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What causes household debt to increase in South Africa?

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ABSTRACT

The 2007–2008 US subprime mortgage crisis evolved into a financial crisis that negatively affected many economies in the world and was afterwards widely referred to as the global financial crisis. Since the beginning of this financial crisis of 2008–2009, South Africa experienced a significant increase in its household debt to income ratio. In the main, this paper investigates the prominent factors contributing to the rise in the level of household debt in South Africa. Specifically, we construct a model for South African household debt through the application of a Vector Error Correction Model (VECM). We employ quarterly time series data throughout the timeline 1985 Q1 to 2012 Q1 and all the econometric tests are analyzed using the statistical software package EViews 7. Our results confirmed the existence of a long run cointegrating relationship between household debt and other macroeconomic determinants. Increasing household debt was found to be significantly affected by positive changes in consumer price index, gross domestic product and household consumption. Also, house prices and household savings were found to positively contribute to a rise in household debt but this relationship was found to be statistically insignificant. Alternatively, household borrowing was found to be significantly and insignificantly affected by negative changes in income and prime rate, respectively. Ultimately, the existence of a long run cointegrated relationship enabled us to build an error correction model for household debt which will facilitate future forecasting.
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1. Introduction

An economy with a good financial situation is associated with low debt levels in the household sector. To manage low debt levels among households, financial institutions which act as the primary source of credit in several countries and specifically in South Africa must be very prescriptive and discerning when it comes to the provision of loans to customers. With escalating debt, the household sector may run the risk of being too exposed to several adverse surprises like unemployment shocks, asset price shocks and shocks from income, just to name a few. In this regard, financial crises have historically been perceived to emit devastating shocks to vulnerable economies.

In lieu of this, it is unfortunate to observe that South Africa records a very high debt level. According to the SARB (2012) quarterly bulletin (June 2012), the ratio of household debt to disposable income decreased slowly to 74.7% in the first quarter of 2012 compared to 74.8% in the fourth quarter of 2011. Though this is seen as a slow decrease, this figure still remains very high and such high levels of household debt may have adverse effects on the economy. Without an effective investigation to discover what might cause this high level of debt among households in South Africa, the household sector might still remain very susceptible to shocks.

On a global scale, South Africa records low debt levels compared to the most influential economies in the world (see Fig. 1). The ratio of household debt to disposable income has briskly augmented in recent years in both Denmark and the Netherlands. In contrast, France alongside with Finland did not experience such significant increases as compared to those other countries. Although high, South Africa has a very good household debt to income ratio compared to the biggest economies in the world. These big economies are interconnected with the US economic and financial system, and therefore, it can be concluded that their high debt to income ratios are primarily due to the US economic recession of 2007–2008. Presently, the high debt ratios can be explained by the continuing adverse effects of the 2008–2009 financial crisis and the arrival of the European sovereign debt crisis.

The US subprime mortgage crisis (SMC) which started in 2007–2008 is considered by many economists to be the most significant incident that occurred since the great depression of the 1930s. Petersen et al. (2012) indicated that the SMC shook the foundations of the financial

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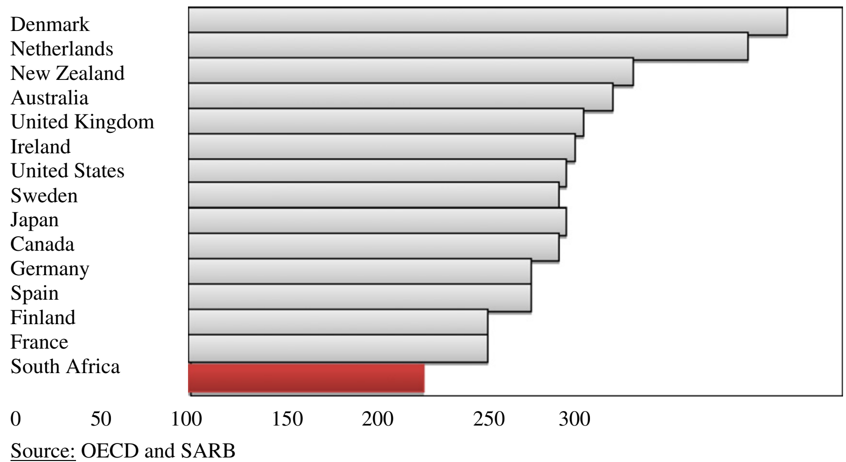

