

*Full Length Research Paper*

# **Evaluation of the current higher education funding model in Rwanda using Higher Education Students' Loans Department (HESLD-REB) as a case study**

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Higher education funding in Rwanda uses a costs sharing approach. This has been analyzed to ascertain its suitability for Rwanda. This research looked at other funding methods that can be applicable for the higher education sector in Rwanda. These included use of PPP, tuition fees, bank loans and internally generated funds by higher learning institutions. It was found in this research that costs sharing approach is a good model in Rwanda but it has faced the challenge of using financial means testing (FMT) to identify potential beneficiaries. There FMT is viewed by most respondents as unfair and that in some cases, financial assistance has not been given to those that deserve it due to corruption in the system. The other funding methods mentioned above have also been analyzed and appropriate conclusions arrived at in the research findings. It was also found out that a failed higher education system would impact on the economic development of the country and also if the higher education sector is underfunded, this will impact on the quality of the graduates and the sector as a whole. There is need for policy change by government of Rwanda towards funding of its higher education.

**Key words:** Costs sharing, financial means testing (FMT), higher education funding model, public private partnerships (PPP).

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## **INTRODUCTION**

A good higher education system is a driver for social economic development of an economy. This is one of the vision 2020 priorities for Rwanda. A well educated workforce is more productive when compared to an uneducated one. It is therefore crucial that adequate funding is provided for the higher education sector. Failure to provide adequate funding may lead to weakening the sector and this will impact the social economic development of the country as there will not be enough well educated manpower. The research aims to;

analyze higher education funding options of using bank loans, setting up of industries, cost sharing, tuition fees, and public-private partnerships arrangements. There is an issue that the Government of Rwanda is slowly phasing out of funding higher education and hence the above options have been proposed (MINEDUC, 2011). The evolution of the higher education system has been discussed, stretching from 1994 to 2012. This includes the statistics on students' enrolment and higher learning institutions. Statistics show that in 1994, there was only

one university in the country, with a total students' enrolment of 3,261 students, and this has grown overtime to 73,674 students in the current year, 2011/2012, with 31 higher learning institutions in Rwanda (MINEDUC, 2011). This reflects a 95% increase of the number of students in higher learning institutions. Such increase most likely comes with increased financial requirements for students and government has to take on the financial burden for these increased numbers. An analysis has been done in this study that links higher education funding to quality of education for the achievement of 2000 Millennium Development Goals on higher education in Rwanda (Millennium Development Goals, 2000). This chapter finally gives the motivations that led to the analysis of the higher education system in Rwanda since 2009 to date.

This study scope is chosen because it was when higher education funding started reducing considerably that the need to find ways of generating funding for higher education in Rwanda arose. The higher education budget in 2008 amounted to USD 42,737,627.42 and this reduced to 43.1% in 2009, and then increased by 60% in 2010; it then reduced by 6% in 2011 and it went up by 9.5% in 2012 (MINICOFIN, 2012). The problem here is that the increment in funding in 2011 may not be considered realistic since student numbers have gone up to 73,674 as seen in Table 1.

### Statement of the problem

Government funding of higher education in Rwanda has been reduced by 25% every year, starting from financial year 2010/2011 (MINICOFIN, 2011). Therefore, there is the need for Government of Rwanda and higher learning institutions to find ways of financing their activities as per the government proposed funding models. These models include the use of students' bank loans, funding through public/private partnerships, tuition fees charges, setting up of commercial companies at higher learning institutions to generate income, and costs sharing which the researcher has analyzed in this study (MINEDUC, 2011; Semugaza, 2005). The researcher has to ascertain their applicability and sustainability for the higher education sub-sector in Rwanda.

### Objectives

1. To analyze the current higher education funding model and also analyze the other government higher education funding methods.
2. To assess the relationship between higher education funding and quality of education.
3. To analyze the link between a well functioning higher education system and its effect on economic development.

### Research questions

1. Is the government of Rwanda current and other higher education funding methods suitable for this sector?
2. Does reduced higher education funding affect the quality of higher education in Rwanda?
3. Does reduced higher education funding affect the economic development of Rwanda?

