

borrow because of their low earnings. Middle-aged people save the most in any country, and the elderly as with the young ones save little or dissave (Modiglian, 1986). In addition, individuals may substitute durables, non-durables, and semi-durables within the consumption constraints (Hendershott & Peek, 1989: 15).

2.3.2 The Permanent-Income Model

The Permanent-Income Hypothesis (PIH) was formalised by Friedman (1957). The theory has clear inference for saving behaviour (Berry & Williams, 2009: 192). The model states that spending decisions of households are the result of the expectations of an average income to be received over their lifetime (permanent income) and the intention to smooth consumption over the years. The present level of income dictates present saving, conditional on expectations of future income. If a household receives a higher income now than is expected in the future, it is more likely to save now. The opposite is true (Berry & Williams, 2009: 192).

Further empirical studies offer some support for the PIH. However, comparing results, however, is difficult because of differences in the patterns by households. Comparing the effects of saving (Hendershott, 1989; Kennickell, 1995; Browning & Lusardi, 2000) is not discussed in this paper. The core of the permanent income hypothesis is optimality in terms of a finite amount spread over the lifetime resources across different periods of consumption and not to consume all lifetime resources in one time period (Banks & Tanner, 1999: 20).

The two models, the life cycle model and the permanent income hypothesis, still remain important to understand intertemporal choices between consumption and saving. However, the theories have been expanded by several researchers.

2.3.3 Keynesian theories on savings

Recent studies using the Keynesian theory on the determinants of saving have brought notable insight into household saving behaviour.

Keynes as referred to by Browning and Lusardi (1996) identified eight motives of saving, which included:

- The precautionary motive, which is to build up a reserve against unforeseen contingencies;
- The life-cycle motive, which is to provide for an anticipated future relationship between the income and the needs of the individual;
- The intertemporal substitution motive, which is to enjoy interest and capital appreciation;
- The improvement motive, which is to enjoy a gradually increasing level of expenditure;
- The independence motive, which is to enjoy a sense of independence and the power to do things, though without a clear idea or definite intention of a specific action;
- The enterprise motive, which is to secure the ability to carry out speculative or business projects;
- The bequest motive, which is to bequeath property or funds
- The avarice motive, which is to satisfy pure greed, that is, unreasonable but insistent inhibitions against acts of expenditure.
- Browning and Lusardi (1996) emulate an additional motive which they refer to as the down-payment motive which is to accumulate deposits to buy houses, cars, and other durables.

Akerlof & Shiller (2009) state that according to Keynes saving decision is not very precise, as most people put little thought into the problem of how much they will save. However, they react automatically to changes in income.

Banks & Tanner (1999) note that the determinants listed above, maps out a very broad definition of saving. “Saving encompasses an individual’s decision to put money in a pension fund (the life-cycle motive), to take out insurance against unemployment or ill health (the precautionary motive), to put money into a savings account for a holiday or washing machine (the down-

payment motive) as well as to speculate on the stock market (the intertemporal substitution motive)” (Banks & Tanner, 1999: 3). From this broad definition of saving, it is accurate to say that income is the most systematic determinant of household saving. Keynes furthermore predicted that the average household savings would increase when they reach a higher income level (Nga, 2007: 7).

Therefore it is evident that low-income or poor households, cannot save or can save very little.

2.3.4 Some gaps in the theory

Both the life cycle and permanent income hypothesis uphold that the purpose of saving is to create a storehouse for future consumption but this, however, does not give an explanation to the unique patterns of asset accumulation by the poor and/or low income households (Sharraden, 2000: 9). Another gap is that the permanent income hypothesis does not consider the income and needs differences, yet a significant factor is that the poor and/or low income households do not have access to the conventional financial institutions and the benefits thereof such as subsidies (Thela, 2008: 9). This is discussed further in the following chapters.

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2.4 Comparative analysis of household savings performance in developing and developed countries

2.4.1 Developed versus Developing countries

Developed and developing countries have different economic environments with the result that they have significant disparities in their household behaviour. The differences are caused by the various measures of saving. The different data sets used and the different sets of independent variables included in multivariate analyses complicate the analysis (Yuh & Hanna, 2010: 75). Therefore different conclusions about savings are reached.

A study was conducted by Moragodlu & Taskin (1996) to learn more about the differences in the nature of households in developed and developing countries. In their study they:

- used the same econometric model for both sets of countries;
- used the UN System of National accounts;

- specified the model after having agreed on the variables, showing cross-country differences in elasticity of savings with respect to variables used in both the permanent income and life cycle hypotheses.
- The model also examined if there was sufficient evidence to attribute the discrepancy of the explanatory power of other variables to differences in the development level of countries.

The following reduced-form behavioural function for households' saving rates was used to test the determinants of household savings:

$$S/Y = f(\ln Y_p, \ln Y_T, YG, R, I, W/Y, SF/Y, D)$$

Where:

S = household savings

Y = household disposable income

$\ln Y_p$ = natural logarithm of trend per capita household income

$\ln Y_T$ = natural logarithm of deviations from trend per capita income

YG = growth rate of the trend per capita income

R = real interest rate

I = rate of inflation

W/Y = monetary wealth to income ratio where total wealth is represented by money plus quasi money

SF/Y = foreign savings to income ratio

D = dependency ratio.

The factors that were investigated included;

- The discrepancy in the explanatory power of non-consensus variables with reference to the level of economic development
- The differences in the effectiveness of the use of consensus variables in explaining household savings for developing versus industrial countries

As with Yuh & Hanna (2010), they found that that households in developed and developing countries have dissimilar savings behaviours. This stems from the differences in economic

development levels which have an influence on the differences in income and consumption. In developed countries household savings increase as permanent income increases, whereas with developing countries, due to the fact that households are relatively poor, spending increases with increases in permanent income (Moragodlu & Taskin, 1996: 147). They also found that some policy measures used to increase household savings in developed countries such as higher levels and faster growth of disposable income, lower real returns and in addition inflation rates are not effective in developing countries, meaning that developed country policies should not be automatically adopted in developing countries. However, in developing countries the establishment of new and more sophisticated financial markets, new instruments and the adoption of a financial liberalization program were found to be crucial for increasing saving rates. The three significant determinants of saving rates in developing countries are the dependency ratio, real balances, and income trends (Moragodlu & Taskin, 1996: 140).

It is clear that there are significant differences in developing and developed countries especially in terms of adopting means of promoting savings, which is the focus of this paper. There are, however, lessons that may be learnt from other countries that have successfully managed to have relatively high saving rates. The next section briefly discusses two countries that have been successful in increasing household savings.

2.4.2 Further international country comparison

It has long been recognised that savings are an important determinant of a country's wealth. Even Adam Smith, 'father of modern economics', in his *Wealth of Nations* (1776), recognised this. Bearing this importance in mind, we now focus on a review of African and Asian economies and their savings trends. It is clear that this study is on a microeconomic perspective. However, notwithstanding that fact, a macroeconomic analysis of the countries is briefly executed below for two reasons; firstly the lack of research done on household savings from a microeconomic level limits the comparison and secondly the ultimate contribution of savings to economic growth, as mentioned in chapter one, makes it imperative to consider the macroeconomic aspect.

2.4.2.1 Asia

A. Other Asian economies

The East and South Asian economies reflect higher rates of savings compared to African economies. Between 1980 and 1995 the East Asian economies had an average savings rate of approximately 33 percent of GDP. Singapore had the highest rate of 45 percent followed by a rise in Malaysian savings to 40 percent, Korea to 35 percent and India to 20 percent (Aryeetey & Udry, 2000: 5). The above provides a platform to investigate how these countries managed to move from a poor saving situation to a significant level of savings that has in turn improved the economies. Attanasio & Szekely (2000) further mentioned how these economies managed to sustain their saving levels after the financial crisis. In the next session particular interest is drawn to China.

B. China

China's household saving rate has been high and rising over the years, attracting a lot attention. In addition to that, China has the highest overall savings ratio worldwide, nearing 50 percent of GDP. This allows room for lessons to be learnt by South Africa, because even though China is still relatively poor, it has achieved titles such as the World's largest capital exporter (Horioka & Wan, 2007: 2). The country has a population of one and a half billion people, growing at a rate of 0.5 percent.

Since 2001, China has become the world's fastest growing economy. After almost 20 years of reform policies, the country has the largest transitional planned economy in the world. Within this period the country has notably expanded in per capita terms and managed to lift over 200 million Chinese out of absolute poverty. Its gross national savings rate averaged 37 percent of Gross National Product in 2000 (Kraay, 2000: 1) and has increased further since 2000 to 50 percent of GDP (Horioka & Wan, 2007: 2). The country has achieved a net saving surplus of 7.5 percent in 2005, which according to Horioka & Wan (2007), translates into a current account surplus.

With the increase in savings, consumption was limited. Alongside China's rapid growth, the country was in a transitional process, which had consequences for savings, whereby the country

was advancing from a rural, agrarian and state-run economy to a more urban and industrial economy driven by market forces.

The country's saving rate averaged 27 percent of GNP before reforms. Conversely the transitional process to a market economy has encouraged voluntary consumption and savings decisions of households at the same time as the decisions that shaped the economic environment. China's case offers a model that economies may adopt to learn how to institute a saving's culture (Nga, 2007: 31).

2.4.2.2 Africa

A. Other African economies

Compared to Botswana which was an exceptional case who has shown reformation in their savings, few other African countries reflect a similar trend. In those countries where a reformation has been seen, the rise may be considered to be less significant. These countries include Ghana, who previously had a low average domestic savings rate of 4 percent, rising over the years to an average of 12 percent, Kenya who is considered to have a low and erratic savings rate which hardly exceeded 2 percent in 2009, and Tanzania (Aryeetey & Udry, 2000: 4). Nigeria on the other hand has shown a fluctuating trend in its domestic savings rate since 1976 when they experienced a decline in savings. An increase to approximately 30 percent was achieved in the 1990's, largely due to private savings (Aryeetey & Udry, 2000: 5).

South Africa on the other hand has continually shown a declining trend in household savings over the past decades, as mentioned earlier, which plummeted to almost 0.25 percent in 2004, 0.15 percent in 2005 and to -0.40 percent and -0.55 percent in 2006 and 2007 respectively and even lower in recent years¹ (Laubscher, 2007: 16).

This study will consider why other rapid developing countries have a higher savings and investment propensity than South Africa, so that an appropriate savings policy can be proposed

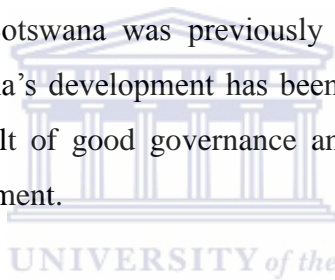
¹ Further discussions in section 3.2

for this country to increase its savings rate. Such increased savings should enhance economic development.

According to Akerlof & Shiller (2009) the variations in savings highlighted in the economies referred to above, are a result of the fact that there are fundamental economic motivations that are prominent in an economy that in turn influence the people's savings. As the Life Cycle models states (Modigliani & Brumberg, 1954), people have economic motivations for saving.

B. Botswana

This section briefly reviews another African country which possesses an almost similar history to that of South Africa. The country is ranked amongst one of the largest diamond producers in the world, and diamond production accounts for more than one third of Botswana's GDP (Ndikumana et al, 2009: 140). Botswana was previously one of Africa's poorest countries. However in recent years, Botswana's development has been recorded to be one of the world's greatest success stories, as a result of good governance and economic growth with practical macroeconomic and fiscal management.



Both the savings and investment ratios are above average in terms of other African countries, contributing to high growth rates. In the 1990s the country's saving rate was around 40 percent (Ndikumana et al, 2009: 140). The country's level of savings reflects a success story in terms of the performance of the financial institutions and government policies. Given the contrasting view of South Africa's case, it is important to highlight the Botswana case so as to show the possibilities of improving the current saving situation in South Africa.

2.5 Chapter summary

This chapter defined household savings and provided a theoretical review of household savings behaviour. The Keynesian theories on savings are also briefly discussed. Some gaps in the theory are indicated and lastly empirical investigations were carried out to compare the saving performance of developing and developed countries. The findings conclude that there are significant differences between developing and developed countries especially in terms of adopting means of promoting savings. Therefore simply adopting developed countries' policies may not work for developing countries. Some evidence in the Muradoglu & Taskin (1996) study is found that in developing countries household savings behaviour hypothesized by the traditional theories is undesired for poor households.

