

Left Out From the Very Start: The Dilemma of Access for Students from Low-Income Families in South Sudan Public Universities

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Abstract

South Sudan public universities have transited from the mode of funding primarily based on the government to cost-sharing with no provision for financial aid. The purpose of mixed method study was to interrogate the influence of cost-sharing on students' access and attainment in South Sudan public universities. A total of 378 students were selected through random sampling procedure while purposive sampling was used to select six members of the National Council for Higher Education, four university administrators, and two universities. Snowballing sampling was used to choose four parents. Questionnaires were used to collect data from students and interview guide from members of the council, university administrators and parents. Statistical Package for Social Sciences computer programme version 23 was used for data analysis. A one sample t-test was used to compare means of two independent groups to establish whether there was significant difference in the views of the associated population. Descriptive statistic was reported in form of frequencies, percentages and tables. The findings revealed that enrolment increased despite changes in the mode of funding, political instability and economic downturn. However, the demographic expansion favored students from the privileged backgrounds. This means a substantial proportion of the population do not participate due to affordability issues. The study recommended the establishment of a financial aid scheme to cushion low-income groups. However, there are concerns that unless peace achieved, reforms in higher education system will continue to be elusive.

Key words: South Sudan, higher education, cost-sharing, net cost, financial aid, access, attainment, affordable and equity

Background

Cost-sharing in public colleges or universities is the shifting of some cost of higher education from government to students and/or their sponsors. It takes several forms: introduction of tuition fees where education was usually "free" or a sharp increase in tuition fees where tuition already existed; imposition of user charges to recover the expenses formerly subsidized by government such as food and accommodation; diminution of student grants and scholarships; effective recovery of students loans; and promotion of tuition-dependent private higher education (Johnstone 2016; 2003).

The debate over cost-sharing model in public institutions has been divisive for most parts. The proponents of cost-sharing argue that it increases the total revenue of higher education, making institutions more responsiveness to their "clients" demand. The opponents of the model, however, maintain that it threatens equity in access and attainment, particularly where tuition is not cushion with financial aid and inconsistencies in the disbursement of appropriation (Okhidoi, 2016 Orr, 2015; Salmi & Bassett, 214). In the last three decades, the conversation on cost-sharing in public institutions have shifted from who pays and who should pay (Barr, 2010) to how can higher education be made more accessible, affordable and equitable (UNESCO, 2017; United Nation General Assembly, 2016).

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Although cost-sharing has become a ubiquitous phenomenon, it is still being accepted with mixed feelings in some regions. A study by Orodho and Getange (2014), Woldegiorgie and Doevenspeck (2013) and Mamdani (1970) described how students and politicians protest the introduction of tuition fees in Sub Saharan African countries in 1980s and 1990s. Today, however, students and/or their sponsors seeking access to public colleges or universities are increasing awareness that they may be expected to make affront or deferred payment (Oketch, 2016; Chihombori, 2013; Marcucci, 2013; Wangenge-Ouma, 2012; World Bank, 2010). SSA countries differ by their political, economic, social and historical (PESH) situations. Table 1 demonstrates how each country PESH circumstances influence students' access, ability to pay and inclusion.

Table 1: Student financial assistance Programmes in Sub Saharan African Countries

Country	Student financial assistance programmes in African Countries
Angola	Government provide grants as living costs
Botswana	Grant-loan a scheme
Burundi	Students receive little direct financial assistance
Cameroon	Need-based and merit-based financing
Cote d' Ivoire	Government grants for all qualified students
Ethiopia	Deferred tuition fees and maintenance costs system
Kenya	Means tested financial aid through HELB program
Mali	Grants based on performance and age
Mauritius	Means-tested grants to cover tuition fees, books, exams and living costs
Namibia	Means-tested financing
Nigeria	Need-based financing
Senegal	Merit-based grants to cover tuition fees and living costs
South Africa	Means tested loan
Tanzania	Means-tested loan
Uganda	Dual track system but now experimenting on a means-tested loan
Zimbabwe	Need-based financing and beneficiaries bonded for a fixed period

Source: The World Bank, 2010

The Republic of South Sudan (RSS) gained independence on 9th July 2011 following an internationally supervised referendum, where the citizens overwhelmingly voted to separate from the then Sudan. The "yes" vote effectively brought an end to half a century of civil war, racial and religious discrimination (Hilda-Johnson, 2016; Babyesiza, 2015). South Sudan is the latest country in the African to transition to cost-sharing with a financial aid provision and erratic disbursement of state appropriation (Ministry of Higher Education, 2013).