### OVERVIEW OF HIGHER EDUCATION SUBSECTOR IN RWANDA

The higher education funding in Rwanda since 1963 to 1994 was fully done by the Government of Rwanda, and at the time there was only one state university called National University of Rwanda. The country was only having 3,261 students by 1994 accessing higher education and this was not so much of a funding budget burden to the state. There was only 3,261 students in the academic year 1994/1995 and this has since increased to 73,674 students in 2011/2012 (MINEDUC, 2011). This increment in number of students justifies the need for increased student funding which has unfortunately been going down overtime (Semugaza, 2005; MINEDUC, 2011).

Table 1 shows that higher education in Rwanda has been growing since the end of genocide in 1994. There is currently student's enrolment of 73,674 and 31 institutions of higher learning. The academic year of 1993/1994 was dead year due to the war that was in the country at the time and there was no students' enrolment. There was only one university in Rwanda in 1994, though, there were other small existing higher learning institutions (6 in number); the total number at that time was 7 (MINEDUC, 2011). Overall, during the periods of 1994 to 2011, there has been a 95.57% student increment in higher learning institutions. This has put the Government of Rwanda on enormous task in finding resources needed to fund the requirements of the increased number of students.

HESLD (2011) analyzed higher education funding models namely the use of tuition fees, student bank loans, public-private-partnerships, and setting up of firms at higher learning institutions to generate funds. There is a correlation between higher education funding and service delivery at higher learning institutions and looking at Rwanda where government higher education funding is being cut by 25% every year (MINEDUC, 2011). This would mean that in about a few years, the Government of Rwanda will pull out completely of funding higher education. There are some effects on service delivery at higher learning institution and achieving set government target of quality education if higher education funding is not adequate (Barr, 2004). Reduced higher education funding affects the country in achieving its target of having a pool of quality educated workforce as envisaged

**Table 1.** Higher education student enrolment statistics and number of higher learning institutions in Rwanda since 1994-2012.

Academic year	Higher Learning Institutions (HLIs)	Students in HLIs	Percentage change in students enrolment (%)
93/94	7	Dead year	
94/95	7	3,261	100
95/96	1	3,948	17.40
96/97	6	4,665	15.36
97/98	8	5,751	18.88
98/99	8	3,045	11.11
99/00	10	9,357	67.45
00/01	10	12,802	26.91
2-Jan	10	15,940	19.68
3-Feb	9	20,393	21.83
4-Mar	20	27,243	25.14
2005	18	26,800	-1.65
2006	18	37,149	27.85
2007	20	41,013	9.42
2008	20	47,406	13.48
2009	28	55,213	14.14
2010	30	62,734	11.98
2011	31	73,674	14.84

Source: MINEDUC, 2011 (Rwanda)

Note: Dead year of 1993/1994: This means that, there were no student enrolments done in higher learning institutions in Rwanda during that academic year. This was due to the liberation war at the time.

in the vision 2020 targets to help in the development of the economy. If higher education funding keeps reducing, this will have an effect on institutional capacity of higher learning institutions as physical and infrastructure development will stall and institutions will be losing a lot of its staff who opt out to look for better working conditions elsewhere.

#### Evolution of higher education in Rwanda since 1994

Higher education sector in Rwanda has since independence grown with a total of 31 higher learning institutions of which 17 are public owned and 14 are privately owned (NCHE, 2011). The current student population in higher learning institutions totals 73,674 which reflects a 96% students' enrolment increase since 1994 to 2012. Rwanda has a liberalized higher education system encouraging the participation of private investors in the higher education sector.

The dynamics of higher education funding in Rwanda changed after the 1994 genocide. Rwanda wants an educated workforce and in the process, a number of people requiring higher education increased with support from government and so was the number of state owned higher learning institutions totaling 17 in number (MINEDUC, 2011). The government of Rwanda overtime has faced budget constraints causing a challenge in

sustaining the required funding for higher education institutions and hence, the need by government and higher learning institutions to find other ways of funding higher education in Rwanda.

Higher learning institutions in Sub-Saharan countries are generally faced with budget constraints as government vote allocations tend to be inadequate and this calls for a need to find other sources of supplementing incomes allocated to these institutions (Oghenekohwo and Abu, 2011). The Government of Rwanda is considering using higher education funding through student loans from commercial banks, setting up of a government bank that only handles student loans, adoption of public private partnership initiatives. Higher learning institutions are being asked to set up companies that will help them generate funds, costs sharing and tuition fees charges (MINEDUC, 2011).