A country comparison is also carried out in this chapter where China was exceptional worldwide in terms of its savings behaviour and in Africa Botswana was outstanding. Other Asian and African countries, some of which have ridiculously low saving rates, also perform relatively better than South Africa. Therefore, it is imperative to investigate how the exceptional countries have improved and hence executed better saving rates. The following chapter specifically focuses on poor households and their saving behavior.

CHAPTER THREE: THE SOUTH AFRICAN HOUSEHOLD SAVINGS - A FOCUS ON POOR HOUSEHOLDS

3.1 Introduction

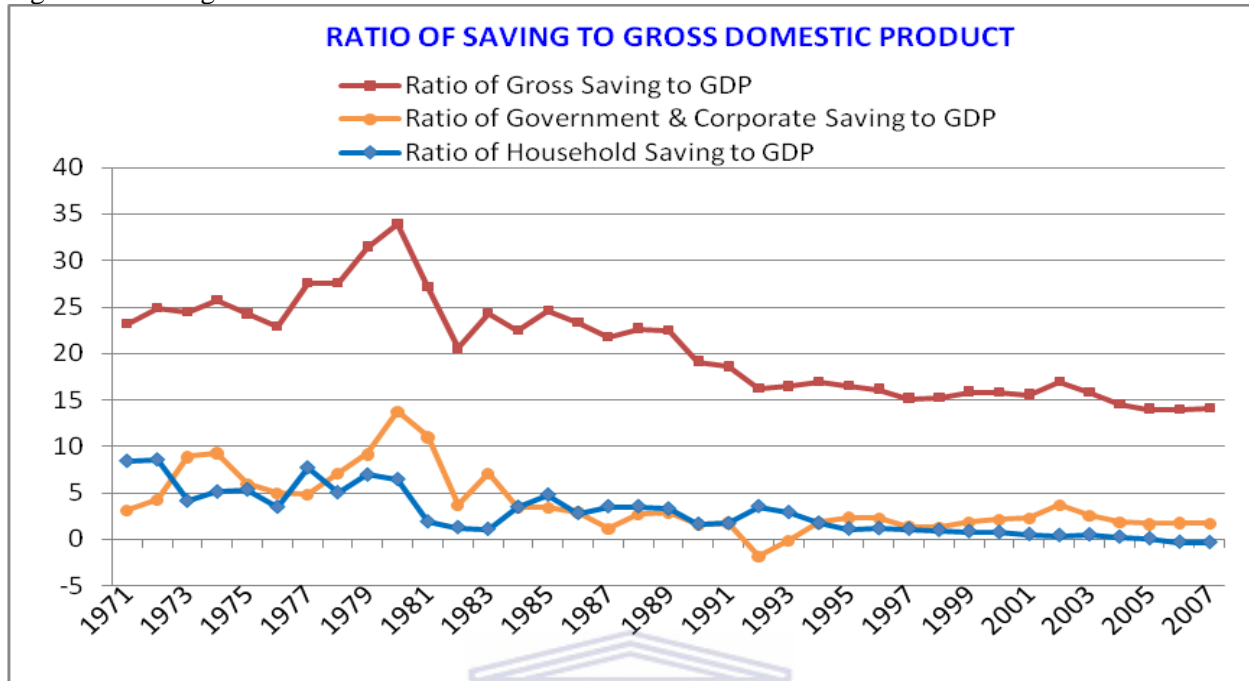
Multifaceted factors influence the savings behaviour of households. South Africa has a unique case and so do poor households. This chapter therefore first looks at the trends in household saving, then provides a background overview of poor households as the focus of this paper and lastly presents a data analysis of the poor.

3.2 Trends in household saving

South Africa's savings rate has declined substantially in the past two decades (Nga 2007: 1). According to the South African Reserve Bank (2008), household saving, which is the difference between disposable income and final consumption expenditure by households, as a percentage of GDP has decreased from 11.4 percent in the 1960's to 10.2 percent in the 1970's moving further down to 4.1 percent in the 1980's, further to 1.5 percent in the 90's and to 0.2 percent in 2001, rising slightly to 0.4 percent in 2001, approximately 0 percent in 2005 and further down in 2007.

Figure 3.1 indicates the decline in household savings as a percentage of GDP, in comparison to gross saving, government, and corporate savings.

Figure 3.1 Saving trends in South Africa



Source: South African Reserve Bank (2008a)

It is important to note that because of South Africa’s historical background, the country still experiences significant differences in income. The income inequality between racial groups is, however, decreasing whereas it is increasingly growing within the race groups, leaving income inequality at a high level (Van der Berg, Louw & du Toit, 2007: 41). The Gini coefficient rose from 0.64 – 0.67 between 1995 and 2008 (World Bank 2010). Although it must be noted that robust economic growth in recent years has resulted in a decline in poverty, the poor continue to have limited access to economic opportunities and basic services, including banking services. This follows the analysis of Sen (1999) that poverty is the deprivation of opportunities rather than merely low income. The question of household savings then becomes more dubious as to whether households, particularly the poor, do not save because of low income or they are deprived of formal saving opportunities.

Very little research has been published on household savings behaviour in South Africa. Of the existing literature, little distinction is given between the three income groups, that is, middle, high and low-income households. This paper therefore focuses on the low-income or poor household savings and how to improve access to financial services for the poor.

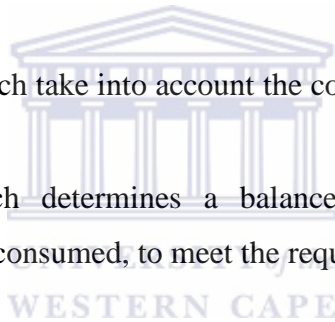
3.3 Poor households; Background overview

This chapter firstly presents the definition of the poor in South Africa. It serves as an introduction and provides a context for the rest of the section. The rest of the chapter covers how the poor spend their income and how they save.

3.3.1 Defining the poor

When defining the poor, income levels are often approximated by proxies such as, per capita daily consumption, to establish the definition. In general, the income of the poor is considered too low to meet basic needs, such as food, clothing and shelter. However, countries differ in their minimum income requirements that classify households as poor or below the poverty line. Nonetheless, there are two approaches to determining poverty lines as discussed by Van der Berg et al (2007):

- the cost of basic needs, which take into account the cost of a basket of goods needed for a healthy and active life;
- energy food intake, which determines a balance between food consumption per household and the calories consumed, to meet the required minimum calorie needs.



To measure poverty at a given line, the Foster-Greer-Thorbecke (FGT) measures are used. What is evident is that a significant proportion of the population in developing countries experiences poverty.

In South Africa, studies have shown that a large proportion of its citizens are unable to meet their household needs. A substantial proportion of them classify themselves as in lack of both food and income (Davids, 2006: 1). South Africa does not have a consistently defined poverty line. However, the most up-to-date source of data in respect of poverty in South Africa, is the Income and Expenditure Survey.

3.3.2 Characteristics of poor households in South Africa

Several researchers have identified the characteristics of the poor in South Africa. A probit analysis was run using the IES in this paper to find out who is more likely to be poor, using a

poverty line of R3000. (The results are shown and discussed later in the chapter). It must be noted that the characteristics in the survey are limited.

Race; Race is an important characteristic due to the apartheid legacy of the country. This remains true even after democratisation (Armstrong et al, 2008: 12). Woolard (2002) states that even though poverty is only amongst a specific racial group in South Africa, a large proportion of the poor classified as Africans (Blacks, Coloureds and Indians).

Gender; Gender dimensions reflect female headed households being more susceptible to poverty than male headed households. However, when households are headed by males, the head is more likely to pursue his own interests at the expense of the household (Black 2004: 414).

Living arrangements of the poor; According to Barnejee & Duflo (2006: 3), the number of people per household in most extremely poor households tends to be as large as 20 per household. This usually consists of a large number of children, which in the South African case could also be attributed to polygamy or the fairly outsized number of women residing per household. There is also generally fewer older people² (Barnejee & Duflo, 2006: 4). Most of the households are usually in neighbourhoods that have a weaker security system (Collins, Morduch, Rutherford & Ruthven, 2009: 18).

Health and Wellbeing; The poor are frequently sick and weak (Barnejee & Duflo, 2006: 8). South Africa is one of the countries that has been most hit by the HIV/AIDS pandemic. Households tend to experience the impact of this pandemic instantly, as it usually contributes to financial burdens in terms of medication and the cost of caring. A usual trend in such cases is often death, then dissolving of families, which then leads to separation of children either to other relatives or to fend for themselves. As stated by National Treasury's Alvin Thela (2008), "the HIV/AIDS pandemic increases social and economic costs and impacts on social insurance, social assistance and private saving".

² The large number of children and small number of adults could be ascribed to South Africa's high fertility and mortality rates.

Poor households generally spend little on education³. There are a high number of illiterate people in South Africa, resulting in a high unemployment rate, largely in rural areas where most poor households are. The high unemployment rate also makes it difficult or close to impossible for households to save as little or no income is received for saving to be possible.

Occupation; The poor usually consist of self-employed and individuals that have multiple occupations. The work is usually temporary and the household members look for economic opportunities anywhere and everywhere. Therefore they do not specialize (Duflo & Banerjee, 2006: 10).

3.3.3 Expenditure among the poor

Sin Goods; Poor households often spend a significant proportion of their total budget on alcohol and tobacco. The abuse of such goods is startling among poor households in South Africa (Black & Mohammed, 2006: 131).

Food; In the past, “poverty lines in many countries were defined by the budget needed to buy a certain amount of calories, plus some other indispensable purchases”, however, currently the poor seems to spend less of their income on food (Banerjee & Duflo, 2006: 5). They prefer to spend it on other goods which are of more importance to them. Using the IES 2005, the consumption levels of 33.2 percent of all households were below the lower-bound⁴ poverty line (Armstrong, Lekezwa & Siebrits, 2008: 9).

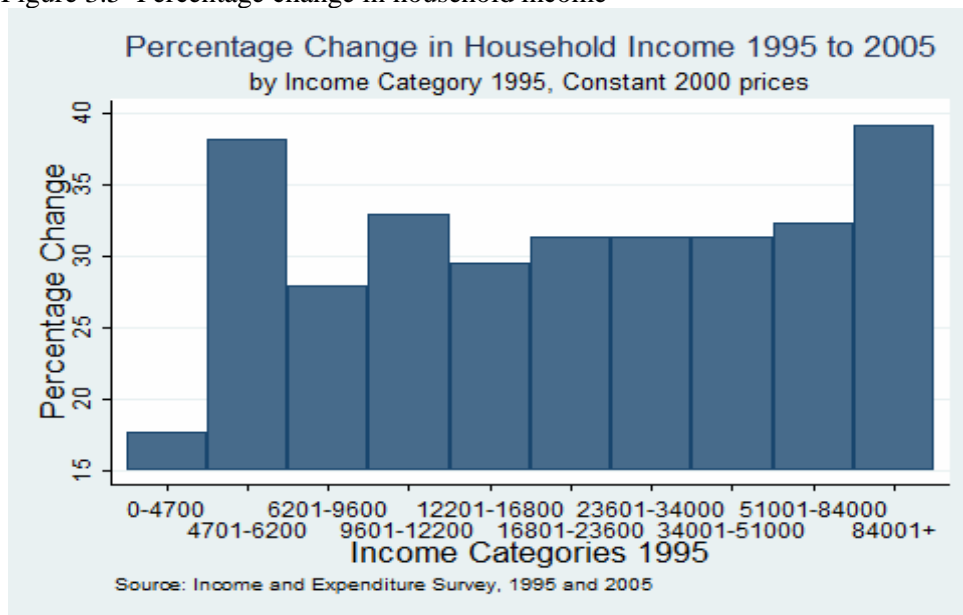
Assets; Fewer durable goods are owned by the poor, yet above 70 percent either own a television set or a radio. The poor, mostly in rural areas, often own some portion of land.

Cultural Customs/ Traditional practises; Cultural activities amongst the poor play a valuable role relative to the consumption of goods and services (Black, 2004: 421). In South Africa, 90 percent of those classified as poor spend money on these activities (Banerjee & Duflo, 2006: 5).