The shift in paradigm was driven by three factors; demographic expansion, economic downturn and institutional behaviors in allocation of public spending. The challenge of transition that revealed itself in form of a power struggle among the ruling elites erupted into civil war in 2013 (Mamdani, 2016 and De Waal, 2014). This was also coupled with turbulent oil price in the world market in 2012 and 2014. According to Garang, Issa and Ali (2017), the global oil crisis combined with political instability resulted into the decline of South Sudan's Gross National Income (GNI). They noted that South Sudan GNI fell by around 70% since independence sending up annual inflation rate from 165 in January to 730 in August 2016 as illustrated in figure 1.

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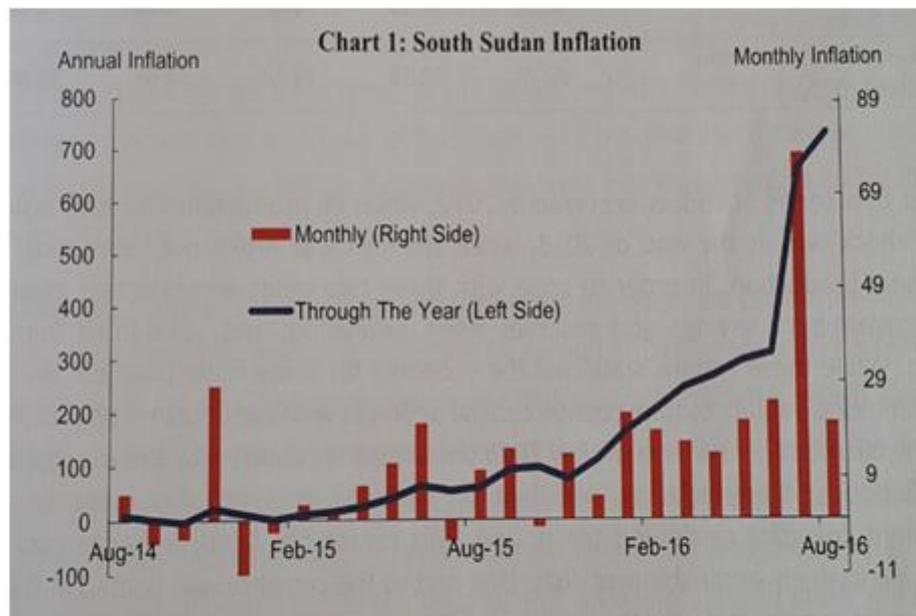


Figure 1: Inflation soared from 165 percent in January 2016 to 730 percent in August 2016

Similarly, the South Sudan Pound (SSP, local currency) lost to US dollars by 80%. The increase in inflation led to the rise in crime rate and lawlessness. This compounded insecurity, forcing some citizens to flee either to neighboring countries or relocated to Protection of Civilian Sites (PoCs). RSS is the first country in Africa to open the Balkan style civilian protection ‘sites’ across the country. Investment in the military rose faster than other sectors. By 2015/2016 budget year, allocation to the military sector exceeded 40% of the national expenditures just as external borrowing also increased. State spending and appropriation to education and other sectors declined (Ministry of Finance and Economic Planning Budget (2017) as demonstrated in figure 2

