another theory that explains the influence of interest rates on the household savings rate is based on financial market imperfections. Financial market imperfections, such as limited access to credit or asymmetric and unequal information, can distort households' savings behaviour [(Maggiori, 2022); (Eslava & Freixas, 2021); (Stiglitz & Weiss, 1981)]. In these cases, changes in interest rates can have different effects on different households, depending on their access to financial markets and their preferences and propensity to take risks.

Another view of this relationship is based on behavioural economics and allows us to understand how psychological biases influence decision-making [(Arthur, 2021); (Mankiw & Taylor, 2020); (Angner, 2020); (Kao & Velupillai, 2015); (Kahneman & Tversky, 1979)]. Individuals may show inertia in adjusting their savings behaviour in response to changes in interest rates, or they may be influenced by framing effects or loss aversion (Thaler & Shefrin, 1981). Understanding these behavioural aspects is crucial for a comprehensive analysis of the impact of interest rates on household savings.

In conclusion, the interaction between interest rates and household savings is multifaceted, encompassing rational economic behaviour, intertemporal choice, life-cycle considerations, and behavioural perceptions. By integrating these theoretical perspectives with empirical data, this framework provides a comprehensive basis for analysing the dynamics of household savings in response to changes in interest rates.

THE IMPORTANCE OF THE HOUSEHOLD WELL-BEING INDEX

The economic well-being index is a crucial measure for assessing the financial health and stability of families. This theoretical framework integrates knowledge from various disciplines, including economics, sociology, and psychology, to elucidate the relevance of the economic well-being index for families. The economic well-being index can be analysed from different perspectives with different emphases and analyses.

From a purely economic perspective, the economic well-being index provides a comprehensive assessment of the financial situation of families, encompassing factors such as income, savings, debt levels and access to essential goods and services [(Voukelatou et al., 2021); (Ruggeri et al., 2020); (Osberg, 2002); (Osberg & Sharpe, 2002); (Sen, 1985)]. Economic well-being is not only determined by income levels but also by the ability of families to meet their basic needs, pay for healthcare, and education and maintain a certain standard of living (Kahneman & Deaton, 2010). On the other hand, the economic well-being index serves to highlight disparities in socioeconomic status and income inequality between families (Wilkinson & Pickett, 2009). Families with higher economic well-being tend to have better access to education, healthcare, and opportunities for social mobility, while families with lower economic well-being may face barriers to economic progress and social inclusion (Marmot, 2004). Sherraden (1991) argues that economic well-being is closely linked to families' financial security and stability. Families with greater economic well-being are better prepared to withstand financial shocks and crises without facing serious financial difficulties (Hurst, Luoh, & Schneider, 2014). In addition, economic well-being provides a buffer against poverty and financial vulnerability, contributing to overall household resilience (Deaton, 1991).

Interest rates play a significant role in shaping households' economic well-being, influencing their financial decisions, savings behaviour and general standard of living. This influence has different perspectives depending on the approach taken and aims to elucidate the relevance of interest rates in the index of household economic well-being.

Economic well-being encompasses several dimensions, including income, wealth, consumption, and financial stability [(Voukelatou et al., 2021); (Sen, 1985)]. Interest rates directly affect households' economic well-being by influencing their access to credit, the cost of borrowing and the return on savings and investments (Campbell & Viceira, 2002). Fluctuations in interest rates can have an impact on households' disposable income, debt burden and ability to achieve their financial goals (Friedman, 1957). Interest rates influence households' decisions regarding saving and investment strategies (Modigliani & Brumberg, 1954). Higher interest rates encourage saving by offering higher returns on savings accounts, certificates of deposit and other interest-bearing assets (Campbell & Viceira, 2002). On the other hand, lower interest rates can incentivise households to seek higher returns through riskier investments or to reduce their savings rate due to lower returns on savings (Bernheim, 1994).

Interest rates have an impact on the cost of household borrowing and debt management practices (Deaton, 1991). Changes in interest rates affect mortgages, personal loans, and other forms of consumer debt, influencing households' monthly payments and overall debt burden (Modigliani, 1986). Households with high levels of indebtedness can face financial difficulties during periods of rising interest rates, while households with manageable indebtedness can benefit from lower borrowing costs (Alesina & Perotti, 1996). Interest rates contribute to income and wealth inequality between households (Piketty, 2014). Households with higher levels of wealth can benefit from higher returns on their investments during periods of rising interest rates, widening the gap between wealthy households and lower-income households (Piketty & Zucman, 2014). Furthermore, access to favourable interest rates and financial products can be limited for lower-income households, boosting economic disparities (Wilkinson & Pickett, 2009).

