Debt Financing and Financial Sustainability; Effect of Trade Credit Financing on Private Secondary Schools in Uasin Gishu County

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Abstract

Financial sustainability is key to the survival of an organization because it leads to continuity, effectiveness and efficiency of an organization. Private secondary schools is in an increasing struggle to expand in terms of number of students and every shilling they bring while they compete with public institutions for survival in tandem with provision of high quality education. The aim of the study was to establish the effect of debt financing on the financial sustainability of private secondary schools in Uasin Gishu County. The study looked at the effect trade credit on the financial sustainability of private secondary schools. This study adopted a descriptive survey research design. The target population of the study was 156 respondents composed of 52 school directors, 52 principals and 52 accountants of private secondary schools in Uasin Gishu County. The sample size formula for this study was based on Yamane’s formula where sample sizes of 112 respondents were selected by use of stratified random sampling techniques. A pilot study on selected respondents from randomly selected 5 private schools in Nandi County was done to test for validity and reliability of the research instruments. Content validity was used as a validity test while reliability was tested using Cronbach’s alpha coefficient. Descriptive statistics including mean, percentages and frequencies and inferential statistics was employed to analyse the data. In addition, inferential statistics that is correlation coefficient was used to make inferences of the population using data drawn from the population whereas descriptive statistics was used to summarize data from the population. The study findings indicated that, trade credit ($\beta = 0.263; p < 0.05$), was significant factors that influence financial sustainability of private secondary schools in Uasin Gishu County. The study recommends that that the management of private secondary schools in need to employ optimal levels of debt since interest payments on debt can affect the schools cash flows, should effectively manage their administrative expenses to enhance their schools’ performance in financial terms and need to devise effective strategies to enhance their revenue generation since revenue is vital towards meeting the obligations of the private schools. The study is of great benefit to the Ministry of Education and management of private secondary schools. It will form a reference point in further research in the area of private institutions and its financial sustainability. This study will be an eye opener to researchers and stakeholders on the importance of debt financing on financial sustainability of private educational institutions.
1.0 Introduction
Education is necessary for the personality grooming of an individual. There are different types of institutions available like private and public institutions (Almani, Soomro & Abro, 2012). Awan (2014) says that education plays a pivotal role in the rise and fall of nations especially in 21st century. It is mainly due to the emergence of global competition in education and technology. This competitive environment is the core need for progress of any country. Awan (2011) argues that all countries have different school systems but when we divide them we find two major categories of school systems: private and public schools. Globally private schools are getting mass acceptance today to ensure sustained progress of the country, however private schools are faced by financial sustainability challenges.

Financing sustainability acts as a basis of investment decision and influence an institutions financial performance. The choice of the appropriate mix of different sources of short and long term funds is one of the critical decision needs that have to be taken by central body of an organization to enhance financial sustainability (Liaqat, 2017). Financial sustainability is described as the ability to cover annual budgets without constraints. It indicates that the income or revenue generated by an organization is greater than the operational costs (Pollinger, Outhwaite & Cordero-Guzman, 2017).

In the context of private secondary schools, financial sustainability implies that these institutions generate revenue that is greater than the costs of providing educational services. That is, the income generated by these colleges is more than what is required to cater for salaries, wages and allowances of staff in addition to procuring educational materials and services (Nga’nga, 2017). Financial sustainability is regarded as one of the cardinal challenges in private institutions. As such, institutions with robust and sound financial structures and stable incomes are the ones that can fulfill their missions and respond to challenges brought about by dynamic environment (Obuya, 2017).

Thus financial sustainability aims at ensuring that a learning institution is able to generate adequate income to enable the institution to discharge its operations efficiently. It is noted that private secondary schools should look into three key pillars in order to ensure financial sustainability, that are identifying and better understanding of costs of all activities and projects, maintain reasonably diversified income structure and more so sufficient, reliable and sustainable public funding with adequate accountability measures (Estermann & Pruvot, 2011). Debt financing has been used as an instrument of filling the budget deficits both in the private and public sector (Onchonga, Muturi & Atambo, 2016). Debt financing is a key source of capital in many growing firms since their retained earnings may not be sufficient enough or may be unavailable (Githaigo & Kabiru, 2015). By generating incomes that may not have been gained with no extra financing, external sourcing in form of equity or debt fund allows firms to improve the firm’s value which is traditionally considered the vital goal of many businesses (Davydov, 2014). Debt financing decision is among the key financial decisions that are taken by firms since debt financing has an effect on the financial performance (Harelimalana, 2017).

In any business enterprise, the sources of funds depend on the relative ease with which funds of different types are obtainable, and this in turn is affected by the character of the company's assets, the seasonal and cyclical fluctuations in its volume of business, its rapidity of growth, its demonstrated or anticipated stability of profits and continuity of operations, its size, and any other aspect of its operations which affects its position as a potential borrower. These factors also determine its financial policy, causing the management to choose one source of financing rather than another (Adam, 2014). Debt financing is one of financing options most commonly pursued by companies. According to Harelimalana, (2017), debt financing takes many forms which include, trade credit, bank loans and installment purchase. Private schools require funds to finance their daily costs of operation such as athletic and academic programs, teacher and administrator salaries and benefits, repair and maintenance, utilities, office and IT provisions, student transportation and others (Kajirwa, 2015). Traditionally, private institutions had avoided leverage financing, electing to reschedule facility acquisition or even improvements up to a point when the necessary resources were acquired by a means of gifts and capital campaigns. Recently, there has been a divergence of events as well as trends which has contributed to an increased and a more aggressive borrowing activity by private schools. Though, private schools are encountered...
with a number of considerations when deciding to borrow and determining the type and amount of leverage financing that best fulfills their needs and the constraints they encounter (Saad, 2015). Globally, Private schools require working capital to fund routine operating costs such as teacher and administrator salaries and benefits, academic and athletic programs, utilities, repair and maintenance, printing, copying and office supplies, IT supplies, software and services, student transportation and the like (Nadiri, 2015). When private schools face the need for a major new facility, renovations to an existing facility or other major capital expenditures, some schools, but not many, have the option to fund such costs from cash reserves, endowment funds or contemporaneous gifts. More frequently, in lieu of deferring the project, schools turn to debt financing. There is limited data available on private debt financing by independent schools (El-Chaarani, 2015).