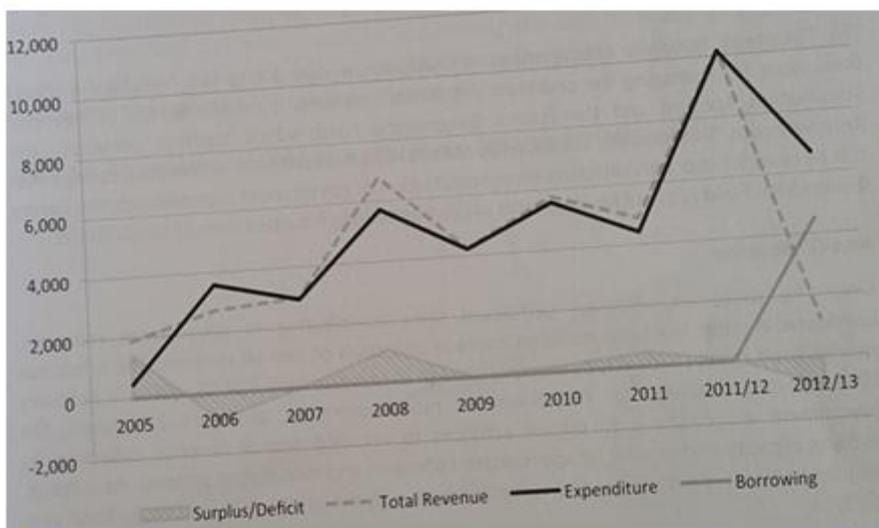


Figure 2: Development in revenue, expenditure and budget surplus or deficits

This had ominous effect on the financing of the five flagship public universities, namely; University of Juba inaugurated in 1977, University of Bahr el Ghazal in 1990,

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University of Upper Nile in 1992, University of Rumbek in 2009 and Dr. John Memorial University of Science and Technology in 2010. Public universities spontaneously charged fees to survive leading to competition. This forced National Council for Higher Education to standardize the sticker price, which was enforced through Ministerial Order No. 11/2016 due to minor resistance from some quarters.

While the capping of tuition fees may have regulated competition, it did not provide answers to questions on how to make higher education in South Sudan more accessible, affordable and equitable. Opponents of the sticker price maintained that it was conceived and implemented in haste. As such, it lacks strategic and procedural clarity on a number of issues. This includes; the roles of other key stakeholder in cost-sharing, the implementation procedures, price review, accountable and transparent utilization of revenues.

It is against this background that this study interrogates how changes in the funding model affect students' participation across income quintiles. Hence, moving the narrative from annual trend reporting on "how many" students annually enroll "who access" and "who is not" participating in South Sudan public universities, why and what can stakeholders do differently to improve ability to pay in order to increase enrollment and attainment.

Statement of the Problem

South Sudan cost-sharing formula has no provision for financial aid and riddled with erratic state appropriation. This has raised social, economic and strategic concerns. Students and/or their sponsors fear that the introduction of tuition and user fees without financial aid may create new obstacles to access and attainment for low-income families. Besides, the rising cost of living due to political instability and economic downturn has led to the increase in students' net cost for continuing students. There is a growing strategic concern that the rise in cost of college may undermine the achievement of the national goal to widen students' participation and narrow the gaps between the upper-income and low-income families. It may also deny the country achieving Target 4.3 of the SDG and AU Agenda 2063.

Surprisingly, there is little empirical work on the influence of cost-sharing on students' numbers and composition. Current conceptual studies tend to focus on annual enrollment trends rather than investment in higher education. The extent to which the new mode of funding affect students' access and attainment, particularly those from marginalizes groups is not yet known. This conversation was expected to contribute towards improving policy and practice on how to make SSPU more accessible, affordable and equitable to all, particularly students from low-income background.

Purpose of the Study

The purpose of the study was to interrogate how the shift from the mode of financing higher education based primarily on the government through tax-payers to cost-sharing framework affect students' access and attainment in SSPU.

Objectives of the Study

The objectives of the study were to:

- i What extent does the rising net cost affect students' decision to apply to South Sudan public universities
- ii How extent does the rising net cost influence students from different income groups' decision to enroll in South Sudan public universities.

Research Hypotheses

Two predictions were formulated based on research questions:

- H₀₁** There is no significant difference between in-state and out-of-state students with respect to the influence of net cost on the decision to access South Sudan public universities
- H₀₂:** There is no significant difference between upper-income and low-income families in the decision to enrolment in South Sudan public universities

Main Perspective

This study was guided by financial nexus theory. The theory was coined by Paulsen and St. John (2002). It posits that family socio-economic condition affects students' access and attainment in different ways. In the last three decades, there has been a fundamental policy shift from state funding to cost-sharing. Different countries have implemented different models in line with their economic, social, political and historical background. While some countries have succeeded, others are still experiencing challenges due to variation in the national economy and family socio-economic circumstances.