Finally, the impact of monetary policies in setting interest rates has an impact on the economic well-being and social equity of households (Stiglitz, Sen, & Fitoussi, 2009). Monetary policy decisions, such as changes in central bank interest rates, can have far-reaching effects on households' financial health, savings behaviour and overall economic stability (Blanchard, 2017).

Empirical studies provide evidence of the relationship between interest rates and various economic outcomes for households, including savings rates, debt levels, homeownership rates and income inequality (Chetty et al., 2014; Lane & Milesi-Ferretti, 2003). By analysing data on interest rates and economic indicators, researchers can assess the impact of monetary policy on households' economic well-being and inform evidence-based policymaking (Hurst et al., 2014).

In conclusion, interest rates play a central role in determining households' economic well-being, influencing their savings behaviour, debt management practices, housing affordability and income distribution. By considering the impact of interest rates on the economic well-being index, policymakers can develop specific strategies to promote financial inclusion, reduce inequality and increase the overall prosperity of households.

DISCUSSION OF RESULTS

This analysis aims to understand the relationship between interest rates and household savings and their index of economic well-being. The starting hypotheses for this study are:

H1: Interest rate fluctuations are positively associated with an increase in the savings rate, i.e. when the interest rate increases, the savings rate increases. This hypothesis reflects the literature drawn from different economic theories that establish this relationship.

H2: Interest rate fluctuations are positively associated with an increase in the economic well-being index. This hypothesis reflects the importance of interest rates in remunerating investments and savings, which are reflected in higher indices of household economic well-being.

To analyse the hypotheses, we used data on the annual values of the 3-month Euribor interest rate (measured on the first day of the following year), the levels of savings and the economic well-being index of Portuguese households between 2000 and 2022.

Table 1: Results of the Pearson Coefficient and R2 between the Interest Rate, Savings Rate and Economic Well-Being Index (2000 – 2022)

	Pearson Coefficient	R Square (R^2)
Household Savings Rate	0,352016	0,123915
Household Economic Well-being Index	-0,69608	0,484522

Source: Pordata.pt (2024); Euribor-rates.eu (2024)

From 2000 to 2022 there is an average positive correlation between the 3-month Euribor rate and the savings rate of Portuguese households, with a value of 0.352. As defined in the research methodology, the average correlation is between 0.3 and 0.5. In this test, which studied the correlation between the interest rate and the savings rate, we concluded that 0.373 (the result obtained) represents an average positive correlation.

When the analysis is made between interest rates and the Economic Well-Being Index, the Pearson Index establishes a strong negative correlation. However, it should be noted that the coefficient of determination (R2) shows that 12.4 per cent of the savings rate is explained by interest rates, while in terms of the Economic Well-Being Index, the negative correlation is explained by 48.5 per cent by the independent variable.

CONCLUSIONS

This paper aims to assess the impact of interest rates on the household savings rate and the economic well-being index, analysing data for Portugal between 2000 and 2022.

Regarding H1: Interest rate fluctuations are positively associated with an increase in the savings rate, the hypothesis is verified, with a positive correlation between the variables. Thus, increases in interest rates lead to increases in household savings levels as a way of obtaining higher returns on investments made. It should also be noted that during the period in question, two global events had a significant impact on economies, namely the 2008 financial crisis and the Covid-19 pandemic. The effect of the pandemic on the savings rate was notorious. The lockdowns caused by COVID-19 led to reductions in the monthly spending of Portuguese families, which led to a considerable increase in the savings rate, thus tampering with the natural trend in the evolution of this rate.

Regarding H2: Interest rate fluctuations are positively associated with an increase in the economic well-being index, this hypothesis was not verified. According to the data analysed, there is a strong negative correlation between interest rates and the economic well-being index, i.e. when the interest rate increases, the economic well-being index decreases. In fact, during the period analysed, the well-being index increased steadily when there were negative 3-month Euribor rates, reflecting this trend in the relationship between variables.

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