In the U.S., approximately 70 private schools issue bonds with published credit ratings. In addition, one of the major rating agencies estimate that for every one school that have issued bonds based on its own credit rating, five more have conducted bond financings supported by a direct-pay letter of credit from a bank or bond insurance provided by a U.S. based bond insurance company. In United States, private schools rely primarily on tuition revenue, charitable donations and endowment and investment portfolio income to support their operations, and each school is on its own to address its facility and financing needs (Fosu, 2013).

In China, over the past 10 years the number of private schools operating has increased by nearly 3,300 from 25,998 in the 2017-2018 school years to 29,273 in the fall of 2019. Total private school enrolment at the end of 2019 was over 5.3 million, representing approximately 10% of total elementary and secondary enrolment in China. Since the 2017-2018 school year, private school enrolments has increased by over 450,000 students or 9.24% from 4,889,545 in 2017-2018 to 5,341,513 in the fall of 2019 (Fong Chun Cheong, 2015).

In Australia, private schools on average receive about $10K per student from combined government funding on top of the parental fees which can be as much as $35K per non-boarding student. The recent OECD Education at a Glance in 2019 shows that Australia is the 4th most privatized country for education. Whereas countries like Sweden, Norway, Finland and Luxembourg spend almost no private money on school education, Australia ranks 4th as the most privatized school education spending in the OECD after Mexico, Columbia and Turkey, with 35% of students attending private schools (Saad, Ghani, Ahmad & Salim, 2015).

**African Perspective of Debt Financing on Financial Sustainability**

Education remains a major challenge in South Africa and has a direct impact on the current skills shortage in the local economy. One of South Africa’s more well-known private education providers is Johannesburg Stock Exchange-listed Curro. Founded in 1998, Curro expects to have 40 schools by the end of this year, and is on track to operate 80 facilities by 2020. The Education SME Fund will offer finance for a variety of purposes, including expansion, working capital, takeovers and management buy-outs. Van Biljon however emphasised that Business Partners is not a “charity” and will only lend to money-making companies. The need for quality education is especially large in South Africa’s low-income rural areas (Kajirwa, 2015).

Grobler (2013) asserted that, in Nigeria the increased students’ growth has overstretched the existing resources. In the country, issues closely related to education are generally declining funding of schools (both public and private) and the concomitant increases of student fees to ensure financial sustainability of the institutions. The private sector is self-financing and at times produces profits. Its primary source of income is student fees (UNESCO, 2015). It is averred that, the number of schools had rises from 160 in 1990 to more than 1000 in year 2020. More than 200,000 students enrolled in private secondary schools in Kenya by year 2003 this has led to financial.

In Ethiopia, education funding comes from different sources. The major one at all levels of government is public revenue from taxation. Education funds are reported to be distributed among primary, secondary and tertiary educational levels in the proportion of 30%, 30% and 40% respectively (Balunri, 2013). The public funding includes direct government expenditures in the form of subsidies to households such as lax reductions, scholarships, loans and grants. It also includes payment from Education Tax Funds (ETF) mainly for capital expenditure. At present, private sources account for about 20% of total
national donors, particularly in the form of loans (Adewale, 2016). The underlying rational for public funding of education is to equip people with the requisite knowledge, skills and capacity to enhance the quality of life and increase productivity and capacity to gain knowledge of new techniques for production so as to be able to participate evocatively in the development process. Uganda, like many African countries, faces major challenges in providing quality and accessible education through government-funded schools. This is why advocates of private schools speak of their ability to help rapidly increase access to quality education where government budgets or infrastructure are inadequate to meet the rising demand. However, as much as private schools in Uganda have managed to contribute significantly to educating this nation, some still face a number of challenges even before the Covid-19 outbreak. Some of these challenges have led to the closure of schools, which affects students, teachers, the parents and the community at large (Lambe, 2014).

In Ghana, the private education sector is already making a significant contribution to education delivery and services. Private in this context means services and financing outside of public sector provision and includes for-profit, charitable, non-governmental, faith based, and community provision. Private schools are funded by corporations and their partner foundations, supported by international organizations, financiers and bankers, as well as individual investors to enhance sustainability of these schools (Awan & Saeed, 2014).

**Kenyan Perspective of Debt Financing on Financial Sustainability**

In Kenya, private schools ought to prudently utilize the resources that they are endowed with without drifting from their mission in order to maintain a financially sustainable institution that is able to meet all its resources and financing obligations and fulfill its mission (Gakuu & Kirimi, 2014). It is noted that financial sustainability can be promoted through a broad based and interdisciplinary approach. It is further noted that financial sustainability requires an organization to develop its overall capacity such as management capacity and technical capacity which are fundamental in generating revenue and attracting funding to the organization. According to Kamau (2016) prudent financial management is imperative in achieving financial sustainability of an organization.

It is asserted that, in the private education sector, it is fundamental to secure financial sustainability both in short and long term in addition to ensuring financial health of the sector (Mugo & Ngahu, 2015). In the same perspective, Grobler (2013), posited that the hundreds of thousands of primary school students who qualify for secondary admission in Kenya are not able to join these institutions due to the limiting capacity. To fill the void, secondary schools both public and private admit thousands students each year. These institutions offer focused education and training programmes to supplement what is offered government (Kenya National Bureau of Statistics, 2009).

Although many private secondary schools are committed to implementing education goals, including Education for All (EFA), they are constrained by financial sustainability challenges (Gongera & Okoth, 2018). In Uasin Gishu County, many private schools are faced with the challenge of weak financial position. Financial backbone of these schools solely lies in the school fee that is collected from the students (Ng’ang’a, 2017). This explains the existing status quo of stunted development of these institutions due to poor payment mode from the parents. This has been catalyzed by high rates of unemployment of parents who are mostly casual laborers. This has limited the abilities of these schools achievement to the desired goals thus led to the following impact. These schools have ended up being unattractive to trained teachers due to their low salary scheme; a point that has made them to embark on hiring untrained teachers or professionals from other disciplines who are yet to secure employment (Chebet, 2013). This temporary plan has an overall effect on the quality of delivery as the so called “teachers” work for the sake of earning salaries as opposed to having job satisfaction; and thus a loss in the number of students in some situations leading to closure. This study therefore seeks to assess the effect of debt financing on financial sustainability of private secondary schools in Uasin Gishu County.