The importance of quality higher education in Rwanda is a pillar for its social economic development especially if training is matched with the needed skills in the market. This is a critical issue for the Government of Rwanda and one would guess that this should be crucial for all economies (Barr, 2004). Barr (2004) argues that very good quality education is very expensive and calls for adequate funding, which should not be only shouldered by governments.

The government of Rwanda currently gives a student pursuing arts and humanities courses USD 1,423 per

annum, and on study completion the student pays back 50% plus 5% interest. Science students are given USD 2,093 per annum, and on completion of studies, the student pays back 25% plus 5% interest as a cost sharing model; though, the government has proposed that a student should pay back 100% of grant provided plus interest (MINEDUC, 2011). The point here is that affordability of the costs may be an issue for some students and this will impact on higher education accessibility. This means that qualifying students may not get access to higher learning institutions, and this may cause skills shortage in some sectors of the economy thus impacting on the social economic development of the country.

This method comes with challenges as it may prove very expensive for the recipients; the government's thinking here is that these funds will come from say commercial banks or from other sources of which the student takes full responsibility of servicing the loan obligation and the government would use budget allocation to higher education for development purposes (Barr, 2004; MINEDUC, 2011).

The Government of Rwanda in pursuit of higher education funding options is considering public-private-partnership, especially on infrastructure development; for instance, some universities like National University of Rwanda, Umutara Polytechnic. Quiet a good percentage of higher learning institutions in Rwanda have tried these options and they have faced challenges on their operationalization hence the need to analyze them further to ascertain their suitability for Rwanda (MINEDUC, 2011; Jonathan and Peter, 2011).

A number of public higher learning institutions in Rwanda have set up companies to do private work for income generation; examples being School of finance and banking (SFB), National University of Rwanda (NUR), ISAE Busogo, Kigali Institute of Education (KIE), Kigali Institute of Science and Technology (KIST) among others (MINEDUC, 2011). The results show that, private companies owned by higher learning institutions can generate income internally, but one needs to understand their efficacy and sustainability in Rwanda (Millett, 1955).

The Government of Rwanda has allowed public higher learning institutions to admit private students who pay tuition, which can be used to support their financial requirements. Privately sponsored students admitted in higher learning institutions are not supported by the government to meet their tuition and leaving allowances. The challenge here is that admission of private students could lead to enrolment explosion. Atuahene (2011) argues that when numbers of students are increased in a higher learning institution, it should be able to use the proceeds from students' paid tuition to develop infrastructure and other learning material needed for students learning. The researcher has to analyze how tuition fees collections can be used to contribute to funding higher education in Rwanda. The issue is that

charging of tuition fees to students makes higher learning institutions get some cash. The problem, however, is that Rwanda is a poor country and therefore, without the help of the government, some students may miss out on attaining higher education qualification. Higher education in Rwanda is key to its economic development and hence, if higher learning institutions were to be allowed to charge tuition fees to students, the government should put limits on such charges. There is need to analyze the mechanics of how tuition fees charges by institutions help to narrow their funding gap.

Rwanda has a number of private financial institutions, which can provide student loans and some more funding needed by higher learning institution and the beauty here is that those individual higher learning institutions and students would be responsible for financing their loan obligations (MINEDUC, 2011). This will especially force institutions to find ways of generating income from consultancies, research, students' fees and others ways to meet loan repayments. However, universities have to be careful in these circumstances to ensure value for money when making investment decisions and the advantage here is that government is relieved of this financial burden of financing higher education (Devarajan et al., 2011; MINEDUC, 2011).

Funding of higher education in Rwanda has gone through a transformation from full government funding to costs sharing between government and the students, use of public private partnership arrangements, use of student loans from financial institutions, internally generated incomes by higher learning institutions and tuition fee charges. The researcher has evaluated all these options in this study to ascertain their feasibility and sustainability and their effects on quality of service delivery at higher learning institutions in Rwanda.

## LITERATURE REVIEW

This is a review of the numerous sources that supports or does not support the study topic as previous published work on higher education funding. The analysis of their findings is done and from that, study gaps are identified and these will shape and support the main research question and sub-research questions of this study. On completion of the literature review, it would be clear how the research study would help in dealing with the gaps that would have been identified. Quality education can be achieved with adequate funding and this is mainly because institutions will be able to access the needed resources to support the educational system. There is need to analyze this assertion to help Rwanda understand the relationship between higher education funding and its quality as the findings will aid policy formulation on higher education funding in the country. Resources allocation to different sectors in an economy is done through parliament. It is therefore, vital that

politicians give due consideration to resources allocated to higher education subsector. Analysis of higher education funding models is vital since it is the only way that the funding mechanism of the sector can be understood and implemented. Any failures would lead to a non functioning sector.