³ A possible reason why poor households may spend less on education is that parents may take their children to public schools or schools that charge no fees (Banerjee & Duflo, 2006: 9).

⁴ The "lower-bound" poverty line, which provides for essential food and non-food consumption, amounts to R322 per capita per month in 2000 prices. The "upper-bound" poverty line, which includes an additional R271 for non-essential non-food items, amounts to R593 per capita per month.

Figure 3.5 Percentage change in household income



Source: Income and Expenditure Survey 1995 and 2005



What to save; The irregularity of income and the low-income of poor households, make it difficult for the poor to save, particularly because saving becomes a possibility at the point where there is something to save. The characteristics of the poor, the irregularity of income and how the poor actually spend make it less likely for them to have anything to save.

Safe Keeping; The concern for most poor who attempt to save, is finding a safe savings instrument that yields a reasonable return. They may be willing to accept a negative rate of interest on savings, in order to make deposits safely (Rutherford et al, 1999: 8). Therefore, with an opportunity to save in a safe and secure manner it is likely that their commitment to saving will be high, also because saving safely provides them with a cushion for shocks (Shukdeve, 2008: 1).

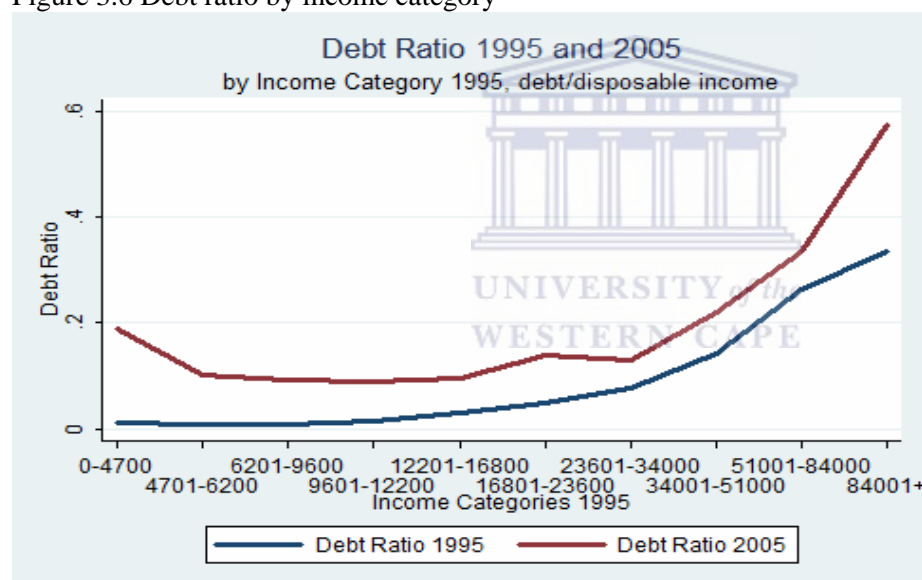
Desire to spend; Ashraf et al (2005) and Duflo et al (2006) stated that the poor often face the temptation to use their savings. This is nonetheless not unique to the poor. The temptation to spend is therefore one of the challenges to overcome.

Consumer norms; Maintaining a certain economic and social status is also a challenge faced by low-income households. This often occurs because of incomplete information (Nga 2007: 62). The bandwagon effect as indicated by Pindyck & Rubinfeld (1995: 227), may be found in South Africa, where the consumption of a household is influenced by the consumption of another household. This also involves the consumption of certain brands or labels as a statement of status, also known as conspicuous consumption. However, it must be noted that in South Africa, with its different race groups, spending on a particular category may be specific to coloureds and another to blacks or whites (Kaus, 2010: 14).

Other norms; The history and stories narrated by the previous generations have an influence on how the current generations live their lives. This includes the decisions whether to save or to spend (Akerlof & Shiller, 2009: 119). Therefore, as Akerlof & Shiller (2009) state, some people may find it difficult to grasp the concept of saving, let alone being futuristic as some may view a futurist approach as inappropriate.

Indebtedness of households; Personal savings are defined as the amount by which the current income of households exceeds their current expenditure (Prinsloo, 2000). Increases in the credit commitments of households will accordingly cause a decline in the saving of households. Over the years South Africa has experienced a typical consequence of the bandwagon effect in terms of the usage of credit to purchase certain commodities to maintain the standard set by other households (Silulwane, 2004: 26). From the diagram below, it is clear that debt in proportion to disposable income went up for all income categories, more than ever for the lowest and highest income groups. The rise in the debt ratio was proportionally less for households in the seventh to ninth deciles, those who earned between R23,600 and R84,000 in 1995 (or R42,889 and R152,654 in 2005).

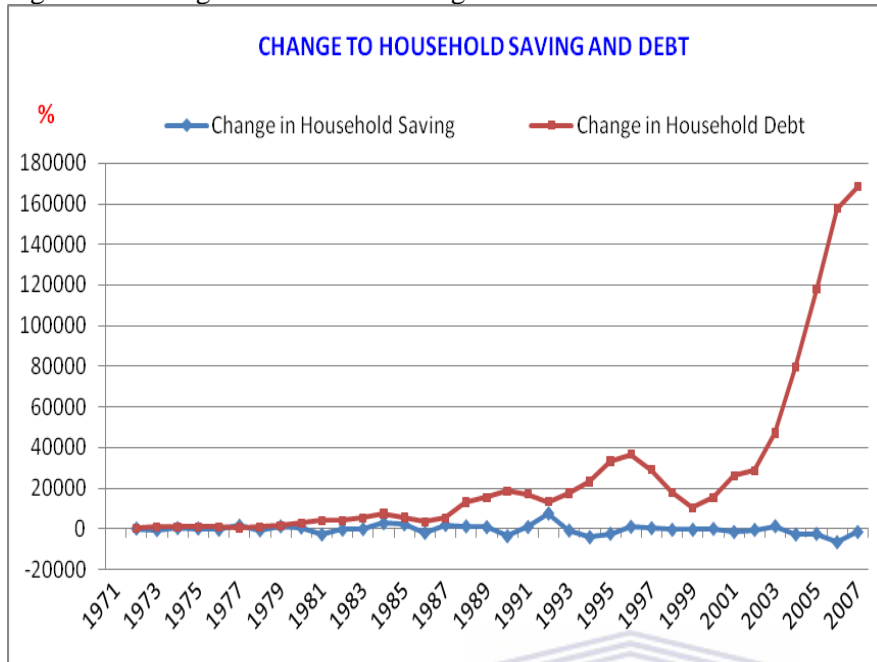
Figure 3.6 Debt ratio by income category



Source: Income and Expenditure Survey 1995 and 2005

Generally speaking, an inverse relation can be expected between increases in households' use of consumer credit and their saving over time. This is illustrated in the Figure 3.7 below.

Figure 3.7 Change to household saving and debt



Source: Income and Expenditure Survey 1995 and 2005

It is notable that poor households may have odd combinations in their portfolios⁶ whereby they may become indebted to save by raising a loan, which has a high price, in order to save. This, however, may be considered odd, but in the case of a lack of secure places to save, poor households would go for the high price anyway because of the perceived high price attached to saving (Collins et al, 2009: 23).

Financial illiteracy; Another challenge faced by the poor, is the lack of education or the quality thereof, which more often than not, translates to illiteracy. Asymmetric information tends to be a major factor in such cases, whereby one party has more information which is not distributed equally amongst the parties involved. This is likely to lead to adverse selection or moral hazard, a possible outcome is market failure, as evident in South Africa, (Pindyck and Rubinfeld 1995: 598).

⁶ That being the collection of relationships and transaction with others (Collins et al, 2009: 14),

Lack of access; The poor have limited access to formal financial services. This could be due to geographical issues, but more so due to the governing conditions of the formal sector's financial services.

Other issues; Other challenges may be a result of unforeseen circumstances, the historical background of the country, and the dependency ratios where the households are often large and the burden is not only from children but also adults that are non-income earners. This in particular is a by-product of the high unemployment rates in the country. Due to their lack of a vision, most poor households have difficulty in projecting the future, and how much should be saved to provide for future consumption.

From the above, it is clear that income is not the only impediment to the savings behaviour of the poor. Some of the other features of these households make them more susceptible to discrimination in the formal type of saving opportunities (Collins, Morduch, Rutherford & Ruthven, 2009: 174).

3.3.5 When do the poor save?

Rutherford et al. (1996) identified several situations (when, where and how) under which low-income households save in a study that explored the range of indigenous systems of financial service provision for the poor. The study was conducted in selected Asian and African countries.

It was found that households save when:

- They feel their savings are secure.
- The amount of their savings is kept secret to others.
- They can access all or part of their savings when needed.
- They have the possibility to save often and easily.
- They are entitled to obtain a credit (reciprocity).
- They feel they own their saving (their savings are not owned by a group).
- They feel the savings are growing and protected from inflation.
- They feel under some social pressure to save.
- They know at any time how much they have.

3.3.6 Why do poor households save?

The traditional reason for saving, namely consumption smoothing, is evident to date, as households still save for future expenses for a number of reasons (Vogel, 1984). This is particularly true for farmers who have seasonal variations in income that depend on the production of certain crops. Saving therefore smoothes out income. Saving is also a means of accumulating wealth, taking the same example of farmers where money saved may be used in other crops to increase the farmer's income. Therefore saving facilitates investment and future consumption of households (Wright, 1999: 3).

Another reason why the poor save is for the funds to act as a form of insurance given the high vulnerability to bad health and disabilities (Banerjee & Duflo, 2007: 8). It also serves as insurance against income losses and retirement given the high level of illiteracy amongst the poor, which is one of the prime contributors to unemployment (Kingdon & Knight, 2005: 15). The long-term goals in each household are also a driving force to saving.

Wright (1999) highlights reciprocity as a key reason why the poor save. He mentions that households save by lending to another household thereby setting an arrangement to reciprocate in time of need. The rationale is similar to that of the formal and semi-formal sectors where savers deposit money to gain access to loans. Likewise, the lender is a future borrower and vice versa (Wright, 1999: 4).

3.3.7 Gaps in theories, particular to the realities of the poor

It may be concluded from the above discussions that the poor are different in terms of their income and expenditure patterns. This leaves further gaps to the realities of the poor. The Life Cycle Model suggest that household savings are determined by current disposable income and anticipated future income, as discussed in chapter 2. There is, however, the reality of an irregularity in the income of the poor. Therefore anticipated future income is likely to play a minimum role in influencing household saving as the households are uncertain of what to expect.

The permanent income hypothesis (PIH) states that spending patterns are derived from expected average income to be received over a life-time. Again the reality that the poor have irregular income and yet have to eat, perform their rituals and satisfy their addictions suggest that they live on the edge with what is readily available. Therefore the prediction of the PIH that saving is presented by current income on the condition of future expectations of income does not fully depict the picture of poor households who have uncertainty in current and even future income.

3.4 Data analysis of the poor

Several factors impinge on the saving behavior of individuals. These factors include demographics, consumer behavior, economic indicators and structural considerations (du Plessis 2008: 48). This section explores both qualitatively and quantitatively the available Income and Expenditure Survey, specifically focusing on the factors that influence the saving by the poor. Therefore a descriptive statistical analysis is included as well as a probit regression analysis and linear ordinary least squares regression, both to see the factors that play a role in being poor and determining differences between individuals' levels of saving.

A Cluster analysis is later done to group similar behaviours, further investigating the results of the probit and linear Ordinary Least Squares (OLS) regression.

3.4.1 The quantitative data analysis of the poor

The analysis of the quantitative data collected by Statistics South Africa (IES, 2005) confirms some findings of other researchers mentioned above and allows for further exploration of the savings behaviour of the poor. As mentioned earlier the Income and Expenditure Survey collects and provides information on income, acquisition and expenditure patterns of a representative sample of households. The surveys were collected in 1995, 2000 and 2005. Due to the data complications this paper uses the IES 2005 for both descriptive and exploratory analysis. The findings are summarized below. Other graphs and tables are found in the appendix. Households' weights are used in this paper.

Table A.1 presents the demographics which are the characteristics of the population from the sample used in the survey. Over 70 percent of respondents are black, about 12 percent are white and the rest Indian, coloured and unspecified. Households are divided into 10 deciles. Each decile represents 10 percent of all households' real per capita income. Real per capita income is often used to measure the standard of living. The poorest household is represented by the first decile and the richest by the tenth decile, moving from the lowest to the highest.