**Statement of the Problem**

Financial sustainability is important to the survival of an institution because it leads to continuity, effectiveness and its efficiency. Specifically, financially stable schools are significant in efficient service delivery, good performance and quality education (Wagenge-Ouma, 2011). Despite the
continued capital investment by the owners, they have continued to face financial challenges. Lack of adequate financing, institutional structures, and effective delivery systems have been associated with low participation rates observed in developing economies. The diversity of funding sources and efficiency enhancing measures are therefore required to cover the significant financial investments for expanding access and improving the quality of secondary education. In addition, private institutions do not receive government funding and the persistent inequalities in the distribution of scarce education resources among various education sectors has resulted in low growth in the number of secondary schools (Ngware, Onsomu, and Muthaka, 2017). This has also led to poor quality of education, industrial court actions for non - remittance of statutory deductions and non-payment of suppliers as well as closure of these schools. In Uasin Gishu County, evidence of closures includes Lions School, Potters and Lochab Gulab private secondary school sections. Therefore, in order to improve the financial position, private schools will more likely turn to debt financing. Scholars have shown that debt financing impacts on financial performance, value of the firm and financial sustainability the findings obtained have been inconclusive (Ng'ang'a, 2017; Kajirwa, 2015; Gabrijelcic, Herman and Lenarcic, 2016). Most studies concentrate on business entities leaving out private schools despite the fact that they are also profit making entities which finance their operations using debt thereby leaving gaps. It is on this basis that the study sought to find out the effect of debt financing on financial sustainability of private secondary schools in Uasin Gishu County.

Objective of the Study
Effect of trade credit on financial sustainability of private secondary schools in Uasin Gishu County

Hypothesis of the Study
H01: Trade credit has no significant effect on financial sustainability of private secondary schools in Uasin Gishu County

2.0 Literature Review
Theoretical Review
Pecking Order Theory
The theory was first proposed by Myers and Majluf in 1984. Theory explains why an institution uses one form of finance over the other. Myers (1984) calls the hypothesis that, when determining the capital structure, firms employ a pecking order due to adverse selection, in which case, the firm initially looks at the retained profits, afterwards to leverage, and just in extraordinary conditions to equity when financing their operations. As pointed out by Myers (1984) main implications of the pecking order hypothesis is the strict arrangement of financing. Harelimana (2017) noticed that firms have a set order of sources of capital used to fund their operations. Accordingly, the pecking order hypothesis proposes that organizations are inclined to employ in house resources compared to outsourced resources, thus will favor retained earnings to obligation, near term obligation to long term obligation and obligation to equity. Firms prefer leverage over equity as they have a more conservative view with regards to dividends and utilize obligation financing to fully realize firm value. The pecking order theory assumes that there is no target capital structure. The firms choose capitals according to the following preference order: internal finance, debt, equity. Koskei (2017) argued the existence of information asymmetry between managers and investors. They argued that managers have more inside information than investors and act in favor of old shareholders. Firms are said to have used pecking order when they have a partial of inner financing to obtaining outside financing and where leverage is utilized, leverage to equity (Ikapel & Kajirwa, 2017). Company's financial results are one of the significant items influencing the choice of a company's capital structure. Firstly, Myers and Majluf (1984) contend that, organizations with higher profitability can majorly fund cash flow needs from held back profits, this would lessen the need to acquire outside financing. This consequently predicts a reverse relationship between firm's performance and use of debt (Githaigo & Kabiru, 2015).

This theory also presupposes that external stakeholders will attempt to establish the firm's value or financial performance, which they are not able to fully monitor from the financing decisions made by the firm. Consequently, a company's capital structure decision will act as flagging factor, whereby the decision makers employ more leverage as a pointer of company's high quality. This is a dependable pointer since well performing firms can secure more leverage, since they are viewed as less prone to default risk on leverage overhauling
expenses that grow after leverage issuance (Liziwe, 2017). The theory is significant to this study because private schools in Kenya tend to lean towards the argument of pecking order theory, because they maximizes on internal sources available to fund their operations before seeking external funds.

Conceptual Framework

Conceptual Framework is a hypothesized model identifying the model under study and the relationship between the dependent and independent variables (Mugenda & Mugenda, 2003). The goal of a conceptual framework is to categorize and describe concepts relevant to the study and map relationships among them (Tromp, 2012). Figure 2.1 represents the conceptual framework for this study. The independent variables include trade credit, bank loans and installment purchase while financial sustainability of private schools is the dependent variable. This is presented in Figure 2.1.

<table>
<thead>
<tr>
<th>Trade credit</th>
<th>Financial Sustainability</th>
</tr>
</thead>
<tbody>
<tr>
<td>Open accounts,</td>
<td>Income diversification</td>
</tr>
<tr>
<td>Promissory notes</td>
<td>Adequacy of Funds</td>
</tr>
<tr>
<td>Bill payable</td>
<td>Efficient Management of Assets</td>
</tr>
<tr>
<td></td>
<td>Self sufficiency</td>
</tr>
</tbody>
</table>

Independent Variable  Dependent Variable

Figure 2.1 Conceptual Framework

Empirical Review

Effect of Trade Credit on Financial Sustainability

Tang (2014) in a study carried for a period between 2009 and 2013 to investigate how the trade credit, from both supplier side and demand side, affects profitability of schools in Netherlands. The study used descriptive statistic and covered 71 SMEs in Netherlands. The study found that trade credits (accounts payable) are positively associated to profitability and that there is the need for schools to develop a long-term relationship with suppliers for them to access trade credit in an easier and a fast way. This study however left gaps it was done among schools in Netherlands while the current study will be specific to private secondary schools in Kenya.