The major strength of theory is to underscore the importance of funding in create enabling conditions for students to enroll, remain enrolled and qualify. The main weakness of framework is that it assumes that financial variable is the sole factor influencing students' decision to access and attainment. There is a growing body of research showing that other non-monetary consideration plays a significant role in students' matriculation and attainment. This includes; leadership political will, students' aspiration, and commitment to the goal; parent, peers and teachers support, institutional rule and regulations, academic progress and extracurricular activities (Goldhaber, Grout & Holden, 2017; Gichuhi, 2015).

The justification of applying financial nexus theory in this study was to highlight the challenges faced by low-income families in seeking university qualification for their children. South Sudan cost-sharing model has no provision for financial aid and docked with irregular disbursement of state appropriation. This forced institutions to relay on parents who are already hard hit by the rising cost of living. If nothing is done about this, South Sudan is unlikely to widen participation nor narrow income gaps between upper and low-income groups. The country may also not meet its global obligation SDG Target 4, 3, which calls on all member states to make higher education more accessible, affordable and equitable to all, especially for students from the marginalized groups.

Methods

The study used mixed method convergent parallel research design, an approach which allowed the researcher to use both qualitative (particularly phenomenology approach) and quantitative (cross-sectional survey) instrument to collect data collection, analyze them separately then compare and contrast the results of each finding (Creswell, 2015). The researcher accorded each strand equal time and status. Phenomenology approach was preferred because it was deemed ideal to describe lived experience and in-depth meaning participants attribute to what they do (Patton, 1990; Greene, Caracelli & Graham, 1989). Cross-sectional survey was chosen because it is appropriate for taking a snapshot of a population at a given time (Lebo and Weber (2015). Using both approaches in a single study was deemed necessary for triangulation.

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A sample unit of 378 undergraduate students was chosen from a target population of 16,618 students in SSPU through the use of Krejcie and Morgan's (1970) Table for determining sample size. This procedure suggests that from a given population of 10,000 to 24,000, a sample size of 378 is adequate to make an acceptable decision on the finding when the margin of error is 5% and the confidence level is 95%. The selection of actual participants was conducted through the use of simple random sampling.

Conversely, purposive sampling was used to select six members of National Council for Higher Education and four senior university administrators from the University of Juba and the University of Bahr el Ghazal. The two public universities were chosen because they were accessible. Others were hard to reach due to political insecurity. In addition they contain 80% of students' caseload in SSPU. Snowballing sampling techniques was used to select four parents while quota sampling procedure was used to allocate the numbers of slots per college/faculty/institutes. Non-probability sampling is preferred because the numbers of participant were small (Rubin & Rubin, 2005; Patton, 2001).

Questionnaire was used to collect data from students. The researcher check the instrument for quality assurance through an online simulation exercise conducted on 30 students and staff of the University of Bahr el Ghazal. However, this group of students and staffs were not included in the final study. This pilot testing helped to detect some vague and irrelevant items in the question. According to Orodho (2012), simulation makes research instruments more robust and users friendly.

Three experts were asked to review the instrument to establish whether it measures what it purports to measure. Their assessment indicated that 0.8 of the questions items were good for the task. However, the researcher modified items marked by the experts for lack of clarity. According to Creswell (2015), content validity is achieved by rational rating of the instruments. If the experts agree on question item(s), then the instrument is purported to measure what it is supposed to measure. The researcher further examined the comprehensiveness and internal consistencies of questions through the use of Cronbach Coefficient, which was calculated at 0.83. According to Oladimeji (2015), a coefficient rating of 0.7 and above is considered high and appropriate for a study.

Interview guide was used to collect data from the members of the NCHE, university administrators, parents and two focus group sessions. Document analysis was also used to confirm whether the evidence provided were dependable. To ensure that data solicited through interview guides and document analysis were credible, dependable and confirmable, the researcher spent three months in the field (April-May 2018), selected key informants, persistent observation of everyday life, member checking and debriefing. Both Boeije (2013) and Lincoln and Guba (1985) supported these approach of establishing a trustworthiness of finding.

The researcher directly administered interview while participant filled and return the questionnaires. The instruments return rate was impressive: 100% response from students of both universities; 80% for the members of the National Council for Higher Education; 83% university administrators, and 100% parents. The overall instrument return rate of both questionnaires and interview guides was 90.8%. According to Mugenda and Mugenda (2004), instrument rates of return above 80% is considered high and a reliable representation of the target the population.

