

Policy implementation of student accounts on credit management at selected South African universities

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DECLARATION

I, Gauda Johannes Maseko, student number 21230684, hereby declare that the thesis for PHILOSOPHIAE DOCTOR is my own work, and that it has not been submitted previously for assessment or completion for any postgraduate qualification in any university or for another qualification. Furthermore, it represents my own opinions.

.....

G.J. Maseko

November 2017

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LETTER FROM THE LANGUAGE EDITOR

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To whom it may concern

This is to confirm that I, the undersigned, have language edited the thesis of

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for the degree

Doctor of Philosophy: Accountancy

entitled:

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The responsibility of implementing the recommended language changes rests with the author of the thesis.

Yours truly,



Linda Scott

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THESIS ABSTRACT

In the past few years, many countries have witnessed significant transformations and reforms in their higher education systems, including the emergence of new types of institutions, changes in patterns of financing and governing. In South Africa, like many other developing nations, the government dominates in financing universities. Since the enrolment in higher education is limited and most of the students tend to come from relatively financially disadvantaged families, other policy options should be considered for the exclusion of students. There had been a shift in the burden of higher education costs from being borne predominantly by the government, or taxpayers, to being shared with parents and students. This adjustment has placed a burden on universities because outstanding student accounts are increasing as a result of the non-payment of tuition fees. It is in light of these increasing expenses borne by students and parents, that universities face a challenge of maintaining higher education accessibility. For instance, student bodies have always objected (sometimes violently) to the increase in tuition fees because of the belief that the fees were escalating at a rate that might exclude potential and existing students from poorer families.

The results show that South African universities are under great strain with excessive default rates of the student accounts. A fundamental concern is that the outstanding student accounts impact negatively on the financial sustainability of universities. Higher education functions in a complex business environment generating operating and non-operating revenue. Credit offered by universities to students in the way of tuition fees is different from that of a typical business. Management of student accounts receivable resulting from the revenue generating activities is crucial to the financial health of universities. To effect the early conversion of these receivables to cash and minimise credit losses, institutions must maintain efficient credit management policies for managing receivables. What should be noted is the difference in credit management strategies between institutions and from this basis, optimum credit management procedures can be identified. The aim of this study is to examine the policy implications of credit management on student accounts at South African universities. The study adopted a convergent, parallel, mixed method research design by collecting both qualitative and quantitative data concurrently, analysing both data components separately and then mixing the databases by merging the data. For the quantitative study, the data were generated from a sample involving the administration of a structured questionnaire to 1 392 senior students and document analysis at five selected South African universities. The statistical data analysis procedures utilised for the quantitative study

were exploratory factor analysis (EFA), descriptive statistics, reliability and validity analysis, correlation analysis and one-way analysis of variance (ANOVA).

Prior to questionnaire administration, a pilot study was conducted to improve the accuracy of the survey instrument. The collected quantitative data were analysed using the Statistical Package for the Social Sciences (SPSS), version 23.0. The analysis of the qualitative data was conducted using document analyses by reviewing and evaluating documents, both printed and electronic; thereby, interpreting to offer voice and meaning around the assessment topic. The results indicate unprecedented implementation of student credit management (SCM) policies at South African universities. Different policies communicated to students at the various universities lead to diverse degrees of effectiveness of the credit management frameworks. Recommendations on the findings were made and the limitations of the study as well as the implications for future research were outlined.

This study will contribute significantly to the critical challenge facing South African universities regarding student debt. The study will be beneficial to policy makers and the implementation of a well-established credit management system, which will improve cash flow and working capital needs of the institution and preserve the future of the institution, while nurturing its development. Furthermore, the study contributes to the literature of student credit management within the South African context. The findings of this study may assist the policy makers in understanding the factors that contribute to student debt.

Keywords: credit management; financial sustainability; student debt; student accounts defaults; financing universities; cost recovery; student financial exclusion; personal financial management

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GLOSSARY OF TERMS

ANC	African National Congress
ANOVA	Analysis of variance
AoD	Acknowledgement of debt
ARC	Accounts receivable collection
ART	Accounts receivable turnover
AVE	Average variance extracted
BTS	Bartlett's test of sphericity
CA	Current assets
CAPM	Capital asset pricing model
CFA	Confirmatory factor analysis
CHE	Council on Higher Education
CM	Credit management
DHET	Department of Higher Education and Training
DoE	Department of Education
EFA	Exploratory factor analysis
FA	Factor analysis
GDP	Gross domestic product
HAUs	Historically advantaged universities
HCC	Human capital contract
HDUs	Historically disadvantaged universities
HE	Higher education
HEIs	Higher education institutions
HEQF	Higher Education Qualifications Framework
HESA	Higher Education South Africa
HOD	Head of department
INFE	International Network on Financial Education

IT	Information technology
KMO	Kaiser-Meyer-Olkin
NCA	National Credit Act
NCHE	National Commission on Higher Education
NDP	National Development Plan
NMU	Nelson Mandela University
NPC	National Planning Commission
NPHE	National plan for higher education
NSFAS	National Student Financial Aid Scheme
OECD	Organisation for Economic Co-operation and Development
PFM	Personal financial management
SARB	South African Reserve Bank
SARS	South African Revenue Services
SASCO	South African Student Congress
SCM	Student credit management
SD	Student debt
SETAs	Sector Education and Training Authorities
SPSS	Statistical package for social sciences
SRC	Students' Representative Council
STAR	Short term accounts receivable
TEFSA	Tertiary Education Fund of South Africa
UoTs	Universities of technology
VIF	Variance inflation factor

CHAPTER 1

INTRODUCTION AND PROBLEM ORIENTATION

1.1 INTRODUCTION

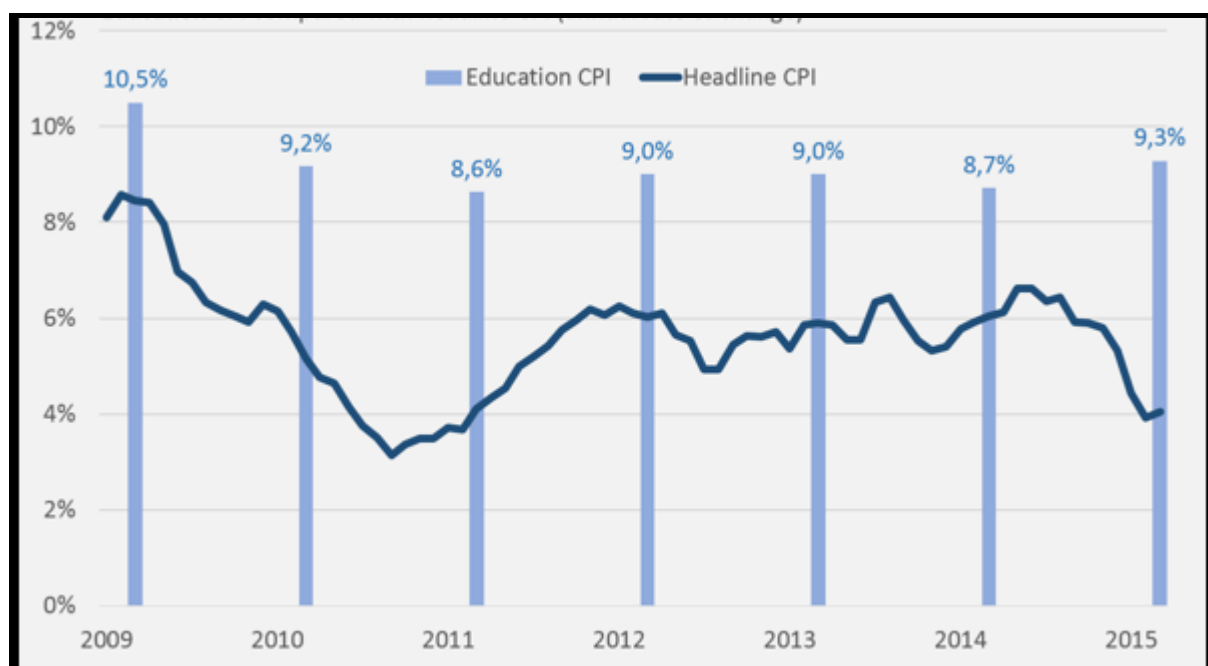
In the past, many countries have witnessed significant transformations and reforms in their higher education systems, including the emergence of new types of institutions and changes in patterns of financing and governance (Salmi, 2001). In South Africa, there are three different categories of universities, namely comprehensive universities, traditional universities and universities of technologies (Council on Higher Education (CHE), 2009). All these universities play a significant role in uplifting the standards of communities' lives through education, research, teaching, learning and community engagement programs to respond to the skills challenges in the South African economic and social sectors. The Department of Higher Education and Training (DHET) has a statutory responsibility to provide the funding and grants to support the academic programs of all students in these universities (CHE, 2009). However, student debt recovery remains a challenge despite the call by DHET that all poor and needy students should be afforded the opportunity to apply for special funding to clear their university debts (University World News, 2011). Cloete (2016a) lamented that since late in 2015, the South African government has been under pressure to react to an unprecedented post-1994 student movement demanding free university education. It is inevitable that the challenges of university funding characterise the student debt at South African universities.

Higher Education South Africa (HESA) (2012) escalates the challenges of *student accounts* (debt) recovery faced by South African universities by calling for all students who owe their universities to be allowed to graduate [*student accounts* and *student debt* are synonyms and will be used interchangeably throughout the study]. Yet, the practical implementations of these calls from DHET and HESA hold back the *credit management* of student recovery systems of the universities. The credit management of student accounts recovery systems are profound in the discussions of modern business environments. Credit is a medium (means) of exchange that makes it possible to get goods, services or money in the present based on a promise to pay for it in future (Kritzinger, 1997:5). The basis of credit is trust, which implies that the buyers receive the goods or services they are buying immediately with a promise to pay for it in the future (Olegario, 2006:1). The main aim of credit is to satisfy needs by offering goods and services that do not have to be paid immediately. The advantage of credit for buyers is that they can immediately enjoy the benefit of the use of goods and services without paying for them (Alford,

2002). *Personal financial management* plays a pivotal role in managing credit. If *personal financial management* is not managed, it can create financial risks or credit risk whereby the borrower is unable to meet obligations of paying the debt.

In South Africa, like many other developing countries, the government dominates in financing universities. The degree of dependence on state funds by individual universities differs (Ouma & Cloete, 2008). Currently, government grants account for on average 50 percent of public higher education funding. According to a ministerial statement on university funding 2016-17 and 2017-18, the government funding has been increasing steadily by 7.4% (2013/14); 7.6% (2014/15); 8.1% (2015/16); 5.3% (2016/17); 5.0% (2017/18). In the years 2013 to 2015, the increase seems to be inflation linked. Notably in recent years, the increase in university funding has been below the inflation target of the South African Reserve Bank (SARB) of 6%. However, the rising costs of education in South Africa has been surpassing the inflation rate also referred to as the consumer price index (CPI). Figure 1.1 depicts that from 2009 through 2015 education inflation has constantly outstripped general inflation in South Africa.

Figure 1.1: Cost of education compared with CPI



Source: Statistics South Africa (2015)

Calitz and Fourie (2016) viewed the hike in prices over the last two decades as the lack of government funding, the latter representing the largest source of university revenue. The #FeesMustFall demonstrations of 2015 and 2016 were indicative of the unguided social

dynamics at work when interest groups struggled to escape the cost of the fiscal adjustment caused by the impact on the government budget of the financial crisis and other factors threatening fiscal sustainability.

At South African universities, student fees comprise 25 percent and a further 25 percent is obtained through private income sources (Kuye, 2007). In fact, higher education makes up a very high percentage of the government's total education budget. However, a mass, high-quality university system is expensive and competes for public funds with other imperatives (Barr, 2004). University enrolments have expanded rapidly in the last two decades, reflecting the sustained increases in public spending for higher education. According to Mingat and Tan (1986), in most developing countries, public expenditure per student in higher education far exceeds that at lower levels of education. Since the enrolment in higher education is limited and most of the students tend to come from relatively poor families, other policy options should be considered for exclusion of students. Mingat and Tan (1986) emphasise that these options include policies to improve efficiency within the education system, leading to reduction in unit costs and policies to increase the private financing of education. In addition to increased private financing, students would be encouraged to behave more like investors than consumers and pay more attention to labour market signals in their choice of course specialisation.

However, in spite of this universally recognised importance of education, higher education in most countries, rich and poor alike, is suffering from increasing austerity, manifested in such problems as: 1) overcrowding, 2) capacity limitations (which exclude large numbers of qualified potential students from lower-income families), 3) declining faculty-student ratios, 4) deteriorating physical plants and in some countries, 5) soaring tuition fees and/or student debts, 6) restrictive student bodies and 7) increasingly demoralised faculty and staff (Johnstone, 2006). This severity may be because of rising costs and diminishing revenues, taking into account non-payment of tuition fees. As a result, universities must have revenue supplementation in order to be financially sustainable.

Johnstone (2004) notes that in recent years there has been a shift in the burden of higher education costs from being borne predominantly by government, or taxpayers, to being shared with parents and students. This shift has placed a burden on universities because outstanding student accounts are increasing as a result of non-payment of tuition fees. It is in light of these increasing expenses borne by students and parents, that universities face a challenge of maintaining higher education accessibility. On the other hand, as a result, universities should have efficient credit management policies to manage the student accounts.

According to the title of the thesis, the study investigates the policy implementation of *student accounts* on *credit management* at selected South African universities. To gain perspective on challenges of policy implementation at South African universities, this study also needs to investigate how students' *personal financial management* influences the *student accounts* and credit management at South African universities. The current student credit management policies have to be reviewed to investigate their relevance in alleviating the escalating student debt.

1.2 BACKGROUND OF THE STUDY

Many South African universities are under great strain with excessive default rates of the student accounts in the region of millions of rand. A fundamental concern is that the outstanding student accounts impact negatively on the financial sustainability of universities. If South African universities do not implement effective credit management strategies to manage outstanding student accounts this could lead to many universities being bankrupt and government having to bail them out. Higher education institutions require sufficient financial stability to permit orderly development (Hosni, 2004).

According to the White Paper for Post-School Education and Training (South Africa, 2013), earmarked funding is an important steering mechanism to ensure that some of the serious problems faced by South African universities are addressed. Funding for universities comes from multiple sources, at different junctures and for different purposes. Depending on an institution's context and capacity, the reliance on funding from the state varies, as does its ability to have a high fee contribution (because of the relative wealth of its student body). The immediate issue addressed in a country's tuition fee policy is the division of the burden of higher education's instructional costs between the student and his/her family and the government. Furthermore, the accompanying financial assistance policies that are adopted should address the implementation of tuition fees that do not reduce access to higher education for students from lower economic backgrounds (Marcucci & Johnstone, 2007). In South Africa, the appropriate tuition fee may be thought to depend on the cost of the various universities' programs. To show the significance of this matter, the National Planning Commission (2012) states that a Ministerial Committee for the Review of University Funding has been appointed to review the current framework and to determine the university system's resource requirements over the next five to ten years.

In many South African universities, student bodies have constantly objected to the increase of tuition fees because of the belief that it was increasing at a rapid rate that might exclude potential students from poorer families. As a result, universities are becoming cost-conscious and many

students are excluded from universities because of non-payment of tuition fees. Naidoo (2002) emphasises that students and politicians argue that more government funds must be made available to solve the many financial problems of higher education institutions in South Africa.

Relatively low levels of public funding for tertiary education translate into higher fees, effectively shutting out the poor and reducing the ability of universities to contribute to social economic development (Letseka & Maile, 2008). The United Nations Development Program ranked South Africa's public spending on education as a percentage of gross domestic product (GDP) at 32nd in the world in 2000 but only 59th for tertiary education (Letseka & Maile, 2008). Letseka and Maile (2008) also highlighted that between 1997 and 2003 education budgets stagnated, particularly for higher education. Over the past five years, both overall education spending and transfers to higher education have risen rapidly. However, the rapid increase in tertiary enrolment means that public funds per student remain lower than a decade ago. This per capita decline means that universities depend increasingly on private fees.

Institutions have increased revenues by charging increased fees. Increasing university fees contributes to the continued under-representation of black students, which threatens the replicate of racial inequality. Letseka and Maile (2008) noted that in 2005, 30 percent of all university students in South Africa were white, compared to 37 percent in 1995. As late as 1993, provision of educational funding was racially skewed and unequal. Government tried to help by setting up the National Student Financial Aid Scheme (NSFAS). In real terms, NSFAS loans to students increased fivefold between 1995 and 2005.

1.3 PROBLEM STATEMENT

For the long-term sustainability of an institution, fund management is essential (Santiago, Largoza & Conchada, 2007). Credit offered by universities to students by way of tuition fees is different from that of a normal business. Students register at universities without any assessment of credit worthiness and credit limit. However, the credit terms are stipulated and universities often withhold the student results and they are not permitted to enrol if accounts are not paid promptly according to the credit terms. Furthermore, unlike in the corporate environment, the credit management policies at South African universities are relatively lenient although this differs amongst universities. The logic is that university education is paid for, therefore, transformed into a commodity (Adams, 2006).

Adams (2006) discussed the managerialism notion (which is a concern about the effective management of institutions) claims that there is nothing distinctive about education, meaning it

can be conceptualised and managed like any other service or business institution. Therefore, the same credit management principles that are used in the corporate environment are considered applicable to institutions. Caruana, Ramaseshan and Ewing (1998) emphasise that tertiary education institutions are required, like business firms, to monitor and adapt to the continuous changes taking place in the political, economic, social and technological environment.

Recently, South African universities enrolments have expanded rapidly, consequently reflecting the continued increase in student accounts. The rapidly escalating student accounts, which is accounted in millions of rands, is a testimony to this problem. With rising tuition fees and student debtors in recent years, the role of a credit management policy and the ability of students to repay their fees have been gaining prevalence. Faced with this reality, South African universities are emphasising an effective credit management policy to manage the student accounts more effectively to improve liquidity and financial sustainability. Student accounts receivable has been reported to be a strongly negative factor in the experience of students (Chudry, Foxall & Pallister, 2011). At the same time, macroeconomic factors such as poverty and unemployment have placed significant constraints on students being unable to settle their outstanding tuition fees.

Facing economic pressure, universities can either look at cost cutting and/or increasing revenue (Caruana *et al.*, 1998). Hence, an effective credit management policy can be beneficial in this regard to recover outstanding student accounts receivable. Although the mandate of the universities is not profit generating, at the same time it is important for universities to remain financially liquid. The increasing unemployment and poverty put a strain on government investment in higher education. This together with a gradual decline in government funding to higher education has a negative impact of the financial sustainability of universities.

Universities function in a complex business environment whereby operating and non-operating revenue is generated. Management of student accounts receivable resulting from the revenue generating activities is important to the financial health of universities. The wide variety of receivables generated by the various activities of the universities results in thousands of individual accounts representing, in total, millions of rands. In order to effect early conversion of these receivables to cash and minimise credit losses, universities must maintain efficient credit management policies for managing receivables. Credit management is related specifically to working capital management function. It involves granting credit, billing accounts, effecting collection, analysing outstanding accounts (aging) and providing for bad debts.

The national plan of higher education seeks to redress and transform higher education by means of five strategic policy aspirations, which include the governance of universities (Adams, 2006). With reference to institutional governance, the Education White Paper 3 (1997, 41) states that “it is the responsibility of higher education institutions to manage their own affairs”, which implies institutional independence (autonomy). Autonomy means the ability of universities to organise their own affairs (including financial management) without interference from the state or its representatives (Adams, 2006). This implies that each university has its own student accounts credit management policy. For the past two years (2015 and 2016), the credit management of the South African universities has been under strain because of the #FeesMustFall campaign due to non-payment of fees demanding free university education.

What should be noted is the difference in credit management policies between universities and from this basis; we can identify the optimum credit management policy. For instance, at some universities, students will not be permitted to register or receive examination results, official transcripts, or marks reports until the outstanding account is settled in full or until an acceptable arrangement for settling the account is made by the department(s) concerned. On the other hand, some universities list the students on a credit bureau or use litigation strategies to manage accounts receivable. Some universities hand over deferred students to debt collection agencies. It is important, therefore, for universities to find an optimum credit management policy that is fair and does not contravene with the constitution framework. Notably, two Eastern Cape universities, Nelson Mandela University (NMU) and Fort Hare have incredibly recovered their student debt in 2006. NMUs debt was down from R101.9 million at the end of 2005 to R15 million and Fort Hare down from R78 million to R15 million (DHET, 2013).

The student leadership structures or Student Representative Council (SRC) has put pressure on the management of South African universities to enrol students regardless of their credit limits. This has been evidenced by many student protests (sometimes violent) at various universities across the country during registration periods. Faced with this dilemma, ultimately, South African universities constantly resort to register students by a way of concession and defer the outstanding accounts. It is the intent of this study to investigate how *personal financial management* influences the student debt and credit management at South African universities. By the time of graduation, many students would owe a substantial amount to the universities, which impacts negatively on the financial sustainability of the university. Consequently, this would affect the effectiveness of credit management on student accounts in order to improve the liquidity of the university.

Financial difficulties have been seen as a major cause of student withdrawal (Scott, Lewis & Lea, 2001). Students with limited financial resources often acquire student loans to pay for the high cost of education. Chudry, Foxall and Pallister (2011) note that a fear of debt is seen as a disincentive to attending university, especially among students from lower socioeconomic groups, potentially acting to reinforce the social class gap in higher education.

To achieve an effective credit management policy, it is important to consider the debtors' turnover rate and average collection period. Debtors' turnover rate indicates how quickly receivables are converted into cash. The turnover rate measures the liquidity of debtors. In addition, the turnover rate converted into average collection period is an important measure of collection activity of accounts receivable. An average collection is used as a yardstick of how long it takes to collect cash from accounts receivable. The higher the value of debtors' turnover the more efficient is the management of debtors or more liquid the debtors are. Similarly, low debtors turnover ratio implies inefficient management of debtors or less liquid debtors. It is the reliable measure of the time of cash flow from credit transactions.

1.3.1 Summarizing the problem

The South African universities are faced with escalating student debt ranging in millions of rands. Credit management policy at South African universities can assist in alleviating the problem. Therefore, it is necessary to explore (1) the differences between universities in the published credit management policies and financial statements and student perceptions (2) on student debt, (3) student credit management and (4) personal financial management. Furthermore, (5) South African universities need guidelines to enhance the management of student debt and student credit management.

1.4 RESEARCH QUESTIONS

1.4.1 Primary research question

To summarise the problem statement, the following primary research is stated:

- What is the relationship between policy implementation of student accounts and credit management at selected South African universities?

1.4.2 Secondary research questions

The proposed study was guided by the following secondary questions:

- What are the attitudes and perceptions of students towards student debt at South African universities?
- How effective is the implementation of credit management policies at South African universities?
- How personal financial management affects student debt and the implementation of student credit management at South African universities?

1.4.3 Research objectives

The following objectives are stated to answer the primary and secondary research questions:

1. To design a conceptual (theoretical) framework wherein the study can be executed (Chapter 2);
2. A literature review to explore the concept of student debt in the context of higher education (Chapter 3);
3. A literature review to explore the concept of credit management in the context of higher education (Chapter 4);
4. A literature review to explore the concept of personal financial management in the context of student debt and credit management policy (Chapter 5);
5. To present an appropriate research methodology and design to answer the set research questions (Chapter 6);
6. To analyse and compare the annual financial statements, published credit policies and student perceptions of the selected South African universities (Chapter 7);
7. To analyse students' perception of their debt, their universities' credit management policies and their personal financial management (Chapter 8); and
8. To conclude by recommending some guidelines for credit policy to manage student debt optimally (Chapter 9).

The sixth and seventh secondary research objectives are empirical in nature. These secondary research objectives are supported by specific *empirical objectives* as specified in Chapter 6 (refer Section 6.6.1, page 118).

1.5 PURPOSE STATEMENT

The purpose of the study is to answer the abovementioned research questions. This mixed method study addresses the impact of credit management policies on student accounts at selected South African universities in order to identify an optimum credit management policy. A convergent parallel mixed methods design was used and it is a type of design in which qualitative and quantitative data are collected in parallel, analysed separately and merged. In this study, qualitative data was collected by document analysis to examine the selected universities' published student credit management policies and financial statements analysis and interpretation. The quantitative data focused on senior students at selected South African universities and questionnaires were used to collect data. The reason for collecting both quantitative and qualitative data is to converge or compare results, validate results, corroborate results of the two forms of data to bring greater insight into the problem that would be obtained by either type of data separately.

1.6 SIGNIFICANCE OF THE STUDY

The findings of this study benefit South African universities in terms of implementing credit management policies of student accounts by identifying the optimum credit management strategy. Furthermore, South African universities will efficiently manage the student debts recovery. Consequently, an effective credit management policy will improve the liquidity and financial sustainability of South African universities. The attitudes and perceptions of students toward tuition fee payment as well as factors contributing to non-payments were investigated and analysed. Students expect the best service from universities in terms of academic programs and infrastructure development. On the other hand, they need to be enlightened that they need to pay for the best service. The DHET policy makers on funding and grants to support the academic programs will be able to understand the challenge that South African universities are facing regarding the defaults on tuition fees.

1.7 LITERATURE REVIEW AND DEFINING CONCEPTS

1.7.1 Financing higher education in South Africa

In many developing countries, the government dominates in financing and providing education (Mingat & Tan, 1986). Similarly, the most important source of financial support for South African Universities is the state. In recent years, governments have begun to redesign tuition-based financing systems for universities. Oketch (2003) noted that some policy makers in Africa

continue to argue that higher education should be funded solely from tax revenues. They point out that tuition is prohibitive and that many students who could not afford it would be prohibited from attending. According to Santiago *et al.* (2007), a well-established economic principle states that individuals should pay for primarily private education. The primary example of this is a business degree. They further argued that there are degree programs that manifest strong externalities or spillovers (i.e. benefits to society and not just to the individual). Science and technology courses are good examples of this for the research they create, but teaching also falls under this category because there is a pressing social need for not just instructions, but instructors, of high calibre. Defaults rates are deterring the progress of financing and providing education.

Some contrasting uses of terminology regarding ‘default’ may be observed in earlier studies. Default in this study is defined by statute as the case in which a borrower has made no payment in more than 180 days for a loan that is billed monthly or more than 240 days for loans billed quarterly (Flint, 1997). However, not all studies define default identically. Some studies redefine default as delinquency of 12 or more consecutive months during the repayment period (Hesseldenz & Stockham, 1982; Stockham & Hesseldenz, 1979). Other studies concern themselves only with degree of delinquency as payments precede defaults (Flint, 1997). Flint (1997) maintained that the effects of student default frequently are observed from two social background variables: race and socioeconomic status.

Barr (2004) identified the three major beneficiaries of education and training. These are the students, their employers and government, the last representing the broad social interest. Furthermore, he discussed the number of ways in which students and their future employers might contribute to the finance of post-school education and training. First, excessive reliance on family resources (i.e. parental earnings or accumulated family savings) will penalise young people from poorer backgrounds. Certainly, this source, on its own, cannot finance large-scale expansion. This is not an argument against the use of family resources to finance training but a caution against relying excessively on this approach. Secondly, students’ current earnings are a common source of educational finance. Given the present state of the job market, this is not an approach on which heavy reliance should be placed. Thirdly, students might be able to finance part of the costs of education or training out of their future income (i.e. through a well-constructed loan scheme, which allows them to borrow against their future earnings). Increasingly, it is becoming a global practice with students from many market-economies (Australia, Germany, New Zealand and the UK to list but a few) required to finance their own

higher education (Chudry, 2010). Very few countries in the world shoulder the entire financial burden of educating their public.

Student loans are already widely used as a means of financing higher education in both developed and developing countries (Woodhall, 1988). Government sponsored or guaranteed student loan programs, which enable students to borrow to finance tuition fees or living expenses, now exist in well over thirty countries (Woodhall, 1988). In some countries, the aim of a loan program is to expand financial aid for students; in other cases, the aim is to reduce the level of subsidy and substitute loans for grants, scholarships or bursaries.

1.7.2 Student Debt

A tuition fee generally refers to a mandatory charge levied upon all students (and/or their parents) covering some portion of the general underlying costs of instruction (Marcucci & Johnstone, 2007). Many students are experiencing financial pressures, including poverty and concern about debt, a comparative lack of money and significant burdens of paid employment, but despite these issues, many students persevere in higher education (Thomas, 2002). In addition, stressful experiences of first year students at universities in South Africa had to do with stress experienced in relation to issues of acquisition of funds to take a student through university education, including ability to pay tuition fees (Bojuwoye, 2010). The relationship between financial issues and withdrawal is receiving considerable attention in many countries currently. The actual importance of this problem depends on the effectiveness of the credit management policy. If no record is kept, the default rate is likely to be high, since defaulters can more easily avoid detection.

Because of relatively high dependence of South African universities on public funding, the decline in government funding requires that universities search for resources to maintain financial stability. The most important economic exchange relationship that almost all universities have utilised to improve their resource condition is tuition fees (Ouma & Cloete, 2008). Tuition fees are institutionally determined; therefore, there are differential pricing variations between institutions. Ouma and Cloete (2008) stressed that many South African universities have made adjustments in the manner in which tuition fees are levied to ensure cost recovery and optimal revenue generation. Because of tuition fee increases, the share of tuition fee revenue in the total income of universities has increased significantly over the years (Calitz & Fourie, 2016).

According to Ouma and Cloete (2008), tuition fees are one of the fastest growing sources of non-government revenue for public universities in South Africa. The need for an increase in tuition fees is because tuition fee revenue is associated with the core business of universities. For several universities, especially historically disadvantaged universities (HDUs), tuition fee increases are also likely to aggravate the problem of student debt. Steyn and Villiers (2006) highlighted that the excessive student debt is a substantial problem for several HDUs. Because of tuition fee increases, government is considering introducing a tuition fee regulation, and student organisations are calling for tuition-free education. Therefore, universities are in a dilemma because of government funding declining, yet raising student fees are unwelcome. Free higher education would also be too expensive to offer.

Universally, student fees increase has not been without controversy and South Africa is no exception. Student organisations constantly insist on 'bail-out' from debt and unlimited access to their constituencies. According to Jansen (2004), a stream of political messages required that students pay fees; that university managements were responsible for collecting such fees; that only academically deserving students from poor backgrounds would receive funding; and that disruption would not be tolerated. The national student debt escalated because universities admitted more disadvantaged students than before, continued to increase fees and put little pressure on students to recover debt (Jansen, 2004). Recently some universities have vigorously promoted upfront payment and cost recovery strategies such as credit management policy and debt collecting agencies to stabilise deferred fees. To reinforce the payment culture they desire, higher education institutions and more particularly historically black institutions, often withhold academic results of indebted students, sometimes prevent students from graduating and increasingly exclude students on financial grounds (Koen *et al.*, 2006).

Koen *et al.* (2006) discussed the impact of student participation in institutional governance on financial and academic exclusions. They noted that, on average, about 25 percent of students leave universities annually in South Africa because they are excluded on academic and financial grounds. Though student organisations were incorporated into decision-making processes at universities, student boycotts and protests are common. The 1997 Higher Education Act 101 requires that all HE institutions formally recognise SRCs and approve their constitutions. The Act also provides elected student leaders with seats in the highest decision-making body on strategic issues (university Council), highest academic body (Senate) and the highest advisory body (Institutional Forums).

Mingat and Tan (1986) discussed two ways in which a policy of increased cost recovery can be implemented. The first is to require students to pay for their education at enrolment. This deal usually is unpleasant because it limits the selection of students to those who have the funds at the time of enrolment. Students from poorer families would be denied access to universities; therefore, this arrangement is both inequitable and inefficient. An alternative arrangement is a student loan scheme. Fundamentally, a loan scheme would allow students to mobilise their future earnings to finance present investment in their studies. The greatest benefit accrues to graduates themselves (Curtis, 2004), because they receive an excellent return on their investment in higher education (Williams & Light, 1999).

The South African government incorporated the Tertiary Education Fund of South Africa (TEFSA), a fund scheme set up shortly after the transition to democracy in 1995. The purpose of the scheme was to provide loan funds for needy students. Later in 1999, the NSFAS was created to provide a sustainable financial aid system for study loans and bursaries to academically deserving and financially needy students. According to the White Paper (South Africa, 2013) an important challenge that still remains is finding the resources to address those students who do not qualify for NSFAS loans because their families' incomes exceed the threshold of R122 000 per annum but who do not earn enough to qualify for commercial loans. This group includes the children of many teachers and civil servants, precisely the groups from whose children future professionals and academics come from in most countries.

1.7.3 Credit management at South African universities

According to Kapsalis (2006), the ability to repay debt is driven by the size of the debt (and the payments required) and the income available to make those payments. He further discussed that most student debtors in Canada, however, have similarly sized debts, but different income levels, suggesting that income is a more important factor. In order to compare the effect of income and indebtedness on the ability of students to repay their loans, the study compared default rates among students with different levels of income, but within the same level of total indebtedness. The average own income during the first three years following graduation (1995-97) was used as an overall measure of income. For this analysis, defaulters include all borrowers who fell into arrears for at least three months. Regardless of the amount of the loan, the percentage of students defaulting within three years drops by about 1.2 percentage point for each \$1,000 increase in own income even for those with less than \$5,000 in debt. On average, about 53 percent of debtors with incomes below \$10,000 defaulted by 1997 compared to only 5 percent for those with incomes above \$40,000. In this study, theories relevant to student debt, student credit

management and personal management will be discussed to enhance the understanding of policy implementation of credit management on student accounts at South African universities.

Although credit terms and credit collection procedures have been studied, there has been very little evaluation of the impact of student accounts on credit management policies within the South African university context. These decisions merit more careful attention for two reasons. First, student debtors are a substantial portion of universities current assets. The outstanding student accounts, therefore, pose a substantial burden on the financial sustainability of universities. Second, a student debtor is a medium-to-high risk investment on which the return yields increase in profit when and only when an account is being paid. Credit management policies must be reviewed and updated every few years because, like all investments, debtors are affected by the changing economic climate and market conditions.

The current state of the South African economy, the new scenario for higher education and the new formula for funding higher education calls for the use of cost-effective strategies that can be used to ensure optimum use of limited funds (Naidoo, 2002). Responsiveness to economic and governmental issues is increasingly important for the financial sustainability of universities. One aspect that rarely is considered in institutions is an effective credit management policy. For institutional survival, universities must reform credit management policies in order to optimise liquidity and financial sustainability. Funds that cannot be obtained from government subsidies and private sponsors will have to be recovered from student fees.

Many South African universities are experiencing problems in collecting outstanding student debts. If cash is not recovered from students, universities will struggle to pay for expenses that have been budgeted for, especially unavoidable fixed expenses. There is no doubt that South African universities currently have credit management policies, but the effectiveness of these policies merits evaluation. This study examines the credit management policies at South African universities. It also evaluates the effectiveness of credit management policies at these institutions.

1.7.4 Personal financial management

Student accounts and credit management are the core spinoff that may influence the implementation of student credit management policy; however, personal financial management cannot be overlooked. Barr (2004) raises a debate on the policy about the ability of students to pay their fees. Should the policy be based on current income (on where people start)? The strategy to which this leads is support for people whose family is poor, even if recipients end up

becoming rich. Alternatively, should ability to pay be based on future income (on where people end up)? This approach leads to finance based on income-contingent loans or graduate taxes, with more generous support, *ex post*, where someone derives little financial benefit from his or her degree.

Barr (2004) further argues that higher education is a basic right and should be free. The equity objective is not free higher education, but a system in which no academically deserving student is denied access because he or she comes from a disadvantaged background. Barr (2004) maintains that we all agree that food is a basic right, yet competitive supply at market prices is uncontroversial. There is a need to examine personal financial management as a contributor to tuition fees defaults at South African universities. Other common demographic variables also draw varied results. Pre-university total income (including parental income) typically has been used as a measure of socioeconomic status of borrowers (Flint, 1997). Six studies (Pattillo & Wiant, 1972; Myers & Siera, 1980; Gray, 1985; Wilms *et al.*, 1987; Knapp & Seaks, 1992; Dynarski, 1994) find lower levels of family income to be correlated positively to default, whereas three other studies (Greene, 1989; Flint, 1994; Volkwein *et al.*, 1995) find no such effect.

1.8 RESEARCH DESIGN AND METHODOLOGY

Research design is a plan of conducting a research project; it is a framework that gives direction and systemises the research project by showing how to solve a specific problem, indicating the steps that are necessary to provide answers to research questions, in order to achieve the research purpose. For this study, therefore, a mixed methods research design was used. As a methodology, it involves philosophical assumptions that guide the direction of the collection and analysis of data and the mixture of qualitative and quantitative approaches in many phases in the research process (Creswell & Plano Clark, 2007:5). Yin (2006) notes that mixed methods research plays an important if not essential role in educational research whereby qualitative methods address process questions and quantitative methods address outcome questions. Mixed methods will produce converging evidence, presumably more compelling than might have been produced by a single method.

Quantitative research determines the relationship between the variables in the population and seeks to explain the relationship in mathematical expressions and statistics. Quantitative study designs are specific, well structured, have been tested for their validity and reliability and can be explicitly defined and recognised (Kumar, 2011:103). The use of a quantitative technique is

applicable to the study because questionnaires were distributed among senior students at South African universities.

On the other hand, qualitative methods are used to understand the meaning behind human behaviour using various techniques, one of which is document analysis. Qualitative research in the form of document analysis is a systematic procedure for reviewing or evaluating documents that are both printed and electronic material (Bowen, 2009:27). The quantitative research approach was used to determine the perceptions and attitudes of students towards student accounts, student credit management and personal financial management. The qualitative research (published policies and financial statements) was applied to establish elicited meaning, gain understanding and develop empirical knowledge on student credit management policy.

1.9 THEORETICAL/CONCEPTUAL FRAMEWORK

In order to be objective, the fundamental rationale of this study was guided on underlying sociological paradigms of radical structuralist and humanist. The role of paradigms as views of social reality was explored in detail by Burrell and Morgan (1979), who argued that social theory in general, and organisation theory in particular could be usefully analysed in terms of four broad world views. The latter were reflected in different sets of metatheoretical assumptions about the nature of science, the subjective-objective dimension, the nature of society and the dimension of regulation-radical change. Burrell and Morgan (1997:1-33) discussed the sociological paradigms and organisational analysis.

Radical humanist paradigm views the consciousness of man as being dominated by the ideological superstructures with which he interacts and these drive a cognitive wedge between himself and his true consciousness, which prevents human fulfilment. This paradigm will develop the discussion of *deprivation theory* (a belief that people take action in social change in order to acquire something) in Chapter 2 and applied in Chapter 5. This paradigm assists in providing critique to the status quo on current student accounts at South African universities and central focus on human consciousness regarding non-payment of tuition fees. Furthermore, radical humanist paradigm theorists (subjective-radical change) are mainly concerned with releasing social constraints that limit human potential. They see the current dominant ideologies as separating people from their true selves. They use this paradigm to justify desire for revolutionary change. Nominalism, which is an ontological debate, assumes that social reality is relative and the social world is mainly names, concepts and labels that help the individual structure reality. Ontology assumes if reality is external from conscious or a product of

individual consciousness it will reveal the concerns on the nature of the world and human beings in a social context.

On the other hand, radical structuralist paradigm theory (objective-radical change) sees inherent structural conflicts within society that generate constant change through political and economic crises. Theorists in this paradigm are mainly concerned with releasing social constraints that limit human potential. This paradigm will advance the discussion of *institutional theory* (an assertion that the institutional environment can strongly influence the development of formal structures in an organisation) in Chapter 2 and applied in Chapter 3. Epistemological assumptions were applied and the focus was to evaluate credit management policies at South African universities. The assumption assists in understanding the ways to acquire knowledge. According to Churchland (1999:12) epistemology is applied rationally (rationally applied to information acquisition, whether sensory, revelatory, rationalist, or whatever). The assumption of positivists theory, which is the epistemological debate, was implemented, which generally assumes that reality is objectively given and can be described by measurable properties, independent of the observer (researcher) and his or her instruments. Positivist studies generally attempt to test theory in an attempt to increase the predictive understanding of phenomena. Positivists generally assume that reality is given objectively and can be described by measurable properties independent of the researcher and his or her instruments (Myers, 1997). This paradigm will cultivate the *portfolio theory of accounts receivable* (portfolio managing approach could increase the value) in Chapter 2 and applied in Chapter 4. Burrell and Morgan (1979:4) depicts the analysis of the nature of social science in terms of subjectivity and objectivity as illustrated in Figure 1.2.

Figure 1.2: Analysis of the nature of social science

The subjectivity approach to social science				The objectivity approach to social science
Nominalism	←	Ontology	→	Realism
Anti-positivism	←	Epistemology	→	Positivism
Voluntarism	←	Human nature	→	Determinism
Ideographic	←	Methodology	→	Nomothetic

Source: Burrell and Morgan (1979:3)

Figure 1.2 identifies four sets of assumptions relevant to social science, characterizing each by descriptive labels under which they have been debated.

1.10 SAMPLING METHOD

Sampling method is the procedure followed in the selection of units to be used as representatives of the target population. The target population for this study entailed reviewing of documents (content analysis) and questionnaires to the senior students as they are presumably assumed to have accumulated student debt.

Probability sampling method incorporating stratified random sampling was applied to select South African universities and cluster sampling to select students at selected universities was used for this study. Purposive sampling was applied to select relevant documents related to student credit management at selected South African universities. South African universities were divided into types of universities. The division into groups is based on a single variable and a random sample was drawn from each separate stratum. Using the stratified sampling method, we can be more certain of obtaining a representative sample from a population with clearly distinguishable strata than with simple random sampling (Welman, Kruger & Mitchell, 2005:61). Cluster sampling occurs when the sampling unit is not an individual but a group (cluster) that occurs naturally in the population (Plano Clark & Creswell, 2008:201). In addition, cluster

sampling occurs when the researcher wants to generate a more efficient probability sample in terms of monetary and/or time resources.

Non-probability sampling incorporating purposive sampling was used to select relevant documents to achieve comparability of credit management policies at selected South African universities. Qualitative research generally is based on non-probability and purposive sampling rather than probability or random sampling approaches (Maree, 2007:79). Therefore, consideration in purposive sampling is upon judgement that documents can provide the best/expert information to achieve the objectives of the study. Furthermore, Plano Clark and Creswell (2008:218) maintained that purposive sampling involves selecting those cases that are the most outstanding successes or failures related to the topic of interest. Such excessive successes or failures are expected to yield valuable information about the study. In qualitative research, number considerations may influence the selection of a sample such as the ease in accessing the potential respondents; your judgement that the person has extensive knowledge about an episode, an event or a situation of interest to you; and how typical the case is of category of individuals or simply that it is totally different from the others (Kumar, 2011:192).

1.11 SAMPLE SIZE

Sampling size is defined as the number of subjects selected for the study whose characteristics exemplify the target population from which sufficient accurate answers were obtained (Churchill & Iacobucci, 2005:41). In order for the results to be generalisable, a total population of six South African universities of technology was selected for the purpose of this study. Public universities in South Africa are divided into three types: traditional universities, which offer theoretically orientated university degrees, universities of technology ('Technikons'), which offer vocational orientated diplomas and degrees and comprehensive universities, which offer a combination of both types of qualifications. The South African universities of technology have been selected purposely, particularly because the problem of outstanding student debtors is relatively large in contrast with traditional and comprehensive universities. The data was collected from a cluster sample of five UoTs out of the six that participated in the survey.

Burger and Silima (2006:656-658) strongly advise researchers selecting a sample not to choose less than 100 cases in order to be able to use descriptive statistics correctly. For example, from the combined total of 400 final year students at a particular South African university, a sample size of 200 is deemed adequate for qualitative data. Against this background respondents were selected randomly to constitute an $n=200$. Maree (2007) noted that using a well-designed

probability sampling method, larger samples would represent the population better than smaller samples and their findings will also be more accurate. According to Plano Clark and Creswell (2008:207), a sample size for purposive sampling is typically small (usually 30 cases or less). They further state that the size of the quantitative sample will not be the same as the smaller (preferably purposefully selected) qualitative sample. The qualitative data, therefore, was used as a secondary role to support the quantitative data.

1.12 DATA COLLECTION INSTRUMENTS

Documentary analysis of the published credit management policies on student accounts and financial statements was performed at selected South African universities for the empirical study. The aim of analysing the student accounts receivable and credit management policies is to establish the effectiveness of credit management policies on student accounts. According to Ritchie, Lewis, Nicholls and Ormston (2013:35), documentary analysis encompasses the study of existing documents, either to understand their substantive content or to illuminate deeper meanings, which may be revealed by their style and coverage. This method exhibits unique characteristics and application possibilities; therefore, it warrants separate discussions, which aid the validity of the result and error measurement reduction (West, 1999:20).

In order to collect information from the students, the study made use of questionnaires, which were distributed in the classrooms with assistance of lecturers at each university. A collective administration of closed-question questionnaires were distributed to students and divided into four sections. Section A consists of questions on students' perceptions and attitude towards student debt. Section B includes questions on student credit management policies implemented by the university on outstanding student fees. Section C comprises questions regarding attitudes and perceptions towards personal financial management. Section D comprises questions on the demographic profile of the participants.

Based on the above information, a pilot study was conducted prior to the actual study to develop, adapt, or check the feasibility of techniques and determine the reliability of measures used in the study.

1.13 DATA ANALYSIS

Analysing the data consists of examining the database to address the research questions or hypotheses (Creswell & Plano Clark, 2007:131). In order to reach the research objectives of addressing research questions for quantitative research, the (n=1 382) collected questionnaires

were submitted for statistical analysis to a statistician. The collected questionnaires were screened before the data was captured on a Microsoft Excel computer package. The Excel document was then imported into the Statistical Packages for the Social Sciences (SPSS) where it was coded in preparation for data analysis. The SPSS, version 23.0 for Windows, was used to analyse the data on frequency distributions, exploratory factor analysis, descriptive statistics, correlation analysis, regression analysis and finally analysis of means (ANOVA). Statistical technique ANOVA was used in the study since there are more than two independent groups that need to be compared on a single quantitative measure score. Specifically, it tests whether the groups have different average scores (Maree, 2007:229). For analysing qualitative research, data was coded, dividing text into small units (themes). The qualitative data comprised of relevant published credit management policy and financial statements documents collected from five selected universities.

1.14 MEASUREMENTS TO ENSURE TRUSTWORTHINESS (RELIABILITY AND VALIDITY)

The reliability and validity is important in order to replicate the study or to use the findings for future research. The quantitative and qualitative studies that are provided are based on empirical and theoretical findings. The statistical information regarding outstanding student accounts receivable was obtained from the financial reports (2010 to 2015). Reliability refers to the degree of internal consistency of a measuring instrument. In this research, reliability was established through the pilot study, which was conducted at one of the universities.

In order to arrive at a measure of reliability during the study, information derived from data collection techniques and instruments was used to the best of their current state of art. It determines whether the tool that is used in research provides the same information if used by different people, under the same conditions and at different times (Goddard & Melville, 2007:41).

Validity, on the other hand, is the degree to which findings of a research study present a true and accurate picture of what is claimed to be described. Thakhathi (2001:85) defines validity as the correspondence between the research and real world. Validity was utilised to ensure that the data include everything it should and does not include anything it should not include. Furthermore, Cronbach's alpha coefficient was used to determine the internal reliability of the students' questionnaire.

1.15 ETHICAL PROCEDURES

Ethical considerations are of the utmost importance because people are involved. As a result, the issues of confidentiality and informed consent are inherent. A letter was written to each university under the study to request permission and approval to conduct research. Since each university has a research ethics committee, an ethical clearance certificate was obtained from each selected university. The identity of each selected university is withheld for confidentiality.

The right to non-participation: respondents were not coerced into participating in the research. Anonymity and confidentiality of individual respondents was adhered to. Confidentiality of financial data and other policy documents is of paramount importance. Plagiarism principles and acknowledgment of other researchers' work was respected. The study maintains research integrity by avoiding misinterpretation, omission of pertinent research data and treating respondents fairly (Leedy & Ormrod, 2005:113).

1.16 CHAPTER CLASSIFICATION

Chapter 1: An introduction, background and scope of the study was provided. The chapter highlighted the problem statement and research objectives. In addition, an outline of the research methodology, conceptual framework, data analysis, ethics as well as validity and reliability within the study was highlighted. The structure of the study was described.

Chapter 2: This chapter provides a critical literature review on concepts, theories and frameworks leading to a model and research questions. The chapter reflects on an extensive review of the literature related to the theoretical framework. Topical issues related to credit management and the landscape of higher education in South Africa are covered in this chapter.

Chapter 3: The chapter focused on the literature review of student debt at South African higher education institutions (Section A of the questionnaire). Furthermore, reviews of the literature on the cost of university in South Africa; the role of student politics; free education; missing middle and affordability of higher education are covered.

Chapter 4: This chapter is devoted to the analysis of the literature focusing on credit management (Section B of the questionnaire), including credit management policy and the implementation of credit management policy at South African universities, reflecting on the unique challenges and the significance of student accounts receivable.

Chapter 5: The chapter deliberates on the literature related to personal financial management (Section C of the questionnaire). The chapter focused on how personal financial management plays a pivotal role in financing higher education. This chapter reviews the existing literature on five topics: the student personal financial management; financial life cycle theory; personal saving in South Africa; human capital theory, South African household spending towards education; and entitlement culture.

Chapter 6: The design and method of research used in the study is covered in this chapter; highlighting data collection, data analysis, reliability of the data and validity of the findings. The research paradigms and the rationale of the research approach and the choice of methodology is outlined.

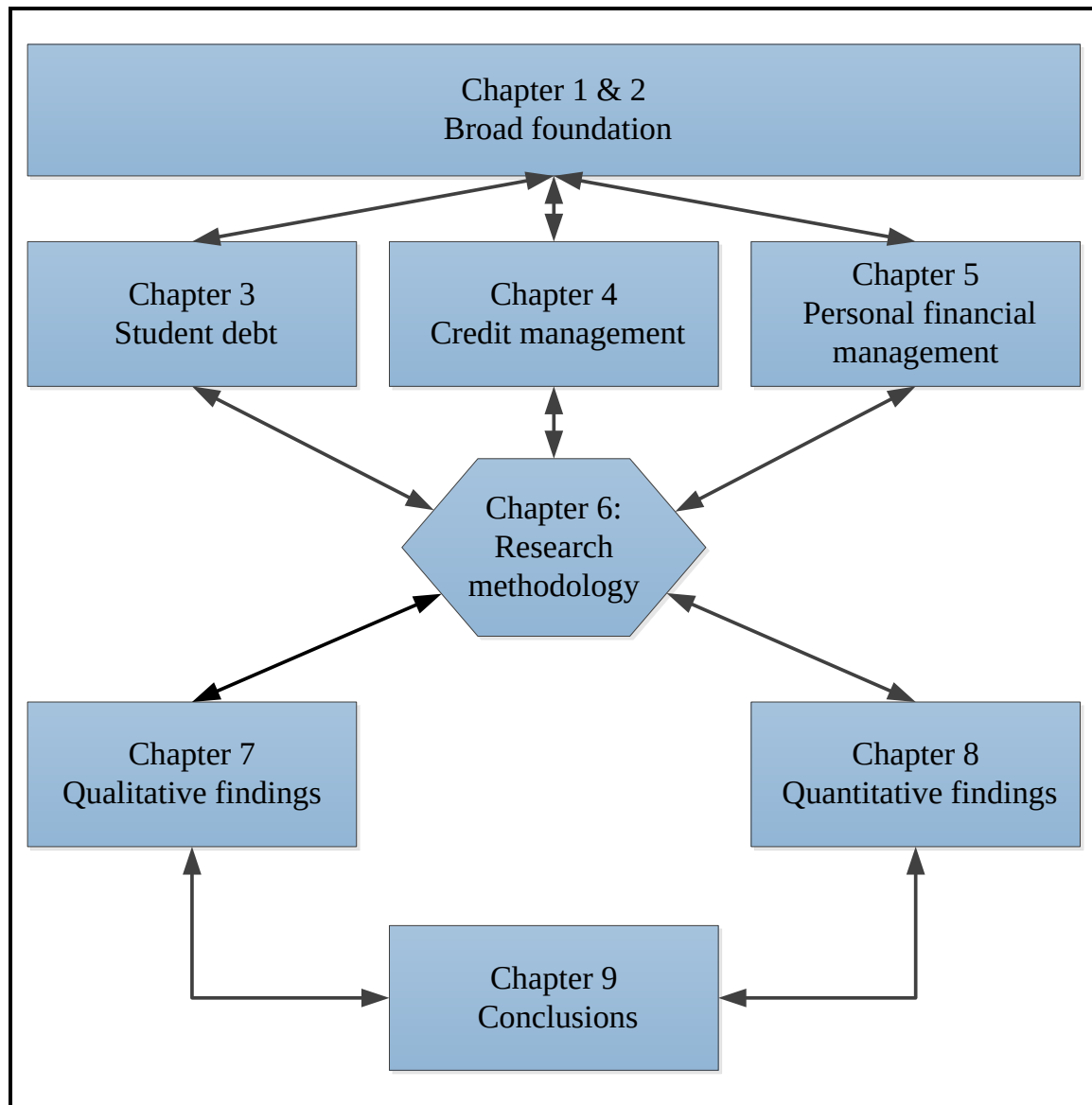
Chapter 7: The chapter provides a presentation of empirical qualitative findings and data analysis. This chapter answers the underlying research questions that are fundamental to this study. The qualitative findings from document analysis, which form an integral part of the study, consist of published statements from the universities' official websites regarding student accounts management practices, audited financial reports, and financial agreements between the management and the SRC.

Chapter 8: The chapter presents empirical findings and data analysis of the quantitative research. Consequently, this chapter focuses on answering the underlying research questions that are fundamental to this study.

Chapter 9: This final chapter presents conclusions to each of the aspects that were examined, based on the objectives of the study. The chapter ascertains whether the research objectives have been attained. Furthermore, the chapter recommends strategies that may be employed in order to ensure that the implementation of student credit management is enhanced at South African universities, in line with findings emanating from this study. Finally, the chapter acknowledges the research limitations of the study and the recommendations encapsulate some suggestions for further research.

The framework of the chapters is summarised in Figure 1.3 below:

Figure 1.3: Framework of chapters



CHAPTER 2

CONCEPTUAL FRAMEWORK AND BACKGROUND

2.1 INTRODUCTION

The aim of this chapter is to address the first secondary research objective (as set in chapter 1, refer page 9), to design a conceptual (theoretical) framework wherein the study can be executed. The chapter will engage in topical issues related to financing and the landscape of higher education in South Africa. The main theoretical support is derived from (1) institutional theory, (2) portfolio theory of accounts receivable, including credit management policy and working capital management, and (3) deprivation theory. Credit management will discuss accounts receivable management practices. Concepts on working capital management discusses the ratio between short-term capital and long-term capital changes and the profitability risks. Institutional theory explains valuable procedures for investigating organisation-environment associations with an emphasis on the social rules, expectations, norms and values as the sources of pressure on organisations. Portfolio theory of accounts receivable describes how the organisation's credit management policy should contribute to its financial sustainability by value maximisation. Deprivation theory, discusses the comparisons between what people want and what they have with what they expected to have. Furthermore, the chapter discusses the landscape and funding of South African higher education. The chapter concludes with a summary of key issues discussed and the research gap.

2.2 THEORETICAL FRAMEWORK

By definition, theory must have four basic criteria: conceptual definitions, domain limitations, relationship building and predictions (Wacker, 1998). According to Wacker (1998), theory construction is significant because it affords a framework for analysis, facilitates the efficient expansion of the field and is needed for the applicability to practical real world problems. In addition, a theory is a formal, testable explanation of some events that includes explanations of how things relate to one another. A theory can be built through a process of reviewing previous studies of similar studies. On the other hand, a grounded theory is a technique of producing a new theory grounded in the field but also set in the context of an existing theory (McGhee, Marland & Atkinson, 2007). Evaluation of theory is the practical application that assists in predicting and investigating relationships between events. According to Ritchie, Lewis, Nicholls and Ormston (2013), a theoretical framework directs research, determining what variables to

measure and what statistical relationships to look for in the context of the problems under study. In the next section, the significant theories relevant to this study will be discussed.

2.2.1 Institutional theory

Institutional theory became a popular and influential description for both individual and organisational action (Dacin, Goodstein & Scott, 2002). The theories of the institutional theory approach provide valuable procedures for investigating organisation-environment associations with an emphasis on the social rules, expectations, norms and values as the sources of pressure on organisations. According to Tolbert and Zucker (1999), institutional theory is premised on the assumption that individuals are assumed to accept and follow social norms unquestioningly, without any real reflection or behavioural resistance, based on their own particular, personal interests. The procedure of social influence processes, such as simulated or normatively based conformity, might alleviate or limit independent decision-making. A study by Powell and Colyvas (2008) supplements the theory by signifying that institutions are sustained, altered and extinguished, as individuals in social situations enact them. It is worth noting that institutional forces shape individual interests and desires, framing the possibilities for action and influencing whether behaviour results in persistence or change.

On the other hand Dacin, Goodstein and Scott (2002) provide a theoretical assumption that institutions change over time, are not uniformly taken for granted, have effects that are particularistic and are challenged as well as hotly contested. Thus, although institutions serve both to drive change and to shape the nature of change across levels and contexts, they change in character and strength over time. Dacin, Goodstein and Scott (2002) assert that pressures for deinstitutionalisation, whether they are primarily functional, political, or social in nature, will not automatically lead to a breakdown in institutional norms. These pressures are interpreted, given meaning and responded to by actors within organisations. As this process diffuses throughout an organisation or among organisations in a given field, new norms and practices take on a greater degree of legitimacy and in turn, become institutionalised.

At this stage, new and existing organisations will adopt the operational method even if the arrangement does not improve efficiency. This theory guides the management structure variable. There are, however, some essential features of organisational environments and activities not fully addressed by the institutional theory, which makes the approach problematic for fully understanding credit reference bureaus and their environment: the organisation being dependent on external resources and the organisation's ability to adapt to or even change its environment

(Scott, 2005). Furthermore, Scott (2005) summarises institutional theory as considering the processes by which structures, including schemes, rules, norms and routines, become established as authoritative guidelines for social behaviour. Consequently, it enquires into how these elements are created, diffused, accepted and modified over space and time; and how they fall into deterioration and neglect.

The first secondary research question asked: What are the attitudes and perceptions of students towards student debt at South African universities? The institutional theory forms the basis for Chapter 3, which is devoted to student debt at South African universities.

2.2.2 Portfolio theory of accounts receivable

Accounts receivable risk management is an organised method of managing uncertainties through risk assessment, developing policies to manage it, and alleviation of risk using managerial resources (Gakure, Ngugi, Ndwiga & Waithaka, 2012). Namusonge and Sakwa (2016) propose that accounts receivable portfolio risk assessment encompasses the identifying delinquent customers, monitoring and control of accounts receivable in order to enhance optimal cash flow. Salek (2005) confirms that a well-managed portfolio of accounts receivable can enhance cash flow and improve working capital.

An organisation's credit management policy should contribute to its financial sustainability by value maximisation. The enterprise value maximisation strategy is executed with a focus on risk and uncertainty (Michalski, 2007). Portfolio theory of accounts receivable has captured the interest of a wide range of scholars. Current assets, among them accounts receivables, could be viewed in the portfolio context as presented by Michalski (2008) and Wu, Olson and Lou (2014).

Michalski (2007) proposes that an increase in the level of accounts receivables in a firm increases both net working capital and the costs of holding and managing accounts receivables. The proposition provides a robust theory, which depicts that both of these decrease the value of the firm, but a liberal policy in accounts receivable coupled with the portfolio management approach could increase its value. Remarkably, Michalski (2007) emphasises that models need reconstruction in order to make them suitable to firms that want to maximise their value. Hence, it is important for universities to adapt and define their credit management policies to be relevant and suitable for their environment.

Michalski (2007) applies portfolio theory in making decisions about selecting which customers should be given trade credit. The researcher maintains that it is possible that an organisation can

sell on trade credit terms to some customers, previously rejected because of too great an operational risk, resulting in increased firm value. Notably, this extension of trade credit is possible only if an organisation has purchasers from various branches and if these branches have different levels of operating risk. The key to success for an organisation is to perform portfolio analysis with the result of a varied portfolio of customers with a range of managed levels of operating risk. It is assumed that if customers' payment habits are correlated with the payment habits of the remaining groups, what was formerly impossible could become possible and may even turn profitable.

The second secondary research question asked: How effective is the implementation of credit management policies at South African universities? The portfolio theory of accounts receivable forms the basis for Chapter 4, which explores the concept of credit management in the context of higher education. The application of the portfolio theory of accounts receivable requires exploring how to manage, apply and measure accounts receivable management and working capital.

2.2.2.1 Credit (accounts receivable) management

Moti, Masinde, Mugenda and Sindani (2012) describe credit management as the procedures and practices an organisation implements in collecting payments from their customers. Businesses and organisations sell and offer goods and services on credit rather than requiring immediate cash payment. Such credit transactions generate accounts receivable. Mian and Smith (1992) discuss the accounts receivable management policy principles by providing a unified framework for analysing a policy choice. How to manage and apply responsibilities for accounts receivable. The responsibilities for various aspects of credit administration processes must be assigned: (1) credit risk of potential accounts receivable must be assessed, (2) the credit-granting decision (including credit terms) must be made, (3) the receivable must be financed until maturity, (4) the receivable must be collected and (5) the default risk must be borne. The authors describe that various credit management policies are simply alternate assignments of these functional responsibilities.

2.2.2.2 Working capital management

Working capital management, which deals with the management of current assets and current liabilities is very important in corporate finance because it directly affects the liquidity and profitability of the organisation (Christopher & Kamalavalli, 2009; Dash & Ravipati, 2009). Excessive levels of current assets can easily result in an organisation realising a substandard

return on investment (Mathuva, 2015). Lovemore and Brummer (2003) formulated three techniques on working capital management. Only one of these techniques has been chosen to measure accounts receivable management in this study, which states that if the ratio between short-term capital and long-term capital changes, profitability and risk also change. This is because it is believed that total capital of an organisation is invested in both current and non-current assets, with long-term invested in non-current assets and a portion of both short-term and long-term capital invested in current assets. This gives an organisation a chance to choose between the conservative-, moderate- and aggressive policy of working capital management.

Mathuva (2015) explains the difference between these policies is an organisation that increases investment in working capital management decreases its profitability as well as risk; because of a higher liquidity ratio, this approach is called the conservative investment policy. The opposite will be achieved on an aggressive investment policy, which will be achieved with a decrease in working capital management and an increase in profitability and risk as a result of lower liquidity ratio.

Based on Lovemore and Brummer (2003), this study will determine the consistency of the theory and implement it in relation to the study to determine accuracy. Among those contributing factors is the extent of the net working capital and the elements shaping it, such as the level of cash tied up in accounts receivable, inventories, the early settlement of accounts payable and operational cash balances (Michalski, 2014).

Michalski (2012) devoted his research to demonstrating that the change in the level of accounts receivables in an organisation increases net working capital levels and influences costs of holding and managing accounts receivable. He further illustrates by providing empirical data from Polish firms, which shows short term accounts receivable (STAR)/ASSETS relation growth that inform about more flexible accounts receivable policy choice. Similarly, STAR/CA relation growth confirms more flexible accounts receivable policy choice. The same way STAR/EBIT relation growth means more flexible choices in accounts receivable policy. This empirical data suggests that for Polish managing teams, risk aversion has a stronger influence on current assets investment policy than pure economic indicators.

Ngugi, Gakure and Gekara (2017) explored the effects of organisation size on accounts receivables management in the hotel industry in Kenya. Based on the findings, the study revealed that size of the organisation had a positive effect on accounts receivable management in the hotel industry in Kenya. It can be concluded that the larger the hotel the higher the accounts

receivables to be managed, hence the need to have strong management structures and clear policies in place. The study reports that size of the organisation is statistically significant in explaining accounts receivables in the hotel industry in Kenya. Furthermore, based on the empirical findings, the study recommends that hotel management should ensure that there are standardised and written manuals with the policies, regarding trade credit and its management. It is important that credit management policies should be communicated with relevant stakeholders to ensure that they are understandable and implemented.

2.2.3 Deprivation theory

The relative deprivation theory of justice, which was developed by Davis (1959) and later discussed by Runciman (1966), is based on comparisons between what people want and have and what they expected to have. Thus, the larger the overlap between expectation and outcome, the greater the perceived fairness. Because of the payment of tuition fees, students' expectations of their university experiences could change, resulting in greater levels of perceived unfairness in instances of disparity between such expectations and the realities of their experiences. Indeed, Jones (2010) predicts that the increase in tuition fees would be attached to additional increases in student expectations, with students demanding better value for money in terms of quality and services and complaining if these expectations are not met or if resources are not focused towards the areas they regard as highly important. As the actual outcomes (in terms of quality of education and services) are likely to remain the same for all students regardless of tuition fees being paid, the gap between expectations and consequences is likely to result in greater levels of perceived injustice for those students paying higher fees.

The study by Savolainen, Paananen, Merikukka, Aaltonen and Gissler (2013) provides an alternative approach; they examined hypotheses resulting from a social selection viewpoint, which treats intergenerational continuity in antisocial propensity as the primary source of socioeconomic differences in criminal activity. Under this theory, individual characteristics of the parents influence their personal socioeconomic attainment as well as the behavioural characteristics they pass on to their children. Some of these behaviours, such as reasoning ability and hyperactive personality, have a considerable genetic component. This phenomenon is discussed further in Chapter 5 in Section 5.5.

In addition to this, according to the relative deprivation theory, expected outcomes are determined in part by social comparisons between oneself and others. With greater inequality, levels of income and economic status amongst the students in South African universities,

students are likely to be perceived as most unfair by those who are not paying fees. If the proposition by Savolainen *et al.* (2013) holds, it is assumed that students will replicate their parents in behavioural issues. Students' response about whether their parents saved for their education has to be established. In addition, it is important to explore their personal financial management because they will also emulate this behaviour to the next generation. The problem of unpreparedness will thus persist. Maccoby (1992), who suggests that the role of parent as teacher was considerate, acknowledges this. There has been increasing emphasis on the role of emotions and mutual recognition in establishing the meaning of parent-child exchanges.

Research by Letseka and Maile (2008) shows that childhood experiences are related to later social deprivation. They testified that South African university students from poor families study under difficult conditions. Several other factors are important in determining the success of students: children from poor families have limited social mobility; matriculants from poor families are likely to drop out due to financial problems.

The third secondary research question asked: How personal financial management affect student debt and the implementation of student credit management at South African universities? The deprivation theory forms the basis for Chapter 5, which is dedicated to personal financial management in the context of student debt and credit management policy.

2.3 LANDSCAPE OF HIGHER EDUCATION IN SOUTH AFRICA

Since 1994, education in South Africa has undergone several broad reforms. Education of the 21st century has different challenges to that of the 20th century. In the recent history of South Africa, a constant refrain was the problem of access to higher education particularly by black students (Jansen, 2004). According to Higher Education South Africa (HESA), student enrolment has almost doubled since 1994 and the student body is more demographically representative (HESA, 2014).

Stevens and de Vera (2015) indicate that universities have a dilemma with regard to their capabilities to maintain sound, efficient, inclusive and affordable education to the thousands of financially- and culturally-deprived students. Notably, public funding on higher education has been gradually decreasing and chances for captivating non-government revenue continue to be limited, hindering the achievement of the important higher education policy goals articulated in the National Plan on Higher Education (Wangenge-Ouma & Cloete, 2008). In a study by Badat and Sayed (2014), they argue that because of policy, the doors of learning remain firmly shut to the majority of South Africans and there is still a "long walk" to achieve the anticipated freedom

of education. In their study, they maintained that education in South Africa generally fails to enhance the freedom of all. De Villiers (2016) highlights that currently no distinction is made in the financing of higher education in South Africa in accordance to race.

The National Planning Commission (2012) in the National Development Plan (NDP) 2030 outlines three main functions of universities in South Africa. First, universities educate and provide people with high-level skills for the labour market. Secondly, they are the dominant producers of new knowledge, find new applications for existing knowledge and validate knowledge and values through curricula. Thirdly, they provide opportunities for social mobility and strengthen social justice and democracy, thus helping to overcome the inequities inherited from our apartheid past. The Green Paper on Post-School Education and Training (2012) noted that despite the advances made since the advent of democracy, the education system continues to replicate the divisions of the past.

The institutional landscape is still reminiscent of apartheid, with disadvantaged institutions, especially those in rural areas of the former bantustans, still disadvantaged in terms of infrastructure, teaching facilities and staffing. Poorer students have to fit into systems that were designed for students from relatively privileged backgrounds. Opportunities in rural areas are far more limited than those in urban areas are and informal settlements are victims of under-provisioning. At the time of the elections of the first democratic government in 1994 there were 36 higher education institutions comprised of 21 universities and 15 technikons (CHE¹, 2010).

With the publication of the National Plan on Higher Education in 2001, the government started a process of restructuring the higher education system through mergers and incorporations. The restructuring has reduced the number of higher education institutions from 36 to 26 and created two new institutional types: comprehensive universities and universities of technology. Universally, higher education has become increasingly important, not only for individuals but for larger society and government for the sake of economic prosperity as well as for advancement of democracy and social justice.

Today, more than ever before in human history, the wealth – or poverty – of nations depends on the quality of higher education. Those with a larger repertoire of skills and a greater capacity for

¹ CHE: Council on Higher Education

learning can look forward to lifetimes of unprecedented economic fulfillment. But in the coming decades the poorly educated face little better than the dreary prospects of lives of quiet desperation (Gillis, 2000).

The social and economic challenges facing South Africa affect the education system in South Africa because of financial exclusion of poorer students. High quality human capital is developed in high quality education systems, with tertiary education providing the advanced skills that command a premium in today's workplace (World Bank, 2000). The South African government considers education as essential to the country's development strategy. In particular, higher education is again recognised as a key sector in African development (Teferra & Altbach, 2004). President Jacob Zuma appointed the NPC in April 2010. The mandate of the commission is to take a broad, cross-cutting, independent and critical view of South Africa, to help define South Africa's achievements in 20 years and measurements to achieve those objectives. The commission is an advisory body tasked with preparing recommendations for the Cabinet on issues affecting South Africa's long-term development. The commission noted education as a major engine of national economic growth and provider of individual opportunity and prosperity. Indeed, South African universities are crucial institutions in terms of reaching our national development objectives.

In particular, the commission identified that countries with a future orientation generally spend more on education and value it more in communities and households. In fact, such countries continuously invest their financial resources in their human resources through extensive and effective education and skills training. Du Pré (2009) emphasises that increasingly, education and skills of individuals are seen as the key to both their personal quality of life and the broader strengths of their society. Countries that fail to do this, put strain on government social spending because of dependency on the government.

2.3.1 White Paper for Post-School Education and Training

The White Paper for Post-School Education and Training was approved by Cabinet on 20 November 2013. The White Paper was approved after consideration of the Green Paper for Post-School Education and Training in January 2012 as a discussion document. The Green Paper was discussed in various government forums, including Cabinet and the Parliamentary Portfolio Committee on Higher Education and Training. The previous Minister of the Department of Higher Education and Training (DHET) (2013), Dr Nzimande, acknowledged that the Green Paper was also discussed at various conferences and seminars by a wide range of stakeholders,

many of whom submitted comments to the DHET. These stakeholders included educational institutions, Sector Education and Training Authorities (SETAs), employer groupings, trade unions and other organisations and individuals.