Sola, Teruel and Martínez-Solano (2012) examined the profitability implications of providing financing to customers for a sample of 11,337 Spanish institutions of learning during the 2000–2007 period. The study found a positive linear relationship between trade credit and firm performance derived from the fact that the benefits associated with trade credit surpass the costs of vendor financing. Furthermore, the effect of receivables on firm profitability differs depending on certain firms’ characteristics. This study was done with regard to financing institutions of learning while the current study seeks to fill this gap by finding out the effect of trade credit on private secondary schools.

Katiwa (2017) did a study on the effect of trade credit on share value of private secondary schools. Secondary data was collected for a period of 5 years (2012 to 2016) on an annual basis. The study employed a descriptive cross-sectional research design and a multiple linear regression model was used to analyze the relationship between the variables. The results revealed that individually, trade credit and assets of the firm are statistically significant determinants of value of private secondary schools while capital structure is an insignificant determinant. This study recommends that policy makers should establish measures that will ensure an increase in trade credit that will improve firm value without exposing the firm to risks associated with trade credit. This study left gaps since it adopted the use of secondary data while the current study will adopt primary data to explain the effect of trade credit on financial sustainability of private secondary schools.

Kapkiyai and Mugo (2015) did a study on the effect of trade credit on financial performance of private schools: evidence of Eldoret Town, Kenya. The study...
discussed how trade credit affected three measures of financial performance namely; liquidity, profit margin and return on assets. Documentary guide was used in the study to collect secondary data. Analysis was conducted using both inferential and descriptive statistics specifically mean and standard deviation. Findings indicated that trade credit positively affected liquidity, profit margin and return on assets. The study however dealt with small scale enterprises and not financial sustainability of private secondary schools in Uasin Gishu County.

Mwangangi (2013) conducted a research to ascertain the correlation existing between trade credit and the Performance of Secondary schools. This research utilized Panel secondary data from for the period 2009 to 2012. Descriptive correlation research design was used and 39 Non-Financial Companies listed at Nairobi Securities Exchange were sampled. Regression Analysis was utilized to ascertain the correlation existing between trade credit and the value of firms. This research founded an inverse, insignificant correlation between trade credit and the Value of Firm. This study did not specifically look to the impact of trade credit on financial sustainability and was specific to. The study however dealt with Performance of Secondary schools and not financial sustainability of private secondary schools in Uasin Gishu County.

3.0 Research Methodology

Research Design
According to Creswell (2014), a research design is the set of methods and procedures used in collecting and analyzing measures of the variables specified in the problem research. This study employed descriptive research design. Descriptive research design involves collection of information from a large population and concentrates on the respondent’s views in order to get relevant information about the dependent and independent variable using questionnaires to achieve the research objectives. The major purpose of descriptive research is description of the state of affairs as it exists. Descriptive research includes survey method, observational method and case study method (Sekaran & Bougie, 2010).

Target Population
The target population for this study was school directors, principals and accountants of private secondary schools in Uasin Gishu County. Accessible population was 156 respondents composed of 52 school directors, 52 principals and 52 accountants of private secondary schools in Uasin Gishu County, Kenya as per Uasin Gishu, Ministry of Education (2020). Table 3.1 shows the accessible population of the study.

<table>
<thead>
<tr>
<th>Category</th>
<th>Target Population</th>
</tr>
</thead>
<tbody>
<tr>
<td>Directors</td>
<td>52</td>
</tr>
<tr>
<td>Principals/Administrator</td>
<td>52</td>
</tr>
<tr>
<td>Accountants</td>
<td>52</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>156</strong></td>
</tr>
</tbody>
</table>


Sampling Frame
The sampling frame for this study was the list of 52 private secondary schools in Uasin Gishu County, Kenya. This is according to the list in https://www.uasingishu.go.ke/education/. Respondents were 156 composed of 52 school directors, 52 principals and 52 accountants.

Sample Size and Sampling Technique

Sample Size
The sample size of this study was based on Yamane’s of 1967 formulae as shown below:

\[ n = \frac{N}{1 + Ne^2} \]

Where;
- \( n \) is the sample size,
- \( N \) is the population size, (156)
- \( e \) is the level of precision (0.05).

\[ n = \frac{156}{1 + 156(0.05)^2} = 112 \]

The desired sample size for the students thus comprised of 112 respondents.

Sampling Procedure
The study adopted stratified random sampling to select the respondents. This technique was chosen because it gives everyone a higher chance of selection.

<table>
<thead>
<tr>
<th>Category</th>
<th>Sampling</th>
<th>Sample</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Total</strong></td>
<td></td>
<td>112</td>
</tr>
</tbody>
</table>
Procedure

<table>
<thead>
<tr>
<th>Procedure</th>
<th>52/156x112</th>
<th>37</th>
</tr>
</thead>
<tbody>
<tr>
<td>Directors</td>
<td>52/156x112</td>
<td>37</td>
</tr>
<tr>
<td>Principals/Administrator</td>
<td>52/156x112</td>
<td>37</td>
</tr>
<tr>
<td>Accountants</td>
<td>52/156x112</td>
<td>37</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td>156</td>
<td>112</td>
</tr>
</tbody>
</table>

**Data Collection Instrument**

This study used questionnaires to collect data relevant to the study. Sekaran (2013) suggests that questionnaires are resourceful data collection instrument which provided the researcher to know what was required and how to measure the variables of concern. Questionnaires are easy to administer and analyze. The questionnaires are advantageous because they cover a large population within a short time and minimal cost on the part of the researcher and intensify independence and accuracy of responses from the respondents (Sekaran, 2013). Structured questionnaires were administered to sampled respondents. Questionnaires were used to obtain primary data from the sampled population.

**Pre-Test of Research Instruments**

Pretesting and pilot testing are invaluable components of survey research, affording researchers a valuable opportunity for reflection and revision of their project before the costs of errors begin to multiply later on (Nixon, 2002). A critical examination of the questionnaire was done in order to; pin point problem areas, reduce measurement error, reduce respondent burden and determine whether respondents interpret questions correctly without creating biasness. The questionnaires were administered physically to 11 respondents from the private secondary schools in Uasin Gishu County prior to the final survey as an actual rehearsal by the interviewer.