A one sample t-test was used to test H_{01} and H_{02} . The test was chosen because it's appropriate to compare means of two independent groups in order to determine whether there is any statistical evidence that the associated population means were significantly different. The procedures involve four steps: stating both null and alternative; formulate the decision;

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analyse sample data and interpret results (Kothari et al, 2014). On the other hand, the collection and analysis of qualitative data took place simultaneously. This procedure requires that the researcher carefully read through the field notes or audio to understand content, analysis and interpret before coding, draw themes, meanings and conclusion (Boeije, 2013; Patton, 2001).

The researcher ensured that the following ethical considerations were put right before venturing into the field. This includes: formal approval from the Catholic University Review Board; approval of gatekeepers starting with Ministry of Higher Education and Vice Chancellors of SSPU. The researcher also gave due respects to the privacy of the participants, research site and adhered to the norm of no falsification of evidence and conclusions (Babbie and Mouton, 1998).

Results and Discussions

This section covers presents the demographical profile and discussions of the results derived from the research questions and its corresponding null hypothesis

Demographical Information

The real identities of all participants were hidden for ethical reasons. They are, however, referred to using broad labels such as students, members of the council, university administrators and parents. Out of 100% students' participation, 37% of the students' age range between 21-30 years, 29% 31-40, 22% below 20 years and 9% above 41%. Data also show that 73% of the students were male while 27% female. Admission data show that 79% of the students were admitted through the joint admission board while 21% through other approaches. Admission by region reveals that 78% of the students were out-of-states recruits compare 22% in-state recruited. An evaluation of students by years of study revealed that 33% were second years, 28% third year, 23% first years, 14% fourth year and 2% fifth year.

Field data indicated that 50% of the members of the National Council for Higher Education age ranged between 45-54 years, 20% above 50 years, while 10% between 35-44 years. Data also showed that 80% of the council members were male and 20% female. Given that higher education is a highly professional field, 40% of the council members interviewed had PhD degree, 30% professors, 10% masters while 20% did not mentioned their qualification. Statistics also showed that 50% of the council members served in higher education sector for over 10 years, 20% less than fifteen, and 10% less than five years. However, 20% did not indicate their years of service. This means the majority of member of NCHE were senior citizens both by academic and cultural means.

Background information on university administrators illustrated that 50% age ranged between 45-54 years, 20% were above 50, and 17% were 35-44 and 33% reluctant to indicate their year of birth. Field data also revealed that 83% of the respondents were male while 16% female. Analysis of university administrators by educational qualification indicated that 50% were master degree holders, 33% PhD or professors and 17% other qualifications. Statistics also indicated that 50% of university administrators served higher education sector for a period ranging from 5-10 years, 33% above 10 years. This means the majority were familiar with the social, economic, political and historical situations of the sample universities. As such, they represent the key informants.

From the demographic profiles of the parents, 50% age ranged between 45-54 years and 50% above 55 years. Field data revealed that 75% of the parents were male while 25% female. An assessment of their education level indicated that 50% had master degree, 25% basic degree while 25% had no formal education. Statistics revealed that 50% of parents have over 10 children and dependence, 25% have 10 while 25% had 5-10. Given the current

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circumstance of civil war and economic downturn, it is difficult if not impossible to raise even two children. Therefore, any family size above two was literacy unaffordable to manage without substantial external help.

Discussion of the Results

In line with the procedures for analysis of a one sample t-test, both null and alternative were formulated (Kothari et al, 2014). The first null hypothesis was drawn from the research question one;

H₀₁: *There is no significant difference between in-state and out-of-state students with respect to the influence of cost of attendance on students' decision to attend South Sudan public universities*

H_{a1}: *There is significant difference between in-state and out-of-state students with respect to the influence of cost of attendance on students' decision to attend South Sudan public universities*

The researcher then proceeded to test the null hypothesis to determine whether there was any significant means difference in the proportion of students who agree and those who disagree with the assumption made in **H₀₁**. The difference between the population means is reported in table 2.