The White Paper (2013) dealt frankly and honestly with the many challenges facing the post-school system. The White Paper focuses its attention on the vision for the system and the principles governing that vision, as well as the policies, which will be developed and implemented over the coming years. It represents government's thinking in the area of higher education and training and is in line with the country's key national policy documents including the National Development Plan, the New Growth Path, the Industrial Policy Action Plan and the draft Human Resource Development Strategy for South Africa. According to the previous Minister of the DHET, Dr Nzimande, the aim of the White Paper is to outline a framework that defines the department's focus and priorities and that enables it to shape its strategies and plans for the future. Furthermore, it outlines policy directions to guide the DHET and the institutions for which it is responsible in order to contribute to building a developmental state with a vibrant democracy and a flourishing economy. The White Paper is therefore an important document in the development of the higher education system in South Africa.

The White Paper further states that the DHET policy aims at improving the participation rates in universities from the current 17.3 percent to 25 percent – that is, from just over 937 000 students in 2011 to about 1.6 million enrolments in 2030. As participation increases, universities must simultaneously focus their attention on improving student performance. Improving student access, success and throughput rates is a very serious challenge for the university sector and must become a priority focus for national policy and for the institutions themselves; in particular, improving access and success for those groups whose race, gender or disability status has disadvantaged them previously. An important area of focus with regard to expanding student access and success is the development of the scarce and critical skills needed for South Africa's economic development. Essentially, the White Paper noted that if the post-school system is to serve the country well, there is a need for more places for people to learn, more types of courses and qualifications, more financial support for students and better quality education and training. In addition, education and training must be affordable for potential students.

To this end, the government has significantly increased the funds available for student loans and bursaries, particularly through the NSFAS. Of particular concern is finding ways to assist those students whose parental incomes are too high to qualify for funding from NSFAS, but are too low to qualify for loans from private financial institutions. This group includes the children of

teachers, nurses and police personnel as well as many public servants, clerical workers and skilled manual workers. These young people are likely to have a home environment conducive to studying and parents who encourage them.

2.4 FRAMEWORK OF SOUTH AFRICAN UNIVERSITIES

According to Govender and Rampersad (2016), the importance of transformation in the higher education sector was underscored early on in our democracy. Firstly, consensus in the government of national unity was that higher education was in need of transformation. Furthermore, the White Paper 3 (South Africa, 1997) indicated that “the higher education system must be transformed to redress past inequalities, to serve a new social order, to meet pressing national needs and to respond to new realities and opportunities”. In addition to the 12 goals set out in the White Paper 3, it also deals directly with the issue of equity (for both students and staff) in higher education transformation. Transformation within tertiary education involved amending the size and shape of institutions, defining autonomy and accountability, the nature of higher education, the atmosphere of student demographic circulation, management and governance, status of student politics, models of delivery, the concept of higher education in terms of the association between free trade and public good, programme modifications and the conditions of the academic workplace (Mouton, Louw & Strydom, 2013).

According to the Council for Higher Education (CHE) the higher education system in South Africa is shaped and understood according to many different narratives – the story of higher education globally and the fundamental changes it has undergone, its own particular history and legacy told from many perspectives and the deliberate steering of the system through the application of policy drivers to reach particular goals (CHE, 2016). While the South African higher education system has experienced considerable growth, this growth has not been met with sufficient funding to permit the national goals of higher education to be fully achieved and the prospects of a sustainable increase in funding are negligible. Indeed, recently there has been an unprecedented growth in the number of students enrolled in higher education. Notably, as the numbers have grown, the ability of government to utilise taxpayers’ contributions to fully cover the need has been stretched to breaking point, putting pressure on student fees.

One of the recommendations of the National Commission on Higher Education (NCHE) of 1996 for taking the system forward to achieve greater equity was to ‘massify’ the system; in other words, to grow the numbers radically to achieve a much higher participation rate of the age

cohort, thereby increasing the proportion of previously disadvantaged students as well as delivering on the high-level skills and knowledge necessary for development.

2.4.1 Establishment of universities of technology

In South Africa, the government participation in higher education has regulated higher education policies by making them assume frameworks to manage the competition in the global market place. Globalisation and the strong demand for the establishment of national economies, determines the agenda for social and economic transformation. The current study will explore the policy implications of credit management on student accounts particularly on universities of technology (UoTs), therefore, it is essential to discuss the formation of UoTs in South Africa.

To address the deficiencies in higher education, namely duplication, inefficiencies and fragmentation, the CHE recommended changes in size and shape of higher education through the White Paper 3 (South Africa, 1997), Higher Education Act (1997) and the National Plan for Higher Education NPHE (2001). The CHE formulated the plan to address the global and national challenges by recognising the disproportions and inadequacies in higher education. This implied that the academic landscape needed to be transformed significantly through various measures, such as restructuring and mergers of institutions. A further advance was the Higher Education Qualifications Framework or HEQF (Ministry of Education, 2004), which is an essential part of the NQF and major counterpart to the NPHE. The purpose is that HEQF works within the background of a single, diverse and distinguished higher education system.

Researchers such as Van Wyk and Higgs (2000) and Jansen (2003) have comprehensively examined the development made by Higher Education Institutions (HEIs) in transforming their programmes in accomplishing demands of the country. In fact, mergers are mentioned in the framework of the restructuring of the higher education landscape and in response to the report by the CHE's Shape and Size Task Team. Three types of universities emerged from this restructuring, traditional universities, comprehensive universities and universities of technology (UoTs). Traditional universities referred to the older established universities prior to the higher education restructuring exercise. Comprehensive universities were mostly formations arising out of the merger between technikons and universities. The third type was the re-classification of technikons to become universities of technology. The universities of technology were established, deemed to be established or declared as a university of technology under the Higher Education Act, 1997 (Act No. 101 of 1997).

In this formation, technikons were confined with their history as diploma-offering institutions. They are now reclassified as UoTs and are now expected to perform as universities. This dilemma forced UoTs to assess their mission and goals in line with external environmental forces (Perumal, 2010). The challenge is to find the characteristics and attributes that will make UoTs unique in the higher education landscape, in the context of harnessing the benefits of technology to solve specific problems through partnerships with industry and society. The restructuring of the landscape and the reduction in the number of higher institutions from 36 to 26 through mergers was a widespread undertaking and was complemented by rigorous political deliberation and intervention (CHE, 2016). According to the CHE (2016), three main bases behind the mergers that took place were transformation, efficiency and diversification. The emergence of UoTs has brought a new higher education configuration, which is an interesting phenomenon to study.

Although the problem of student debt is not unique to UoTs, it is empirical to explore the credit management policy frameworks applied on student accounts because they have a direct impact on financial sustainability of universities. This will contribute to devise a model with a set of performance indicators, criteria, effectiveness, attributes and underpinning theoretical constructs to operate as a single system.

2.5 FINANCING HIGHER EDUCATION IN SOUTH AFRICA

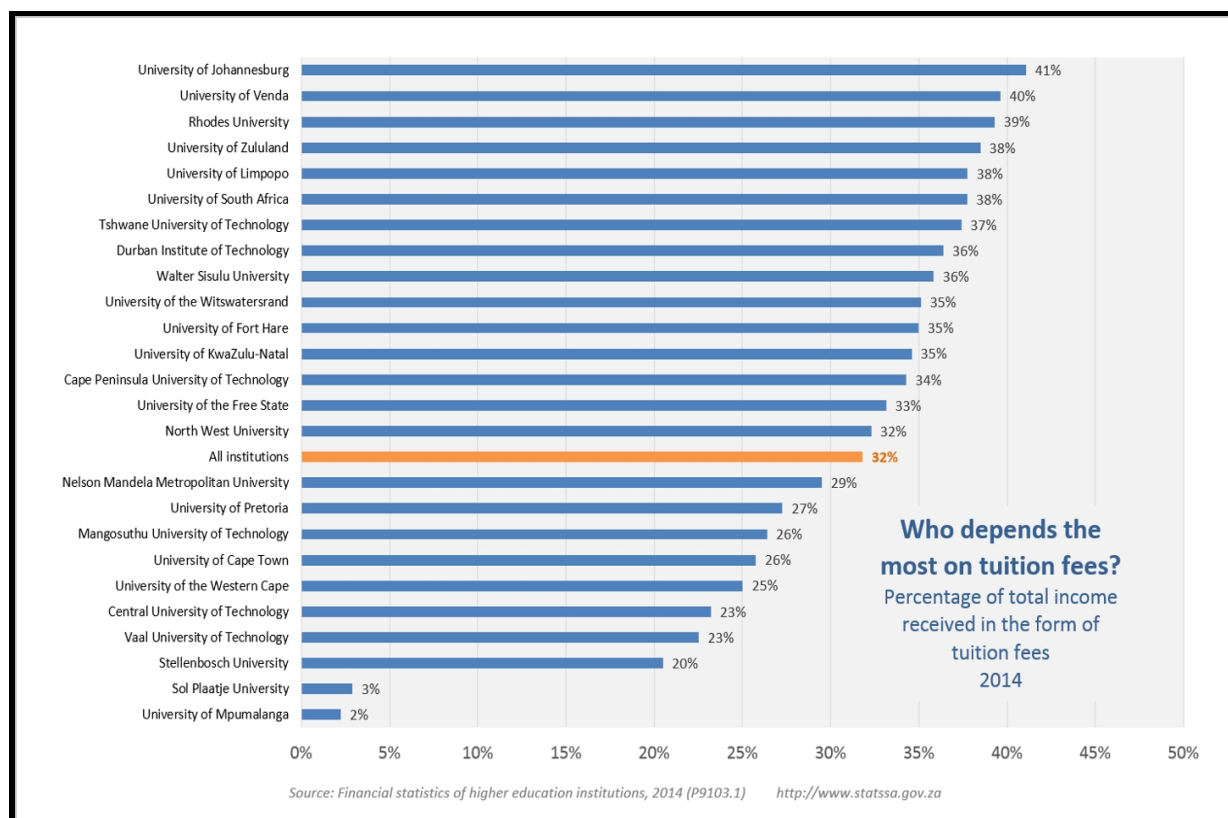
Financing higher education is a key determinant of access to higher education. Financing of universities has received considerable attention during the last two decades, beginning with the recommendations of the NCHE in 1996, through to the publication of the new funding formula in 2003 and its implementation in 2004 (CHE, 2010). South African universities are funded mainly in three ways: by the state, by student fees and by ‘third stream’ income, including entrepreneurial activities, donor funding and research activities. Overall, the proportion of income derived from state funding fell and the proportion derived from student fees increased for both historically advantaged universities (HAUs) and historically disadvantaged universities (HDUs) from the late 1980s to the early 2000s (CHE, 2010).

Much of the funding is dependent on the government. However, government funding of higher education in South Africa has not been suitable for universities to fulfil their mandates successfully. Several university funding pointers indicate that in the recent past, South African government funding for universities has diminished gradually, prompting tuition fee hikes to capture increased revenue. In order to be financially sustainable, universities rely mainly on

tuition and residence fees from students, as well as income from donors, research and other activities. Recently, higher education institutions in South Africa are being faced with decreasing state funding, increasing student debt and pressure to use their financial resources more efficiently (CHE, 2010: 6). Students entering university do so from positions of extreme inequality, most obviously in schooling, but also in terms of diverse socioeconomic and cultural backgrounds. The intersection between national and institutional policies gives rise to strategies, administrative rules and practices, which comprehensively influence students' academic lives. The relationship between a decrease in state funding and increase in student fees deserves considerable attention.

In South Africa, the impact of lower public spending on higher education as well as the escalating cost of higher education has contributed to the fact that student debt has increased substantially over the years, increasing by 79 percent over the period 2001-2003 (HESA report, 2011). At the same time, student debt was written off by 102 percent from 2000-2003, without taking into account institutions for which no data is available but where large debts could be expected (De Villiers & Steyn, 2006). In 2015, the South African government announced a zero fee increase for higher education institutions. The data by Statistics South Africa (2016) provides an indication of which universities are most dependent on tuition fees and as a result might be most vulnerable to a shortfall. Figure 2.1 provides the data regarding South African university dependency on tuition fees.

Figure 2.1: Percentage of total tuition fees income received



Source: Stats SA: Financial statistics of higher education institutions (2014)

In 2014, tuition fees contributed 32 percent to the income of South Africa's 26 universities, according to data from Statistics South Africa (2015), SA's latest financial statistics of higher education institutions report. South Africa's higher education institutions recorded a total income of R60,6 billion in the 2014 financial year. Money from government, in the form of grants, contributed R25,3 billion (42%), followed by other receipts at R35,2 billion (58%). Other receipts include tuition fees (contributing R19,3 billion or 32% to total income), research income, gifts, donations and other sources of income. Taxes contributed R51 million. It is also evident that the level of dependence on core government funding by individual universities varies.

The White Paper for Post-School Education and Training (2013) makes an assurance to implement "free education" gradually for the poor students in South Africa as resources become accessible. White Paper 3 also noticeably states that the direct cost to students should be proportional with ability to pay. In addition, DHET (2015) indicated that financial need should not be an obstacle to access and success in higher education. It is necessary to observe the determination of the department by analysing the funding towards education. Table 2.1 below

(current medium-term) indicates that the budget allocation to funding of universities has been on an upward trend, from R11 billion in 2006 to R26 billion in 2013. Funding for 2016/17 is currently at R39.5 billion.

Table 2.1: University funding allocation, 2016/17-2018/19

Medium-term expenditure estimates			
	2016/17	2017/18	2018/19
University funding	R39 531 603	R41 944 120	R44 319 940

Source: DHET (2016): Estimates of Expenditure 2016/17 and 2017/18

Though the table above indicates an increase in university funding, it is important to notice that government expenditure on higher education has been decreasing considerably in both real and student per capita terms and as a percentage of the government budget and of the GDP (Cele & Goodman, 2016). According to a study by the South African Institute of Race Relations (SAIRR, 2015), currently, levels of public spending on South African universities is at around 0.8 percent of GDP, which is low by global standards. According to the study, a more appropriate number would be 2.5 percent of GDP.

2.5.1 Graduate tax

Student loans and historical debt are constantly frustrating students at South African universities, while universities have decreased capital funding. In light of recent policy debate concerning higher education financing in South Africa, some economists and analysts have proposed the introduction of graduate tax as a form of funding higher education. Graduate tax implies that all graduates pay a small addition to income tax back to the university during their working lives. It has been a form of financing for many years; for example, Glennerster, Merrett and Wilson (1968) suggested that graduates should allocate a portion of their incomes for part or whole of their working lives, as a kind of repayment for the cost of their education. According to their proposition, the repayment should be subjected to income. They have advanced their argument for such a tax. First, is the issue of equity, noting that in the United Kingdom (UK) higher education is now financed as a social responsibility. Secondly, graduate tax would ease the burden of constraint on educational expenditure. If graduate tax is implemented, it is argued, revenue would increase as the scheme expands. There would be less financial constraint on the growth of university education. Lastly, Glennerster *et al.* (1968) argue on efficiency and suggest that students in many parts of the world, not only UK, have to work long hours in order to raise

money to finance their education. This implies that if students earned wages and had all their fees paid for them, the inequitable effect on students would be removed.

Palacios (2003) provided a contrast between graduate tax and human capital contracts, which is the basis for graduate tax and income-contingent loans. By way of illustration, human capital contract (HCC) is a contract in which a student commits part of future earnings for a fixed term in exchange for capital for financing education. The main restrictions essential to design HCCs are the percentage of income and the repayment term. Each student pays according to capacity and is equitable from a lifelong perspective. Therefore, the HCC is lowering the obligation risk of lifelong earnings. HCCs avoid financial distress for the student and decrease the probability of default because it is related to income. With a graduate tax, according to Palacios (2003) each student would pay a percentage of income throughout their productive life. Table 2.2 provides a comparison between graduate tax and HCCs.

Table 2.2: Contrast between graduate tax and HCCs

Characteristic	Graduate tax	Human capital contract
Percentage of income determined by	Government	Investors, presumably different for each student
Student join	Involuntarily	Voluntary
Term of the contract	Whole productive life	Fixed period of time

Source: Palacios (2003)

Albrecht and Ziderman (1992) reasoned that the term graduate tax is slightly misleading since it legitimately relates to individuals who attend higher education but fail to graduate (drop out). They maintained that it is not applicable to all graduates since percentage tax varies according to income level; graduates with low incomes are exempt for tax. Thus, the government assumes the risk of human capital investment, which is spread over the student cohort, high-earning graduates will prove to have been a good investment, relative to those with low incomes or unemployed. Johnstone (2005) submits that graduate tax shifts a portion of the cost of financing higher education from the government or taxpayers to students, although to be paid only after the student has graduated and is earning an income. Remarkably, the financial success of the graduate tax would be measured by the discounted present value of this stream of expected future income surtax payments. Thus, the practical effect on participating students of the graduate tax is anticipated practically.

Graduate tax and HCC affords opportunities for increasing student contributions to the cost of higher education. If they can be suitably reformed to the policy choices they can constitute productive, though limited, instruments for cost recovery.

2.5.2 Tuition fee models

Tuition fee generally refers to a mandatory charge levied upon all students covering some portion of the general underlying costs of instruction (Marcucci & Johnstone, 2007). Student fees are essentially education prices of the university. In economical markets, prices are determined by supply and demand. In South Africa, tuition fees are institutionally determined; therefore, differential pricing has led to considerable variations between universities (Wangenge-Ouma & Cloete, 2008). HESA (2008) provided several models, which can be used toward the contribution of tuition fees. First, the flat rate or uniform tuition fee model is regarded as a typical model where nationally students make a flat rate contribution to the tuition fees. The flat tuition fees could apply to all study programmes or similar programmes across the university system. Secondly, closely related to the uniform fee model is the fixed fee model, which assures tuition fees are fixed for the entire period of study.

Thirdly, is the differentiated or variable fee model, where fees are different for different programmes of study or for different universities. In this model, universities prescribe their own fees, at times leading to substantial variations. Fourthly, a redistributive tuition fee model denotes to varying pricing of tuition according to the available disposable income of the prospective student or the student's family. In such a model, once student tuition fees are set, students from low-income families only pay what they can afford while wealthier students pay the entire amount. In this system, financial aid would be used to retain the price of tuition moderately constant and at a level of affordability. In such a model, tuition fee increases and the number of students that can be accommodated would be related to the providing of financial aid. However, a redistributive tuition fee system is difficult to implement directly since it needs means testing for all students and their families. This would be very expensive and time consuming to administer and open to corruption. Lastly, a free market tuition fee model, where fees are set subject to the market demand for study programmes, the cost of offering these programmes and the possible earnings capacity of programme graduates. Student fees are allowed to differ by subject since a free market depends on price determination by competitive pressures. South African higher education uses several combinations of the differentiated tuition fee models.

2.5.3 National Student Financial Aid Scheme (NSFAS)

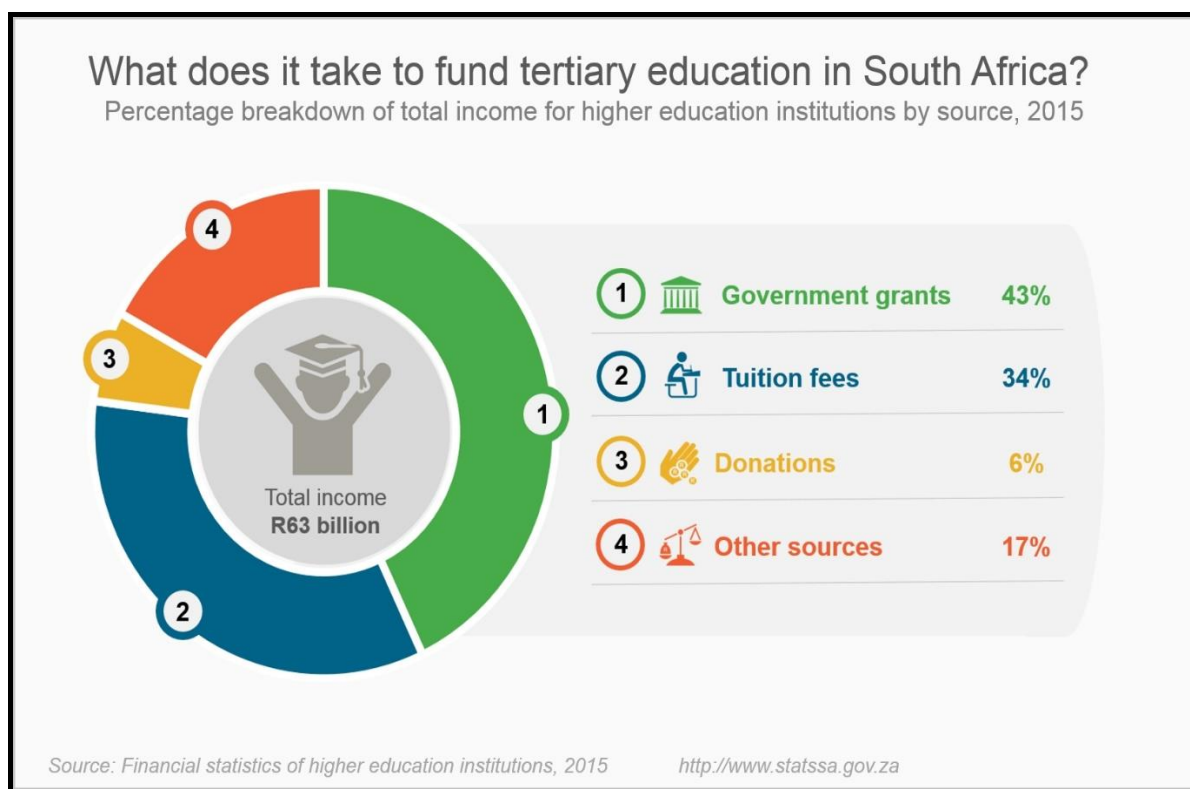
The NSFAS is a hybrid of income contingent loan and bursary scheme (HESA, 2008). It offers students who qualify loans of which up to 40 percent can be adapted to a bursary, depending on the student's academic results. Students start repaying loans when they are employed and earning above a threshold amount (CHE, 2016). The purpose of NSFAS is to influence inequality of South Africa's student populations by providing a sustainable financial aid system, which enables academically able students to meet their developmental needs. The NSFAS functions on the basic norm that loan recipients only start repayments once they are in employment and earn a certain level of income. The NSFAS allocates funding to universities based on an annual allocation assessment and formula.

The allocation formula is informed by the number of disadvantaged students, demographic profile and the average full cost of study at the respective institutions (Wangenge-Ouma, 2010). However, the fundamental difficulty NSFAS has been encountering since inception is that the funds available for awards are insufficient for generating sensible equality of opportunity, despite constant growth in NSFAS funding over the last twenty years (CHE, 2016). According to CHE (2016), current estimations are that NSFAS has less than half of the funds it requires to overcome the demand for financial aid from qualifying applicants. Notably, despite achievements in accomplishing equity through NSFAS, student debt accumulated from R669.1 million in 2001 to more than R1 196.4 million in 2003 (Ntshoe & De Villiers, 2008).

2.6 HOW IMPORTANT ARE THE STUDENT FEES FOR SOUTH AFRICAN UNIVERSITIES

As previously mentioned in Section 2.5.2 above, student fees are education prices of the university. Because of recent protests about student fees at higher education institutions in South Africa, Statistics South Africa (2016) unpacks the revenue mix for the country's 20 universities and six universities of technology. South African universities depend generally on government grants and tuitions fees for income, according to data from Statistics South Africa's (2016) latest financial statistics of Higher Education Institutions Report (2015). Of the R63 billion received as income by universities in 2015, 43 percent was sourced from government, 34 percent from tuition fees, 6 percent from donations and the remaining 17 percent from other sources, such as investments. Figure 2.2 illustrates the percentage breakdown of total income for South African universities.

Figure 2.2: Percentage of total national income for higher education institutions by source



Source: Stats SA: Financial statistics of higher education institutions (2015)

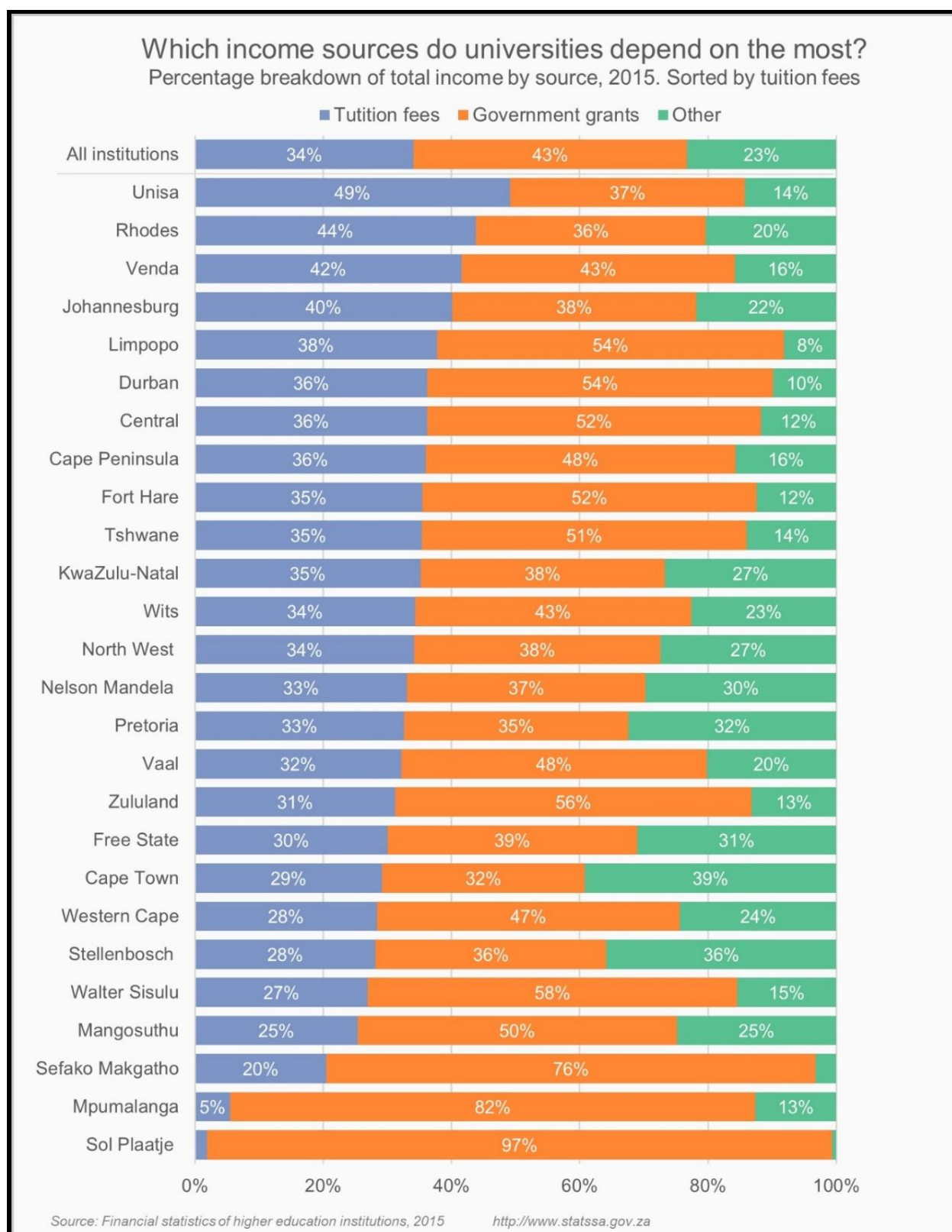
From the figure above, it is evident that if tuition fees are ever done away with completely, both government and universities will have the challenging task of sourcing another way to finance this amount. This will result in many universities having financial sustainability challenges. Alternatively, tough decisions on expenditure would need to be made, with increased efficiency the key to reducing costs.

2.6.1 Total income sources

Which universities are affected most if there is any change to the tuition fee structure? The graph below indicates that Unisa, Rhodes University and the University of Venda are the top three universities that depend on tuition fees the most in percentage terms. In fact, almost half of Unisa's financial resources are reliant on this source of income. The graph below indicates that each university has its own unique revenue mix. This is a significant fact to deliberate if the country decides to change the way tertiary education is financed. Any alterations to the funding model would have fundamental different responses based on the particular financial make-up of each university. Figure 2.3, which provides percentage breakdowns of total income per

university, illustrates that the universities did well in generating third-stream income, but clearly used student fees to compensate for the drop in government subsidies.

Figure 2.3: Percentage total income by source, sorted by institution



Source: Stats SA: Financial statistics of higher education institutions (2015)

The share of tuition fee income in the total income of universities has risen significantly over the years, from 24 percent in 2009 to 34 percent in 2015 (DoE, 2015). This is evident that tuition fees are the rapidly growing source of income for universities because they have grown on average by 10 percent over six years. It is also empirical to have cognitive consideration on the UoTs exclusively because they are the foundation of this study. On average, the UoTs source 33.33 percent of income from tuition fees, 50.5 percent from government grants while 16.17 percent is from other sources. This implies that tuition fees significantly contribute towards the income of UoTs; hence it has an impact on the financial sustainability of universities.

2.6.2 Cost sharing

Cost sharing is founded on the basis that higher education is both a public and private advantage; therefore, the cost should be shared between the government and the recipient. Generally, cost sharing denotes the sharing of higher education costs by numerous participants in society, for example the state, industry, students and their parents (HESA, 2008).

Johnstone (2006) illustrates that cost sharing be in a form of tuition fees, introduced either where they did not previously exist or rapidly increased where they already do. As the government funding for higher education has declined in real terms, universities, adhering to autonomous rights to prescribe student fees, have gradually increased student fee income as a proportion of their revenue. One of the most important reasons for cost sharing in higher education is that education accrues enormous benefits to both society and the individual consumers (HESA, 2008). The NDP 2030 stresses the value of higher education in South Africa. Equally, recent ministerial and presidential statements on higher education funding re-emphasise the vanguard role of higher education in South Africa.

2.7 SUMMARY AND RESEARCH GAP

This chapter has reached the first secondary objective by designing a conceptual (theoretical) framework through the lens of institutional theory, portfolio theory of accounts receivable and deprivation theory. Furthermore, this chapter reviewed the literature on South African higher education framework linking it to the funding system. The organisation of the chapter covered an introduction, theoretical literature and empirical literature that illustrates the particular importance of tuition fees as a source of revenue.

The overall assessment of empirical debates and studies aimed at illustrating the challenges of South African universities particularly towards funding. As such, they have made important

contributions to our understanding of increasing tuition fees and decreasing state funding. Despite these achievements, there was scant literature on how the universities will recover the persistent outstanding student debt. As such, the literature review helped to fill some of the literature gaps that the objectives of this study strive to fill. Because of increasing dependence on tuition fees, South African universities generally have too much money tied up in student accounts receivables. This burdens the universities with higher costs of accounts receivable and additional costs such as bad debts. Student tuition collection has become a critical resource issue in South African universities. To be financially sustainable, universities must reform credit management policies to ensure that the conversion of student accounts receivable is turned into cash. The aim of this study is to explore the credit management policies at selected South African universities, thereby identifying the best practice. Having reflected these issues in the current chapter, the succeeding chapter moves to deliberate on the literature concerning student debt.

CHAPTER 3

STUDENT DEBT

3.1 INTRODUCTION

The aim of this chapter is to address the second secondary research objective (as set in chapter 1, page 9), a literature review to explore the concept of student debt in the context of higher education. The preceding chapter formulated the foundation for this chapter by highlighting the financing of South African universities including the importance of student fees. Subsequently, student fees lead to student debt as a result of non-payment. This chapter is grounded on institutional theory which provide valuable procedures for investigating organisation-environment associations with an emphasis on the social rules, expectations, norms and values as the sources of pressure on organisations. This chapter reviews the existing literature on five topics: student debt at South African universities; cost of university education in South Africa; the role of student politics; free education in South Africa; missing middle and making higher education affordable. Reviews of the literature helped to identify similar studies on these topics, which provided evidence of potential research gaps ripe for further study. The chapter concludes with a summary of the issues explored and the research gap.

As mentioned before, the purpose of this chapter is to describe the student debt at South African universities and the impact on students and the universities' financial sustainability in an attempt to generate a desired body of knowledge regarding the research problem. Student debt is yet another funding restriction facing many of South Africa's public universities (HESA, 2008). In South Africa, tertiary institutions have a high student debt, running into millions of rand. Even though the student debt has an impact on all universities, some universities are affected significantly because tuition fees form a significant part of the income of universities. Steyn and De Villiers (2006) illustrate that the problem of student debt is a major obstacle to the attainment of financial stability by many universities in South Africa. Indeed, South African universities have carried the burden of student debt for decades and universities have implemented different debt recovery methods. The purpose of this study is to establish how effective credit management policies are in reducing the persistent student debt. Credit management, thus, has become a burdensome task for most universities (HESA, 2008). Although universities have developed credit management policies to manage student debt, many are forced, in many instances, to write off student debt (Steyn & De Villiers, 2006).

3.2 COST OF UNIVERSITY EDUCATION IN SOUTH AFRICA

Dissatisfaction with high tuition fees in universities is a global phenomenon. In only the last three years, students have publicly protested against fee increases in Australia, Brazil, Germany, the Netherlands and the United Kingdom (Calitz & Fourie, 2016). Studies by Wangenge-Ouma (2012) and Wangenge-Ouma and Cloete (2008) warn about the rising cost of tuition in South Africa. Calitz and Fourie (2016) conclude that the main reason for the hike in prices over the last two decades is the lack of government funding, the largest source of university revenue. They highlight that between 1996 and 2013, for example, higher education spending as a share of total expenditure by government declined from 4.9 percent to 4.7 percent. To preserve standards, increased tuition fees were the only rational solution for university management, pushing the cost of university education to historically unparalleled levels and triggering students to object. This advocates that high costs of tertiary education have the likelihood of putting students off the university (dropout based on financial exclusion). Calitz and Fourie (2016) echo this in stating that the #FeesMustFall protests of 2015 were indicative of the social dynamics when students protested to escape the cost of the fiscal adjustment caused by the impact on the government budget of the financial crisis and other issues threatening fiscal sustainability.

Murray (2014) investigates the factors affecting graduation and dropout using a competing risks framework, focusing on credit points to graduation as the dependent variable of the analysis. Using a sample of students from the University of KwaZulu-Natal (UKZN) in South Africa, the author suggests that residence and financial aid status are significant determinants for both dropout and graduation. This is consistent with the proposition of Neethling (2015) who laments that students who receive financial aid have lower probabilities of financial exclusion. Evidence by Letseka and Maile (2008) and Letseka (2009) shows that, on average, 70 percent of the families of the university dropouts surveyed were in the category of low economic status. The authors demonstrate that many of the students coming from these families depended on their parents or guardians for financial support to pay their fees and/or supplement what they get from NSFAS to provide for essential living expenses. Furthermore, many of those who dropped out indicated that they worked to augment their meagre financial resources, no doubt adding to their stress levels and distracting them from their studies.

3.3 STUDENT DEBT AT SOUTH AFRICAN UNIVERSITIES

The prospect of tuition fee increases for public sector universities has attracted an enormous amount of attention as governments in all industrialised countries have responded to the

converging pressures of increased demands for higher education and rising costs of competing areas of social spending (Wellen, 2004). A study using a British sample discovered that students' debt levels increased significantly between the second and third year of studies and once students acquired debt, their approaches toward debt became more tolerant (Davies & Lea, 1995). Within the South African university context based on institutional theory, the procedure of social influence processes, such as simulated or normatively based conformity, might alleviate or limit independent decision-making.

The student governance structures comprise mainly student political organisations such as the SRC. Students use these structures to negotiate meaning in social issues of interest to them, to compensate for an absent family or for institutional support on campus. In South Africa, financial exclusions originated in 1998 when a number of historically black institutions were required by commercial banks to produce cash-flow plans showing both their government subsidy income and their private income before extensions could be given to their overdraft facilities (Bunting, 2006). Tuition fees income is explicitly associated with the core business of universities. Because most of the income of the institutions affected is dependent on the tuition fees paid by students, the cash-flow plans had to assume that students with fee debts would settle these before registering.

Inevitably, fewer students than expected were able to pay outstanding fees or make the required advance payments. Those not able to satisfy these financial requirements were refused permission to register and enrolment totals at the historically black institutions dropped sharply because of financial exclusion. According to Bunting (2006), the majority of students affected by financial exclusions were black students from economically disadvantaged backgrounds. The NSFAS was intended to help these students register and remain registered at higher education institutions, but the constant exclusion of many students was a clear indication that the scheme was being funded at inadequate levels.

3.3.1 Attitude towards student debt

A study by Yeboah, Ernest and Gyamfi (2012) demonstrates that student knowledge on tuition fees and user fees is low and students were not aware that they do not pay tuition fees, which are a constitutional provision. The study found that students face inadequate funding in their education and results in psychological distraction, which affects their attention while studying. This means that student debt somehow concerns the students. A study of Baldwin, Gendall and Hoek (1995) examines how the idea of debt to finance tertiary education is perceived by senior

New Zealand secondary school students. A study found that though most students admit the importance of a tertiary education, many have a realistic anxiety of indebtedness and do not admit that a university degree delivers the job security, which would assure debt repayment. Baldwin *et al.* (1995) also cite that neither students' attitudes to incurring debt for tertiary education nor their likelihood of enrolment changed meaningfully following administration of a promotion campaign portraying education as an investment.

Another study in New Zealand by Haultain, Kemp and Chernyshenko (2010) had three sections towards their study. Study 1 employs exploratory factor analysis to investigate the structure of debt attitudes of students in their final year of secondary school, while study 2 uses exploratory factor analysis to investigate debt attitudes of first-year university students. From their results, both studies indicate that contrary to what was assumed in the past, the structure of these attitudes is not unidimensional, but is described by two dimensions: 1) fear of debt, and 2) debt utility. They maintain that these dimensions are uncorrelated; people's fear of debt does not relate to any noticeable degree to whether they think debt is useful or not. Both factors are interactively significant by being relatively fearless of debt and believing debt to be useful in achieving individual goals, predict how much debt a tertiary student is likely to obtain. Fear of debt but not debt utility attitudes are related with whether parents went to university. In Study 3, confirmatory factor analysis indicates the superiority of the two-factor solution for the attitudes to debt of a sub-sample of Study 1 questioned a year later. The two factors have slightly different relationships with other variables. Study 3 also shows that, on average, longitudinally, the students became less debt fearful between the end of secondary school and the end of their first year of tertiary study but their views as to the utility of debt remained unchanged.

A study by Callender and Jackson (2005) explores the relationship between prospective higher education students' attitudes to debt and their decisions about whether or not to enter higher education. The results indicate that students from low social classes are more debt averse than those from high social classes and are far more likely to be discouraged from going to university because of their fear of debt.

Gordon's (2013) study suggests that student debt is considered a requirement by all of the students as it relates to their higher education attendance and their lifestyle choices. Higher education attendance was perceived as a condition to achieve admission to future employment.

Lyons (2004) reviews a profile of financially-at-risk students at higher education. The study reveals that the financially-at-risk students were mainly from low-to-middle income families.

Moreover, these groups of students are most likely to hold more than one type of debt and are more likely to default on their debt. The study recommends that campus administrators can alleviate the problem through financial education.

3.3.2 Student debt implications

Globally, debt is an increasing socio-economic problem at present. Requiring students and their families to incur debt towards higher education is fraught with political and cultural significance (Glater, 2015). Because of increased cost sharing in higher education around the world, higher education students are taking on an increasingly large amount of debt, not only to pay fees but also to cover living expenses while studying (Rey & Schiopu, 2015). Rationally, borrowing money for education is a good investment as long as the increase in the student's return on investment is appropriate. However, investment in higher education has become risky and increasingly costly. In both developed and developing countries the average university fee has been rising over time, however, there is a lot of inconsistency in returns across students. Lochner and Shin (2014) indicate that the labour market uncertainty has increased considerably in recent decades while increased access to higher education has led to relatively poorer and less able students joining the pool of borrowers.

Over the years, research on debt has been particularly of interest to many researchers, corresponding to an increase in research by a variety of social scientists, including psychologists and sociologists. For example, sociologist Ford (1988, 1990, 1992), lawyers Sullivan, Warren and Westbrook (1989), political scientists Callender and Jackson (2005), economist Zhang (2013) and several psychologists Katona (1975), Haultain, Kemp and Chernyshenko (2010), Tokunaga (1993), Davies and Lea (1995), social scientists Sweet, Nandi, Adam and McDade (2013) and many in recent years Vieru (2015) particularly focus on student debt. Furthermore, Vieru (2015) points out that many graduates were concerned about their levels of debt when leaving university and believed it would have an impact on their future lifestyle. Notably, the findings reveal that there are considerable challenges to the idea that the cost of study is an investment that assures reasonable returns in the labour market. However, students are worried about their future, not only in terms of finding a graduate job, but also in how their finances will be affected by larger debts that the majority will be repaying in the long-term after they have graduated.

The abovementioned studies report some correlation between attitudinal variables and debt behaviour; however, these cannot be taken as implying that a tolerant attitude to debt causes

people to get into debt. It is equally possible that causality runs in the other direction. Students inevitably and unwillingly run into debt in pursuit of their prospective career advancement. In a study by Universities U.K. (2005), which investigates full-time higher education students' attitudes to debt and part-time working and their impact on academic studies and attainment, three quarters of the students had concerns about debts building up and paying debt off. The groups more likely to be worried about accumulating debt were concerned that financial difficulties would negatively affect their academic performance. Nevertheless, the majority of students in the survey (almost two thirds) seemed to take a pragmatic view of debt as a normal part of today's lifestyle. Less than one quarter were not worried about debt because they knew they would get a well-paid job when they graduated. At the same time, almost three quarters of students agreed that borrowing money for a university education was a good investment.

Some studies suggest that students respond differently to debt and those with similar incomes but different characteristics may adopt different attitudes towards their financial affairs and debt (Hesketh, 1999; Scott, Lewis & Lea, 2001). For instance, Hesketh's (1999) study found that the majority of students were largely confident in their money matters, particularly middle class students. Their confidence stemmed from the fact that they had the necessary resources to survive, but more importantly, they could secure additional funds if required. Scott *et al.* (2001) conclude from an economic psychological perspective, that current higher education students are more tolerant towards debt than either intending students or recent graduates. Connor, Dawson, Tyers, Eccles, Regan and Aston (2001) suggest that many applicants to higher education expect to engage in paid work while studying. Connor *et al.* (2001) report that of the potential entrants to higher education surveyed, nearly all planned to combine studies with part-time work and saw this as the main way to support themselves.

In 2002, Callender and colleagues conducted a survey of more than 2 000 prospective students across the UK, using a stratified random sample of schools and colleges (Callender, 2003; Callender & Jackson 2005; Callender & Jackson 2008). The study found that students from lower social class backgrounds were more debt averse than those from other social classes and were far more likely to be deterred from going to university because of fear of debt. Furthermore, fear of debt appeared to have a strong impact on the choices of students from lower social class backgrounds, causing them to apply to universities where they were likely to incur lower living costs and good term-time employment opportunities. Schmeiser, Stoddard and Urban (2016) suggest that it is important that the students understood the borrowing process and the consequences of debt. It is important that students are familiar with credit management

policies of their institution. Student debt affects students negatively; consequently, it is empirical to discuss the effects that student debt has on students. These factors are discussed in Sections 3.3.2.1 through 3.3.2.4.

3.3.2.1 Psychological factors

Constant increasing costs of higher education and the expansion of access, together with greater cost sharing by students and their families, have consequently led to higher indebtedness of students in many countries (Lochner & Shin, 2014). A study by Davies and Lea (1995) discovered that students from a relatively low-income, high-debt group had relatively tolerant attitudes towards debt. The same findings were attested by Ross, Cleland and Macleod (2006) who discovered that students worried about money had higher debt and were ranked lower in their classes suggesting that financial worries were the cause of psychological difficulties. Sweet, Nandi, Adam and McDade (2013) examined the relationship of several measures of debt with measures of both psychological and general health and found that for young adults in a nationally representative sample, household debt was an important independent indicator of health outcomes.

Research by Cho, Xu and Kiss (2015) suggest that high relative debt, stated as the debt-to-asset ratio, was related with higher perceived stress, depression and worse self-reported general health both when individually evaluated and when calculated based on stated debt and asset levels. Similar findings were discovered by Lim, Heckman, Montalto and Letkiewicz (2014), who discovered that student debt and other related financial circumstances are one of the leading causes of stress. Notably in their study, finances were ranked as the second largest stressor among students, following academics. Indeed, even if the economic obstacles are overcome, low social economic status students may still encounter more threat, more health problems, and more emotions that are negative and lower levels of motivation than their high social economic status counterparts (Jury, Smeding, Stephens, Nelson, Aelenei & Darnon, 2017). Archuleta, Dale and Spann (2013), who explored the influence of debt on student financial anxiety, conducted a study of financial mental health of students. The results indicated that financial satisfaction, student loans and gender are associated with financial anxiety. The studies suggest that student debt and psychological factors should be an increased focus on the study of financial and psychological wellbeing of students.

3.3.2.2 Dropout rates

Students who drop out, take with them tuition fees and other revenue the university may have (Sutter & Paulson, 2017). Much has been written about the dropout rates and scholars have identified the potential number of factors that may have a causal dropout from university studies. Glater (2015) acknowledges that shifting the risk of financing education to students might be counter-productive as students may choose to forgo higher education to escape student debt. Cloete (2016) laments that undergraduate students in South Africa have a relatively high dropout rate and low graduate rate because of student debt. The researcher further identified that the South African undergraduate system is too expensive, mostly because of government underfunding and inadequacies at the undergraduate level. According to the researcher, higher education inflation is higher than the CPI, which implies that student fees increased at substantially higher levels than inflation. This daunting challenge was also acknowledged by Cele and Goodman (2016) and they maintain that inevitable cost increases have become an exclusion factor for poor students to enter the system and those who gain access often become burdened with enormous debts. In a study by Letseka and Maile (2008) it was concluded that matriculants from poor families have high probability to drop out due to financial problems and children from social grants takers need more than NSFAS currently offers. Many students despite being recipients of NSFAS financial aid suffer financial hardships and the demands of independent study at university level contribute to these high dropout rates (CHE, 2016).

A study conducted by Matsolo, Ningpuanyeh and Susuman (2016) regarding factors affecting the enrolment rate in South Africa reveals that 1) finance, 2) orphanhood, 3) transport to the higher education institutions, and to a lesser extent, 5) unplanned pregnancies, are some of the main factors that affect the enrolment rate of students. The study also emphasises the importance of residing near to the institution of study; it is recommended for students to study in close proximity to their homes. An earlier study by Murray (2014) found that financial aid and residence-based accommodation benefits students by increasing the likelihood that they complete their studies without being financially excluded.

Castex (2017) identifies that the dropout rate varies with individual ability and family income. It is documented that part-time income of university graduates highly compensates for foregone earnings and costs of education. In addition, Bradley and Migali (2016) cite that differences in dropout behaviour occur between high and low-income groups and between different types of universities. Students from low-income groups who are working part-time forgo earnings while

enrolled to pay tuition in order to avoid dropping out of university and accumulate debt (Castex, 2017).

3.3.2.3 Access to education: free education

In most countries in the world, developed or developing, a very small quantity of the poor students go to university and ultimately complete successfully, because of lack of academic, social and material capital (Cloete, 2016). Student debt can deter the students from higher education as was alluded by Glater (2015) who suggests that student debt affects access to higher education as much as any admission decision. Public financing of education in the developing world context combines public and private funding and the application of fees is regarded as a way of supplementing state funding. The funding of public higher education is currently unsettled in South Africa.

Wangenge-Ouma and Cloete (2008) note that public funding has been declining and opportunities for winning non-government revenue remain limited. The normal raising of tuition fees, which is one of the foremost strategies public universities have resorted to in an attempt to alleviate declining state funding, is not without controversy. The past two years (2015 and 2016) proved particularly challenging years for all institutions of higher education in South Africa. The #Fees-Must-Fall movement swept across the country and affected the course of teaching and learning everywhere. It is disputed that higher education is not affordable for the poor who are generally sensitive to tuition fee increases and the rich, who can afford the current (high) tuition fee charges. Sader and Gabela (2017), in their study that identified factors that influence students' access to the curriculum and participation in higher education, found that financial constraints remains a significant factor obstructing access to higher education.

A limited number of European countries such as Norway, Germany and Finland still provide free undergraduate higher education for their citizens (Galvin, Nieuwenhuis, Phillips, Thain & Kokkori, 2015). The rationalisation amongst these countries for this 'free for all' policy originated on the principle of 'equal access', whereby free education ensures that financial barriers do not deprive those students that are academically deserving, but lack funds to access higher education. Furthermore, these countries tend to invest in higher education because of the perceived benefits of education to society as a whole. Notably, Biffl and Isaac (2002) noted a number of societal benefits such as better health, citizens that are more educated, greater social cohesion and greater scientific and technological advances that increase both productivity and economic growth.

Exploration of these observations is particularly interesting in South Africa during a time of the significant #Fees Must Fall, which advocates free education. Contrary to dominant opinions and despite current fiscal pressures, estimates produced by the South African Institute of Race Relations suggest that free higher education for all undergraduate students is affordable for South Africa (Phungo, 2015). Phungo's (2015) argument focusses on the current levels of public spending on South African universities that is approximately 0.8 percent of the GDP, which is low by global standards. He suggests that a more appropriate number would be 2.5 percent of the GDP. He further maintains that household spending levels suggest that only 5 percent of South African families could comfortably afford to pay university fees for their children. This suggests that ensuring access to students from less prosperous backgrounds will require a significant degree of subsidy or grant funding.

In a study conducted by Minty (2015), overall, Scottish interviewees were supportive of free tuition but had concerns about its sustainability, leading some to suggest that those from the most affluent backgrounds should contribute to the cost of higher education. The study revealed that students in the north of England questioned the trebling of tuition fees but overall accepted the principle of student contribution. In both England and Scotland, interviewees expressed concern that tuition fees may deter young people from poorer backgrounds from going to university. The cost of tuition appeared to be less of a concern for students from wealthier backgrounds, most of whom were aware of the greater labour market value of degrees from higher status institutions. Blackburn (2015) has also shown that in Scotland, students from families with lower incomes take on the greatest levels of debt. Furthermore, Blackburn's study highlights that the current fee-free policy has created a "*de facto* system of graduate tax". As a result, graduates from families having lower household incomes in Scotland might end up having far more debt than graduates from wealthier families have.

Debt is perceived as a burden for enabling university access for poorer students. Instead of promoting socioeconomic mobility and greater equality of opportunity, debt reinforces pre-existing inequality of income and wealth (Glater, 2015). Glater (2015) emphasises that student debt imposes a toll on borrowers while in school, potentially adversely affecting both completion rates and academic performance. He further elaborates that indebted students fail to graduate on time more often than their classmates who do not borrow; one study found that one in five undergraduate students who borrowed did not graduate at all. In addition, indebted students receive lower grades in their classes and lower grades in turn may make it harder to obtain the employment necessary to meet repayment obligations. As suggested by Glater (2015), this

means that student indebtedness may thus worsen the effects of socioeconomic inequality that force students to borrow in the first place.

Avery and Turner (2012) consider that students with high levels of debt are likely to default relative to students with low levels of student debt. However, some research suggests that students who borrow relatively smaller amounts are more likely to default than students who borrow larger amounts, suggesting that maybe, if employment decreases indebtedness it still may not promote academic success. It may also be that debt itself encourages some students to work hard, to make every borrowed dollar count. The challenge for South African universities is to provide access to education notwithstanding the background of inequalities in family and personal income.

Vandenberghe and Debande (2006) provide a holistic assessment that free higher education can be considered partially as an implicit and deferred fee mechanism. Fundamentals supportive of this formation are essentially threefold. First students tend to become potential taxpayers. Secondly, the general level of taxation is inflated by the budgetary requirements of free higher education. Thirdly, graduates pay more of these additional taxes than non-graduates do, given their higher income level as well as tax progressivity.

3.3.2.4 Academic performance

The success rate of students at universities has become a growing concern for the CHE (2011), who subsequently recommend that the University of Western Cape (UWC) implement an investigation on a programme-by-programme basis to identify the reasons for student attraction and success rates (CHE, 2010). Prior imperial studies have attempted to evaluate the factors that impact on the academic performance at universities, such as Schmeiser, Stoddard and Urban (2016), Schmeiser, Stoddard and Urban (2015b), Glater (2015), Rey and Schiopu (2015), Mattana and Joensen (2014), Zhang (2013), Trombitas (2012), and Cooke, Barkham, Audin, Bradley and Davy (2004). A review of the literature reveals that little research has been done in the South African universities context.

Zhang (2013) identifies that the accumulation of student debt leads to negative behaviours and less time dedicated to their studies. Consequently, student's social life and their academic performance are affected significantly. A study by Glater (2015) indicates that lack of financial resources precludes poor people from buying all kinds of goods and services. Consequently, this has a direct impact on the academic performance of students. Education is perceived as an investment, one that pays dividends to the larger community. Glater (2015) also indicates that

higher levels of education produce tangible benefits, in the form of higher tax revenues, lower health costs, lower crime rates and lower law enforcement costs. The theory of academic performance was also discussed by Ross, Cleland and Macleod (2006), who studied the relationships between student debt, mental health and academic performance. In their study, they established that students from lower socioeconomic backgrounds and postgraduate students had higher debts. Notably, there was no direct correlation between debt, class ranking or general health. Students who perceive debt to be a problem have larger debts and rank lower in their classes.

Glater (2015) emphasises that indebted students may academically perform worse than their counterparts because they may try to alleviate the borrowing by working part-time and, consequently, they might not have sufficient time to concentrate on their studies. Students would appear to be under constant pressure because of taking responsibility for financing their studies themselves (Curtis, 2004). Schmeiser, Stoddard and Urban (2015a; 2016) emphasise the importance of student financial counselling regarding student debt as an intervention to enhance academic performance. However, a study by Zhang and Kemp (2009) indicates that students with more debt have greater tolerance for it, yet, student debt did not have strong links with individuals' motivation, personal happiness or academic achievement.

Furthermore, education results in intangible benefits, in the form of innovation, a more highly trained workforce and, possibly, socioeconomic mobility. It is difficult to determine how often the prospect of taking on significant debt deters students from pursuing higher education. However, a growing body of scholarship suggests that poorer students are more likely to be deterred. Debt could serve a useful screening function to determine the academic performance of students. If this is true, deterrence is less worrisome as debt aversion correlates closely with lack of determination.

3.4 THE ROLE OF STUDENT POLITICS

One of the most distinctive features of the anti-apartheid resistance since the 1960s was the prominent role of students and student organisations at schools and universities (Jansen, 2004). In South Africa, political tensions on university campuses during post-apartheid have become regular in different universities (Maseko, 1994; Cele & Koen, 2003; Cele, Koen & Mabizela, 2001; Cele, 2014). Student political organisations (often revolutionised) are usually organised and connected to major political organisations. Student political organisations play a very prominent role in institutions, with the capacity to mobilise mass resistance with relative ease on

burning social and political issues. Jansen (2004) notes that with the emergence of the new democratic government in 1994, the focus of student organisations has shifted from protest against an illegitimate government to demands for unrestricted access to higher education, expanded financial aid to needy students and relief from personal debt to institutions.

The South African Student Congress (SASCO) has constantly made radical demands regarding the financial exclusion of students at tertiary institutions. The organisation insists that students should not be excluded on the grounds that they are indigent. The organisation further argue that higher education is irregularly priced and not affordable to the working class while on the other hand NSFAS is inadequate and unsustainable in its current structure and operation. In addition, SASCO (2010) suggests the introduction of an educational tax on all South Africans through progressive taxation. Financial negotiations and protests are not a new phenomenon within South African student politics. Appropriately, Koen, Cele and Libhaber (2006) predicted that South African universities would experience large financial strikes in future. The testimony to this prediction is the dramatic #Fees Must Fall in 2015 and 2016.

The role of politics is argued from the proposition of the Freedom Charter, which states that “[t]he doors of learning and culture shall be open to all.” Some researchers argue that education in South Africa generally miscarries to improve the freedom for all. For example, Badat and Sayed (2014) lament that the idea that “with freedom comes responsibilities” to respect and promote constitutional requirements to social justice in and through education has not received the full and rigorous attention of the government. However, the Freedom Charter further states, “[e]ducation shall be free, compulsory, universal and equal for all children; Higher education and technical training shall be opened to all by means of state allowances and scholarships awarded on the basis of merit.” Students say *the ANC and its government promised free higher education* but the party says the *Freedom Charter* has been misquoted. Le Roux and Breier (2016) admit that one of the key promises of the Freedom Charter, which had a profound reason for students fighting, was that the doors of learning would be opened to all.

There is persistent turmoil between students and university management particularly during registration periods and sometimes SRC elections. In many cases, SRC constitutions permit the contestation of seats based on political party association (HESA, 2014). A study conducted by Muya (2014) found that student political organisations are the extensions of national political parties in South Africa and emulates the continuation of societal politics. Remarkably, the researcher alluded that student politics is a factor that triggers the conflicts that have been the order of the day on the South African campuses. Muya (2014) also believes that the practice of

student politics on campuses is founded by student emotions instead of democratic rationality. Furthermore, he observes the part of university management, in that they have portrayed a minimal role in mentoring students' leaders on university values and ethos as well as on the growth of the leadership components of their induction.

Luescher and Klemenčič (2017) improve the discussion by adding that students endure a powerful political force and associate with both political parties and with SRCs. Furthermore, political parties try to institute or penetrate prevailing student associations to exploit on their deployment potential and their influence in universities. Students have in turn placed their confidence on politicians rather than the academic community. In their manifesto, the political agenda of both national and student politics is to advance welfare of the people. Financial difficulty on registration on campus is at the heart of this persistent issue. Notably, the student activism of 2015-2016 has conveyed in many and different ways, two key issues: the overall funding and the complex notion of a decolonised education (Bawa, 2017).

Cele (2014) discusses the role of student activism by complementing the collective student activism, which sought to assist about 7 000 students facing financial exclusion at UWC in the 1998 student activism. He observed the lack of student activism as the most substantial feature of UWC student politics between 2000 and 2005. The study by Cele (2014) illustrates that students merely relied on collective action, particularly discussions with the university management, to address their problem of financial exclusion. The researcher maintains that the SRC took a leading role in the negotiations, without always obtaining a mandate from the student body. Consequently, this led to widening the social detachment between the SRC and the student body and raised questions of legitimacy about SRC decisions. The attachment of students to politics may have a socio-political influence on students.

Ali, Fjeldstad and Sjursen (2014) proposed that the fundamental proposition from social influence philosophy is that behaviour and the behaviour and social models of an individual's orientation group will influence attitudes. This is likely to be the case of the attitude of students towards student debt. Cele (2014) contextualises the discussions by adding that on an individual level, some students continued to engage and assigned the SRC to address their financial needs, while others avoided the SRC and consulted directly with the university management and with the Student Credit Management (SCM) office.

Section 29(1) (b) of the South African Constitution (1996) took forward this promise: "Everyone has the right (a) to a basic education, including adult basic education; and (b) to further

education, which the State, through reasonable measures, must make progressively available and accessible.” In other words, basic education is a fundamental right, while further education (i.e. higher education and technical and vocational education and training) must be made progressively available and accessible. In 2016, equal education made a submission to the fees commission of inquiry into higher education and training by referencing both the Freedom Charter and the South African constitution. It will be interesting to see the outcome, after lengthy deliberations of the commission on this matter.

3.5 FREE EDUCATION IN SOUTH AFRICA

The post-apartheid South African higher education saw the creation of an immensely different and more complex policy environment. There was a concentrated attempt to unify and streamline the system and to make it more efficient and effective. Higher education needed to be made more functional, relevant and responsive to societal issues. Odhav (2009) notes that although a radical shift in policy content and direction has occurred from apartheid to post-apartheid, numerous problems continued within the higher education sector and in policy processes, specifically in their implementation within and between institutions. Notably, the policy weaknesses exist in various areas, such as funding, redress and capacity building, both for historically disadvantaged institutions (HDIs) and for students, especially those from disadvantaged backgrounds. The higher education system thus continues to be somewhat fragmented, despite government’s efforts at coordinating a unified system.

Student organisations and certain political formations are advocating for the ideal policy of free education until undergraduate level at South African universities. Many proponents of this model argue that free education will expand access and participation of the poor in higher education and many positive externalities in socio and economic challenges. Wangenge-Ouma and Cloete (2008) discuss several advantages and disadvantages of free education in South Africa. The main advantage is that it may spur an increase in the social demand for higher education. It would be expected that many poor students will be able to access higher education and thus higher education would become a popular commodity. Furthermore, free education is identified as critical to resolving the country’s broader social and economic problems.

However, free higher education will benefit the rich since a big percentage of the beneficiaries of higher education will be from the richer segment of the society as it is the situation now. Further emphasis by Wangenge-Ouma and Cloete (2008) was that children from higher socio-economic backgrounds usually attend high quality schools hence their domination in higher education

participation profiles. Therefore, free education will benefit the affluent students disproportionately, yet they are able to pay a portion of the costs of tuition fees. Wangenge-Ouma and Cloete (2008) argue that such a policy will have significant equity implications, as resources would be transferred from the fiscus to prosperous families. Through taxation, the poor would be made to pay for the education of the rich (HESA, 2008).

An important fundamental policy consideration is the affordability of free higher education in South Africa. State resources are limited and are competed for by other equally essential priorities such as health, infrastructure and national security. Already tuition fee increases at universities are making unsustainable resource demands on government. The government is concerned that tuition fee increases at universities has increased at a higher rate than government contribution for the NSFAS, thus putting pressure on government to increase funding for the scheme. Free tuition will aggravate the problem by stretching the government budget on higher education. According to the previous Minister of Higher Education, Dr. Nzimande, the introduction of free education for poor students would go a long way towards resolving the perpetual funding-related protests on university campuses. The government has been considering a free higher education for some time-premeditated implementation for the first undergraduate degree. This was a mandate and resolution of the African National Congress (ANC) in 2008 Polokwane elective conference and its 2012 Mangaung conference.

In his paper, Cloete (2016) probes an important question regarding free education. He posed a question whether free higher education is a good idea and where the money will come from. He cites that free education is not possible and there is not enough money in any developing country for free higher education. He defends his argument by citing the examples of Norway, Finland and Germany the richest and most developed countries in Europe but never Africa or Latin America. He cites Professor Archer from the University of Cape Town (UCT) who argues from a technical economist viewpoint, that free tertiary education is regressive: poorer members of society end up subsidising the rich. The practical implementation of free education is somewhat troublesome. Clear primary policy frameworks need to be debated whether it would be free education for all or exclusively for the poor. South African universities are, therefore, in an unenviable situation whereby government funding is declining and yet raising tuition fees is undesirable. Hence, the policy of free education requires fundamental rational assessment of and changes in social goals, priorities and policies.

3.6 MISSING MIDDLE

The missing middle is a group that NSFAS refers to as ‘gap’ families (Dano, 2015). According to Dano (2015), they are students who do not qualify for NSFAS funding or for bank loans because they are at the end of the lower middle class. In 2016, Higher Education Minister, Dr Nzimande, said fees for students whose families get between R120 000 and R600 000 income annually will not increase. Cloete (2015) shows that for about half a million South Africans who earn more than R500 000 per annum, university education is very affordable; for the “rest it is beyond the means of most South African households”. According to McKenna (2016) (as part of the Rhodes University submission to the Fees Commission) at present the missing middle are unable to afford university fees and do not qualify for state support through the NSFAS programme. Presidential task teams on the funding challenges at universities, appointed by President Jacob Zuma on 6 October 2015 and recommended that a procedure must be initiated immediately to develop a new financing model. The model includes the private banking sector and other business interests to integrate decisions for funding the missing middle to provide loans at favourable interest rates without having to provide collateral. This must be established during 2016 with the view to pilot it in the 2017 academic year for full application in 2018 (McKenna, 2016).

3.7 MAKING HIGHER EDUCATION AFFORDABLE

Constantly, the South African government has stressed the need for increased participation in higher education in order to meet the needs of a knowledge economy and increase the standard of living of many South Africans living in poverty. McKenna (2016) in Rhodes University submission to the Fees Commission alludes to the fact that the university is a provider of public good in its potential to guarantee social cohesion, if students from all social groups were able to access higher education in a mode that is dignified and did not suffocate them with crippling debt. Education is viewed as a vehicle to bridge the gap of persistent inequality. This has also emphasised growing expectation that students and their families will make a significant contribution to the cost of higher education by shouldering part of the burden of tuition fees and living expenses. The current tuition fees policy at South African universities is a cost-sharing model between parents and taxpayers. All students pay the same tuition fee depending on the course of study.

Students from lower income family backgrounds are afforded financial support through the NSFAS (in terms of loans and bursaries). However, the available NSFAS funding is insufficient

to cover study costs of many poor students (DoE, 2005; HESA, 2008; Le Roux & Breier, 2007). Consequently, the tuition fees and increases are unaffordable for poor students. Wangenge-Ouma and Cloete (2008) discuss that a possible way of making higher education affordable to the poor without making it cheap to the rich is through a redistributive tuition fee model. A redistributive tuition fee model refers to differential pricing of higher education according to the available disposable income of the prospective student or the student's family. In such a system, once tuition fees are set, students from low-income backgrounds only pay what they can afford while wealthier students pay the entire amount. As such, poor students will pay lower tuition fees while students from affluent families will pay higher fees (HESA, 2008). Should it be free education for all or affordable higher education for all is the question that policy makers have to deliberate upon towards the attainment of the NDP 2030 reality.

3.8 SUMMARY AND RESEARCH GAP

This chapter has reached the second secondary research objective as set in chapter 1 (refer page 9) by exploring the concept of student debt in the context of higher education in South Africa. Student debt accrued by university students during their studies has been the source of recent debates and controversy in South Africa. The implications of student debt and the attitude towards debt were covered in the literature. The student debt discussed by many scholars above is based on student loans as a way of financing education in various countries. In many studies above, there is no financial implication directly towards the university because the loans are not due directly to the university but to the state. Therefore, the student debt is not accounts receivable in the financial statements of the university; the university would have been paid in the form of loans. What is less investigated is the attitude and perceptions of students towards tuition fee debt. The student debt at South African universities should be addressed. According to Universities South Africa, universities' financial sustainability depends on tuition fees.

The current study will focus on the student accounts receivable due to the universities, thereby having a direct impact on the financial sustainability of the university. This study will explore the policy guidelines of credit management towards student accounts, thus establishing the effectiveness of collectability of the student debts. Student fee debt at South African universities has spiralled out of control and is putting pressure on financial sustainability of universities. The next chapter will focus on theoretical perspectives of credit management reflecting on the implementation on student accounts at South African universities.

CHAPTER 4

CREDIT MANAGEMENT

4.1 INTRODUCTION

The aim of this chapter is to address the third secondary research objective (set in chapter 1, refer page 9): a literature review to explore the concept of credit management in the context of higher education. Chapter 2 conveyed the groundwork for this chapter by outlining theory regarding credit management. This chapter is embedded on portfolio theory on accounts receivable and supplemented by the working capital management concept. It reviews in-depth the existing literature on credit management topics in cognisance with the theoretical framework discussed in Chapter 2: credit management policy; credit management cycle; managing accounts receivable; trade credit; credit management as an enhancer of financial sustainability; National Credit Act and application of credit management at South African universities. Reviews of the literature helped to identify similar studies on these topics, which provided evidence of a potential research gap ripe for further study. The chapter concludes with a summary of the issues explored and the research gap.

Credit management also is referred to as accounts receivable management. The fundamental principle is that credit management is about management of accounts receivable. Portfolio theory of accounts receivable suggest that an organisation's credit management policy should contribute to its financial sustainability by value maximisation. Credit management is generally a policy of governing and collecting payments from customers (Fujo & Ali, 2016). The credit management policy of an organisation refers to the different procedures it uses to collect accounts receivable once they become due. The purpose of a management policy is to encourage efficient fiscal management practices and to have proper control over the organisation's accounts receivables. South African universities have high student accounts receivable in the range of millions of rand.

Related to the student debt problem are the different credit management policies that universities implement to ensure student fee payment. According to HESA (2008), these approaches range from a grace period allowed for fee payment, to the minimum amount students are permitted to pay before they are allowed to register or write exams. Furthermore, several universities allow students owing not more than 20 percent of fees to write exams (HESA, 2008). The credit management policy is a key policy that has to be driven by management of universities. Accounts receivable management entails determining an appropriate credit management policy as well as examining ways of ensuring prompt collections and decreasing bad debts (Kontuš,

2013). An ineffective credit management policy may deteriorate cash flow and cause the organisation to incur bad debt expenses.

4.2 CREDIT MANAGEMENT POLICY

Effective credit management increases the business' performance in various ways. For example, the study of Woodyard, Robb, Babiarz and Jung (2017) explored the relationships between subjective and objective financial knowledge with cash and credit behaviour and found that at higher levels of both, objective and subjective knowledge were significant indicators of positive financial behaviour and avoidance of negative behaviour. Hence, Njeru, Mohhamed and Wachira (2017) emphasise effective credit management as key in recovery of debts. In their analysis of the effectiveness of credit management systems on loan performance of commercial banks in Kenya, it was revealed that credit terms have an effect on performance, just as credit evaluation was found to be very important in influencing the performance of commercial banks. Therefore, an effective credit management system helps institutions in identifying and diagnosing credit risk and provides opportunities to identify better strategies to collect.

A credit management strategy is essential to manage accounts receivable. Studies by Huang, Lu, Zhu, Li and Gu (2016) and Wong, Lu, Tjosvold and Yang (2016) examine the relationship in credit management strategies. Their results indicate similarities. For example, Huang *et al.* (2016) found that rational explanations and social encouragement were effective to reduce the negative conflicts in managing accounts receivable. While, the study of Wong *et al.* (2016) confirms that rational explanations and social encouragement could be essential credit management strategies, which they could use to provide credit and to convince borrowers that their transaction costs will be reasonable if the debtor complies with the credit strategy. Notwithstanding the fact that many institutions in South African universities have credit management policies, this study will explore the enforcement efficiency. As a result, managing accounts receivable is as important as to maintain financial health for the institutions. It is crucial to impose a strategy when attempting to recover a debt from accounts receivable who are delinquent. If the credit management policy is not imposed appropriately, it will consequently lead to financial constraints and liquidity.

Credit management is important in institutional finance decision making. Managing accounts receivable enables the institutions to make proper financial decisions (Ramiah, Zhao, Moosa & Graham, 2016). Although Soufani (2002) perceives the institutional finance decisions as an important factor that influences the decision to finance accounts receivable, Ramiah *et al.* (2016)

maintain that the finance decision-making process involves many areas such as cash, inventory and accounts receivable. Institutional finance decision making often is split into three different focal points, namely capital structure, capital budget and working capital (Bastos, 2010). Credit management forms part of working capital, which embraces mainly cash management, inventory management and credit policies. Michalski (2012) denotes that the change in the level of accounts receivables in an enterprise increases net working capital levels and influences costs of holding and managing accounts receivables.