**Validity of the measuring Instrument**

Validity is defined as the point to which an instrument measures what it is projected to evaluate (Mugenda, 2011). The validity of the data collection instrument for the study was tested by first administering it on conveniently selected respondents from randomly selected private schools in Nandi County. In addition study research experts including the supervisor evaluated the instrument by assessing the concepts relevant to the study to determine whether the sets of items indicated in the sets of questionnaires accurately represented the concepts under study. The comments and criticism of the experts was considered and incorporated in the final draft of the questionnaires so as to ensure its content validity. Creswell and Clark (2011), state that the usual procedure in assessing content validity of a measure is to use professionals or experts in a particular field.

**Reliability of the Questionnaire**

Reliability is a measure of the degree to which a research instrument yields consistent results or data after repeated trials (Wachira, 2017). Split-half technique was used to assess the reliability of the instrument. These involved administration of the questionnaire to the pilot group of respondents and then dividing the scored instrument into two halves and then computing the correlation coefficient of the two halves to see how they correlate. Based on Cronbach’s alpha coefficient, 0.70 or higher value was considered to acceptable value for Cronbach’s alpha reliability (Sekaran, 2003). In general, reliabilities less than 0.6 are considered to be poor, those in the 0.70 range, acceptable, and those over 0.80 good (Mugenda, 2011).

**Data Processing and Analysis**

The questionnaires collected from the respondents were ascertained to ensure that only the sufficiently and appropriately filled ones will be considered for the study. This was done in order to eliminate incomplete data and minimize outliers in the eventual findings. The Statistical Package for Social Sciences (SPSS) version 24.0 computer software was used to facilitate data analysis. Data collected from the questionnaires was analyzed using descriptive and inferential statistics. In particular, descriptive statistics include frequencies, percentages, means and standard deviations while inferential statistics constituted Pearson’s product moment correlation coefficient and multiple regression analysis. The findings were presented in form of tables and were interpreted and discussed in line with the study objectives. The following multiple regression model was adopted.

\[ Y = \alpha + \beta_1 X_1 + \varepsilon \]  

**Equa. 3.1**

\( Y \) represents the dependent variable (Financial Sustainability)  
\( \alpha \) - the constant of equation (represents the changes that cannot be explained by independent variables in the model)
\( X_1 \) Represents trade credit
\( \beta_1 \) are the coefficients of independent variables
\( \xi \) - error term

4.0 Research Findings and Discussions

Response Rate
The researcher distributed 156 questionnaires and received a total of 105 questionnaires back for analysis. This represents 67.3% response rate. This response rate was deemed satisfactory as suggested by Zikmund, (2010) who stated that in descriptive research, a response rate of above fifty percent (50%) is adequate for analysis, sixty percent (60%) good and seventy percent (70%) and above to be very good.

Table 4.1: Response Rate

<table>
<thead>
<tr>
<th>Responses</th>
<th>No</th>
<th>Percentages</th>
</tr>
</thead>
<tbody>
<tr>
<td>Administered questions</td>
<td>156</td>
<td>100</td>
</tr>
<tr>
<td>Unreturned</td>
<td>51</td>
<td>32.7</td>
</tr>
<tr>
<td>Usable questionnaires</td>
<td>105</td>
<td>67.3</td>
</tr>
</tbody>
</table>

Pilot Study Results
This study assessed the internal consistency of the research questionnaires. The most standard test of inter-item consistency reliability is Cronbach’s alpha coefficient. Sekaran and Bougie (2010) noted that it designates the degree to which an instrument is error free, consistent and stable across time and also across the various items in the scale. Hence, the Cronbach alpha coefficient test was engaged to measure the internal consistency of the instruments used and the coefficient alpha of these variables were reported in Table 4.2.

Table 4.2 Reliability analysis

<table>
<thead>
<tr>
<th>Constructs</th>
<th>Cronbach’s Alpha Coefficient</th>
<th>Test items</th>
</tr>
</thead>
<tbody>
<tr>
<td>Trade Credit</td>
<td>0.875</td>
<td>5</td>
</tr>
<tr>
<td>Financial sustainability</td>
<td>0.811</td>
<td>3</td>
</tr>
</tbody>
</table>

As shown in Table 4.2, the Cronbach alpha test showed values ranging from 0.702 (Installment Purchase) to a high of 0.875 (Trade Credit). These findings were in line with the rule of thumb proposed by Hair et al., (2010) where coefficient of 0.70 is regarded to have an average reliability while coefficient of 0.70 and above indicates that the instrument has a high reliability standard. Therefore, all items were included in the research instrument.

4.4 Demographic Data of the Respondents
This section consists of information that describes basic characteristics such as gender of respondents, Age of respondents, and the respondent’s level of experience.

Distribution of Respondents by Gender
The researcher asked the respondents to indicate their gender on the questionnaire and the results are as presented in Table 4.3

Table 4.3 Gender Composition of the Respondents

<table>
<thead>
<tr>
<th>Gender of Respondent</th>
<th>Frequency</th>
<th>Percentage (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Male</td>
<td>58</td>
<td>55.2</td>
</tr>
<tr>
<td>Female</td>
<td>47</td>
<td>44.8</td>
</tr>
<tr>
<td>Total</td>
<td>105</td>
<td>100.0</td>
</tr>
</tbody>
</table>

Table 4.3 indicates that out of a total of 105 respondents 58(55.2%) of the respondents who participated in the study were male while 47(44.8%) were female. Gender was an important variable in this study to investigate the representation of male and female respondents in the study. The results indicate that there are more male than female accountant/directors working in private schools in Uasin Gishu County. However, the gap between male and female isn’t so wide since both male and female individuals are given a chance to share their knowledge, the outcome for the study is likely to be greater. Basically, there is a distinctive set of skills brought about by the diverse genders.