Table 2

Analysis on the difference in perception on the influence of net cost on students' decision attend

Test Value = 0						
	T	Df	Sig. (2-tailed)	Means Difference	95% Confidence Interval of the Difference	
					Lower	Upper
Difference in the influence of net cost on in-state and out-of-state students' decision to apply	31.834	373	.000	2.567	2.38	2.76

Based on results in table 2, where the observed *t*-value ($t = 31.834$), the degrees of freedom ($df = 373$), and the significance level ($\alpha = 0.05$) and the corresponding confidence level is 95%. Decision rule: reject **H₀₁** if $\alpha \leq 0.05$, and fail to reject if *t*-value was larger than *p*-value. We, therefore, reject **H₀₁** and conclude that there is a significant difference between *out-of-state* and *in-state* students with respect to the influence of cost of attendance on their decision to apply and attend SSPU. This means that although cost of tuition fees was reasonable low, the cost of maintenance was extremely high for out-of-state students compared to in-state students.

Net cost is the amount of money paid by a student to attend college education after deducting need-based or merit grants and loans. The cost of attendance consists of money paid to cover academic cost such as tuition or other fees while maintenance cost is money

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paid towards cost of housing, food, transport, and health-care. On, the other hand, “*Out-of-state*” refers to students enrolled from other states within the country while *in-state* means those enrolled within their home state. The proximity between *home of origin* and *education facilities* has financial implications. The choice of what and where to study is related to cost of attendance.

The researcher used the following seven indicators to measure cost of attendance; tuition, housing, food, transport, health-care, teaching and learning materials. SSPU recruit nation-wide as a matter of policy. But political instability and economic downturn has not only led to the introduction of tuition fees but also the rise in the cost of living on all citizens. Out-of-state students experience financial challenges to meet the demand of their education due to lack of financial aid and social support network. “While tuition itself is reasonable low compare to what is offered by private own universities, the cost of accommodation, food, health, transport and reading material are extremely high”, commended a student. “The situation is more acute for out-of-state students because they lack financial assistance and social support network where the university was situated” said another student (Focus Group Discussion May 22nd, 2018).

The administration maintained that “the current infrastructures in SSPUs were neither intended nor designed for university education. They are overcrowded, dock with poor sanitation, lack of utilities and informally managed” (Interview with one university administrator 22nd April 2018). This, as a result, has forced some students to rent outside the central business district (CBD) either in colonies or alone depending on their ability to pay. A student remarked “while rent outside the CBD is affordable, there is a rise in the cost of transport and insecurity.”

Students who choose to commute are ever late for classes. Yet the cost of transport itself is high as one of the parents observed “My child’s cost of transport exceeded his tuition fees per semester. This may undermine my ability to enroll or maintain those enrolled” (Interview April 16, 2018).

Another parent said that while the cost of food, transport, rent, and scholastic material have gone up, the salary of civil servants have remained the same. Abraham Maslow hierarchy of needs theory placed food at the bottom of pyramid to indicate it is one of the basic of all the needs. Although government provided lunch for all registered students in SSPUs, the majority of out-of-state students contend that one meal was not enough for geographical students who have no social network and merit or need-based grants as well as loan to cushion them. “I am often sick and weak due to inadequate food to attend classes.” remarked a student. Another student said, “The cost of medicare has increased since the resumption of the post-independence civil war in 2013. Government provides no medical insurance. Each student is expected to cover his or her medicare from out-of-pocket source” (Focus Group Discussion University B May 22nd, 2018).

Both *in-state* and *out-of-state* agree that there was acute shortage of teaching and learning material due to constant lack of power, internet, poor laboratories and libraries facilities. They are forced to rely on photocopy of reading material. The imposing presence of photocopying machines and generators has become the hallmark of SSPU. “The noise pollution may be deafening and irritating for guest but it is the only viable solution”, said a student (Focus Group Discussion University A May 15th, 2018). A member of the National Council for Higher Education added that due to high cost of electricity, the diffusion of internet remains a challenge (Interview May 6th, 2018).

These finding indicates that there is relationship between students’ ability to pay and decision to choose where and what to study. There are concerns that living cost is likely to

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deter out-of-state students compared to in-state students. There is a growing literature explaining such association. A study by Scott-Clayton (2013) examined academic and non-academic factors influencing students' choice of three private and one publicly chartered school in southwestern. The results showed that 67% of the finalists choose public institution because they were affordable, academic reputation of institutions, scholarship and peer support while 33% private institution because they placed high level of importance on the quality of curriculum, student/faculty ratio and support services. This study shows that the majority of students' choice of where and what to study is influence by cost factor.