Blacks have a share of between 88.35 percent and 95.68 percent for the first four deciles which are the lower income categories as according to Woolard (2002). The blacks are poorer and the whites are mostly non-poor. The latter is indicated by the larger share of over 70 percent in the highest income category. As far as gender is concerned, the female share is considerably higher than the male share within the first three deciles, with 62.71 percent share in the lowest category. Looking at the area type (rural or urban), the low income categories are dominated by those in rural areas whereas the higher income categories are in the urban areas with the highest income category reflecting a 94.76 percent being in the urban area.

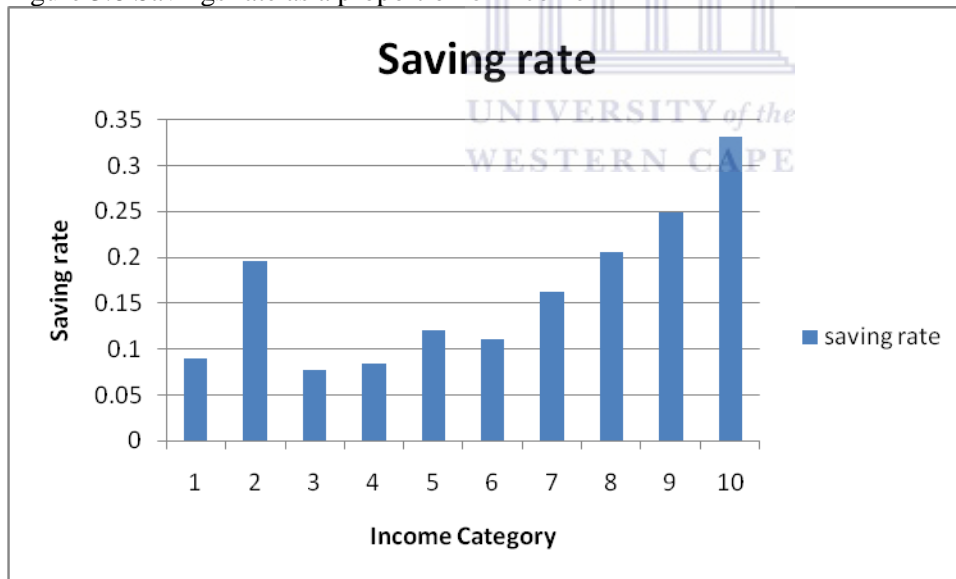
There is an increasing trend in income with those who have higher educational qualifications, (referred to in this paper as educational attainment). The first three income categories are in respect of those with no schooling. The next three are in respect of those with at least primary or secondary school education and matric. Those with qualifications higher than matric receive higher income as indicated by the higher income categories. In this analysis households over 12 members were ignored. However, the results agree with Barnejee & Duflo (2007) that the larger the household, the more likely it is that they will fall in the lowest category and therefore be poor. The smaller the household, the greater the chance that they will fall in the middle to highest income category. The results show that the highest income category consists of between one and two individuals in a house, whereas the lower deciles are mostly representing larger households.

As expected, the poor spend a larger proportion of their income on health, as they are more frequently sick due to living conditions and more vulnerable to HIV/AIDS (see Figures A.1-A.4). They also spend most of their income on food, as shown by the mean food rate. That leaves very little to spend on education. This differs from the findings of Barnejee & Duflo (2007). As

mentioned earlier cultural activities play an important role in the lives of the poor, relative to the consumption of materialistic goods and services. Cultural activities include traditional ceremonies as previously highlighted. According to the survey the recreation and cultural rate is highest amongst those in the lowest income category than in the other categories.

With reference to the saving rate, which is saving as a proportion of income, marginally more than 30 percent is the mean saving rate for the highest income category. It shows a higher saving rate as a proportion of income. This is probably influenced by the fact that the last category has more income. It is also notable that the low income categories have a mean rate above 0 and the mean saving rate of decile 2 is above 15 percent oddly between the other low categories with low saving rates. This may allude to the fact that the poor save relatively more than is assumed. However, the methods of saving are probably not reflected formally, hence are informal methods.

Figure 3.8 Savings rate as a proportion of income



Source: Income and Expenditure Survey 1995 and 2005

3.4.2 Probit Regression

To classify households as poor or non-poor a likelihood ratio test known as the ‘probit analysis’ is used. A probit analysis groups the households by their common characteristics (Hendry & Nielsen, 2007: 63). A probit is appropriate here as it models dichotomous outcome variables, in this case poor or non-poor (UCLA, 2011). A dummy variable is created which indicates if the household’s per capita income value is above or below the poverty line of R3000 (1: poor, 0: non-poor).

Table 3.1 Summary of probit regression analysis of poor or non-poor

Probit regression		Number of obs	=	47380368		
		LR chi2(16)	=	1.67E+07		
		Prob > chi2	=	0		
Log likelihood =	-	Pseudo R2	=	0.2649		
Poor	Coef.	Std. Err.	Std. Err.	Z	P>z	[95 percent Conf. Interval]
Rural	0.482172	0.0004564	1056.42	0	0.481277	0.483066
Coloured	-0.50559	0.000812	-622.67	0	-0.50718	-0.504
Indian	-0.63827	0.0018294	-348.9	0	-0.64186	-0.63469
White	-1.01061	0.0017686	-571.42	0	-1.01407	-1.00714
Male	-0.48265	0.0004282	-1127.07	0	-0.48349	-0.48181
Primary	-0.18085	0.0006298	-287.16	0	-0.18209	-0.17962
Secondary	-0.49534	0.0006286	-787.95	0	-0.49657	-0.49411
Matric	-0.98082	0.0009401	-1043.3	0	-0.98267	-0.97898
Cert.diploma	-1.67327	0.0017917	-933.91	0	-1.67678	-1.66976
Degree	-2.75521	0.0062304	-442.22	0	-2.76743	-2.743
age 25to34	-0.01371	0.0010833	-12.65	0	-0.01583	-0.01158
age35to44	-0.19022	0.0010381	-183.25	0	-0.19226	-0.18819
age45to54	-0.35273	0.001043	-338.19	0	-0.35477	-0.35068
age55to64	-0.48082	0.0010081	-476.95	0	-0.4828	-0.47884
over64	-0.63938	0.0010159	-629.37	0	-0.64137	-0.63739
Hhsize	0.128706	0.0000758	1697.39	0	0.128557	0.128854
_cons	-0.13251	0.0011672	-113.53	0	-0.1348	-0.13022

The explanatory variables included in the probit are as follows: race dummy variable, the reference group being blacks, gender dummy variable, reference group being female, age dummy variables, reference group: 15-24 years, educational attainment, reference group being no school and the household size.

The results of the probit analysis, show that those in rural areas are more likely to be poor. Coloured, Indian, and whites are less likely to be poor than the black race group. There is a higher probability that those with no schooling will be poor when compared to those with higher educational attainment. Of those in the working age group, the youngest group of age 15 to 24 are more likely to be poor than the older ones. Household size is positive in the regression analysis showing a high likelihood of being poor if the household is large.

The relevance of these results is that they are in conjunction with the characteristics discussed earlier in the chapter therefore supports the findings of other researchers (Woolard 2002, Armstrong et al 2008). Hence the quantitative data analysis of the poor confirms the results of the qualitative analysis. This then substantiates this paper's focus on the low-income groups.

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3.4.3 Linear Ordinary Least Squares (OLS) Regression (Factors influencing saving)

This section focuses on savings; therefore an OLS is run to find out the factors influencing savings. Real per capita saving 2 (realperSav2) is used after having dropped about ten thousand of those recorded with zero saving. The Ordinary Least Square technique (OLS) is used to determine which factors are significant determinants of individual saving.

The explanatory variables included are similar to those of the probit and are as follows: race dummy variable, the reference group being blacks, gender dummy variable, reference group being female, age dummy variables, reference group: 15-24years, educational attainment, reference group being no school and the household size. The results are shown in Table 3.1.

Table 3.2 Summary of OLS regression results (Dependent variable: Log real per capita saving)

Source	SS	Df	MS	Number of observations	=	9876
				F(16, 9859)	=	489.98
Model	20204.17	16	1262.7607	Prob > F	=	0
Residual	25408.47	9859	2.5772	R-squared	=	0.443
				Adjusted R-squared	=	0.442
Total	45612.65	9875	4.6190	Root MSE	=	1.6054
logrealperSav2	Coef.	Std. Err.	T	P>t	[95 percent Conf.	Interval]
Rural	-0.6410	0.0393	-16.31	0	-0.7181	-0.5640
Coloured	0.3683	0.0617	5.97	0	0.2475	0.4893
Indian	0.6213	0.0964	6.45	0	0.4324	0.8103
White	1.0969	0.0532	20.63	0	0.9927	1.2012
Male	0.4290	0.0347	12.37	0	0.3610	0.4970
Primary	0.1224	0.0586	2.09	0.037	0.0075	0.2374
Secondary	0.4098	0.0571	7.17	0	0.2978	0.5218
Matric	1.1161	0.0698	15.99	0	0.9792	1.2529
Cert.diploma	1.8746	0.0797	23.52	0	1.7183	2.0308
Degree	2.3076	0.0897	25.71	0	2.1317	2.4835
age25to34	0.1036	0.0945	1.1	0.273	-0.0816	0.2888
age35to44	0.4634	0.0905	5.12	0	0.2861	0.6408
age45to54	0.4708	0.0902	5.22	0	0.2940	0.6475
age55to64	0.3225	0.0866	3.72	0	0.1527	0.4924
over64	0.3224	0.0876	3.68	0	0.1508	0.4941
Hhsize	-0.1641	0.0059	-27.84	0	-0.1756	-0.1525
_cons	6.3347	0.1050	60.32	0	6.1288	6.5405

Source: Income and Expenditure Survey 2005

The result of the regression is presented in the table above. The variables in the regressions are statistically significant therefore their coefficients can be trusted. The regression indicates that those in the urban areas save more than those in rural areas. Blacks save less compared to the other races. Males save more than females. Considering those in the working age group, between 15 and 65, those older than 25 save more compared to those less than 25 years of age. More education has a socio-economic story; it is associated with labour market status and is a proxy for economic status. The regression shows that those with higher education save more.

3.5 Chapter summary

It is clear that there is a need for the poor to save in order to smooth income, to act as a form of insurance and for reciprocity as mentioned earlier. The problem is, however, lack of access to formal financial institutions. This may be attributed to the governing conditions of the formal sector financial services. The question is how informal saving of the low-income categories can be formalised.

This chapter looked at poor households in detail, starting off with defining who is poor, then the characteristics of poor households were discussed, followed by a discussion of how the poor actually spend. Some of the spending patterns translate into complex issues that may not be economically justifiable. However, they carry significant value for the households, such as the cultural activities which are also seen as having a net benefit. Contributing to the church fund may, for example, have benefits later on when the church carries out a funeral for a church member. This highlights the complications of poor households and their methods of saving. What was identified as a major need for low-income categories, is the ability to convert saving into lump sums to finance their needs.

The chapter also focused on the challenges faced by the poor when they actually save. The security aspect is one (amongst others) of the major factors that determines when the poor save. The chapter then gives dominant reasons why low-income groups save. It is found that saving is not only for day to day needs, but also for covering the potential risks that may arise. Lastly, the data analysis is also included in this chapter. One of the main findings in the analysis is that traditional instruments are not substituted by sophisticated instruments and vice versa. Therefore given that the poor prefer the traditional instruments for saving, further investigations to the reasons behind their preference and also ways in which their saving may be improved is discussed in the next chapters.

CHAPTER FOUR: SAVING MECHANISMS TO MOBILISE SAVING FOR THE POOR

4.1 Introduction

Researchers found that low-income individuals can save (Schreiner et al., 2001) and that they do actually save (Schreiner, Clancy, & Sherraden, 2002), Collins et al (2009) further found that poor households save because of their low and uncertain income. Other research examined how much the poor can save (Hogarth et al, 2006). Moore et al (2000) identified how low-income individuals save, by identifying the existing initiatives. The next section first discusses the main reasons why banks are very seldom an option for the poor. In Section 4.3 the methods of saving are investigated.