Distribution of Respondents by Age
The respondents were asked to indicate their age bracket on the questionnaire to assess if the respondents were from diverse age groups and the results are as presented in Table 4.4
As indicated in Table 4.4, 6(5.7%) were aged between 20-25 years, 20(17.1%) were aged between 26 to 30 years, 29(27.6%) were aged between 31 to 5 years, 20(17.1%) were aged 36 to 40 years, 17(16.2%) were aged between 41-45 years and 13(12.4%) were above 45 years of age. This indicates that the respondents were composed of individuals from diverse age groups and have several years of experience and skills that are necessary to understand the effect of debt financing on financial sustainability of private secondary schools.

Distribution of Respondents by Highest Education Level
Respondents were asked to indicate their highest education level. This item was to assess their level of skills and to establish whether they were in a position to answer the questionnaire accurately and the results were as indicated in Table 4.5.

As indicated in Table 4.5, out of the 105 respondents, majority 71(67.6%) had bachelor’s degree, 19(18.1%) were diploma holders, 10(9.5%) represented others who could be PhD or CPA holders, 4(3.8%) had a master’s degree while only 1(1.0%) of the respondents were certificate holders. These findings indicate that the respondents were in a position to accurately answer the questionnaire. In addition, the findings also indicate that the accountants and School directors/administrators are equipped with the necessary knowledge and skills to ensure financial sustainability of the school.

Distribution of Respondents by Years of Experience
Respondents were asked to indicate the number of years of experience they have had in the school to assess their familiarity in the field and hence assure validity of their responses, the results are as indicated in Table 4.6.
Table 4.6 shows the number of years respondents had served in the school. Out of the 105 respondents, 27(25.7%) had served for less than 5 years, while the majority 49(46.6%) had served for 6-10 years, 20(19.0%) had served for 11-15 years and 3(2.9%) had served for between 16-20 years while 6(5.7%) had served for more than 20 years. The findings of this study indicate that the respondents had adequate experience to respond to the questions and are informed of the school debt financing and financial sustainability. This concurs with the study by Lussier (2008) who summarized that the individuals with higher experiences have greater chances of responding to the questionnaire statements compared to people with less experience.

Descriptive Statistics
The descriptive statistics of the variables were analyzed using frequencies, percentages and mean. In the analysis mean range of 1 to 1.4 represents strongly disagree, while for disagree the mean ranged from 1.5 to 2.4, and for neutral the mean ranged from 2.5 to 3.4, for agree the mean ranged from 3.5 to 4.4 and lastly, for strongly agree the mean ranged from 4.5 to 5.0, while for standard deviation of greater than 0.5 was evaluated to indicate homogeneity and a standard deviation less than 0.5 indicates heterogeneity of data.

Effect of Trade Credit on Financial Sustainability
This study sought to establish the effect of trade credit on financial sustainability of private secondary schools in Uasin Gishu County. To achieve this objective mean, frequencies and percentages were used to interpret the data. This is presented in Table 4.7

Table 4.7 Effect of Trade Credit on Financial Sustainability

<table>
<thead>
<tr>
<th>Trade Credit</th>
<th>SA</th>
<th>A</th>
<th>U</th>
<th>D</th>
<th>SD</th>
<th>M</th>
<th>Std</th>
</tr>
</thead>
<tbody>
<tr>
<td>i. Trade payable improves the quality of strategic decisions that leads to reduced cost of services</td>
<td>F</td>
<td>40</td>
<td>39</td>
<td>5</td>
<td>8</td>
<td>13</td>
<td>3.81</td>
</tr>
<tr>
<td></td>
<td>%</td>
<td>38.1</td>
<td>37.1</td>
<td>4.8</td>
<td>7.6</td>
<td>12.4</td>
<td></td>
</tr>
<tr>
<td>ii. Trade credit enhances filling financing deficits for firms that have insufficient financial resources</td>
<td>F</td>
<td>39</td>
<td>42</td>
<td>8</td>
<td>16</td>
<td>0</td>
<td>3.99</td>
</tr>
<tr>
<td></td>
<td>%</td>
<td>37.1</td>
<td>40.0</td>
<td>7.6</td>
<td>15.2</td>
<td>0.0</td>
<td></td>
</tr>
<tr>
<td>iii. Prepayments enable efficient utilization of available resources</td>
<td>F</td>
<td>51</td>
<td>31</td>
<td>17</td>
<td>3</td>
<td>3</td>
<td>4.18</td>
</tr>
<tr>
<td></td>
<td>%</td>
<td>48.6</td>
<td>29.5</td>
<td>16.2</td>
<td>2.9</td>
<td>2.9</td>
<td>.998</td>
</tr>
<tr>
<td>iv. Trade receivables improves budgetary Solvency of secondary schools</td>
<td>F</td>
<td>51</td>
<td>33</td>
<td>6</td>
<td>12</td>
<td>3</td>
<td>4.11</td>
</tr>
<tr>
<td></td>
<td>%</td>
<td>48.6</td>
<td>31.4</td>
<td>5.7</td>
<td>11.4</td>
<td>2.9</td>
<td></td>
</tr>
</tbody>
</table>

From the descriptive statistics Table 4.7, most of the respondents 75.2% agreed that trade payable improves the quality of strategic decisions that leads to reduced cost of services while 20% disagreed and was supported by a mean of 3.81. The respondents also agreed at 77.1% that trade credit enhances filling financing deficits for firms that have insufficient financial resources, while 15.2% disagreed; this had a mean of 3.99 on their responses. In addition, 78.1% of the respondents were in agreement with a mean of 4.18 that Prepayments enable efficient utilization of available resources, out of this 5.8% disagreed. Lastly, 80% of the respondents were in agreement with a mean of 4.11 that trade receivable improves budgetary solvency of secondary schools, out of this 14.3% disagreed. This implied that the respondents are in agreement that trade credit plays a key role on financial sustainability of private secondary schools in Uasin Gishu County since their responses were between
mean scores of 3.90 and 4.8 on the continuous Likert scale. These findings are similar to that of Tang (2014) who found that trade credits (accounts payable) are positively associated to profitability and that there is the need for schools to develop a long-term relationship with suppliers for them to access trade credit in an easier and a fast way. Also Katiwa (2017) revealed that individually, trade credit and assets of the firm are statistically significant determinants of value of private secondary schools while capital structure is an insignificant determinant. These findings however disagreed to the findings by Mwangangi (2013) who founded an inverse, insignificant correlation between trade credit and the Value of Firm.