Frenetta (2004) hypothesized that high school students living beyond commuting distance from a university are far less likely to attend post-secondary education, particularly, if they were from lower-income families. Frenetta interprets commuting distance in the following ways; 0-40 km is a commuting distance while 41 km or more is beyond commuting distance. Recent developments in information, communication technology have demystified distance. But yet cost has continued to a factor for educational planners.

A research by Falch, Lujala, and Strom (2013) investigated the relationship between geographical proximity and K-12 graduate students' choice of college in Norway. A differences-in-differences model was used to measure the influence of time on achievement. The result shows that reduced travel time has a positive effect on students' performance and attainment. Although there is a marked improvement on travel time in developed world, developing countries still have a less developed transport sector, which tend to rise the cost of travel.

A study by Danielle, Kaustav, Gail, and Wayne (2016) scrutinized the relationship between students' resident and performance. They hypothesized that students who live on-campus, at least during their freshman year, are more likely to complete their degrees in time compared to students who live off-campus. They found that students commuting have more demands on their time and commitment to studies, which have negative influence on their performance. In countries like South Sudan where there is acute shortage of physical infrastructure, residing off-campus for majority of students is inevitable.

While demographic increase shows the country's resilience to invest in education, the political and economic situation has made investment in college education very difficult for geographical students. This study found that *out-of-state* students who have no social support and a stable financial aid were often cash trapped to afford the ever rising cost of attendance. There are concerns that if nothing was done to address it, the number and composition of students may deteriorate, which could undermine the national character of public universities in the country. The study recommends financial support for need-based students, expansion of infrastructures and diffusion of modern technology. This cannot be possible without the return of peace.

The first null hypothesis was drawn from the research question two, which states that;

H₀₂: There is no significant difference in enrolment in South Sudan public universities between upper-income and low-income families

H_{a2}: There is a significant difference in enrolment in South Sudan public universities between upper-income and low-income families

The researcher used educational level, occupation, income and family size as indicators to measure family socio-economic circumstance. A one sample t-test to determine

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whether there was any significant means difference in the proportion of students who agree and those who disagree with the null hypothesis. Table 3 outlines the means difference between the two groups of students.

Table 3: Analysis on the difference in enrolment between upper-income and low-income families

Test Value = 0						
				95% Confidence Interval of the Difference		
	T	Df	Sig. (2-tailed)	Means Difference	Lower	Upper
Difference in enrollment in SSPU between upper-income and low-income families	58.244	377	.000	3.849	3.72	3.98

Based on results in table 3, where SPSS the observed *t*-value ("*t*" = 58,244), the degrees of freedom (*df* = 377), and the significance level ($\alpha = 0.05$) and the corresponding confidence level is 95%. Decision rule: reject H_0 if ($\alpha \leq 0.05$), and fail to reject if *t*-value was larger than *p*-value. We, therefore, reject the null hypothesis and conclude that there is significant difference in enrolment in SSPU between students from upper-income and low-income families. This means that the introduction of tuition fees have skewed enrolment in SSPU in favor of students from upper-income background. A large proportion of students from low-incomes are either prevented from enrollment or could not remained enrolled due to affordability issues

Over 50% of the respondents mentioned that their parents had had no formal education. South Sudan National Bureau of Statistic Monitoring Survey (2012) attests to the facts that there was a high illiteracy rate and gender disparity in South Sudan. Data from both sampled universities confirms gender disparity. Female enrollment stand at 18% compare to 82% for male (The University of Juba Statistical Outlook, 2017; the University of Upper Nile Statistical Outlook, 2018). "There were few women both in the class and at the staff level", said a university administrator.

Parental occupation is described as the job parents do that can predict their educational achievement and income levels. Focus group discussion revealed that the most parents are either peasants or conscripted in the army (Group Interview at University A May 15th, 2018). There were also concern raised that most parental occupation and education level does not enhance career guidance. "My father has no formal education. They both have no experience to share about college access, progress and completion" said a student (Interview April 16th, 2018). This shows the neither difficulties faced by first-generation students in seeking access where there is neither any family guidance nor availability professional service providers.

The study found that SSPUs lack any robust outreach system. The lack of public university websites have denied student the opportunities to know what courses are offered therein and what sort of financial aid system is available. Vacancies are often advertised through FM radios, TV and New-papers, which are more available to city dwellers compared

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to the rural folk. “These modes of communication have denied geographical students the opportunities to access higher education” commented a member of National Council for Higher Education (Interview April 18th, 2018).