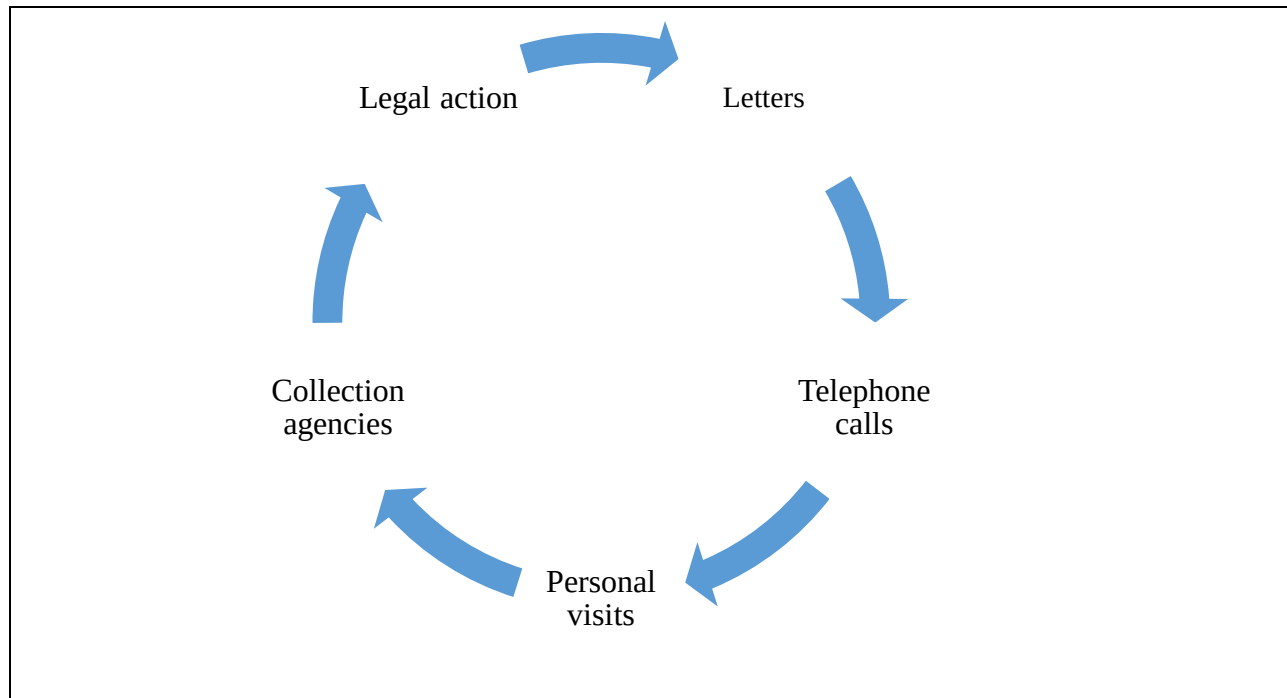
It is imperative that the organisation communicates the credit management policy to accounts receivable so that they understand the terms and conditions of the credit agreement. Jackson (1999) constructively argues that the relationship between an organisation's policies in such areas as its key success factors and the management of the organisation is the capability of an organisation to communicate its policies clearly throughout the organisation. Robust policies exist in those areas that often come under public scrutiny and directly affect people's lives. A transparent communication system that delivers improved information flow between the organisation and its accounts receivable offers improved information flows (Petroons, Hanan, Bailey, Gupta, Mellyn, Saal, Alexander & Mondschein 2014). Such a system will advance general system efficiency by meaningfully reducing the costs of invoicing, reconciling accounts receivable and settlements. Petroons *et al.* (2014) suggest that organisations must create a system that allows accounts receivable to both manually and electronically present invoices for authorisation or rejection.

4.3 CREDIT MANAGEMENT CYCLE

The debt collection procedure starts with the correct and timely mailing of invoices. An invoice provides both managers and customers with terms and conditions of the credit transactions that have taken place. Furthermore, an invoice provides customers with the amount and the date on which the debt must be paid. It is critically important to send invoices timely to encourage prompt payments of outstanding accounts receivable. The longer an account remains outstanding, the harder it is to collect. Prompt follow-up is necessary to prevent losses. According to Kumaraswamy (2016), credit management cycle represents an average collection period and setting effective credit standards. These standards assist the institutions to evaluate the effectiveness of their credit management policy. Michalski (2012) emphasises that the institutions should design an appropriate receivables collection process within the credit management cycle. Ngugi, Gakure and Gekara (2017) believe that strategies such as letters, phone calls and sending statements are key drivers to accounts receivables management.

Therefore, various methods may be used to collect overdue accounts. Figure 4.1 indicates elements that are essential to an effective credit management cycle.

Figure 4.1: Credit management cycle



Source: Researcher's own illustration

4.3.1 Letters

A business may use standard or individual letters to collect outstanding debt. It is important to study the timing, content, wording and presentation of letters to improve the responses of customers who are willing to act on a request made for payment. Using a letter in the credit management cycle as a practice for accounts receivable optimises the collections. According to Darko, Adarkwah, Donkor and Kyei (2016), recovery of outstanding debt could impose administrative costs to the institutions. Such costs may include notification about existing debt and follow-up letters with additional costs for delivery to the recipient. Effectively, a letter of debt reminder can be written to the students or guardians as a formal communication that is usually with a specific objective of honouring the debt obligation within a specific date.

Letters often are followed by telephone calls (O'Neill, 2008). Castleman and Page (2016), suggest that text message reminders increase the likelihood of students reapplying for financial support and increase the retention of students. In related work, Schmeiser, Stoddard and Urban (2015) found that students who receive the warning letters slightly reduce their debt behaviour

relative to the ones that did not receive the letters. Additionally sending at-risk students a letter ('Know your Debt' letter) about their student debt and offering financial counselling could make a considerable change in students' academic outcomes (Schmeiser *et al.*, 2015). This confirms that constant reminders and notices play an important role in reminding students of their debt responsibility. In addition, it emphasises the importance of high-quality administrative credit management policy data for understanding student debt. These letters can be sent depending on the amount of the student debt or according to accounts receivable age analysis.

4.3.2 Telephone calls

Telephone calls are one of the most effective ways of collecting outstanding debts. The telephone call should be used preferably for larger, problem debts because of the higher costs attached to telephone calls. Some kind of system priorities should be applied to accounts. Telephone calls are expensive in terms of both human resource costs and telephone charges, but the benefit of receiving cash normally will outweigh the costs of telephone calls. However, if a student does not voluntarily discuss ways of repayment, the institution may contact the student or the person responsible for payment to develop a repayment schedule.

Rosenberg and Gleit (1994) articulate the qualitative methods of credit management strategies, which include 1) doing nothing, 2) using regular statements as a reminder, 3) sending computerised reminders, 4) sending a personal letter, 5) telephone calls, and 6) using agents. Credit management is currently as much of an art as science (Rosenberg & Gleit, 1994). O'Neill (2008) emphasises telephone interaction with the account receivable at certain times of the day, requests or solicitations of a promise to pay, the possibility of extending a repayment schedule, the possibility of increased or decreased interest rate over a longer or shorter time period, pressures to report a delinquent payment to a credit reporting agency and other steps in order to persuade payments.

4.3.3 Personal visits

If the customer is in close proximity, a personal visit will entail visiting the customer at the stipulated address. The aim of a personal visit is to establish the hindrance and to encourage the customer to pay promptly. O'Neill (2008) anticipates that the communication with the account receivable is such that payment options may (or may not) be offered, providing variable degrees of flexibility to payment on the deferred account. In the case of universities, this method might not be suitable due to large quantities and proximity of students or persons responsible for their fee payments.

4.3.4 Collection agencies

Using collection agencies implies the organisation is outsourcing the responsibility of credit collection to a third party. The organisation can do this if it does not have the capacity or when the customer cannot be reached and all the means of encouraging the customer to pay have been exhausted. When accounts receivable default, lenders have no alternative but to track repayments either through litigation or seizure collateral (if there is any) whilst some might employ debt collection agencies (Ssebagala, 2016). O'Neill (2008) highlights that overdue accounts may be handled by collection agencies who are highly trained, experienced and have excellent negotiating skills. Shao, Zoldi, Cameron, Martin, Drossu, Zhang and Shoham (2007), in their study of enhancing delinquent debt collection, suggest that collection agencies often trust evidence contained in the account notes made by previous collectors to establish the latest actions taken on an account, such as letters sent and phone calls made. Furthermore, account notes often comprise evidence about why the account has not been paid.

Collection note information is useful in deciding how best to work the account. Shao *et al.* (2007) invented a model that offers an automated system and method for forecasting the probability of collecting on a delinquent debt. The system uses predictive models to evaluate individual debt holder accounts and forecast the amount that will be collected on each account based on learned relationships among known variables. Drozd and Serrano-Padial (2017) focus on an information technology (IT) model that alleviates informational irregularities, allowing lenders to concentrate collection efforts on delinquent borrowers who are more likely to repay. Their model delivers improved indication precision and they believe that IT has been employed to identify consumers successfully who are more likely to repay after debt collection takes place.

4.3.5 Legal action

Legal action costs money, sometimes even more than the amount recovered from the debtor if the action was successful. It may also be very time consuming, especially if the action is defended. The process of credit management has become sophisticated; the combination of each debt collection strategy is intended to yield a result. An account receivable might have different circumstances, however, debt collection processes preferably are tailored to a specific account receivable reflecting the fact that different people will react differently to the same message or offer. In order to increase collection efforts, different people should be treated differently, but suitably for their specific circumstances (O'Neill, 2008).

Jain (2015) cites that formation and operation of the debt recovery tribunals have a significant impact in the matter of debt recovery. The legal action is likely to speed up the recovery procedure. Hamilton (2016) admits that organisations should not allow receivables to increase dramatically; there must be constant examination and action needs to be taken promptly. When there are signs of default, the problem must be addressed swiftly using different strategies such as sending invoices or hiring lawyers earlier to enforce the payment.

4.4 MANAGING ACCOUNTS RECEIVABLE

Ngugi (2015) identifies the five steps of managing accounts receivable: (1) determining to whom to extend credit, (2) establishing a payment period, (3) monitoring collections, (4) evaluating the liquidity of receivables accelerating, and (5) eventually cash receipts from accounts receivables holders. He emphasises that a critical part of managing accounts receivables is determining to whom credit should be extended. This is contrary to universities because credit is offered to students when they register for academic courses without any credit screening. Credit screening involves companies requesting potential customers for references from banks and suppliers to determine their payment history. Other suppliers verify if customers are listed on the credit bureau as bad payers or default risk. It is important to check these references on potential new customers as well as periodically check the financial health of continuing customers (McKesson, 2011).

For many organisations and institutions, accounts receivable are one of their largest assets. For example, Table 4.1 provides an indication of receivables for South African universities selected for this study as a percentage of current assets for the most recent two years (for the purpose of confidentiality, the university names are reserved):

Table 4.1: Student accounts receivables as a percentage of current assets

University	2015	2014
A	8%	9%
B	64%	37%
C	39%	23%
D	18%	18%
E	N/A	15%

Source: Author's own illustration based on financial statements of universities

Cash flow is delayed in receivables; waiting for payment to be received to ensure the efficient cash flows according to plan, the organisation must establish credit parameters. A credit policy determines whom the organisation will allow credit to and the collection policy regulates the cash collection structure. In establishing these policies, it becomes clear that the loosening of credit management policy will increase bad debts² and vice versa.

Usually, before the buyer can use credit as a medium of exchange, the requirements of credit worthiness stipulated by the seller must be adhered to. This implies that the seller must decide if the credit of the buyer is acceptable to him in terms of affordability. The decision to grant credit is based on the buyer's credit profile, which is a summary of all characteristics of the buyer. Based on these characteristics, (such as the integrity, willingness to pay and ability to pay) the seller will make the decision to grant credit. There are always inherent elements associated with every credit transaction. Kritzing (1997:6-8) discusses the three elements of credit.

First, credit inherently contains an element of the risk of default by the debtor. The default risk means a financial loss will be sustained in a form of credit loss (bad debt) because of the seller having to write-off the money owed. This default risk may be greater or lesser in different businesses or organisations (Rai & Kamil, 2010). The business granting the credit has no control over the inherent risk. This risk is determined by factors extraneous to the organisation such as general unemployment levels, changing socio-economic conditions, debtor attitudes and political issues.

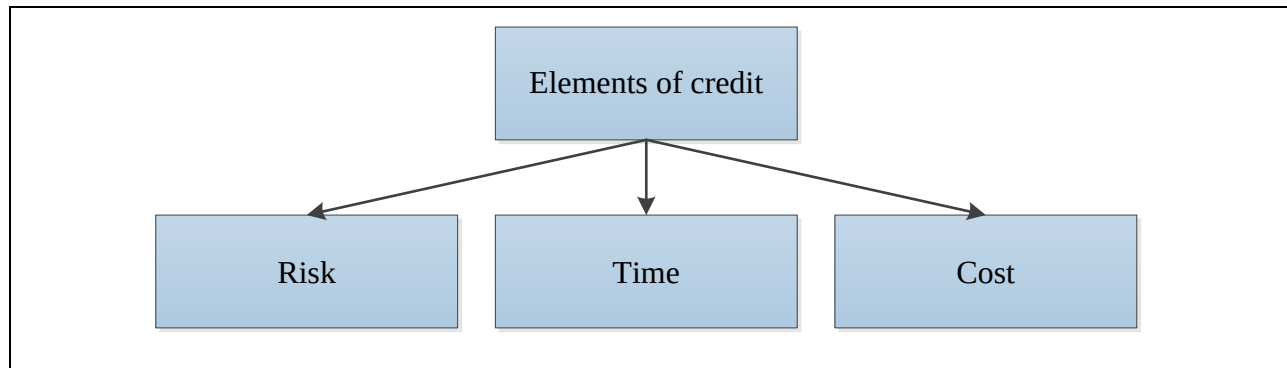
Secondly, credit involves an element of time because the providers of goods or services have to wait for their money from buyers. Usually on the transaction date, the terms and conditions of credit will be stipulated, which include the period of payment and installments. Consequently, the element of time has a direct influence on the risk associated with credit. Kritzing (1997:18) emphasises that the longer the period of credit, the greater the default risk.

Lastly, credit involves an element of cost because the seller has to incur certain costs to recover the outstanding amount. This includes amongst others the salary to be paid to the credit manager, costs of creditworthiness assessment, cost of financing and administration of debtors, costs of

² Credit loss

collecting accounts receivable and the bad debts. Figure 4.2 summarises the sketch of the three elements associated with credit.

Figure 4.2: Elements associated with credit



Source: Adapted from Kritzing (1997:18)

In order to manage the risk associated with credit, the business must have a clear credit management policy. Credit management is a term used to identify accounting for accounts receivables. It involves the initiation of accounts receivable collection process. As a strategy, businesses adopt credit management to manage accounts receivable associated with credit terms that they denote to customers regarding the collectability of outstanding accounts. Businesses use this short-term financing strategy to convert accounts receivable into cash. To be financially sustainable in the long term, businesses need to manage short-term decisions such as their credit management strategies. They have to manage the credit terms of accounts receivable in order to eliminate liquidity risk exposure. When the account is paid, the receivables will decline and the firm's cash balance will increase (Correia, Flynn, Uliana & Womald, 2007:12). Businesses, whether big or small, have to formulate a credit management strategy to manage accounts receivable. A properly managed accounts receivable portfolio can accelerate cash flow and supply cash requirements.

Account holders who do not pay their accounts promptly constantly must be reminded of their outstanding debt. The business must have a clear credit management policy, which serves as a guideline for collecting outstanding accounts receivable. Businesses that do not pay much attention to the collection of overdue accounts will eventually have inefficient credit (Kritzing, 1997:70). Credit management is a short-term policy that contains management of accounts receivable and has influence on working capital. The ultimate goal of management of accounts receivable is to increase working capital of the organisation. Public organisations and institutions

such as universities are not immune; they particularly have to manage student accounts as their accounts receivable.

4.5 TRADE CREDIT

Trade credit emerges when there is a delay between the delivery of goods or services by a supplier and their payment. For the supplier this represents an investment in accounts receivables, which is classified as current assets, while for the buyer it is a source of financing that is classified under current liabilities on the statement of financial position (García-Teruel & Martínez, 2010). The credit terms of an organisation specify the repayment terms required of all its credit customers. The decision whether to extend the trade credit terms, is a cooperation between limiting the risk of allowing for the payment postponement from unreliable purchasers and gaining new customers by way of a more liberal enterprise trade credit policy (Michalski, 2007). This decision forms the level and quality of accounts receivable. Mian and Smith (1992) and Michalski (2008) discuss risk inherent to accounts receivable decisions, which must be accepted by financial institutions' pledging of accounts receivable of the organisation. Smith (1973) predicts and Michalski (2008) confirms that portfolio theory management may be used to decrease accounts receivable risk.

Michalski (2012; 2008) try to adapt the capital asset pricing model (CAPM) theory to working capital elements. Srinivasan and Kim (1987) and Schmidt and Zeitingner (1996) discuss the granting policy of an organisation and demonstrate that trade credit policy requires matching the future revenue gains against possible losses. Michalski (2008) clarifies the relationship between liquidity and risk during accounts receivable management.

According to Mian and Smith (1992), to extend trade credit, responsibilities for various features of the credit administration process must be allocated: 1) the credit risk of the potential account receivable must be assessed, 2) the credit granting decision (including setting credit terms) must be completed, 3) the account receivable must be financed until maturity, 4) the account receivable must be collected, and 5) the default risk must be borne.

4.5.1 Discounts

Trade credit imposes inherent financial risk that cannot be avoided, but it must be managed so that the risk is minimised. Organisations must introduce innovative incentive strategies in order to encourage prompt payment of outstanding accounts receivables. Discounts can be used to encourage prompt payment of accounts receivable. Many empirical studies have revealed that

discount for early payment of debt increases revenue. Mungal and Garbharran (2014) attest to this and identify that customers take longer to pay back their overdue accounts if they are not offered discounts. The benefits of offering incentives to accounts receivable by granting discounts on prompt payments increase managing the account receivable asset (Salek, 2005). The benefits include increased cash flow, reduced bad debt loss, lower administrative cost in the entire revenue cycle, which improve financial sustainability. Hill and Riener (1979) agree that a key decision in the organisation's credit management policy is whether to offer cash discounts for early payments of invoices. If the discount is offered, the organisation has to determine how much it should be. The discount offered should be adequate to offer an encouragement to pay the invoice within the stipulated period, but marginal to avoid profit margin erosion.

Hill and Riener (1979) observe that there are costs in granting discounts, but there are three possible benefits. First, cash is received timely, reducing the need to borrow or allowing more cash for investment. Secondly, revenue increases since allowing discount results in a price reduction. Thirdly, if accounts receivable can be encouraged to pay early, there is a possibility of reducing bad debts. Fabbri and Klapper (2016) provide evidence that organisations must bargain with clients. They document that organisations with weak bargaining power towards their customers are more probable to extend trade credit, have a larger share of goods sold on credit and offer extended payment periods before imposing penalties.

Discounts and trade credit could also be used as complementary strategies to enhance prompt payments. Discounts to inspire early payment are a best practice that can enhance the cash flow of a business. The discount presented should be enough to offer an incentive to the customer to pay the invoice within the stipulated period, but small enough to avoid profit margin erosion. It is necessary to inform customers that the discount will not be honoured if payment is received after the discount date as this alleviates possibly destructive confrontations later. Glater (2015) identifies some universities that allow discounts to students based on the annual family income.

Generally, cash discounts are offered according to the credit terms. Usually, credit terms may be indicated as follows in the conditions of sale: 2/10 net 30 days. These credit terms specify that the customer receive a 2 percent discount if their account is paid within 10 days from the credit period. Should the customer not take advantage of the discount, the account must be settled within 30 days from the beginning of the credit period.

4.6 CREDIT MANAGEMENT AS AN ENHANCER OF FINANCIAL SUSTAINABILITY

Management of accounts receivable requires consideration of several interrelated aspects: investment costs, losses from bad debts and the impact of credit terms on sales (Lieber & Orgler, 1975). Michalski (2012) emphasises that accounts receivable management should contribute to realisation of the basic financial purpose of an enterprise, which is the realisation of such strategy linked with its owner's (or its stakeholders') wealth maximisation. According to the portfolio theory of accounts receivable the key to success for an organisation is to perform portfolio analysis with the result of a varied portfolio of customers with a range of managed levels of operating risk. The organisations' performance and financial sustainability realisation is more effective when it is realised in the most efficient approach. Evaluating the payment patterns of accounts receivable and the credit loss costs of an organisation will assist the organisation to monitor the effectiveness of their credit management policy. Accounts receivable can first be examined as a whole and individual accounts may be inspected if necessary. It is also performed with a focus on risk and uncertainty (Gentry, 1988; Michalski, 2012). One method of monitoring payment behaviour of accounts receivable is to relate receivables to the assets or revenue of the business by means of the following ratio:

$$\text{Percentage of total resources invested in accounts receivable} = \text{Accounts receivable} / \text{total assets}.$$

This ratio overstates the investment of the business in accounts receivable, since accounts receivable are recorded at sales price rather than at the cost of goods sold on credit. A more accurate indicator of the effectiveness of credit management policy and collection is the average accounts receivable collection (ARC) period. This ratio expresses the total amount of receivables outstanding in terms of an equivalent number of average daily credit sales:

$$\text{Average collection period} = \text{Total accounts receivable} / \text{average daily credit sales}.$$

Accounts receivable have to be monitored to alleviate the costs of credit loss (bad debts). In the next sub-section, the literature pertaining to the monitoring of credit loss and accounts receivable carrying costs is discussed.

4.6.1 Monitoring credit loss and accounts receivable carrying costs

Scherr (2015) deliberates that credit management policy mainly concerns the control of credit-related costs such as bad debts. The researcher identifies two types of credit-related costs,

namely bad debt expenses and accounts receivable carrying costs. Bad debt expense denotes accounts receivable that is uncollected because of default. Scherr (2015) elaborates that if the organisation has large numbers of accounts receivable in its portfolio, it has a greater number of defaults.

Bad debts are measured by means of the following ratio:

$\text{Bad debt ratio} = \text{bad debt} / \text{credit sales} \times 100$

A business determines certain confidence limits based on the expected value of this ratio, for example, a bad debt ratio of 5 percent of credit sales generally is expected for a business. The business also determines the historic random variation in this ratio, for example, historically, variations of 1 percent have occurred. If the actual ratio of bad debts to credit sales of the business falls outside these limits, an investigation needs to be performed.

The accounts receivable carrying costs represent the time value of money for investment in accounts receivable assets and are computed as a required return times the investment in accounts receivable (Scherr, 2015). Additionally, the larger the accounts receivable in the portfolio, the greater the accounts receivable carrying costs. Shah (2015) and Aggarawal and Tyagi (2016) similarly identify the costs associated with accounts receivable, which include cost of financing accounts receivable, administrative costs in managing a credit department, collection costs and bad debts losses. They all argued that bad debts loss is an inherent risk. In spite of implementing effective credit management policy, a certain fraction of accounts receivable results in bad debt loss. Therefore, the information about the possible bad debt loss should be incorporated in the credit management policy. Kulikova, Garyncev and Goshunova (2015) advise that the provision of doubtful debts foundation should be based on the principle of accounting concepts. In this regard, it is sensible to use the process of accounts receivable aging based on the probability of payment coefficient.

4.7 NATIONAL CREDIT ACT

In South Africa, a consumer credit regulatory management highlights the prevention of consumer over-indebtedness (Ssebagala, 2016). The *Usury Act, 1968 (Act No. 73 of 1968)* and the *Credit Agreements Act, 75 of 1980*, have been the cornerstone of consumer credit in South Africa for the last thirty-odd years. The abovementioned acts have now been replaced by one piece of legislation, the *National Credit Act (NCA), 34 of 2005*.

The history of consumer credit legislation in South Africa is not isolated from developments elsewhere, consumer credit legislation is often viewed by a new generation of lawyers as a modern invention with very few, if any, historical roots (Otto, 2010). The formation of the NCA was that debtors who are protected by principles that have developed over a long period of time and that have become part of their common law should, in addition, be protected by legislation.

Mlandu (2010) identifies that the Act rests on three pillars, namely the ability to pay, the disclosure of total cost of credit and setting of interest rate caps. In addition, it applies to all credit agreements between parties dealing at arms' length and made within South African borders, where a consumer can be a juristic person, the state or an organ of state. In terms of the NCA, a credit provider may conclude a credit agreement with a consumer only after a proper financial assessment concludes that the consumer will be able to satisfy all of his obligations under all his credit agreements (Stoop & Kelly-Louw, 2011). Stoop and Kelly-Louw (2011) note that a practice of not conducting this affordability assessment has evolved amongst certain credit providers where the credit agreement involved is a suretyship agreement.

4.7.1 Acknowledgement of debt

In practice, it frequently transpires that a creditor accommodates a debtor by entering into an acknowledgement of debt (AoD) with the debtor to facilitate repayment of a current debt instead of instituting legal action for recovery of the debt (Van Heerden & Borraine, 2011). This will imply that the debtor will be afforded a longer period to repay the debt. An acknowledgment of debt, commonly referred to as an AoD, is a document that contains an unequivocal admission of liability by the debtor (Schoeman Tshaka Attorneys, 2014). The debtor acknowledges that he or she owes a particular sum of money to the creditor and undertakes to repay what is owing on terms so agreed between the parties therein.

During the registration period, many students sign the acknowledgement of debt before they can register; a document that contains clear admission of a liability by a debtor. Therefore, students sign the document to acknowledge and undertake to pay a particular sum of outstanding debt from the previous year(s). It is hoped that this study will establish if such signed agreements are obligatory and encountered by students and whether an AoD constitutes a credit agreement that applies to the NCA. The NCA contains no clear answer to this problem. Schreiber (2014) suggests that generally it could be said that if an AoD contains a deferral of payment and requires the payment of interest, fees or charges because of such deferral and payment in instalments, it usually falls within the ambit of the NCA as a credit transaction.

Schreiber (2014) further insists that the applicability of the NCA to an AoD would in each instance need to be decided on its own facts, taking into account the nature of the transaction and the characteristics of the person entering into the AoD as a debtor. It is important for clients to note that when they plan to enter into an AoD as a creditor or debtor they first need to ascertain the applicability of the NCA to the specific transaction to appreciate their rights fully and more importantly their obligations. Finally, if an AoD falls under the ambit of the NCA, it may have serious consequences for the creditor. These include credit assessments, the capping of interest and compliance with pre-enforcement procedures, which in certain instances may lead to the unenforceability of the AoD or procedural problems when instituting action against a debtor based on an AoD, resulting ultimately in wasted costs and time or even loss.

Van Heerden and Boraime (2011) point out that in instances where an AoD has been entered into with a natural person consumer on or after 1 June 2007 as a Section 8(4)(f) credit transaction, it would mean that the creditor will have to comply with the NCA in all respects. Therefore, AoDs, irrespective of whether or not they fulfil NCA, are essential documents in terms of credit management policies to any creditor or business. Van Heerden and Boraime (2011) admit that these are most effective when coupled with other cash flow and credit control strategies. In addition, debtors should guarantee that they are fully conscious of the contents and the meaning of AoD before signing them.

4.7.2 Purposes of National Credit Act

The NCA is about to change the consumer credit landscape, as it aims to tighten the way lenders provide credit and places greater responsibility on these parties. While it is believed that this move will be positive for the consumer, it is doubtful whether the consumer is aware of the Act and its implications and whether it will put him/her in the position of power to benefit from the Act. It is also questionable whether the consumer will alter his/her patterns because of the Act in such a way as to reduce his/her level of indebtedness.

The Act shifts the burden of assessing the consumer's creditworthiness to the credit provider, requiring vigilance on the part of the credit provider. The Act further promotes and protects consumer rights, which, *inter alia* include the right to apply for credit, reasons for credit being refused, requirement that credit agreements be in a simple and understandable language and the protection against discrimination relating to credit.

4.7.3 The credit provider - consumer relationship

The NCA has as an underlying purpose that aims to regulate the relationship between the consumer and credit provider and confer the majority of rights upon the consumer to ensure that the main purpose of the NCA, to protect consumers, is met. It is important to take a closer look at this relationship and how it will be affected by the NCA and how it will in turn affect the debt recovery industry in particular.

The right to privacy and confidentiality – Section 68 (1) of the NCA requires that any person who receives, compiles, retains and/or reports any confidential information in respect of a consumer or prospective consumer, protect the confidentiality of such information. They must ensure that such information is utilised only for purposes as allowed for in the NCA and that the information is reported or released only to the consumer himself or another person insofar as the NCA or other legislation allows such a release to a third party, or if instructed by the consumer to release such information, or if ordered to do so by a tribunal.

4.8 APPLICATION CREDIT MANAGEMENT AT SOUTH AFRICAN UNIVERSITIES

Credit management has become a challenging task for most universities. A university is a non-profit organisation aiming at providing the knowledge and skills to the nation. However, it is imperative that a non-profit organisation remains financially sustainable for its constant continuity. Michalski (2012) observes that accounts receivable management should contribute to the realisation of basic financial purpose of a non-profit organisation, which is the most financially effective realisation of its mission. The non-profit organisation's mission realisation is more effective when it is realised in the most efficient way. It is executed with a focus on risk and uncertainty. Any change in the level of accounts receivables in a non-profit organisation increases the net working capital level and influences costs of holding and managing accounts receivables (Michalski, 2012). This means that there is a justification that credit management for non-profit organisations does not differ from a for-profit business.

Credit management policies and credit management frameworks at South African universities of technology need an urgent remedy in terms of designing sustainable credit management policies. Indeed the challenges facing universities are enormous, making it even more essential that each institution develops a comprehensive credit management strategy with clear guidelines. The default of student accounts can be viewed in twofold. First, there is an element of late payment,

which exploits the possibility of default penalty interest for late payment. Late payment implies that the university can still receive revenue from student accounts but not promptly. Secondly, there is a defining issue of non-payment of tuition fees whereby the student accounts are not paid at all and the university does not receive any revenue, which may lead to sanction or suspension of studies.

At South African universities, there is a section in the finance department that is responsible for the administration of the outstanding student fees known as the credit management or student debtors'/fees management. This section usually is responsible for the risk and recovery of student fee income from current and non-current students. Student credit management is also responsible for the administration and processing of the debit orders and methods of payment. South African universities have an autonomy, which means the ability of universities to organise their own affairs (including financial management) without interference from the state or its representatives (Adams, 2006). This implies that each university has its own student accounts credit management policy.

Although student accounts receivable presents variations among universities, it represents a high proportion of the institution's current assets, sometimes accounting for more than two thirds of them. Different universities are using different credit management systems. Some universities use aggressive credit management systems whereby students are not permitted to register for a subsequent year of study if there are still outstanding fees from the previous year of study. The outstanding fees have to be paid in full and the registration fee for the current year of study paid in full before students can enrol for further studies. Hence, a student cannot graduate if there are outstanding tuition fees owed to the university, as the university will withhold degrees or diploma certificates. If the fees are outstanding above the stipulated credit limit, universities may resort to using credit agents and at times students will be listed on the credit bureau.

Other universities use conservative or lenient credit management systems whereby students are entitled to register for the subsequent year even if there are fees outstanding from the previous year. This is done by way of concession, where students acknowledge the outstanding debt.

4.8.1 Effectiveness of credit management policy

Credit management is a financial asset (accounts receivable) to the organisation that is offering credit. This imposes a financial risk because there is a probability of default of accounts receivable. Effective credit management is about developing consistency in credit and collection processes of outstanding debts. This, in turn, will ensure efficiency in the entire revenue cycle.

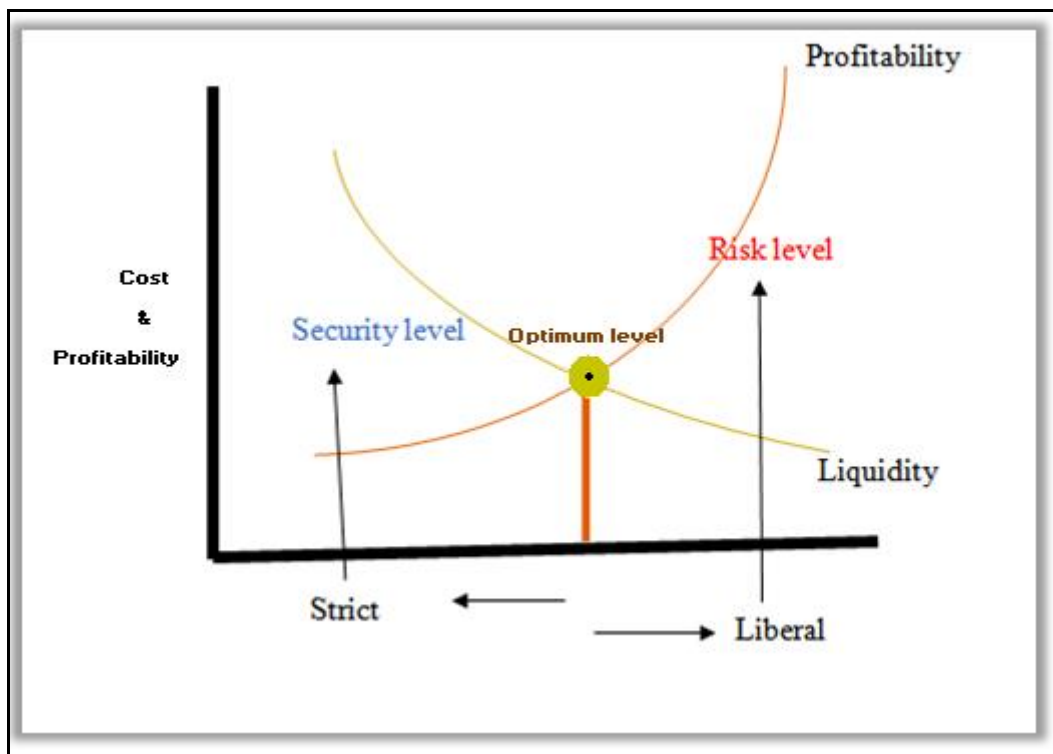
The underlying principle to consistency is a thoughtfully designed and actively implemented credit and collection policy. Such a policy has effectiveness into entire credit-to-cash process thereby improving the liquidity. Even if businesses and organisations already have a credit and collection policy, it is important to review it on a regular basis to assess its effectiveness and to make sure that it is enforceable.

Scherr (2015) suggests that to achieve an effective credit management strategy, an organisation can use internal expertise or outsource alternatives. According to his study, the most common internal policy mechanisms are enforcing the credit limit of each accounts receivable or a personal guarantee of the debt. This personal guarantee enhances the probability of collecting the debt and decreases the defaults rates. Outsourcing alternatives will imply using the collection agency to recover the outstanding debt on behalf of the organisation.

Omondi (2014) suggests that it is the prerogative of the organisation to follow a lenient or stringent credit policy. Lenient policy allows the organisation very liberal terms while stringent policy allows an organisation to impose on a highly selective basis to customers who have proven records of creditworthiness. The key principles of credit management that an organisation should adhere to are ageing of accounts receivable, evaluating the potential to pay using criteria such as integrity of the customer, collateral to be pledged and current economic conditions should be analysed, assessment of default risk and responsibility and the financing of accounts receivable until it has been paid (Omondi, 2014).

Credit management policy affects accounts receivable management as it guides how to manage accounts receivable and how to identify between liberal and strict credit. Kumar (2010) illustrates how strict and liberal policies can affect profitability. If an organisation does not restrict to offer goods or services on credit, this liberated credit policy will increase the amount of credit revenue and profitability. However, risk will also increase with increasing of credit revenue. If an organisation offer goods and services to those accounts receivable whose capability to pay is not good, then there is a probability that some amount will become bad debt. An organisation can increase the time limit for paying such accounts receivable. On the other hand, if an organisation's credit policy is strict, then it will increase liquidity and security, but decrease the profitability. Consequently, the credit manager should make a credit policy at an **optimum level** where **profitability** and **liquidity** will be equal. Figure 4.3 provides an illustration on how to achieve the optimum level between a liberal policy and a strict policy. The length of credit period allows accounts receivables to pay for debt and it has to be afforded according to the credit profile of customers (Kumar, 2010).

Figure 4.3: Optimum level between liberal and strict policy



Source: Kumar (2010)

According to Ngugi, Gakure, Gekara and Kahi (2017), effective credit management policy involves five steps: 1) determining to whom to extend credit, 2) establishing a payment period, 3) monitoring collections, 4) evaluating the liquidity of receivables accelerating, and 5) eventually cash receipts from accounts receivables holders. An important part of managing accounts receivables according to portfolio theory of accounts receivable, is determining to whom credit should be extended and to whom it should not. It is essential that accounts management policies are written down, clearly defined and communicated to account receivables. The study further concludes on the governance that credit management policies that are written down (proclaimed), clearly defined and communicated affect accounts receivables positively.

4.8.2 Securitisation and factoring of student accounts

Both factoring and securitisation involves capitalising the receivables of the organisation. Factoring is applied for relatively short-term account receivables ranging between one and six months, while securitisation is implemented on long term accounts receivables of the organisation. Factoring is a transaction that implies the sale of accounts receivable to a financial institution or any third party (a factor) at a discount. A business will usually factor its accounts

receivable to enhance the cash flow. Mian and Smith (1992) communicate several forms of the contractual agreement between the organisation and the factor. Under a typical contract, when the manufacturer receives an order, it is passed to the factor. The factor does the credit-risk assessment and makes the credit-granting decision. In non-recourse factoring, the factor has no recourse to the manufacturer's other assets, should the customer default.

Securitisation has become an important way for financial institutions, organisations and governments to pool assets and sell them to investors (Zalecki & Morcos, 2006). Zalecki and Morcos (2006), Avery and Turner (2012) and Soederberg (2014), discuss key fundamentals for securitising student loans to alleviate student debt. For this study, securitisation will not be deliberated further because it is not possible to apply securitisation or factoring of students accounts in South Africa due to many factors such as NCA and the constitution.

4.9 SUMMARY AND RESEARCH GAP

This chapter has attained the third secondary research objective by exploring the concept of credit management in the context of higher education in South Africa. From the foregoing review of the relevant literature, the credit management (accounts receivable management) has been discussed widely on the corporate and banking industry level. The trade credit offered by universities has different characteristics to that offered by the corporate sector. At the university, students register without any assessment of credit profile or credit assessment. Universities' credit management capability has been compromised seriously because of high student debt. There are inconsistencies in credit management policies amongst South African university. This is driven by the fact that each university has autonomy in the management of operations.

This study will investigate the effectiveness of credit management policies of student accounts at selected South African universities. The effectiveness of credit management policies on student accounts has not yet been studied let alone from a South African universities' perspective. Furthermore, the study will examine fragmentations and similarities then establish the possibility of harmonising and standardising credit management policies taking into account the cognisance of an inclusive credit management policy. It is envisaged that this study will recommend a comprehensive and consistent credit management policy for South African universities. Effective credit management policy can be used as a stepping-stone to enhance financial sustainability of South African universities. If South African universities are not financially sustainable, it will be difficult for them to offer much needed quality education to alleviate the fundamental socio-economic issues such as inequality, unemployment and poverty. Furthermore, to ensure that the

vision of NDP 2030 is achieved, proactive strategies have to be applied to avoid university bankruptcy and financial instability. The next chapter will focus on theoretical perspectives of personal financial management in the context of student debt and credit management policy.

CHAPTER 5

PERSONAL FINANCIAL MANAGEMENT

5.1 INTRODUCTION

The aim of this chapter is to address the fourth secondary research objective as set in chapter 1 (refer page 9) of conducting a literature review to explore the concept of personal financial management in the context of student debt and credit management policy. Chapter 2 is the underlying guidance for this chapter as it outlined the human behaviour by defining deprivation theory. Deprivation theory form a basis for this chapter in that as a result of the payment of tuition fees, students' expectations of their university experiences could change, resulting in greater levels of perceived unfairness in instances of disparity between such expectations and the realities of their experiences. In light of this background, it is empirical to establish the role of personal finance with regard to escalating student debt at South African universities. This chapter provide a detailed review of the existing literature on six topics: 1) student personal financial management; 2) financial life cycle; 3) personal saving in South Africa; 4) human capital concept; 5) South African household spending towards education; and 6) entitlement culture. Reviews of the literature helped to identify similar studies on these topics, which then provided evidence of potential research gaps ripe for further study. The chapter concludes with a summary of the issues explored and the research gap.

In keeping with the conceptual framework established in Chapter 2, this chapter highlights that personal financial management, which is related to financial literacy, plays a pivotal role in financing for higher education. Effective personal financial management is of great importance, especially in a world where individuals are faced constantly with financial risks and uncertainties regarding their financial future (Van Deventer, De Klerk & Bevan-Dye, 2014). Personal financial management has become acute in recent years and has been narratively studied by many scholars, policy makers, financial analysts and even psychologists. As a result, personal financial management has diverse conceptual definitions in existing research. Many scholars may not agree on how to define the concept of personal financial management precisely, but they can identify reasons people struggle to manage money. Remund (2010) gives the most basic definition, stating that financial literacy relates to a person's competency for managing money.

On the other hand, Huston (2010) defines personal financial management as a typical input to model the need for financial education and explain variation in financial outcomes. The researcher further alluded to the fact that financial literacy is a component of human capital that

can be used in financial activities to increase expected lifetime utility from consumption (i.e. behaviours that enhance financial well-being). According to the United States (US) Financial Literacy and Education Commission (cited by Basu, 2005) financial literacy is defined as the ability to make informed judgements and to take effective actions regarding the current and future use and management of money. Financial literacy should comprise the ability to make informed financial choices, plan for the future, spend prudently and control and be prepared for life events such as saving for university education.

Robb and Woodyard (2011) suggest that understanding the relationship between knowledge of personal financial management and corresponding financial behaviour is increasingly renowned as an area of critical financial importance. Scholars validate the importance of knowledge by referencing how knowledge can improve financial well-being (Scott, 2010) with the general assumption that improved knowledge will result in more effective financial decision-making. In fact, South Africans lack the essential financial skills to plan for retirement, education and general personal financial management.

A relevant study by Kotzé and Smit (2008) indicates that there is a positive correlation between financial knowledge and management over personal finances, as well as confidence in handling money and making investment decisions. Therefore, it can be expected that individuals who perceive that they have sufficient financial knowledge feel that they have informed management over their personal finances; these individuals appear to be confident in controlling their money and making investment choices. Kotzé and Smit (2008) elaborate on the fact that it is imperative that from a young age individuals should obtain financial education in personal financial management to lessen the concerns and consequences of the maladministration of personal finances and negligent handling of debt. In their study, they concluded that there is a necessity for financial education and financial literacy in South Africa. Against this background, it is imperative to understand the relationship between financial knowledge and financial behaviour.

5.2 STUDENT PERSONAL FINANCIAL MANAGEMENT

Personal financial management of university students has been a focus of many research studies as a high level of student debt and inadequate money management practices have shown to relate to financial constraints. Students are perceived as a high-risk group in terms of financial stability (Cude, Lawrence, Lyons, Metzger, LeJeune, Marks & Machtmes, 2006). Student personal financial management attitudes have been investigated more extensively, for example stress-related health problems, poor academic performance and dropout rates (Palmer, Bliss, Goetz &

Moorman, 2010; Robb & Pinto, 2010; Cloete, 2016; Zhang, 2013), while several studies have examined attitudes toward education loans and student debt in general (Chudry, Foxall, & Pallister, 2011; Haultain, Kemp & Chernyshenko, 2010). Financial education is the key to manage financial complications, particularly among young adults (Fatoki, 2014; Cude, Danes & Kabaci, 2016). Financial judgements students make in the university have a significant effect on their financial situation after university. Students need to make essential financial choices on whether to save, spend or invest, founded on their financial knowledge.

The current study will expand the scope of the existing literature by exploring the personal financial management and student debt at South African universities. With the intensive research in this area, the study will be able to come up with conclusive evidence whether there is any relationship between current student debt at South African universities and student money management attitudes. The study will examine the underlying factors of personal financial management, i.e. students' attitude, financial handling beliefs and financial situation factors. Kidwell and Turrisi (2004) propose that amounts of students debts are related to their budgeting practices; students who perceived themselves as competent in budgeting have less debt. They add that personal management tendencies can consequently influence the accrual of financial debt. Some researchers have shown positive correlation between handling financial responsibilities with financial training (Robb & Woodyard, 2011). For example, Lyons and Hunt (2003) suggest that students prefer to receive financial education training in one-on-one discussions, small group settings and from financial aid officers.

Improved credit card usage behaviour was related with students with higher scores on a measure of financial knowledge in a study by Robb (2011). Actually, knowledge had an influence on the likelihood of students revolving a balance, making minimum payments, delinquency, cash advances, or maxing out credit cards. Amongst the overall population of students, there is indication that there is a positive correlation between financial knowledge and financial behaviour. Leclerc (2012), who examines the specific sociological factors that influence students to become negligent with credit card debt, complemented the study. The researcher concludes that family income and the amount of financial aid a student receives affects their financial situation, as does the student's own level of financial education and financial socialisation from parents.

Moreover, financial literacy has an effect on asset accumulation. A recent study by Letkiewicz and Fox (2014) revealed that financial literacy is positively correlated with both illiquid and liquid assets, with a standard deviation increase associated with 60 percent and 30 percent

increases, respectively. Letkiewicz and Fox (2014) further suggest that financial literacy alone is not significant, but when coupled with conscientiousness it appears to benefit those low in conscientiousness to improve net worth. These findings by various researchers are consistent with other studies that find a positive relationship between financial literacy and financial outcomes, such as savings and investment practices. It is important that individuals take responsibility for their future and that concept has to be transferred to the next generation.

Van Deventer, De Klerk and Bevan-Dye (2014) studied student personal financial management in the South African context. In their study, they investigate the Generation Y cohort, labelled as individuals born between 1986 and 2005, which represent an estimated 32 percent of the country's total population in 2015, of which the African portion made up a projected 84 percent of this cohort. Their study reveals that African Generation Y students perceive themselves as having the necessary personal financial management skills. Another study by Nanziri and Leibbrandt (2016) was conducted through a constructed financial index for South Africa using data collected on attitudes (towards), access to and use of financial services over the period 2005 – 2009. The study reveals that below average financial literacy is common among women and young adults (including students). In examining what drives the financial literacy levels observed in their study, they found that the scores are higher in the financial knowledge domain compared to the financial capability domain. This means that financial concepts or terms are well engrained in the minds of South Africans, but positive financial behaviour is lacking.

A study by Bates, Lucey, Inose, Yamane and Green (2015) interprets the higher education students' interpretations of financial morality. The theory of financial morality includes an element of stewardship and postulates that financial decision-making embraces elements of personal and social bias and that human values and sustainability value consideration as part of the process. They document that the basis for conservative financial practice signifies the concept of choice and the learning of prudent financial decision-making. According to their proposition, the conservative wisdom embraces that good choices prompt favourable results while bad choices yield the reverse. This kind of thinking imparts itself to patterns of assumptions about people founded on perceptions of their economic status. Furthermore, conservative understandings of financial practice assign accountability to a person or group of people for the outcomes related with their choices of resource allocation.

To complement the study of financial literacy, Louw, Fouché and Oberholzer (2013) advance the discussions by evaluating the financial literacy needs of third-year students at a South African university. In their study, they discovered the areas where the students, who mainly are

financially funded by their parents, have a high level of financial literacy, as well as the areas of illiteracy that need to be addressed. From the findings, cash management was essential for the majority of students who budget for their daily finances. Furthermore, although the students do not have much exposure with financial practices, they have a good level of knowledge regarding the collection questions on general financial literacy; however, there is an indication that their financial literacy is not sufficient.

5.3 FINANCIAL LIFE CYCLE

In the past three decades, many respected finance theorists and behavioural scientists have studied how people should and actually do make investment decisions (Bodie, 2003). Financial literacy is a matter of intense concern to millions, perhaps billions, of people around the world. Several studies have captured important features of this reality. Lusardi and Mitchell (2014) studied the theory of financial knowledge as a form of investment in human capital. They argue that financial literacy has important implications for welfare, as well as policies intended to improve levels of financial knowledge in the larger population. They observe that while the costs of raising financial literacy are likely to be considerable, so too are the costs of being liquidity-constrained, over-indebted and poor.

Campbell (2006) had two contrasts of household finance whereby positive household finance is described as a study of how households behave and normative household finance as a study of how households should behave. His study deducts that, with a few adjustments, standard finance theory can rationalise the behaviour of most households and thereby determine the differences between actual and optimal behaviour. However, some households still make investment blunders because their actual behaviour significantly deviates from what is optimal. Financial education can help such households overcome their blunders. In other words, the relationship between theory and education is clear; normative financial theory describes the goal and financial education benefits for households.

Bodie, Treussard and Willen (2008) provide a theoretical contribution of life cycle theory on savings and investment by investigating the household saving for retirement and for higher education. According to the model, individuals save when they are young to finance for future consumption. They highlight that the model assists in managing resources through different times and outcomes over the life cycle in a logical and rigorous way. Previously, individuals relied on institutions such as insurance companies and financial institutions to make financial decisions. Over time, institutional shifts have forced households to take greater responsibility for

their financial plans (Bodie, Treussard & Willen, 2008). They maintain that the purpose of life-cycle theory is not to provide answers to portfolio plans but rather to provide a framework for making lifetime plans. It remains the responsibility on individuals and households to manage their finances and how much to save for education and retirement.

The model was complimented by an important study by Brown, Haughwout, Lee, Scally and Van Der Klaauw (2014), which reveals the student debt role on the household balance sheet. Interestingly, their study discovered that there was a positive relationship between student debt and other debts. In fact, student debt is now the second largest liability on household balance sheets, after mortgages. The financial education on household level has become an important feature particularly in the South African context.

5.4 PERSONAL SAVING IN SOUTH AFRICA

Household debt levels comparative to GDP have escalated rapidly in many countries over the past decade (Lombardi, Mohanty & Shim, 2017). The importance of financial literacy cannot be underestimated as it is central to how individuals and communities create and preserve their wealth and manage debt. This recognition has given motivation to a variety of financial education programmes (Piprek, Dlamini & Coetzee, 2004.). The FinMark Trust report studied by Piprek, Dlamini and Coetzee (2004) indicates that lack of financial literacy can result in poor financial choices that can be harmful to individuals and communities. The report further points to a link between poverty, low literacy and low financial literacy.

There is a general concern that consumers lack the working knowledge of financial concepts and thus lack the know-how to make decisions that benefit their economic well-being. Braunstein and Welch (2002) state that this deficiency in financial matters is likely to lead to inability to save for long-term goals such as home purchases, financing higher education or retirement planning. Engelbrecht (2014) emphasises that while financial literacy on its own is not adequate for the eradication of poverty, it signifies a critical role. This role is to afford the means through which individuals can obtain the necessary knowledge and values for personal financial management. Engelbrecht (2014) recommends that financial literacy education should be facilitated by social workers as a poverty alleviation tool with the aim of stimulating social change in order to enhance the financial well-being of vulnerable people. Financial literacy will improve the saving and investment behaviour of individuals.

Prinsloo (2000) defines personal saving as saving by the household sector as that part of current income, after the payment of direct taxes, which is not consumed or transferred as part of

household current consumption. On the contrary, any portion of the current expenditure of households not financed by current income but rather by the use of credit characterises an increase in the financial liabilities of individuals and is regarded as negative saving. Prinsloo (2000) categorises personal saving into two categories, namely contractual and discretionary saving. Contractual saving includes individuals obligating to a series of payments such as premiums on insurance policies, contributions to pension funds and the capital amount payable on households' mortgage loans. On the other hand, discretionary saving implies households are not obligated to fixed commitments. All contractual savings normally stem from optional savings to the extent that contractual obligations are made on a voluntary basis. An exception being the employee is bound by a contract of service to contribute to a pension fund. When an individual has to make a saving for education, a decision has to be made whether it will take the form of contractual or discretionary saving.

A study on South African household savings behaviour conducted by Du Plessis (2010) indicates that several factors determine South African household savings behaviour and that the decreasing household savings rate cannot be ascribed simply to low current income levels of South Africa's large poor population. Instead, South African household savings demonstrate that they are negatively impacted by South Africans' anticipation of future income, with the result that South Africans have a short-term outlook with regard to financial planning. A conflicting study by Precious and Asrat (2014) reveals that opposing a theoretical anticipation, the level of income and household savings are negatively correlated, suggesting that South African households do not save and progressively rely on debt to finance their spending. In addition, the study reveals that there is a positive correlation between household savings and age dependency ratio, inflation and real interest rate.

Zwane, Greyling and Maleka (2016) arrived at similar findings in their study that investigate the determinants of household savings in South Africa over the period 2008 – 2012. Their study discloses that household savings in South Africa mainly are determined by income, age, education achievement and employment status. Mongale, Mukuddem-Petersen, Petersen and Meniago (2013) provide guidance on how household savings can be improved in South Africa. They suggest that with a higher level of disposable income which subsequently leads to economic growth household savings can be increased. In their study, results indicate that the rate of household savings is correlated with disposable income and real GDP is positive and significant. They further recommend that government should consider reducing income taxes as a way of enhancing the disposable income and rather increase consumption taxes.

It is imperative to reflect on South African household debt levels relative to savings. If an individual sustains the cost of an event and there is a possibility that the cost will surpass that individual's ability to pay, then the individual experiences a significant risk (Glater, 2015). South Africa is ranked amongst the highly indebted countries with lowest savings culture in the world. The determinants of household savings in South Africa over the period 1990-2011 was studied by Precious and Asrat (2014) who came to the conclusion that the level of income and household savings are negatively related, suggesting that South African households do not save but progressively rely on debt to finance their spending. In fact, Figure 5.1 provides statistics of South African household debt, which illustrate that the recent households' debt in South Africa decreased to 74.40 percent of gross income in 2016 from 78 percent in 2015. Household debt to income in South Africa averaged 57.28 percent from 1969 until 2016, a realisation magnitude of 86.40 percent in 2008 and a record low of 40.30 percent in 1980.

Figure 5.1: South Africa households' debt to income



Source: South African Reserve Bank (2017)

A study by Meniago, Mukuddem-Petersen, Petersen and Mongale (2013), about what causes household debt to increase in South Africa, confirms the existence of a relationship between household debt and other macroeconomic factors. Accumulative household debt was found to be associated with fluctuations in CPI, GDP and household consumption. In addition, house prices and household savings were identified to contribute to a rise in household debt but this relationship was found to be statistically immaterial. Alternatively, household borrowing was identified to be significantly and insignificantly affected by negative fluctuations in income and prime rate, respectively.

Fatoki (2015) conducted a similar study where the causes and consequences of household over-indebtedness in South Africa were studied. The study reveals that when the current income is not adequate to support household consumption, households would borrow and transfer future consumption into the present through debt. The study also suggested that a factor that can lead to over-indebtedness is the lack of financial literacy. Lusardi and Tufano (2015) add that individuals must have a debt literacy to enhance financial understanding that measures knowledge about debt and self-assessed financial understanding. In their study, they discovered that individuals with lower levels of debt literacy tend to incur high-cost behaviours, incurring higher fees and using high-cost borrowing. In addition, less debt literate individuals also report to be financially negligent and their debt is excessive and they lack the ability manage their debt position.

5.5 HUMAN CAPITAL CONCEPT

Deprivation theory in chapter 2 proposed that expected outcomes are determined in part by social comparisons between oneself and others. Human capital concept provides a rationality notion of parents investing their time and resources in their children. The concept recommends that an individual will make investments in human capital if the possible benefits surpass the costs related with education. Related to this concept, Brown, Scholz and Seshadri (2011) discuss a model in which parents and children create investments in the children's education and parents can transfer cash to their children. They demonstrate that for a recognisable set of parent-child pairs, parents will reasonably under-invest in their child's education. For these parent-child pairs, additional financial aid will increase educational accomplishment. The model highlights an important feature of higher education finance, the expected family support that is based on income, assets and other factors.

The expected family contribution is neither legally guaranteed nor universally offered. Their model recognises the set of families that are unlikely to provide their expected family contribution. Using a common proxy for financial aid, they show that financial aid increases the educational attainment of children whose families are likely to under-invest in education. Financial aid has no effect on the educational attainment of children in other families. The theory and empirical evidence identifies a set of children who face quantitatively important borrowing constraints for higher education. Given the personal financial management with regard to the role of parents on children, it is essential to discuss intergenerational transfer that comprise attachment theory, which is discussed in the next section.

5.5.1 Intergenerational transfer

The transition from childhood to maturity is pivotal for intergenerational transfer. Kim and Chatterjee (2013) provide an excellent illustration that the improvement of financial independence among young adults is often related to attainment of financial skills and resources, including attaining higher education. Generally, students begin their higher education life with inadequate skills for managing personal finances (Chinen & Endo, 2012). This may be attributed to the fact that students' parents are usually primary caretakers (Sabri & MacDonald, 2010). Family resources are a critical basis of the university decisions of children. Acquiring financial skills during childhood is linked with better savings in adulthood (Grinstein-Weiss, Spader, Yeo, Taylor & Freeze, 2011). The study of Grinstein-Weiss *et al.* (2011) on transfer of financial knowledge found that getting high levels of financial literacy in childhood is associated with higher credit scores and lower credit card debt in adulthood. In addition, the level of parental financial literacy affects the relationship between children's later educational achievement and credit scores. These results propose suggestions for initiatives supporting financial competency for parents and children. Financial decisions are guided significantly by our attitudes, which are guided by cultural issues including family, ethnicity, gender and socioeconomic station (Britt, 2016). In Chapter 2 the study by Savolainen *et al.* (2013) provides an alternative approach by concluding that individual characteristics of the parents influence their personal socioeconomic attainment as well as the behavioural characters they pass on to their children. Some of these behaviours, such as reasoning ability and hyperactive personality, have a considerable genetic component.

An attachment theory studied by Bretherton (1992) supplements the discussion by suggesting that individuals differ in the way they approach and respond to the world. These differences are based on experiences of relating to important people in their lives, particularly parents. The influence of childhood attachment becomes embedded in working models. Working models are the mental representations that an individual holds, which develop through experiences with people that an individual is attached to. Given the importance of childhood financial practices, Kim and Chatterjee (2013) discovered that childhood financial socialisation practises were correlated positively with valuable financial practices. Financial practices were found to be attached to parental socialisation.

Using the concept of attachment theory, Jorgensen, Rappleyea, Schweichler, Fang and Moran (2017) studied the role of attachment insecurity, locus of control and parental financial communication on the financial behaviour of emerging adults from a family financial

socialisation theory perspective. The study recommends that financial communication and locus of control mediated the relationship between attachment insecurity and financial behaviour. The conclusions reinforced the presence of attachment as significant to family relationship in relation to financial socialisation process, as well as the construction of a theoretical model of family financial socialisation theory.

Lissington and Matthews (2012) agree that one way in which financial literacy is attained is through intergenerational transfer from one's parents and grandparents, but it is unknown to what extent this is happening. In their study, they discovered that the intergenerational transfer of financial literacy is less formal than might be anticipated in high net worth families; it tends to be via observation and experience rather than formal passing on of knowledge. They also found that despite concerns about the capability of their planned heirs to manage their expected inheritance, only a small fraction take some form of action to deal with those concerns. The findings are consistent with that of Tang (2017) who had similar findings about intergenerational financial behaviour. The results from the study indicate that parents' financial conduct affects that of children both directly and indirectly. Furthermore, the influence of parents depends on the parent-child relationship. According to Sabri and MacDonald (2010), the influence of childhood consumer experience and financial socialisation agents on savings and financial problems by creating bad habits or poor attitudes toward financial management that could be alleviated through financial education during higher education.

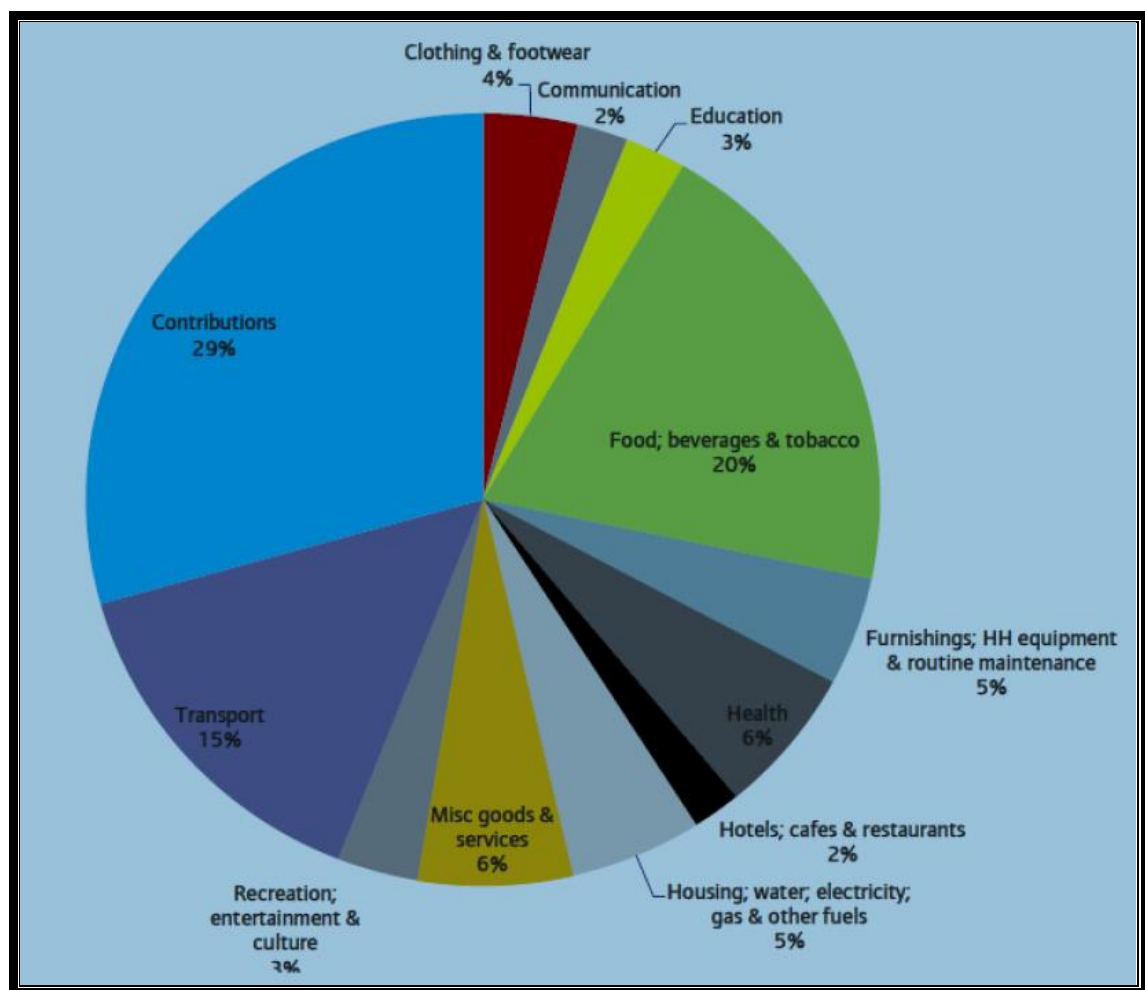
There is an augmented gap in higher education attendance by family income (Belley & Lochner, 2007). Belley and Lochner (2007) examined how ability and family income affect educational attainment and whether family income was associated to the consumption value of schooling. They discovered that family income was a significant determinant of higher education attendance in the early 2000s relative to early 1980s. A number of studies demonstrate the significance of higher education savings (Elliott, Song & Nam, 2013; Nam, Kim, Clancy, Zager & Sherraden, 2013; Rauscher, Elliott, O'Brien, Callahan & Steensma, 2017). When parents open higher education savings accounts, students were more probable to report paying for their university attendance with family assistance (Elliott *et al.*, 2013). In fact, even small savings towards higher education influenced both university enrolment and graduation rates. The imperial evidence supports the utility of children's savings as an investment in educational outcomes (Rauscher *et al.*, 2017). In the next section we will realise how South Africans save for education. This will reflect whether the problem that we have for high university student debt was created by the South African household expenditure patterns.

5.6 SOUTH AFRICAN HOUSEHOLD SPENDING TOWARDS EDUCATION

Generally, South Africa is faced with contemporary struggles of levels inequality, poverty and unemployment. The culture of spending, saving and investment has to be reviewed in order to identify the shortcomings. As the point of departure, it is imperative to reflect on the spending habits of South Africans. A report by Standard Bank (2015) reveals the monthly spending habits of households in South Africa. The bank reflects that 62.3 percent of households fall within the poorest income category below R86 000 per annum, while middle-income groups (R86 001 – R1.48 million per annum) contain a combined 26.4 percent of South African households. The richest households in South Africa only account for 1.2 percent (R1.48 million – R2.36 million+ per annum).

According to Standard Bank (2015), the major household expenditures are food, beverages and tobacco (20%) and contributions, which represent instalment type payments and contain medical aid, insurance and pension fund contributions (29%). Transport encompasses 15 percent of aggregate household expenditure; this includes petrol and purchases of new vehicles. Health accounts for 6 percent and housing, electricity, gas and fuels account for 5 percent of aggregate household spending. Notably, education is only 3 percent of spending, which includes primary, secondary and tertiary education. This is a testimony that South Africans do not contemplate much emphasis on the intrinsic value of education. It also raises a fundamental concern that the current high student debt at South African universities can also emanate from spending habits rather than embedded much on poverty, unemployment and inequality. Up to 60 percent of household spending is on essential items and 40 percent on non-essential items. Figure 5.2 below illustrates the South African household spending habits:

Figure 5.2: South African household expenditure patterns



Source: Standard Bank Research (2015)

A fundamental concern is to reflect on the South African household expenditure patterns, which are related to savings and investment. In light of the above observation, it is imperative that there has to be a paradigm shift in terms of personal financial management. Particularly there is still time to change the future, if financial literacy is concentrated on students because they are the future leaders in society. Jappelli and Padula (2013) confirm that financial literacy accumulated early in life definitely is associated with the individual's wealth and portfolio management later in life.

5.7 ENTITLEMENT CULTURE

A problem of non-payment of accounts is not exclusive to South African universities; there is widespread non-payment of service charges at many South African municipalities (Fjeldstad, 2004). Fjeldstad (2004) believes that the dominant widespread non-payment of service charges is

caused by inability to pay as well as the existence of ‘entitlement culture’. From the research, it was discovered that there is a huge variation in compliance between existing poor communities with similar socio-economic conditions. These differences were explained to be fuelled by the culture of entitlement in that the government must act in the best interest of communities. Similar studies claim that widespread non-payment is because of ‘entitlement culture’ and the ‘culture of non-payment’ inherited from the apartheid era (Johnson, 1999; Ajam, 2014). It is assumed that the understanding of the relationship between provision of services and payment is a critical factor for compliance. Notably, a study by Peters (2011) indicates that significant disparities in payment and non-payment exist across both poor and non-poor. The researcher suggested that effective enforcement to ensure payment is critical, as individuals should believe that non-payment carries consequences. However, Botes and Pelser (2001) indicate that the poverty of many low-paying areas makes them unable to pay rather than unwilling to pay. Fjeldstad (2004) suggests that ability to pay and accessibility become key variables when priorities are made. This means that organisations must effect effective credit management policies to enforce compliance.

Ssebagala (2016) narrate that the growing debt service burdens have raised concerns that South African families are increasingly becoming more financially fragile and unable to meet repayment obligations. The researcher explains that there is excessive spending, which leaves the South African households financially overstrained by negative income shocks. This can also be evidenced by the levels of household debt and spending habits that were illustrated in Figure 5.1 and Figure 5.2 above. The study of Ssebagala (2016) demonstrates that South African households are considerably more likely to be negligent on their financial obligations when they encounter negative occasions beyond their control rather than due to the size of the expenditure burden. This advocates that repayment problems are likely to persist even when consumers borrow within their means. This also suggests that individuals spend excessively, which leads to irrational amounts of debt and, consequently, they are financially overstrained and unable to repay.

5.8 SUMMARY AND RESEARCH GAP

This chapter has reached the fourth secondary research objective by exploring the concept of personal financial management in the context of student debt and credit management policy at the South African universities. In view of the fact that personal savings represent the principal source of funding for tertiary education in South Africa, the extremely low levels of savings, combined with the excessive debt levels of individuals is a cause for concern. Personal debt and

savings are two key variables in determining effective personal financial management. Because students are the future leaders in society, it is important to investigate their personal finance behaviours because they will transfer their values and norms to the next generation. It is evident from the literature above that South African household debt is high and the spending levels towards education are alarming. If the problem of personal financial management can be resolved, individuals will manage their money wisely, budget for the education hence alleviate the high student debt at universities.

Despite its importance, the academic literature has given little attention to how personal financial management can diminish student debt particularly at South African universities. If we accept that individuals make investment mistakes, the next challenge is to apply theory to financial education in order to change the behaviour. Current research attempts to apply theories from various fields to model the impact of financial literacy on student debt. Robb and Woodyard (2011) point out bluntly that individuals' financial well-being is incumbent on their actions. They maintain that, although influenced by external forces such as economic factors and policy structures adopted by government and private industry, decisions ultimately are made by individuals. They present findings that generally are supportive of the notion that level of financial knowledge does have an impact on financial behaviour and individuals must take responsibility for their future financial well-being.

This study aims to contribute to a growing body of research that examines how lack of financial knowledge tends to cause uninformed decisions to be made, leading to poor personal financial management. Currently, little is known about how students respond to student accounts at South African universities by changing their financial behaviour and their financial future expectations that would allow them to make correct decisions about managing their finances.

The next chapter will present the research design and methodology followed in this study.

CHAPTER 6

RESEARCH DESIGN AND METHODOLOGY

6.1 INTRODUCTION

The preceding chapters were fundamental to convey the literature for this study. The current chapter addresses the fifth secondary research objective by presenting the research procedure used to address the objectives and the research questions of the study as stated in Chapter 1 (refer page 8). This chapter illustrates the research philosophy used in the study and justifies the selection of the chosen approach. The research design is outlined and the steps and actions taken to ensure validity and reliability are explained. Specifically, it explains why mixed methods research is considered appropriate for this thesis. Based on research questions, this thesis is designed to be a concurrent quantitative-dominant study in which qualitative and quantitative data are collected and analysed appropriately at the same time, but the latter is given more weight than the former. In addition, the procedures used to collect, capture and process the data as well as the techniques implemented to analyse the data are discussed. The chapter also provides information about the data collection process, reliability, validity of the study and ethical considerations. This chapter is of significance, it enables deeper understanding of the various methods and principles that give the assertion that the research certainly was conducted and that the professed findings are authentic rather than fictional.

The mixed methods approach in social research has been given many names including blended research, integrative, multi-method, multiple methods, triangulated studies, ethnographic residual analysis and mixed research (Harrison & Reilly, 2011:8). Johnson, Onwuegbuzie and Turner (2007:123) define mixed methods research as the type of research in which a researcher or a team of researchers combines elements of qualitative and quantitative research approaches for the broad purpose of breadth and depth of understanding and corroboration. They argue that mixed methods research is one of the three major research approaches (quantitative research, qualitative research and mixed methods research). In addition, Watkins and Gioia (2015:15) give a contemporary definition of mixed methods research in social work research as the rigorous and epistemological application and integration of qualitative and quantitative research approaches to draw interpretations based on the combined strengths of both approaches for the purpose of influencing social work research and policy.

In light of the definitions, Creswell (2014:2) provides an underpinning definition of mixed methods as an approach to research in the social behaviour and health sciences in which the

investigator gathers both quantitative (closed-ended) and qualitative (open-ended) data, investigates the two and then draws interpretations based on the combined strengths of both sets of data to understand research problems. Johnson *et al.* (2007:129) recommend that the definition of mixed methods research will change constantly as this research approach continues to develop. A mixed methods approach can be described as a method that focuses on combining both quantitative and qualitative data in a single study to provide better results than either approach alone.