Table 4.8 Financial Sustainability

<table>
<thead>
<tr>
<th>Financial Sustainability</th>
<th>SA</th>
<th>A</th>
<th>U</th>
<th>D</th>
<th>SD</th>
<th>M</th>
<th>Std</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. A schools favorable cash ratio indicates a good financial position of the school</td>
<td>F</td>
<td>34</td>
<td>46</td>
<td>6</td>
<td>6</td>
<td>13</td>
<td>3.78</td>
</tr>
<tr>
<td>i. Revenue generated from services offered internally are cost efficient</td>
<td>F</td>
<td>35</td>
<td>46</td>
<td>7</td>
<td>12</td>
<td>5</td>
<td>3.90</td>
</tr>
<tr>
<td>ii. Services offered should sustain itself financially effectively</td>
<td>F</td>
<td>54</td>
<td>29</td>
<td>16</td>
<td>4</td>
<td>2</td>
<td>4.23</td>
</tr>
</tbody>
</table>

On the effect of debt financing on financial sustainability of private secondary schools in Uasin Gishu County, the study findings indicated that majority of the respondents 76.2% agreed that a schools favorable cash ratio indicates a good financial position of the school, 18.1% of the respondents disagreed, this was supported by a mean of 3.78. Further 77.1% also agreed that revenue generated from services offered internally are cost efficient while 16.2% disagreed; this was supported by a mean of 3.90. Furthermore the findings indicated that 79% also agreed that services offered should sustain itself financially effectively while 5.7% disagreed; this was supported by a mean of 4.23. Lastly 85.7% of the respondents agreed that efficient debt management promote financial stability, this had a mean of 4.14. This implies that debt financing influence the financial sustainability of private secondary schools in Uasin Gishu County. These finding is consistent to other findings by Onchong’a, Muturi & Atambo (2016) who stated that, debt financing is a key source of capital in many growing firms since their retained earnings may not be sufficient enough or may be unavailable. Harelimana (2017) stated that, the sources of funds depend on the relative ease with which funds of different types are obtainable, and this in turn is affected by the character of the company’s assets, the seasonal and cyclical fluctuations in its volume of business, its rapidity of growth, its demonstrated or anticipated stability of profits and continuity of operations, its size, and any other aspect of its operations which affects its position as a potential borrower. These factors also determine its financial policy, causing the management to choose one source of financing rather than another (Adam, 2014).

**Financial Sustainability**

This study sought to the effect of debt financing on financial sustainability of private secondary schools in Uasin Gishu County. To achieve this objective mean frequencies and percentages were used to interpret the data. This is presented in table 4.8.

**Inferential Analysis**

This section outlines the relationship between the various independent variables on the dependent variable. It discusses the various Pearson product moment correlations and multiple regression analysis. The measures were constructed using added
scales that were from the independent and dependent variables.

### Table 4.9 Correlation analysis

<table>
<thead>
<tr>
<th></th>
<th>Pearson Correlation</th>
<th>Sig. (2-tailed)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Trade credit</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Financial sustainability</td>
<td>.915**</td>
<td>.000</td>
</tr>
</tbody>
</table>

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

From the study the results indicate that all the study variables had positive high correlation with financial sustainability of private secondary schools, this was indicated by trade credit r=0.915 and p < 0 .01. This implies that when trade credit, bank loan and installment purchase are positive, financial sustainability of private secondary schools in Uasin Gishu County are also positive hence, they lead to enhancement of financial sustainability.

From the study it will be noted, the above table was at 99% level of confidence (significant at the 0.01 level (2-tailed), since a unit change in trade credit leads to 0.915 unit change in financial sustainability of private secondary schools in Uasin Gishu County.

Also a unit change in bank loans leads to 0.892 unit change in financial sustainability of private secondary schools in Uasin Gishu County. Lastly, a unit change in installment purchase leads to 0.886 unit change in financial sustainability of private secondary schools in Uasin Gishu County.

### Multiple Regression Analysis

The study sought to establish a combined effect of trade credit, bank loan and installment purchase on financial sustainability of private secondary schools in Uasin Gishu County. The results of multiple regression analysis shown in Table 4.9.

### Table 4.9 Multiple Regression Model Summary

<table>
<thead>
<tr>
<th>Model</th>
<th>R</th>
<th>R Square</th>
<th>Adjusted R Square</th>
<th>Std. Error of the Estimate</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>.786*</td>
<td>.618</td>
<td>.614</td>
<td>.47536</td>
</tr>
</tbody>
</table>

a. Predictors: (Constant), trade credit

b. Dependent Variable: Financial sustainability

From Table 4.9, R-Squared is used to evaluate the goodness of fit of a model. In regression, the R square coefficient of determination is a statistical measure of how well the regression line approximates the real data. It measures the proportion of the variation in dependent variable in this case financial sustainability of private secondary schools, explained by independent variables. The adjusted R-squared is a modified version of R-squared that has been adjusted for the number of predictors in the model. The adjusted R-squared increases only if the new term improves the model more than would be expected by chance. It decreases when a predictor improves the model by less than expected by chance while the standard error of the estimate is a measure of the accuracy of predictions.

From the results on model summary R= 0.786, R-square = 0.618, adjusted R- square= 0.614, and the SE= 0.47536. The coefficient of determination also called the R square is 0.618. This implies that the effect of the predictor variables (trade credit, bank loan and installment purchase) explains 61.8% of the variations in financial sustainability of private secondary schools in Uasin Gishu County. This implies that a 1 unit change in the predictor variables (trade credit, bank loan and installment purchase) has a strong and a positive effect on financial sustainability of private secondary schools in Uasin Gishu County.

This study therefore assumes that the difference of 38.2% of the variations is as a result of other factors not included in this study. The standard error(S) of the regression provides the absolute measure of the typical distance that the data points fall from the regression line. S is in the units of the dependent variable. The standard error is an important indicator of how precise an estimate of the population parameter. As presented in table 4.15 (S=.47536) which is 4.8%. This indicates that the regression
model is precise using the units of the dependent variable.