4.2 Avoiding banks as a savings facility

Empirical evidence suggests that there are several reasons why poor households would rather not save in bank. A study of savings and services in Africa by Wright (1999), highlights two significant reasons. Firstly the formal banking system requires high opening and minimum balances and secondly, the location of the banks are often not within the reach of poor people (Wright, 1999: 5). In other words, difficult access to formal financial institutions seems to be the main reason why poor people do not save in banks. Other reasons are the formalities in banks, where a lot of paper work is required, whereas banks are by and large not interested in small deposits. Therefore the poor households consider themselves incapable of dealing with banks (Aryeetey and Gockel, 1991).

Wright (1999) summarizes the reasons to address the issue of access, mentioning physical and psychological factors (See Tables 4.1 and 4.2).

Table 4.1 Summary of physical factors of access to banks

Reason	Explanation
Physical proximity	How far banks are situated from the poor homesteads or workplaces determine the ease and cost of getting there
Terms and conditions of the institution	The terms and conditions, including opening and minimum balances, fees and other transaction cost, and withdrawal rules make access by the poor impossible
Opening hours	The opening hours of the institution may be really inconvenient for market traders
Hours spent in the bank	The queues and how long a client must take to wait for the completion of a transaction add to the transaction costs
Paper work	The layout, length, language, and writing, may be intimidating and impossible for poorly educated communities

Table 4.2 Summary of psychological factors of access to banks

Reason	Explanation
Service by staff	This involves how the bank staff treats poor clients. Whether they are; <ul style="list-style-type: none"> • intolerant • inconsiderate • non-helpful • corrupt
Appearance	Poor clients tend to be intimidated by high-class appearing financial institutions. Very low-class appearing financial institutions can create suspicions on the viability & security of the institution.
Complexity of paper work	The more difficult it is to fill in the paper work and the more tedious the process, the more poor clients shy away and are intimidated. This can be attributed to the high illiteracy rate amongst the poor.

Therefore it may be concluded that accessibility, convenience, and security impel the poor to save in banks. However, security is considered to be less important to the poor, given that they seldom have secure options (Mutesasira et al, 1999).

4.3 Ways in which the poor save

The way in which the poor can save may be categorized into 3 sectors; the informal sector, formal sector and semi-formal sector.

4.3.1 Informal sector facilities

Saving at home; A majority of the poor save at home, either stashing their income in pots, back yards and under mattresses (Sukhdeve 2008: 34). This becomes less frequent as the household becomes richer. The benefits of this type of saving include the fact that saving at home has minute transaction costs and is zero-priced (Rutherford et al 1999: 11)⁷. The risks are that spending may be reckless, the saving may be stolen or lost, insect eating may occur and family members and friends may require help during tough times and lastly, families may have unrest when the head of the house die without disclosing the hiding place (Wright & Mutesasira, 2001: 14). This type of saving is considered as saving up.

Saving clubs; These are groups who help monitor individual savings as a form of discipline. The benefits and risks are similar to those of saving at home as the money is often kept either at home or with money guards. It is also a way of saving up.

Money guards; *Money guards* guard the money for free over an agreed period. The guard may use the money while it is with him. The benefits are similar to those of saving at home, as saving with a money guard is often done with either other family members or neighbours or shopkeepers. Therefore the transaction costs are minimal if any. However the risk of handling money is still highly possible. Money guarding is considered as saving up.

⁷ This section relies strongly on the research done by Rutherford et al, 1999 due to the limited availability of reliable sources.

Deposit collectors; Deposit collectors are also known as mobile bankers. They collect money in a more regular and reliable way, and charge a fee for their service (Rutherford et al, 1999: 14). This is a method of saving up.

Community saving; Community saving is the most common way of saving. There are different methods of community saving, as listed below:

Reciprocal lending; With reciprocal lending, the home savings are consumed by a neighbour or relative. Households borrow and lend small quantities of rice or kerosene or cash on an everyday basis. The benefit is securing help in time of need. The risk is, however, that the reciprocity is not definite. Sometimes the neighbour just borrows and is not in a position to lend. It is classified as a method of savings through (Rutherford et al, 1999: 17).

Rotating Savings and Credit Associations (ROSCA); ROSCAs are true savings-through devices. Different individuals within a community contribute toward a fund. It's considered a strict form of saving, and therefore the benefit is the rigidity which influences discipline. On the other hand there are risks such as a member not being able to continue with saving due to unforeseen circumstances (Rutherford et al, 1999: 18).

ASCAs Accumulating Savings and Credit Associations; The principle of the ASCA is that every member makes deposits regularly (though in some ASCAs they are allowed to vary those deposits both across time and between members), and some members borrow from the fund, while others choose not to. The benefits and risks are similar to those of ROSCA's but it is more flexible, complex and risky (Rutherford et al, 1999: 21). It is a saving up method.

Informal insurance schemes; Informal insurance schemes are within the boundaries of a financial service. These include funeral clubs and other business schemes. However, due to the informality of the schemes, members may easily rebel against unwritten rules (Rutherford et al, 1999: 17). It is a saving through method.

Moneylenders and pawnbrokers; This is a systematic way of lending money as a financial service, rather than as part of normal social life (Rutherford et al, 1999: 22). It is a method of saving down.

Supplier credit; This involves suppliers that provide goods on credit, or even cash advances, to retailers who deal in their goods (Rutherford et al, 1999: 23). It is a method of saving down.

4.3.2 Semi-formal sector facilities

MFIs (loans, savings, and insurance products); It is known that in South Africa, and other sub-Saharan African economies, a multitude of the poor population and those with small enterprises face the problem of limited access to financial services (including deposit and credit facilities) provided by formal financial institutions (Basu et al, 2004: 3). This is despite the reality that the poor represent the majority in the economy. Due to the authenticity of the problem, several diverse microfinance institutions have emerged (Basu et al, 2004: 3). Microfinance institutions refer to financial institutions that provide financial services and assist small enterprises, the poor and households in mobilizing saving. These institutions often differ in terms of their legal structure, mission and methodology (CGAP 2011). These financial institutions are a necessity for the poor to escape the poverty trap (Das Adhikary, 2005: 4).

MFIs are principally recognized as an aid to poverty alleviation. They are the only service provider which forms groups. MFIs' uniquely have to play the role of a creditor and a debtor within members of the group (Rutherford et al, 1999: 29). Microfinance institutions are also categorized into formal, semi-formal and informal providers (Basu et al, 2004: 3). Formal providers are:

- subject to general laws and specific banking regulation and supervision
- any registered legal organization offering any kind of financial services
- development banks, savings and postal banks, commercial banks, and non-bank financial intermediaries

Semi-formal financial providers are:

- registered entities subject to general and commercial laws but not under bank regulation and supervision
- financial NGO's, credit unions and cooperatives

Informal providers are;

- Non-registered groups
- Rotating savings and credit associations (ROSCA's) and self help groups

With reference to ownership, MFI's can be:

- government-owned
- member-owned
- managed by socially minded shareholders
- managed by profit maximizing shareholders

MFI Benefits

The benefits of micro-financing are that the main targets are the poorest of the poor, and mostly women, due to their better credit risk rating than men. Micro finance institutions create an opportunity for the poor to meet their needs. Micro-financing further provides training on how to handle money, therefore helping the poor become economically secure, and thus making them acceptable to lenders (Raath 2010).

MFI Myths

There are a few misconceptions about micro-financers:

MFI's are loan sharks

The truth is that micro-financers are usually professional registered lenders who lend money via established offices. They must be registered with the National Credit Regulator (NCR) and the Micro Finance Regulatory Council (MFRC) in order to be considered a legitimate business.

MFI's charge excessive rates

The truth is that the cost of credit charged by micro-financers is misinterpreted as being the interest rate.

MFI's commit fraud with clients' personal details

The truth is that there has never been a case on record involving a professional micro-financing establishment committing fraud.

4.3.3 Formal sector facilities

Savings and credit co-operatives (SACCOSs) (savings, loans and insurance products); This way of saving involves the three categories of converting saving to a lump sum. In this case people come together to pool their savings, and from that pool they take loans on which they pay interest which is in turn used to reward the savers (Rutherford et al, 1999: 24). The services offered include a variety of loan types, insurance and short-term savings to pension plans. The risks are largely on the administrative side, where often the books of the co-operative are not well kept. Weak governance is in addition a risk.

Formal banks (savings and loan products); Formal banks offer a variety of services that are friendly to poor and rural groups, including mobile banking units and daily deposit collection (Rutherford et al, 1999: 26). It is a way of saving up. A recognized trend in accounts held by the poor is the low balances and a high frequency of withdrawals. This makes it highly possible for bank failures to manifest.

Insurance companies; Insurance companies are formally regulated companies in both public and private ownership (Rutherford et al, 1999: 28). It is a way of saving through. However, poor households rarely use insurance companies.

4.4 Access to saving by the poor

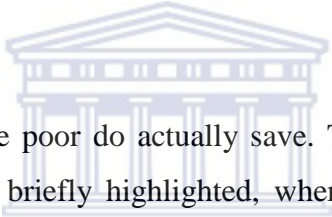
The preceding chapters of this paper highlight the importance of access to saving by the poor. As was mentioned repeatedly, the poor can, do, need and want to save. However, their methods of savings are often through informal saving mechanisms that are less secure and more risky. Therefore as with other income groups, the poor require access to secure financial services. For that reason it is right to conclude that the demand for access to saving is high. To improve access

to saving, more service providers ought to come to the fore to expand access, so that they can reach the poor in remote regions.

Access to savings facilities through semi-formal and informal methods are provided, but more thought has to be given to the design of a savings facility that will have a significant impact on poverty reduction while simultaneously contributing to economic growth. It cannot be an isolated fact that there are challenges faced by the suppliers. These include the high costs involved in providing access, institutional limitations, the lack of proper regulation and infrastructural issues.

The lack of access bears more consequences on the demand side rather than the supply side, as saving is essential for poor people's well-being (Glisovic, El-Zoghbi and Forster, 2010: 3).

4.5 Chapter summary



This chapter acknowledges that the poor do actually save. The lack of interest of low-income households to save with banks is briefly highlighted, whereby the two factors, physical and psychological factors are mentioned. The rest of the chapter discusses the ways used most by the poor. These are classified into formal, informal, and semi-formal. The following chapter states the benefits of formalised saving by the poor and offer suggestions to bridge the gap between the formal and the informal institutions. Further on the chapter looks at ways to incentivize the poor to save and ways to incentivize formal institutions or businesses to supply the saving vehicle.

CHAPTER FIVE: PROSPECTS OF FORMALISING INFORMAL SAVING

5.1 Introduction

There is very little accuracy on the extent of formal and informal savings in African countries such as South Africa. Some researchers found that in these countries informal saving tends to be larger than formal saving (Aryeetey & Udry 2005: 8). More and more informal methods of saving are present because of the high transaction costs associated with formal saving.

Under the right marketing conditions, better interaction between the formal sector and the informal sector may be achieved and in turn contribute to achieving the United Nations millennium goals, such as the eradication of extreme poverty and hunger, promoting gender equality, empowering women and improving economic growth levels which is important to this paper. Formalising the existing informal methods of saving is a way to achieve this.

This chapter investigates the risks and benefits to the economy of formalising. The costs and problems associated with the lack of finances are briefly discussed and the chapter further addresses some initiatives adopted in South Africa. Furthermore, methods to incentivize the poor to save and businesses to supply the saving vehicle are identified. The chapter ends with some recommendations.

5.2 Formalisation of savings

This paper supports and promotes the notion that forming linkages between semi-formal and informal financial institutions for example between Micro-Finance Institutions and the banking system, contribute largely to the sound development of the informal sector (Basu et al, 2004: 12). This is particularly true of the MFI's that employ full intermediation, and also interact with the poor communities about their existing informal methods of saving. Therefore they understand the sector better.

The linkage also involves linking banks and self-help groups (Schoombee, 2000: 423). The self-help groups include savings clubs and other community saving schemes such as ROSCA's and ASCA's of which stokvels are an example.

In this paper formalising refers to linking the informal and semi-formal financial institutions to formal financial institutions. Reference is made to micro savers, and these are the informal financial institutions.

Formalising is nonetheless not a new strategy. Its existence goes back prior to 1986 when the Asian and Pacific Regional and Agricultural Credit Association (APRACA) adopted the strategy. 1987 and 1989 were the years APRACA began its linkage banking workshops. In 1991 APRACA spread to an Australian initiative known as "banking with the poor" (Schoombee, 2000: 425), and has since spread significantly to other countries.