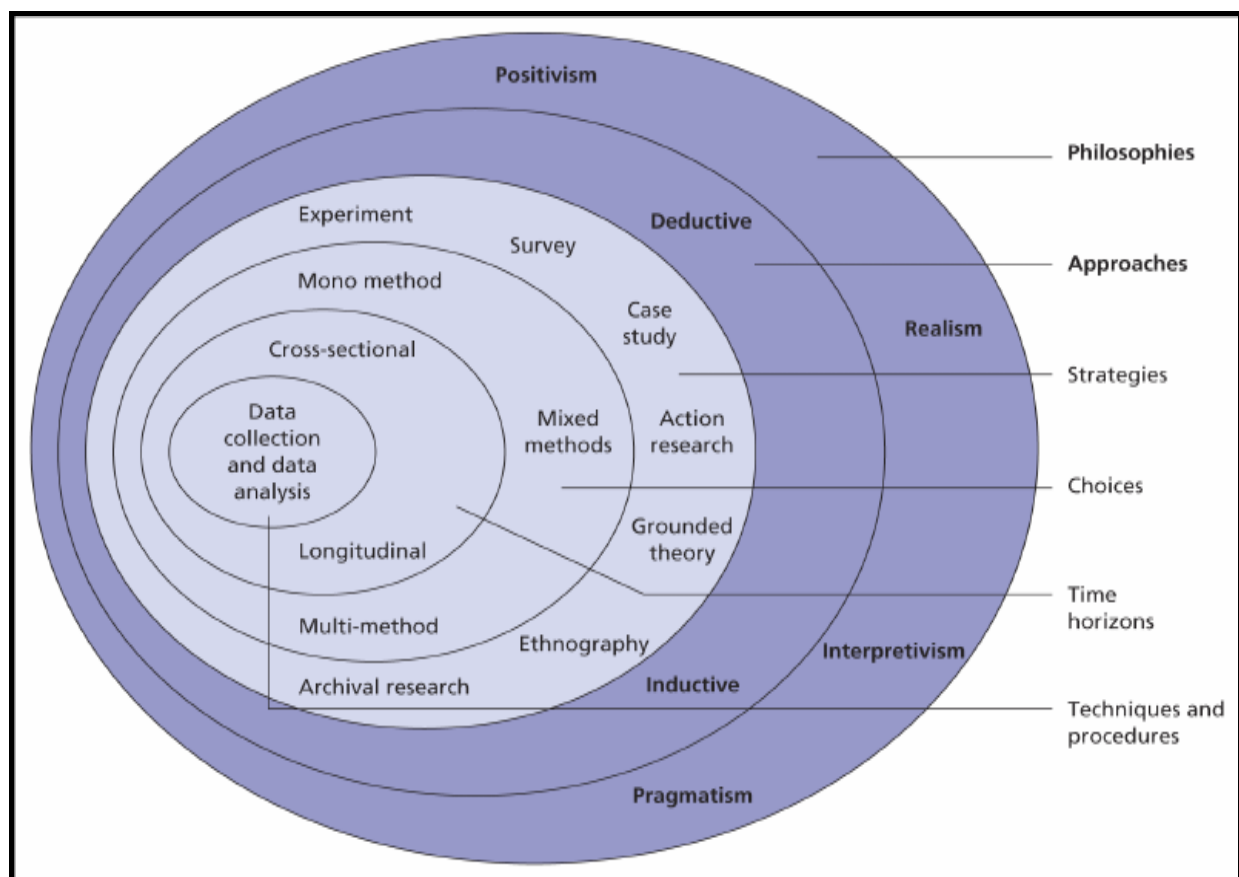
Mixed methods research is becoming an increasingly popular approach in the discipline fields of sociology, psychology, education and health sciences (Azorín & Cameron, 2010:95). In the fields of management, accounting and finance research where positivism has long dominated, there is an increasing call for using multiple methods to explore the same phenomenon (Ferreira & Merchant, 1992; Lukka, 2010; Modell, 2010; Grafton, Lillis & Mahama, 2011). Inspired by this methodological development and motivated by the observed gaps in policy implications of credit management of student accounts that have been discussed in the previous chapters, this thesis adopts a mixed methods research approach as its methodology to explore the main research questions.

Based on research questions and research objectives, this thesis is designed to be a concurrent mixed methods study in which quantitative and qualitative data are collected and analysed appropriately at the same time. Such a design allows the two types of data to integrate at all stages of the project.

6.2 RESEARCH PROCESS

In this study, a research onion is adopted as a framework to guide the study. The research onion provides an effective and comprehensive progression through which a research methodology can be designed. Its usefulness lies in its adaptability for almost any type of research methodology and ability to be used in a variety of contexts (Bryman, 2015). Saunders, Lewis, Thornhill and Wang (2009:108) recommend the use of the research onion to depict the fundamental issues underlying the choice of data collection techniques and analysis procedures. The research onion was developed by Saunders, Lewis and Thornhill (2003:83) in order to describe the stages through which the researcher must pass when formulating an effective methodology. The research onion is illustrated in Figure 6.1.

Figure 6.1: The research onion



Source: Saunders *et al.* (2009:108)

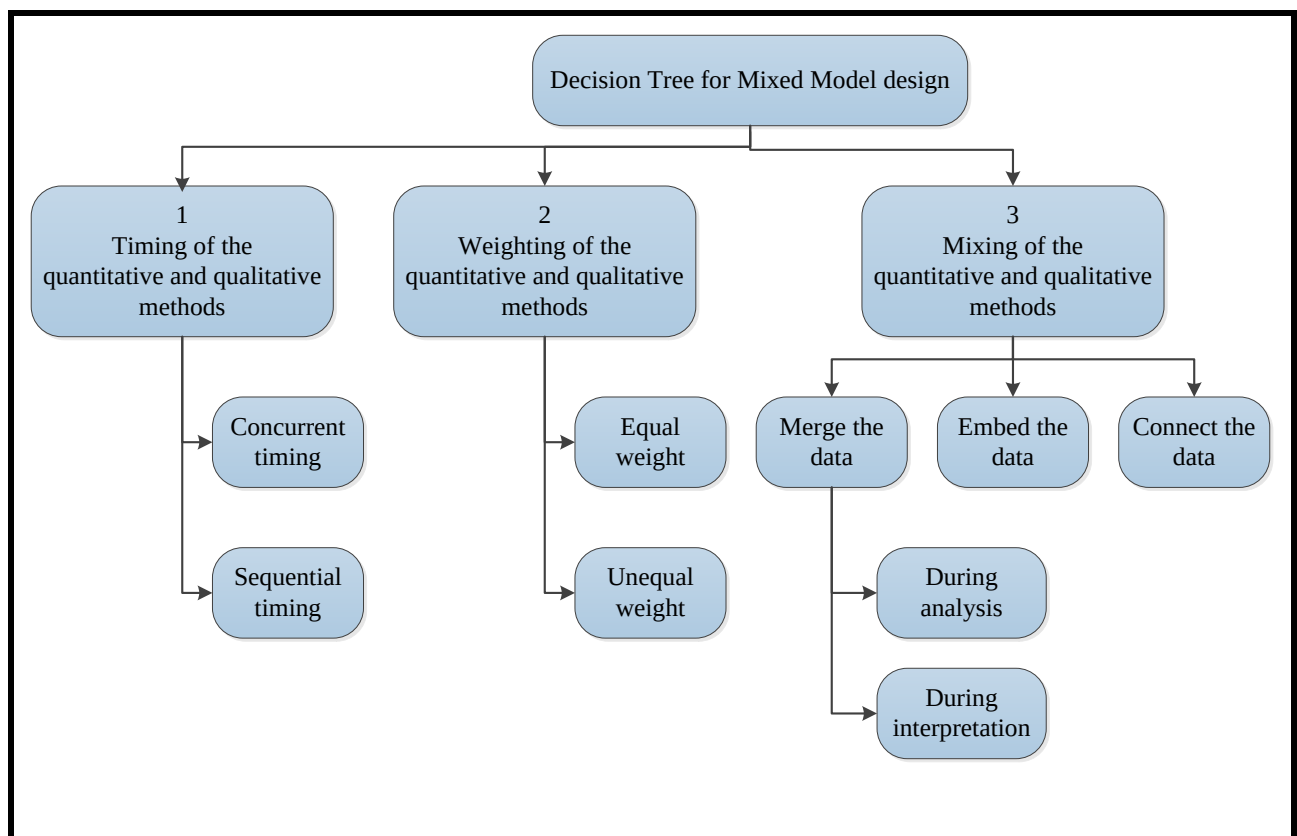
First, the research philosophy requires definition. This creates the starting point for the appropriate research approach, which is adopted in the second step. In the third step, the research strategy is adopted and the fourth layer identifies the various choices. The fifth step indicates the time horizons while the sixth step represents the stage at which the data collection methodology is identified. The benefits of the research onion are thus that it creates a series of stages under which the different methods of data collection can be understood and illustrates the steps by which a methodological study can be described.

Essentially the research onion affords a framework of the important stages that need to be taken into account before engaging in any research. The different stages assist in 1) the formulation of the research philosophy; 2) the research approach implemented; 3) applicable research strategies; 4) the research time lines; and 5) the data collection methods adopted by the researcher. The different stages of the onion serve as a basis from which to describe the research methodology and design.

The first step of the research onion entails research philosophies. Although the philosophical backgrounds usually remain implicit in most research, they affect the practice of research, which enable the drawing of correct inferences to answer the various research questions (Wahyuni, 2012:69). Saunders *et al.* (2009:108) highlight that the research philosophy you pursue incorporates significant assumptions about the way in which you view the world. It is argued that mixed method research with its pragmatic approach does not align itself with a single system or philosophy (Creswell, Plano Clark, Gutmann & Hanson, 2003:165) and instead is most often driven by the research question, rather than being restrained by paradigmatic assumptions (Johnson & Onwuegbuzie, 2004:15). The first question when deciding on methodology is to establish which method is appropriate to answer the research question (Doyle, Brady & Byrne, 2009:176). Watkins and Gioia (2015:19) concur that research questions should be a determining factor against the decision to use mixed methods research. Pragmatism argues that the significant determinant of the epistemology, ontology and axiology you implement is the research question (Saunders *et al.*, 2009:109).

Paradigmatically, mixed method research makes use of pragmatism as a system of philosophy. Saunders *et al.* (2009:109) denote that pragmatism contends that the most significant determinant of the philosophy adopted in a research project is the answering of particular research questions. Mixed methods research also is an effort to use multiple approaches in answering research questions, rather than confining or compelling researchers' choices (Johnson & Onwuegbuzie, 2004:16). Saunders *et al.* (2009:109) confirm that mixed methods research, both qualitative and quantitative, are conceivably highly appropriate within one study. Creswell and Plano Clarke (2007:150) suggest that there are three fundamental judgements to make prior to selecting a particular type of mixed methods design. Figure 6.2 outlines a decision tree that directs the main issues that need to be considered. First is the timing of quantitative and qualitative methods. Secondly is the weighting of the quantitative and qualitative methods. Thirdly is the mixing of the quantitative and qualitative methods.

Figure 6.2: Decision tree for a mixed method design



Source: Creswell and Plano Clark (2007:180)

Figure 6.2 outlines the necessary steps to be undertaken with regard to mixed method design. Once the decision for the mixed method design has been made, it is crucial to focus on the philosophy that will be a framework to guide the research study. The next subsection will discuss the research paradigms to outline the philosophical dimension of the study.

6.3.1 Research paradigms

The first stage of the research onion assumes the discussion of research philosophy, which entails the research paradigms. Research paradigms outline the philosophical dimensions of social sciences because of fundamental beliefs that affect the ways to conduct social research, including the choice of a particular research methodology (Wahyuni, 2012:69). Morgan (2007:49) defines a paradigm as beliefs and practices that guide a field and it can be used to summarise the beliefs of researchers. The worldview, theoretical lens and paradigm are all terms used interchangeably in the literature. A paradigm is a worldview that is defined by diverse elements including epistemology (how we know what we know), ontology (nature of reality), axiology (values) and methodology (the process of research) (Hanson, Creswell, Clark, Petska &

Creswell, 2005:225). Therefore, a paradigm describes the guidance about how we know our interpretation of reality and our values and methodology in research.

Doyle, Brady and Byrne (2009:183) suggest that the worldview of the researcher is significantly determined by the positivist (quantitative) paradigm or naturalistic or constructivist (qualitative) tradition to which they associate themselves. Constructivism or qualitative researchers work within the interpretative paradigm and the researcher is subjective with the focus directed at a deeper understanding of what is happening with a smaller sample (Doyle *et al.*, 2009:177). Mackenzie and Knipe (2006:193) recommend that without nominating a paradigm as a first step there is no foundation for successive choice regarding methodology, methods, literature and research design. Mixed methods research is directed by philosophical assumptions that allow the mixing of qualitative and qualitative methods throughout the research process (Hanson *et al.*, 2005:59). This notion is founded on the fact that there are quite different epistemological and ontological assumptions that reinforce different paradigms and methods (Azorín & Cameron, 2010:96). Azorín and Cameron (2010:96) propose that the organising idea of a range, with hard positivism at one end and constructionism at the other, can be used to point out the main epistemological and ontological assumptions. Howe (1988) considers the positivist paradigm as related to the quantitative methods, while the constructivist paradigm is more associated with qualitative methods. A fundamental understanding of methodology is discussed in detail in the next section.

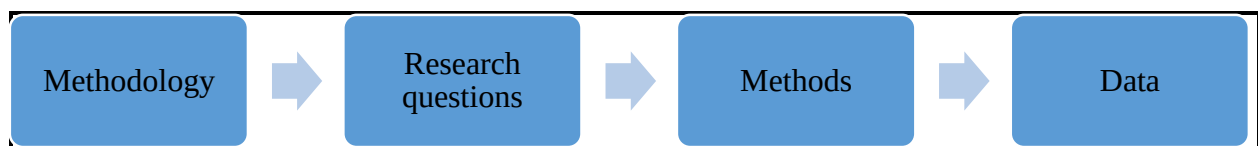
6.3.2 Methodology

Methodology is a comprehensive approach to the research process. Watkins and Gioia (2015:2) describe the term methodology as a lens through which a research is explained. They deliver a premise that the terms methodology and method are not synonymous (but are related) as they are often preserved. While methodology is how we see the world, methods are the techniques that are used to confirm the methodological underpinning in a study. Essentially, if methodology is the theory behind the research, then methods are the tools used to collect the information needed to understand (either confirm or contradict) the research (Watkins & Gioia, 2015:3). According to Creswell and Tashakkori (2007), methodologies explain and define the kinds of problems that are worth investigating; what constitutes a researchable problem; testable hypotheses; how to frame a problem in such a way that it can be investigated using particular designs and procedures; and how to select and develop appropriate means of collecting data. A methodology refers to a model to conduct research within the context of a particular research paradigm (Wahyuni, 2012:72).

Van der Walt (2008:58-60) describes a worldview as “the network/framework of confessional convictions, which determines how one understands and experiences reality”. How we think influences what we do and how we live. The focus is not on the fact that an individual sees, but rather on what and how an individual sees. A worldview helps us to make the right choices and to discard the wrong and that which can do us harm.

Greene (2002:260), who suggested that most methodologies have preferences for particular methods, outlined the operation framework of methodology and method but methods gain meaning only from methodologies that share and guide their use. The research methodology that the researcher adopts denotes the methods (tools) used to achieve answers to the research questions and thus attaining the set objectives (Middelberg, 2011). Watkins and Gioia (2015:3) provide an ordering of methodology and methods in the research process as illustrated in Figure 6.3:

Figure 6.3: The ordering of methodology, research questions, methods and data

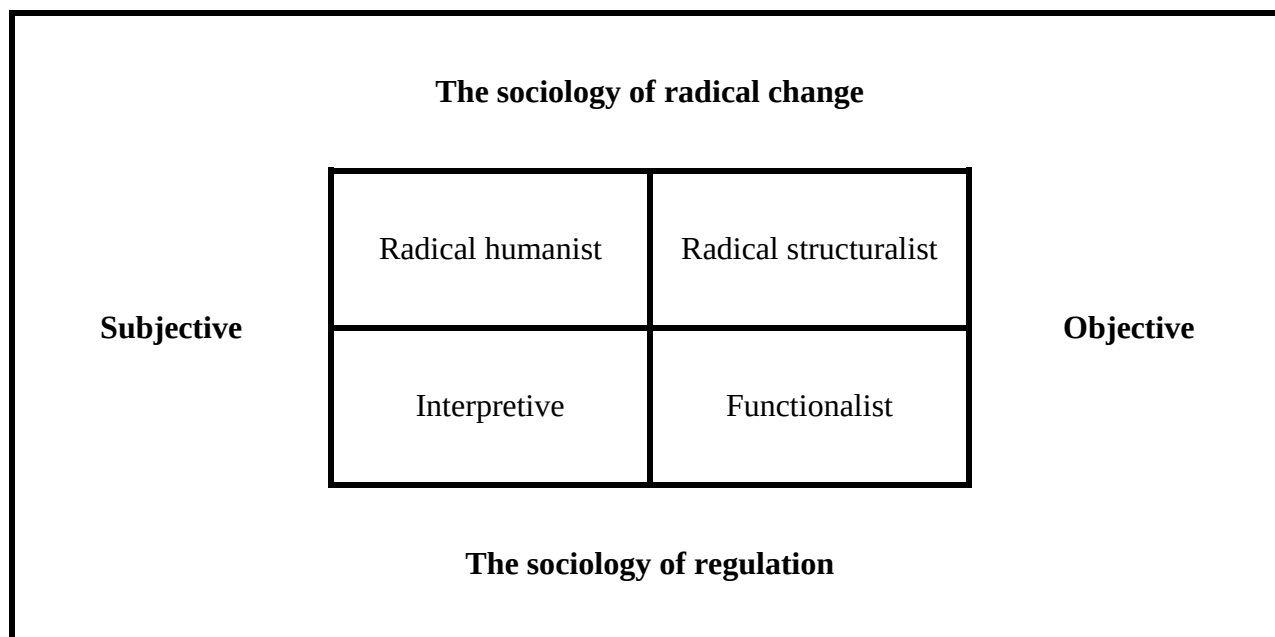


Source: Watkins and Gioia (2015:3)

6.3.3 Sociological paradigms (research paradigms)

Paradigms are categorised in various ways and vary based on the chosen author. This study discusses the four paradigms of Burrell and Morgan (1979), namely radical humanists, radical structuralist, interpretive and functionalist. In order to be objective, the fundamental rationale of this study will be guided on underlying sociological paradigms of radical structuralist and radical humanist. The role of paradigms as views of social reality was explored in detail by Burrell and Morgan (1979:1-33) who maintain that social theory and organisation theory in particular could be usefully analysed in terms of four broad world views, which were reflected in different sets of metatheoretical assumptions, about the nature of science, the subjective-objective dimension and nature of society and the dimension of regulation radical change. They introduced each of these four paradigms – functionalist, interpretive, radical-humanist and radical structuralist. Each mirrors a network of associated schools of thought, dissected in approach and perspective, but sharing common fundamental assumptions about the nature of the reality that they address. Figure 6.4 provides an illustration of the four paradigms.

Figure 6.4: Four paradigms for the analysis of social theory



Source: Adapted from Burrell and Morgan (1979; 2005:24)

Radical humanist paradigm views the consciousness of man as dominated by the ideological superstructures with which he interacts and these drive a cognitive wedge between himself and his true consciousness, which prevents human fulfilment. This paradigm will assist in providing critique to the status quo on current student accounts at South African universities and central focus on human consciousness regarding non-payment of tuition fees. Furthermore, radical humanist paradigm theorists (subjective-radical change) are mainly concerned with releasing social constraints that limit human potential. They see the current dominant ideologies as separating people from their true selves. They use this paradigm to justify desire for revolutionary change.

Nominalism, which is an ontological debate, assumes that social reality is relative and the social world is mainly names, concepts and labels that help the individual structure reality. Ontology is the view of how an individual perceives a reality (Wahyuni, 2012:69). Hence, the political influence on tuition fee payment will be identified in the study. This will reveal the concerns on the nature of the world and human beings in a social context. There are two aspects of ontology according to Saunders *et al.* (2009:110). Objectivism, which depicts that social entities exist in reality, external to social actors concerned with their existence. Subjectivism portrays a view that social phenomena are generated from perception and resulting actions of those social actors concerned with their existence.

Epistemology on the other hand, portrays what constitutes acceptable knowledge in the field of study (Saunders *et al.*, 2009:112), which embraces positivist philosophy to the development of knowledge, whereas the ‘feelings’ researcher is adopting the interpretivist philosophy. In essence, interpretivism argues that it is essential for the researcher to understand differences between humans in their role as social actors. This highlights the difference between conducting research among humans rather than objects such as machines. Saunders *et al.* (2009:114) discuss realism since it is another branch of epistemology, which shows us that reality is the truth that objects have an existence independent of the human mind. This depicts that there is reality that is independent of the mind, which requires development of knowledge. This assumption reinforces the collection of data and understanding those data. Ritchie, Lewis, Nicholls and Ormston (2013:11) affirm that realism propose that there is an external reality, which exists independently of people’s beliefs or understanding about it. They further maintain that an underlying ontological issue is considered whether the social and natural worlds exist in similar ways or whether the social world is very diverse because it is open to subjective interpretation.

On the other hand, radical structuralist paradigm theory (objective-radical change) sees inherent structural conflicts within society that generate constant change through political and economic crises. Theorists in this paradigm are mainly concerned with releasing social constraints that limit human potential. Epistemological assumptions will be applied and the focus will be to evaluate credit management policies at South African universities. The assumption will assist in understanding the ways to acquire knowledge. This is because epistemology is the belief on the way to generate, understand and use the knowledge deemed to be acceptable and valid (Wahyuni, 2012:71). According to Hooker (1995:12), epistemology is applied rationally (rationally applied to information acquisition, whether sensory, revelatory, rationalist, or whatever). To cement this argument Ritchie *et al.* (2013:13) stress that epistemology is particular with ways of knowing and learning about the social world and emphasizes on questions such as: How can we know about reality and what is the basis of our knowledge?

The assumption of positivists theory, which is the epistemological debate, will be implemented, which generally assumes that reality is objectively given and can be described by measurable properties independent of the observer (researcher) and his or her instruments. Positivist studies generally attempt to test theory, in an attempt to increase the predictive understanding of phenomena. Positivists generally assume that reality is given objectively and can be described by measurable properties, which are independent of the researcher and his or her instruments (Myers, 1997).

In addition to ontology and epistemology philosophies, two basic beliefs that affect the way to investigate reality are axiology and methodology. Axiology is concerned with ethics, encompassing the roles of values in the research and the researcher's stance in relation to the subject studied, while methodology refers to a model for undertaking a research process in the context of a particular paradigm (Wahyuni, 2012:69). In particular, this involves the role that a researcher's values play in all stages of the research process and is of great importance for research results to be credible and have substance. The basic beliefs of the paradigms are summarised in Table 6.1.

Table 6.1: Fundamental beliefs of research paradigms in social sciences

	Research paradigms			
Fundamental beliefs	Positivism (Naïve realism)	Post positivism (Critical realism)	Interpretivism (Constructivism)	Pragmatism
Ontology: the position on the nature of reality	External, objective and independent of social actors	Objective. Exists independently of human thoughts and beliefs or knowledge of their existence, but is interpreted through social conditioning (critical realist)	Socially constructed, subjective, may change, multiple	External, multiple, view chosen to best achieve an answer to the research question

	Research paradigms			
Fundamental beliefs	Positivism (Naïve realism)	Post positivism (Critical realism)	Interpretivism (Constructivism)	Pragmatism
Epistemology: the view on what constitutes acceptable knowledge	Only observable phenomena can provide credible data, facts. Focus on causality and law-like generalisations, reducing phenomena to simplest elements	Only observable phenomena can provide credible data, facts. Focus on explaining within a context or contexts	Subjective meanings and social phenomena. Focus upon the details of situation, the reality behind these details, subjective meanings and motivating actions	Either or both observable phenomena and subjective meanings can provide acceptable knowledge dependent upon the research question. Focus on practical applied research, integrating different perspectives to help interpret the data
Axiology: the role of values in research and the researcher's stance	Value-free and etic. Research is undertaken in a value-free way, the researcher is independent of the data and maintains an objective stance	Value-laden and etic. Research is value laden; the researcher is biased by world views, cultural experiences and upbringing	Value-bond and emic. Research is value bond, the researcher is part of what is being researched, cannot be separated and so will be subjective	Value-bond and etic-emic. Values play a large role in interpreting the results, the researcher adopting both objective and subjective points of view
Research methodology: the model behind the research process	Quantitative	Quantitative or qualitative	Qualitative	Quantitative and qualitative (mixed or multi-method design)

Source: Wahyuni (2012:70) based on Saunders *et al.* (2009:119)

6.4 RESEARCH APPROACH

The second layer of the research onion (refer Figure 6.1) involves the research approach. The research approach is an important part of any research study, regardless of the research area. In the light of the discussion on the research methodology, it can be deduced that both quantitative and qualitative methods constitutes a mixed methods approach. Trafford and Leshem (2008:96) cite that doctoral candidates use deductive approaches to describe their research approach.

Quantitative methods stem from a positivism worldview and seek to understand the breadth of human experience (Watkins & Gioia, 2015:4). Therefore, a quantitative research method is best captured in numbers and counting of things (Watkins, 2012:1). Mixed methods research responds to the interests and needs of different stakeholders in research (Doyle *et al.*, 2009:176). Greene (2002) confirms that a mixed method approach enables an evaluation to be attentive to or inclusive of the concerns and value stances of more stakeholders than a single-method approach. The qualitative research method is guided from an anti-positivistic, interpretative approach, is holistic in nature and targets the understanding of social life. Relatively, quantitative paradigm is founded on positivism, which takes scientific explanation to be nomothetic through measuring the social world objectively and testing hypotheses (Hanson & Grimmer, 2007).

In pursuit of the same argument concerning the judgement of mixed methods research, Johnson and Onwuegbuzi (2004:18) specify that mixed methods research contains the use of induction, which refers to the discovery of patterns, deduction, which involves testing theories and hypotheses and abduction, which refers to uncovering and relying on the best set of explanations for understanding one's results. They further maintain that mixed methods research strives to legitimate the usage of multiple approaches in answering research questions, rather than limiting or restraining researchers' choices. Saunders *et al.* (2009:124) proclaim that deduction-testing theory focuses on scientific research by developing rigorous tests. On the other hand, inductive focuses on getting a feeling of what was going on, to understand better the nature of the problem. Trafford and Leshem (2008:97) recommend that to benefit from deductive and inductive approaches, a mixed methods research is an appropriate method. The next section discusses in detail why mixed methods research, as a methodology, is appropriate for the current study.

6.5 RESEARCH DESIGN

The third and fourth stage of the research onion (refer Figure 6.1) entails the research strategy and choice for the study respectively. Creswell (2013:12) describes the research design as a type of inquiry within quantitative, qualitative and mixed methods approaches that provides specific

direction for research procedures. Hence, it refers to the overall strategy that the researcher chooses to employ to integrate the different components of the study.

Research design is a plan of conducting a research project. It is a framework that gives direction and systemises the research project by showing how to solve a specific problem, indicating the steps that are necessary to provide answers to research questions in order to achieve the research purpose. Middelberg (2011) concludes that a research design affords a map whereby a researcher should travel in order to accomplish conclusions with research objectives being the landmarks along the way. For this study, therefore, mixed methods research design will be used. As a methodology, it involves philosophical assumptions that guide the direction of the collection and analysis of data and the mixture of qualitative and quantitative approaches in many phases in the research process (Creswell & Plano Clark, 2007:5). Yin (2006) notes that mixed methods research plays an important if not essential role in educational research, whereby qualitative methods address process questions and quantitative methods address outcome questions. Mixed method will produce converging evidence, presumably more compelling than might have been produced by a single method alone.

Quantitative research determines the relationship between the variables in the population and seeks to explain that relationship in mathematical expressions and statistics. Quantitative studies are specific, well structured, have been tested for their validity and reliability and can be defined and recognised (Kumar, 2011:103). The use of quantitative technique is applicable to the study because questionnaires will be distributed among senior students at South African universities.

On the other hand, qualitative methods are used to understand the meaning behind human behaviour using various techniques, one of which is document analysis. Policy documents have been found to be appropriate for capturing the essence of a phenomenon since they meet the inclusion criteria for the study (Given, 2016:61). Rossman and Wilson (1985:630) outline the following benefits for the adoption of mixed methods research:

- Combination enables confirmation or corroboration of each other through triangulation.
- Combination enables and develops analysis in order to provide richer data.
- Combination initiates new modes of thinking by attending to paradoxes that emerge from the two data sources.

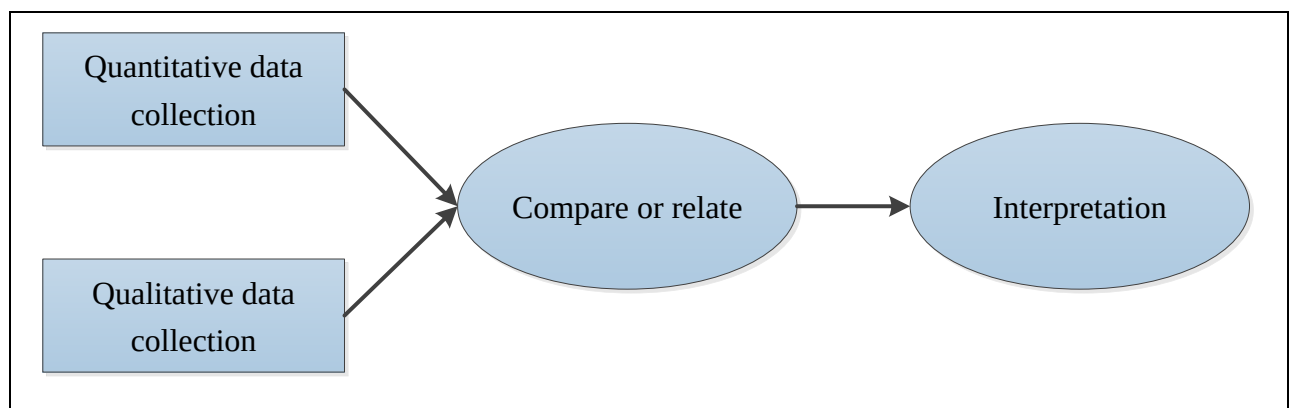
Specifically, this study is designed to be a concurrent quantitative-dominant mixed methods study in which the quantitative and qualitative data are connected. Henceforth, the next subsection discusses mixed method design that will be applied in this study.

6.5.1 Convergent parallel design

In convergent parallel designs, researchers collect both qualitative and quantitative data concurrently, analyse both data components separately and then mix the databases by merging the data (Harrison & Reilly, 2011). Convergent parallel designs as explained by Harrison and Reilly (2011) most often are conducted to blend the strengths of both quantitative and qualitative research to match results or to validate or confirm quantitative with qualitative findings. In convergence design models, qualitative and quantitative data are analysed separately and the different results are converged during the interpretation (Creswell *et al.*, 2003). The time of collection of data is very important.

In a study, Mathwick, Wiertz and De Ruyter (2008) composed both qualitative and quantitative data in their concurrent design study investigating relational norms that determine social capital. The results for each data component were presented separately and mixed in the discussion section. Figure 6.5 provides an illustration for convergent mixed methods research design.

Figure: 6.5: Convergent mixed methods design



Source: Adapted from Creswell and Plano Clark (2011:69)

The choice of concurrent design to a large extent is influenced by some practical considerations. First, although the two types of data are collected from different sources, the researcher wants to analyse them in a complementary manner. In this sense, rather than conducting two distinct analyses, it is better to analyse them approximately at the same time. Additionally, in such a design, as the data collection, data analysis and interpreting results of quantitative and qualitative

studies occur approximately at the same time, they can talk to each other. The collection of data was done by visiting each university and collecting data from students' through questionnaires and obtaining the relevant official documents.

6.6 EVALUATION OF MIXED METHODS RESEARCH

A study that includes both data types without integration is purely a collection of methods (Harrison & Reilly, 2011). Robust mixed methods studies consider the decision of how to integrate the data as well as timing and priority (Creswell and Plano Clark, 2007). In light of this advice, it is imperative to have guidance for conducting mixed method research and for considering the objectivity of data collection and analysis of both data types. Henceforth, researchers must maximise the extent to which they are using mixed method research. By concurrently collecting both the forms of data, the researcher intends to compare them with the search for congruent findings (Azorín & Cameron, 2010:98). The data can be prioritised according to Azorín and Cameron (2010:98). Mixed methods researchers can give equal priority depending on the research questions, practical constraints for data collection, the need to understand one form of data before proceeding to the next or the audience preference.

6.6.1 The rationale of using mixed methods for this study

The core objectives of the study envisaged to investigate the policy implementations of credit management policy on student accounts on selected South African universities. The quantitative data were collected through questionnaires amongst students at various campuses of selected universities. In order to investigate the implementations of the credit management policy on student accounts, the quantitative study was appropriate to quantify the results.

Ritchie and Spencer (2002:56) found it appropriate to use qualitative data to understand public policy issues. Therefore, the researcher considered that a purely quantitative study might not be suitable for exploring the research phenomenon. In order to intensify and compliment the study and the credit management policy (document analysis) it was imperative to qualify the study regarding the policy implementation and how this influences student accounts. In addition, a qualitative method might embrace an in-depth probing into the understandings of credit management policies. The mixing of quantitative and qualitative data will benefit in harnessing mutually illuminating findings and as a result, comprehensive conclusions can be drawn. Hence, the study will be complemented by the portrayal of the weaknesses and strengths of both methodologies.

In light of the above consideration and also motivated by the methodology development in management accounting research the researcher found it appropriate to use mixed methods research that combines quantitative and qualitative methods to investigate policy implementation of credit management on student accounts in this thesis. Besides, mixed methods research seems to be more suitable to explore the objective of this study and to answer the research question than singular methods.

Greene, Caracelli and Graham (1989) indicate that researchers can take advantage of mixed methods triangulation by seeking convergence, corroboration, and correspondence of results from different methods and/or attain a complementarity that uses different methods to measure overlapping but also different facets of a phenomenon, yielding an enriched, elaborated understanding of that phenomenon. Therefore, in this study the researcher conducted a concurrent quantitative-dominant mixed methods study. In the mixed methods, a researcher can give equal priority to both quantitative and qualitative research, emphasise qualitative more, or emphasise quantitative more (Creswell *et al.*, 2003). This emphasis results from the audience preference and practical constraints of data collection. In addition, the variables used in the quantitative study were helpful to formulate interview questions in order to explore the participants' perspective about the credit management policies.

The proposed study will be guided by the following research questions:

- What are the attitudes and perceptions of students towards student debt at South African universities?
- How effective is the implementation of credit management policies at South African universities?
- How personal financial management affects student debt and the implementation of student credit management at South African universities?

Empirical research objectives:

In order to explore the research questions, the following empirical research objectives (as set in chapter 1, page 9) need to be addressed:

- To analyse and compare the annual financial statements, published credit policies and student perceptions of the selected South African universities (Chapter 7); and
- To analyse students' perception of their debt, their universities' credit management policies and their personal financial management (Chapter 8).

These research objectives are supported by the following specific empirical objectives:

1. To identify the key variables that comprise student debt, credit management and personal financial management (factor analysis);
2. To assess the attitudes and perceptions of students regarding student debt (means);
3. To assess the attitudes and perceptions of students regarding the credit management at universities;
4. To assess the attitudes and perceptions of students regarding the personal financial management;
5. To examine the relationship between student debt and student credit management;
6. To examine the relationship between student debt and personal financial management;
7. To examine the relationship between credit management and personal financial management;
8. To examine the impact (predictive relationship) between student debt and student credit management;
9. To examine the impact (predictive relationship) between the personal financial management and student credit management;
10. To examine whether there are any significant differences between universities with regard to student debt, student credit management and students' personal financial management; and
11. To determine the effectiveness of student credit management (SCM) at South African universities.

The purpose of the study is to address *inter alia* the abovementioned empirical research objectives. The mixed method study will suitably address the implementations of credit management policy on student accounts at selected South African universities. A mixed method will increase the interpretability, meaningfulness and validity of constructs and inquiry results by both capitalising on inherent method strengths and counteracting inherent biases in methods and other sources (Greene, Caracelli & Graham, 1989:259).

6.6.2 Reliability in mixed method research

Johnson, Buehring, Cassell and Symon (2006) define reliability as the extent to which studies can be replicated. It therefore necessitates that researchers on dissimilar studies, using the same

methods, can obtain the same results as those of a prior study. Therefore, reliability is concerned with the robustness of the data collection techniques and analysis procedures, specifically whether or not it will yield consistent findings at different times and under different conditions (Saunders *et al.*, 2009:156).

Reliability, validity and triangulation, are relevant research concepts, therefore, have to be redefined in order to reflect the multiple ways of establishing truth. Greene, Caracelli and Graham (1989) propose that the core premise of triangulation as a design strategy is that all methods have inherent biases and limitations, so use of only one method to measure a given phenomenon will inevitably yield partial and limited results.

6.6.3 Reliability and validity

Reliability and validity is an important issue in order to replicate the study or to use the findings for future research. Ritchie *et al.* (2013:270) confirm that reliability is concerned with the replication of research findings and whether or not they will be repeated by another study using the same or similar methods. The qualitative study that is provided is based on empirical and theoretical findings to be able to confirm that the findings are trustworthy. The qualitative data were collected from authentic official documents of the universities. Therefore, the qualitative data has features that are expected to be consistent, dependable or replicable. The study was subjected to the same data collection, which ensures that the authenticity placed on the data by the researcher has been consistently, credibly and rigorously derived.

In quantitative data, assessment for validity confirms that a study measures what it intends to measure and reliability guarantees that the study can be replicated (Given, 2016:74). For quantitative data, Cronbach's alpha testing was adopted as the measure of internal consistency for the measurement scale and was used with a co-efficient value of 0.7 as a cut-off point in line with the suggestions made by Nunnally (1978:245) while Peterson (1994:382) indicates that a 0.6 Cronbach alpha is acceptable. An important property of the co-efficient alpha is that its value tends to increase with an increase in the number of scale items (Bryman & Bell 2011:158). A large alpha value indicates a high reliability while scores close to zero indicate that the reliability of the instrument is low (Malhotra, 2010:724). Validity and reliability are evaluative criteria that are pursued by positivists to ensure the objectivity of the quantitative research (Johnson *et al.*, 2006). In fact, the validity of findings or data generally is considered to refer to the correctness or precision of a research reading (Ritchie *et al.*, 2013:273).

6.6.3.1 Triangulation

Triangulation is regarded as a credibility verification process whereby researchers converge a multiple or different sources of data to form themes or groupings in a study (Given, 2016:71). Cohen, Manion and Morrison (2000) define triangulation as the use of two or more data collection methods to study a specific phenomenon. Triangulation often is believed to assist in enhancing the validation of claims that might arise from the study (Olsen, 2004:3). Modell (2009:2) emphasises that triangulation implies that different methods are combined to provide complementary insights into the same empirical phenomenon with the aim of enhancing the validity of representations.

Doyle *et al.* (2009:178) advocate that in mixed methods, triangulation allows for greater validity in a study by seeking corroboration between quantitative and qualitative data. They further argue that using a combination of research approaches provides a more complete and comprehensive picture of the study phenomenon. Creswell *et al.* (2003) maintain that using mixed methods methodology can allow for the limitations of each method to be defused while strengths are built upon providing stronger and more accurate inferences. Triangulation has its origins in attempts to validate research findings by generating and comparing different sorts of data and different respondents' perspectives, on the topic under investigation (Torrance, 2012:5). The reason for collecting both quantitative and qualitative data is to converge or compare results, validate results, corroborate results of the two forms of data to bring greater insight into the problem that would be obtained by either type of data separately.

In this study, the two underlying sources of data are triangulated, where each data source offers a philosophical fundamental point for the other data sources. Triangulation provided additional sources of valuable insight that could not be obtained from the literature review alone. It minimised the shortfalls of single-source research by engaging three data sources, which complemented and verified each other and it also afforded valuable and more complete information in the sense that the researcher was able to source information from various bases including the document analysis, which provided first hand implementation of credit management policies. Creswell, Clark, Gutmann, Hanson, Clark and Creswell (2008:183) advocate that triangulation is advantageous because it can result in well-validated and substantiated findings.

6.6.4 Sample and sampling procedures

The last step of the research onion (refer Figure 6.1) refers to the data collection and data analysis. When determining what data collection approaches to use, a researcher should consider the size of the sample because this can determine the duration of the project (Watkins & Gioia, 2015:47). At the initial planning stages of the research, the researcher intended to involve all the South African universities. On the advice of the promoters and the Statistics Department at the North-West University that due to the practical considerations, population size, the time available to complete the research and the financial implications, it is advisable to limit the sample to the South African UoTs. There are currently six UoTs operational in South Africa (Council on Higher Education, 2012:1). Of the six UoTs, the permission to conduct research was granted by five institutions through their ethical clearance committees (see Appendix 3). The UoTs identified for this research have similar backgrounds. Adhering to ethical considerations of confidentiality and privacy, the researcher made a concerted and conscious effort to uphold this promise by representing UoTs by alphabets rather than mentioning names. In light of respecting the confidentiality, every UoT and its members that participated in this study remain anonymous.

6.7 DATA COLLECTION TECHNIQUES AND PROCEDURES

For the purpose of this study, the questionnaire formed the first data collection method and the content thereof was guided by the literature reviewed. Assistance from the statistics department at the North-West University was sought, particularly to obtain advice with regard to validity of items for statistical purposes. The questionnaire was administered to the 2000 UoT students at five selected universities. Furthermore, the document analysis on student credit management policies was conducted amongst the five universities purposefully sampled.

6.7.1 Questionnaire development

A questionnaire was prepared based on the literature review and the knowledge obtained during such literature study. A copy of the questionnaire utilised during the structured interviews is provided as Appendix 1. A five-point Likert-type scale is used (strongly disagree through to strongly agree). Each of the core questions provides useful information.

6.7.2 Development of the questionnaire

When developing the questionnaire items, various information compiled by authors was taken into consideration on the principles of questionnaire and scale construction. Furthermore, the

development of the questionnaire was based on several other studies and research instruments. The sections of the research instruments are described briefly below.

Section A consisted of 30 questions, which focused on attitude and perception towards student debt and were guided by a study by Universities (2005), which was a survey of higher education students' attitudes to debt and term-time working and their impact on attainment.

Section B measured the awareness of the credit management policy on student accounts and consisted of 23 questions. The questions were developed in accordance with the literature on accounts receivable management.

Section C consisted of 24 questions on personal financial management, which were adapted from the study conducted by OECD International Network on Financial Education (INFE) measuring financial literacy. The OECD INFE (2011) defined financial literacy as “[a] combination of awareness, knowledge, skill, attitude and behaviour necessary to make sound financial decisions and ultimately achieve individual financial wellbeing”.

The questions covered in Section C, proposed methodology are based on the definition above, and the recommendations developed in the OECD INFE (2011). The recommendations of the OECD INFE identify the types of questions that could be included in an internationally representative survey taking into consideration the various elements of financial literacy identified in the definition.

Section D is aimed to seek the participants' biographical information and profile of information relevant for student accounts credit management policy. The section consists of 13 questions, which contain the data needed to establish a detailed profile for the sample.

6.7.3 Pilot study

The questionnaire was piloted to eliminate bias and to ensure the validity and reliability of questions. This was imposed as the current study was within South African HE context. Watkins and Gioia (2015:65) recommend that a test run of the data collection method and other mixed methods study procedures should be done by conducting a pilot study. The pilot study was a small-scale replication of the actual study, targeting a small number of persons (the sample consisted of 150 respondents) with characteristics similar to those of the target group of respondents. The construction of the questionnaire was done with the assistance of the official

statistician at the North-West University, who advised on the validity of items for statistical purposes.

The purpose of the pilot study was: 1) to determine the feasibility of the study; 2) to test the reliability and validity of the instrument and trustworthiness of respondents for data collection in the main study; 3) to establish how appropriate, understandable and practical the instrument is; 4) to address any problems prior to the main study; and 5) to check the time required for the completion of the questionnaire. After the questionnaire was refined, the pilot study achieved its purpose as it reported a satisfactory reliability at above 0.70 Cronbach alpha value across all sections of the measuring instrument. Saunders *et al.* (2009:394) acknowledge that the purpose of the pilot test is to refine the questionnaire so that participants will not encounter problems in answering the questions and there will be no complications in recording the data.

The pilot study confirmed that the questionnaire could be applied successfully across very different universities and throughout diverse populations within South African universities. The questionnaire development process incorporated several rounds of comments followed by two large-scale pilot studies at one of the universities selected for this study. The final version of the questionnaire has been created following feedback from the university participating in the pilot studies, the views of expert subgroup members and the results of the analysis process.

The questionnaire fully meets the goals outlined above. The questions cover a mixture of attitudes and perceptions towards student debt, awareness/knowledge of the credit management policy applied on student accounts as well as capturing behaviour relating to topics such as money management, planning for short and longer-term financial goals.

The questionnaire is designed specifically to be applicable to fee-paying senior students at different higher education institutions. The pilot study confirmed that it could be applied successfully across very different South African universities and throughout senior student populations.

6.7.4 Data collection

After obtaining ethical clearance certificates from each university under review, the Deans and heads of departments (HoDs) were contacted by e-mail and by telephone. The survey was described, potential participants and the assistance needed from them to pursue this important research was explained. The study was limited only to the senior students who are assumed to have accumulated student debt while at the university. The objective of receiving the approval

from the relevant authorities was to ensure that there is no interference with teaching time and to seek further assistance from the lecturers involved with senior students (3rd and 4th year students). Further, it was to ensure that the survey description is clear and unambiguous. The appointments were made with the relevant authorities at the beginning of the year (2017) so that data are collected at the same time at all the selected universities. The fieldwork took place when the students just registered for their studies (some were still negotiating to be registered because of financial exclusion and were in the middle of thinking about their registration and financial exclusions). This context is important for understanding the nature of the responses given in the study.

6.7.5 Questionnaire survey

The fieldwork for this study took place after the #FeesMustFall protests that took place in 2015 and 2016. This was after the President of South Africa, honourable Jacob Zuma, made an announcement of the setting of higher education fees commission to probe the possibility of fee-free higher education in South Africa. The investigation involved a questionnaire survey of 1382 students at five selected universities in South Africa. Following advice from senior staff in local universities, the questionnaire was administered in hard copy across the universities in a controlled environment (tutorial/class time) and 1382 questionnaires were completed amongst the five selected South African universities. Although this represents a considerable number of responses, it is only a fraction of potential student responses.

6.7.6 Questionnaire briefings

After obtaining the necessary approval from the deans and the heads of department of various faculties, the questionnaire briefing was conducted with the lecturers/tutors (managers of questionnaires) to ensure that they fully understand the purpose of the study and the procedure of the questionnaire. The premise of questionnaire briefings was made to ensure the integrity of the data collected as the lecturers would be working on behalf of the researcher. In addition, this was made to enhance the collection of high quality data, also to eliminate the risk of damaging the public image of the research. These meetings provided an opportunity to discuss the project directly with the authority; this opportunity for conversation helped to create a common sense of purpose that encouraged the fieldwork team to collect data of the highest quality. A briefing typically will have two components, first, it is a motivational presentation to make the manager of the questionnaire feel involved and engaged with the project and, secondly, an instructional

seminar that makes sure that the survey process is undertaken consistently and professionally in a controlled environment.

6.7.7 Documentary analysis

Document analysis is a qualitative research method in which documents are interpreted to offer voice and meaning around an assessment topic (Bowen, 2009:27). Altheide, Coyle, DeVriese and Schneider (2008:127) define a document as any symbolic representation that can be recorded and retrieved for description and analysis. Document analysis is a methodical procedure for reviewing or evaluating documents, both printed and electronic material (Bowen, 2009:27). In addition to the interviews, documentary analysis of the financial reports and credit management policies on student accounts receivable management will be performed.

The aim of analysing the student accounts receivable and credit management policies is to establish the effectiveness of a credit management policy on student accounts. According to Ritchie *et al.* (2013:35), documentary analysis encompasses the study of existing documents, either to understand their substantive content or to illuminate deeper meanings, which may be revealed by their style and coverage. The financial reports of universities are public documents, hence Ritchie *et al.* (2013:35) maintain that documents to be analysed might be public documents such as media reports, government papers or publicity materials, procedural documents such as minutes of meetings, formal letters or financial accounts or personal documents like diaries, letters or photographs. They argue that documentary analysis is particularly useful where the history of events or experiences has relevance, in studies where written communications may be central to the enquiry and where private as well as public accounts are needed. In addition, Saunders *et al.* (2009:256) illuminate that most research questions are answered using some combination of secondary and primary data. They further advocate that such documentary secondary data can be used to assist to triangulate findings based on other data, such as questionnaires.

O'Leary (2004:177) observes that document analysis entails documents as a source of data, similar to data gathered in surveys, interviews and observations. She noted that the main difference of document analysis is that the documents are pre-produced manuscripts that have not been generated by the researcher. In essence, this entails interviewing documents and treating each document as a respondent who can provide you with information relevant to the inquiry (O'Leary, 2004:180). Furthermore, Bowen (2009:28) asserts that the rationale for documents analysis pertains to the examining of information collected through different methods. The

researcher can corroborate findings across data sets and thus reduce the impact of potential biases that can exist in a single study. He maintains that mixed methods sometimes include document analysis.

Owen's (2014) study uses interviews and document analysis in qualitative methods in higher education policy analysis. The study of Owen (2014) affords appropriate insight to gain understanding of educational policy. Altheide *et al.* (2008:131) advise that qualitative document analysis must be reflective of emergent foundations, meanings, activities and relationships. Document analysis becomes ethnographic when the researcher engages in the material and asks crucial questions about the organisation, production, relationships and consequences of the content, including its communication formats (Altheide *et al.*, 2008:135). Finally, Noor (2008:1604) believes the incorporation of documentary sources is essential to supplement and compensate for the limitations of other data collection methods.

In relation to qualitative research, document analysis offers advantages that outweigh shortcomings (summarised in Table 6.2), as illustrated by Bowen (2009:31-32) inherent in document analysis:

Table 6.2: Advantages and limitations of document analysis

Advantages	Limitations
Efficient method: Document analysis is less time consuming and, therefore, more efficient. It requires data selection, instead of data collection.	Insufficient detail: Documents are produced for some purpose other than research; they are created independent of a research agenda. Consequently, they usually do not provide sufficient detail to answer a research question.
Availability: Many documents are in the public domain, especially since the advent of the Internet and are obtainable without the authors' permission. This makes document analysis an attractive option for qualitative researchers.	Low retrievability: Documentation is sometimes not retrievable (may be deliberately blocked), or retrievability is difficult.

Advantages	Limitations
Cost effectiveness: Document analysis is less costly than other research methods and is often the method of choice when the collection of new data is not feasible. The data (contained in documents) have already been gathered; what remains is for the content and quality of the documents to be evaluated.	Biased selectivity: An incomplete collection of documents suggests ‘biased selectivity’. In an organisational context, the available (selected) documents are likely to be aligned with corporate policies and procedures and with the agenda of the organisation’s principals. However, they may also reflect the emphasis of the particular organisational unit that handles record keeping.
Exactness: The inclusion of exact names, references and details of events makes documents advantageous in the research process.	
Coverage: Documents provide broad coverage; they cover a long span of time, many events and many settings.	
Stability: As a corollary to being non-reactive, documents are stable. The researcher’s presence does not alter what is being studied.	
Lack of obtrusiveness and reactivity: Documents are unobtrusive and non-reactive, that is they are unaffected by the research process. Therefore, document analysis counters the concerns related to reflexivity (or the lack of it) inherent in other qualitative research methods. Reflexivity, which requires an awareness of the researcher’s contribution to the construction of meanings attached to social interactions and acknowledgment of the possibility of the investigator’s influence on the research is usually not an issue in using documents for research purposes.	

Source: Adapted from Bowen (2009:31)

6.8 DATA HANDLING AND PREPARATION FOR ANALYSIS

For this study, three sources of data were identified, namely 1) quantitative data in the form of a questionnaire, 2) qualitative data in the form of document analysis, and 3) a literature review as secondary data. The information provided by participants will become the raw data. The data are stored and handled securely and in accordance with appropriate national or international data protection regulations and guidelines. The storage of any documents will not be alongside personal information and none of the contact details collected during fieldwork will be used for any purpose other than to validate the survey responses or to follow up with the respondent during the next phase of fieldwork for further research. Data confidentiality statements have been provided to participants.

After the questionnaires were collected, they were cleaned to prepare for analysis (by checking that values have been entered correctly), the data were captured on the Microsoft Excel spreadsheet. The Excel spreadsheet was imported into SPSS, version 23.0, for the statistical data analysis. The promoter provided guidance regarding appropriate data analysis. The statistical data analysis encompassed reliability testing, demographic frequency distribution, exploratory factor analysis, descriptive statistics, correlation analysis, regression analysis and analysis of variance (ANOVA).

6.8.1 Frequency distributions

The use of frequency distribution applied in this study is presented in Section 8.3.1. The frequency distribution simplified the assessment of the background of respondents. The proper way of summarising data for individual variables so that specific values can be read easily is to use a frequency distribution (Saunders *et al.*, 2009:429).

6.8.2 Factor analysis

Factor analysis was used in this study to identify patterns and factors underlying relationships to summarise data. Factor analysis reduces a large number of variables into a smaller set of variables and provides construct validity evidence of self-reporting scales (Williams, Onsman & Brown, 2010:2). In this study, this technique was used to summarise the number of variables in the scale and group them into sets of variables.

6.8.3 Descriptive data

Descriptive statistics permits the researcher to describe (and compare) variables numerically (Saunders *et al.*, 2009:444). O'Leary (2004:189) pronounces that the main function of descriptive statistics is to provide measures of central tendency, dispersion and distribution shape. The general impression, which is a central tendency, is an indication of the value that occurs most frequently. In this study, frequency distributions are the major descriptive statistics used.

6.8.4 Correlation analysis

Correlation analysis involves measuring the relationship between variables. Furthermore, correlation analysis analyses the direction and magnitude of the relationship between variables (Diamantopoulos, 2000:214). The Spearman's correlation procedure was adopted for this study to explore the relationship between constructs.

6.8.5 Regression analysis

Regression analysis narrates independent and dependent variables in a mode, which takes mathematical inter-correlation into account (Malhotra, 2010:44). Regression analysis can also be used to predict the values of a dependent variable given the values of one or more independent variables (Saunders *et al.*, 2009:461). In the current study, regression analysis was conducted in order to establish the influence between constructs.

6.8.6 Analysis of variance (ANOVA)

Analysis of variance is a statistical tool that is used to determine the differences among the group means. Saunders *et al.* (2009:458) explains that if a numerical variable is divided into three or more different groups using a descriptive variable, you can measure the probability of these groups being different, occurring by chance alone, by using one-way analysis of variance. If statistically significant differences are found, a post-hoc test is computed to examine which specific groups differed significantly between the groups. This is performed to maintain the integrity and improve the confidence of the results.

6.9 ETHICAL CONSIDERATIONS

Authenticity of the data collected is of the utmost importance for the accuracy of results, but also to adhere to the ethical framework. According to Mouton (2009:239), ethics are concerned with what is wrong and what is right in the conduct of research. Zikmund, Babin, Carr and Griffin

(2013:78) stated that ethics refer to a concern with the developments of moral principles by which situations can be judged and it applies to all situations in which there can be actual or potential harm of any kind to an individual or group. It is authoritative that all the research-related issues are performed in an ethical and legal manner and the researcher should possess an accurate and comprehensive knowledge of the subject (Creswell, 2003). The respondents and participants must be encouraged to voice their genuine opinion about the subject.

The identity of the respondents should be valued and not be revealed without their permission and their participation in the process should not put them at risk in any way. The researcher had to take into consideration and protect the feelings, welfare and rights of the participants (see Appendix xx for a copy of the ethical clearance certificate from the Ethics Committee at the North-West University). In addition, an ethics clearance certificate was sought formally through the research ethics committee of each identified UoT (See Appendix A). Permission that was granted applied to both the quantitative and qualitative research. The principle of informed consent was attached to the data collection instruments to highlight the purpose of the study and associated ethical issues (see Appendix B). To ensure transparency, the results of this study were made available to all interested stakeholders. The purpose of these ethical codes and guidelines is to protect participants, subjects, direct data collection and ensure acceptable and worthwhile goals (Watkins & Gioia, 2015:118).

6.10 SUMMARY

This chapter addressed the fifth secondary research objective by discussing the methodological decision the researcher made and the overall procedures for collecting, analysing, interpreting and reporting data. The underlying philosophical assumptions were addressed at the beginning of the chapter. Mixed methods research as a methodology has been widely used in social science and researchers in the fields of management and accounting call for the combination of different research approaches to assess the same phenomenon. The researcher believes that, given the research purposes and the general research question, mixing quantitative and qualitative methods in the current study makes it possible to take advantages of triangulation and complementarity and enhance the validity of the overall research. Based on the research purposes, the specific research questions, this study is designed to be a concurrent mixed methods research. In addition, the researcher described the tactics applied to minimise the threats to external, internal and construct validities. Ethical considerations were taken into account to ensure the authenticity of the study.

An extensive elaboration was provided regarding the research philosophy, design and the methodology that was used to undertake the study. The questionnaire was administered to the target sample after it had been pretested, piloted and modified accordingly. The same applied to respondents' data that was captured, coded, cleaned and then analysed using relevant statistical programmes such as SPSS.

In the next chapter, the data obtained during the research study are interpreted and analysed. The findings were provided to enable the researcher to translate obtained information from the data into meaningful interpretation.

CHAPTER 7

PRESENTATION AND ANALYSIS OF QUALITATIVE DATA

7.1 INTRODUCTION

This aim of this chapter is to address the sixth secondary objective as set in chapter 1 (refer page 9) of analysing and comparing the annual financial statements, published credit policies and student perceptions of the selected South African universities. This chapter also addresses the specific empirical objectives as set in chapter 6 (refer Section 6.6.1, page 118). The chapter will present the qualitative data analysis by discussing: 1) document analysis as qualitative research; and 2) ranking effectiveness per university.

7.2 DOCUMENT ANALYSIS AS A QUALITATIVE RESEARCH

This section focuses on a discussion of the findings from the document analysis, which formed an integral part of the study. The sample for the document analysis consisted of documents from five selected South African UoTs. The synthesised data contained in documents was appraised and then organised into major themes, categories and case practices. These documents comprised audited financial reports, financial agreements between the management and the SRC and the published statements from the universities' official websites regarding student accounts management practices. The documents are adequate towards conceptual framework of the study and are authentic, credible, accurate and representative because they were obtained from the selected universities' official websites and published, audited financial reports. Furthermore, documents were assessed for completeness, in the sense of being comprehensive (covering the topic completely or broadly). The documents are trustworthy communication intended to convey and disseminate the student accounts management processes and have been approved following a due process by the management or the university Council.

Data analysis is centred on systematically exploring the data for content and meaning, which relates to the implication on students accounts. This involved breaking down, examining, comparing, conceptualising and categorising the data for the formation of key issues and themes from the documents. Pope, Ziebland and Mays (2000) advocate that qualitative research uses analytical categories to describe and explain social phenomena. The literature review served as a basis for the formulation regarding the organising of information into categories and related meaningful emergent themes relevant in response to the research questions. Documents have been considered carefully to reflect and construct social reality and versions of events. Blaxter,

Hughes and Tight (2010) validate, by a pragmatic illustration, that documentary analysis proceeds by conceptualising from each document those elements considered significant or relevant and by assembling the findings, or setting them alongside others, which are considered to be related. Bowen (2009) affirms the configuration of document analysis in the form of a systematic procedure for reviewing or evaluating documents, both printed and electronic material.

Accordingly, the documents from various universities were examined systematically and interpreted in order to elicit meaning, gain understanding (making sense of characteristics) and develop empirical knowledge in order to discover insights relevant to the research problem. Researchers typically review the prior literature as part of their studies and incorporate that information in their reports (Bowen, 2009). The reviewed literature guided an interactive process of reflecting on the pertinent information obtained in documents (document review), which suggested situations that need to be examined and interpreted as part of the research. The documents were instrumental in understanding the consecutive roots of specific issues and indicated the conditions that impinge upon the phenomena currently under investigation. Objectively, documents have been used for background and context to verify findings or corroborate (contradictory) evidence from quantitative results (presented in the next chapter).

Thematic analysis uncovered the following identification of five themes pertinent to a phenomenon of policy implications of credit management on student accounts: 1) conveyance or communication of procedures, 2) encouragement to settle debt, 3) implementation of credit management, 4) recovery of deferred debt, and 5) effectiveness of credit management policy. The themes and operational descriptions are provided in Table 7.1 below.

Table 7.1 Themes and operational definitions

	Theme	Operational description
1	Conveyance or communication of procedures	This theme encapsulates the manner in which the credit management policies are communicated to students.
2	Encouragement to settle debt	This theme describes the credit management procedures to encourage prompt payment of outstanding student accounts
3	Implementation of credit management	This theme includes exploring different credit management policies implemented at universities
4	Recovery of deferred debt	This theme focuses on the strategies that universities apply to recover the accumulated debt from previous year(s)
5	Effectiveness of credit management policy	This theme encompasses analysing the effectiveness of credit management policies

7.2.1 Conveyance or communication of procedures

It is the university's responsibility to ensure that it communicates accurate, relevant and complete information regarding the student accounts credit management policy. The information should be made available so that students and their fee-paying persons can be kept abreast of the status of student accounts. This was signified in Section 4.2 by Jackson (1999) who justified that it is essential to communicate the organisational policies in guarding relationship with relevant stakeholders. Petroons *et al.* (2014) advocate that the organisation must have a transparent communication system that delivers improved information flow between the organisation and its accounts receivable. This is assumed that if the university communicates its credit management policy to its students and parents/legal guardians this will encourage them to make predetermined plans of how they are going to settle the student debt. It is essential that universities inform students and parents of credit management policies and payment alternatives including the use of credit cards and the establishment of a payment plan (Geffert, 1991). It is expected of the universities to communicate the credit terms of student debt. Credit terms stipulate the repayment schedule and comprise matters such as the cash discount, the cash discount period and the credit period (Too, Kubasu & Langat, 2016).

For the purpose of confidentiality, the university names are reserved and they will be referred to as University A, B, C, D and E. From the findings, it was apparent that universities have various ways of communicating the credit management policies of student accounts. The information communicated to students at some universities is not adequate. At University E, for instance, the information provided on the official website of the university indicates mainly how students should pay for the fees by the end of the academic year (banking details), failing which the account will be handed over to debt collectors. Universities A and D comprehensively communicate the credit management policies and the consequences for non-compliance. The remaining two universities, C and B, communicate credit management policies, however, there is information missing such as discounts and payment period. The credit management information is conveyed to students mainly through university official websites and student fees booklet; hence, the completeness of the information can be evaluated from these measures. These findings reveal that there is deficiency in sharing credit management information with students, mainly with University E, while other universities moderately share the information. Universities that reasonably share the student credit management information should ensure that information is disseminated to students accordingly.

7.2.2 Encouragement to settle debt

Fundamentally, in order to maximise the present value of net earnings from accounts receivable, an organisation must devise means to consider on the investment of accounts receivable. This can be achieved by encouraging prompt payment of accounts receivable thereby eliminating the risk of default and costs associated with the administration of accounts receivable. The study from the document analysis indicated that there is a varying strategy amongst the universities in the manner they encourage students to pay their accounts promptly. Discounts can be used as an incentive to achieve early settlement of accounts receivable. This was echoed by Mungal and Garbharran (2014) who identified that accounts receivable relatively take so long to pay back their overdue accounts if they are not offered discounts as discussed in Section 4.5.1. Discount refers to a deduction from debt, as in return for prompt payment. In Section 4.5.1, Fabbri and Klapper (2016) advise that organisations must bargain with accounts receivable to encourage early settlement of accounts. In Section 4.2, Huang *et al.* (2016) and Wong *et al.* (2016) believe that conflicts, rational explanations and social encouragement were effective to reduce the negative conflicts in managing accounts receivable.

Amongst the universities, University A offers the highest discount of 10 percent on tuition fee if the student account is settled by the 31 March for year students. Semester 1 students have to

settle the student accounts by 28 February, while Semester 2 student accounts have to be settled by 31 August to qualify for the discounts. Notably, only national students have to apply for the discount after settlement of the accounts and then the discount will be credited to the student accounts. University D also offers a settlement discount of 5 percent on tuition fees for annual and Semester 1 registrations if accounts are settled by 28 February, while Semester 2 students have to settle their accounts by 31 July to qualify for the discount. In both of these universities, discount becomes applicable exclusively to students paying their own fees. Universities B, C and E do not offer any settlement discounts.

Although discounts increase the administration of accounts receivable, the benefits of offering discounts were discussed extensively in Section 4.5.1. Characteristics of universities can lead to advantageous credit management policies by encouraging early settlement to reduce the delinquency of accounts receivable. Nobanee and AlHajjar (2014) suggested that granting discounts is effective for cash conversion cycle. Lieber and Orgler (1975) developed an accounts receivable management model incorporating discounts to exploit the present value of net earnings from accounts receivable. The study recommends that a cost-benefit analysis must be conducted prior to implementing the complete model.

To encourage prompt payment, universities must also reflect on timely sending of statements of student accounts. This was acknowledged by Geffert (1991), who advised that in an effort to encourage timely payment of student accounts and increase cash flow there has to be timely sending of statements of accounts. Fantaw, Abera and Nesro (2014) also admitted that appropriate sending of statement to accounts receivable should be made strictly as internal control over receivables. All universities mostly make use of the post to send statements to parents or legal guardians who are responsible for the payment of student fees. However, at all universities, students can also access their statements electronically from the student portal.

7.2.3 Implementation of credit management

From all the universities under study, students with various levels of debt are expected to make payments over and above the required minimum upfront payments. These payments had to be made during the month-long registration period at the beginning of the term. Section 4.8 explicated the application of credit management at South African universities. Through the documents analysis, the implementation of credit management was analysed by examining the framework regarding credit payment period, interest rate charges, method(s) of payment, credit loss/bad debt policy and registration fees payments.

7.2.3.1 Credit payment period

Universities A and D have a clear and detailed credit payment period stated for the year courses and semester courses. The policy of both universities clearly states that if students do not adhere to the stipulated credit agreements, the accounts are handed over to legal collection agents. Universities B, C and E do not explicitly communicate the credit payment period of student accounts. However, University B indicated that all student fees should be settled by 30 November of the year of registration. The extended period may be extended in exceptional cases. University E stipulates that fees are to be paid in full by the end of the academic year, failing which the accounts will be handed over to debt collectors. Credit payment period must be effected appropriately in accordance with timely sending of student accounts.

7.2.3.2 Interest rate charges

Accounts receivables may increase profitability because of the implicit interest rates involved (Emery, 1984). On the contrary, a high investment in accounts receivable involves negative effects, such as default risk (Namusonge & Sakwa, 2016), late payment (Pike & Cheng, 2001) and transaction cost of converting receivables into cash (Kim & Atkins, 1978), which may damage a firm's profitability (Martinez-Sola, García-Teruel & Martínez-Solano, 2013; Pogue, Sartoris & Hill, 1983). Universities A, C and D charge interest on overdue student accounts, while Universities B and E do not charge any interest on student accounts. The interest rate charged, which is debited to the student accounts, varies amongst universities between 5 percent and 7 percent. The findings affirms the study of O'Neill (2008) who emphasised that interest charges can be used to persuade payments. In Section 4.8, Michalski (2012) recommends that interest charges can be used as a penalty on default for late payment of student accounts.

7.2.3.3 Method(s) of payment

All the universities have a cashier's office where fees can be paid by cash or card payments. However, Universities B, C, D and E limit the amount of cash to be paid on the university premises. In fact, University C is a cashless university. All the universities have a bank account where fees can be paid by cash deposit or by cheque directly into the bank account or electronically. Postal orders and money orders are also applicable at Universities C and D, while other universities do not utilise such facilities.

7.2.3.4 Credit loss/bad debt policy

Credit management policy as well as examining ways of prompt collections and decreasing bad debts were discussed by Kontuš (2013) in Section 4.1. Credit loss (bad debts) monitoring was discussed in Section 4.6.1. From the findings, all universities do not noticeably communicate the credit loss policy. In Section 4.6.1, Scherr (2015) pronounces that credit management policy mainly concerns the control of credit-related costs such as credit loss.

It is apparent from the financial reports of all universities that each university makes a provision or allowance for credit loss/impairment loss. The provision for credit loss is based on the credit risk that universities are exposed to from student accounts receivables. The financial reports also indicate that at year-end, management makes an estimate of the amount it expects to recover from outstanding balances of student accounts. Students are grouped based on similar credit risk characteristics that are indicative of the ability of the student to pay according to the contractual terms. The details regarding the provision for impairment variations are discussed in Section 7.2.5 below.

7.2.3.5 Registration (initial up-front) fees payments

At all the universities, the findings revealed that it is compulsory that students pay an initial registration fee prior to registering for the particular academic year. The amount of registration varies amongst the universities. In the financial statements, it is stated that the registration fee is paid to mitigate the credit risk that universities are exposed to from outstanding student accounts. Registration fees are based on a fixed amount approved by the university management and this amount is credited to student accounts. The significance of the registration fee is based on the assumption that the registration fee will alleviate the student debt. The high registration fees translate to lower outstanding accounts receivable. Amongst the universities, the results indicate that University B charges the highest registration fee.

Notably, though University B charges the higher registration fee, the university Council approved a minimum registration fee for students who are unable to pay the registration fee. The minimum registration fee is based according to the levels of family income to cater for all students. In Section 3.4, Cele (2014) discussed the role of student activism towards financial exclusion because of accumulated debt and for students who cannot afford the initial payment. According to Koen, Cele and Libhaber (2006), on average, about 25 percent of students leave tertiary education annually in South Africa because of academic and financial exclusion. It becomes difficult for students that have accumulated debt to pay for the debt and the registration

fees. Cross and Carpentier (2009) assert that South African students encounter financial pressure linked to the payment of registration fees and other related university expenses. Furthermore, in Section 3.3.2.3 Glater (2015) discussed how student debt could deter the students from higher education. The next section will discuss the findings regarding how the universities attempt to recover the deferred debt.

7.2.4 Recovery of deferred debt

Student debt at South African universities was discussed in Section 3.3, while Section 3.3.2 dealt with student debt implications on universities and the application of credit management at South African universities was highlighted in Section 4.8. It should be noted that the contract, which forms part of the application form for admission to the universities, is signed by the students and/or their legal guardian and legally binds those parties to pay the full tuition. Universities have similar and different ways in which they manage the outstanding fees. Through the documents analysis, the practical recovery of deferred debt is analysed by assessing the acknowledgement of debt, regulatory or administrative governance issues, use of credit collectors and the handling of the missing middle.

7.2.4.1 Acknowledgement of debt

Acknowledgement of debt (AoD) was discussed in Section 4.7.1, which is a legal agreement granted to debtors to be afforded a longer period to repay the debt. The findings revealed that all universities require students with outstanding fees to sign the (AoD) or debt agreement before they can register and view their results. AoD serves as an instalment plan on how the outstanding debt from the previous years will be paid. For example, Universities C and D require students with outstanding fees who want to view their results and continue with their studies to bring their parents/legal guardian to enter into AoD arrangements with the university. The necessary documentation has to be provided such as identity documents as well as proof of income. Unemployed persons and pensioners are not permissible as surety. Parents/legal guardians who are unable to come the university physically are contacted either telephonically or by e-mail to have the AoD forms sent to them to complete. University E evidently does not reflect the payment terms of the outstanding debt. Two universities have a clear payment policy for the outstanding debt. Universities A and B require payment in proportion to the level of debt (the higher level of debt, the higher the payment required) and students sign the payment instalment agreement for the remaining balance.