Fig. 1. Level of household debt to income ratio in selected countries.
Source: OECD and SARB.

industry by causing the failure of many iconic Wall Street investment banks and prominent depository institutions. In mid-2008–2009, the SMC cascaded into a financial crisis that spread into many regions of the world. This crisis stymied credit extension to households and businesses thus creating credit crunches and, ultimately recessions. Allen and Giovannetti (2010) reiterated that the seeds of this crisis can be traced to the low interest rate policies adopted by the Federal Reserve Bank and other central banks after the collapse of the technology stock bubble. In this context, Masilela (2009) asserted that this financial crisis was to a large extent a debt crisis.

Consequently, the question regarding the degree to which South Africa and other African countries were affected arises. Despite the initial assumptions about the South African economy not being affected significantly by this crisis, this economy was plunged into a recession for the first time in 17 years. On the other hand, Naude (2009) accentuated that the overall effects of the financial crisis on developing countries and especially African countries will certainly be negative.

In surveying the literature, it is apparent that the existing studies into the development of debt have been largely theoretical. Consequently, studies which examined the causes of increasing debt levels in the household sector are very limited. To the best of our knowledge, this study is the first of its kind to build a model for South African household debt using the Vector Error Correction Model (VECM) framework to investigate the main reasons why South African households enter into debt and records high debt levels in their balance sheet. Also, this econometric model is estimated using quarterly data from 1985 Q1 to 2012 Q1 with the aid of the statistical software package EViews 7. Consequently, from our results, measures will then be proposed to alleviate credit conditions among households thereby encouraging a stable financial household sector in South Africa. The structure of this paper is as follows. The current section is of an introductory nature, Section 2 reviews the theoretical framework and the empirical literature related to household debt. Section 3 provides a brief explanation of the methods used in this paper to build a VECM model for household debt in South Africa, while Section 4 will discuss the results. Finally, we conclude with Section 5.

2. Theoretical model and empirical literature

2.1. Theoretical model

Above all, this paper is mainly supported by the theoretical framework of the life cycle hypothesis (LCH) formalized by the economists Irving Fisher, Rod Harrod, Albert Ando and Franco Modigliani, but was mainly initiated from the latter. The main idea behind the LCH is that households mainly go in for large amounts of debt to smooth their consumption and for the possession of long-lasting commodities (houses, cars, etc.). The model assumes that a household can maximize utility over its life-time subject to an intertemporal budget constraint. This implies that by smoothing their consumption, households can maximize utility over their life-cycle. Clearly, the model foresees that consumption in each period is dependent on expectations about life time income. Assuming that household income is upward sloping, we can say that during the early stage of their working life, households will have a negative saving rate. However, as they will grow older together with their income, their savings will increase while indebtedness will decrease. Upon retirement, that is when households are no longer working, households will again dissave as in the early stage of their working life. At this stage of their lives, their consumption will be principally financed by the income they earned during their working age. Households may then enter into debt in periods where their income is extremely low, mainly because they need to finance their existing consumption. For that reason, they will then repay these loans in periods when their income will be relatively high.

In part, the LCH framework includes house prices, inflation, consumer price index, household income, interest rates, economic growth, and household consumption as determinants of increasing household debt levels.

In addition, we also consider the Permanent-Income Hypothesis (PIH). In 1957, the economist Milton Friedman developed the PIH in an attempt to explain consumer behavior. In particular, Friedman argues that consumption should not depend on current income alone. This model emphasizes that consumers use saving and borrowing behavior to smooth their consumption in response to random and temporary changes in their incomes from year to year. In essence, this theory conveys the message that households look at the future on deciding upon their current consumption. Friedman's PIH complements the LCH of Modigliani.

2.2. Empirical literature

This literature review encapsulates the relevant studies pertaining to household indebtedness in South Africa as well as in other countries.

For instance, Kotzè and Smit (2008) asserted that the high level of household debt in South Africa is due to a lack of a comprehensive saving culture among South Africans. This is certainly caused by financial illiteracy on the part of the consumers as they spend almost

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