There are several linkage projects, all of which may be classified under five linkage banking models of which, according to Schoombee (2000), three may be applicable to the South African context. These are:

- indirect linking via a NGO intermediary. South African banks lack adequate information on the informal and semi-informal institutions, therefore NGO's are considered to assume the role of bridging that gap. A downside to this in South Africa is the scarcity of such NGO's;
- direct linking with NGO involvement;
- direct linking with no NGO.

The aforementioned international advances may be considered together with another three strategies highlighted by Schoombee (1998) on how banks can serve the poor in a sustainable manner, namely:

- by having banks that exclusively serve the poor;
- by having banks create specialized divisions/programmes that focuses on the poor;
- by enabling banks to link up with informal financial intermediaries.

5.3 Risks to formalise savings of the poor

Amidst political and economic stability the presence of risk will always prevail. The lives of poor households are often far more uncertain than those of non-poor households. This may be due to the fact that they are often less healthy; they have a weaker security system and have unstable income (Collins et al, 2009: 17).

Accumulating lump sums may seem to be a task too unbelievable to attain for the poor. However, as mentioned by Collins et al (2009), it is important to note that the main constraint in the financial ability of the poor, apart from low income, is how the financial instruments presented to them are designed to suit their particular needs. The fact that the income of the poor is low may not be easily addressed by financial services but they may offer discipline, security, flexibility and incentives to ensure that poor households can accumulate the large sums required to meet their needs (Collins et al, 2009: 98).

A study done by Wright & Mutesasira (2001), in Uganda, an African country like South Africa, which has a high percentage of poor people, used qualitative data from 1,500 interviews, participatory rapid appraisals and group discussions to quantify the relative risk faced by the poor in respect of their savings in the three sectors (formal, semi-formal, informal). They found that the highest incidence of loss was in the informal sector where 99 percent of the interviewees indicated that they had experienced losses in their saving. 26 percent of those who saved in the semi-formal sector had the same experience and only 15 percent in the formal sector.

However, what is also interesting is that the most risky forms of savings such as savings in kind and at home are the most popular (Wright & Mutesasira, 2001: 4). It is therefore encouraging to make more formal methods that are more specific to the poor and more accessible to their needs. This reduces the risk of losing their savings.

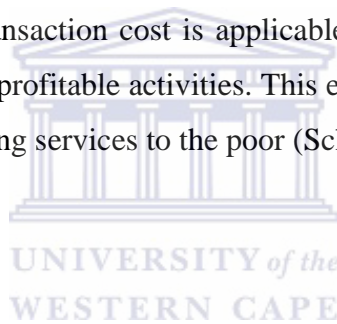
Conversely, it is rather risky for banks to be involved in the savings of poor households. This is seen in the trend of closures of rural bank branches (Wright & Mutesasira, 2001: 16). Nonetheless, the poor may not be simply left alone to suffer the consequences of their risky

situation, but more creative thinking and flexibility has to be applied to the matter as mentioned by Wright & Mutesasia (2001).

The failure of most formal banks who serve the poor is owing to one or a combination of high risks, high costs and low returns associated with this type of business. In addition to this are the socio-economic, cultural and language barriers faced by the informal sector in dealing with formal financial institutions (Schoombee, 2000: 3). The high costs are not only borne by banks but also their clients who incur time and travelling costs as banks are usually not within the reach of the poor.

Due to the costs involved it may be concluded that when dealing with poor customers it is not easy to make a profit. A contributing factor is the deposits of the poor clients that tend to be small amounts whilst the same transaction cost is applicable. It should not be expected of any private enterprise to carry out non-profitable activities. This explains the lack of enthusiasm from South African banks to offer banking services to the poor (Schoombee, 2000: 4).

5.4 Problems with lack of saving



Although there are risks attached to offering formal savings facilities for the poor as stated above, they (the poor) may not be left unattended without providing any secure facilities. This is because the lack of the facilities creates problems not only for the individual, but also for financial institutions and for the economy as a whole (CGAP, 1999: 4).

On the individual level, the lack of institutional savings facilities leaves the individual with only the option of in-kind savings (for example; gold, raw material, animals) or informal financial intermediaries which are less secure (for example; ROSCA's, money-guards, community saving clubs, etc.). Institutionally, the lack of saving may mean that the financial institution purely avails credit services to the clients. This is a problem because the dependency by financial institutions on external sources for financing shifts the focus from serving clients, to scouting for donors (CGAP, 1999: 4). Lastly, nationally the lack of savings means that national resources do not increase. Therefore foreign debt increases. This has negative consequences because in the

long run an economy cannot rely entirely on foreign investment. Additional domestic savings may need to be mobilized to finance growth.

Due to the problems attached to a lack of savings, the costs and benefits to formalizing informal saving are discussed in the next section.

5.5 Costs of formalising informal saving

The costs to micro entrepreneurs of formalizing informal saving are classified into four categories by Jansson & Chalmers (2001).

- *Initial monetary cost*; These are all the costs related to the registration of the financial institutions.
- *Ongoing monetary cost*; These are the costs related to paying taxes, renewing permits, insurance and social security.
- *Initial indirect costs*; These are administrative expenses and other opportunity costs in respect of time spent on registrations.
- *Ongoing indirect costs*; These are ongoing compliance and opportunity costs.

Costs to banks include high transactional costs that are the result of the small savings of the poor, high risk in terms of lack of information and low returns.

5.6 Benefits to formalise informal savings

There are also benefits to formalise informal savings and this section briefly covers them.

5.6.1 Reducing poverty

One of the major issues faced by South Africa is the high level of informality. It has been found that there is a correlation between being poor and working in the informal sector (Aswani, 2007: 10). A difficulty faced by informal enterprises is that the state is restricted in the regulation of the enterprises, hence the difficulty to include the informal sector in policies and strategies when formulating national socio-economic goals (Aswani, 2007: 9). Particularly, to this paper is that the saving of individuals in this sector is at a low. As a result of poor people not saving much,

government regulations controlling their savings behavior cannot be effective so that they also contribute towards growth.

On the other hand, it has been noted that the informal economy contributes to economic development hence its prominence in developing economy discussions on economic development (Aswani, 2007: 7). There are two schools of thought that arise in such discussions. One school advocates for total removal or elimination of the informal sector to eradicate poverty whilst boosting economic development. This school believes that the informal sector worsens poverty and economic development is slowed down. The second school of thought which is endorsed by this paper, promotes a more controlled informal sector which is believed to maximise and spread benefits to the uneducated and unemployed population, and it is important to stress that South Africa has one of the highest unemployment rates in the world.

South Africa, as mentioned earlier, has a high level of informality and therefore the removal of the sector may not be to the advantage of a large percentage of the population. For that reason, integrating the informal sector into the formal sector may be beneficial to the economy.

There are many ways to alleviate poverty. The most effective is economic development that involves improvement in employment, good health and education. Augustin & Burlone (2004), mention that domestic institutions that are capable of effectively managing growth and macroeconomic stability, play a key role in stimulating economic development.

Financial institutions such as MFI's (which mobilise savings) played an essential role with regard to the above, by providing access to better ways of turning savings into lump sums. This in turn presented an escape of the poverty trap by the poor and also offered opportunities for them and their households (Das Adhikary, 2005: 4). The vulnerability to economic shocks could be reduced.

Therefore, one benefit from formalising savings is the reduction of poverty, to which micro-enterprises, government and the society at large benefit because of the eradication of extreme poverty and hunger which is one of the United Nations millennium goals.

5.6.2 Promoting Gender equality and empowering women

Another important benefit of formalising informal savings is bridging the gap between women and men that affect or are affected by saving. Previously women did not have financial autonomy and several studies have shown that men tend to make the household decisions. This, however, is influenced by many factors including those which are highlighted in chapter three and in the analysis that women tend to have lower income than men in general. Therefore they have little say in the financial decisions. Nonetheless, it is interesting that Anderson & Baland (2002) mention that in some areas informal methods of saving are used by women to protect the funds from their husbands. Furthermore Duflo (2003) and other researchers indicate that income given to women has long term benefits as there is a higher probability that women will be more inclined than men to save or invest in education, nutrition, and housing. This suggests that men and women possess different attitudes to savings. Formalizing savings will also increase access to finance consequently the financial institutions that are involved will promote gender equality, empower women and encourage a saving attitude.

5.6.3 Advertising openly

Informal financial service providers may benefit from formalisation due to the ability to advertise their services openly. This will attract more clients, which means more saving opportunities will be created.

5.6.4 Good governance

Some of the benefits of formalisation of informal savings for government according to Jansson & Chalmers (2001) are the expansion of the tax base and the availability of information about economic activities. Improved income distribution is achieved as well as health and safety, economic growth and security.

5.6.5 Increased access, security liquidity and returns

The main criteria valued by poor households with reference to saving formalisation are, access, security, liquidity and returns (Hirschland 2003). Saving at home under the bed or in a hidden place in the home, may be easily accessible but is not safe from bed bugs, theft, demand of relatives, and yields no returns as it is not protected from inflation. The barriers identified by the

World Bank (1997) in terms of why the poor do not save with banks, include the high opening and minimum account balances, high travel time and transport cost to bank branches, and lastly, the lack of familiarity with bank procedures (Basu, 2004: 4).

MFI's which are tailor made to the specific needs of the poor, provide means to overcome the existing barriers to banking. Therefore formalising informal savings provides increased access to infrastructure, access to markets, security, liquidity and returns.

5.6.6 Legal protection

Formalizing informal saving, as with formalising the informal sector, enables microenterprises to expand without the fear of government intervening in the process, receiving penalties for tax avoidance and other government requirements. It also offers the ability to enter into legal agreements with the clients (Jansson & Chalmers, 2001: 6).

The jobs created by the sector have more social security under formalisation. Therefore employees may not be easily dismissed or unfairly treated, making the environment safe and stable.

5.6.7 Substituting discretionary and contractual saving

Discretionary saving as discussed in chapter 2, allows a household to freely decide on savings within its budgetary constraints (Portis, 2006: 1). Considering the challenges of poor households' savings, discretionary saving is important. However, according to Strydom (2007), there is substitution between discretionary and contractual savings. Therefore, formalising informal saving will convert the significantly large discretionary saving into contractual saving.

5.7 Initiatives

All three strategies of formalisation mentioned earlier have been adopted by South Africa. The first strategy was adopted in terms of a Community Bank that has subsequently failed, the second strategy example adopted took the form of the Mzansi account and the last strategy was adopted using MFI's. The advantage of the third strategy is that the problems and the costs involved in

banks' attempts to replicate the techniques of the informal savings institutions, may be overcome (Schoombee, 2000: 4).

The Community Bank initiative will not be discussed in this paper due to its failure but three other initiatives, namely the Mzansi Account, MFI's and Mobile Banking will be discussed.

5.7.1 Mzansi Account

The second strategy mentioned above is for banks to create divisions that cater to the unique needs of the poor. South Africa has created these divisions to serve the poor, distinguishing between serving the working poor (those with low-income but receive a salary) and those involved in micro-lending. Schoombee (2000) states that focus have been placed on serving the working poor. This however excludes a large proportion of South Africa's poor that do not have the luxury of work and live in rural areas or are victims of the high unemployment levels. Some of the initiatives such as the Standard Bank Business Growth Plan and First National Bank People's Benefit Scheme have withdrawn either because of the high operating costs or lack of access to the intended groups. However, one of the lasting initiatives is the Mzansi Account.

The Mzansi account was introduced after the 1998 exemption from the Usury Act, which is the Act that fixed maximum finance charges to protect vulnerable individuals from exploitation (Schoombee, 2009: 143). The 1998 exemption was announced by the Department of Trade and Industry (DTI), raising the level of exemption to R50 000. The focus was to encourage the SMME (small, micro and medium enterprise) growth of the sector.