7.2.4.2 Governing administrative issues

Students with outstanding balances on their fees accounts are not permitted to certain academic gratifications according to the regulatory authorities of universities. At all the universities, to be allowed to register and view the academic results, students who owe the universities need to settle their outstanding debt or pay according to the AoD and pay the registration fee in full. Universities B and E evidently do not specify whether students are allowed to graduate if they have outstanding fees. University C clearly stipulates that students are not permitted to graduate if they have outstanding fees. Universities A and D permit students to graduate if they have outstanding fees, after signing an AoD; however, students are not handed the academic certificate (students are issued with the fees statement instead) but are allowed to go through the graduation procession. The academic certificates at both these universities are withheld until after the graduation ceremony if fees are still outstanding.

7.2.4.3 Debt collectors (agencies)

Debt collectors were discussed in Section 4.3 as a fragment of credit management cycle. O'Neill (2008) recommends that deferred debt might be administered by collections agencies who are highly trained, experienced with excellent negotiating skills. Shao *et al.* (2007) counsel that using debt collectors should be the last resort in the delinquent debt collection process. Similarly, Hamilton (2016) warns that organisations should constantly monitor receivables to avoid a dramatic increase, which can lead to increased credit losses.

The results posit that all the universities make use of the external debt collection agencies for overdue student accounts. Notably, University C also hands the delinquent accounts receivable to the credit bureau, while University A clearly stipulates that student accounts are not listed on the credit bureau as a resolution of the university Council. The other universities, B, D and E, did not disclose information whether student accounts are listed on the credit bureau. According to SABC (2015), thousands of students have been blacklisted by universities because of outstanding university fees. Machika and Johnson (2015) provide evidence that South African university students encounter harassment if they are unable to pay their fees and, subsequently, are placed on the credit bureau.

7.2.4.4 Missing middle

SRCs relationship with management sought to influence the decision-making of SCM in relation to student registration, financial exclusions and similar issues. In particular, apart from the credit

management policy, the SRCs generally are being consulted on extreme cases where students faced a real possibility of being excluded because of poor academic performance or high debts. The role of student politics in relation to student debt was discussed in Section 3.4. Based on the literature it is assumed that the university with a high level of students from missing middle will encounter high student debt. This is because the student fees of poor students are paid for by NSFAS and the students above the missing middle threshold are assumed to afford student fees. This assumption will also be established through the quantitative study. In Section 3.6, Dano (2015) offered the description of the missing middle students while Cloete (2015) validates a considerable number of students at South African universities fall within the category of missing middle. McKenna (2016), Rhodes University submission to the Fees Commission, pronounced that at present the missing middle are unable to afford university fees and do not qualify for state support through the NSFAS programme.

The findings provided no evidence of classifying credit management for students in the missing middle category though this group relatively poses more credit risk for the universities. The universities do not provide evidence of credit management strategy according to the affordability or the family income threshold. If the data for students in this category were available, it would assist the universities to plan, make reliable provisions and manage the credit risk more effectively.

7.2.5 Effectiveness of credit management policy

Njeru, Mohhamed and Wachira (2017) propose that effective credit management is key in recovery of debts as it helps in diagnosing credit risk and provides opportunities to identify better strategies to collect. In Section 4.1, Kontuš (2013) opines that organisations must examine ways of prompt collections of accounts receivable and decreasing bad debts while in Section 4.2, Njeru, Mohhamed and Wachira (2017) insist the effective credit management policy as key in recovery of outstanding debts. Furthermore, in Section 4.3, Kumaraswamy (2016) remarks that credit management cycle represents an average collection period and setting effective credit standards.

Several contemporary theories of literature regarding credit management cycle, which incorporates accounts receivable age analysis, were presented in Section 4.3. The purpose of accounts receivable age analysis is an accurate assessment of customer account payment patterns, in particular, determination of variation over time. Figure 7.1 to Figure 7.5 indicate the annual level of tuition fees income, student accounts receivable and the provision for impairment

(allowance for credit loss). From this information, the effectiveness of credit management can be evaluated based on financial ratios:

7.2.5.1 Effectiveness based on accounts receivable collection (ARC) period

ARC period ratio is an indication of the effectiveness of the credit and collection policy of the organisation and it will directly affect the liquidity position of the university. ARC is used to calculate how quickly the university collects the money from student accounts receivable. Table 7.2 indicates the ARC period for universities.

The calculation of accounts receivable days is based on the following formula:

$$(Student\ accounts\ receivable \div Revenue\ from\ tuition\ fees) \times 365\ days$$

Table 7.2: ARC of universities

	2015	2014	2013	2012	2011	2010	Average
University A	317	375	331	265	274	269	305
University B	367	350	290	202	194	201	267
University C	146	153	81	87	79	76	103
University D	267	257	225	189	190	239	228
University E	-	314	308	254	280	303	292

It is undoubtedly that amongst the universities, University C has a better credit management effectiveness, according to ARC, with an average collection period of 103 days, however, the situation is deteriorating considerably, particularly from 2014. The findings show that Universities B and D, with average collection period of 267 and 228 days respectively, are encountering difficulty in student debt collections and the situation is worsening, particularly from 2013. Universities A and E have accumulated delinquency of ARC, with average collection period of 305 and 292 days respectively. The findings are consistent with the recommendation of Rao and Gaglani (2014) that suggests that the value for the organisation can be created by reducing the number of days for accounts receivables. A study by Too *et al.* (2016) affirmed that organisations could create value by reducing their number of days of accounts receivables.

7.2.5.2 Effectiveness based on accounts receivable turnover (ART) ratio

The ART metric measures how many times an organisation turns accounts receivable into cash during a period; usually over one year. A higher ratio means you are turning accounts receivable into cash more frequently; if, for example, your ratio is two, you collect average accounts receivable twice a year, every six months. The more frequently you are collecting, the higher your cash flow and liquidity. Table 7.3 provides ART ratios of the universities.

The calculation of ART is based on the following formula:

$$\text{Revenue from tuition fees} / \text{average student accounts receivable}$$

Table 7.3: ART of universities

	2015	2014	2013	2012	2011	2010	Average
University A	1.15	0.97	1.10	1.38	1.33	1.36	1.22
University B	0.99	1.04	1.26	1.81	1.88	1.81	1.47
University C	2.50	2.39	4.52	4.19	4.61	4.80	3.84
University D	1.36	1.42	1.62	1.93	1.92	1.53	1.63
University E	-	1.16	1.18	1.43	1.30	1.21	1.26

The ART index reflects that University C has a relatively enhanced ART (average of 3.84 times) among the universities, however, the situation weakened from 2014. Universities A, B and E has delinquency ART averaging 1.22, 1.47 and 1.26 times respectively. The condition of these universities is worsening steadily particularly from 2013. University D has an unwavering but precarious ART average of 1.63 times, which must be monitored cautiously. The findings emulate the suggestion of Nobanee and AlHajjar (2014) regarding optimal cash conversion cycle and opportunity costs by converting accounts receivable to cash.

7.2.5.3 Effectiveness based on bad debt to revenue from tuition fees

This ratio expresses the percentage of credit income that was written off to bad debt. A lower percentage signifies that effective credit management policies and procedures are employed. The amount of bad debt written off is included in operating expenses. Because this amount cannot be explicitly determined for all the universities from the financial reports it will be calculated based

on provision for credit loss. This is also because universities write off student accounts as bad debts at different intervals. Table 7.4 indicates the analysis of bad debt to revenue from tuition fees.

The calculation of bad debt to revenue is based on the following formula:

$\text{Allowance for credit loss} / \text{Revenue from tuition fees}$

Table 7.4: Bad debt to revenue from tuition fees

	2015	2014	2013	2012	2011	2010	Average
University A	0.60	0.72	0.64	0.54	0.55	0.59	0.61
University B	0.65	0.68	0.40	0.45	0.42	0.42	0.50
University C	0.13	0.13	0.06	0.06	0.06	0.06	0.08
University D	0.47	0.46	0.44	0.47	0.44	0.44	0.45
University E	-	0.53	0.54	0.50	0.58	0.64	0.56

The ratio signifies that University C, with the average of 8 percent, is consistent in effectively managing accounts receivable since a small portion of accounts receivable is provided for a credit loss. This situation has to be tamed since the ratio increased by 50 percent since 2014. On the contrary, University A, B and E are providing a substantial percentage of annual tuition fee income as an allowance credit loss with the average of 61 percent, 50 percent and 56 percent respectively, while University D shows a stable but critical condition with the average of 45 percent. An increase in accounts receivable that exceeds income reflects the relaxation of credit management policy, which may result in an increase in credit loss (Correia, Flynn, Uliana & Wormald, 2011:5-30)

7.2.5.4 Effectiveness based on allowance for credit loss to accounts receivable

The percentage of accounts receivable estimated as allowance for credit loss gauges how much of the accounts receivables are apportioned or provided as allowance for credit loss. The amount of the allowance for credit loss is accounted for as an operating expense in the statement of comprehensive income. The allowance for credit loss to accounts receivable is illustrated in Table 7.5.

The calculation of percentage accounts receivable estimated as allowance for credit loss is based on the following formula:

<i>Allowance for credit loss / Accounts receivable</i>

Table 7.5: Allowance for credit loss to accounts receivable

	2015	2014	2013	2012	2011	2010	Average
University A	0.69	0.70	0.70	0.74	0.73	0.79	0.73
University B	0.64	0.71	0.50	0.82	0.79	0.76	0.70
University C	0.34	0.30	0.28	0.25	0.27	0.27	0.29
University D	0.64	0.65	0.72	0.90	0.84	0.68	0.74
University E	-	0.61	0.64	0.72	0.76	0.77	0.70

The results demonstrate that University C, with average of 29 percent, has a superior management of student accounts receivable reflected by the amount of accounts receivable that are provided for credit loss. However, the university increased the allowance for credit loss steadily from 2014 but the increase is insignificant. The findings indicate that other universities had a volatile allowance for credit loss but the allowance poses an inherent risk for the universities. The percentage of accounts receivable estimated to allowance for credit loss has similar ranges amongst University A, B, D and E with averages of 73, 70, 74 and 70 percent respectively. This indicates that universities are not optimistic (based on reliable estimates) about the collection of student accounts receivable.

7.2.5.5 Effectiveness based on receivable to current assets ratio

Student accounts receivables, as a percentage of current assets would reveal the level of receivables in current assets and the opportunity cost associated with it, the higher the percentage, the higher the cost of carrying the receivables. It, therefore, is desired that an organisation needs to carry the least percentage of receivables possible without affecting the revenue from tuition fees.

Hence, if this ratio is very high, it means that the credit management policy may not be effective; too much cash is locked up in the receivables. If cash is locked up in the receivables, it could

have been invested elsewhere to earn a return or settle liabilities. The ratio for student accounts receivable to current assets is indicated in Table 7.6.

The calculation of receivable to current assets ratio is based on the following formula:

<i>Student accounts receivables / Current assets</i>

Table 7.6: Student accounts receivable to current assets ratio

	2015	2014	2013	2012	2011	2010	Average
University A	21%	26%	27%	21%	23%	26%	24%
University B	63%	37%	46%	47%	39%	35%	45%
University C	35%	28%	12%	14%	10%	9%	18%
University D	39%	38%	33%	37%	31%	46%	37%
University E	-	33%	31%	28%	40%	51%	37%

The results depict that student accounts receivable to current asset ratio of universities varied significantly between the highest of University B (63%) in 2015 and the lowest of University C in 2010 (9%). The average ratio of University B (45%) and University D and E (37%) is more than the industry six year average of 32 percent, which shows that the contribution of receivable in current assets is more, which may lead to blockage of cash with accounts receivable due to non-payment. Rao and Gaglani (2014) confirm that the receivables of any organisation, if managed effectively, increase the current assets, which leads to increase in the working capital; however, excess of receivables increases the costs by blockage of funds. Namusonge and Sakwa (2016) conclude that investments in account receivables are highly vulnerable to credit losses. Consequently, this will reduce the returns from the investment in accounts receivable. In fact, the investment in accounts receivable, as expected, must earn a rate of return in excess of the required rate of return (Too *et al.*, 2016).

It was found that the situation at University A and C was favourable as an average of 24 percent and 18 percent respectively. This ratio has to be analysed along with the findings discussed in Section 2.5 and Section 2.6, which revealed the dependency of universities on tuition fees. On average, UoTs depend at the average rate of 30 percent on tuition fees.

Section 4.8.1 outlined the effectiveness of credit management policy where Scherr (2015) concludes that to achieve an effective credit management strategy an organisation can use internal expertise or with outsourcing alternatives. Omondi (2014) and Kumar (2010) synthesises lenient or stringent credit management policy to manage accounts receivable.

7.3 RANKING EFFECTIVENESS PER UNIVERSITY

Table 7.7 provides average ranking order for credit management effectiveness amongst the universities based on averages from 2010 to 2015 as exhibited in Table 7.2 to Table 7.6.

Table 7.7: Credit management effectiveness ranking order amongst universities

	1	2	3	4	5
Effectiveness diagnoses based on accounts receivable collection (ARC) period	C	D	B	E	A
Effectiveness diagnoses based on accounts receivable turnover (ART) ratio	C	D	B	E	A
Effectiveness diagnoses based on bad debt to income	C	D	B	E	A
Effectiveness diagnoses based on allowance for credit loss to accounts receivable	E	C	B	A	D
Effectiveness diagnoses based on receivable to current assets	C	A	E	D	B

On average, University C has an acceptable efficiency of credit management of student accounts followed by University D. University B has a moderate efficiency while University E and A have inferior credit management of student accounts.

The following figures indicate the annual tuition fees income (in millions of rand) for the universities, student accounts receivable and allowance for credit losses to demonstrate the summary of the findings.

Figure 7.1: University A (Financial reports data in Rm)

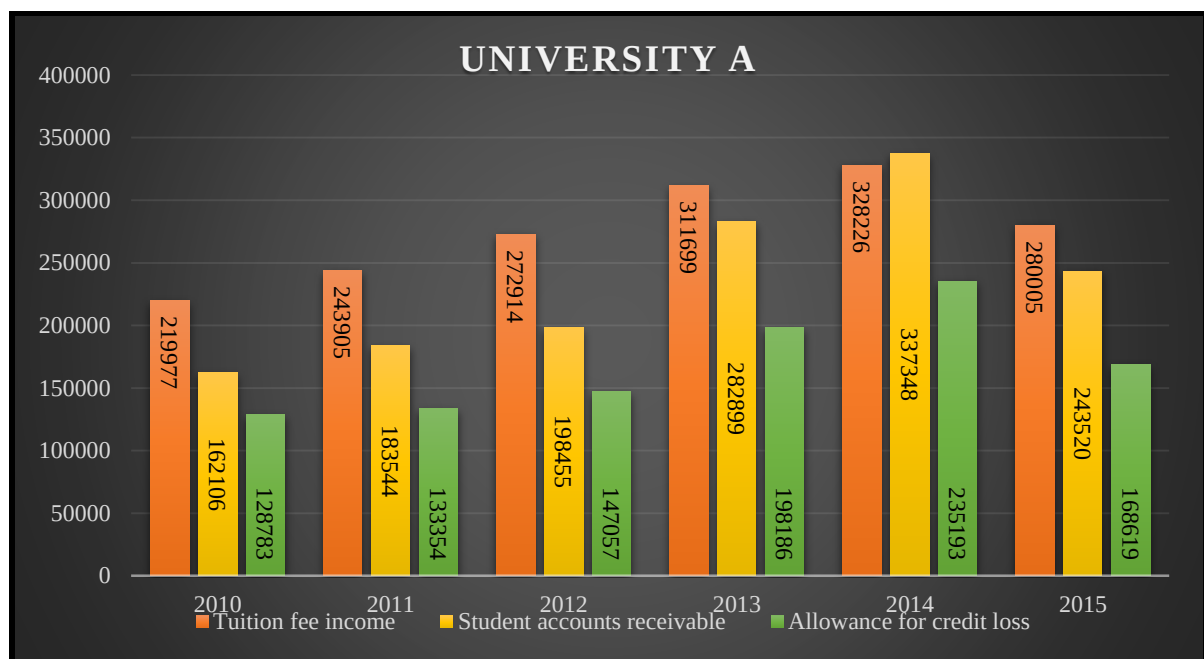


Figure 7.1 shows that tuition fee income, student accounts receivable and the allowance for credit loss for University A has been increasing steadily since 2010 until 2014; however, in 2015 the tuition fee slumped. Notably, 2014 was a worse performing year in terms of credit management since the student accounts receivable exceeded the tuition fee income. This means that the university was battling with the credit management of accumulating student debt.

Figure 7.2: University B (Financial reports data in Rm)

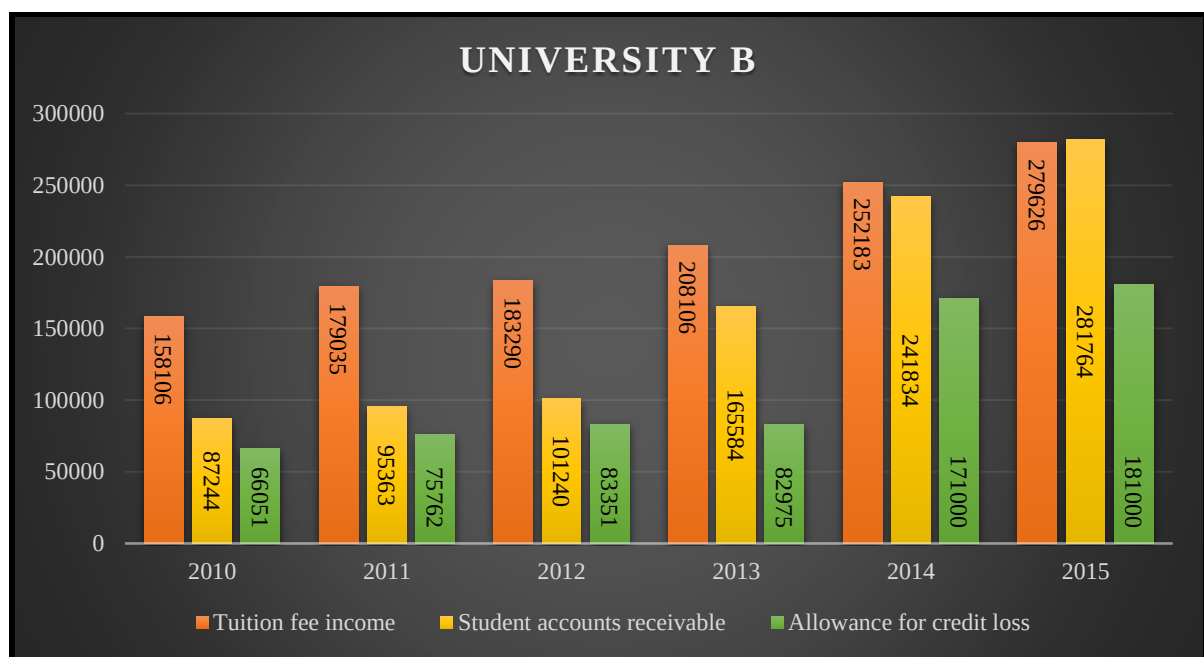
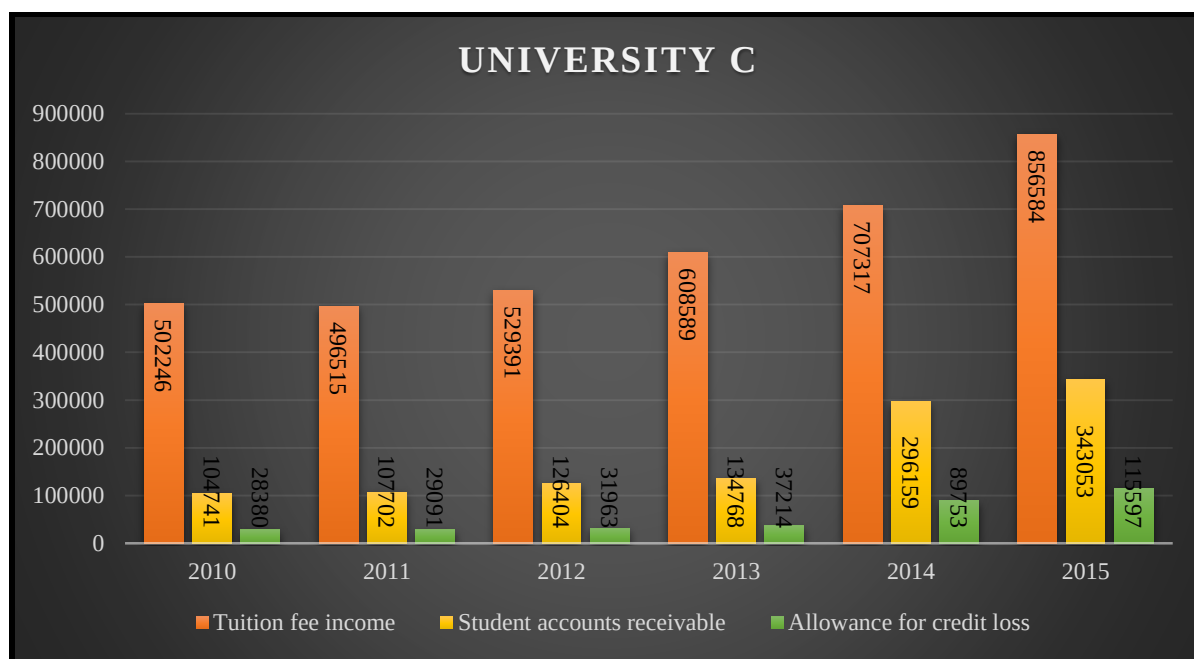


Figure 7.2 illustrates that University B generally encountered challenges in credit management particularly in 2015 where the student accounts receivable exceeded the tuition fee income. In 2014, the difference between tuition fees income and student accounts receivable is marginal. This suggests that the accumulated student debt is putting strain on the credit management.

Figure 7.3: University C (Financial reports data in Rm)



According to Figure 7.3, University C has an acceptable credit management policy of student accounts. However, the university increased the allowance for credit loss from 2014. This suggests that student accounts receivable are putting strain on credit management in recent years.

Figure 7.4: University D (Financial reports data in Rm)

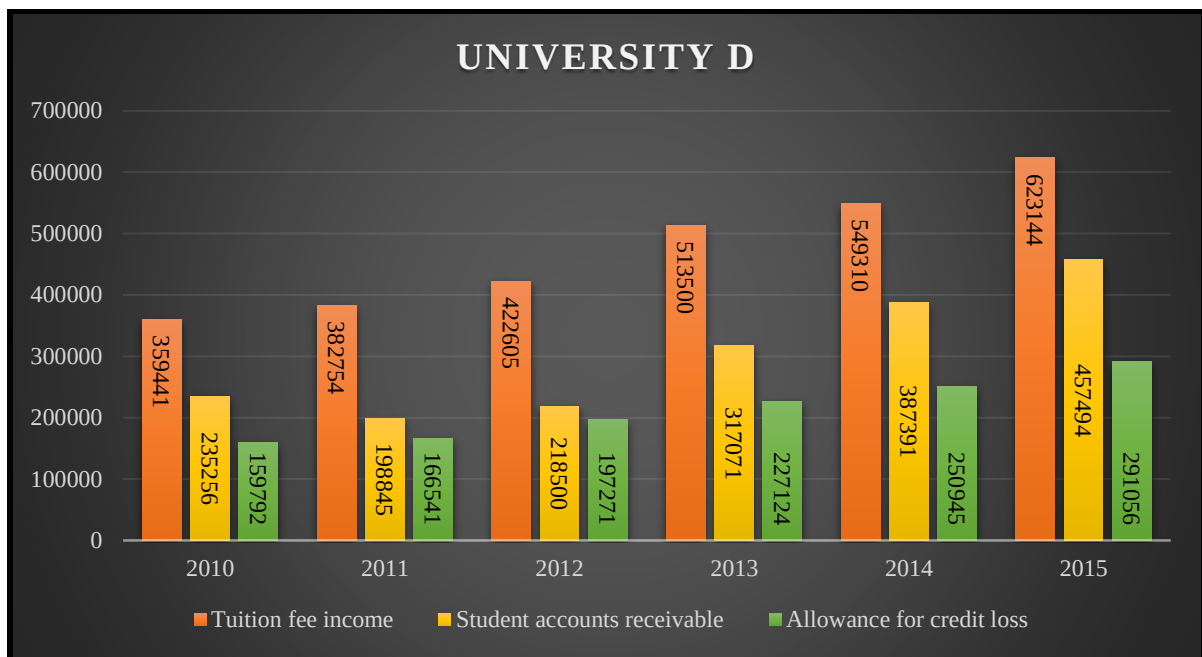


Figure 7.4 attests that the university has a steady credit management of student accounts. From 2014, the student accounts receivable and the allowance for credit loss increased steadily. This also suggests that the university is encountering challenges with credit management in recent years.

Figure 7.5: University E (Financial reports data in Rm)

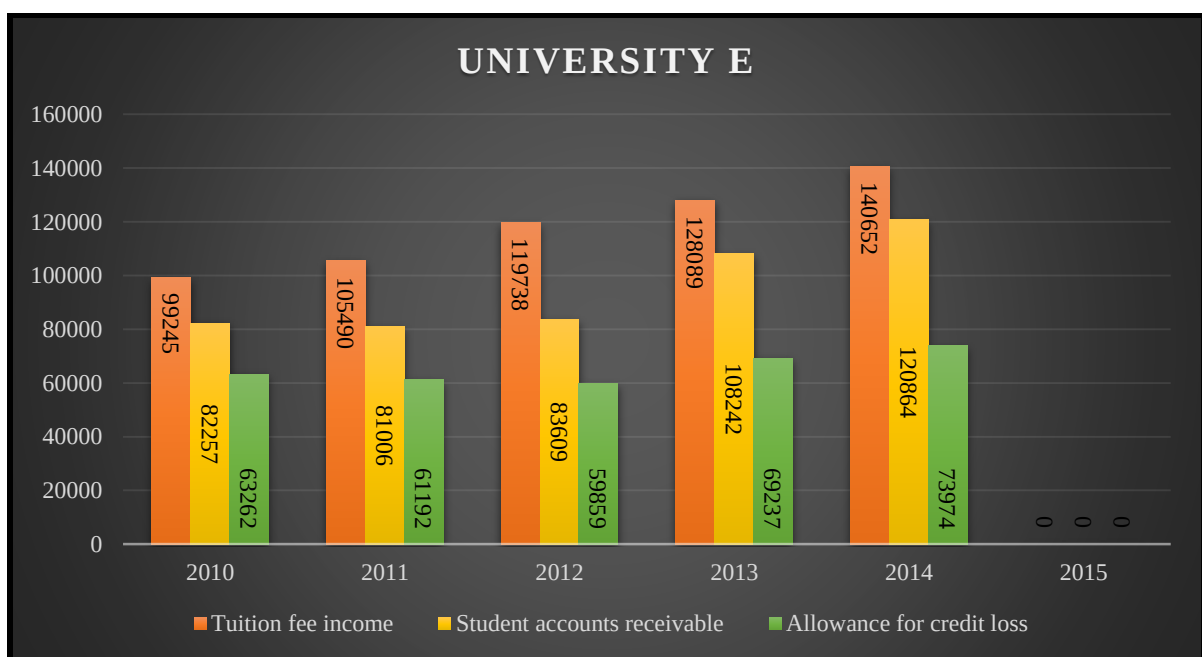


Figure 7.5 indicates that the margin between tuition fee income, student accounts receivable and the allowance for credit loss is marginal. The data for 2015 was not available during data collection. Generally, the university has been encountering challenges with credit management since the allowance for credit loss has been more than 50 percent of the tuition fee income. The situation has been worsening from 2013.

7.4 SUMMARY

This chapter addressed the sixth secondary objective as set in chapter 1 of analysing and comparing the annual financial statements, published credit policies and student perceptions of the selected South African universities.

The management of student accounts receivable is determined largely by the universities' credit management policy. Credit management is a combination of art and science requiring balancing of opposing priorities, which lead to effective receivables management (Salek, 2005:3). This can be achieved, according to Salek (2005:3), through involvement of the business process, staffing skills, motivation, technology, company culture and changing the behaviour of accounts receivables and the flexibility of dealing with changing external influences. Furthermore, credit management of student accounts entails assessing and managing the risk to avoid cash flow problems. Namusonge and Sakwa (2016) and Omondi (2014) cite that accounts receivable risk assessment includes identification of problem customers, monitoring and control of accounts receivables in order to maintain optimal cash flow. Rao and Gaglani (2014) advise that it is essential to manage effectively, monitor efficiently, plan properly and review periodically in an attempt to reduce the cash conversion cycle. Indeed universities have to establish sound credit management policy, which will ensure proper debt collection procedures and is pivotal in improving efficiency in receivables management of student accounts.

The findings show that some universities partially communicate the credit management policy to students while others comprehensively disclose the information. The quantitative results are envisaged to reveal whether students comprehend the information. The findings also reveal the practical differences amongst universities to encourage students to settle tuition fees promptly. As a result of institutional autonomy, universities exercise independent credit management policies. The findings indicate that there are significant similarities and differences in the recovery of student debt. The effectiveness of credit management policy is imperative for this study and the results demonstrate significant differences amongst universities. The implementation of credit management on student accounts is deteriorating, particularly in recent

years. All the universities generally have been increasing the allowance for credit loss, meaning that the probability of student debt recovery is diminishing. The South African universities are facing challenges with the policy implementation of credit management policy on student accounts. This can also be attributable to the protest for free education.

Generally, the effectiveness is deteriorating steadily for all the universities, particularly in recent years. It is apparent from the results of different ratio analysis that some universities ought to have credit management policy reforms in order to be financially sustainable. The universities must urgently implement radical credit management transformation to curb the escalating situation.

The next chapter will present the data analysis and findings of the quantitative data.

CHAPTER 8

PRESENTATION AND ANALYSIS OF QUANTITATIVE DATA

8.1 INTRODUCTION

The aim of this chapter is to address the seventh secondary research objective (as set in chapter 1, refer page 9) of analysing students' perceptions on student debt, student credit management policy and personal financial management. This chapter also considers the specific empirical objectives as set in chapter 6 (refer Section 6.6.1, page 118). This chapter presents the findings and empirical analysis drawn from the quantitative data. Literature review chapters informed the findings. This chapter thus focuses on answering the underlying research questions that are fundamental to this study.

The quantitative data were obtained by the distribution of questionnaires and captured using Microsoft Excel for Windows (refer to Appendix 1 for the questionnaire). The data from Excel was transformed to the Statistical Package for the Social Science (SPSS), version 23.0, for the purpose of analysing the data. This chapter will present: frequency distribution to become familiar with the data, exploratory factor analysis to reduce the questions in the questionnaire into sensible groups (factors); descriptive statistics to explain the factors; correlations to establish the relationship between factors; regression analysis to investigate the association between factors; and analysis of means (ANOVA and t-test) to determine the differences in student perceptions between five universities.

8.2 PILOT TESTING THE QUESTIONNAIRE

A pilot study was conducted using a sample with characteristics similar to the targeted group and was completed by 138 participants. The purpose of the pilot study was to determine the internal consistency of the measurement instrument. The questionnaire comprised items structured based on five-point Likert-type scales. The Likert scales consist of a number of statements, which express a range from strongly disagree to strongly agree towards the given constructs to which the respondent is asked to respond (Kothari, 2004:84).

The pilot study also afforded the opportunity to ensure that the questionnaire encompassed all the information it was intended to incorporate to determine the reliability and validity of the questionnaire. Cronbach's alpha coefficient was used to establish the degree to which the items reflect internal consistency (reliability). The pilot study results reported in Table 8.1 indicate the

existence of correlated scale items and rationalises the internal consistency of the scales. According to Watkins and Gioia (2015:102), there are different suggestions for cut-off points for Cronbach's alpha values, but overall a Cronbach's alpha of 0.6 or higher for exploratory studies is sufficient for providing adequate scale reliability.

Table 8.1: Pilot test results

Scales	No. of items	Cronbach's Alpha
Section A: Student debt (SD)	30	0.740
Section B: Student credit management (SCM)	23	0.719
Section C: Personal financial management (PFM)	31	0.706

8.2.1 Review of the questionnaire

The questionnaire comprised items structured based on five-point Likert-type scales. Respondents were offered a choice of five pre-coded responses with the neutral point being moderately agree. In a frequency scale 1 strongly disagree and 2 disagree allow the participants to express how much they disagree with a particular statement while 4 agree and 5 strongly agree allow the participants to express how much they agree with a particular statement.

8.3 RESULTS OF THE MAIN SURVEY

Subsequent to conducting and pilot testing of the measuring instrument, 2 000 questionnaires were distributed to the identified sample of senior students at selected five universities (A, B, C, D and E) of which there were 1 382 respondents. The researcher, therefore, found this sample size of the data adequate (69% response rate) to perform the required statistical analysis. The results are reported according to valid response percentages, excluding missing figures.

8.3.1 Frequency distributions of demographic information

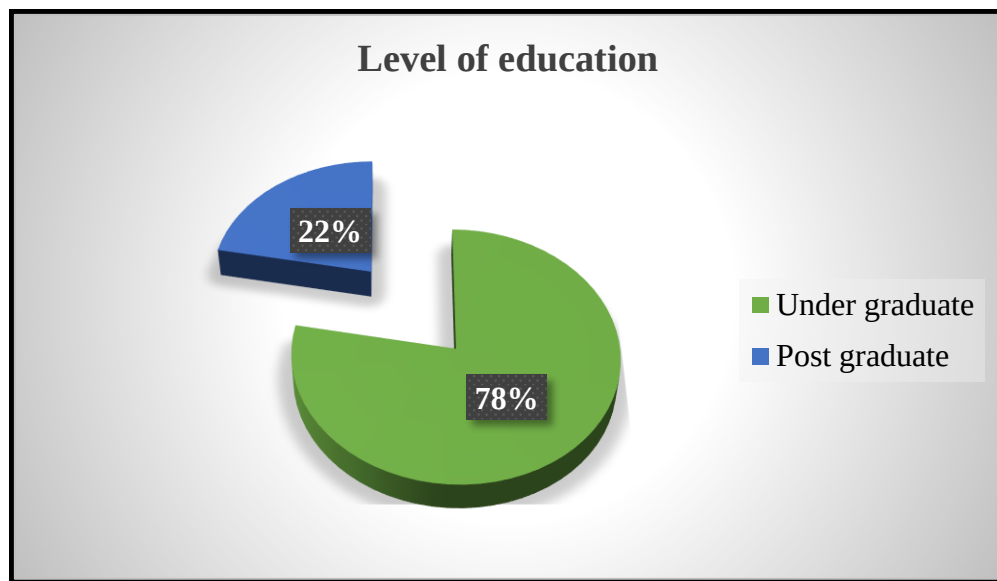
Section D requested the participants to provide their personal information, which comprised current level of education (D1), duration at the same university (D2), faculty (D3), studying at home province (D4), family level of income (D5), acknowledgment of debt (D6), level of student debt (D7), source of funding (D8), method(s) of receiving the fees statement (D9), preferential method(s) of receiving the fees statement (D10), preferential method of fees payment (D11), frequency of receiving fees statement (D12) and perception about main

contributor to non-payment of fees (D13). Each of these characteristics is discussed in the following subsections (8.3.1.1 to 8.3.1.13).

8.3.1.1 Current level of education

The current level of education is reflected in Figure 8.1. Of the participants in the sample, the majority were undergraduates (n=1 038; 78%). The postgraduate participants made up the balance (n=293; 22%) of the sample.

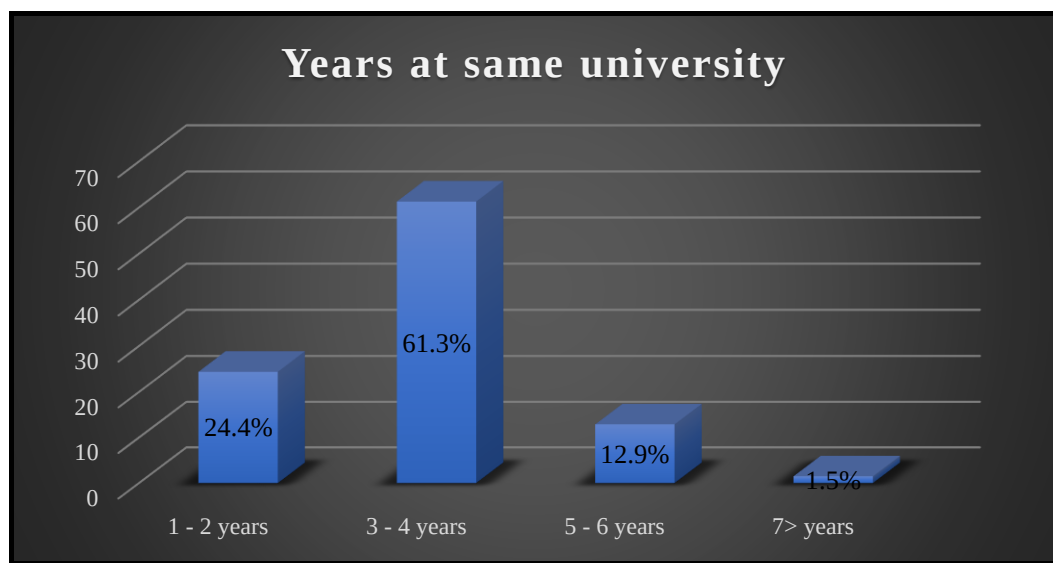
Figure 8.1: Participants' current level of education



8.3.1.2 Duration at the same university

Participants were asked to indicate their number of years in the same university. Figure 8.2 reveals that the majority of participants were at the same university for three to four years (n=838; 61.3%) followed by (n=334; 24.4%) those who have been with the same university for one year to two years. Only a small number of participants (n=176; 12.9%) and (n=20; 1.5%) have been with the same university for five to six years and more than seven years, respectively. Overall, the participants had a number of years to have accumulated student debt.

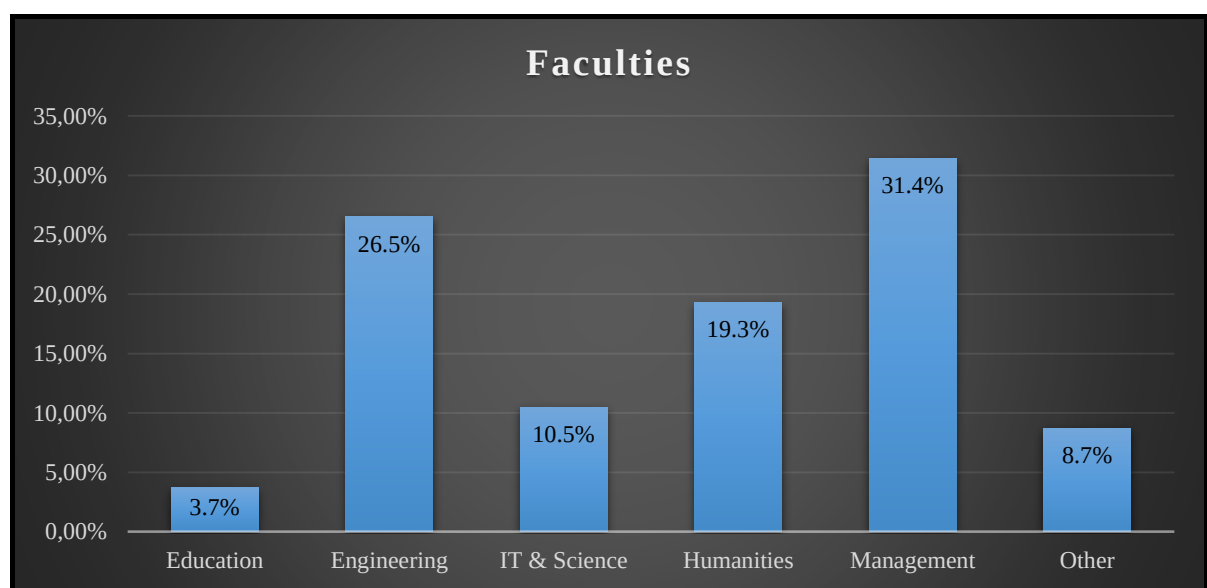
Figure 8.2: Participants' duration at the same university



8.3.1.3 Faculty

The participants were classified into academic faculties as illustrated in Figure 8.3. There has been a fair representation of participants from various faculties. The sample composition was as follows: from the Education faculty (n=50; 3.7%); from the Engineering faculty (n=362; 26.5%); from Information Technology and Science faculty (n=143; 10.5%); from the Human Sciences (n=263; 19.3%); from the Management Sciences faculty (n=429; 31.4%) while (n=119; 8.7%) were from other faculties.

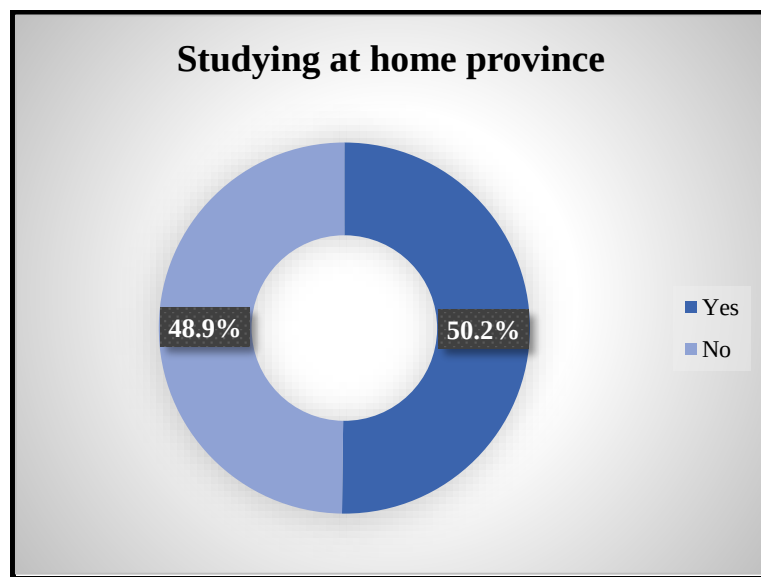
Figure 8.3: Participants' academic faculties



8.3.1.4 Attending university in home province

Figure 8.4 illustrates almost an even distribution of participants' background. Most of the participants (n=683; 50.2%) indicated that they are attending university in their home province while (n=677; 49.8%) indicated that they are attending university away from their home province.

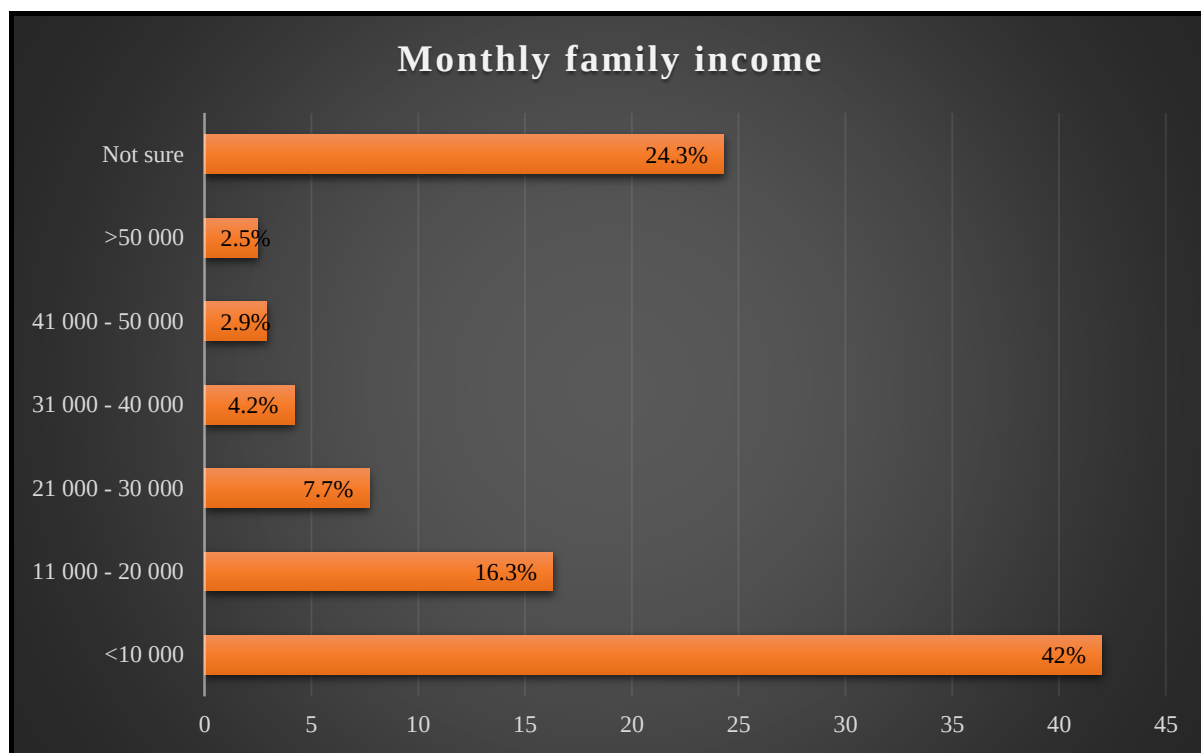
Figure 8.4: Participants' home province attendance



8.3.1.5 Family level of income

The distribution of the participants' family level of monthly income is shown in Figure 8.5. This figure provides evidence that the majority of participants (n= 566; 42%) are from families that earn R10 000 or less, while (n=219; 16.3%) are from families earning between R11 000 and R20 000, (n=104; 7.7%) are from families earning income ranging from R21 000 to R30 000, (n=57; 4.2%) are from families earning from R31 000 to R40 000, (n=39; 2.9%) are from families earning R41 000 to R50 000, while (n=34; 2.5%) are from families that earn R50 000 or more on a monthly basis. A substantial number of participants were not sure about family income (n=327; 24.3%).

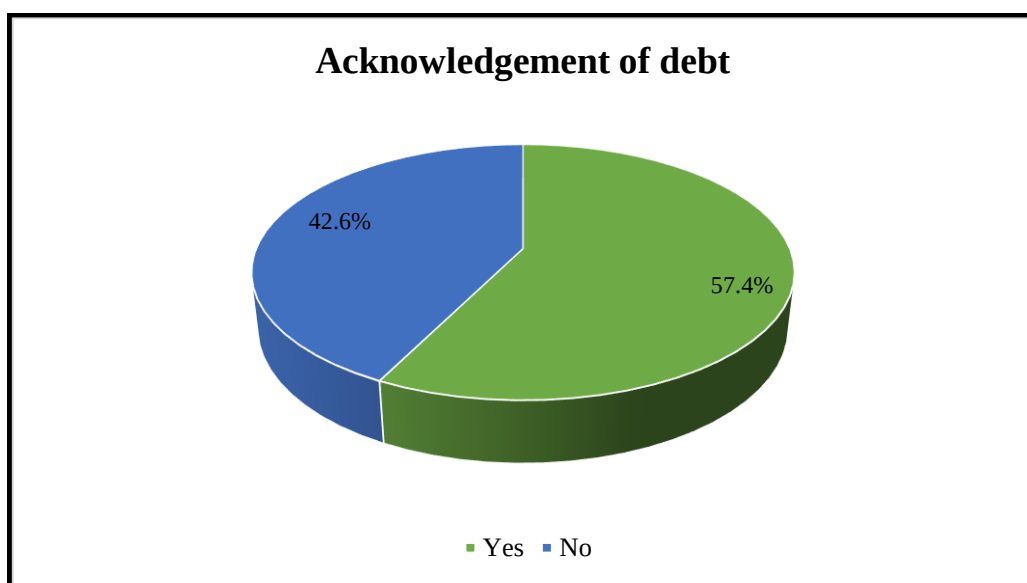
Figure 8.5: Family monthly level of income



8.3.1.6 Acknowledgement of debt (AoD)

The participants were requested to indicate whether they have signed an acknowledgement of debt with the university to pay the outstanding student debt. Figure 8.6 indicates that the majority of participants (n=787; 57.4%) have signed the AoD, while (n=583; 42.6%) did not sign an agreement.

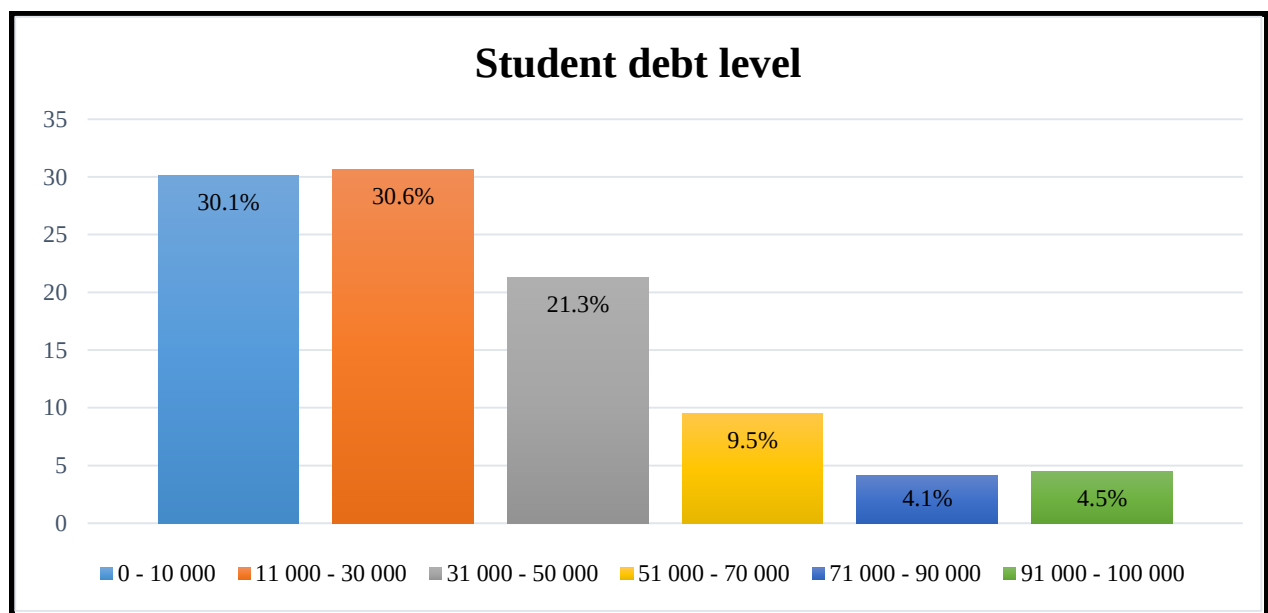
Figure 8.6: Participants' AoD



8.3.1.7 Fees debt level

Figure 8.7 indicates the composition of the fees debt level of the participants as follows: Those owing less than R10 000 (n=411; 30.1%), those owing between R11 000 to R30 000 (n=419; 30.6%), those owing between R31 000 to R50 000 (n=291; 21.3%) those owing between R51 000 to R70 000 (n=129; 9.5%) those owing between R71 000 to R90 000 (n=56; 4.1%) and the balance comprised the remainder of the sample owing more than R90 000.

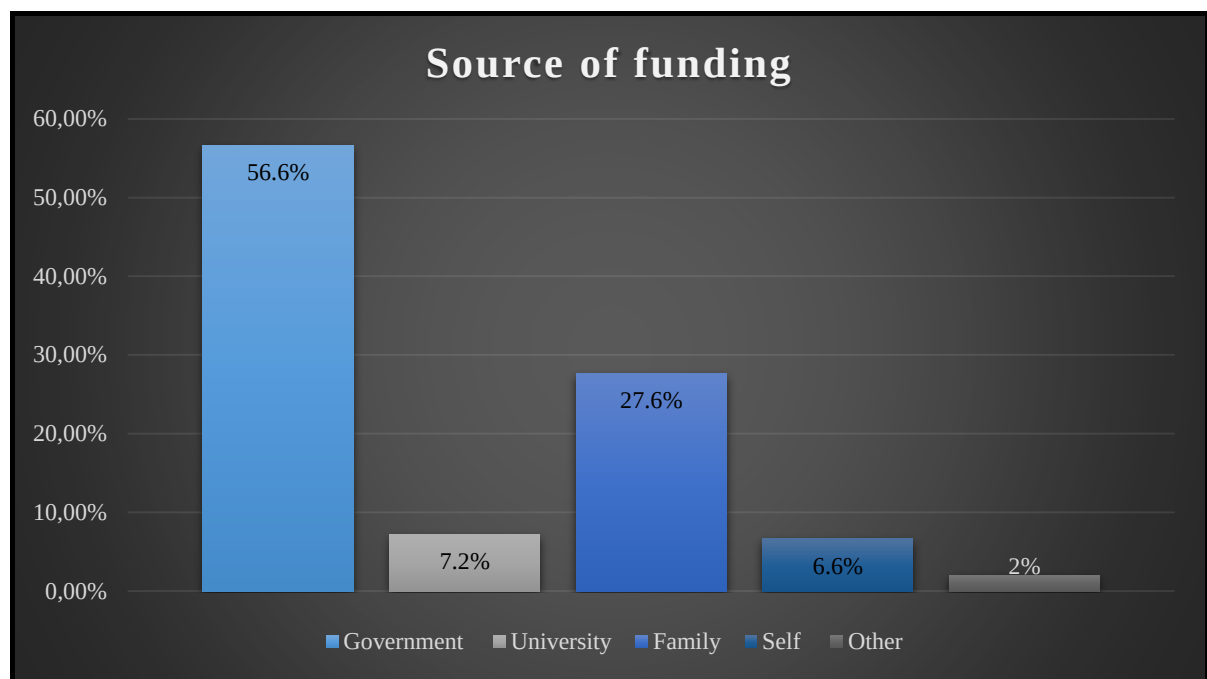
Figure 8.7: Participants' debt level



8.3.1.8 Funding for university studies

Figure 8.8 depicts the sources of funding to finance university fees. It can be seen that the majority of participants (n=751; 56.6%) are funded through government and (n=95; 7.2%) have university scholarships (bursary) while those funded by family are (n=366; 27.6%). The lowest source of the funding are self-funded through personal savings and income from working (n=88; 6.6%).

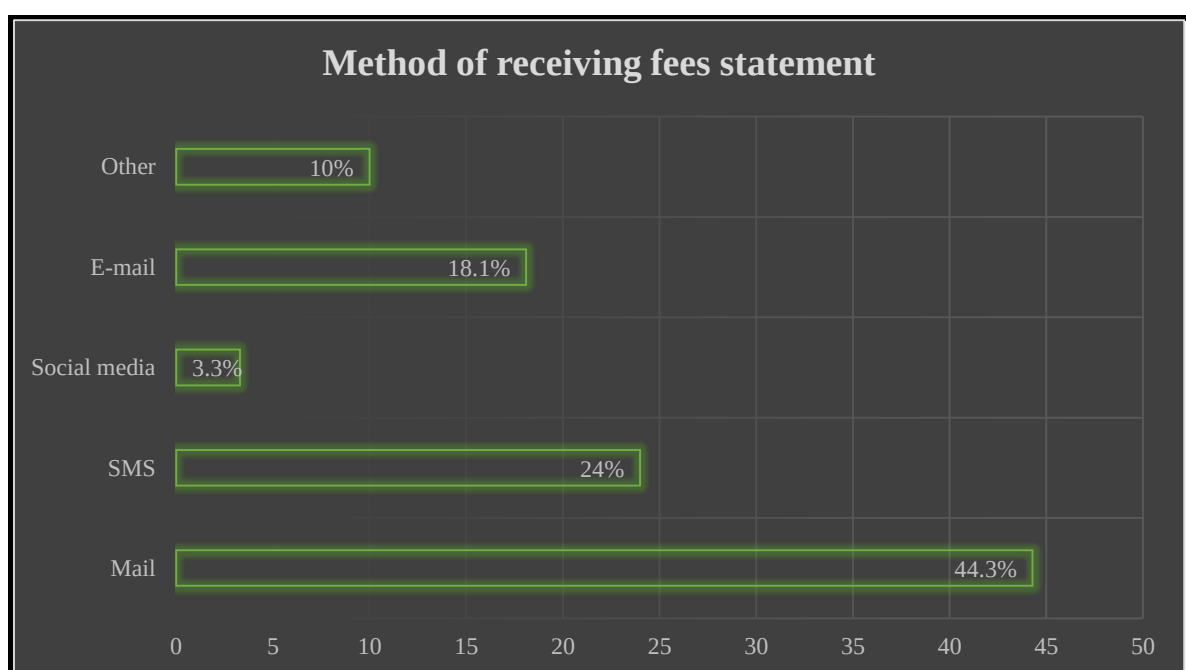
Figure 8.8: Sources of university funding



8.3.1.9 Methods of receiving fees statement

The results of the study reveal that the majority of the participants ($n=584$; 44.3%) receive their fees statements by mail (post) as exhibited in Figure 8.9. About ($n=316$; 24%) indicated that they receive statements by SMS, while ($n=239$; 18.1%) receive statements through e-mail. Only ($n=43$; 3.3%) receive statements by social media.

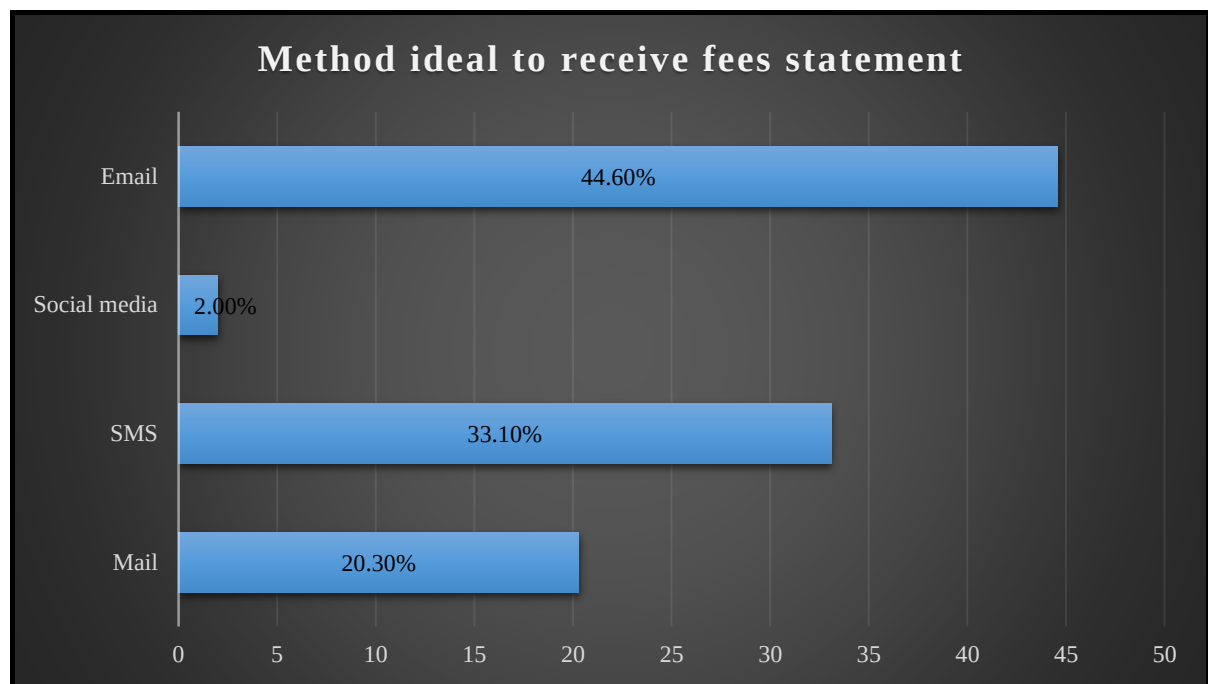
Figure 8.9: Methods of receiving fees statement



8.3.1.10 Preferential methods of receiving fees statements

Figure 8.10 shows that the majority of participants prefer to receive statements through e-mails (n=585; 44.6%) rather than through post (n=266; 20.3%). About 33.1 percent prefer to receive statements by SMS. Only a small number of participants (n=26; 2%) prefer to receive fees statements through social media.

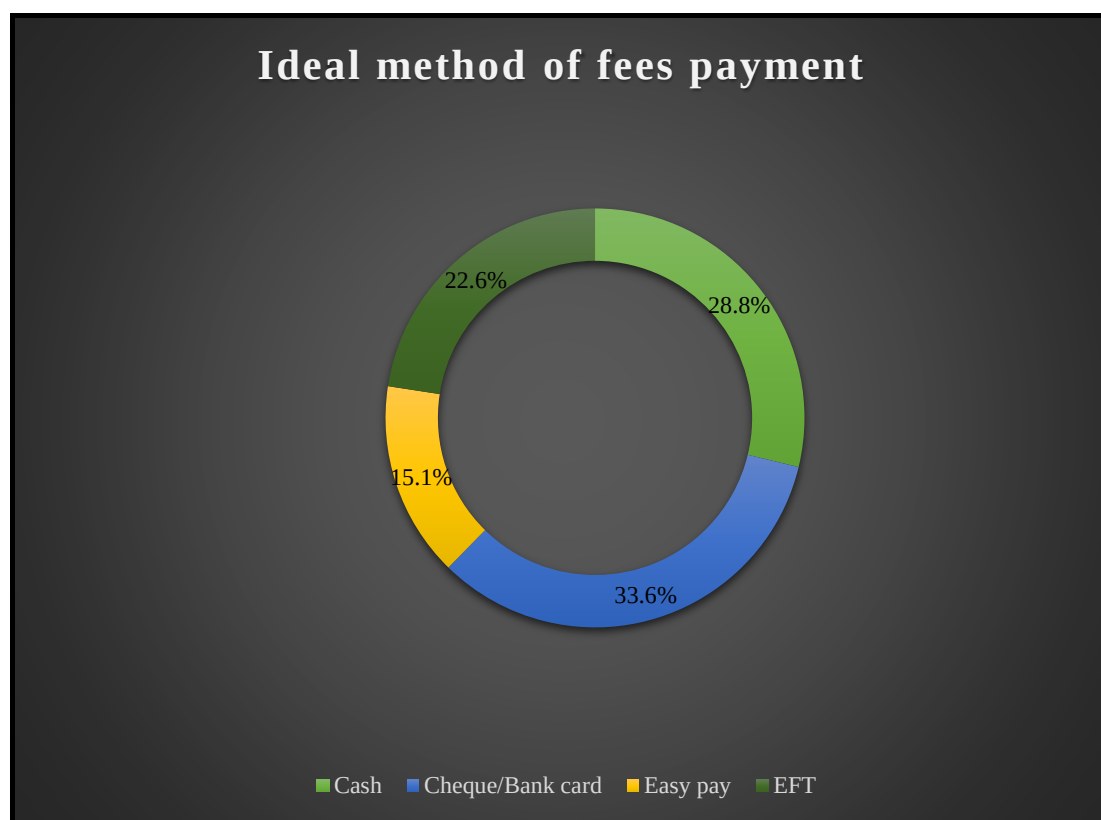
Figure 8.10: Participants' preferential methods of receiving fees statements



8.3.1.11 Preferential methods of settling fees accounts

Figure 8.11 indicates that participants prefer a variety of ways to pay their fees. The distribution indicates that participants prefer more alternatives rather than being confined to one method of payment. The majority of the participants (n=450; 33.6%) prefer to pay through bank card, while others prefer to pay cash (n=385; 28.8%). Other participants (n=302; 22.6%) and (n=202; 14.6%) prefer payment through electronic transfer and easy pay respectively.

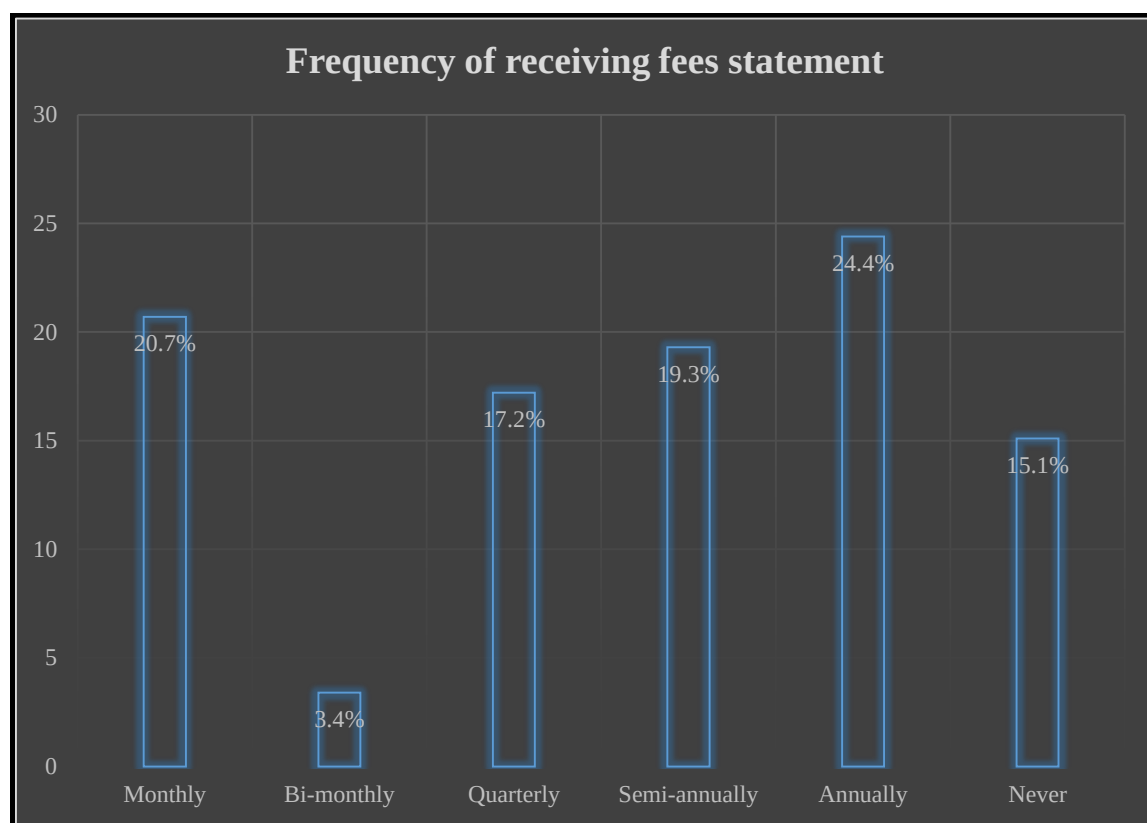
Figure 8.11: Methods of fees payments as preferred by participants



8.3.1.12 Frequency of receiving the fees statement

Participants were requested to indicate how often they receive the fees statement from the university and six possible alternatives were provided. Figure 8.12 indicates that participants receive fees statements at various frequencies. This implies that universities do not have internal control procedures to ensure that fees statements are sent timeously. If the policies are in place, adherence to these procedures is not enforced. The frequency of receiving fees statements are as follows: annual basis (n=332; 24.4%); monthly basis (n=281; 20.7%); semi-annually (n=262; 19.3%); quarterly basis; bi-monthly basis (n=234; 17.2%) and (n=46; 3.4%) respectively. About (n=205; 15.1%) never receive fees statements from the university.

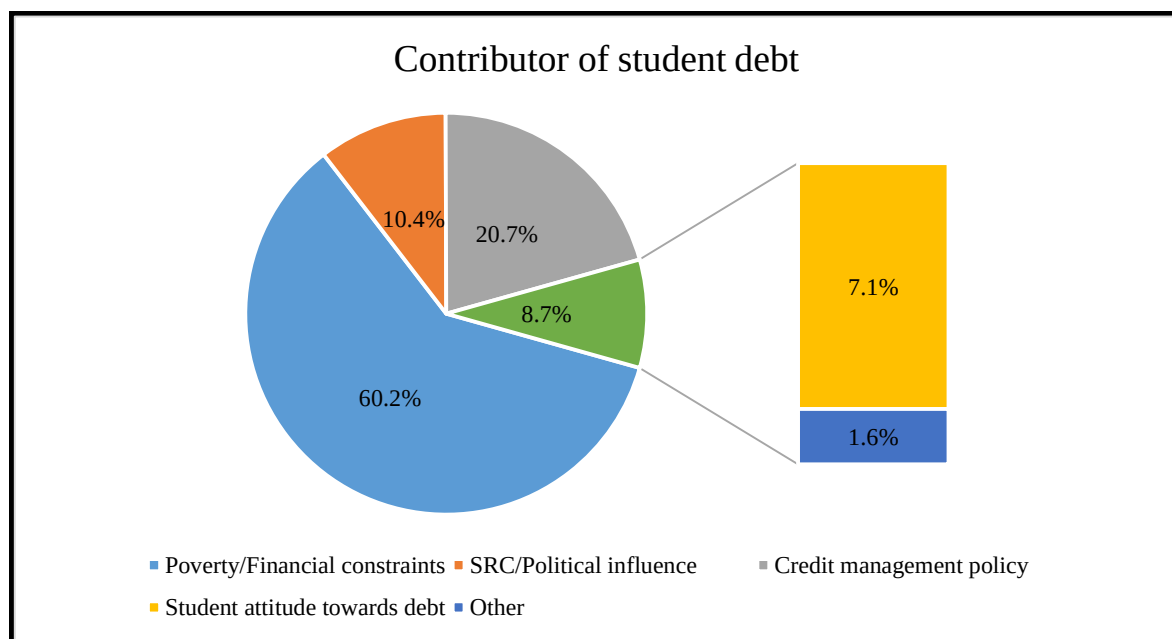
Figure 8.12: Frequency of fees statements



8.3.1.13 Contributor to non-payment of fees

Participants were requested to choose from five alternatives as to the main cause of non-payment of fees at their universities. Figure 8.13 indicates that the majority (n=810; 60.2%) believe that poverty is the main reason for non-payment of fees, followed by those who believe that credit management policies are the main source of non-payment of fees (n=279; 20.7%). Other reasons for non-payment are as follows: political influence (n=140; 10.4%); student attitude towards debt (n=95; 7.1%) while (n=22; 1.6%) cited other reasons as main contributors of non-payment of fees such as corruption and entitlement for free education.

Figure 8.13: Main contributors to non-payment of fees



The subsequent section describes the exploratory factor analysis conducted on the scaled responses in the questionnaire for Sections A, B and C. A discussion of factor analysis procedure, methods of extraction, factor structure as well as naming and interpretation of factors are provided.

8.3.2 Exploratory factor analysis (EFA)

Factor analysis is a collection of procedures for explaining the correlations among variables in terms of more essential objects called factors (Cudeck, 2000:296). EFA is a statistical system that is applied to measure things that are not directly measured by forming fundamental measurements named latent variables without determining the extent to which the results fit a particular model (Bryman & Cramer, 2011:319). In this regard, EFA was used to condense the number of variables to a smaller number of dimensions named factors, which explains what is common among the original set of variables. Primarily, Bartlett's tests of sphericity and the Kaiser-Meyer-Olkin (KMO) test were conducted to determine whether the data were appropriate for factor analysis. Table 8.2 illustrates the summary results for the KMO measure and the Bartlett test. Section A of the questionnaire contained questions regarding student debt, while Section B comprised questions about student credit management and Section C encompassed questions concerning personal financial management. The KMO test yielded sampling adequacy of 0.801 for student debt measures, 0.863 for student credit management measures and 0.844 for personal financial management measures respectively. All these KMO indicators were above 0.6

implying that the data for this study is considered excellent for other EFA procedures (Kaiser, 1974:35).