A scrutiny of parental income revealed that while the cost of living has gone up as a result of 300% inflation, salaries have remained constant. Parents whose monthly income ranges between SSP 0001 to 3,000 earn less than \$10 USA and are considered low-income families. Those earning between SSP 4,000- 10,000 were the emerging middle class before 2013 but today they have dropped some scales down. Those earning above SSP 11,000 used to be known as upper-income groups then. But this group now fits the label of middle-income group. Low-income and middle income groups with large family structure are cashed trapped and cannot afford to pay their children in SSPUs” (Focus Group Discussion University B May 22nd, 2018).

The numbers of upper-income families continue to deteriorate while the numbers of low-income families increase. The emerging middle-income groups were decimated as 1 dollar increased from 3 SDD in 2011 to a dollar to 333 SSD in 2018 (World Bank, 2016). This skewed enrollment in favor of the privilege few. Low-income families are either locked out due to affordability issues or lack of financial aid. “My parents could not afford to maintain our education in the neighboring countries due to high rising exchange dollar rate, forcing us to register in SSPU” (Focus Group Discussion University A May 15th, 2018).

Family size is described as the internal make-up of a family unit. In developed countries, a family means husband, wife and their biological children. In developing countries, however, family can either be nuclear or extended. A typical family in South Sudan has above five members on average due to the enduring tradition of polygamy and extended relationship (The National Bureau of Statistics Welfare Monitoring, 2012). Most students reported large family structures as the leading challenge to access and attainment and is synonymous to poverty. One parent observed “I cannot afford to enroll all my children and dependence although I receive remittance from my relatives abroad” (Interview May 9th, 2018).

The difficulties to pay the cost of attendance have served to increase the distaste for cost-sharing model. “It is not only inappropriate for a post-conflict country but also undesirable for an oil economy country” remarked a student (Interview April 20th 2018). “It is conceived and implemented in haste and lack clarity on a number of issues”, suggested university administrator (Interview April 11^h 2018). “It cannot work effectively without financial assistance and efficient disbursement of state appropriation”, added another parent (Interview May 6th 2018). “There is a growing fear that cost-sharing policy may create new obstacles to access and attainment” mentioned a member of National Council for Higher Education (Interview May 6th, 2018).

There is growing literature on how family circumstances affect students’ enrolment in a varying way (Maloy, 2016, Meyer, et al, 2013; Johnstone, 2016, Paulsen & St. John, 2016, Gichuhi, 2016, Odhiambo, 2016, Musa, 2015; Lopez, 2013; and Nyahende, 2013). Issues of ability to pay can create great hindrances not only access but also progress and attainment (Orr, 2015; Salmi et al, 2014; Tinto, 2012). Although cost-sharing policy is considered to increase the total revenue and quality of higher education institutions, there is a need to review it in a holistic way in order to ensure no one is left behind (Marcucci, 2013).

Global Agenda 2030, Target 4.3 calls on all nations to ensure that quality higher education is made accessible, affordable and equitable to all, particularly those from the marginalized background (UNESCO, 2017; United Nation General Assembly, 2016). In South Sudan, this goal is challenged by the transition from one conflict to another (Mamdani,

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2016) and the rising cost of living due to over dependence on single sources of revenues (Hilder-Johnson, 2016). This could undermine the achievement of the national goal to widen participation and narrow the gaps between upper-income and low-income. The groups likely to be adversely affected are low-income families, first-generation, female and geographical students. It is also important to state here that judicious investment in education cannot take place in the absence of peace.

Conclusions and Way Forward

The purpose of this mixed methods research was to investigate the influence of cost-sharing on students' access in South Sudan public universities. The study found that enrolment increased despite changes in the mode of funding, political instability and economic downturn. However, the demographic expansion favored students from the privileged backgrounds. The implication is that a substantial proportion of the populations do not participate due to affordability issues. Higher education is a great equalizer to improve peoples' lives, economic efficiency and intergeneration mobility. There is need to ensure that low-income families, first-generation, geographical and female students who are adversely affected participate. The study recommended the need to synchronize tuition fees, state appropriation and financial aid to widen participation and narrow gaps between economic groups. Such reforms are unthinkable without achieving peace.

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