The account was launched in 2004 as a joint initiative by ABSA, Standard Bank, First National Bank and Ned Bank (The Big four) including the Post Bank, with the intention to reach the target of 80 percent of adults within categories 1-5 of the Living Standard Measure (LSM) as set by the Financial Sector Charter. The Mzansi account is still functioning. Key to its success was lowering operating costs. This included low account opening costs, no monthly administration fee, free debit cards (with the exception of one of the retail banks), a minimum balance of between R0 and R20 to open and keep open the account, one free monthly cash deposit (at a teller or an ATM) with unlimited electronic deposits, and the same fees for using ATMs

irrespective of the size of the transaction or the ownership of the ATM (Schoombee, 2009: 150). An identity document is sufficient for identification so that those who cannot produce evidence of street addresses are not excluded.

The target number of accounts opened was reached in 2008. However the banks' expectations that Mzansi account holders would use other banking services did not materialize. Therefore Mzansi accounts remain unprofitable for banks.

5.7.2 Microfinance Institutions (MFIs)

The last strategy is for banks to link up with semi-formal and informal financial intermediaries. An example of such a strategy is the Microfinance institutions.

Microfinance institutions are organizations that solely provide financial services to the poor in a reliable and affordable way. However, how the providers function varies in terms of their missions, legal structure and methodology (CGAP 2011). By and large, the functioning of these organizations has proved that the poor save and attracted commercial banks as new players in microfinance. New resources in microfinance services are pouring in, showing exceptional growth in financial services for the poor (Collins et al, 2009: 175).

As discussed in chapter 4, microfinance institutions are categorized into formal, semi-formal and informal providers. MFI's stepped in to provide financial services to poor households. They also mobilize savings and consecutively assist to alleviate poverty. However, MFI's may also be considered risky institutions themselves and although this may be true, it is clear that they yield better results to informal saving.

A study by Imai, Gaiha, Thapa & Annim (2010), tested the hypothesis that microfinance reduces poverty. Their findings indicated that microfinance (in addition to other factors) does reduce poverty. However, this has been argued and criticized considerably.

The prospects of reducing poverty and increasing profits have been a drive in the increasing number of microfinance service providers that are setting up shop in countries all over the world,

and these service providers are becoming less and less dependent on public funding (Collins et al, 2009: 175).

Microfinance has demonstrated its ability to fulfill institutional functions. It bonds people together, simultaneously linking them towards the leaders in the formal sector and effectively mitigates external shocks. Collins et al. (2009) further mention that not only new financial providers are coming to the fore but also new ideas and technologies, such as mobile banking.

5.7.3 Mobile banking

Mobile banking is discussed as an initiative because of its role in reaching the poor. An article in the Economist on 11 March 2010 stated that *“The widespread use of mobile phones by poor people in developing countries may provide an answer”*. This gives reason to explore mobile banking as an initiative to formalisation. Mobile banking (m-banking) is the use of a mobile phone or device to perform financial transactions linked to a customer’s bank account. M-banking provides financial services through ICT, with the help of the widespread use of mobile phones even in low income countries. Mobile banking has grown rapidly in developing countries like South Africa, with a positive social impact on the country’s poor (Porteous & Wishart, 2006: 4).

As mentioned by Aker & Mbiti (2010), Mobile phone coverage in Africa has grown from 10 percent of those in possession of mobile phones in 1999, mostly in North and South Africa, to 60 percent in 2008 and it is estimated that by 2012 only a handful will not be connected.

The fact that the poor have little money was highlighted in the previous chapters. However it is also true that what the poor have, they make means to administer it in the best way they can. There are nonetheless risks to holding cash and this is often at a high cost to the poor as crime may be persistent in areas of residence or on the way to their residences. On the other hand, poor people have little or no choice on how to handle their money, leading to the use of informal methods to do so. The informal financial services are often unsafe and carry a risk, therefore not reducing but rather exacerbating poverty.

Formal financial services offer safer methods and other possible benefits to handle the poor's lump sums of money by reducing the vulnerability to cash flow shocks such as bugs, climate conditions and illnesses (Porteous & Wishart, 2006: 4). Access to these financial services is essential, where transfers and withdrawals may be carried out safely. M-banking provides a low-cost, safe and accessible transaction banking platform for the poor and in the long run gives an opportunity to reduce poverty.

There are five potential economic benefits of mobile phones to both consumers and producers underlined by Aker & Mbiti (2010);

1. Mobile phones improve access to and use of information as they reduce search costs; improve coordination among agents and increase market efficiency.
2. Mobile phones improve firms' productive efficiency and allows for better supply chain management through increased communication.
3. Mobile phones create jobs to address the demand for mobile related services, thereby providing income-generating opportunities in rural and urban areas.
4. Mobile phones can facilitate communication among social networks in response to shocks, thereby reducing households' exposure to risk.
5. Mobile phone-based applications and development projects, also known as "m-development", have the potential to facilitate the delivery of financial, agricultural, health, and educational services.

The most common services are account alert, security alerts and reminders, account balance, updates and history, customer service via mobile, branch or ATM location information, bill pay, delivery on payments, funds transfer, transaction verifications and mortgage alerts (MMA, 2009: 1).

There are four key principles for policy makers to consider when dealing with financial services for the poor, and these are:

- The service must be reliable;
- The service must be convenient;

- The transactions should be flexible and
- There must be some structure.

The initiatives discussed earlier indicate a consideration of these four principles. The next section presents ways to incentivise saving.

5.8 Incentivized saving

“Everybody agrees that people need to save more but there is no quick fix to bring this about. It will be an evolutionary process involving everyone..... The financial services industry and consumer groups need to seize the moment and work together to make this a reality.” Tony Vine-Lott (2010), director general of TISA (Tax Incentivised Savings).

To ensure that the benefits of saving offset the costs, the high risks and high costs associated with dealing with micro savers will have to be checked, and low returns need to be addressed, not only for the bank but also on the micro savers’ side. Appropriate practises will need to be carried out to ensure that formalising is cost-effective for both banks and micro savers, to give incentives to parties involved to actually carry out the formalisation of saving. Below are recommendations to incentivize saving.

5.8.1 Incentives to micro savers and microfinance institutions

Subsidies and incentives may play a role in overcoming the savings hurdles by the poor, whereby as encouragement, subsidies are afforded to individuals that have succeeded to save for a given period of time, which may increase with higher amounts saved. The option of incentivizing does not compel individuals to save regularly, however it reduces the reluctance to saving. This may be in terms of providing and administering products to savers, Schoombee (2000) states that this is a way of encouraging commitment. McCarthy and Neuberger (2004), mention that a boost in aggregate saving may be a result of tax incentives that raise the rate of return on savings, through life insurance and pension funds. This is particular to the poor as their desired savings are often below that offered by social security and therefore requires funding of social security by the government (Davis & Hu, 2004: 3).

Young children may be encouraged to save, to establish a saving culture in them that will grow with them and the generations after them, as indicated earlier that the stories told and the lives lived by the older generations tend to influence the next generation. Also, savings competitions may be introduced amongst schools, whereby the school that accumulates the most gets an incentive.

Costs related to registration and compliance may be addressed and made less tedious by adopting similar methods to that of the Mzansi account and mobile banking where formal documentation and means tests that make it difficult for micro savers to register and comply are reduced. Ongoing compliance and administration may be made convenient by means of the use of technology such as transactions by mobile phone, where payments are made through phones and monthly visits to stations that reach them. However, this method ought to be less sophisticated and user friendly.

Reducing transportation costs makes financial institutions easily accessible. Given that micro savers are looking for flexibility in their savings, an as-and-when basis as indicated by Bester, Hendrie, Hobden, Hougaard, Ketley & Musa (2008), allows for such flexibility. They further mention that this comes at a price causing an administrative expense to the financial service provider. Programs that inform consumers of charges, fees, and withdrawal terms and conditions are necessary.

5.8.2 Incentives to banks

Financial service providers face the fact that irregular income by the poor is not profitable. However, the exclusion of the poor is not an option as discussed above, therefore the service providers who deal largely with the low-income fraternity, may be incentivized through administrative methods such as tax incentives provided by the state.

Limiting risk by ensuring overall transparency of all parties that cater for the poor may be monitored and the most transparent providers may be incentivized to encourage more transparency.

Collateral to avoid high risks for banks is often difficult to obtain because of the irregularity of income. Therefore to incentivize banks, group homogeneity may be encouraged (Schoombee, 2000: 434). For example, farmers who receive income mostly in winter may be encouraged to save together to ensure consistency in saving which reflects commitment. This requires that the group members know each other well. To limit high costs, compared to have many small transactions, the prospects of group homogeneity allow for more substantial deposits.

5.8.3 Further Incentives/ Initiatives

Government needs to simplify tax further for institutions in informal saving. This allows for smaller charges raised by institutions on their clients, and hence encourages individuals to save, as stipulated by Bernheim (1999). Tax incentives may stimulate financial activities. Bernheim further mentions that saving accounts that are tax-favoured have the benefit of making monitoring of long-term objectives easier. However, it is worth mentioning that Robson (1995) highlights the finding of others that there is hardly any substantial evidence that levels of tax do affect aggregate saving. Therefore this paper does not elaborate on tax incentives.

Financial education on all levels must be encouraged by the state. Schools in rural areas and areas where low-income households are mostly based need to educate and provide understanding of saving and the services provided. In the case of those not in schools, workshops may be held to bring financial understanding, whereby farmers, other vendors and households in general are assisted in accumulating lump sums.

Another way of incentivizing saving for the poor is through an asset building approach that is discussed by Thela (2008) and Sharaden (2001) amongst others. This approach also observes the reality of income irregularity of the poor. They suggest saving and accumulation as a method to serve the poor, by encouraging small, regular deposits yet dependent on each household's income flow for a period. The approach matches the saving deposits and it allows for access to the saved funds but not the matched funds. The match funds are like tax incentives and are in-kind from other sources. Saving and accumulation according to the asset building method

mentioned by Thela (2008), is a better solution for the eradication of poverty, instead of looking for answers in income and consumption.

5.9 Chapter summary

The government has a significant role to play in the formalisation of informal saving to achieve favorable results. A lot may be learnt from other countries such as China. In addition domestic policies need to be adjusted to encourage a savings culture for the poor.

Formalisation, a strategy that has existed prior to 1986, possess risks due to the uncertainty of the lives of the poor compared to the non-poor households. However, the poor still need to be provided with secure saving facilities. The presence of risks and costs may be compensated by the benefits to formalize saving, such as the reduction in poverty which is one of the prevalent issues in South Africa, promoting gender equality and empowering women, among other benefits as stated above.

The saving of the poor is likely to increase with institutional support and incentives. Mzansi accounts are an example of such support but more initiatives and incentives may be considered.

CHAPTER SIX: CONCLUSION

The purpose of this paper was to examine the saving behavior of poor households. It focused on the informal methods of saving by the poor and the prospects to formalise their savings.

It is evident that the poor save. They have their own methods which do not contribute substantially to the economy as a whole. The majority of the poor save in informal ways, but formal and semi-formal saving methods also exist in low-income households. However, because of the magnitude of the informal sector in South Africa, it is concerning to have a multitude of the poor that save informally because it questions the reliability of some of the high priority rates such as the poverty rates, unemployment rate as to whether they are true reflections of the South African economy.

Chapter two of the paper discusses the traditional theories of household savings which do not clearly explain the behaviour of poor households particularly in South Africa. However, other Asian developing economies have shown higher rates of saving, as well as Botswana, a developing country in Africa. There is much to be learnt from these countries.

There are several challenges that are particularly unique to the poor that influence both spending and saving by their households as highlighted by other researchers and the analysis executed in chapter three. It is seen that some of the reasoning behind the spending activities carries sentimental value which are not easily measured. The activities are believed to enhance their livelihood.

A dynamic aspect to the poor is their need to accumulate and manage lump sums, as discussed in chapter three, this may be done by saving up, saving down or saving through. There is a lack of interest by low-income households to save with banks mainly because of transaction costs and the accessibility of institutions. Therefore their own saving mechanisms are used.

Furthermore the risks and benefits of formalised saving by the poor are discussed. Several initiatives have surfaced over the years, some of them failing along the way. This paper discusses

the Mzansi account and mobile banking to offer suggestions to bridge the gap between the formal and the informal institutions and recommend ways to incentivize the poor to save as well as ways to incentivize formal institutions or businesses to supply the saving vehicle.

The development of the financial sector may not be independent in an attempt to reduce poverty. The effort undertaken by poor households to save informally indicates that finance of the poor is essential to their lives. Enhanced methods to save that reflect accessibility, reliability, convenience, are essential to the accumulation of lump sums for cash flow reasons and long-term consumption. With incentives and support, savings of the poor become possible and have the potential of increasing.