Table 8.2 also indicates that the Bartlett's test of sphericity results for the different scales, revealed significant chi-squares of 3769.233 (df=55) for student debt scale; 5311.397 (df=78) for student credit management scale and 5576.648 (df=91) for personal financial management scale respectively. All these values were at significant levels of $p=0.000$; <0.05 similarly asserting that factor analysis is suitable for the data set.

Table 8.2: The KMO measure and the Bartlett test results

CONSTRUCTS	KMO MEASURE	BARTLETT'S TEST		
		Appropriate Chi-square	Degrees of freedom	Significance level
Student Debt (SD)	0.801	3769.233	55	0.000
Student Credit Management (SCM)	0.863	5311.397	78	0.000
Personal Financial Management (PFM)	0.844	5576.648	91	0.000

From the above, it is evident that the Bartlett's test of sphericity is significant at $p<0.000$ inferring that the data is not an identity matrix with zero correlations. The test revealed a chi-square value (χ^2) and a KMO measure of sampling adequacy (>0.50).

8.3.2.1 Factor extraction procedure

The scale comprised four sections – A to D. For the purpose of factor analysis, only items under Sections A to C were used, as section D consisted of items regarding general information. For determining the number of significant measurements within the variables, the principal component analysis (PCA) was performed as recommended by Costello and Osborne (2005). To establish the number of factors under each section, eigenvalues equal to or greater than one were examined following Kaiser's criteria (Ledesma & Valero-Mora, 2007). Under Section A, three factors were identified, in Section B three factors were extracted and in Section C also three factors were identified.

Table 8.3 to Table 8.5 provide the results after rotating all the variables. The attained factor matrix was rotated using the Varimax rotation using Kaiser normalisation. Only those factors

with loadings higher than 0.5 were retained for analysis. Factors with less than three items were rejected due to the proposition of Costello and Osborne (2005) that a factor is defined by at least three factors. Furthermore, the items that loaded on more than one factor were allowed to represent the factor with the highest loading provided the loading is >0.50 (Costello & Osborne, 2005).

Furthermore, along with the Kaiser's rule the scree test was performed as a graphical strategy to determine the number of components to retain. The shape of the scree plot was examined to identify the point where the line levels off as the "graphs elbow" or at the foot of a mountain (Williams, Onsman & Brown, 2010). According to the screens plotted for the study, the line seems to level off after three factors for each section. This further attests the adequacy of the factor solution for the constructs in the study. The scree plots are attached as Appendix 3 to the study. Table 8.3 provides factors extracted and rotated factor loadings for student debt.

Table 8.3: Factors for student debt

SECTION A: Student Debt (SD)				
		F1	F2	F3
<i>SD1: Student debt implications</i>				
A1	I am troubled about my outstanding student fees	0.861		
A2	I am worried about the tuition fee debt I could build-up while in tertiary education	0.779		
A5	I am concerned about being excluded from university because of my student debt	0.676		
A4	My outstanding student debt affects my academic performance	0.649		
<i>SD2: Reaction to student debt</i>				
A24	Students must protest against financial exclusion		0.786	
A23	SRC should negotiate with the university management to do away with financial exclusion		0.756	

A22	Students should be allowed to enrol for studies without paying for registration fees	0.695	
A16	Tertiary education should be free for all	0.597	
<i>SD3: Attitudes towards student debt</i>			
A7	Owing tuition fee to the university is not satisfactory		0.790
A6	Once you have accumulated tuition fee debt it is difficult to get out of it		0.769
A3	Student debt put people off tertiary education		0.610
Eigenvalue		3.455	1.868
% of variance explained		31.406	16.984
Cumulative variance explained		31.406	48.390
Cronbach's alpha		0.790	0.680
		0.651	

8.3.2.2 Interpretation of student debt factors

The first dimension (**SD1**) named ***Student debt implications***, consisted of four items (eigenvalue=3.455) and explained 31.406 percent of the total variance. The items loaded on this factor can assist in examining the significance of student fee debt. This factor emphasises the significance of student debt on South African universities. According to Dale and Beville (2007), the implications of student debt can lead to the students dropping out of studies or starting their careers saddled with excessive debt. This phenomenon must be understood in the general context of South African higher education as well as economic and social trends. Wangenge-Ouma and Cloete (2008) advocate that the frequent increase of tuition fees, which is one of the main strategies that South African universities have resorted to alleviate declining state funding, has implications on student debt.

Ross, Cleland and Macleod (2006) maintain that student debt is related directly to the location of parental home, parental social class, previous higher education and length of time at the university. They further emphasised that worry about debt contributes to poor academic performance and having fewer student support grants and higher fees may be counterproductive. This confirms the findings of Callender and Jackson (2005), which were discussed in Section 3.3.1 where they counsel that students from low social classes are more debt averse than those

from high social classes and are far more likely to be discouraged from going to university because of their fear of debt. According to Koen *et al.* (2006), on average, approximately 25 percent of students leave universities annually in South Africa because they are excluded on academic and financial grounds. Breier (2010) supports that in South Africa many students left the university before completing a qualification because of financial constraints.

On the other hand, student debt has negative implications on the universities. South African universities are owed tuition fees, which form a substantial source of universities' revenue. In Section 2.5 and Section 2.6 the significance of student fees for South African universities were discussed. Although South African universities are under pressure to provide access and quality education to all the citizens of the country, this must happen considering the fact that universities must remain financially sustainable. To this end, many South African universities are confronted with decreasing state funding, increasing student debt and pressure to use their financial resources more efficiently (CHE, 2010:6).

SD2 comprised four items and was named ***Reaction to student debt*** (eigenvalue=1.868), it explained 16.984 percent of the total variance. The challenges posed by student debt to South African universities are profound. Mouton, Louw and Strydom (2013) acknowledge that funding of tertiary institutions in South Africa is controversial even after it has undergone fundamental restructuring. In Section 2.5 financing higher education in South Africa was discussed whereby the three ways of funding - being by the state, student fees and third stream income, were outlined. Mouton *et al.* (2013) maintained that the government remains the most important source of financial support for South African universities, which has historically delivered the primary support for institutions' operating and capital expenses. Tuition fees are the highest source of non-governmental revenue for South African universities.

However, higher education institutions in South Africa are being faced with decreasing state funding and increasing student debt. Mouton *et al.* (2013) complain that the over-reliance of certain universities on student tuition fees generates an additional iniquitous burden for students. In South Africa, students enroll at universities from extreme inequality. The role of student politics were outlined in Section 3.4 where student organisations and certain political formations are advocating for the ideal policy of free education up until undergraduate to address the inequality dilemma. This makes it difficult for universities to implement the credit management on student accounts to recover the outstanding debts. This is because often the South African universities are 'under siege' with constant protests regarding student fees and free education. To

remedy the situation universities are prompted into implementing concessions of registering students with outstanding student debt.

Wangenge-Ouma and Cloete (2008) deliberated some advantages and disadvantages of free education in South Africa while Cloete (2016) depicts that free education in South Africa is not financially possible. Former Higher Education minister Blade Nzimande acknowledged that free education for all is not a realistic goal as someone has to pay. Notably, the recent observations of #FeesMustFall, which advocates free education, have not gone unnoticed. The role of student politics were discussed in Section 3.3 noting constant radical demands regarding the financial exclusion of students at tertiary institutions. The student political organisations contend that students should not be excluded from the universities on the grounds of outstanding debt.

The third factor (**SD3**) in Section A was named ***attitudes towards student debt***, comprised three items (eigenvalue=1.022) and explained 9.295 percent of the total variance. Student fee debt is handled differently at different universities through the implementation of a credit management policy. For instance, some universities prevent students who owe fees from registering, graduating or obtaining academic transcripts. According to Callender and Jackson (2005), student debt is unequally distributed and students who are financially disadvantaged before going to university are more likely to be in debt and to leave university with the largest debts, on the other hand affluent students are less likely to have debts and leave universities with the lowest debts. Therefore, poor students are more sensitive to debt. The attitude towards student debt is one of the underlying factors for the non-payment of tuition fees.

The attitude towards student debt is not a new phenomenon. According to Lea, Webley and Levine (1993) debt is correlated strongly with economic factors. Davies and Lea (1995) found that students who were from relatively low-income homes were relatively tolerant towards high debt. However, Minty (2015) found students differ in their attitudes to debt with Scottish students from poorer families being debt avoiders and apprehensive about getting into debt. Furthermore, debt avoiders were found to be more concerned with student debt rather than being reassured. Whereas, students from England were more likely to have considered the level of student debt they might graduate with; these students were comfortable with incurring student debt and are determined to go to university despite the cost. In Section 3.3.1, Yeboah, *et al.* (2012) infer that student awareness about the tuition fees influences the non-payment of student fees. The knowledge about credit management policy may encourage the students to pay their accounts promptly. If students are aware about the discounts, credit payment period and how to

pay their student accounts, students are encouraged to comply with and commit to the credit management policy.

It was conceded by Bunting (2006) that the majority of students affected by chronic financial exclusions were black students from economically disadvantaged backgrounds. Letseka and Maile (2008) acknowledge this and Letseka (2009) shows that on average, 70 percent of the families of the university dropouts surveyed were in the category of low economic status as outlined in Section 3.3.2. Student finances are important determinants of financial exclusion and the in the choice of institution, study programme and dropout rates (Breier, 2010). It was echoed by Badat (2010) that the financial exclusion barrier should be resolved in consideration to institutional histories as well as visualised new social and educational roles. It is essential to create the circumstances and opportunities by providing the necessary resources for developmental trajectories for all universities. In Section 3.3.2.2, it is highlighted that Cloete (2016) pronounces that in South Africa, students have relatively high dropout rate and low graduate rates because of financial exclusion. Cele and Goodman (2016) conclude that inevitable fee tuition increases have become an exclusion factor for poor students.

8.3.2.3 Interpretation of student credit management factors

Table 8.4 provides factors extracted and rotated factor loadings for student credit management.

Table 8.4: Factors for student credit management

SECTION B: Student Credit Management (SCM)				
		F1	F2	F3
<i>SCM1: Implementation of SCM</i>				
B6	The fees payment policy accommodates students from disadvantaged background	0.752		
B7	I comply with the stipulated university credit management policy	0.668		
B23	Upfront payment that is charged by the university is affordable	0.625		
B4	I am satisfied with current credit management policy on student accounts at my university	0.590		

B12	The credit management policy at my university encourages students to settle students debts promptly	0.540		
SCM2: Communication of SCM				
B2	I have read the fees payment policy towards student accounts at my university		0.878	
B1	I know student credit management policy at my university		0.833	
B3	The fees payment policy at my university is easily understandable		0.758	
SCM3: Effectiveness of SCM				
B15	The student fees statement indicates the date(s) when fees should be paid			0.694
B14	The student fees statement I receive from the university reflects the correct amounts and balance			0.690
B16	It is the policy that my university grants merit bursaries on academic achievements			0.600
B13	I receive my student fees statement timely from the university			0.577
Eigenvalue		4.569	1.445	1.077
% of variance explained		35.150	11.118	8.284
Cumulative variance explained		35.150	46.268	54.552
Cronbach's Alpha		0.748	0.821	0.625

The first factor in Section B (**SCM1**) to determine the implementation of credit management policy amongst the students was named **Implementation of SCM**. It contain five items (eigenvalue=4.569) and explained 35.150 percent of the total variance. This factor emphasises the implementation of student credit management policies at five South African universities. The regulatory frameworks of credit management policy were discussed in Chapter 4. In Section 4.2, it is noted that Njeru *et al.* (2017) emphasise the effective credit management as key in recovery of debts. In Section 4.5.1, Mungal and Garbharran (2014) identify that accounts receivable can be encouraged to settle accounts by offering discounts. Specifically Glater (2015) identifies that some universities allow discounts to students based on the annual family income. Section 4.3 contained a discussion on credit management cycle, which entails the correct and timely sending

of fees statements. Michalski (2007) describe that an increase in the level of accounts receivables increases both net working capital and the costs of holding and managing accounts receivables. The author concludes that it is important to match the length of the trade credit to accounts receivable capabilities to pay.

Mthethwa (2012) affirm that consideration of guidelines and implementation plans, effective response and monitoring systems will improve policy implementation. In Section 4.2, Huang *et al.* (2016) found that conflicts, rational enlightenments and social encouragement were effective in alleviating undesirable conflicts of managing accounts receivable. Similarly, the study of Wong *et al.* (2016) emphasise that rational explanations and social encouragement could be essential for credit management implementation and to persuade borrowers to comply with the credit strategy.

The second factor in Section B (**SCM2**) was named ***Communication of SCM*** and it entailed three items (eigenvalue=1.445), which explained 11.118 percent of the total variance. The questions loaded in this factor can assist researchers in examining the role of communicating credit management policy to relevant stakeholders. The mutual relationship with accounts receivable is crucial for the effectiveness of credit management policy. This can be achieved by ensuring that the credit management policy is communicated accurately, conveying relevant and complete information. This was suggested in Section 4.2 by Jackson (1999) who acknowledge that it is crucial to communicate the organisational policies and is essential for a relationship with relevant stakeholders.

Petroons *et al.* (2014) concede that organisations must have a detailed and transparent communication system that delivers improved information flow between the organisation and its accounts receivable. Hence, it is imperative that universities communicate the credit management policy to students and parents/legal guardians to encourage timely payment of student debt. Kahr (2001) suggest that payment compliance can be improved by negotiating the payment terms with delinquent accounts receivables.

The third factor in Section B was attributed to (**SCM3**) entitled ***Effectiveness of SCM***, contained four items (eigenvalue=1.077) and explained 8.284 percent of the total variance. This factor highlights the effectiveness of credit management policies at five selected South African universities. As discussed in Section 4.3, credit management procedure starts with the correct and timely mailing of invoices. To be effective, credit management policy should ensure timely conversion of accounts receivables into cash. To influence this cycle the study of Schmeiser,

Stoddard and Urban (2015) expose that students who obtain the notice letters reduce their debt behaviour relative to the ones that did not receive the letters. Michalski (2012) emphasise that the institutions should design an appropriate receivables collection process within the credit management cycle. This is consistent with the suggestion of Ngugi *et al.* (2017), discussed in Section 4.3, that policies such as letters, phone calls, credit control and sending statements are key drivers to effective accounts receivables management. In Section 4.8.1 it is noted that Scherr (2015) advocate that to realise an effective credit management an organisation can use internal expertise or through outsourcing alternatives such as employing a debt collection agency.

8.3.2.4 Interpretation of student credit management factors

Table 8.5 provides factors extracted and rotated factor loadings for personal financial management.

Table 8.5: Factors for personal financial management

SECTION C: Personal financial management (PFM)				
		F1	F2	F3
<i>PFM1: PFM attitudes</i>				
C7	I am interested in increasing my personal financial knowledge (financial literacy)	0.831		
C8	I have interest in reading about personal money management	0.807		
C9	One should keep careful track of how much money is spent each month	0.778		
C6	I feel putting money away each month for saving is important	0.708		
<i>PFM2: Planning for PFM</i>				
C22	I set long term financial goals and strive to achieve them		0.816	
C23	I save a certain portion of the money that I earn		0.753	
C21	I keep a close personal watch on my financial affairs		0.751	
C10	I have a monthly personal budget		0.534	

<i>PFM3: Control regarding PFM</i>			
C20	I pay my bills on time		0.708
C19	My family saved money to finance my studies		0.687
C5	I feel capable of handling my financial future		0.570
C1	I feel in control of my personal financial management		0.548
C4	I am uncertain about where my money is spent		0.526
Eigenvalue		4.312	2.021
% of variance explained		30.797	14.434
Cumulative variance explained		30.797	45.230
Cronbach's Alpha		0.815	0.758

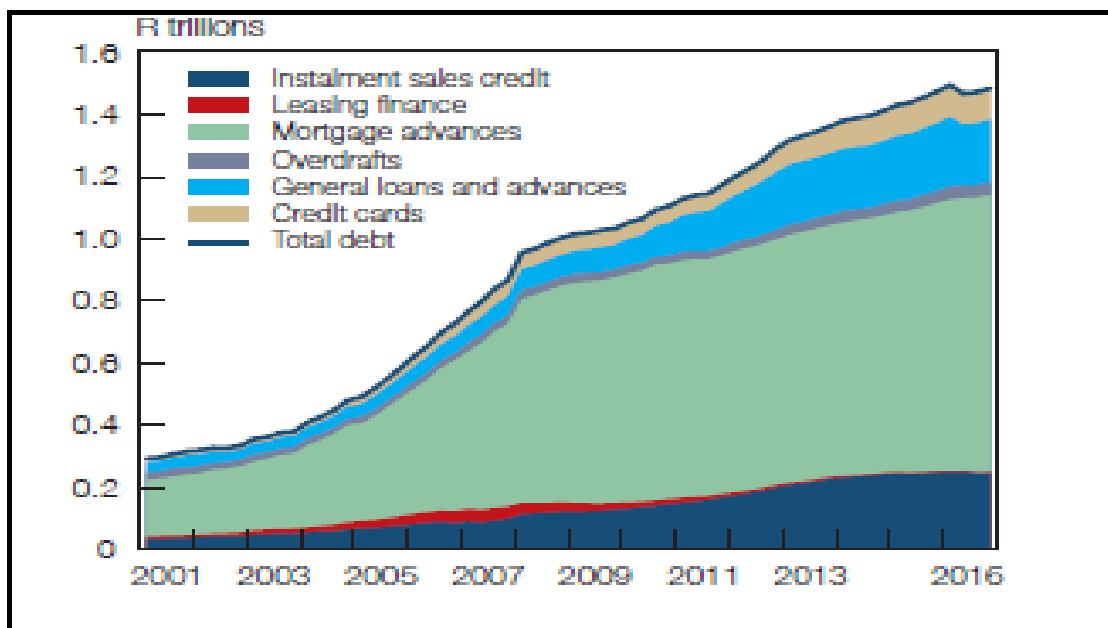
PFM1 was labelled ***PFM attitudes***, consisted of four items (eigenvalue=4.312) and explained 30.797 percent of the total variance. This factor can assist researchers in discovering how personal financial management can affect student debt. Personal financial management is important for long-term financial plans such as saving for education (Atkinson & Messy, 2011). This corresponds with the proposition of Kotzé and Smit (2008), discussed in Section 5.1, which indicates that there is a positive correlation between financial knowledge and management over personal finances, as well as confidence in handling money and making investment decisions. The attitude of students towards money management can be related to intergenerational transfer discussed in Section 5.5.1. Usually, students start higher education life with insufficient skills for managing personal finances (Chinen & Endo, 2012). In Section 5.5.1 it is noted that Grinstein-Weiss *et al.* (2011) hold that acquiring financial skills during childhood is linked to better savings in adulthood.

Bretherton (1992) studied the attachment theory, which suggests that parental attachment influences childhood approach and response to the world. In Section 5.5.1, Kim and Chatterjee (2013) suggest that childhood financial socialisation practises were correlated with parental socialisation. Generally, South African household spending towards education is very low as discussed in Section 5.6; only 3 percent of spending is towards education as illustrated in Figure 5.2. South African household debt was discussed in Section 5.4 and indicated that the household

debt is unprecedentedly high as illustrated in Figure 5.1. What is worth determining is the allocation of debt.

Figure 8.14 provides an illustration that mortgage advances still dominate by 60 percent in 2016 (59 percent in 2015) of the total credit extended to household. About 15.5 percent is the credit extended in the form of credit cards while 13.7 percent comprised general loan advances. Notably education debt does not feature considerably in household debt, which implies that the majority of South African households do not view the intrinsic value of education as a priority. However, the money is spent on material items rather than on essential things. These findings confirm the findings of Garðarsdóttir and Dittmar (2012) that the level of materialism is related to higher levels of financial worry, a greater risk of irrational, unrestricted buying and a unique finding is that materialism is directly associated to the amount of money a person owes, including mortgage but excluding student debt.

Figure 8.14: Composition of household debt



Source: SARB Financial Stability Review (2017:17)

Using the intergenerational transfer and attachment concepts discussed in Section 5.5.1, it can be concluded that the students' attitude towards money management is influenced by family (household) financial socialisation. This confirms the studies conducted by Jorgensen and Savla (2010), Gudmunson and Danes (2011) and Kim and Chatterjee (2013), which found that parental influence impacts on the personal financial attitudes of students. In fact, the studies found that parents' perceived explicit and implicit teachings influenced their children's financial

literacy. Similarly, Akben-Selcuk (2015) concludes that parental teaching of finance was found to have a positive influence on the financial behaviours of students emphasising that financial education starts at home.

The second factor (**PFM2**) identified in Section C was named **Planning for PFM**, comprised four items (eigenvalue=2.021) and explained 14.434 percent of the total variance. This factor focuses on the governance of personal financial management. Section 5.2 illustrated the essential financial choices on whether to save, spend or invest founded on financial literacy. Kidwell and Turrisi (2004) suggest that amounts of students debts are related to their budgeting practices and financial literacy can consequently influence the accrual of financial debt. In the South African context, Els (2007) believes that indigenous financial knowledge within finance can assist in dealing with the alleviation of poverty and thereby incorporating an aspect of sustainable development. Els (2007) emphasises the use of indigenous knowledge systems (ethno-finance) and financial practices from all cultural groups in South Africa to disseminate financial knowledge.

The third factor identified in Section C (**PFM3**) was **Control regarding PFM**, consisted of five items (eigenvalue=1.204) and explained 8.603 percent of the total variance. This factor will assist in understanding perceptions regarding taking responsibilities for personal financial management. Anxieties about financial preparedness are documented in several studies indicating that students lack the basic knowledge needed to make good financial decisions. Section 5.2 discussed a study of Letkiewicz and Fox (2014), which revealed that financial behaviour seems to be affected by financial literacy. Students' attitudes towards money influence personal financial management.

A study by Akben-Selcuk (2015) suggests that students with more positive attitudes towards money were more likely to report paying bills on time, having a budget in place and saving for the future. Attitude towards money also was found to be an important determinant of students' financial behaviours. A similar study by Batty, Collins and Odders-White (2015) reveals that financial education is associated with improved student attitudes and positive financial behaviour.

Shim, Barber, Card, Xiao and Serido (2010) discovered that responsibility regarding personal financial management is related to early financial socialisation, which in turn is associated to financial attitudes and subsequently to financial behaviour. Section 5.2 documented a study by Bates *et al.* (2015), which denotes that conservative financial practice signifies the concept of

choice and the learning of prudent financial decision-making. In Section 5.3 Bodie, Treussard and Willen (2008) provide a theoretical contribution of life cycle theory on savings and investment by investigating the household saving for retirement and for higher education.

In the contemporary financial climate, the need for financial education and financial planning may be greater than ever before (Serido, Shim, Xiao, Tang & Card, 2014) to assist students to avoid costly errors and establish a lifelong pattern of effective financial decision-making. Financial literacy can contribute to more responsible financial behaviours among students. This was attested by research of Stone, Wier and Bryant (2008) that reveals that financial literacy education might decrease materialism, increase positive financial attitude and consequently attain responsible personal financial management. Contrary, the study of Pillai, Carlo and D'souza (2012) reveals that financial literacy does not matter but rather the practical application of such knowledge to real-life situations.

8.3.3 Descriptive statistics

Descriptive statistics describe the basic features of data in a study by determining the difference between level of participants' agreement or disagreement for each construct. Hence, descriptive statistics was used to describe the basic features of the data in a study to measure central tendency and variability comprising the means, standard deviations and variances of the predetermined constructs and factors as well as for the entire sample. Table 8.6 provides summaries about the sample and the measures for student debt factors.

Note that the statements in sections A, B and C in the questionnaire employs a five-point Likert scale where the extreme points are "1", which indicates the participants "strongly disagree" and "5" which indicates "strongly agree". Since the mean scores are probably not to be whole numbers but rather fractions, the following scales can help to interpret the mean scores of individual items or factors, i.e. a score of 4+ implies strongly agree, between 3 and 4 implies moderately agree, between 2 and 3 moderately disagree and less 2 strongly disagree. Table 8.6 exhibits the average ($\bar{x}$) of the means for each factor. For example, this is clear that the participants, on average, agree to a higher extent to the items in SD3 ($\bar{x} = 4.09$) than they agree to the items in SD2 ($\bar{x} = 3.75$).

Table 8.6: Descriptive statistics results for student debt

Descriptive Statistics: Student debt implications (SD1) ($\bar{x} = 3.84$)						
	N	Min	Max	Mean	Std. Deviation	Variance
Troubled about student debt (A1)	1382	1	5	3.97	1.257	1.580
Concerned about debt accumulation (A2)	1382	1	5	4.07	1.177	1.385
Concerned about financial exclusion (A5)	1382	1	5	3.43	1.330	1.768
Impact of debt on academic performance (A4)	1382	1	5	3.88	1.350	1.823
Valid N (listwise)	1382					
Descriptive Statistics: Reaction to student debt (SD2) ($\bar{x} = 3.75$)						
Free for all tertiary education (A16)	1382	1	5	3.47	1.482	2.195
Enrol without payment of registration fees (A22)	1382	1	5	3.87	1.308	1.710
SRC should negotiate financial exclusion (A23)	1382	1	5	4.14	1.143	1.307
Must protest against financial exclusion (A24)	1382	1	5	3.53	1.441	2.076
Valid N (listwise)	1382					
Descriptive Statistics: Attitudes towards student debt (SD3) ($\bar{x} = 4.09$)						
Student debt put people off education (A3)	1382	1	5	4.30	1.058	1.119
Difficult to get rid of accumulated debt (A6)	1382	1	5	3.92	1.108	1.228
Owing fees not satisfactory (A7)	1381	1	5	4.05	1.081	1.168
Valid N (listwise)	1381					

Student debt implications (SD1). According to the results shown in Table 8.6, participants indicated that on average they are troubled about student debt (mean 3.97; $\sigma=1.257$; $\sigma^2=1.580$). Moreover, they are concerned about student debt accumulation (mean 4.07; $\sigma=1.177$; $\sigma^2=1.385$). Furthermore, they specified that they are concerned about financial exclusion (mean 3.43; $\sigma=1.330$; $\sigma^2=1.768$) and consequently they indicated that student debt somehow affects their academic performance (mean 3.88; $\sigma=1.350$; $\sigma^2=1.823$). To support a more clear understanding with the further analyses in the study, considering these items in factor SD1, a higher mean implies a higher degree of negative experience as a result of student debt, and *vice versa*.

Reaction to student debt (SD2). The participants also moderately highlighted that tertiary education should be free for all (mean 3.47; $\sigma=1.482$; $\sigma^2=2.195$) and they should enroll for an

academic year without the payment of registration fees (mean 3.87; $\sigma=1.308$; $\sigma^2=1.710$). The participants believe that the SRC should negotiate for financial exclusion (mean 4.14; $\sigma=1.143$; $\sigma^2=1.307$) while others modestly cited that they must protest against financial exclusion (mean 3.53; $\sigma=1.441$; $\sigma^2=2.076$). To summarise, considering the items in factor SD2, a higher mean implies a higher degree of destructive reactions as a result of student debt, and *vice versa*.

Attitudes towards student debt (SD3). Participants are also of the opinion that student debt puts people off education (mean 4.30; $\sigma=1.058$; $\sigma^2=1.119$) and once you have accumulated student debt it is difficult to avoid it (mean 3.92; $\sigma=1.108$; $\sigma^2=1.228$). They also lamented that they are not content with student debt meaning that they impose a threat because of student debt (mean 4.05; $\sigma=1.081$; $\sigma^2=1.168$). To summarise, considering the items in factor SD3, a higher mean implies a higher degree of threat as a result of student debt, and *vice versa*.

The results as illustrated in Table 8.6 indicate that the mean scores returned for the constructs of student debt were above the score of 3 on the Likert scale. This suggests that participants recognise the significance of student debt within their universities. Variance, as with the standard deviations, decreases with every respondent that has a tendency of responding similarly to a particular question. This indicates that there is a narrow spread in the data and implies an agreement on these items. Generally, reasonably low standard deviations for all the measured variables is indicative of a relatively consistent sample and the means for this data set, therefore, gives a reliable indication of the responses. Furthermore, this suggests that the results of the study in this instance are reliable.

The next section discusses the descriptive analysis for student credit management. Table 8.7 provides summaries about the sample and the measures for student credit management factors.

Table 8.7: Descriptive statistics results for student credit management

Descriptive Statistics: Implementation of student credit management (SCM1) ($\bar{x} = 2.77$)						
	N	Min	Max	Mean	Std. Deviation	Variance
Satisfied with student credit management (B4)	1382	1	5	2.40	1.132	1.282
Policy inclusive of disadvantaged students (B6)	1382	1	5	2.70	1.269	1.610
Comply with credit management policy (B7)	1382	1	5	3.03	1.187	1.408
Policy encourages prompt payment (B12)	1382	1	5	2.93	1.196	1.430
Registration fee is affordable (23)	1382	1	5	2.80	1.339	1.792
Valid N (listwise)	1382					
Descriptive Statistics: Communication of Student credit management (SCM2) ($\bar{x} = 2.76$)						
Familiar with credit management policy (B1)	1382	1	5	2.75	1.293	1.673
I read student credit management policy (B2)	1382	1	5	2.88	1.284	1.650
Credit management policy understandable (B3)	1382	1	5	2.65	1.233	1.520
Valid N (listwise)	1382					
Descriptive Statistics: Effectiveness of student credit management (SCM3) ($\bar{x} = 3.12$)						
I receive fees statement timely (B13)	1382	1	5	2.81	1.343	1.803
Statement always reflect correct balance (B14)	1382	1	5	3.32	1.302	1.696
Statement indicate the settlement date (B15)	1382	1	5	2.94	1.287	1.656
Merit bursary on academic achievement (B16)	1382	1	5	3.42	1.175	1.382
Valid N (listwise)	1382					

Implementation of SCM (SCM1). Table 8.7 shows that participants generally are not satisfied with the implementation of student credit management (mean 2.40; $\sigma=1.132$; $\sigma^2=1.282$) and they believe that the credit management policy excludes students from disadvantaged background (mean 2.70; $\sigma=1.269$; $\sigma^2=1.610$). They moderately comply with the credit management policy (mean 3.03; $\sigma=1.187$; $\sigma^2=1.408$) and they cited that the credit management policy does not encourage them to pay fees promptly (mean 2.93; $\sigma=1.196$; $\sigma^2=1.430$). The students complained

that the university's registration fee is not affordable (mean 2.80; $\sigma=1.339$; $\sigma^2=1.792$). To summarise, considering the items in factor SCM1, a higher mean indicates a more positive acceptance of the universities' implemented credit management, and *vice versa*.

Communication of SCM (SCM2). Furthermore, the participants admitted that they are not familiar with the student credit management at their institutions (mean 2.75; $\sigma=1.293$; $\sigma^2=1.673$) and they confessed that they have not read the student credit management policy (mean 2.88; $\sigma=1.284$; $\sigma^2=1.650$). Consequently, they cited that they do not understand the student credit management policy at their respective institutions (mean 2.65; $\sigma=1.233$; $\sigma^2=1.520$). To summarise, considering the items in factor SCM2, a higher mean indicates a better understanding of universities' credit management, and *vice versa*.

Effectiveness of SCM (SCM3). Participants are also of the view that they do not receive fees statements timeously from the universities (mean 2.81; $\sigma=1.343$; $\sigma^2=1.803$) and they moderately believe that statements reflect the correct balances (mean 3.32; $\sigma=1.302$; $\sigma^2=1.696$). They indicated that the fees statement does not evidently indicate the settlement date (mean 2.94; $\sigma=1.287$; $\sigma^2=1.656$). They moderately admit that it is the policy to be granted merit bursary on academic achievement (mean 3.42; $\sigma=1.175$; $\sigma^2=1.382$). To summarise, considering the items in factor SCM3, a higher mean indicates students experience a higher degree of effectiveness by their universities regarding credit management, and *vice versa*.

The results as indicated in Table 8.7 indicate that the mean scores returned for the constructs of student credit management were below the score of 3 on the Likert scale. This suggests that generally participants do not recognise the significance of student credit management within their universities. Hence, they are not comfortable with the implementation, communication and the effectiveness of student credit management policies. Furthermore, this can suggest that participants are not familiar with student credit management policies thereby rendering it ineffective. Possibly this is an indication that participants disapprove of the implementation of student credit management policy within their institutions.

Variance, as with the standard deviations, decreases with every respondent that has a tendency of responding similarly to a particular question. This indicates that there is a narrow spread in the data and implies an agreement on these items. Generally, reasonably low standard deviations for all the measured variables is indicative of a relatively consistent sample and the means for this data set, therefore, gives a reliable indication of the responses. Furthermore, this suggests that the results of the study in this instance are reliable.

The next section discusses the descriptive analysis for personal financial management. Table 8.8 provides summaries about the sample and the measures for personal financial management factors.

Table 8.8: Descriptive statistics results for personal financial management

Descriptive Statistics: Personal financial management attitudes (PFM1) ($\bar{x} = 4.16$)						
	N	Min	Max	Mean	Std. Deviation	Variance
Saving money is important (C6)	1382	1	5	4.16	1.094	1.196
Interested in enhancing financial literacy (C7)	1382	1	5	4.25	1.023	1.046
Interest in reading about money (C8)	1382	1	5	4.02	1.090	1.188
Important to control finances (C9)	1382	1	5	4.21	1.024	1.049
Valid N (listwise)	1382					
Descriptive Statistics: Planning for personal financial management (PFM2) ($\bar{x} = 3.31$)						
I have a monthly personal budget (C10)	1382	1	5	3.10	1.368	1.872
I manage my financial affairs (C21)	1382	1	5	3.47	1.128	1.273
I have long-term financial goals (C22)	1382	1	5	3.62	1.161	1.347
I save portion of money that I earn (C23)	1382	1	5	3.05	1.270	1.613
Valid N (listwise)	1382					
Descriptive Statistics: Control regarding personal financial management (PFM3) ($\bar{x} = 2.86$)						
I am in control of my personal finances (C1)	1382	1	5	2.53	1.256	1.578
I know where my money is spent (C4)	1382	1	5	3.18	1.297	1.681
I am confident about my financial future (C5)	1382	1	5	3.50	1.324	1.753
Family saved money for my studies (C19)	1382	1	5	2.41	1.331	1.771
I pay my bills timely (C20)	1382	1	5	2.70	1.292	1.670
Valid N (listwise)	1382					

PFM attitudes (PFM1). The results as indicated in Table 8.8 show that participants believe that saving money is important (mean 4.16; $\sigma=1.094$; $\sigma^2=1.196$). They demonstrated interest in enhancing their financial literacy (mean 4.25; $\sigma=1.023$; $\sigma^2=1.046$) and they cited that they intend reading about money matters (mean 4.02; $\sigma=1.090$; $\sigma^2=1.188$) as they believe that it is important to control personal finances (mean 4.21; $\sigma=1.024$; $\sigma^2=1.049$). To summarise, considering the

items in factor PFM1, a higher mean indicates students are more prepared to manage their personal finance well, and *vice versa*.

Planning for PFM (PFM2). In addition, participants have personal budget uncertainly (mean 3.10; $\sigma=1.368$; $\sigma^2=1.872$) and they moderately manage their personal financial affairs (mean 3.47; $\sigma=1.128$; $\sigma^2=1.273$). They indicated that they tentatively have long-term financial goals and strive to attain them (mean 3.62; $\sigma=1.161$; $\sigma^2=1.347$) consequently they indicated that they moderately save money (mean 3.05; $\sigma=1.270$; $\sigma^2=1.613$). To summarise, considering the items in factor PFM2, a higher mean indicates students do more planning with regard to their personal finance, and *vice versa*.

Control regarding PFM (PFM3). Participants indicated that they are not assured about controlling their personal finances (mean 2.53; $\sigma=1.256$; $\sigma^2=1.578$) and they moderately know where their money is spent (mean 3.18; $\sigma=1.297$; $\sigma^2=1.681$). The results indicate that participants are moderately confident about their financial future (mean 3.50; $\sigma=1.324$; $\sigma^2=1.753$) while the others indicated that their families did not save money to finance education (mean 2.41; $\sigma=1.331$; $\sigma^2=1.771$). Furthermore, they admitted that they are often not paying accounts timely (mean 2.70; $\sigma=1.292$; $\sigma^2=1.670$). To summarise, considering the items in factor PFM3, a higher mean indicates students are more in control of their personal finance, and *vice versa*.

The results in Table 8.8 indicate that the mean scores returned for the constructs of personal financial management were above the score of 3 on the Likert scale with the exception of control regarding personal financial management. This suggests that participants recognise the significance of personal financial management; however, the drawbacks are inadequate management of personal finances by parents and by themselves. The mean values also imply that participants hold similar views that these dimensions are also key elements in the student debt and personal financial management.

Variance, as with the standard deviations, decreases with every respondent that has a tendency of responding similarly to a particular question. This indicates that there is a narrow spread in the data and implies an agreement on these items. Generally, reasonably low standard deviations for all the measured variables is indicative of a relatively consistent sample and the means for this data set, therefore, gives a reliable indication of the responses. Furthermore, this suggests that the results of the study in this instance are reliable.

8.3.4 Correlation analysis

In order to examine the relationship between constructs, correlations were computed using Pearson's correlation coefficients to establish the strength and direction of the relationships between constructs. A cautious consideration with regard to the comparison between Pearson and Spearman correlation methods was made in order to select the appropriate method. While the Pearson correlation evaluates the linear relationship between two continuous variables, the Spearman correlation evaluates the monotonic relationship between two continuous or ordinal variables. In a monotonic relationship, the variables tend to change together, but not necessarily at a constant rate. Hauke and Kossowski (2011) explain that Spearman correlation is distribution free and measures a monotone association that is used when the distribution of data makes Pearson's correlation coefficient undesirable or misleading. As a result, the Pearson correlation was found to be appropriate for this study as it is expected to give appropriate results since the data is sufficient for the analysis.

The test was subjected to a two-tailed test of significance of two different levels: highly significant ($p < 0.01$) and significant ($p < 0.05$). The size of the effect as suggested by Steyn (2002:2) is outlined as follows: $r = 0.10-0.29$ (small effect), $r = 0.30-0.49$ (medium effect) and r equal to or greater than 0.50 (large effect). The strength of the relationship between the factors, was also established using guidelines suggested by Choudury (2009:4) from 0.0 to 0.1 (very weak or no relationship); 0.1 to 0.3 (weak relationship); 0.3 to 0.5 (moderate relationship) and 0.5 to 1.0 (strong relationship). The results of the correlation analysis are reported in Table 8.9.

Table 8.9: Correlation matrix among constructs

	SD1	SD2	SD3	SCM1	SCM2	SCM3	PFM1	PFM2	PFM3
SD1	1								
SD2	.188**	1							
SD3	.526**	.162**	1						
SCM1	-.213**	-.074**	-.236**	1					
SCM2	-.139**	.000	-.139**	.592**	1				
SCM3	-.101**	.046	-.155**	.516**	.400**	1			
PFM1	.020	-.017	.068*	.171**	.108**	.158**	1		
PFM2	-.108**	.078**	-.120**	.363**	.293**	.279**	.324**	1	
PFM3	-.181**	-.026	-.225**	.511**	.400**	.387**	.261**	.494**	1

** . Correlation is significant at the 0.01 level (2-tailed). * . Correlation is significant at the 0.05 level (2-tailed).

SD1= Student debt implications; SD2= Reaction to student debt; SD3= Attitudes towards student debt

SCM1= Implementation of SCM; SCM2=Communication of SCM; SCM3=Effectiveness of SCM

PFM1= PFM attitudes; PFM2= Planning for PFM; PFM3= Control regarding PFM

8.3.4.1 Correlations with student debt (3 factors) and student credit management (3 factors)

Student debt implications (SD1), reaction to student debt (SD2) and attitudes towards student debt (SD3) show negative associations with the implementation of student credit management (SCM1), ($r = -.213^{**}$, $r = -.074^{**}$, $r = -.236^{**}$). SD1 and SD3 show negative or weak correlations with communication of student credit management (SCM2), ($r = -.139^{**}$, and $r = -.139^{**}$). Finally, SD1 and SD3 show negative or weak correlations with efficiency of student credit management (SCM3), ($r = -.101^{**}$ and $r = -.155^{**}$).

This indicates that students perceive that student debt has the implications such as financial exclusion, academic performance and accumulation of student debt. This accords with the findings of Bunting (2006), who states that the majority of students at South African universities are affected by financial exclusions, particularly from economically disadvantaged backgrounds. Likewise, Calitz and Fourie (2016) echo that the #FeesMustFall protests of 2015 were indicative of the social dynamics when students protested to escape the cost of the fiscal adjustment caused by the impact on the government budget of the financial crisis and other issues threatening fiscal sustainability. Confirmation by Letseka and Maile (2008) and Letseka (2009) shows that on

average, 70 percent of the families of the university dropouts surveyed were in the category “low economic status”. Section 3.3.1 discussed the study of Callender and Jackson (2008) that revealed that students from lower social class backgrounds were more debt averse than those from other social classes and, consequently, far more likely to be discouraged from going to university because of fear for student debt. Furthermore, in Section 3.3.2.1 a number of researchers demonstrated the implications of student debt on psychological factors, dropout rates, access to education and academic performance.

8.3.4.2 Correlations with student debt (3 factors) and personal financial management (3 factors)

SD3 showed a weak correlation with personal financial management attitudes (PFM1) ($r=.068^*$). Further SD1 and SD3 showed negative or weak correlations with planning for personal financial management (PFM2), ($r= -.108^{**}$ and $r= -.085^{**}$) while SD2 showed a positive correlation ($r= .078^{**}$). These results indicate that participants’ reaction to student debt is associated with personal financial planning. Finally, SD1 and SD3 showed negative or weak correlations with control regarding personal financial management (PFM3), ($r= -.181^{**}$ and $r= -.225^{**}$).

The framework of South African universities was highlighted in Section 2.4, which is characterised by institutional autonomy regarding governance of each institution. This means that each institution liberally formulates and implements a student credit management policy. The results indicate that participants perceive personal financial management and student debt differently. For instance, Kidwell and Turrisi (2004) propose that amounts of student debts are related to their budgeting practices, students who perceived themselves as competent in budgeting have less debt. This is also consistent with the study of Peters (2011) discussed in Section 5.7 who stated that significant disparities in payment and non-payment exist across both poor and non-poor communities.

Fjeldstad (2004) suggests that ability to pay and accessibility become key variables when priorities are made. In Section 5.7 the entitlement culture in South Africa was discussed with reference to Fjeldstad’s (2004) view that the prevailing wide spread of non-payment is caused by inability to pay as well as the presence of entitlement culture. Notably, the study of Ssebagala (2016) suggest that the South Africans are considerably more likely to be negligent on their financial obligations when they encounter negative occasions beyond their control rather than due to the size of the expenditure burden.

8.3.4.3 Correlations with student credit management (3 factors) and personal financial management (3 factors)

Implementation of student credit management (SCM1), communication of student credit management (SCM2) and effectiveness of student credit management (SCM3) showed a weak correlation with personal financial management attitudes (PFM1), ($r=.171^{**}$, $r=.108^{**}$ and $r=.158^{**}$). Furthermore, SCM1, SCM2 and SCM3 showed weak correlations with planning for personal financial management (PFM2), ($r=.363^{**}$, $r=.293^{**}$ and $r=.279^{**}$). Finally, SCM1, SCM2 and SCM3 showed moderate correlations with control regarding personal financial management (PFM3), ($r=.511^{**}$, $r=.400^{**}$ and $r=.387^{**}$).

This possibly is consistent with the view that individuals that plan to finance university education are able to comply with the student credit management policy at a university. As discussed above and in Section 5.6, South African households spending towards education is very low, putting a strain on the implementation of a credit management policy at South African universities.

8.3.5 Regression analysis

A standard multiple regression analysis was conducted in order to establish the relationship amongst constructs. Regression analysis can also be used to predict the values of a dependent variable given the values of one or more independent variables (Saunders, Lewis & Thornhill, 2009:461). In statistical modelling, regression analysis is a statistical process for estimating the relationships among variables. It includes many techniques for modelling and analysing several variables when the focus is on the relationship between a dependent variable and one or more independent variables (predictors). Multiple regression provides information about the model as a whole (all subscales) and the relative contribution of each of the variables (individual subscales) that make up the model (Pallant, 2011:148).

This was performed because a major shortcoming of correlations is that they do not identify causes from consequences. This procedure was done separately for each construct. Table 8.10 to Table 8.12 represent the results for regression analysis of student debt and student credit management while Table 8.13 to Table 8.15 provide the regression results for personal financial management and student credit management and Table 8.16 to Table 8.18 deliver the regression results for student debt and personal financial management. Prior to conducting regression analysis, the data was assessed to check whether conditions for regression analysis were met. In

this study, sample size adequacy, standardised, unstandardised coefficients and collinearity statistics were assessed for the evaluation of statistical significance for each data set.

Using Tabachnik and Fidell's (2007: 123) formula of calculating sample size ($N > 50 + 8m$, where m = number of independent variables), the sample size of 360 respondents was considered acceptable to perform regression analysis. The correlations were all below the cut-off point of below +0.80 and -0.80 indicating the absence of multi-collinearity (Grewal, Cote & Baumgartner, 2004). The tolerance gauge the strength of the relationship between one independent variable and the other independent variables and should be $t > 0.5$ (O'Brien, 2007:673). Variance inflation factor (VIF), as suggested by Field (2005:349), should ideally be < 0.10 .

To eliminate the likelihood of multicollinearity, it is essential that the results from collinearity diagnostics should have tolerance value > 0.10 and $VIF < 0.10$ as the small value of tolerance indicate the high multiple correlation with other variables (Pallant, 2007:156). Equally, the beta coefficients have different scales, the absolute value of beta parameter under standardised coefficients is used to compare and determine the effect of independent variables on the dependent variable (Muijs, 2010:167). The significant value is used to measure the statistic significant unique contribution of each independent variable to the formula (Pallant, 2007:159).

8.3.5.1 Regression analysis for SD and SCM

Table 8.10 provides the results for regression analysis for student debt with implementation of student credit management.

Table 8.10: Regression analysis SD with (SCM1) implementation of SCM

Dependent variable: Implementation of SCM (SCM1)							
Independent variables:	Unstandardised coefficients		Standardised coefficients			Collinearity Statistics	
	B	Std. error	Beta	t	Sig	Tolerance	VIF
Student debt implications (SD1)	-.103	.027	-.120	-3.886	.000*	.713	1.403
Reaction to student debt (SD2)	-.022	.024	-.024	-.906	.365	.959	1.043
Attitudes towards student debt (SD3)	-.176	.032	-.170	-5.529	.000*	.719	1.390

$R=0.260$; $R^2=0.067$; Adjusted $R^2=0.065$; F Change=33.221; *Sig $p < .05$

According to Table 8.10 to Table 8.12, the regression analysis revealed that the two student debt factor subscales have a significant negative relationship in overall implementation of student credit management. In assessing the multicollinearity, Field (2005:27) recommends that if the VIF is >0.10 then collinearity is a cause for concern. The VIF for the three subscales were satisfactory since they ranged between 1.043 and 1.403. A tolerance level of >0.10 is more appropriate, consequently, the tolerance levels attained in the regression analysis of the student debt and student credit management are within an acceptable range.

Student debt implications (SD1) and students attitude towards debt (SD3) showed significant negative influence on student debt management (SCM1), ($p=.000$; $\beta=-0.120$) and ($p=.000$; $\beta=-0.170$). In terms of the adjusted R^2 , approximately 7 percent of student debt can be attributed to the credit management policy of universities. This being the case, the findings of the current study are congruent with the results of previous studies conducted by Glater (2015), which found that student debt towards higher education is fraught with political and cultural significance. In addition, in Section 3.4 the role of student politics and hasty intolerances towards student debt were discussed within South African universities' context. This reinforces the perception that student credit management is likely to be proportionate to the reaction to student debt.

In order to further analyse the relationship between student debt and communication of student credit management (SCM2), regression analysis was conducted. The results are illustrated in Table 8.11.

Table 8.11: Regression analysis SD with (SCM2) communication of SCM

Dependent variable: Communication of SCM (SCM2)							
Independent variables:	Unstandardised coefficients		Standardised coefficients			Collinearity Statistics	
	B	Std. error	Beta	t	Sig	Tolerance	VIF
Student debt implications (SD1)	-.094	.034	-.086	-2.718	.007*	.713	1.403
Reaction to student debt (SD2)	.064	.031	.056	2.048	.041*	.959	1.043
Attitudes towards student debt (SD3)	-.087	.041	-.066	-2.111	.035*	.719	1.390

$R=0.134$; $R^2=0.018$; Adjusted $R^2=0.016$; F Change=8.384; *Sig $p < .05$

According to Table 8.11, student debt implications (SD1) ($p=0.007$; $\beta=-0.086$) and students attitudes towards debt (SD3) ($p=0.035$; $\beta=-0.66$) seem to negatively affect communication of student credit management (SCM2), while it positively affect student communication. In terms of the adjusted R^2 , approximately 2 percent of student debt can be attributed to the credit management communication policy of universities. The findings of the current study are supported by studies conducted by several researchers (O'Neill, 2008; Petroons *et al.*, 2014) in which communication with the account receivables were found to be potent predictors of credit management. Overall, the impression is that when communication of student credit management is effective, it will alleviate student debt. On the other hand, dysfunctional or defective communication of student credit management means trouble for the institutions in terms of student debt.

Regression analysis was conducted to analyse further the relationship between student debt and effectiveness of student credit management (SCM3). The results are illustrated in Table 8.12.

Table 8.12: Regression analysis SD with (SCM3) effectiveness of SCM

Dependent variable: Effectiveness of SCM (SCM3)							
Independent variables:	Unstandardised coefficients		Standardised coefficients			Collinearity Statistics	
	B	Std. error	Beta	t	Sig	Tolerance	VIF
Student debt implications (SD1)	-.033	.028	-.037	-1.183	.237	.713	1.403
Reaction to student debt (SD2)	.070	.025	.077	2.835	.005*	.959	1.043
Attitudes towards student debt (SD3)	-.156	.033	-.148	-4.740	.000*	.719	1.390

$R=0.174$; $R^2=0.030$; Adjusted $R^2=0.028$; F Change=14.350; *Sig $p < .05$

An analysis of the regression matrix in Table 8.12 reveals attitude towards student debt (SD3) negatively affects the effectiveness of student credit management. Notably, VIF values of all factors ranged between 1.043 and 1.403, while tolerances were <0.10 . Since the values are within acceptable limits, it implies that the multi-collinearity did not pose any problems. In terms of the adjusted R^2 , approximately 3 percent of student debt can be attributed to the effectiveness of student credit management policy of universities.

This finding substantiates that students are not entirely satisfied with their attitudes towards student debt while they are positive about their reaction towards student debt. This further extends the findings of previous studies conducted by Bunting (2006) who insisted that the majority of students are affected by financial exclusions and Letseka (2009) indicate that dropout rates are considerably high. As a result, students perceive that they should react, thereby affecting the effectiveness of student credit management. The #FeesMustFall protests are a testimony of reaction to student debt (Calitz & Fourie, 2016), which affects the implementation and effectiveness of student credit management.

8.3.5.2 Regression analysis for PFM and SCM

The regression analysis was used to ascertain whether any predictive relationships existed among the personal financial management and implementation of student credit management. The results are reported in Table 8.13.

Table 8.13: Regression analysis PFM with (SCM1) implementation of SCM

Dependent variable: Implementation of SCM (SCM1)							
Independent variables:	Unstandardised coefficients		Standardised coefficients			Collinearity Statistics	
	B	Std. error	Beta	t	Sig	Tolerance	VIF
PFM attitudes (PFM1)	.010	.025	.010	.423	.673	.881	1.134
Planning for PFM (PFM2)	.132	.025	.143	5.278	.000*	.715	1.399
Control regarding PFM (PFM3)	.447	.027	.438	16.501	.000*	.745	1.343

R=0.527; R²=0.277; Adjusted R²=0.276; F Change= 176.350; *Sig p < .05

Table 8.13 to Table 15 indicates the regression analysis revealing that the two subscales of personal financial management have significant relationships with the implementation of student credit management. The VIF values for the three subscales ranged between 1.134 and 1.399, which were adequate, while tolerance values were below the >0.10 threshold. Therefore, multi-collinearity problems associated with the current regression analysis were eliminated.

The two significant predictors of implementation of student credit management were planning for personal financial management (PFM2) (p=000; β =0.143) and control regarding personal financial management (PFM3) (p=000; β =-0.438). In terms of the adjusted R², approximately

28 percent of personal financial management can be attributed to the implementation of SCM policy. This denotes that students perceive themselves as capable and accountable towards managing their personal finances. These findings are inconsistent with the findings of Shambare and Rugimbana (2012) who found that South African university students indicate moderate levels of financial literacy; suggesting that there is a need to reinforce basic financial concepts. Lusardi and Tufano (2009) found a strong relationship between debt literacy and both financial experiences. Specifically, they discovered that individuals with lower levels of debt literacy tend to transact in high-cost manners, sustaining higher fees and using high-cost borrowing.

Relationship between personal financial management (PFM) and communication of student credit management (SCM2) was conducted by a regression analysis as illustrated in Table 8.14.

Table 8.14: Regression analysis PFM with (SCM2) communication of SCM

Communication of SCM (SCM2)							
Independent variables:	Unstandardised coefficients		Standardised coefficients			Collinearity Statistics	
	B	Std. error	Beta	t	Sig	Tolerance	VIF
PFM attitudes (PFM1)	-.020	.034	-.015	-.579	.563	.881	1.134
Planning for PFM (PFM2)	.176	.035	.151	5.088	.000*	.715	1.399
Control regarding PFM (PFM3)	.349	.038	.270	9.274	.000*	.745	1.343

R=0.364; R²=0.132; Adjusted R²=0.130; F Change= 70.038; *Sig p < 0.05

In Table 8.14, the regression analysis revealed that the two personal financial management factor subscales (PFM2 and PFM3) have a significant relationship with communication of student credit management.

The two significant predictors of communication of student credit management were planning for personal financial management (PFM2) (p=000; β =0.151) and control regarding personal financial management (PFM3) (p=000; β =0.270). The adjusted R², 13 percent of personal financial management be associated with the communication of student credit management policy. Subsequently, the findings of the current study are congruent with the results of previous studies conducted by Wong *et al.* (2016), which found that rational explanations and social encouragement could be essential credit management strategies in dealing with accounts

receivable. In addition, O'Neill (2008) anticipates that the communication with the account receivable is such that payment options may be offered, providing variable degrees of flexibility to payment on the deferred account. This consequently will make individuals to manage personal finances to settle outstanding debts and take advantage of discounts offered. Thus, in Section 4.3, Ngugi *et al.* (2017) emphasise that policies such as letters, phone calls, and credit control sending statements are key drivers to optimise accounts receivables management.

Regression analysis was conducted to further analyse the relationship between personal financial management (PFM) and effectiveness of student credit management (SCM3). The results are illustrated in Table 8.15.

Table 8.15: Regression analysis PFM with (SCM3) effectiveness of SCM

Dependent variable: Effectiveness of SCM (SCM3)							
Independent variables:	Unstandardised coefficients		Standardised coefficients			Collinearity Statistics	
	B	Std. error	Beta	t	Sig	Tolerance	VIF
PFM attitudes (PFM1)	.041	.027	.039	1.501	.134	.881	1.134
Planning for PFM (PFM2)	.099	.027	.106	3.616	.000*	.715	1.399
Control regarding PFM (PFM3)	.337	.030	.324	11.340	.000*	.745	1.343

R=0.401; R²=0.161; Adjusted R²=0.159; F Change= 88.141; *Sig p < .05

Exhibiting in Table 8.15 planning for personal financial management (PFM2) (p=0.000; β =0.106) and control regarding personal financial management (PFM3) (p=0.000; β =0.324) have a significant predictive relationship with effectiveness of student credit management. In terms of the adjusted R², approximately 16 percent of personal financial management could be attributed to the effectiveness of student credit management policies of universities. The study of Michalski (2012) emphasises that the institutions should design an appropriate receivables collection process within the credit management cycle. It can be assumed that accounts institutions can improve the effectiveness by offering discounts. Students will often take the discount, particularly those with sensible personal financial management to take the benefit of the discount versus the value of credit.

8.3.5.3 Regression analysis for SD and PFM

Table 8.16 provides the results for regression analysis for student debt with PFM attitudes.

Table 8.16: Regression analysis SD with (PFM1) PFM attitudes

Dependent variable: PFM attitudes (PFM1)							
Independent variables:	Unstandardised coefficients		Standardised coefficients			Collinearity Statistics	
	B	Std. error	Beta	t	Sig	Tolerance	VIF
Student debt implications (SD1)	-.015	.027	-.018	-.557	.577	.713	1.403
Reaction to student debt (SD2)	-.024	.024	-.027	-.985	.325	.959	1.043
Attitudes towards student debt (SD3)	.083	.032	.081	2.569	.010*	.719	1.390

R=0.075; R²=0.006; Adjusted R²=0.003; F Change=2.594; *Sig p < .05

In Table 8.16 to Table 8.18, the regression analysis revealed that the one student debt factor subscale have significant positive relationship in overall PFM attitudes. In assessing the multicollinearity, Field (2005:27) recommends that if the VIF is >0.10 then collinearity is a cause for concern. The VIF for the three subscales were satisfactory since they ranged between 1.043 and 1.403. A tolerance level of >0.10 is more appropriate, consequently, the tolerance levels attained in the regression analysis of the student debt and personal financial management are within an acceptable range.

Attitude towards debt (SD3) showed significant positive influence on PFM attitudes (PFM1), (p=.010; β =0.081). In terms of the adjusted R², approximately 0.6 percent of student debt can be attributed to the PFM attitudes. This being the case, the study by Hancock, Jorgensen and Swanson (2013) highlight the importance of early interventions in the life of university students including involving parents as positive role models to enhance financial attitudes. The attitudes of students towards debt are somehow complex. Harrison, Chudry, Waller and Hatt (2015) discovered that generally student attitudes appear to fall between the ‘debt-savvy’ and ‘debt-resigned’ types, with students being relatively well-informed about repayment terms and accepting large scale indebtedness as ‘normal’ with most students being in the same condition. This implies that students might become familiar with debt and it becomes a condition that is not positively affecting personal financial management attitudes.

The relationship between student debt (SD) and planning for PFM (PFM2) was conducted by a regression analysis as illustrated in Table 8.17.

Table 8.17: Regression analysis SD with (PFM2) planning for PFM

Dependent variable: Planning for PFM (PFM2)							
Independent variables:	Unstandardised coefficients		Standardised coefficients			Collinearity Statistics	
	B	Std. error	Beta	t	Sig	Tolerance	VIF
Student debt implications (SD1)	-.072	.029	-.077	-2.457	.014*	.713	1.403
Reaction to student debt (SD2)	.106	.026	.109	4.007	.000*	.959	1.043
Attitudes towards student debt (SD3)	-.110	.035	-.097	-3.109	.002*	.719	1.390

R=0.169; R²=0.029; Adjusted R²=0.026; F Change=13.513; *Sig p < .05

According to Table 8.17 reaction to student debt (SD2) (p=.000; β =0.109) affect the planning for PFM (PFM2) positively, while student debt implications (SD1) (p=0.014; β =-0.077); and attitudes towards student debt (SD3) (p=0.002; β =-0.097) seem to negatively affect planning for PFM (PFM2). In terms of the adjusted R², approximately 3 percent of student debt can be attributed to planning for PFM. The findings of the current study imply that reaction to student debt influence planning for PFM while student debt implications and attitudes towards student debt negatively affect planning for PFM.

The relationship between student debt (SD) and control regarding PFM (PFM3) was conducted by a regression analysis as illustrated in Table 8.18.

Table 8.18: Regression analysis SD with (PFM3) control regarding PFM

Dependent variable: Control regarding PFM (PFM3)							
Independent variables:	Unstandardised coefficients		Standardised coefficients			Collinearity Statistics	
	B	Std. error	Beta	t	Sig	Tolerance	VIF
Student debt implications (SD1)	-.075	.026	-.089	-2.865	.004*	.713	1.403
Reaction to student debt (SD2)	.017	.024	.020	.739	.460	.959	1.043
Attitudes towards student debt (SD3)	-.184	.031	-.181	-5.879	.000*	.719	1.390

R=0.237; R²=0.056; Adjusted R²=0.054; F Change=27.409; *Sig p < .05

An analysis of the regression matrix in Table 8.18 indicate that student debt implications (SD1) (p=.004; β =-.089) and attitudes towards student debt (SD3) (p=.001; β =-.181) negatively affects the control regarding PFM. In terms of the adjusted R², approximately 5.4 percent of student debt can be attributed to the control regarding PFM.

This finding substantiates the fact that student debt implications and attitudes towards student debt hinders the control regarding PFM. Students encounter vulnerable conditions and the control regarding PFM is compromised or neglected.

8.3.6 Analysis of variance (ANOVA): Comparing the universities

The ANOVA is a statistical technique that used where there are more than two independent variables that need to be compared with a single dependent variable (Maree, 2007:229). The purpose of ANOVA is to test for significant differences between the means of three or more groups (Watkins & Gioia, 2015:105). The *F* ratio or *F* statistic represents these differences and if the likelihood of any difference between groups occurring by chance alone is low, this will be represented by a large *F* ratio with a probability of less than 0.05 (Saunders, Lewis & Thornhill, 2009:458). ANOVA is computed to detect whether there are any statistically significant differences between universities with reference to the dimensions student debt, student credit management, personal financial management and demographic information for the five universities (A, B, C, D and E).

The ANOVA tables and homogeneous subsets tables are attached in Appendix 4 (labelled as A tables). Only the significant differences will be reported.

8.3.6.1 ANOVA analysis of student debt (SD)

With reference to the abovementioned influences, comparisons between all five universities were undertaken to determine whether there were statistically significant differences. Table 8.19A (Appendix 4) presents the results of the ANOVA dimension of student debt (SD). The statistically significant differences between the five universities were found in student debt implications (SD1). Table 8.19A indicates that there are statistically significant perception differences found between students from five institutions in student debt implications, significant at $p < 0.05$. To maintain integrity and improve the confidence of the results, a post-hoc test (using Tukey HSD to eliminate violations of the assumptions) was computed to examine which specific groups differed significantly. [The explanation of the ANOVA and subsets tables are not explained for every section as they are the same as 8.3.6.1]. Table 8.19 provides the differences through post-hoc test dimensions of student debt implications (SD1).

Table 8.19: Post-hoc tests - dimensions of student debt implications (SD1)

University code	University code	Mean Difference	Std. Error	Sig.	95% Confidence Interval	
					Lower Bound	Upper Bound
A	E	.357*	.086	.000	.1136	.600
	C	.298*	.070	.000	.1024	.493
	B	.442*	.085	.000	.2039	.680
D	B	.329*	.094	.005	.0647	.594

*. The mean difference is statistically significant at the 0.05 level.

According to Table 8.19, the post-hoc tests illustrate that a statistically significant perception difference exists between students from universities with regard to student debt implications (SD1). Notably, there is a statistically mean difference between University A with B (mean difference 0.442), C (mean difference 0.298) and E (mean difference 0.357). However, there is no statistically significant difference between University A and D. There is also statistically significant difference between University D and B (mean difference 0.329). This result implies that differences exist between South African universities in respect of perceptions of student debt implications. University A (mean 4.0748) has a significantly higher mean score than E (3.7179), C (3.7771) and B (3.6330); while D (3.9623) has a higher mean significant score than B. The interpretation of this results is as follows:

Student debt implication (SD1): Students from Universities E, C and B experience student debt significantly less negative than students from Universities A and D. [These results are consistent with the descriptive statistics in Section 8.3.3. This consistency of the mean values will not be referred to every time with the interpretation of the factors].

It is inevitable that student debt will significantly affect the financial sustainability of South African universities. The understanding of perceptions towards student debt is a stepping-stone in implementing the credit management policy. A common understanding between students and university management is essential for the implementation of credit management policy.

8.3.6.2 ANOVA analysis of student credit management (SCM)

Table 8.20A (Appendix 4) provides the ANOVA for student credit management amongst the five universities for dimensions of student credit management (SCM). Table 8.20A indicates that there are statistically significant differences found between the five institutions in all the factors of student credit management, significant at $p < 0.05$. A post-hoc test was computed to examine which specific groups differed significantly between the groups. The results are reported in Table 8.20.

Table 8.20: Post-hoc tests - dimensions of student credit management (SCM)

Dependent Variable	University code	University code	Mean Difference	Std. Error	Sig.	95% Confidence Interval	
						Lower Bound	Upper Bound
SCM1	A	E	.247*	.079	.018	.026	.469
		D	.279*	.078	.004	.060	.497
	C	E	.411*	.070	.000	.214	.609
		D	.443*	.069	.000	.249	.637
		B	.335*	.066	.000	.150	.519
SCM2	A	E	.658*	.101	.000	.372	.944
		B	.303*	.092	.010	.046	.561
	C	E	.612*	.093	.000	.351	.874
		B	.258*	.082	.017	.028	.488
	D	E	.551*	.104	.000	.259	.842
	B	E	.355*	.099	.004	.075	.635
SCM3	A	E	.264*	.080	.010	.040	.488
	C	A	.258*	.065	.001	.075	.442
		E	.522*	.076	.000	.309	.735
		D	.341*	.068	.000	.148	.533
	B	E	.363*	.084	.000	.126	.600

*, The mean difference is statistically significant at the 0.05 level.

The results of the post-hoc tests illustrated in Table 8.20 indicate that the mean scores for SCM indicate that there are statistically significant differences amongst students from five universities. Particularly, in terms of implementation of SCM1, statistically mean difference between University C with B (mean difference 0.335), D (mean difference 0.443) and E (mean difference 0.411). However, there is no statistically significant difference between University A and C in terms of implementation of SCM1. University A (mean 2.8452) has a significantly higher mean than E (2.5979) and D (2.5667), while University C (mean 3.0092) has a higher mean than E, D and B (2.6747). The interpretation of these results is as follows:

Implementation of SCM (SCM1): Students from Universities A and C have a significantly more positive acceptance of their universities' implementation of credit management than Universities E and D, and E, D and B, respectively.

With regard to communication of SCM2, University E shows a mean difference that is statistically significant with all other universities, University A (mean difference 0.658), University B (mean difference 0.355), University C (mean difference 0.612), and University D (mean difference 0.551). There are also statistically differences found between University A and University B (mean difference 0.303); University C and University B (mean difference 0.258). University A (mean 2.9435), C (2.8979), D (2.8360) and B (2.6403) has a significantly higher mean than E (2.2855), on the other hand, A and C have a higher mean than B. The interpretation of these results is as follows:

Communication of SCM (SCM2): Students from Universities A, C, D and B have a significantly better understanding of their universities' credit management than students of University E. Furthermore, students of Universities A and C have a significantly better understanding than students of University B.

The results of post-hoc tests indicate that statistically significant perception differences exist on effectiveness of SCM3 amongst the universities. University E shows statistically significant differences with University A (mean difference 0.264), University C (mean difference 0.522) and University B (mean difference 0.363). Furthermore, University C shows statistically significant differences with University A (mean difference 0.258) and University D (mean difference 0.341). There is no statistically significant perception difference between University A, B and D in terms of effectiveness of SCM3. University C (mean 3.3455) and B (3.1858) have

a significantly higher mean than A (3.0872), E (2.8231) and D (3.0050), and E, respectively. The interpretation of these results is as follows:

Effectiveness of SCM (SCM3): Students from Universities C and B experience a significantly higher degree of effectiveness of their universities' credit management than Universities A, E and D, and E, respectively.

It is imperative that there are inherent differences in the implementation of SCM at South African universities. The application credit management at South African universities was discussed in Section 4.8. These findings can assist in understanding how students respond to implementation of SCM at various universities. Against this background, a comprehensive and accepted credit management policy that is equally effective can be identified.

8.3.6.3 ANOVA analysis of personal financial management

An examination ANOVA in respect of personal financial management amongst universities was performed. Table 8.21A (Appendix 4) provides the ANOVA for personal financial management amongst the five universities for dimensions of PFM. Table 8.21A indicates that there are statistically significant differences found between the five universities in all the factors of PFM, significant at $p < 0.05$. To maintain the integrity of the results, using Tukey HSD to eliminate violations of the assumptions, a post-hoc test was computed to examine which specific groups differed significantly between the groups. The mean differences are reported in Table 8.21.

Table 8.21: Post-hoc tests - dimensions of PFM

Dependent Variable	University code	University code	Mean Difference	Std. Error	Sig.	95% Confidence Interval	
						Lower Bound	Upper Bound
PFM1	A	D	.276*	.077	.003	.061	.491
	E	D	.330*	.079	.000	.107	.553
	C	D	.374*	.071	.000	.174	.574
	B	D	.251*	.082	.023	.020	.482
PFM2	A	D	.233*	.082	.043	.004	.463
	C	E	.290*	.090	.014	.037	.543
		D	.405*	.075	.000	.195	.616
	B	E	.266*	.093	.044	.004	.527
PFM3	A	D	.381*	.079	.000	.160	.602
		E	.376*	.079	.000	.155	.598
	C	D	.295*	.070	.000	.0978	.493
		E	.327*	.073	.000	.121	.533
	B	D	.246*	.064	.001	.066	.426
		E	.411*	.086	.000	.171	.652
		D	.330*	.078	.000	.111	.549

*, The mean difference is statistically significant at the 0.05 level.

PFM1 attitudes as illustrated by Table 8.21 indicate that statistically significant perception differences exist between University D and all other universities. The results indicate that University A (mean difference 0.276), University B (mean difference 0.251), University C (mean difference 0.374) and University E (mean difference 0.330) have a higher mean difference than University D. There is no statistically significant perception difference between University A, B, C and E in terms of PFM1 attitudes. The interpretation of these results is as follows:

PFM attitudes (PFM1): Students from Universities A, B, C and E are significantly more prepared to manage their personal finance than those of University D.

The results of post-hoc further indicate that statistically significant perception differences exist on planning for PFM2 amongst the universities. University D shows statistically significant differences with University A (mean difference 0.233), University C (mean difference 0.405) and University B (mean difference 0.381). Furthermore, University E shows statistically significant differences with University B (mean difference 0.266) and University C (mean difference 0.290). There is no statistically significant perception difference between University A, B and C in terms of planning for PFM2. University A (mean 3.2949), B (3.4425) and C (3.4668) have a significantly higher mean than D (3.0615) and E (3.1769). The interpretation of these results is as follows:

Planning for PFM (PFM2): Students from Universities A, B and C do significantly more planning for personal financial management than students from D and E.

Remarkable statistically significant mean perception differences were realised among the universities with respect to control regarding PFM3. There is no statistically significant perception difference between University D and E in terms of control regarding PFM3. Equally, the post-hoc results show cohort with no statistically significant perception differences between University A, B and C. The results indicate that University E reflect statistically significant differences with University A (mean difference 0.376), University B (mean difference 0.411) and University C (mean difference 0.327) while University D shows statistically significant difference with University A (mean difference 0.295), University B (mean difference 0.330) and University C (mean difference 0.246). University A (mean 2.9794), C (2.9301) and B (3.0143) have a significantly higher mean than D (2.6841) and E (2.6031). The interpretation of these results is as follows:

Control regarding PFM (PFM3): Students from Universities A, C and B are significantly more in control of their personal finances than students of D and E.