Assessing the Fit of the Multiple Regression Model
Multiple regression analysis was conducted to test the influence among predictor variables on financial sustainability of private secondary schools in Uasin Gishu County. All the four null hypotheses were tested using F statistic. The test results are shown in Table 4.10.

Table 4.10 ANOVA Results

<table>
<thead>
<tr>
<th>Model</th>
<th>Sum of Squares</th>
<th>df</th>
<th>Mean Square</th>
<th>F</th>
<th>Sig.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Regression</td>
<td>46.302</td>
<td>4</td>
<td>11.576</td>
<td>321.519</td>
<td>.000</td>
</tr>
<tr>
<td>Residual</td>
<td>3.600</td>
<td>100</td>
<td>.036</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Total</td>
<td>49.902</td>
<td>104</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

a. Dependent Variable: Financial sustainability
b. Predictors: (Constant), trade credit

The findings showed that there was a statistically significant relationship between the independent variables and the dependent variable (F= 321.52; p<0.05). This therefore indicates that the multiple regression model was a good fit for the data. It also indicates that installment purchase, bank loans and trade credit all influence financial sustainability of private secondary schools in Uasin Gishu County.

Individual Regression Coefficients
The study employed multiple regression analysis to test the hypotheses. Multiple regression analysis was conducted to test the effect of the study variables installment purchase, bank loans and trade credit on financial sustainability of private secondary schools in Uasin Gishu County. This was done with a significance level of 0.05, such that when the significance value is less than the 0.05 the null hypothesis is rejected and when it is above 0.05 it is accepted. These results were presented in Table 4.11.

Table 4.11 Individual Regression Coefficients

<table>
<thead>
<tr>
<th>Model</th>
<th>Unstandardized Coefficients</th>
<th>Standardized Coefficients</th>
<th>t</th>
<th>Sig.</th>
</tr>
</thead>
<tbody>
<tr>
<td>(Constant)</td>
<td>.224</td>
<td>.119</td>
<td>1.875</td>
<td>.064</td>
</tr>
<tr>
<td>Trade Credit</td>
<td>.263</td>
<td>.314</td>
<td>5.130</td>
<td>.000</td>
</tr>
</tbody>
</table>

a. Dependent Financial sustainability

Thus the regression equation becomes;

\[ Y = 0.224 + 0.263 X_1 \] \hspace{1cm} Equation 4.1

From the study, Hypothesis one stated that;

H01: Trade credit has no significant effect on financial sustainability of private secondary schools in Uasin Gishu County.

The study findings indicated that trade credit was positive and had a significant effect on financial sustainability of private secondary schools in Uasin Gishu County with (\( \beta = 0.263; \ p<0.05 \)). Therefore the null hypothesis was rejected. This implies that trade credit enhance financial sustainability of private secondary schools in Uasin Gishu County. This study concurs with the study by Tang (2014) who found that trade credits (accounts payable) are positively associated to profitability and that there is the need for schools to develop a long-term relationship with suppliers for them to access trade credit in an easier and a fast way. Also Katiwa (2017) revealed that individually, trade credit and assets of the firm are statistically significant determinants of value of
private secondary schools while capital structure is an insignificant determinant. These findings however disagreed to the findings by Mwangangi (2013) who founded an inverse, insignificant correlation between trade credit and the Value of Firm.

5.0 Summary, Conclusions and Recommendations

Summary of Findings
The findings of the study were summarized as shown below:

Effect of Trade Credit on Financial Sustainability
The first objective of the study sought to the effect of trade credit on financial sustainability of private secondary schools in Uasin Gishu County. The study findings indicated the respondents agreed that trade credit affects financial sustainability of private secondary schools in Uasin Gishu County. These studies also indicated that bank loans positively and significantly affect financial sustainability of private secondary schools in Uasin Gishu County.

Conclusions
From the findings, it was concluded that trade receivables improves budgetary Solvency of secondary schools, trade credit enhances filling financing deficits for firms that have insufficient financial resources, Prepayments enable efficient utilization of available resources and trade payables improves the quality of strategic decisions that leads to reduced cost of services.

Recommendations
Based on the results, findings and conclusions the following recommendations have been made:

Recommendation for Policy and Practice
The study findings reveal that trade credit has a significant effect on financial sustainability of private secondary schools. The study therefore recommends that the management of private secondary schools in need to employ optimal levels of debt since interest payments on debt can affect the schools cash flows.

Recommendations on Theories
The study showed that trade off theory explains that a firm which has employed debt will experience financial distress when it is not able to meet the requirements of its debt holders. When the levered firm continually fails in meeting the debt holders’ obligations the firm can end up being insolvent. Financial distress costs or bankruptcy costs (direct or indirect) usually considered as the cost of debt is the primary portion of the Trade-off theory of the firm’s composition of capital (Sheikh & Wang, 2011).

The study further indicated the respondents agreed that there was a significant relationship between bank loan and financial sustainability of private secondary schools, therefore pecking order theory presupposes that external stakeholders will attempt to establish the firm’s value or financial performance, which they are not able to fully monitor from the financing decisions made by the firm. Consequently, a company’s capital structure decision will act as flagging factor, whereby the decision makers employ more leverage as a pointer of company's high quality. This is a dependable pointer since well performing firms can secure more leverage, since they are viewed as less prone to default risk on leverage overhauling expenses that grow after leverage issuance (Liziwe, 2017).

Suggested Areas for Further Studies
The conclusions of the study were made within the framework of its scope. However, the study established that the model summary indicated that, out of the chosen factors only 61.8% could explain the financial sustainability variation. This means that there were more factors that influenced the financial sustainability of private secondary schools in Uasin Gishu County. To improve on financial sustainability of private secondary schools in Uasin Gishu County and based on the findings of the study, the researcher suggests that the same study be carried out but explore other factors that may influence the financial sustainability of private secondary schools given the fact that the chosen variables could explain 61.8% variation of the financial variability.

References