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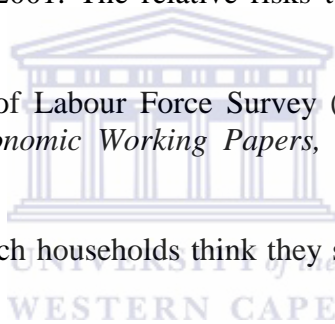
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APPENDIX

Table A.1: Summary of demographics results

Quintiles of real per capita income	1	2	3	4	5	6	7	8	9	10
Race										
Black	95.68 %	95.65 %	91.48 %	88.31 %	83.59 %	82.0 %	76.44 %	59.81 %	44.84 %	17.24 %
Coloured	3.36 %	3.48 %	7.48 %	10.08 %	14.06 %	12.79 %	13.13 %	13 %	12.12 %	6.34 %
Indian	0.74 %	0.29 %	0.84 %	1.44 %	1.59 %	2.88 %	4.51 %	7.48 %	6.22 %	5.09 %
White	0.20 %	0.59 %	0.16 %	0.16 %	0.69 %	2.25 %	5.61 %	19.58 %	36.74 %	71.17 %
Unspecified	0.01 %	0	0.04 %	0.01 %	0.07 %	0.08 %	0.31 %	0.55 %	0.09 %	0.17 %
Total	100 %	100 %	100 %	100 %	100 %	100 %	100 %	100 %	100 %	100 %
Gender of household head										
Male	37.29 %	40.52 %	46.00 %	52.85 %	60.12 %	65.95 %	71.95 %	73.44 %	80.05 %	81.92 %
Female	62.71 %	59.43 %	53.87 %	47.08 %	39.79 %	33.88 %	27.90 %	26.54 %	19.90 %	18.07 %
Unspecified	0	0.05 %	0.13 %	0.07 %	0.09 %	0.16 %	0.15 %	0.02 %	0.05 %	0.01 %
Total	100 %	100 %	100 %	100 %	100 %	100 %	100 %	100 %	100 %	100 %
Area type										
Urban	33.31 %	37.62 %	42.87 %	55.14 %	62.80 %	71.42 %	78.97 %	86.83 %	87.99 %	94.76 %
Rural	66.69 %	62.38 %	57.13 %	44.86 %	37.20 %	28.58 %	21.03 %	13.17 %	12.01 %	5.24 %
Total	100 %	100 %	100 %	100 %	100 %	100 %	100 %	100 %	100 %	100 %
Educational attainment										
No School	31.14 %	33.55 %	25.29 %	24.41 %	15.48 %	11.98 %	6.42 %	3.18 %	1.22 %	0.56 %
Incomplete Primary	31.49 %	28.25 %	32.79 %	26.95 %	23.65 %	19.67 %	15.93 %	8.41 %	4.63 %	0.93 %
Incomplete Secondary	32.31 %	32.09 %	35.11 %	38.73 %	49.49 %	48.25 %	49.19 %	42.17 %	29.02 %	13.04 %
Matric	4.28 %	4.75 %	6.10 %	8.02 %	8.81 %	16.56 %	20.23 %	29.86 %	31.74 %	28.58 %
Matric+	0.38 %	0.79 %	0.33 %	1.62 %	1.28 %	2.36 %	5.75 %	12.36 %	20.58 %	26.99 %
Degree	0.00 %	0.05 %	0.10 %	0.03 %	0.91 %	0.64 %	2.08 %	4.00 %	13.03 %	29.34 %
Unspecified	0.40 %	0.53 %	0.29 %	0.29 %	0.37 %	0.53 %	0.38 %	0.03 %	0.55 %	0.55 %
Total	100 %	100 %	100 %	100 %	100 %	100 %	100 %	100 %	101 %	100 %
Household size										

1	7.39 %	6.55 %	8.89 %	7.93 %	14.09 %	24.90 %	28.67 %	34.47 %	30.52 %	28.99 %
2	8.31 %	6.78 %	6.85 %	16.67 %	19.73 %	20.94 %	21.28 %	18.15 %	21.76 %	33.54 %
3	9.83 %	9.68 %	18.25 %	18.56 %	19.21 %	14.28 %	14.15 %	14.66 %	17.39 %	18.19 %
4	16.75 %	16.29 %	18.98 %	17.91 %	15.85 %	14.79 %	14.67 %	14.51 %	19.55 %	13.89 %
5	13.09 %	16.24 %	14.56 %	16.11 %	10.48 %	10.44 %	9.82 %	10.29 %	7.10 %	3.99 %
6	12.58 %	12.49 %	10.88 %	8.67 %	7.83 %	5.53 %	4.90 %	4.70 %	2.07 %	0.99 %
7	9.95 %	10.53 %	7.62 %	4.82 %	4.84 %	4.78 %	3.38 %	2.01 %	1.11 %	0.41 %
8	7.17 %	7.68 percent	5.81 percent	3.85 percent	2.61 percent	1.82 percent	1.27 percent	0.75 percent	0.30 percent	0.00 percent
9	4.43 percent	4.54 percent	3.55 percent	2.02 percent	1.78 percent	0.84 percent	1.12 percent	0.35 percent	0.11 percent	0.00 percent
10	3.65 percent	4.35 percent	2.00 percent	1.23 percent	1.71 percent	1.08 percent	0.41 percent	0.01 percent	0.06 percent	0.00 percent
11	2.09 percent	1.34 percent	0.82 percent	0.59 percent	0.58 percent	0.16 percent	0.20 percent	0.02 percent	0.02 percent	0.00 percent
12	1.44 percent	1.27 percent	0.53 percent	0.50 percent	0.19 percent	0.14 percent	0.12 percent	0.07 percent	0.00 percent	0.00 percent
Health rate (mean)	0.04154	0.0200	0.0202	0.0202	0.0146	0.0112	0.0118	0.0124	0.0129	0.0120
Food rate (mean)	0.94737	0.4674	0.3552	0.3154	0.2560	0.1942	0.1591	0.1195	0.0858	0.0516
Education rate (mean)	0.14348	0.0213	0.0248	0.0254	0.0306	0.0320	0.0211	0.0241	0.0264	0.0136
Recreation & culture rate (mean)	0.07425	0.0320	0.0333	0.0360	0.0348	0.0294	0.0326	0.0340	0.0333	0.0378
Saving rate (mean)	0.06828	0.1580	0.0747	0.1012	0.1140	0.1284	0.1937	0.2203	0.2534	0.3261

Figure A.1: Health rate as a proportion of income

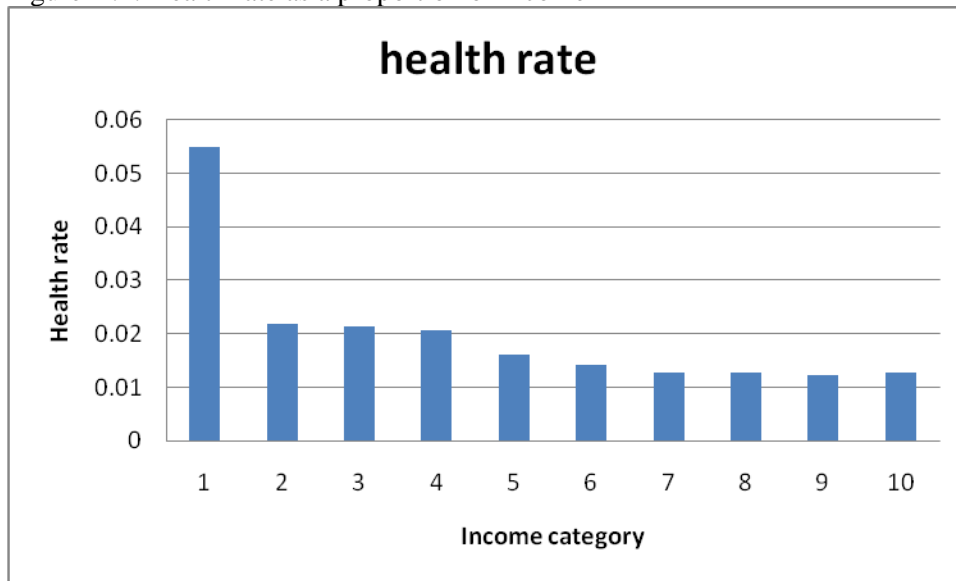


Figure A.2: Food rate as a proportion of income

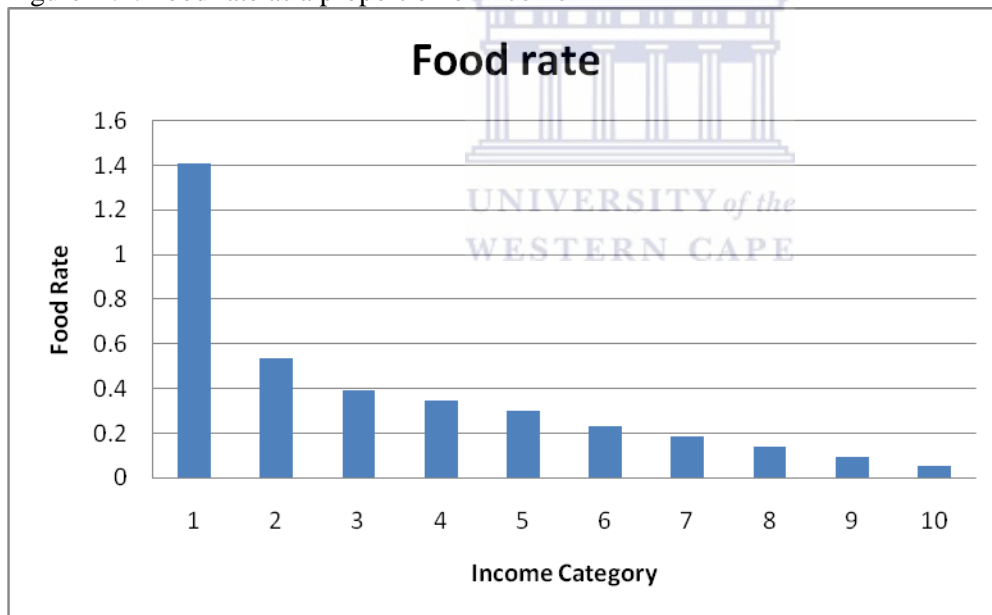


Figure A.3: Education rate as a proportion of income

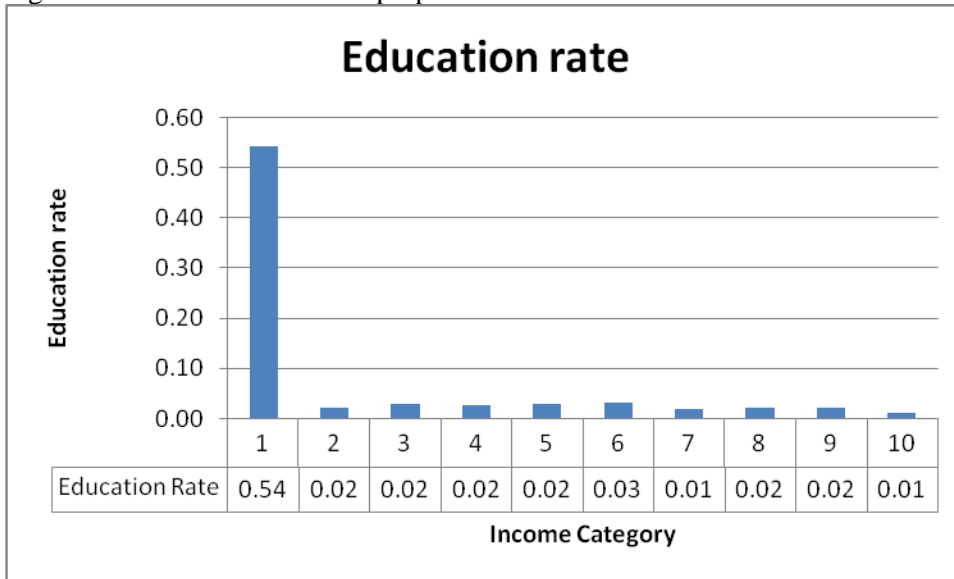


Figure A.4: Recreation and culture as a proportion of income