The differences amongst universities regarding PFM indicate that students differ in the way they perceive personal financial management. Some students have a belief that money has to be used cautiously to manage student debt, while others shift the accountability to either the universities or the government. The theory of entitlement culture (discussed in Section 5.7), intergenerational transfer (discussed in Section 5.5.1), human capital (discussed in Section 5.5) and financial literacy are profound in the context of personal financial management.

8.3.7 ANOVA analysis of demographic information

ANOVA of demographic information is computed to detect whether there are any statistically significant differences between universities with reference to the dimensions student debt, student credit management and personal financial management. The ANOVA and homogeneous subsets tables are attached in Appendix 4.

8.3.7.1 Current level of education

Table 8.22A (Appendix 4) presents the results of the ANOVA for the education level of the participants. Figure 8.1 indicated that the sample represent 78 percent undergraduate and 22 percent postgraduate students. Table 8.22A indicates that there are statistically significant perception differences found between participants from five institutions in student debt implications (SD1); attitudes to student debt (SD3); implementation of SCM (SCM1); communication of SCM (SCM2); planning for PFM (PFM2); control regarding PFM (PFM3). This indicates that both undergraduate and postgraduate participants have different perceptions towards these variables. However, there were no statistically significant differences found on reaction to student debt (SD2), effectiveness of SCM (SCM3) and PFM attitudes (PFM1). This implies that participants have the same perceptions towards these variables. Because there are fewer than three groups, the post-hoc analysis could not be performed, instead the means test (t-test) are presented in Table 8.22 for current level of education.

Table 8.22: Descriptive means - Current level of education

		N	Mean	Std. Deviation	Std. Error
Student debt implications (SD1)	1	1038	3.8878	1.0028	.03113
	2	293	3.6826	.96733	.05651
	Total	1331	3.8426	.99841	.02737
Attitudes to student debt (SD3)	1	1038	4.1379	.81692	.02535
	2	293	3.8976	.84181	.04917
	Total	1331	4.0850	.82816	.02270

		N	Mean	Std. Deviation	Std. Error
Implementation of SCM (SCM1)	1	1038	2.7254	.87504	.02716
	2	293	2.9522	.77841	.04547
	Total	1331	2.7753	.85958	.02356
Communication of SCM (SCM2)	1	1038	2.6391	.98986	.03072
	2	293	2.7815	.93796	.05479
	Total	1331	2.6704	.98010	.02686
Planning for PFM (PFM2)	1	1038	3.2765	.94816	.02943
	2	293	3.4394	.86179	.05035
	Total	1331	3.3124	.93197	.02555
Control regarding PFM (PFM3)	1	1038	2.8358	.85271	.02646
	2	293	2.9986	.79415	.04639
	Total	1331	2.8716	.8425	.02309

Table 8.22 provide the following statistically significant results to assess the influence of education level:

- *Student debt implications (SD1)*: The undergraduate students have a higher mean score (3.8878) than postgraduate students (3.6826). These results suggest that undergraduate students have a higher degree of negative experience because of the implications of student debt.
- *Attitudes to student debt (SD3)*: The undergraduate students have a higher mean score (4.1379) relative to postgraduate students (3.8976). These results denote that undergraduate students impose a higher degree of threat as a result of student debt.
- *Implementation of SCM (SCM1)*: The postgraduate students have a higher mean score (2.9522) than the undergraduate students (2.7254). These findings mean that postgraduate students have more positive acceptance of universities' implemented credit management.
- *Communication of SCM (SCM2)*: The postgraduate students have a higher mean score (2.7815) than the undergraduate students (2.6391). These discoveries imply that postgraduate students have a better understanding of universities' credit management.
- *Planning for PFM (PFM2)*: The postgraduate students have a higher mean score (3.4394) than the undergraduate students (3.2765). This is an indication that postgraduate students have a superior personal financial planning that the undergraduate students.
- *Control regarding PFM (PFM3)*: The postgraduate students have a higher mean score (2.9986) than the undergraduate students (2.8358). This signify that postgraduate students are more in control of their personal finances.

8.3.7.2 Duration at the same university

Table 8.23A (Appendix 4) show the results of the ANOVA for the duration at the same university by the participants. Figure 8.2 indicates the duration that participants have stayed in the same university. Table 8.23 provide the post-hoc analysis for duration at the same university.

Table 8.23: Post Hoc Tests - Number of years at the same university

Dependent Variable	Years	Years	Mean Difference	Std. Error	Sig.	95% Confidence Interval	
						Lower Bound	Upper Bound
SD1	5-6	1-2	.281*	.090	.005	.071	.492
SCM1	1-2	3-4	.153*	.056	.017	.022	.283
		5-6	.197*	.077	.029	.016	.379
SCM2	1-2	3-4	.171*	.064	.020	.022	.320
SCM3	1-2	5-6	.209*	.079	.021	.025	.394
PFM2	1-2	3-4	.186*	.061	.006	.045	.328

*, The mean difference is significant at the 0.05 level.

According to Table 8.23, the post-hoc tests illustrate that a statistically significant perception difference exists between students according to their duration at the university with regard to student debt implications (SD1), implementation of SCM (SCM1), communication of SCM (SCM2), effectiveness of SCM (SCM3) and planning for PFM (PFM2). The results can be summarised as follows:

- *Student debt implications (SD1)*. The longer the students stay at the same university, the more they are concerned with the negative implications of student debt. There is a statistically mean difference (0.281) between students that stayed at the university between one to two years compared with students that stayed more than five years at the same university.
- *Implementation of SCM (SCM1)*. As the years staying at the university increase there is a decrease in the mean scores regarding the implementation of SCM, which implies that the more matured the students become, the more negative and less satisfied they are with their universities' credit management policies.
- *Effectiveness of SCM (SCM3)*. There is also a statistically mean difference between students that have stayed less years at the same university (one to two years) than students that stayed longer (5+ years) with regard to effective SCM, implying the matured students experience their universities' credit management less effective than those of relatively new students.

- *Planning for PFM (PFM2)*. Relatively new students (1-2 years) are much more concerned with planning their PFM than the group which is between three and four years at the same university.

8.3.7.3 Faculty of study

Table 8.24A (Appendix 4) indicates the results of the ANOVA for the academic faculty of the participants. Figure 8.3 specifies the faculty of the participants. Table 8.24A indicates that there are statistically significant perception differences found between participants from five institutions in all three student debt variables; implementation of SCM (SCM1), effectiveness of SCM (SCM3), planning for PFM and control regarding PFM. Table 8.24 provide the post-hoc analysis for faculty.

Table 8.24: Post Hoc Tests - Faculty

Dependent Variable	Faculty	Faculty	Mean Difference	Std. Error	Sig.	95% Confidence Interval	
						Lower Bound	Upper Bound
SD1	1	5	.444*	.148	.032	.0225	.865
		6	.568*	.166	.009	.0927	1.043
	3	5	.340*	.095	.005	.0676	.612
		6	.464*	.123	.002	.1141	.814
SD2	2	5	.310*	.068	.000	.1166	.503
	4	5	.356*	.074	.000	.145	.568
SD3	3	5	.235*	.080	.039	.007	.464
SCM1	5	3	.259*	.083	.022	.022	.496
	6	3	.313*	.107	.040	.008	.617
SCM3	6	3	.315*	.108	.042	.006	.625
PFM2	2	3	.351*	.092	.002	.088	.614
	4	3	.299*	.097	.025	.023	.576
	5	3	.331*	.090	.003	.074	.588
	6	3	.401*	.116	.007	.071	.731
PFM3	2	3	.298*	.083	.004	.062	.535
	5	3	.374*	.081	.000	.143	.605
		4	.192*	.066	.041	.004	.379

*. The mean difference is significant at the 0.05 level.

[1. Education; 2. Engineering; 3. IT & Science; 4. Human Science; 5. Management Sciences; 6. Other.]

According to Table 8.24, the post-hoc tests illustrate that a statistically significant perception difference exists between students from different faculties. The results can be summarised as follows:

- *Student debt implications (SD1)*: There is a statistically mean difference between students from Education and Management Sciences (mean difference 0.444). Similarly, IT & Science and Management Sciences (mean difference 0.340). The results indicate that students from Education and IT & Science faculties are more concerned with student debt implications than students from Management Sciences.
- *Reaction to student debt (SD2)*: There is a statistically mean difference between students from Engineering and Human Sciences (mean differences 0.310 and 0.356 respectively) relative to Management Sciences. The results indicate that students from Engineering and Human Sciences faculties have a higher degree of destructive reaction as a result of student debt than students from the Management Sciences.
- *Attitudes to student debt (SD3)*: Results show a statistically mean difference between students' from IT & Science Faculty (mean difference 0.235) and Management Sciences. The results indicate that students from the IT & Science Faculty experience higher degree of threat (tolerant) because of student debt than students from the Management Sciences Faculty.
- *Implementation of SCM (SCM1)*: A statistically mean difference between students from the IT & Science Faculty (mean difference 0.259) and Management Sciences were found. Students from the IT & Science experience a more positive acceptance of their universities' implemented credit management than those from Management Sciences.
- *Planning for PFM (PFM2)*: There is a statistically mean differences between students from the Engineering; Human Sciences; Management Science and other faculties (mean difference 0.351; 0.299; 0.331 and 0.401) are significantly higher than the IT & Science. This implies that the IT & Science students are less alarmed with planning for personal financial management.
- *Control regarding PFM (PFM3)*: Statistically mean differences exist between Engineering and Management Science faculties (mean difference 0.298 and 0.374) have a significantly higher means than the IT & Sciences and Human Sciences. The results suggest that the IT & Science and Human Science are less anxious with control concerning personal financial management than the Engineering and Management Sciences.

8.3.7.4 Home province

Table 8.25A (Appendix 4) presents the results of the ANOVA for the home province of the participants. Figure 8.4 identifies whether participants are studying in their home province.

About 50.2 percent of the participants are studying in their home province while 48.9 percent are studying away from their home province. Table 8.25A indicates that there are statistically significant perception differences found between participants from five institutions in student debt implications (SD1); attitudes to student debt (SD3); implementation of SCM (SCM1) and communication of SCM (SCM2). Because there are fewer than three groups, the post-hoc analysis could not be performed, instead the t-test are presented in Table 8.25 for the home province.

Table 8.25: Descriptive means - Home province

		N	Mean	Std. Deviation	Std. Error
Student debt implications (SD1)	1	683	3.7405	1.02386	.03918
	2	677	3.9383	.96230	.03698
	Total	1360	3.8390	.99825	.02707
Attitudes to student debt (SD3)	1	683	4.0246	.88020	.03368
	2	677	4.1457	.77355	.02973
	Total	1360	4.0849	.83074	.02252
Implementation of SCM (SCM1)	1	683	2.7177	.83548	.03196
	2	677	2.8389	.87794	.03374
	Total	1360	2.7780	.85871	.02328
Communication of SCM (SCM2)	1	683	2.5789	.94771	.036263
	2	677	2.7695	1.00400	.038587
	Total	1360	2.6738	.98042	.026585

Table 8.25 provide the following statistically significant results to assess the influence of home province:

- *Student debt implications (SD1)*: The students that attend the university away from their home province have a higher mean score (3.9383) than those that attend at their home province (3.7405). This result is a revelation as students that are attending the university away from their home province have a higher degree of negative experience because of the implications of student debt.
- *Attitudes to student debt (SD3)*: The students that attend the university away from their home province have a higher mean score (4.1457) relative to those attending university at their home province (4.0246). These results denote that students attending the university away from their home province impose a higher degree of threat as a result of student debt.
- *Implementation of SCM (SCM1)*: The students attending the university away from their home province have a higher mean score (2.8389) than those that attend university at their home

province (2.7177). These findings mean that students attending the university away from their home province have more positive acceptance of universities' implemented credit management.

- *Communication of SCM (SCM2):* The students that attend the university away from their home province have a higher mean score (2.7695) than those attending university at their home province (2.5789). These results reveal that students attending the university away from their home province have a better understanding of universities' credit management.

8.3.7.5 Family income

Table 8.26A (Appendix 4) presents the results of the ANOVA for the family income level of the participants. Figure 8.5 indicated the family level of income of the sample. Table 8.26A indicates that there are statistically significant perception differences found between participants from five institutions in reaction to student debt (SD2), attitudes to student debt (SD3), implementation of SCM (SCM1), communication of SCM (SCM2), effectiveness of SCM (SCM3), planning for PFM (PFM2), and control regarding PFM (PFM3). Table 8.26 provide the post-hoc analysis for family income.

Table 8.26: Post Hoc Tests - Family income

Dependent Variable	Income	Income	Mean Difference	Std. Error	Sig.	95% Confidence Interval	
						Lower Bound	Upper Bound
SD2	1	2	.215*	.0756	.023	.021	.409
		3	.460*	.101	.000	.199	.721
		4	.213*	.060	.002	.060	.367
SD3	3	1	.267*	.088	.013	.040	.493
		2	.286*	.098	.019	.033	.538
	4	1	.149*	.052	.022	.015	.282
SCM1	1	3	.389*	.092	.000	.153	.626
	2	3	.265*	.103	.049	.001	.529
	4	3	.253*	.094	.035	.012	.494
SCM2	1	3	.389*	.105	.001	.119	.658
	2	3	.371*	.117	.008	.071	.672
SCM3	1	3	.409*	.093	.000	.169	.649
	2	3	.296*	.104	.023	.028	.564
	4	3	.278*	.095	.019	.033	.522
PFM2	1	3	.816*	.097	.000	.566	1.067
		4	.349*	.057	.000	.202	.497
	2	3	.671*	.109	.000	.391	.950
		4	.203*	.075	.034	.011	.396
	4	3	.467*	.099	.000	.212	.722

PFM3	1	3	.418*	.089	.000	.189	.647
		4	.153*	.053	.020	.017	.288
	2	3	.462*	.099	.000	.205	.718
		4	.196*	.069	.023	.019	.373
	4	3	.265*	.091	.019	.032	.499

*. The mean difference is significant at the 0.05 level.

1. <R10 000; 2. R11 -30 000; 3. R31 – 50 000; 4. >R50 000.

The results of the post-hoc tests illustrated in Table 8.26 indicate the mean scores. This indicate that there are statistically significant differences amongst students' from different monthly family income levels. The results can be summarised as follows:

- *Reaction to SD (SD2)*: Students from the lowest monthly family income (<R10000) are more reactive to student debt than students from other higher monthly income levels: (mean differences 0.215; 0.460; 0.213) income levels R11 000 – 30 000; R31 000 – 50 000; >R50 000 respectively. These results indicate that financially disadvantaged students have relatively higher degree of destructive reactions as a result of student debt.
- *Attitudes to student debt (SD3)*: Students from higher monthly family income have undesirable attitude towards student debt (mean difference 0.267 and 0.149); R31 000 – 50 000 and >R50 000 respectively than students from lower monthly family income. These results indicate that the level of family income is associated with attitude towards student debt. Students from higher monthly family income have a higher degree of threat because of student debt.
- *Implementation of SCM (SCM1)*: Relatively, students from low and higher monthly family income have acceptable perceptions regarding the implementation of SCM (mean difference 0.389; 0.265 and 0.253) <R10 000; R11 000 – R30 000 and >R50 000, respectively than students from middle (R31 000 – R50 000) monthly family income. These results suggest that students from extreme incomes are more positive towards the implementation of credit management than the middle class.
- *Communication of SCM (SCM2)*: Equally, students from lower monthly family income have tolerable perceptions towards the communication of SCM (mean difference 0.38859 and 0.37127) <R10 000 and R11 000 – R30 000 respectively than students from middle monthly family income (R31 000 – R50 000). These results portray that students from low monthly family income have a better understanding of universities' credit management.

- *Effectiveness of SCM (SCM3)*: Results show that students from lower and highest monthly family income students have welcoming perception differences (mean difference 0.409; 0.296 and 0.278) <R10 000; R11 000 – R30 000 and >R50 000 respectively concerning the effectiveness of SCM than students from middle monthly family income. These results portray that the level of family income influence the perceptions regarding the effectiveness of student credit management. Students from extreme monthly family income experience a higher degree of effectiveness by their universities' regarding credit management.
- *Planning for PFM (PFM2)*: Table 8.26 illustrate that statistically significant differences exist between students' from low monthly family income of <R10 000 and R11000 – R30 000 (mean differences 0.816 and .349), R31 000 – R50 000 and >R50 000 groups. Furthermore, >R50 000 are also significantly higher than the middle group (R11 00 – R30 000). These results demonstrate that middle group do less planning for personal financial management.
- *Control regarding PFM (PFM3)*: Differences were found with <R10 000 and R11 000 – R30 000 monthly family income (mean difference 0.418 and 0.153) and the R31 000 – 50 000 and >R50 000 groups. Monthly family income of R31 000 – 50 000 show (mean difference 0.462 and 0.196) a significant difference between the >R50 000 group. These results suggest that middle-income group are less in control of personal finances.

8.3.7.6 Acknowledgement of debt (AoD)

Table 8.27A (Appendix 4) presents the results of the ANOVA for the signing of AoD by the participants. Figure 8.6 indicated that 57.4 percent of the participants have signed AoDs with the universities while 42.6 percent of the participants did not sign any agreement. Table 8.27A indicates that there are statistically significant perception differences found between participants from five institutions in student debt implications (SD1); implementation of SCM (SCM1); communication of SCM (SCM2); effectiveness of SCM (SCM3); PFM attitudes (PFM1); planning for PFM (PFM2) and control regarding PFM (PFM3). This indicates that there are different perceptions towards these variables amongst the participants who signed the AoD and those that did not.

Because there are fewer than three groups, the post-hoc analysis could not be performed, instead the means test (t-test) are presented in Table 8.27 for the AoD.

Table 8.27: Descriptive means – Acknowledgement of debt (AoD)

		N	Mean	Std. Deviation	Std. Error
Student debt implications (SD1)	1	787	3.9835	.94986	.03386
	2	583	3.6604	1.02723	.04254
	Total	1370	3.8460	.99607	.02691
Implementation of SCM (SCM1)	1	787	2.6772	.91274	.03253
	2	583	2.8963	.77475	.03208
	Total	1370	2.7705	.86327	.02332
Communication of SCM (SCM2)	1	787	2.6565	1.01708	.03625
	2	583	2.6891	.93847	.03886
	Total	1370	2.6703	.98418	.02658
Effectiveness of SCM (SCM3)	1	787	3.0546	.90061	.03210
	2	583	3.2093	.83532	.03460
	Total	1370	3.1204	.87645	.02368
PFM attitudes (PFM1)	1	787	4.1299	.87790	.03129
	2	583	4.2050	.80164	.03320
	Total	1370	4.1619	.84680	.02288
Planning for PFM (PFM2)	1	787	3.2338	1.00538	.03584
	2	583	3.4078	.82615	.03422
	Total	1370	3.3078	.93697	.02531
Control regarding PFM (PFM3)	1	787	2.7641	.86125	.03070
	2	583	3.0006	.80351	.03327
	Total	1370	2.8648	.84501	.02282

Table 8.27 provides the following statistically significant results to assess the influence of AoD:

- *Student debt implications (SD1)*: The students that have signed the AoD have a higher mean score (3.9835) than those that did not sign such agreement (3.6604). These is an indication that students that have signed the AoD have a higher degree of negative experience because of the implications of student debt.
- *Implementation of SCM (SCM1)*: The students without an AoD have a higher mean score (2.8963) than those that have signed the AoD (2.6772). These findings mean that students without an AoD have more positive acceptance of universities' implemented credit management.
- *Communication of SCM (SCM2)*: The students without an AoD have a higher mean score (2.6891) than those that have signed the AoD (2.6565). These results reveal that students without an AoD have a better understanding of universities' credit management.

- *Effectiveness of SCM (SCM3)*: The students without an AoD have a higher mean score (3.2093) than those that have signed the AoD (3.0546). This is an assertion that students without an AoD perceive a higher degree of effectiveness by their universities' credit management.
- *PFM attitudes (PFM1)*: The students without an AoD have a higher mean score (4.2050) than those that have signed the AoD (4.1299). These findings suggest that students without an AoD have a tendency of being more prepared to manage their personal finances.
- *Planning for PFM (PFM2)*: The students without an AoD have a higher mean score (3.4078) than those with an AoD (3.2338). This is an indication that students without an AoD have a superior personal financial planning.
- *Control regarding PFM (PFM3)*: Students without an AoD have a higher mean score (3.0006) than those with an existing AoD (2.7641). This endorse that students without an AoD are more in control of their personal finances.

8.3.7.7 Debt level

Table 8.28A (Appendix 4A) provides the results of the ANOVA for the debt level of the participants. Figure 8.7 indicated the debt level of the sample. Table 8.28A indicates that there are statistically significant perception differences found between participants from five institutions in student debt implications (SD1). This indicates that the level of student debt has different implications amongst participants. Table 8.28 provide the post-hoc analysis for debt level.

Table 8.28: Post Hoc Tests - Debt level

Dependent Variable	Debt	Debt	Mean Difference	Std. Error	Sig.	95% Confidence Interval	
						Lower Bound	Upper Bound
SD1	3	1	.496*	.098	.000	.199	.794
	4	1	.411*	.098	.001	.115	.707
	5	1	.478*	.104	.000	.161	.794
	6	1	.628*	.112	.000	.289	.968
	7	1	.489*	.131	.005	.092	.885
	8	1	.345*	.104	.021	.030	.660

*. The mean difference is significant at the 0.05 level.

1. 0 - <R10 000; 2. R11 000 – 20 000; 3. R21 000 – 30 000; 4. R31 000 – 40 000; 5. R41 000 – 50 000;

6. R51 000 – 60 000; 7. R61 000 – 70 000; 8. >R71 000.

The results of the post-hoc tests illustrated in Table 8.28 indicate that the mean scores for student debt implications (SD1) indicate that there are statistically significant differences amongst students with different debt levels.

Student debt implications (SD1): Particularly, students with low debt levels perceive student debt differently than students with higher debt. The results show that students with low debt, owing 0 to <R10 000 (mean differences 0.496; 0.411; 0.478; 0.628; 0.489 and 0.345) with students owing R11 000 – 20 000; R21 000 – 30 000; R31 000 – 40 000; R41 000 – 50 000; R51 000 – 60 000; R61 000- 70 000 and >R71 000 respectively. These results imply that students with low debt levels are relatively less concerned with the student debt implications than students with higher student debt levels.

8.3.7.8 Method(s) of receiving fees statement

Table 8.29A (Appendix 4) display the results of the ANOVA for the methods of receiving fees statements by the participants. Figure 8.9 indicated the methods that participants receive fees statements. Table 8.29A indicates that there are statistically significant perception differences found between participants from five institutions in student debt implications (SD1), reaction to student debt, all variables of student credit management and personal financial management. This indicates that participants have different perceptions towards receiving of fees statements. It is also an indication that there is no consistency or standardisation from universities in terms of sending statements to students. Table 8.29 provide the post-hoc analysis for method(s) of receiving fees statement.

Table 8.29: Post Hoc Tests - Method(s) of receiving fees statement

Dependent Variable	Statement	Statement	Mean Difference	Std. Error	Sig.	95% Confidence Interval	
						Lower Bound	Upper Bound
SD1	1	4	.355*	.076	.000	.148	.563
SD2	2	1	.356*	.066	.000	.175	.538
SCM1	2	1	.301*	.060	.000	.138	.464
	4	1	.277*	.066	.000	.098	.456
	5	1	.343*	.081	.000	.120	.565
SCM2	2	1	.394*	.068	.000	.208	.579
	4	1	.299*	.075	.001	.095	.503
	5	1	.355*	.093	.001	.101	.609
SCM3	2	1	.168*	.061	.047	.001	.336
	4	1	.215*	.067	.012	.032	.399
PFM1	1	3	.383*	.134	.035	.017	.749
	5	3	.469*	.148	.014	.063	.874

PFM2	2	1	.349*	.065	.000	.172	.526
	4	1	.269*	.071	.002	.074	.464
	5	1	.287*	.089	.011	.045	.529
PFM3	4	1	.215*	.065	.008	.038	.392

*, The mean difference is significant at the 0.05 level.

1. Mail; 2. SMS; 3. Social media; 4. E-mail; 5. Other.

Post-hoc Table 8.29, illustrate mean differences and the results can be summarised as follows:

- *Student debt implications (SD1)*: A statistically significant perception difference exists between students receiving fees statement by mail and e-mail (mean difference 0.355). The results imply that students receiving a fees statement by mail experience student debt more negatively than those receiving statements by e-mail.
- *Reaction to student debt (SD2)*: Significant differences exist between students receiving fees statements by SMS and by mail (mean difference 0.356). This is an expression that students receiving fees statements by SMS have a higher degree of destructive reactions because of student debt.
- *Implementation of SCM (SCM1)*: Differences exist between students receiving fees statements by mail (mean differences 0.301; 0.277 and 0.343) with students receiving statements by SMS; e-mail and other methods. These results suggest that students receiving fees statements by mail are more negative towards the universities' implementation of SCM (SCM1).
- *Communication of SCM (SCM2)*: Results indicate a mean difference between students receiving fees statements by mail (mean differences 0.394; 0.299 and 0.355) and those receiving fees statements by SMS; e-mail and other methods respectively. These results suggest that students receiving fees statements by mail are have a lower understanding of universities' credit management.
- *Effectiveness of SCM (SCM3)*: Similarly, a mean difference was found between students receiving fees statements by mail (mean differences 0.168 and 0.215) and those receiving fees statements by SMS and e-mail. This results hint that students receiving fees statements by mail experience a lower degree of effectiveness the universities' credit management.
- *PFM attitudes (PFM1)*: Students receiving fees statements by social media (mean differences 0.215 and 0.469) and those receiving fees statements by mail and other methods respectively, signal that students receiving fees statements by social media are less prepared for personal financial management.

- *Planning for PFM (PFM2)*: Significant differences were found (mean differences 0.349; 0.269 and 0.287) between students receiving fees statements by mail and those receiving fees statements by SMS, e-mail and other methods. This is an indication that students receiving fees statements by mail are less concerned with planning for PFM.
- *Control regarding PFM (PFM3)*: Differences were found between students receiving fees statements by mail and e-mail (mean difference 0.215). This is an indication that students receiving fees statements by mail are less in control regarding PFM.

8.3.7.9 Appropriate method of receiving fees statement

Table 8.30A (Appendix 4) illustrates the results of the ANOVA for the appropriate method of receiving the fees statement. Figure 8.10 indicated the ideal method of receiving fees statements. Table 8.30A indicates that there are statistically significant perception differences found between participants from five institutions in implementation of SCM (SCM1); communication of SCM (SCM2); effectiveness of SCM (SCM3); planning for PFM (PFM2) and control regarding PFM (PFM3). Table 8.30 provide the post-hoc analysis for an ideal method of receiving fees statement.

Table 8.30: Post Hoc Tests - Ideal method of receiving fees statement

Dependent Variable	Prefer	Prefer	Mean Difference	Std. Error	Sig.	95% Confidence Interval	
						Lower Bound	Upper Bound
SCM1	1	4	.174*	.064	.032	.010	.337
SCM2	1	4	.280*	.072	.001	.095	.465
	2	4	.246*	.062	.000	.087	.404
SCM3	1	2	.225*	.068	.005	.051	.399
		4	.287*	.064	.000	.122	.453
PFM2	1	2	.214*	.072	.017	.028	.400
		3	.598*	.191	.010	.107	1.089
PFM3	1	2	.200*	.065	.012	.031	.368

*. The mean difference is significant at the 0.05 level.

1. Mail; 2. SMS; 3. Social media; 4. E-mail.

The results of Table 8.30 illustrate that a statistically significant perception difference exists regarding the preference of receiving the fees statement. The results can be summarised as follows:

- *Implementation of SCM (SCM1)*: There are differences between students that prefer receiving statements by mail (mean difference 0.174) and students that prefer receiving statements by e-mail. The results indicate that students preferring receiving fees statements by mail have a more positive acceptance of the universities' implementation of credit management.
- *Communication of SCM (SCM2)*: There are differences between students that prefer receiving statements by mail (mean difference 0.280) and students that prefer receiving statements by e-mail. Similarly, between students that prefer receiving statements by SMS (mean difference 0.246) and students that prefer receiving statements by e-mail. This suggests that students receiving fees statements by mail and SMS have a better understanding of the universities' credit management than those who prefer e-mail.
- *Effectiveness of SCM (SCM3)*: The results indicate significant differences regarding the receiving fees statements by mail (mean differences 0.225 and 0.287) and by SMS and e-mail. The results show that students that prefer to receive fees statements by mail experience a higher degree of universities' credit management effectiveness.
- *Planning for PFM (PFM2)*: Mean differences of 0.214 and 0.598 for students receiving fees statements by mail indicate statistically significant differences among students preferring to receive fees statements by SMS and social media respectively. These results indicate that students receiving fees statements by SMS and social media do less planning for PFM compared to students who are receiving fees statements by mail.
- *Control regarding PFM (PFM3)*: Differences between students preferring to receive fees statements by mail (mean difference 0.200) and those preferring to receive statements by SMS. The results reflect that students receiving fees statements by SMS are less in control regarding PFM compared to those receiving fees statements by mail.

8.3.7.10 Suitable method of fees payment

Table 8.31A (Appendix 4) demonstrate the results of the ANOVA for the ideal method of fees payment. Figure 8.11 indicated the ideal method of fees payment. Table 8.31A indicates that there are statistically significant perception differences found between participants from five institutions in student debt variables, student credit management variables, planning for PFM (PFM2) and control regarding PFM (PFM3). Table 8.31 provide the post-hoc analysis for an ideal method of fees payment.

Table 8.31: Post Hoc Tests - Ideal method of fees payment

Dependent Variable	Settle	Settle	Mean Difference	Std. Error	Sig.	95% Confidence Interval	
						Lower Bound	Upper Bound
SD1	3	1	.374*	.086	.000	.153	.595
		2	.445*	.084	.000	.230	.661
		4	.408*	.090	.000	.177	.639
SD2	1	3	.291*	.082	.002	.081	.502
	2	3	.429*	.080	.000	.224	.635
		4	.315*	.070	.000	.135	.495
SD3	3	1	.376*	.071	.000	.193	.560
		2	.290*	.070	.000	.111	.469
	4	1	.186*	.063	.018	.023	.348
SCM1	1	3	.802*	.071	.000	.619	.985
	2	3	.657*	.069	.000	.478	.836
	4	3	.649*	.075	.000	.458	.841
SCM2	1	3	.731*	.083	.000	.517	.944
	2	3	.598*	.081	.000	.390	.806
	4	3	.569*	.087	.000	.345	.792
SCM3	1	3	.603*	.074	.000	.412	.794
	2	3	.494*	.073	.000	.307	.680
	4	3	.440*	.078	.000	.234	.640
PFM2	1	3	.983*	.075	.000	.790	1.176
	2	3	1.012*	.073	.000	.824	1.201
	4	3	.966*	.079	.000	.764	1.168
PFM3	1	3	.840*	.069	.000	.661	1.018
	2	3	.745*	.068	.000	.570	.919
	4	3	.717*	.073	.000	.530	.904

*. The mean difference is significant at the 0.05 level.

1. Cash; 2. Cheque/Bank card; 3. Easy Pay; 4. EFT.

According to Table 8.31, the post-hoc tests indicate that a statistically significant perception difference exists between students preferring to pay for student accounts. The results can be summarised as follows:

- *Student debt implications (SD1)*: The post-hoc tests indicate that significant perception difference exists between students preferring to pay for student accounts by easy-pay and preferring to pay by cash, cheque/bank card and EFT (mean differences 0.374; 0.429 and 0.315) respectively. These results indicate that students whose ideal method is easy pay have a higher degree of negative experience because of student debt.

- *Reaction to student debt (SD2)*: Mean differences exist between students' preferring payment by cash and cheque (mean differences 0.291 and 0.429) than easy pay and EFT. The easy pay and the EFT groups have a higher degree of destructive reaction because of student debt.
- *Attitudes to student debt (SD3)*: There are varied results regarding attitudes towards student debt (SD3) in relation to the ideal method of student accounts payments. Mean difference 0.376 and 0.290 between student preferring payments by easy pay to those preferring cash and cheque/bank cards. Students prefer EFT payment (mean difference 0.186) above cash payments to stimulate attitudes towards student debt. These results suggest that students preferring easy pay and EFT experience a higher degree of threat because of student debt.
- *Implementation of SCM (SCM1)*: Differences exist between students preferring Easy-pay (mean differences 0.802; 0.657 and 0.649) than paying by cash, cheque/bank card and EFT respectively. These results indicate that easy pay students preferring are more negative towards acceptance of the universities' implementation of credit management.
- *Communication of SCM (SCM2)*: Statistically significant perception difference exist between students preferring easy pay (mean differences 0.731; 0.598 and 0.569) than paying by cash, cheque/bank card and EFT respectively. These results indicate that easy-pay group has a lesser understanding of universities' credit management.
- *Effectiveness of SCM (SCM3)*: Perception difference exist between students preferring Easy-pay (mean differences 0.603; 0.494 and 0.440) than paying by cash, cheque/Bank card and EFT respectively. These results indicate that the group preferring Easy-pay experience a lower degree effectiveness of the universities' credit management.
- *Planning for PFM (PFM2)*: Significant perception differences exist between students preferring Easy-pay (mean differences 0.983; 1.012 and 0.966) than paying by cash, cheque/Bank card and EFT respectively. These results indicate that the group that prefer Easy-pay do less planning with regard to their personal finance.
- *Control regarding PFM (PFM3)*: Statistically significant perception differences exist between students preferring easy pay (mean differences 0.840; 0.745 and 0.717) than paying by cash, cheque/bank card and EFT respectively. These results indicate that easy pay group are less in control of their personal finances.

8.3.7.11 Prevalence of receiving fees statement

Table 8.32A (Appendix 4) provides evidence regarding the results of the ANOVA for the occurrence of receiving the fees statement. Figure 8.32 indicated the frequency of receiving fees statements by the participants. Table 8.32A indicates that there are statistically significant perception differences found between participants from five institutions in student credit management variables, planning for PFM (PFM2) and control regarding PFM (PFM3). Table 8.32 provide the post-hoc analysis for frequency of receiving the fees statement.

Table 8.32: Post Hoc Tests - Prevalence of receiving fees statement

Dependent Variable	Frequency	Frequency	Mean Difference	Std. Error	Sig.	95% Confidence Interval	
						Lower Bound	Upper Bound
SCM1	1	5	.205*	.0694	.037	.007	.403
		6	.269*	.079	.009	.044	.493
	4	6	.242*	.080	.030	.014	.470
SCM2	1	5	.282*	.079	.005	.057	.507
		6	.420*	.089	.000	.164	.675
	3	5	.276*	.083	.012	.039	.513
		6	.414*	.093	.000	.148	.679
SCM3	1	6	.248*	.080	.024	.019	.476
	3	6	.305*	.083	.004	.067	.543
	4	6	.274*	.081	.010	.042	.506
PFM2	1	5	.450*	.074	.000	.239	.660
		6	.360*	.084	.000	.121	.598
	3	5	.492*	.078	.000	.270	.713
		6	.402*	.087	.000	.153	.650
	4	5	.435*	.075	.000	.220	.650
		6	.345*	.085	.001	.103	.587
PFM3	1	5	.265*	.068	.001	.072	.458
		6	.237*	.077	.025	.018	.456
	2	5	.386*	.131	.039	.011	.761
		6	.358*	.136	.091	-.030	.747
	3	5	.299*	.071	.000	.096	.502
		6	.271*	.080	.009	.043	.499

*. The mean difference is significant at the 0.05 level.

1. Monthly; 2. Bi-monthly; 3. Quarterly; 4. Semi-annually; 5. Annually; 6. Never.

A post-hoc test was computed using Tukey HSD to eliminate violations of the assumptions and examine which specific groups differed significantly between the groups. Table 8.32 provides the differences through post-hoc test. The results can be summarised as follows:

- *Implementation of SCM (SCM1)*: The results indicate that a statistically significant perception difference exists between students receiving fees statement monthly (mean differences 0.205 and 0.269) with those receiving fees statements annually and never receiving statements. These results indicate that there is a prevalence of students receiving statements annually or never and this consequently is an impediment on the implementation of SCM. In addition, differences exist between students receiving fees statement semi-annually and those who never receive any statements (mean difference 0.242). This is another hint that there is an occurrence of students not receiving statements and this is a barrier on the implementation of SCM. The students who receive statements annually or never are less positive towards the acceptance of the universities' credit management.
- *Communication of SCM (SCM2)*: There is an apparent statistically significant perception difference between students receiving fees statement monthly (mean differences 0.282 and 0.420) with annually and never respectively. These results denote that there are incidences of students receiving statements annually or never and this consequently impose a weakness on the communication of SCM. In addition, differences exist between students receiving fees statement quarterly (mean differences 0.276 and 0.414) with those who receive fees statements annually and never respectively. These results show that students receiving fees statements annually or never have a lower understanding of the universities' credit management.
- *Effectiveness of SCM (SCM3)*: The effectiveness of SCM is compromised by students who never receive fees statements (mean differences 0.248; 0.305 and 0.274) compared with those that receive fees statements monthly, quarterly and semi-annually respectively. These results signify that students who never receive the fees statements experience a lower degree of effectiveness of universities' credit management.
- *Planning for PFM (PFM2)*: Differences exist between students receiving fees statement monthly (mean differences 0.450 and 0.360) with those receiving fees statements annually and never. Similarly, differences exist between students receiving fees statements quarterly (mean differences 0.492 and 0.402) with those receiving fees statements annually and never respectively. Furthermore, students receiving fees statements semi-annually (mean differences 0.435 and 0.345) with those receiving fees statements annually and never respectively. These results indicate that there is a prevalence of students receiving statements annually or never and this consequently is an inhibition on planning for PFM.

- *Control regarding PFM (PFM3)*: Control regarding PFM (PFM3) is affected by statistically significant perception differences that exist between students receiving fees statement monthly (mean differences 0.265 and 0.237) with those receiving fees statements annually and never respectively. Likewise, significant perception differences exist between students receiving fees statements bi-monthly (mean differences 0.386 and 0.358) with those receiving fees statements annually and never respectively. Still, a significant perception difference exists between students receiving fees statements quarterly (mean differences 0.299 and 0.271) with those receiving fees statements annually and never respectively. These results indicate that there is a prevalence of students receiving statements annually or never and this subsequently is a prevention on control regarding PFM.

8.3.8 Results of the reliability analyses

This section provides the results of reliability analyses. To authenticate the reliability of the questionnaire for the main survey, the Cronbach's alpha coefficient was computed. The Cronbach's alpha value measures the internal consistency of the measurement items that constitute the measurement instrument. Generally, the Cronbach's alpha coefficients were satisfactory, ranging from 0.625 to 0.821 and, therefore, surpassing the minimum cut-off of 0.6 recommended by Zikmund and Babin (2010:248) for exploratory studies. The pilot study accomplished Cronbach alpha coefficients ranging from 0.704 to 0.889, suggesting the realisation of internal consistency of the questionnaire (Hair, Black, Babin, Anderson, Tatham & Black, 2010:641). The item factor loading values ranged from 0.526 to 0.878, which is well above the baseline value of 0.5 (Aldlaigan & Buttle, 2002:369). These results confirmed the ability of the survey instrument to measure all constructs in the study consistently.

8.3.9 Validity analysis

Validity analysis was used to examine the validity of the study, namely content validity, convergent validity, construct validity and discriminant validity.

8.3.9.1 Content validity

Content validity was considered by a literature review in combination with the items on the measuring instrument for this study. This was performed by examining studies that identified factors that are relevant in relation to student debt, student credit management (accounts receivable management) and personal financial management. The factors established in such

studies were incorporated in the measuring instrument. Therefore, the underlying factors were used to measure the content validity.

8.3.9.2 Convergent validity

For the purpose of this study, convergent validity was determined through factor loadings, Cronbach's alpha values, description analysis, correlation analysis, regression analysis and ANOVA. The results showed sufficient evidence of convergence of the study constructs, thus providing evidence of convergence among the constructs. Therefore, the results suggest that all items converged well on the construct they were intended to measure and hence confirmed the presence of convergent validity.

8.3.9.3 Construct validity

Construct validity, which seeks to determine the association between the concepts and what the study aims to achieve. All the factors loadings in Table 8.3, Table 8.4 and Table 8.5 are higher than the threshold of 0.50 and indicate validity for the various construct measures.

8.4 SUMMARY

This chapter has reached the seventh secondary research objective as set in Chapter 1 by analysing students' perceptions on student debt, student credit management policy and personal financial management. This chapter outlined the results of the quantitative data analysis and addressed the specific empirical objectives as set in Chapter 6, Section 6.6.1. The chapter presented the preliminary results from the pilot study, including validity and reliability. The chapter then progressed with the analysis of the main study. First, the demographic information of the participants was examined. The reliability of the main study was explained, subsequently, some details were furnished with regard to the naming of factors, description analysis and correlation analysis, regression analysis and analysis of means (ANOVA and t-test) was performed regarding the nine predetermined factors to establish whether there were any significant relationships that could merit exploration. This chapter outlined the comparison amongst five universities with regard to student debt (SD), student credit management (SCM) and personal financial management (PFM).

Descriptive analysis indicated that on average students are troubled about student debt and are concerned about student debt accumulation. However, they moderately cited that tertiary education should be free for all. The results demonstrate that generally, students are not satisfied

with the implementation of student credit management and they admitted that they are not familiar with the student credit management policy at their respective institutions. Students also revealed that they do not receive fees statements timeously from the universities. Furthermore, participants recognise the significance of personal financial management; however, the drawbacks are inadequate management of personal finances by parents and by themselves.

Negative or weak correlation was found between student debt and student credit management. Similarly, negative or weak correlation was found between student debt and personal financial management. Correlations of student credit management and personal financial management were negative or weak.

The regression analysis revealed that student debt implications and attitudes towards student debt have a negative relationship in overall implementation and effectiveness of student credit management. However, the regression matrix show that student debt have a significant relationship with the communication of student credit management. Results also reveal a relationship between planning and control regarding personal financial management and student credit management. A relationship was also found between attitudes towards student debt and personal financial management attitudes. Still, a relationship exist between student debt and planning for personal financial management. Student debt implications and attitudes towards student debt has a negative relationship with control regarding personal financial management.

The ANOVA analysis indicate statistically significant and practical differences between the universities in terms of student debt, student credit management and personal finances. Furthermore, statistically significant differences were found with regard to the demographic information amongst the students. Chapter 9 will present the conclusion, recommendations and limitations.

CHAPTER 9

CONCLUSION, RECOMMENDATIONS AND LIMITATIONS

9.1 INTRODUCTION

The aim of this chapter is to address the eighth secondary research objective as set in Chapter 1 to conclude by recommending some guidelines for credit policy to manage student debt optimally. This final chapter seeks to present conclusions to each of the aspects that were examined, based on the objectives of the study. Furthermore, it seeks to recommend strategies that may be implemented in order to ensure that the implementation of student credit management is enhanced at South African universities, in line with the findings emanating from the study. The chapter intended to accomplish seven purposes. The first purpose is to provide a review of the study by summarising all the chapters of the thesis. The second purpose is to discuss conclusions based on theoretical objectives. The third purpose is to discuss conclusions based on empirical objectives and how they were achieved. The fourth purpose is to acknowledge the limitations of the study by considering the conditions and weaknesses that were beyond the control of the researcher and encapsulate some suggestions for future research opportunities. The fifth purpose is to indicate overall recommendations towards the policy implementation of student accounts on credit management emanating from the study. The sixth purpose is to mention some theoretical and practical contributions made by the study. Finally, the chapter provides concluding remarks for the study.

9.2 REVIEW OF THE STUDY

The purpose of the study was to examine policy implementation of credit management policy on student accounts at selected South African universities. The study is embedded by the relevant contemporary issues of increasing student debt and decreased funding from government, which directly impact the financial sustainability of South African universities. Furthermore, this was inspired by observation of shifting the blame to the government and universities. In pursuit to achieve the objectives of the study, the thesis was divided into nine distinct chapters each serving a different purpose. A mixed methods research approach was ideal for robustness in achieving the objectives of the study, comprehensively answering the research questions and an in-depth understanding of the phenomenon.

The first chapter introduced the study by discussing the background to the study, the problem statement, the research objectives, the research design as well as ethical considerations. The

second chapter reflected on an extensive review of the literature related to the theoretical framework. The chapter engaged on topical issues related to the landscape of higher education in South Africa. The chapter focused on primary and supplementary theories related to student debt, credit management and personal financial management. The third chapter focused on the literature review of student debt at higher education. This chapter was grounded on institutional theory discussed in Chapter 2. The fourth chapter of the study was dedicated to the analysis of the literature focusing on credit management. This chapter was established in portfolio theory of accounts receivable deliberated in Chapter 2. The chapter also highlighted the credit management policy and the implementation thereof at South African universities. The fifth chapter discussed the literature related to personal financial management. The chapter drew attention to the fact that personal financial management plays a pivotal role in financing higher education. This chapter recognised deprivation theory as reflected in Chapter 2.

In the sixth chapter, the research methodology employed in the study was discussed. Analysis and interpretation of the data emanating from the study followed in the seventh and eighth chapters, which were qualitative data and quantitative data analysis respectively. The ninth chapter concludes the study by discussing the conclusions drawn from the study, suggesting some recommendations and highlighting the limitations of the study as well as the implications for further research.

9.3 CONCLUSIONS BASED ON THE THEORETICAL OBJECTIVES

Based on the literature review, this study provides a review on the theoretical concepts, student debt, student credit management and personal financial management.

9.3.1 Conclusions drawn from the review of the literature on the theoretical concepts

The first theoretical objective was dedicated to discussing the literature focusing on the theoretical framework and this was addressed in Chapter 2 of this thesis. The first secondary research objective of the study was to design a conceptual (theoretical) framework wherein the study can be executed. The study acknowledged the landscape of HEIs in South Africa and the establishment of UoTs, which are the major focus of this study. The study further reflected on the financing of HEIs and the funding towards student fees. Furthermore, Chapter 2 focused on the underlying theories that the study is formulated upon such as the institutional theory, portfolio theory of accounts receivable, and deprivation theory. These theories form a basis to

reflect on the empirical debates and studies aimed at illustrating the challenges of South African universities, particularly towards funding. From the literature, it was evident that because of increasing dependence on tuition fees, South African universities generally have too much money tied up in student accounts receivables ranging to millions of rands. In fact, the study confirmed that because of funding shortfall in higher education, South African universities are forced to rely more on tuition fees for operational requirements, resulting in steep fee increases. The study concluded that student tuition collection (credit management policy) has become a critical resource issue in South African universities.

9.3.2 Conclusions based on the literature review on student debt

The second secondary objective of the study was a review to explore the concept of student debt in the context of higher education in South Africa. Students have to deal with the dual challenge of academic and financial ability. Student debt was discussed from institutional theory point of view, which embrace investigating organisation-environment associations with an emphasis on the social rules, expectations, norms and values as the sources of pressure on organisations. Against this background, Chapter 3 obtained the objective by reviewing literature on student debt at South African universities. The results reveal the missing middle as the most vulnerable, since they have insufficient funding. The results revealed that universities allow students with accumulated debt to register for the subsequent academic year after paying the registration fees and signing the AoDs. This can also be regarded as an inclusive approach to accommodate financially excluded students. From the literature review, it was evident that student debt has a direct impact on the financial sustainability of the universities. On the other hand, the impact of student debt was uncovered, highlighting the negative impact of drop-out, psychological factors, academic performance and access to education. The student politics and the demand for free education in South Africa were also revealed as putting pressure on the implementation of credit management policy.

9.3.3 Conclusions based on the literature review on credit management

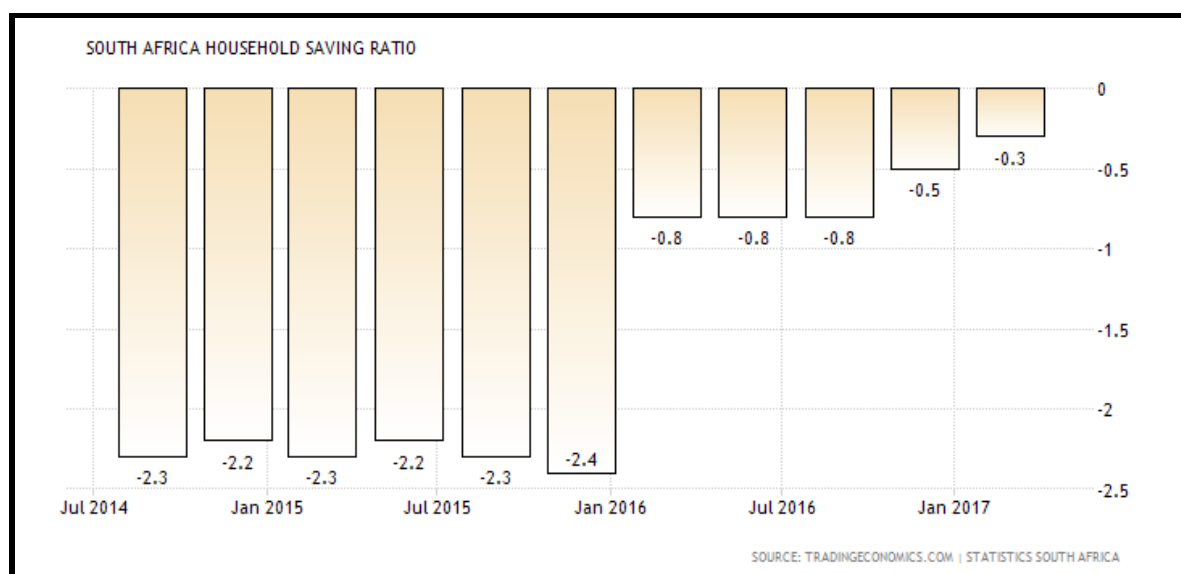
The third secondary objective of the study was to explore the concept of credit management in the context of higher education. Chapter 4 was dedicated to the fundamentals of the literature on credit management reflecting on the South African context. The study conceded that the trade credit offered by universities has particular different characteristics to that offered by the corporate sector. The chapter was grounded by the portfolio theory of accounts receivable and complemented by credit management and working capital management. Furthermore, an analogy

and variances in the implementation of student credit management policies amongst the South African universities was explored. Key findings indicate that there are differences in policy implementation of credit management of student accounts amongst the institutions. Regardless of the variations, the study concludes that there is a need to intensify emphasis on the implementation of credit management policies to enhance the financial stability of South African universities.

9.3.4 Conclusions based on the literature review on personal financial management

The fourth secondary objective of the study was to conduct a literature review to explore the concept of personal financial management in the context of student debt and credit management policy which was achieved through Chapter 5. The aim of including this discussion was to reflect on the personal responsibility for financing education rather than depending on government funding. The primary theory that enriched the study is the deprivation theory, which entails social comparisons between oneself and others. The study was also enhanced by concepts such as financial life cycle, and human capital, which encompasses intergenerational transfer and attachment. Furthermore, this was to prompt pondering and introspection regarding the impact of personal finance on student debt at South African universities. Chapter 5 is devoted to the literature review on personal financial management focusing within the South African context. In this study, it emerged that South Africans are indebted, there is low spending towards education and the savings rate is low. This study documents that although household debt level is high, the borrowing for financing education is relatively low. Figure 9.1 provides an illustration for negative household saving in South Africa.

Figure 9.1: South African household saving ratio



Source: Statistics South Africa (2017)

The study acknowledges the importance of financial literacy to address the problem of personal financial management. If the problem of personal financial management can be fixed, it is anticipated that individuals will manage their money wisely, be able to finance education hence alleviate the high student debt at universities. In this study, it also emerged that there are various inherent divergent theoretical explanations for delinquent personal financial management in South Africa. These include the human capital theory, drawing the rationality notion of parents investing resources in educating children and guaranteeing the intergenerational transfer. An attachment theory, denoting the importance of influence of childhood attachment, was discussed to change the prevailing situation. Many authors acknowledged that financial literacy is attained through intergenerational transfer. The problem of entitlement culture was discussed in order to trigger the self-reliance notion. The study concludes that the problem of student debt, which poses a challenge in implementation of credit management policy at South African institutions, somehow is attributed to poor personal financial management.

9.3.5 Conclusions based on the research methodology and design

The fifth secondary objective of the study was to present an appropriate research methodology and design to answer the set research questions and this objective was accomplished through Chapter 6. The chapter illustrated the research philosophy used in the study and justified the selection of the chosen approach. Based on research questions and practical implications, it was appropriate for this study to use concurrent mixed methods in which qualitative and quantitative

data are collected and analysed appropriately at the same time. Guided by a research onion (refer Figure 6.1) a mixed methods approach afforded comprehensive results than either approach alone.

9.4 CONCLUSIONS BASED ON EMPIRICAL OBJECTIVES

Creswell et al. (2003:173) defined integration as the combination of quantitative and qualitative research within a given stage of inquiry. The integration in this discussion will take the form of triangulation of data to fully answer any questions and develop a more robust and meaningful picture of the research problem. The rationale of triangulation is to increase the validity of constructs and inquiry results by counteracting or maximising the heterogeneity of irrelevant sources of variance attributable to inherent method bias but also to inquirer bias, bias of substantive theory or biases of inquiry context (Greene, Caracelli & Graham, 1989:259). Various researchers recommend the use of both data as complimentary rather than as rival opponents. Hence, the study became more meaningful for quantitative analysis when interpreted in light of critical qualitative information.

The secondary research objectives was set in chapter 1 (refer page 9), supported by the specific empirical objectives set in chapter 6 (refer Section 6.6.1, page 118). The results based on these objectives are discussed below.

9.4.1 To identify the key variables that comprise student debt, credit management and personal financial management

Factor extraction procedure performed provided nine factors, which achieved the objective in Chapter 8, Section 8.3.2.1. The detailed naming and interpretations of extracted factors was also in Section 8.3.2.1. Table 8.3 justified the factors for student debt and provided the reliability of the factors. Table 8.4 warranted the factors for student credit management and reliability of the factors while Table 8.5 reported the factors for personal financial management together with applicable factor reliability. Furthermore, the KMO and BTS test results reported in Table 8.2 justified the performance of the factor extraction procedure.

9.4.2 To assess the attitudes and perceptions of students regarding student debt

This objective was asserted in Chapter 8, Section 8.3.3. Table 8.6 provides the evident statistical indicators of the means, standard deviation and variance. From an empirical study conducted, it

is noticeable that the participants (based on a 5-point Likert scale) are distressed by student debt. When analysing the five-point Likert scale, responses showed mean response values between three (moderately agree) and four (agree). Responses pertaining to attitudes towards student debt were marginally higher than student debt implications and reaction to student debt. Participants generally are concerned with the accumulation of student debt and as a result, they believe that the SRC should negotiate for financial exclusion. They generally believe that they should enrol without paying the registration fees and must protest against financial exclusion. The qualitative data discussed in Chapter 7 (Section 7.2.2) revealed that universities could encourage prompt payment by timely sending of statements of student accounts and granting discounts on early settlements. This could improve the attitudes and perceptions of students regarding student debt.

9.4.3 To assess the attitudes and perceptions of students regarding credit management at universities

The attitudes and perceptions of students regarding the implementation of student credit management policy was achieved in Section 8.3.3 and Table 8.7 shows the statistical indicators for the means, standard deviation and variance of data set. The five-point Likert responses from participants showed mean responses values between two (disagree) and three (moderately agree). This implies that students are not content with the implementation of student credit management policy. This may be attributable to the fact that universities are not disseminating information on student credit management; hence, they are not familiar with the credit and payment terms. Furthermore, fees statements are not sent timely, consequently affecting the effectiveness of student credit management policy. In Chapter 7 (Section 7.2.3), the qualitative results revealed that there is no uniformity amongst the universities regarding the credit payment period, interest rate charges, method(s) of payment, credit loss policy and registration fees payments. In addition, some universities deferred student accounts to collection agencies, while others do not. From both qualitative and quantitative results, it can be concluded that regulatory frameworks regarding student credit management are not comprehensive. Therefore, there is a need for a coherent policy process.

9.4.4 To assess the attitudes and perceptions of students regarding the personal financial management

The students' attitudes and perception regarding the personal financial management are demonstrated through the descriptive analysis undertaken in Chapter 8, Section 8.3.3 and the means, standard deviations and variances are shown in Table 8.8. The results of the analysis

demonstrate empirically that while participants acknowledged the importance of personal financial management, they are unprepared, not confident and lack control regarding personal financial management.

9.4.5 To examine the relationship between student debt and student credit management

This objective was achieved in Section 8.3.4 (correlation analysis). In Section 8.3.4.1, negative correlations were found between student debt constructs and implementation of student credit management. This indicates that participants do not have positive perceptions about the implementation of credit management policy. Weak or negative correlations also were found between student debt factors and the communication of student credit management policy indicating that participants do not have a positive perception about the dissemination of information regarding the credit management policy. The correlation between student debt factors and the effectiveness of student credit management showed weak or negative correlations indicating that the participants have undesirable credit management policies. In Chapter 7, Section 7.2.1, the qualitative data revealed that the student credit management information communicated to students at some universities is not adequate. This study concludes from both the quantitative and qualitative data findings that there is deficiency in sharing student credit management information.

9.4.6 To examine the relationship between student debt and personal financial management

This objective was aimed at establishing whether personal financial management influences student debt at selected South African universities. The correlations in Section 8.3.4.2 assisted in achieving this objective. Attitudes towards student debt showed a weak correlation with personal financial management attitudes. Again, student debt implications and attitudes towards student debt showed negative or weak correlations with planning for personal financial management. This indicates that participants perceive that personal financial management attitudes negatively affect student debt. Planning and control regarding personal financial management also indicated weak or negative correlations with student debt implications and attitudes towards student debt indicating that inadequate personal financial management negatively affects student debt. Reaction to student debt showed a positive correlation with planning for personal financial management.

9.4.7 To examine the relationship between credit management and personal financial management

This empirical objective focused on establishing whether personal financial management influences student credit management. Section 8.3.4.3 achieved the objective by demonstrating a weak correlation between personal financial management attitudes and the implementation and communication of student credit management. This is an indication that participants perceive the implementation and communication of student credit management negatively influences personal financial management attitudes. Similarly, planning for personal financial management showed weak correlation with student credit management. This emphasises the fact that negligent personal financial management has a negative influence on student credit management.

9.4.8 To examine the impact (predictive relationship) between student debt and student credit management

The analysis of participants' responses regarding the influence of student debt on student credit management was achieved through regression analysis in Section 8.3.5 through Section 8.3.5.1. The regression analysis revealed that student debt has a significant negative relationship in the implementation of student credit management. Furthermore, the regression analysis confirmed that communication of student credit management policy impacts negatively on student debt. In Chapter 7 (Section 7.2.4), the qualitative results revealed that all universities require students with outstanding fees to sign the AoD before they can register and view their results. Moreover, some universities permit students to graduate if they have outstanding fees. This leads to the conclusion that student debt attitudes, implications and reactions negatively affect the implementation and effectiveness of student credit management policy at selected South African universities.

9.4.9 To examine the impact (predictive relationship) between personal financial management and student credit management

The regression analysis in Section 8.3.5.2 assisted in achieving this objective. The results ascertained that personal financial management has a significant relationship with the implementation and effectiveness of student credit management. This gives rise to the conclusion that in South African universities communication of student credit management policies can enhance personal financial management thereby assisting individuals to plan to settle their debts. Chapter 7 (Section 7.2.5) qualitative results revealed that universities do not have effective credit

management policies. It can be concluded that improved personal financial management can improve student credit management because individuals will plan and be able to pay student accounts promptly.

9.4.10 To examine the impact (predictive relationship) between student debt and personal financial management

The regression analysis in Section 8.3.5.3 assisted in achieving this objective. The results reflected that attitudes towards student debt have significant positive relationship with personal financial management attitudes. Reaction to student debt also has a positive relationship with the planning for personal financial management. Contrary, student debt implications and attitudes towards student debt signalled negative relationship with planning for personal financial management. Similarly, student debt implications and attitudes towards student debt negatively affects the control regarding personal financial management.

9.4.11 To examine whether there are any significant differences between universities with regard to student debt, student credit management and students' personal financial management

Student debt (SD): The one-way ANOVA, which was analysed and discussed in Section 8.3.6 and illustrated in Table 8.19, supported the achievement of this objective. Statistically significant different perceptions were identified when five universities were compared with regard to student debt implications in Section 8.3.6.1. The post-hoc test illustrated in Table 8.20 further identified specific universities that differ substantially in terms of perception differences regarding the student debt implications. This attracts the conclusion that there are different perceptions towards the implications of student debt; however, there are no major differences in terms of reaction and attitudes towards student debt.

Student credit management (SCM): One-way ANOVA analysis of student credit management in Section 8.3.6.2, Table 8.21 revealed that statistically significant differences exist between the five institutions' student credit management policy. The post-hoc results in Table 8.22 revealed that there are also similarities amongst different universities in terms of credit management implementation, communication and effectiveness. This triggers the conclusion that, because of institutional autonomy, universities differ in the implementation of credit management policy of student accounts. The qualitative results confirm the findings in Chapter 7 that there are fundamental variations of SCM amongst South African universities.

Personal financial management (PFM): Differences were found when the responses for personal financial management were compared amongst the universities. One-way ANOVA in Section 8.3.6.3 analysed differences of personal financial management amongst five universities. Table 8.23 indicates that there are statistically significant differences between the five universities. The post-hoc results in Table 8.24 reveal that there are no major differences in terms of perceptions on attitudes, towards personal financial management, amongst the five universities and no statistically significant perception differences in three universities in terms of the encounters and accountability regarding personal financial management. This generates the conclusion that somehow students have similar perceptions about personal financial management.

The aforementioned differences in SCM amongst the universities were complemented by the findings of qualitative study in Chapter 7, which also revealed that differences exist amongst the universities in terms of conveying information regarding SCM, charging the interest on overdue student accounts, granting discounts for early settlement, credit payment period, methods of payment, credit loss or bad debt policy and recovery of deferred debt. These findings confirmed the inherent differences that exist amongst the universities.

9.4.12 To examine whether there are any significant differences between the demographic information of students with regard to student debt, student credit management and students' personal financial management

- *Current level of education*: Results in Section 8.3.7.1 indicates that undergraduate students experience negative student debt implications and impose a higher degree of threat because of student debt. Postgraduate students have more understanding of credit management and are positive towards the implementation. Furthermore, postgraduate students have a likelihood of superior planning and control of personal finances.
- *Duration at the same university*: The results on Section 8.3.7.2 illustrate that a statistically significant perception difference exists between students according to their duration at the university. The longer the students stay at the same university, the more they are concerned with the negative implications of student debt (SD1). As the years of staying at the university progress, the more matured the students become, the more negative and less satisfied they are with the implementation of student credit management (SCM1). Consequently, they experience their universities' credit management less effective (SCM3). Relatively, new

students at the university (1-2 years) are much more concerned with planning for PFM (PFM2) than the group which is between (3-4 years) at the same university.

- *Faculty of study:* The results on Section 8.3.7.3 indicates statistically significant perception differences were found between participants from five institutions. The students from the Education and IT & Science faculties are more concerned with student debt implications (SD1) than students from Management Sciences. Students from the Engineering and Human Sciences faculties have a higher degree of reaction to student debt (SD2) than students from Management Sciences. Notably, students from the IT & Science Faculty experience higher degree of attitudes to student debt (SD3) than students from the Management Sciences. Furthermore, students from the IT & Science encounter more positive acceptance of their universities' implemented credit management (SCM1) than those from Management Sciences. Results also indicate that the IT & Science students are less alarmed with planning for personal financial management (PFM2). This is also an indication that the IT & Science and Human Science are less anxious with control concerning personal financial management (PFM3) than Engineering and Management Sciences.
- *Home province:* In Section 8.3.7.4 the findings reveal that students that are attending the university away from their home province experience negative student debt implications and impose higher degree of threat because of student debt. However, they have a better understanding of credit management and are more positive with the implementation.
- *Family income:* The results in Section 8.3.7.5 indicate that there are statistically significant perception differences found between participants from five institutions. The students from financially disadvantages families have relatively higher degree of destructive reactions as a result of student debt (SD2). On the other hand, students from affluent families have a higher degree of threat as a result of student debt (SD3). Relatively, students from extreme incomes are more positive towards the implementation of credit management (SCM1) than the middle class (missing middle). This might be an indication that poor students qualify for NSFAS and affluent students can afford the fees. Remarkably, students from low monthly family income have a better understanding of universities' credit management (SCM2). It can be concluded that they are less anxious about the credit management because fees are covered by NSFAS. Still, students from extreme monthly family income experience a higher degree of effectiveness by their universities' regarding credit management (SCM3). Results also show that middle group (missing middle) do less planning for personal financial management (PFM2). Consequently, middle-income (missing middle) group are less in control of personal finances (PFM3).

- *Acknowledgement of debt (AoD)*: In Section 8.3.7.6, the results testify that students without AoD understand the credit management and are positive with the implementation. The findings also indicate that they experience a higher degree of effectiveness by the university regarding credit management. Furthermore, the students without AoD are more prepared to manage personal finances as they indicate better planning and control towards personal finances.
- *Debt level*: In Section 8.3.7.7 statistically significant perception differences were found between participants from five institutions in student debt implications (SD1). It can be concluded that students with low debt levels are relatively less concerned with the student debt implications (SD1) than students with higher student debt levels.
- *Method(s) of receiving fees statement*: The results in Section 8.3.7.8 indicate differences found between participants from five institutions. The students receiving fees statement by mail experience student debt implications (SD1) more negatively than those receiving statements by e-mail. Remarkably, students receiving fees statements by SMS have a higher degree of reactions to student debt (SD2). Students receiving fees statements by mail are more negative towards the universities' implementation of SCM (SCM1). Consequently, students receiving fees statements by mail have a lower understanding of universities' credit management (SCM2). Still, students receiving fee statements by mail experience a lower degree of effectiveness of the universities' credit management (SCM3). The results also indicate that students receiving fees statements by social media are less prepared for personal financial management (PFM1) and are less concerned with planning for PFM (PFM2). As a result students receiving fees statements by mail are less in control regarding PFM (PFM3).
- *Appropriate method of receiving fees statement*: The results in Section 8.3.7.9 indicate that there are statistically significant perception differences found between participants from five institutions. The students preferring to receive fees statements by mail are more positive with implementation of student credit management (SCM1). Results also show that students desiring to receive fees statements by mail and SMS have a better understanding of student credit management (SCM2) than those who prefer e-mail. Hence, they experience a higher degree of universities' credit management effectiveness (SCM3). Moreover, students favouring receiving fees statements by SMS and social media do less planning for PFM (PFM2) than students who are favouring receiving fees statements by mail. Consequently, students aspiring receiving fees statements by SMS are less in control regarding PFM (PFM3) than those preferring to receive fees statements by mail.

- *Suitable method of fees payment:* In Section 8.3.7.10 statistically significant perception differences were found between participants from five institutions. The students whose ideal payment method is easy pay have a higher degree of negative experience because of student debt (SD1). Students opting for easy pay and the EFT have a higher degree of destructive reaction to student debt (SD2). The results hint that students preferring easy pay and EFT experience a higher degree attitudes to student debt (SD3) hence they are more negative towards acceptance of the universities' implementation of credit management (SCM1). Similarly, those preferring easy pay have a lesser understanding of universities' credit management (SCM2) and experience lower degree of effectiveness for the universities' credit management. Furthermore, the group that prefer easy pay do less planning with regard to their personal finance (PFM2) and are less in control of their personal finances (PFM3).
- *Prevalence of receiving fees statement:* The results in Section 8.3.7.11 indicate that there are statistically significant perception differences found between participants from five institutions. There is a prevalence of students receiving statements annually or never receiving the fees statements. This consequently is an impediment on the implementation of SCM (SCM1). The students who receive statements annually or never are less positive towards the acceptance of the universities' credit management. Thus, they have a lower understanding of the universities' credit management (SCM2) and experience a lower degree of effectiveness of universities' credit management (SCM3). Accordingly, prevalence of inadequate receiving of fees statements is an inhibition on planning for PFM (PFM3) and prevent control regarding PFM (PFM3).

9.4.13 To determine the effectiveness of SCM at South African universities

The purpose of this objective was to examine the SCM of the selected South African universities to determine its comparative effectiveness. In Chapter 7, Section 7.2.5, this objective was accomplished through rigorous document analysis. To assess the effectiveness, various ratios were performed, encompassing: Effectiveness based on accounts receivable collection (ARC) period discussed in Section 7.2.5.1; effectiveness based on accounts receivable turnover (ART) ratio conferred in Section 7.2.5.2; effectiveness based on bad debt to revenue from tuition fees outlined in Section 7.2.5.3; effectiveness based on allowance for credit loss to accounts receivable conversed in Section 7.2.5.4 and effectiveness based on receivable to current assets ratio deliberated in Section 7.2.5.5. According to Section 7.2.1, key findings indicate that on paper, Universities A and D relatively have a superior policy; however, in terms of policy implementation and effectiveness, University C has a superior credit management policy on

student accounts. The results, as illustrated in Table 7.7, revealed that University C has an acceptable effectiveness of SCM followed by University D. University B has a moderate effectiveness while Universities A and E have inferior credit management of student accounts.

9.5 LIMITATIONS OF THE STUDY AND FUTURE RESEARCH OPPORTUNITIES

Although this study has provided relevant and profound insights into understanding the policy implementation of student accounts on credit management at selected South African universities, it was not without its limitations. Despite the benefits that mixed methods researchers can take, this methodology is challenging in that it entails more work and financial resources and takes more time than singular methods (Molina-Azorín, 2011:1). First, the results may not be generalised to the broader South African HEIs academic population. Superior accuracy could have been realised if the questionnaire had been completed in the presence of the researcher. Furthermore, the study was conducted in a specific category of South African universities, namely the UoTs. Consequently, caution should be exercised when generalising the findings beyond other forms of HEIs in the country. Future studies could include a comparison between different HEIs and enlarged sample sizes. Because the research topic involves sensitive information, researchers should take precautions regarding obtaining ethical clearance to conduct research.

A longitudinal study is strongly recommended, as it would provide valuable information concerning any underlying changes in the factors that determine the perceptions towards student debt, student credit management and personal financial management. Structural equation model (SEM) for modelling of these relationships could be used to shed light on our understanding of concepts like student debt within the context of HEIs. Furthermore, the study could be refined by drawing comparisons between different categories of South African institutions to determine whether there are any significant variations in terms of policy implementation of SCM.

Another limitation concerns the use of a single method of qualitative data collection. Document analysis was used to collect the qualitative data; future researchers are encouraged to consider purposeful interviews with student accounts (SCM) manager(s). This necessitates a need for further research in order to explore the views of the student accounts (SCM) manager(s), as they are key informants to provide relevant information. Such information could potentially provide valuable insights to policy makers. Furthermore, a study could be expanded to examine the students and/or parents prior to entering HEIs to investigate the financial preparedness to finance

tertiary education. This study will stimulate planning and create awareness towards taking the responsibility towards the reality of financing education. In addition, it would be interesting if future research can extend the present quantitative study by using matrix to examine percentage income that should be allocated to finance education. Finally, given the benefits of mixed methods research, more research that integrates quantitative and qualitative methods should be undertaken in the fields of accounting and management accounting research.

No benchmark exists for this type of study in the country; therefore, comparing the findings to previous studies in this regard is not possible. This study was conducted during a period when institutions were faced with major challenges in higher education due to #FeesMustFall. Respondents may have been extra prudent in responding to some categories of the questionnaire. It is essential to note that the aforementioned limitations do not necessarily contravene the contributions yielded in this study but open up further opportunities for future research. Hence, the following section will discourse the recommendations arising from the study.

9.6 RECOMMENDATIONS

Undoubtedly, South African universities are facing a challenge of financial sustainability because of the student debt phenomenon. Because universities have dissimilar implementation of credit management policy, interventions should be tailored to address the diverse student credit management policies at South African universities. The credit management policies may not be identical as each institution is unique and has its own strategy and identity. However, the basic procedures must incorporate the succeeding recommendations to remedy the escalating student debt.

Following from the results of the study, it is recommended that upon application, students must provide the details of the fee-paying person (parents or legal guardian) and the proof of family income. It is recommended that this process be linked to the NFSAS system so that details of parents can be accessed through South African Revenue Services (SARS) and Department of Home Affairs. This will make the universities plan better and they can make reliable credit risk estimates based on authentic information. Credit risk can be categorised according to the family income ability to pay (low risk, moderate risk and high risk). It is recommended that the government should provide grants based on the ability of students to pay based on family income. Yet, the compliance to credit policy is not based on income solely, but on how the income is managed. The university that has the highest missing middle student category will encounter more credit management delinquency as this category of students do not receive

government funding. Johnson and Hlatshwayo (2015) suggest that the government should support students with the greatest need rather than universities with the best results. These researchers believe that if state funding can be based on the ability of students to pay, this will alleviate resource deficiencies.

The results further revealed that there is lack of compliance and negative perceptions towards the implementation of credit management policies. Figure 8.6 illustrates that 57.4 percent of the participants signed the AoD with the university. It is suggested that universities should not compromise the AoDs that have been signed, as this is a sign of negligence regarding compliance. This may assist to manage the risk proactively and encourage commitment of accounts receivables to honour their obligations. In addition, universities should consider creating monthly accounts receivable ageing reports to monitor the payment status of overdue student accounts. In order to address the negative perceptions of SCM, it is of paramount importance for the universities to send fees statements punctually. Figure 8.12 indicates that 24.4 percent of the participants receive statements annually, 20.7 percent monthly, 19.3 percent semi-annually, 17.2 percent quarterly and 3.4 percent on bi-monthly basis. About 15.1 percent never receive fees statements from the university. Universities should also ensure that statements contain accurate and complete information of student accounts.

It is recommended that universities should consider offering payment discounts as an incentive for early payments. In addition, it is essential for universities to intensify the collection policy by decreasing the settlement period equally consider granting discounts over a series of payment. For instance, 10/30 net 180, meaning that a 10 percent discount is allowed if the account is settled within 30 days of statement while the full statement amount must be paid within 180 days (6 months). The options may be provided over different time intervals such as 7/60 net 180, 5/90 net 180, 2/120 net 180 based on policy proclamation.

With regard to the dissemination of student credit management information, it is suggested that the policy should be made available with the proof of registration. Once the student has registered, the information should be communicated personally via e-mail and on social media(s). The credit management procedures must be sent along with the statements. The credit management information should also be made available and easily accessible on the website and fees book. The SCM department should have campaigns to remind the students about the outstanding fees and communicate the information regarding discount offers.

On the application form, applicants must choose the method of receiving the statements. Figure 8.6 illustrated that the majority of the participants receive statements by mail, while Figure 8.7 indicated that participants prefer to receive statements in other forms such as emails (44.6 percent), 33.1 percent by SMS, 20.3 percent by mail and 2 percent by social media. It is recommended that universities offer different payment methods. Figure 8.11 provided the evidence that participants prefer different methods of payments. The majority of the participants (33.6 percent) prefer to pay by bankcard, while 28.8 percent prefer to pay cash. Other participants (22.6 and 14.6%) prefer payment through electronic transfer and Easy Pay respectively. Monthly reminders of outstanding accounts should also be sent to students and parents by SMS.

In view of this, it is crucial for universities to understand why students are not paying fees and for students to understand why they must pay fees. If universities know the reason why students are not paying fees, then universities can devise better understanding on how to manage the student accounts. Similarly, if students understand the importance of paying fees, they will be committed and their attitude towards student debt and SCM will improve. This will create a cognitive understanding between students and the management and an atmosphere conducive to communication between them. It is assumed that the relational expertise and relational agency will improve. Once common understanding is created between students and the management this will lead to a collaborative relationship rather than revolution; thereby, creating a coherent policy for SCM. Edwards (2011:34) advises that relational agency in inter-professional activities is seen to be reconciled by common knowledge, which is built on interactions at the points where the boundaries of practice intersect.

South Africans have to be conscious and recognise the intrinsic value of education by establishing genuine, radical personal financial management. Financial rehabilitation to create awareness of the importance of personal financial management will go a long way to solve the problem of student debt in South African universities. Credit management is a critical risk management activity, which aims at controlling credit policies and minimising the risk. There is a need for student credit management policy reforms to enhance the effectiveness of collectability of student accounts receivable. It is important that the problem of escalating student debt is addressed and diagnosed accurately. Figure 8.13 indicated that the majority of participants (60.2%) believe that poverty is the main source of non-payment of fees, while 20.7 percent believe that credit management policies are the main source of non-payment. Participants cited political influence, student attitude towards debt and other reasons as contributors of non-

payment of fees such as corruption and entitlement for free education. It is recommended that the findings from this study should be shared with student accounts policy makers at various universities.

The UoTs are encouraged to use benchmarks with other categories of universities in South Africa to compare the best practice and methods and adopting methods that institutions can use to make improvements in the credit management policy. It is appropriate to recommend that universities should have credit management performance reporting annually in order to be kept abreast and evaluate the effectiveness. Finally, it is appropriate to recommend that there is a compelling need for institutions to be responsive to escalating student debt through effective policy implementation of credit management on student accounts.

9.7 CONTRIBUTIONS OF THE STUDY

The effort dedicated on this research project was meaningful and it culminated in the discovery of essential information, as per the objectives of the study. The study covered the cutting-edge debates within the South African higher education context. Managing and implementing credit management of student accounts is not an easy task particularly with the recent protests against fee increases at South African universities. Theoretically, the study derived from institutional theory contributes to the literature of student credit management within the South African context. Practically, the findings of this study may assist the policy makers in understanding the factors that contribute to student debt. The results of this study may also inform policy makers regarding the management of student accounts. It also provides an indicator for the government to understand the importance of educating the society regarding financial literacy, particularly investing towards education.

Deprivation theory provided a basis for the study to reaffirm the importance of personal financial management to alleviate the student debt at South African universities. The study will be beneficial to South African society to realise how individually they can plan finances to be able to finance university education. Practically, the study reaffirms the importance of personal financial management. Moreover, the study demonstrates that personal financial management affects the student debt at South African universities. Finally, the study confirmed that financial education can alleviate indebtedness and individuals will be more responsible towards financing university education.

The findings of this study will benefit South African universities in terms of implementing credit management policies of student accounts by identifying the optimum credit management

strategy. Portfolio theory of accounts receivable provided an underlying basis for South African universities to effectively manage the student accounts. Consequently, effective credit management policy will improve the liquidity and financial sustainability of South African universities. The DHET policy makers, on funding and grants to support the academic programs, will be able to understand the challenge that South African universities are facing regarding the defaults on tuition fees. Finally, from a management point of view, the results of this study may enable policy makers to understand and make policy reforms that will enhance the effectiveness of SCM. The study may provide hints that may enable them to improve credit management policy.

9.8 CONCLUSION

The primary research question addressed in this study was what is the relationship between policy implementation of student accounts and credit management at selected South African universities? This chapter has reached the eighth and final secondary research objective by recommending some guidelines for the credit management of student accounts optimally. Credit management policy can be implemented to the higher education sector, but not in the same way as in profit-making organisations. This study is arguably amongst the first to examine such scope, magnitude and dimensions within South African universities. The study will be beneficial to policy makers and the implementation of a well-established credit management system, which will improve cash flow and working capital needs of the institutions and preserve the future of the institution while nurturing its development. A mixed methods research approach was compatible to achieve the fundamental objectives of this thesis. Implementation of student credit management policy at South African universities faces many challenges. The value of this study identifies that the university might have prominent credit management policies on paper but it is a challenge to translate them into reality. There often is distortion and the decisions of practices often are guided by pragmatism from political influence, which compromises the implementation. Both the qualitative and quantitative results of this study revealed that significant differences exist between universities in terms of the policy implementation of student accounts on credit management.

The findings of the study also confirmed the prevalence of differences amongst universities concerning policy implementation of student accounts on credit management. These differences were attested to by ANOVA and post-hoc analysis. In particular, the study indicated that statistically significant perception differences exist amongst the students from various universities, attributable to the factors extracted from this study.

The findings of this study prove that personal financial management is attributable to student debt at South African universities. Moreover, it explains that household indebtedness and low savings rate cause a low investment in education, particularly tertiary education, by individuals. The study illustrated that transformation through financial literacy is essential to alleviate the problem.

Institutional forces shape individual interest and desires, framing the possibilities for action and influencing whether behaviour changes the narrative of South African universities. Credit management is a dynamic financial management technique and its effectiveness is associated with an organisation's aptitude to achieve its mission, goals, objectives and sustainability (Namusonge & Sakwa, 2016).

Based on the literature reviewed, this study pointed out increasing dependence on tuition fees by South African universities. As a result, to remain financially sustainable, SCM has become a critical resource issue in South African universities. Therefore, the study concludes that lack of financial knowledge leads to uninformed decisions, which lead to poor personal financial management. If individuals change their financial behaviour, their financial future expectations would allow them to make the correct decisions about investing in education and this can mitigate student debt at South African universities.

This is testimony that South Africans do not contemplate the intrinsic value of education. It also raises a fundamental concern that the current high student debt at South African universities can also emanate from spending habits rather than being embedded in poverty, unemployment and inequality. Profound findings on personal financial management must inspire South Africans to be introspective regarding the underlying factors that contribute to student debt at universities and take responsibility rather than shifting the blame on universities and the government. The conclusive findings arising out of this study confirm that it is evident that debt is a major impediment to South African households when it comes to investing in higher education. The compelling narrative on financial prudence is important in attaining the intrinsic value of education. Obi (2014:20) emphasised that making adequate financial provisions for university education is as important as making a decision to undertake it. There has to be a paradigm shift towards investing more in higher education by government, private sector and individuals. Given these findings, it seems reasonable to conclude that policy implementation of student accounts on credit management at selected South African universities is associated with the prevalence of the extracted factors. This study is meaningful to policy makers and individuals, as they will

undoubtedly benefit from the guidance offered in this study to better prepare for the financing of university education.

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APPENDIX 1

QUESTIONNAIRE

SECTION A: Attitude and perception towards student debt

Section A: Student perceptions and attitude towards payment of tuition fees.

		Strongly disagree	Disagree	Moderately agree	Agree	Strongly agree
A1	I am troubled about my outstanding student fees	1	2	3	4	5
A2	I am worried about the tuition fee debt I could build-up while in tertiary education	1	2	3	4	5
A3	Student debt put people off tertiary education	1	2	3	4	5
A4	My outstanding student debt affects my academic performance	1	2	3	4	5
A5	I am concerned about being excluded from university because of my student debt	1	2	3	4	5
A6	Once you have accumulated tuition fee debt it is difficult to get out of it	1	2	3	4	5
A7	Owing tuition fee to the university is not satisfactory	1	2	3	4	5
A8	Borrowing money for a tertiary education is a good investment	1	2	3	4	5
A9	I am willing to find part-time work to finance my student debt	1	2	3	4	5
A10	I believe that there is high non-payment of tuition fees at my university	1	2	3	4	5
A11	I have to pay for my student account in honour of the service that the university is providing	1	2	3	4	5
A12	I am concerned about the financial stability of my university	1	2	3	4	5
A13	My student account has an impact on the financial sustainability of the university	1	2	3	4	5
A14	I believe I can improve the financial stability of my university by paying my student account on time	1	2	3	4	5
A15	The university should increase fees annually to be financially sustainable and to curb inflation	1	2	3	4	5
A16	Tertiary education should be free for all	1	2	3	4	5
A17	I believe all tertiary education should be free only for the financially needy students	1	2	3	4	5
A18	I believe all tertiary education should be free only for academically deserving students	1	2	3	4	5

		Strongly disagree	Disagree	Moderately agree	Agree	Strongly agree
A19	I am committed to settle my student fees account promptly	1	2	3	4	5
A20	I have defaulted on payment of my student account	1	2	3	4	5
A21	I have enough money to finance my student debt	1	2	3	4	5
A22	Students should be allowed to enrol for studies without paying for registration fees	1	2	3	4	5
A23	SRC should negotiate with the university management to do away with financial exclusion	1	2	3	4	5
A24	Students must protest against financial exclusion	1	2	3	4	5
A25	I have a detailed plan on how I am going to settle my student debt	1	2	3	4	5
A26	I rather spend money enjoying my life-style than paying for my student fees	1	2	3	4	5
A27	I prefer to receive free education in return pay higher tax to finance education when I start working	1	2	3	4	5
A28	I would prefer to pay my student account after I start working (graduate tax)	1	2	3	4	5
A29	Discounts for prompt payment will encourage payment of student accounts.	1	2	3	4	5
A30	Individual university should have the right to set their own tuition fees	1	2	3	4	5

SECTION B: Credit management policy

Section B: The credit management policy and the awareness of the policy applied by the university on outstanding student fees

		Strongly disagree	Disagree	Moderately agree	Agree	Strongly agree
B1	I know student fees payment (credit management) policy at my university	1	2	3	4	5
B2	I have read the fees payment policy towards student accounts at my university	1	2	3	4	5
B3	The fees payment policy at my university is easily understandable	1	2	3	4	5

		Strongly disagree	Disagree	Moderately agree	Agree	Strongly agree
B4	I am satisfied with current credit management policy on student accounts at my university	1	2	3	4	5
B5	The credit management policy at my university is very stringent (strict)	1	2	3	4	5
B6	The fees payment policy accommodates students from disadvantaged background	1	2	3	4	5
B7	I comply with the stipulated university credit management policy	1	2	3	4	5
B8	I believe it is important for the university to have credit management policy	1	2	3	4	5
B9	I should settle my student fees whenever I have money	1	2	3	4	5
B10	I should settle my student fees according to the university's fees payment policy	1	2	3	4	5
B11	The credit management policy allows for discount on early settlement of student fees	1	2	3	4	5
B12	The credit management policy at my university encourages students to settle students debts promptly	1	2	3	4	5
B13	I receive my student fees statement timely from the university	1	2	3	4	5
B14	The student fees statement I receive from the university reflects the correct amounts and balance	1	2	3	4	5
B15	The student fees statement indicates the date(s) when fees should be paid	1	2	3	4	5
B16	It is the policy that my university grants merit bursaries on academic achievements	1	2	3	4	5
B17	At my university student accounts are handed to debt collectors after exceeding stipulated period of payment	1	2	3	4	5
B18	The fees management policy allows me to receive my academic results even if I have outstanding tuition fee	1	2	3	4	5
B19	The fees management policy allows me to register even if I have an outstanding balance from the previous year.	1	2	3	4	5
B20	Discount towards early settlement of outstanding fees will encourage me to settle my student account timely	1	2	3	4	5
B21	The university charges interest for outstanding student accounts	1	2	3	4	5
B22	Upfront payment (registration fee) is required before registration	1	2	3	4	5
B23	Upfront payment that is charged by the University is affordable	1	2	3	4	5

SECTION C: Personal financial management

Section C: Personal financial management of students and attitude towards student debt.

		Strongly disagree	Disagree	Moderately agree	Agree	Strongly agree
C1	I feel in control of my personal financial management	1	2	3	4	5
C2	I have enough money to socialise weekly/monthly	1	2	3	4	5
C3	My finances are a significant source of worry for me	1	2	3	4	5
C4	I am certain about where my money is spent	1	2	3	4	5
C5	I feel capable of handling my financial future	1	2	3	4	5
C6	I feel putting money away each month for saving is important	1	2	3	4	5
C7	I am interested in increasing my personal financial knowledge (financial literacy)	1	2	3	4	5
C8	I have interest in reading about personal money management	1	2	3	4	5
C9	One should keep careful track of how much money is spent each month	1	2	3	4	5
C10	I have a monthly personal budget	1	2	3	4	5
C11	I sacrifice my needs and wants to save money for financing my studies	1	2	3	4	5
C12	There is no point in saving for something, it is better to buy on credit	1	2	3	4	5
C13	I tend to live each day as it comes I not worry about the future	1	2	3	4	5
C14	I believe parents should save money for educating their children	1	2	3	4	5
C15	I believe life is short I should enjoy my money today	1	2	3	4	5
C16	I would rather be in debt than changing my lifestyle	1	2	3	4	5
C17	It is better to have something now and pay for it later	1	2	3	4	5
C18	I believe the government must take responsibility for financing my education (studies)	1	2	3	4	5
C19	My family saved money to finance my studies	1	2	3	4	5
C20	I pay my bills on time	1	2	3	4	5
C21	I keep a close personal watch on my financial affairs	1	2	3	4	5
C22	I set long term financial goals and strive to achieve them	1	2	3	4	5
C23	I save a certain portion of the money that I earn	1	2	3	4	5
C24	Money is there to be spent	1	2	3	4	5

SECTION D: Biographical/ demographic information

D1. Current level of education

Under graduate	1	Post graduate	2

D2. Number of years at same University

1-2	1	3-4	2	5-6	3	7>	4

D3. My faculty is:

Education	1	Engineering	2	IT & Science	3	Human Sciences	4
Management Sciences	5	Other (specify)	6				

D4. Are you attending university in your home province

Yes	1	No	2

D5. Please specify family monthly level of income

<R10 000	1	R11 000 – 20 000	2	R21 000 – 30 000	3	R31 000 – 40 000	4
R41 000 – 50 000	5	>R50 000	6	Not sure	7		

D6. You have signed an agreement to pay the outstanding university fees at a later stage? (Studying under financial concession)

Yes	1	No	2

D7. Specify your student debt payable to the university

0	1	<R10 000	2	R11 000 – 20 000	3	R21 000 – 30 000	4	R31 000 – 40 000	5
R41 000 – 50 000	6	R51 000 – 60 000	7	R61 000 – 70 000	8	R71 000 – 80 000	9	R81 000 – 90 000	10
R91 000 – 100 000	11	>R100 000	12						

D8. Please indicate which of the following source(s) are financing your university studies

Government loan/bursary (NSFAS)	1
University scholarship/bursary	2
Parent/Family/Spouse	3
Personal savings	4
Earnings from part-time work	5
Earning from current employment	6
Work study programme	7
Investment income	8
Other (specify)	9

D9. How do you or a person responsible for your student account receive your student fee statement? Select method(s)

Mail	1	SMS	2	Social media	3	E-mail	4
Other (specify)	5						

D10. Which method(s) would you prefer to receive your student statement?

Mail	1	SMS	2	Social media	3	E-mail	4

D11. How would you prefer to settle your student account?

Cash	1	Cheque/Bank card	2	Easy pay at Pick & Pay/Checkers/Post office	3	EFT	4

D12. How often do you or a person responsible for your student account receive your statement of student account from university?

Monthly	1	Bi-monthly	2	Quarterly	3
Semi-annually	4	Annually	5	Never	6

D13. What do you think is the main contributor to the non-payment of student accounts at your university?

Poverty/Financial constraints	1
SRC/Political influence	2
Credit management policy	3
Student attitude towards debt	4
Other (specify)	5

This is the end of the questionnaire. Thank you for your participation!

APPENDIX 2

ETHICAL CLEARANCES



NORTH-WEST UNIVERSITY
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20 February 2013

ETHICS APPROVAL OF PROJECT

The North-West University Ethics Committee (NWU-EC) hereby approves your project as indicated below. This implies that the NWU-EC grants its permission that, provided the special conditions specified below are met and pending any other authorisation that may be necessary, the project may be initiated, using the ethics number below.

Project title: Policy implementation of student accounts on credit management at selected South African universities															
Project Leader: Prof M Oberholzer															
Ethics number:	N	W	U	-	0	0	0	0	1	-	1	3	-	A	1
	Institution			Project Number						Year		Status			
Status: S = Submission; R = Re-Submission; P = Provisional Authorisation; A = Authorisation															
Approval date: 2013/02/20										Expiry date: 2018/02/19					

Special conditions of the approval (if any): None

General conditions:

While this ethics approval is subject to all declarations, undertakings and agreements incorporated and signed in the application form, please note the following:

- The project leader (principle investigator) must report in the prescribed format to the NWU-EC:
 - annually (or as otherwise requested) on the progress of the project,
 - without any delay in case of any adverse event (or any matter that interrupts sound ethical principles) during the course of the project.
- The approval applies strictly to the protocol as stipulated in the application form. Would any changes to the protocol be deemed necessary during the course of the project, the project leader must apply for approval of these changes at the NWU-EC. Would there be deviated from the project protocol without the necessary approval of such changes, the ethics approval is immediately and automatically forfeited.
- The date of approval indicates the first date that the project may be started. Would the project have to continue after the expiry date, a new application must be made to the NWU-EC and new approval received before or on the expiry date.
- In the interest of ethical responsibility the NWU-EC retains the right to:
 - request access to any information or data at any time during the course or after completion of the project;
 - withdraw or postpone approval if:
 - any unethical principles or practices of the project are revealed or suspected,
 - it becomes apparent that any relevant information was withheld from the NWU-EC or that information has been false or misrepresented,
 - the required annual report and reporting of adverse events was not done timely and accurately,
 - new institutional rules, national legislation or international conventions deem it necessary.

The Ethics Committee would like to remain at your service as scientist and researcher, and wishes you well with your project. Please do not hesitate to contact the Ethics Committee for any further enquiries or requests for assistance.

Yours sincerely

Prof Amanda Lourens
(chair NWU Ethics Committee)



08 February, 2017

Mr G.J. Maseko

Vaal University of Technology

Dear Mr Maseko

It is my pleasure to inform you that permission to conduct project titled: "Policy implications of student accounts on credit management at selected South African Universities" has been granted.

Permission to conduct the project is granted on the condition that any changes to the project must be brought to the attention of the MUT Research Ethics Committee as soon as possible.

Good luck with your research.

Yours faithfully,

A handwritten signature in black ink, appearing to read "Anette", with a long, sweeping flourish extending to the right.

Dr. Anette Mienie

Director: Research

031 9077354/7450

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12th September 2016

Mr Gauda Johannes Maseko
c/o Faculty of Economics and Management Sciences
North West University (Potchefstroom campus)

Dear Mr Maseko

PERMISSION TO CONDUCT RESEARCH AT THE DUT

Your email correspondence in respect of the above refers. I am pleased to inform you that the Institutional Research Committee (IRC) has granted full permission for you to conduct your research "Policy implications of student accounts on credit management at selected South African universities" at the Durban University of Technology.

We would be grateful if a summary of your key research findings can be submitted to the IRC on completion of your studies.

Kindest regards.
Yours sincerely

A handwritten signature in black ink, appearing to read 'S. Moyo', with a long horizontal stroke extending to the right.

PROF. S. MOYO
DIRECTOR: RESEARCH AND POSTGRADUATE SUPPORT

Gauda Johannes Maseko
Vaal University of Technology
Department of Accounting
Faculty of Management Sciences

johannes@vut.ac.za

**PERMISSION TO CONDUCT RESEARCH AT THE BLOEMFONTEIN CAMPUS FOR
HIS PhD STUDY ENTITLED "POLICY IMPLICATIONS OF STUDENT ACCOUNTS
ON CREDIT MANAGEMENT AT SELECTED SOUTH AFRICAN UNIVERSITIES"**

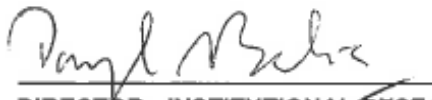
Dear Gauda Johannes Maseko

This is to confirm that you have been granted permission to conduct research at CUT campus in Bloemfontein for your PhD study entitled "POLICY IMPLICATIONS OF STUDENT ACCOUNTS ON CREDIT MANAGEMENT AT SELECTED SOUTH AFRICAN UNIVERSITIES"

The conditions of the permission are:

- The research will not interrupt any of the official activities at the CUT;
- You will supply us with the copy of your report;
- The cost of all related activities will be covered by yourself;
- Recruitment of participants is the sole responsibility of yourself;
- Voluntary nature of the potential participant's decision to consent to participate should be strictly observed;
- You should not disclose a potential participant's decision to participate or otherwise to any other party;

- Permission does not compel, in any sense, participation of staff members or students in your research.



DIRECTOR: INSTITUTIONAL RESEARCH AND QUALITY ENHANCEMENT

DR DM BALIA

13 OCTOBER 2016

Research Ethics Committee

The TUT Research Ethics Committee is a registered Institutional Review Board (IRB 00005968) with the US Office for Human Research Protections (IORG# 0004997) (Expires 9 Jan 2017). Also, it has Federal Wide Assurance for the Protection of Human Subjects for International Institutions (FWA 00011501) (Expires 22 Jan 2019). In South Africa it is registered with the National Health Research Ethics Council (REC-160509-21).

October 18, 2016

Ref #: REC/2016/08/006 Name: Maseko GJ Student #: NWU

Mr GJ Maseko
C/o Prof M Oberholzer
North West University

Dear Mr Maseko,

Decision: Approval with Comments

Name: Maseko GJ

Project title: *Policy implications of student accounts on credit management at selected South African universities*

Qualification: PhD Financial Management, North West University

Supervisor: Prof M Oberholzer

Thank you for submitting the revised project documents for ethics clearance by the Research Ethics Committee (REC), Tshwane University of Technology (TUT). In reviewing the documents, the comments and notes below are tabled for your consideration, attention and notification:

- **North West University, Ethics Letter**

- **NWU Project Title.** The REC took of the NWU Registration of Title (dated 24 June 2013). Also, the REC took note that a revised NWU Ethics Clearance letter that clearly indicates the student's name and final project title will be submitted to the TUT REC for notification and archiving as soon as it is available.

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- **Proposal, Risk Management**

- The REC reconfirmed its opinion that the focus of the project potentially involves significant risks for the targeted research sites, especially given the current national volatile situation regarding student fees. The project activities might contribute to escalated student unrest / violence and further disruptions of university activities. As such, the indication in the Memo (received on 26 Sep 2016) that the "... project activities has no risk to contribute to student unrest or cause disruptions of university functions" is contestable. Therefore, the researcher is strongly encouraged to remain sensitive and vigilant throughout the project to ensure that any potentially volatile findings are reported in a socially responsible way.

- **Survey Questionnaire**

- The revisions are in order and duly noted.

- **Interviews, Credit Managers and SRC Members**

- **Information Leaflet and Informed Consent Content.** The revisions are in order and duly noted.

- **Institutional Requirements**

- The REC took note that a copy of the final project report will be provided to the *TUT Registrar* for notification and/or potential implementation in the TUT context.
- The REC took note of the researcher's commitment to ensure that *Tshwane University of Technology (TUT)* as academic institution will not be identified in any of the project's research outputs, including the thesis.

An expedited review panel of the Research Ethics Committee, Tshwane University of Technology (TUT), reviewed the revised project documents on October 11, 2016. **Final Approval with Comments** is granted to the project.

The proposed research project may now continue with the proviso that:

- 1) The researcher/s will conduct the study according to the procedures and methods indicated in the approved proposal, particularly in terms of any undertakings and/or assurances made regarding the confidentiality of the collected data.
- 2) The proposal will again be submitted to the Committee for prospective ethical clearance if there are any substantial changes from the approved proposal.

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- 3) The researcher/s will act within the parameters of any applicable national legislation, professional codes of conduct, institutional guidelines and scientific standards relevant to the specific field of study. Strict adherence to the following South African legislation, where applicable, is especially important: Protection of Personal Information Act (Act 4 of 2013), Children's Act (Act 38 of 2005) and the National Health Act (Act 61 of 2003).
- 4) The current ethics approval expiry date for this project is **December 31, 2018**. No research activities may continue after the ethics approval expiry date. Submission of a duly completed Research Ethics Progress Report (available at: <http://www.tut.ac.za/Other/rnnew/ResearchEthicsCommittees/Pages/default.aspx>) will constitute an application for renewal of REC ethics approval.

Note:

The reference number [top right corner of this communiqué] should be clearly indicated on all forms of communication [e.g. Webmail, E-mail messages, letters] with the intended research participants.

Yours sincerely,



WA HOFFMANN (Prof)
Chairperson: Research Ethics Committee
[Ref#2016=08=006=MasekoGJ]

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Vaal University of Technology

Your world to a better future

RESEARCH DIRECTORATE

Tel: (016) 950 9531

Research and Innovation Ethical Clearance Certificate

Applicant:	GJ Maseko
Project:	Policy implications of credit management on student accounts at selected South African universities.
Institution:	Vaal University of Technology
Date Approved:	24 July 2017
Ethical Clearance Number:	ECN43-2017
Approved: Yes/No	Yes

DR SM NELANA

CHAIRPERSON: RESEARCH & INNOVATION ETHICS COMMITTEE

Date: 24 July 2017

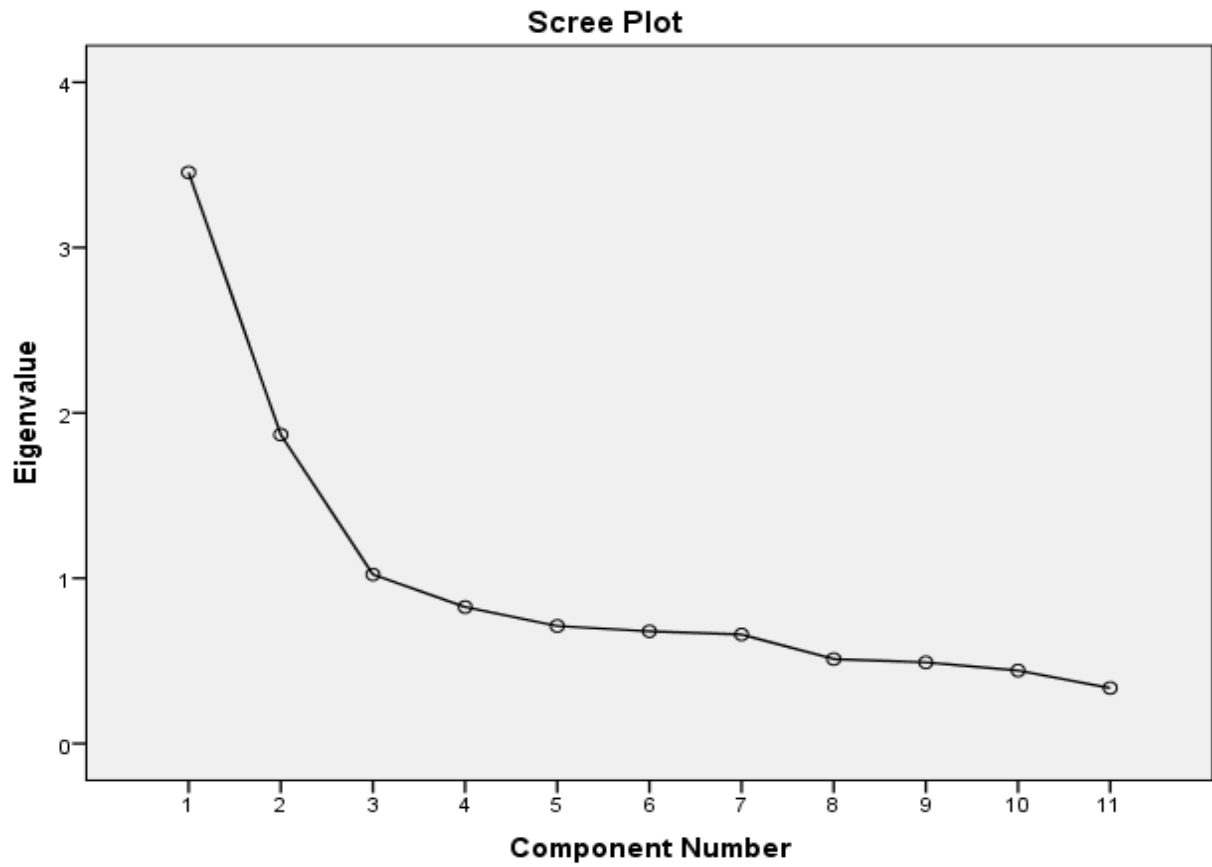


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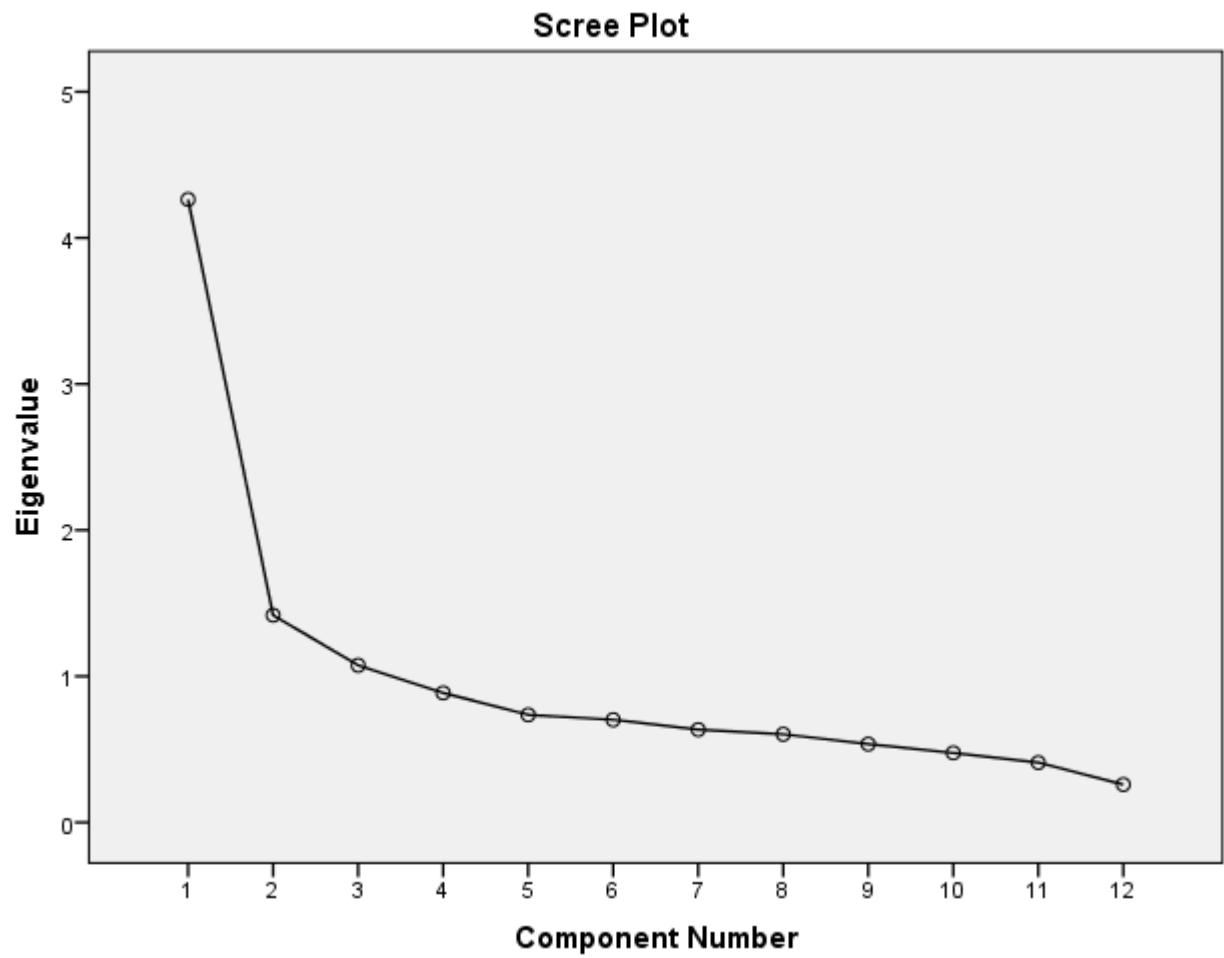
APPENDIX 3

SCREE PLOTS

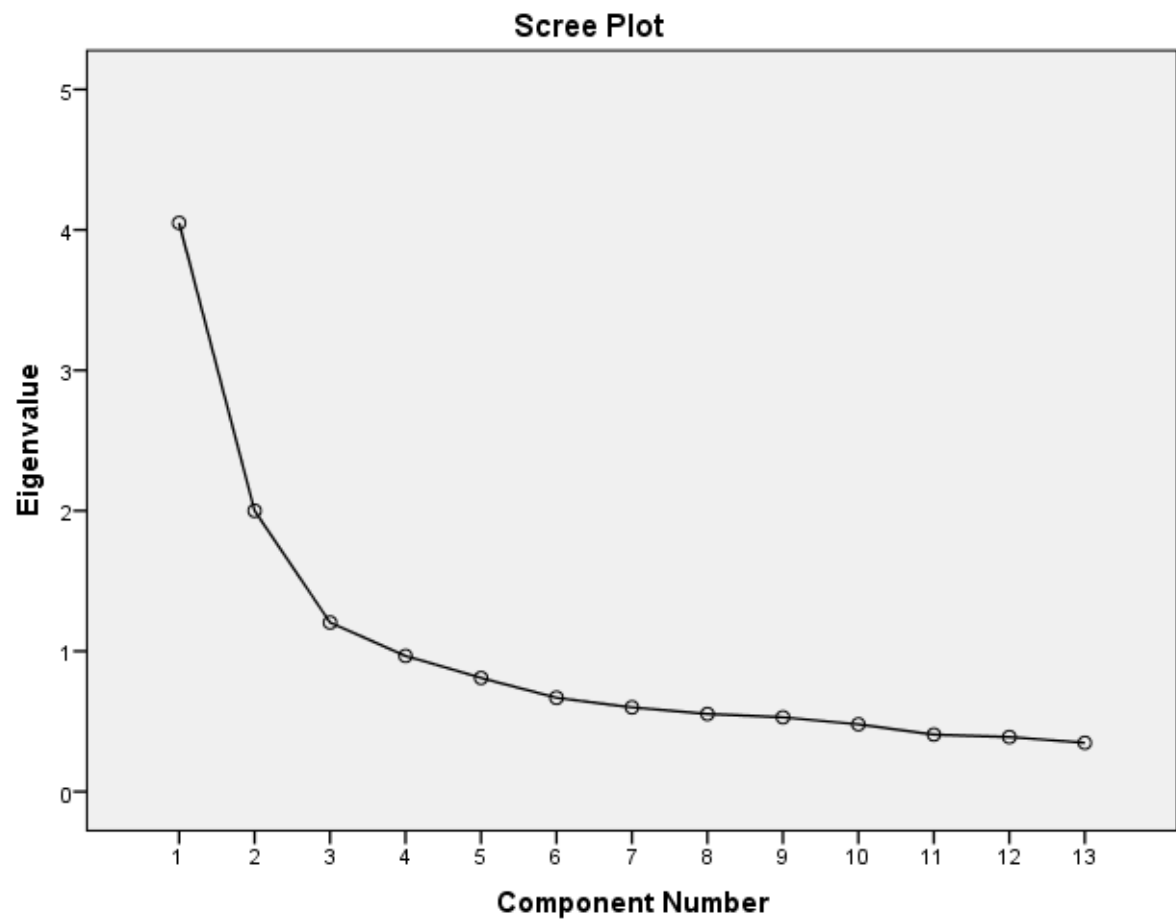
SECTION A: Student Debt (SD)



SECTION B: Student credit management (SCM)



SECTION C: Personal financial management (PFM)



APPENDIX 4

ANOVA AND SUBSETS

Student debt

Table 8.19A: ANOVA: Dimensions of student debt (SD)

		Sum of squares	df	Mean square	F	Sig.
Student debt implications (SD1)	Between groups	36.074	4	9.019	9.224	.000*
	Within groups	1346.300	1377	.978		
	Total	1382.374	1381			

*. Statistically significant differences at $p < 0.0$

		N	Mean	Std. Deviation	95% Confidence Interval for Mean	
					Lower Bound	Upper Bound
SD1	A	301	4.0748	.81842	3.9819	4.1676
	E	195	3.7179	1.01022	3.5753	3.8606
	C	369	3.7771	.98059	3.6767	3.8775
	D	252	3.9623	.99529	3.8388	4.0858
	B	265	3.6330	1.14295	3.4948	3.7713
	Total	1382	3.8397	1.00050	3.7869	3.8925

Homogeneous Subsets

Student debt implications (SD1)					
	INST	N	Subset for alpha = 0.05		
			1	2	3
Tukey B ^{a,b}	B	265	3.633		
	E	195	3.718		
	C	369	3.778	3.777	
	D	252		3.962	3.962
	A	301			4.075

Student credit management

Table 8.20A: ANOVA: dimensions of student credit management (SCM)

		Sum of squares	df	Mean square	F	Sig.
Implementation of SCM (SCM1)	Between groups	41.413	4	10.353	14.486	.000*
	Within groups	984.154	1377	.715		
	Total	1025.567	1381			
Communication of SCM (SCM2)	Between groups	66.321	4	16.580	14.494	.000*
	Within groups	1575.228	1377	1.144		
	Total	1641.549	1381			
Effectiveness of SCM (SCM3)	Between groups	40.757	4	10.189	13.746	.000*
	Within groups	1020.705	1377	.741		
	Total	1061.462	1381			

*.Statistically significant differences at $p < 0.05$

		N	Mean	Std. Deviation	95% Confidence Interval for Mean	
					Lower Bound	Upper Bound
SCM1	A	301	2.8452	.90617	2.7424	2.9480
	E	195	2.5979	.82262	2.4818	2.7141
	C	369	3.0092	.73116	2.9344	3.0841
	D	252	2.5667	.91373	2.4533	2.6800
	B	265	2.6747	.87091	2.5694	2.7801
	Total	1382	2.7706	.86176	2.7251	2.8161
SCM2	A	301	2.9435	1.15187	2.8129	3.0742
	E	195	2.2855	1.07613	2.1335	2.4375
	C	369	2.8979	1.00097	2.7955	3.0004
	D	252	2.8360	1.10313	2.6991	2.9728
	B	265	2.6403	1.02686	2.5160	2.7645
	Total	1382	2.7607	1.09026	2.7032	2.8183
SCM3	A	301	3.0872	.85737	2.9900	3.1845
	E	195	2.8231	.87091	2.7001	2.9461
	C	369	3.3455	.81814	3.2618	3.4293
	D	252	3.0050	.85137	2.8993	3.1106
	B	265	3.1858	.92274	3.0742	3.2975
	Total	1382	3.1228	.87671	3.0766	3.1691

Homogeneous Subsets

Implementation of SCM (SCM1)					
	INST	N	Subset for alpha = 0.05		
			1	2	3
Tukey B ^{a,b}	D	252	2.567		
	E	195	2.598		
	B	265	2.675	2.675	
	A	301		2.845	2.845
	C	369			3.009

Communication of SCM (SCM2)					
	INST	N	Subset for alpha = 0.05		
			1	2	3
Tukey B ^{a,b}	E	195	2.286		
	B	265		2.640	
	D	252		2.836	2.836
	C	369			2.898
	A	301			2.944

Effectiveness of SCM (SCM3)					
	INST	N	Subset for alpha = 0.05		
			1	2	3
Tukey B ^{a,b}	E	195	2.823		
	D	252		3.005	
	A	301		3.087	
	B	265		3.186	3.186
	C	369			3.346

Personal financial management

Table 8.21A: ANOVA: dimensions of PFM

		Sum of squares	df	Mean square	F	Sig.
PFM attitudes (PFM1)	Between groups	22.878	4	5.719	8.126	.000*
	Within groups	969.191	1377	.704		
	Total	992.069	1381			
Planning for PFM (PFM2)	Between groups	32.805	4	8.201	9.603	.000*
	Within groups	1175.928	1377	.854		
	Total	1208.733	1381			
Control regarding PFM (PFM3)	Between groups	33.033	4	8.258	11.980	.000*
	Within groups	949.189	1377	.689		
	Total	982.222	1381			

*.Statistically significant differences at $p < 0.05$

		N	Mean	Std. Deviation	95% Confidence Interval for Mean	
					Lower Bound	Upper Bound
PFM1	A	301	4.1811	.83543	4.0863	4.2758
	E	195	4.2346	.73245	4.1312	4.3381
	C	369	4.2791	.75113	4.2022	4.3560
	D	252	3.9048	.94329	3.7877	4.0218
	B	265	4.1557	.92271	4.0441	4.2673
	Total	1382	4.1596	.84757	4.1148	4.2043
PFM2	A	301	3.2949	.95135	3.1869	3.4028
	E	195	3.1769	1.08948	3.0230	3.3308
	C	369	3.4668	.85104	3.3797	3.5539
	D	252	3.0615	.95891	2.9425	3.1805
	B	265	3.4425	.81837	3.3435	3.5414
	Total	1382	3.3099	.93555	3.2605	3.3592
PFM3	A	301	2.9794	.82444	2.8859	3.0729
	E	195	2.6031	.87661	2.4793	2.7269
	C	369	2.9301	.71854	2.8565	3.0036
	D	252	2.6841	.82311	2.5820	2.7862
	B	265	3.0143	.94578	2.8999	3.1287
	Total	1382	2.8660	.84335	2.8215	2.9105

Homogeneous Subsets

PFM attitudes (PFM1)				
	INST	N	Subset for alpha = 0.05	
			1	2
Tukey B ^{a,b}	D	252	3.905	
	B	265		4.156
	A	301		4.181
	E	195		4.235
	C	369		4.279

Planning for PFM (PFM2)					
	INST	N	Subset for alpha = 0.05		
			1	2	3
Tukey B ^{a,b}	D	252	3.062		
	E	195	3.177	3.177	
	A	301		3.295	3.295
	B	265			3.443
	C	369			3.467

Control regarding (PFM3)				
	INST	N	Subset for alpha = 0.05	
			1	2
Tukey B ^{a,b}	E	195	2.603	
	D	252	2.684	
	C	369		2.930
	A	301		2.979
	B	265		3.014

ANOVA analysis of demographic information (Whole sample)

Table 8.22A: ANOVA - Current level of education

ANOVA						
		Sum of squares	df	Mean square	F	Sig.
Student debt implications (SD1)	Between groups	9.619	1	9.619	9.713	.002*
	Within groups	1316.156	1329	.990		
	Total	1325.775	1330			
Attitudes to student debt (SD3)	Between groups	13.196	1	13.196	19.508	.000*
	Within groups	898.988	1329	.676		
	Total	912.184	1330			
Implementation of SCM (SCM1)	Between groups	11.752	1	11.752	16.086	.000*
	Within groups	970.960	1329	.731		
	Total	982.712	1330			
Communication of SCM (SCM2)	Between groups	4.636	1	4.636	4.840	.028*
	Within groups	1272.976	1329	.958		
	Total	1277.613	1330			
Planning for PFM (PFM2)	Between groups	6.066	1	6.066	7.015	.008*
	Within groups	1149.134	1329	.865		
	Total	1155.199	1330			
Control regarding PFM (PFM3)	Between groups	6.056	1	6.056	8.579	.003*
	Within groups	938.186	1329	.706		
	Total	944.242	1330			

*. Statistically significant differences at $p < 0.05$

Table 8.23A: ANOVA - Number of years at the same university

ANOVA						
		Sum of squares	df	Mean square	F	Sig.
Student debt implications (SD1)	Between groups	10.394	2	5.197	5.223	.006*
	Within groups	1358.359	1365	.995		
	Total	1368.753	1367			
Implementation of SCM (SCM1)	Between groups	6.862	2	3.431	4.638	.010*
	Within groups	1009.688	1365	.740		
	Total	1016.551	1367			
Communication of SCM (SCM2)	Between groups	7.302	2	3.651	3.782	.023*
	Within groups	1317.687	1365	.965		
	Total	1324.989	1367			
Effectiveness of SCM (SCM3)	Between groups	5.429	2	2.715	3.549	.029*
	Within groups	1043.942	1365	.765		
	Total	1049.371	1367			
Planning for PFM (PFM2)	Between groups	8.487	2	4.244	4.863	.008*
	Within groups	1191.043	1365	.873		
	Total	1199.531	1367			

*. Statistically significant differences at $p < 0.05$

Homogeneous Subsets

STUDENT DEBT IMPLICATIONS (SD1)			
Tukey HSD ^{a,b}			
Years	N	Subset for alpha = 0.05	
		1	2
1	334	3.711	
2	838	3.859	3.859
3	196		3.992
Sig.		.144	.206

COMMUNICATION OF SCM (SCM2)			
Tukey HSD ^{a,b}			
Years	N	Subset for alpha = 0.05	
		1	
2	838	2.613	
3	196	2.707	
1	334	2.784	
Sig.		.070	

PLANNING FOR PFM (PFM2)			
Tukey HSD ^{a,b}			
Years	N	Subset for alpha = 0.05	
		1	2
2	838	3.263	
3	196	3.283	3.283
1	334		3.450
Sig.		.961	.061

IMPLEMENTATION OF SCM (SCM1)			
Tukey HSD ^{a,b}			
Years	N	Subset for alpha = 0.05	
		1	2
3	196	2.694	
2	838	2.738	2.738
1	334		2.891
Sig.		.788	.063
EFFECTIVENESS OF SCM (SCM3)			
Tukey HSD ^{a,b}			
Years	N	Subset for alpha = 0.05	
		1	2
3	196	2.995	
2	838	3.121	3.121
1	334		3.204
Sig.		.159	.448

Table 8.24A: ANOVA - Faculty

ANOVA						
		Sum of squares	df	Mean square	F	Sig.
Student debt implications (SD1)	Between groups	18.353	4	4.588	4.755	.001*
	Within groups	1198.549	1242	.965		
	Total	1216.902	1246			
Reaction to student debt (SD2)	Between groups	28.246	4	7.061	7.895	.000*
	Within groups	1110.840	1242	.894		
	Total	1139.086	1246			
Attitudes to student debt (SD3)	Between groups	7.774	4	1.943	2.834	.023*
	Within groups	851.744	1242	.686		
	Total	859.517	1246			
Implementation of SCM (SCM1)	Between groups	8.836	4	2.209	2.934	.020*
	Within groups	935.193	1242	.753		
	Total	944.029	1246			
Effectiveness of SCM (SCM3)	Between groups	7.810	4	1.953	2.536	.039*
	Within groups	956.248	1242	.770		
	Total	964.058	1246			
Planning for PFM (PFM2)	Between groups	14.151	4	3.538	4.002	.003*
	Within groups	1098.004	1242	.884		
	Total	1112.155	1246			
Control regarding PFM (PFM3)	Between groups	17.853	4	4.463	6.178	.000*
	Within groups	897.343	1242	.722		
	Total	915.196	1246			

*. Statistically significant differences at $p < 0.05$

Homogeneous Subsets

STUDENT DEBT IMPLICATIONS (SD1)				
Tukey HSD ^{a,b}				
Faculty	N	Subset for alpha = 0.05		
		1	2	3
6	119	3.632		
5	429	3.756	3.756	
2	362	3.856	3.856	
4	263	3.874	3.874	3.874
3	143		4.096	4.096
1	50			4.200
Sig.		.337	.053	.072

REACTION TO STUDENT DEBT (SD2)			
Tukey HSD ^{a,b}			
Faculty	N	Subset for alpha = 0.05	
		1	2
5	429	3.557	
3	143	3.752	3.752
6	119	3.790	3.790
1	50	3.835	3.835
2	362	3.867	3.867
4	263		3.914
Sig.		.078	.724

ATTITUDES TO STUDENT DEBT (SD3)		
Tukey HSD ^{a,b}		
Faculty	N	Subset for alpha = 0.05
		1
5	429	4.007
4	263	4.086
6	119	4.098
2	362	4.102
3	143	4.242
1	50	4.260
Sig.		.120

IMPLEMENTATION OF SCM (SCM1)			
Tukey HSD ^{a,b}			
Faculty	N	Subset for alpha = 0.05	
		1	2
3	143	2.566	
2	362	2.718	2.718
1	50	2.796	2.796
4	263	2.820	2.820
5	429	2.826	2.826
6	119		2.879
Sig.		.130	.639

EFFECTIVENESS OF SCM (SCM3)			
Tukey HSD ^{a,b}			
Faculty	N	Subset for alpha = 0.05	
		1	2
1	50	2.895	
3	143	2.949	
5	429	3.123	3.125
2	362	3.126	3.126
4	263	3.188	3.188
6	119		3.265
Sig.		.064	.777

PLANNING FOR PFM (PFM2)			
Tukey HSD ^{a,b}			
Faculty	N	Subset for alpha = 0.05	
		1	2
3	143	3.0087	
4	263	3.3080	3.308
1	50	3.3250	3.325
5	429		3.340
2	362		3.360
6	119		3.410
Sig.		.060	.947

CONTROL REGARDING PFM (PFM3)			
Tukey HSD ^{a,b}			
Faculty	N	Subset for alpha = 0.05	
		1	2
3	143	2.611	
1	50	2.772	2.772
4	263	2.793	2.793
6	119	2.849	2.849
2	362		2.909
5	429		2.985
Sig.		.182	.293

1	Education	2	Engineering
3	IT & Science	4	Human Sciences
5	Management Sciences	6	Other

Table 8.25A: ANOVA - Province

ANOVA						
		Sum of squares	df	Mean square	F	Sig.
Student debt implications (SD1)	Between groups	13.309	1	13.309	13.478	.000*
	Within groups	1340.926	1358	.987		
	Total	1354.235	1359			
Attitudes to student debt (SD3)	Between groups	4.986	1	4.986	7.257	.007*
	Within groups	932.900	1358	.687		
	Total	937.885	1359			
Implementation of SCM (SCM1)	Between groups	5.001	1	5.001	6.811	.009*
	Within groups	997.106	1358	.734		
	Total	1002.107	1359			
Communication of SCM (SCM2)	Between groups	12.355	1	12.355	12.967	.000*
	Within groups	1293.971	1358	.953		
	Total	1306.326	1359			

*, Statistically significant differences at $p < 0.05$

Table 8.26A: ANOVA - Family level of income

ANOVA						
		Sum of squares	df	Mean square	F	Sig.
Reaction to student debt (SD2)	Between groups	39.196	3	13.065	14.544	.000*
	Within groups	912.667	1016	.898		
	Total	951.862	1019			
Attitudes to student debt (SD3)	Between groups	16.869	3	5.623	7.983	.000*
	Within groups	715.677	1016	.704		
	Total	732.546	1019			
Implementation of SCM (SCM1)	Between groups	33.456	3	11.152	14.649	.000*
	Within groups	773.474	1016	.761		
	Total	806.929	1019			
Communication of SCM (SCM2)	Between groups	45.644	3	15.215	15.920	.000*
	Within groups	970.969	1016	.956		
	Total	1016.613	1019			
Effectiveness of SCM (SCM3)	Between groups	36.541	3	12.180	15.900	.000*
	Within groups	778.308	1016	.766		
	Total	814.849	1019			
Planning for PFM (PFM2)	Between groups	132.087	3	44.029	53.335	.000*
	Within groups	838.721	1016	.826		
	Total	970.808	1019			
Control regarding PFM (PFM3)	Between groups	42.997	3	14.332	19.957	.000*
	Within groups	729.657	1016	.718		
	Total	772.653	1019			

*. Statistically significant differences at $p < 0.05$

Homogeneous Subsets

REACTION TO STUDENT DEBT (SD2)			
Tukey HSD ^{a,b}			
Income	N	Subset for alpha = 0.05	
		1	2
3	104	3.438	
2	219		3.683
4	457		3.684
1	567		3.898
Sig.		1.000	.082

IMPLEMENTATION OF SCM (SCM1)			
Tukey HSD ^{a,b}			
Income	N	Subset for alpha = 0.05	
		1	2
3	104	2.4750	
4	457		2.728
2	219		2.740
1	567		2.864
Sig.		1.000	.344

EFFECTIVENESS OF SCM (SCM3)			
Tukey HSD ^{a,b}			
Income	N	Subset for alpha = 0.05	
		1	2
3	104	2.803	
4	457		3.080
2	219		3.099
1	567		3.212
Sig.		1.000	.390

CONTROL REGARDING PFM (PFM3)			
Tukey HSD ^{a,b}			
Income	N	Subset for alpha = 0.05	
		1	2
3	104	2.519	
4	457		2.785
1	567		2.937
2	219		2.981
Sig.		1.000	.066

COMMUNICATION OF SCM (SCM2)			
Tukey HSD ^{a,b}			
Income	N	Subset for alpha = 0.05	
		1	2
3	104	2.358	
4	457		2.609
2	219		2.729
1	567		2.747
Sig.		1.000	.456

ATTITUDES TO STUDENT DEBT (SD3)			
Tukey HSD ^{a,b}			
Income	N	Subset for alpha = 0.05	
		1	2
2	219	4.006	
1	567	4.025	
4	457	4.174	4.174
3	104		4.292
Sig.		.144	.436

PLANNING FOR PFM (PFM2)				
Tukey HSD ^{a,b}				
Income	N	Subset for alpha = 0.05		
		1	2	3
3	104	2.695		
4	457		3.162	
2	219		3.365	3.365
1	567			3.511
Sig.		1.000	.089	.336

Table 8.27A: ANOVA – Acknowledgement of debt (AoD)

ANOVA						
		Sum of squares	df	Mean square	F	Sig.
Student debt implications (SD1)	Between groups	19.604	8	2.450	2.568	.009*
	Within groups	961.080	1007	.954		
	Total	980.684	1015			
Implementation of SCM (SCM1)	Between groups	32.874	8	4.109	5.374	.000*
	Within groups	770.013	1007	.765		
	Total	802.887	1015			
Communication of SCM (SCM2)	Between groups	30.126	8	3.766	3.862	.000*
	Within groups	981.817	1007	.975		
	Total	1011.944	1015			
Effectiveness of SCM (SCM3)	Between groups	19.859	8	2.482	3.161	.002*
	Within groups	790.796	1007	.785		
	Total	810.654	1015			
PFM attitudes (PFM1)	Between groups	11.719	8	1.465	1.976	.046*
	Within groups	746.665	1007	.741		
	Total	758.384	1015			
Planning for PFM (PFM2)	Between groups	50.286	8	6.286	6.881	.000*
	Within groups	919.948	1007	.914		
	Total	970.233	1015			
Control regarding PFM (PFM3)	Between groups	49.650	8	6.206	8.670	.000*
	Within groups	720.868	1007	.716		
	Total	770.518	1015			

*. Statistically significant differences at $p < 0.05$

Table 8.28A: ANOVA - Debt level

ANOVA						
		Sum of squares	df	Mean square	F	Sig.
Student debt implications (SD1)	Between groups	19.871	8	2.484	2.518	.010*
	Within groups	1338.841	1357	.987		
	Total	1358.711	1365			

*, Statistically significant differences at $p < 0.05$

Homogeneous Subsets

STUDENT DEBT IMPLICATIONS (SD1)			
Tukey HSD ^{a,b}			
Debt	N	Subset for alpha = 0.05	
		1	2
1	197	3.4518	
8	166		3.7967
4	212		3.8632
2	214		3.8633
5	163		3.9294
7	80		3.9406
3	207		3.9481
6	128		4.0801
Sig.		1.000	.184

Table 8.29A: ANOVA – Methods of receiving fees statement

ANOVA						
		Sum of squares	df	Mean square	F	Sig.
Student debt implications (SD1)	Between groups	25.333	4	6.333	6.471	.000*
	Within groups	1284.074	1312	.979		
	Total	1309.407	1316			
Reaction to student debt (SD2)	Between groups	26.714	4	6.678	7.384	.000*
	Within groups	1186.713	1312	.905		
	Total	1213.427	1316			
Implementation of SCM (SCM1)	Between groups	30.634	4	7.659	10.517	.000*
	Within groups	955.442	1312	.728		
	Total	986.076	1316			
Communication of SCM (SCM2)	Between groups	40.733	4	10.183	10.726	.000*
	Within groups	1245.591	1312	.949		
	Total	1286.324	1316			
Effectiveness of SCM (SCM3)	Between groups	11.797	4	2.949	3.843	.004*
	Within groups	1006.995	1312	.768		
	Total	1018.792	1316			
PFM attitudes (PFM1)	Between groups	7.915	4	1.979	2.752	.027*
	Within groups	943.449	1312	.719		
	Total	951.364	1316			
Planning for PFM (PFM2)	Between groups	31.175	4	7.794	9.060	.000*
	Within groups	1128.615	1312	.860		
	Total	1159.790	1316			
Control regarding PFM (PFM3)	Between groups	12.547	4	3.137	4.403	.002*
	Within groups	934.688	1312	.712		
	Total	947.235	1316			

*, Statistically significant differences at $p < 0.05$

Homogeneous Subsets

STUDENT DEBT IMPLICATIONS (SD1)			
Tukey HSD ^{a,b}			
Statement	N	Subset for alpha = 0.05	
		1	2
4	239	3.621	
3	43	3.657	3.657
5	135	3.733	3.733
2	316	3.827	3.827
1	584		3.977
Sig.		.467	.078

IMPLEMENTATION OF SCM (SCM1)			
Tukey HSD ^{a,b}			
Statement	N	Subset for alpha = 0.05	
		1	2
1	584	2.597	
4	239	2.874	2.874
2	316		2.898
5	135		2.939
3	43		2.958
Sig.		.075	.935

EFFECTIVENESS OF SCM (SCM3)		
Tukey HSD ^{a,b}		
Statement	N	Subset for alpha = 0.05
		1
3	43	3.006
1	584	3.023
2	316	3.192
5	135	3.196
4	239	3.2385
Sig.		.218

COMMUNICATION OF SCM (SCM2)			
Tukey HSD ^{a,b}			
Statement	N	Subset for alpha = 0.05	
		1	2
1	584	2.4687	
3	43	2.6841	2.684
4	239	2.7677	2.768
5	135		2.824
2	316		2.862
Sig.		.107	.595

REACTION TO STUDENT DEBT (SD2)			
Tukey HSD ^{a,b}			
Statement	N	Subset for alpha = 0.05	
		1	2
1	584	3.6241	
5	135	3.7185	3.719
4	239	3.7667	3.767
3	43	3.8605	3.861
2	316		3.980
Sig.		.281	.187

PFM ATTITUDES (PFM1)			
Tukey HSD ^{a,b}			
Statement	N	Subset for alpha = 0.05	
		1	2
3	43	3.7907	
4	239		4.108
2	316		4.149
1	584		4.174
5	135		4.259
Sig.		1.000	.616

PLANNING FOR PFM (PFM2)			
Tukey HSD ^{a,b}			
Statement	N	Subset for alpha = 0.05	
		1	2
1	584	3.1348	
3	43	3.2733	3.273
4	239	3.4038	3.404
5	135	3.4222	3.422
2	316		3.483
Sig.		.101	.376

CONTROL REGARDING PFM (PFM3)			
Tukey HSD ^{a,b}			
Statement	N	Subset for alpha = 0.05	
		1	2
1	584	2.757	
2	316	2.902	2.902
5	135	2.927	2.927
4	239	2.972	2.972
3	43		3.084
Sig.		.256	.429

Table 8.30A: ANOVA – Ideal method of receiving statement

ANOVA						
		Sum of squares	df	Mean square	F	Sig.
Implementation of SCM (SCM1)	Between groups	6.131	3	2.044	2.762	.041*
	Within groups	966.897	1307	.740		
	Total	973.027	1310			
Communication of SCM (SCM2)	Between groups	21.683	3	7.228	7.653	.000*
	Within groups	1234.325	1307	.944		
	Total	1256.008	1310			
Effectiveness of SCM (SCM3)	Between groups	15.293	3	5.098	6.733	.000*
	Within groups	989.556	1307	.757		
	Total	1004.849	1310			
Planning for PFM (PFM2)	Between groups	13.174	3	4.391	5.079	.002*
	Within groups	1129.892	1307	.864		
	Total	1143.066	1310			
Control regarding PFM (PFM3)	Between groups	9.397	3	3.132	4.441	.004*
	Within groups	921.882	1307	.705		
	Total	931.280	1310			

*. Statistically significant differences at $p < 0.05$

Homogeneous Subsets

IMPLEMENTATION OF SCM (SCM1)		
Tukey HSD ^{a,b}		
Prefer	N	Subset for alpha = 0.05
		1
4	585	2.719
2	434	2.751
1	266	2.892
3	26	2.900
Sig.		.508

COMMUNICATION OF SCM (SCM2)		
Tukey HSD ^{a,b}		
Prefer	N	Subset for alpha = 0.05
		1
4	585	2.532
3	26	2.587
2	434	2.778
1	266	2.812
Sig.		.232

EFFECTIVENESS OF SCM (SCM3)		
Tukey HSD ^{a,b}		
Prefer	N	Subset for alpha = 0.05
		1
4	585	3.042
2	434	3.104
3	26	3.125
1	266	3.329
Sig.		.132

PLANNING FOR PFM (PFM2)			
Tukey HSD ^{a,b}			
Prefer	N	Subset for alpha = 0.05	
		1	2
3	26	2.8654	
2	434		3.249
4	585		3.289
1	266		3.463
Sig.		1.000	.430

CONTROL REGARDING PFM (PFM3)			
Tukey HSD ^{a,b}			
Prefer	N	Subset for alpha = 0.05	
		1	2
3	26	2.554	
2	434	2.780	2.780
4	585		2.886
1	266		2.980
Sig.		.287	.401

Table 8.31A: ANOVA – Ideal method of fees payment

ANOVA						
		Sum of squares	df	Mean square	F	Sig.
Student debt implications (SD1)	Between groups	30.056	3	10.019	10.254	.000*
	Within groups	1304.383	1335	.977		
	Total	1334.439	1338			
Reaction to student debt (SD2)	Between groups	33.320	3	11.107	12.535	.000*
	Within groups	1182.889	1335	.886		
	Total	1216.209	1338			
Attitudes to student debt (SD3)	Between groups	20.566	3	6.855	10.172	.000*
	Within groups	899.706	1335	.674		
	Total	920.272	1338			
Implementation of SCM (SCM1)	Between groups	90.617	3	30.206	44.951	.000*
	Within groups	897.070	1335	.672		
	Total	987.687	1338			
Communication of SCM (SCM2)	Between groups	74.644	3	24.881	27.259	.000*
	Within groups	1218.536	1335	.913		
	Total	1293.180	1338			
Effectiveness of SCM (SCM3)	Between groups	50.641	3	16.880	23.031	.000*
	Within groups	978.465	1335	.733		
	Total	1029.106	1338			
Planning for PFM (PFM2)	Between groups	168.577	3	56.192	75.008	.000*
	Within groups	1000.120	1335	.749		
	Total	1168.696	1338			
Control regarding PFM (PFM3)	Between groups	104.527	3	34.842	54.459	.000*
	Within groups	854.115	1335	.640		
	Total	958.641	1338			

*, Statistically significant differences at $p < 0.05$

Homogeneous Subsets

STUDENT DEBT IMPLICATIONS (SD1)			
Tukey HSD ^{a,b}			
Settle	N	Subset for alpha = 0.05	
		1	2
2	450	3.742	
4	302	3.779	
1	385	3.813	
3	202		4.187
Sig.		.809	1.000

REACTION TO STUDENT DEBT (SD2)				
Tukey HSD ^{a,b}				
Settle	N	Subset for alpha = 0.05		
		1	2	3
3	202	3.5050		
4	302	3.6192	3.6192	
1	385		3.7961	3.796
2	450			3.934
Sig.		.437	.093	.266

ATTITUDES TO STUDENT DEBT (SD3)				
Tukey HSD ^{a,b}				
Settle	N	Subset for alpha = 0.05		
		1	2	3
1	385	3.960		
2	450	4.046	4.046	
4	302		4.146	
3	202			4.337
Sig.		.565	.439	1.000

IMPLEMENTATION OF SCM (SCM1)			
Tukey HSD ^{a,b}			
Settle	N	Subset for alpha = 0.05	
		1	2
3	202	2.177	
4	302		2.826
2	450		2.834
1	385		2.979
Sig.		1.000	.098

COMMUNICATION OF SCM (SCM2)			
Tukey HSD ^{a,b}			
Settle	N	Subset for alpha = 0.05	
		1	2
3	202	2.1250	
4	302		2.694
2	450		2.723
1	385		2.856
Sig.		1.000	.155

EFFECTIVENESS OF SCM (SCM3)			
Tukey HSD ^{a,b}			
Settle	N	Subset for alpha = 0.05	
		1	2
3	202	2.6795	
4	302		3.1192
2	450		3.1733
1	385		3.2825
Sig.		1.000	.086

PLANNING FOR PFM (PFM2)			
Tukey HSD ^{a,b}			
Settle	N	Subset for alpha = 0.05	
		1	2
3	202	2.4703	
4	302		3.436
1	385		3.453
2	450		3.483
Sig.		1.000	.910

CONTROL REGARDING PFM (PFM3)			
Tukey HSD ^{a,b}			
Settle	N	Subset for alpha = 0.05	
		1	2
3	202	2.212	
4	302		2.928
2	450		2.956
1	385		3.051
Sig.		1.000	.228

Table 8.32A: ANOVA - Frequency of receiving fees statement

ANOVA						
		Sum of squares	df	Mean square	F	Sig.
Implementation of SCM (SCM1)	Between groups	16.655	5	3.331	4.546	.000*
	Within groups	991.342	1353	.733		
	Total	1007.997	1358			
Communication of SCM (SCM2)	Between groups	32.738	5	6.548	6.928	.000*
	Within groups	1278.729	1353	.945		
	Total	1311.467	1358			
Effectiveness of SCM (SCM3)	Between groups	16.981	5	3.396	4.479	.000*
	Within groups	1025.999	1353	.758		
	Total	1042.979	1358			
Planning for PFM (PFM2)	Between groups	60.164	5	12.033	14.501	.000*
	Within groups	1122.719	1353	.830		
	Total	1182.883	1358			
Control regarding PFM (PFM3)	Between groups	22.223	5	4.445	6.379	.000*
	Within groups	942.716	1353	.697		
	Total	964.938	1358			

*. Statistically significant differences at $p < 0.05$

Homogeneous Subsets

IMPLEMENTATION OF SCM (SCM1)			
Tukey HSD ^{a,b}			
Frequency	N	Subset for alpha = 0.05	
		1	2
6	205	2.607	
5	332	2.670	
3	234	2.835	2.835
4	262	2.849	2.849
1	281	2.875	2.875
2	46		2.996
Sig.		.081	.599

EFFECTIVENESS OF SCM (SCM3)			
Tukey HSD ^{a,b}			
Frequency	N	Subset for alpha = 0.05	
		1	2
6	205	2.9293	
5	332	3.0346	3.035
1	281	3.1770	3.177
4	262	3.2032	3.203
3	234		3.234
2	46		3.304
Sig.		.080	.089

CONTROL REGARDING PFM (PFM3)				
Tukey HSD ^{a,b}				
Frequency	N	Subset for alpha = 0.05		
		1	2	3
5	332	2.709		
6	205	2.738	2.738	
4	262	2.896	2.896	2.896
1	281	2.974	2.974	2.974
3	234		3.009	3.009
2	46			3.096
Sig.		.075	.063	.321

COMMUNICATION OF SCM (SCM2)			
Tukey HSD ^{a,b}			
Frequency	N	Subset for alpha = 0.05	
		1	2
6	205	2.438	
2	46	2.571	2.571
5	332	2.575	2.575
4	262	2.626	2.626
3	234		2.851
1	281		2.857
Sig.		.567	.121

PLANNING FOR PFM (PFM2)			
Tukey HSD ^{a,b}			
Frequency	N	Subset for alpha = 0.05	
		1	2
5	332	3.031	
2	46	3.114	
6	205	3.121	
4	262		3.466
1	281		3.480
3	234		3.522
Sig.		.960	.995