This chapter also looks at higher education funding and its effect on social and economic development of Rwanda. Higher education is a good catalyst to economic development of a country as it would bring out the needed manpower resources. The manpower produced from universities will fill the skills gaps that may be existing in an economy. The researcher has to analyze all these funding models for their suitability for Rwanda based on the research questions that have been set in the previous chapter. It is important that the country gives adequate funding to higher education since it is a great pillar for achieving its economic development. A good funded higher education aids in producing graduates that are of good academic standing and comparable internationally and this is a dream that Rwanda strives to achieve as one of its 2020 goals (MINEDUC, 2011). Research is very fundamental in a university for achieving new innovations and inventions in a country. This is what enhances a country's economic development.

### **Funding of higher education**

Higher education funding in Rwanda is a real challenge as the government ponders its withdrawal completely from funding recurrent budget of higher learning institutions, and provision of tuition fees and leaving allowances to students (HESLD, 2011). The government wants the expansion of the tertiary sector to be able to achieve its social economic development, and whereas this is the government's wish; its budget allocation to the sector has been going down and more funds tend now to go to 9 year basic education. The implication of this is that, more students will access primary and secondary education and they may get problems accessing higher education as its funding keeps reducing. This may not be regarded as a good move since primary and secondary education by its self does not provide enough skills to facilitate the functionality of an economy. It may be vital if followed with some form of vocational training to get practical skills.

Rwanda is faced with a challenge of its unit cost in that comparatively, both a private and public sponsored students may be doing the same course but paying different tuition fees. For instance for a science course, a private student would pay \$526 and a public sponsored student is paying \$2,192 and there has been questions surrounding such disparities. The Government of Rwanda is beginning to think that, it would be cheaper if higher education is made private where students have to take financial responsibilities for their university studies.

They could get financial help from government in form of loans, where the student would have to pay back to the government 100% of the loan plus an interest of 8% per annum (HESLD, 2011). Initially, students would only pay back a certain percentage of tuition back to the government interest free. Science students would only pay back to government 25% and Arts and humanities would pay 50%. This is cheaper when you compare it with paying back to government 108%. The argument here is that all students will have to pay back the 100% of principle amounts of loans given and an additional 8 %payment in interest. This may not be affordable to a lot of students especially those from deprived financial backgrounds and this would affect students' loans recovery.

Loans recovery from students has not been good in Rwanda and this could be attributed to poverty levels and lack of employment for some students. Another theory could be that employers may not be deducting agreed loan repayments from salaries of loan beneficiaries from Higher Education Student Loans Department. The loans distributed by HESLD are USD 115,261,894 and the loans recovered are just about USD 1,754,385. This rate of loans recovery is so low and it could lead to costs sharing approach unattainable in the long run for the country since there will be no revolving funds to sustain it (HESLD, 2011). Higher education funding has suffered cuts in Rwanda mainly because, the ministry of education and the government think that basic education is a fundamental right for every Rwandan. So, the Government of Rwanda has made it free for every Rwandan and it has devoted most of the budget vote allocated to ministry of education to this sub sector (MINEDUC, 2011). The researcher, however, feels that there is a contradiction on policy of achieving a robust higher education in the country and yet it is gradually having its resources allocation going down. It is a good policy to have free universal basic education in Rwanda, but this may not be good enough in developing its economy since the country will need to have them trained further in higher education institutions. The Government of Rwanda ought to continue supporting higher education through the cost sharing approach introduced in 2008 as a way to achieve its 2020 vision of producing enough manpower for the economy. All the funding approaches as suggested in this study should be explored for adoption and implementation. The government could decide to invest a portion of its resources in the primary sector and seek support from donors who are willing to support the sector. Rwanda has a number of partners investing in the primary and secondary education sectors. This policy approach could be given more support by the government.

According to Hayman (2007), adequate higher education funding is vital for a country's economic growth, as poor funding for higher education would impact its potential for growth since it would have shortage of

educated manpower. It is good to appreciate that having basic education is crucial as it raises literacy rates in a country. This allows for successful students to proceed to polytechnics to study practical courses that are vital for job creation and this is a step in the right direction. The government, however, does not have enough financial resources to cater for construction of good physical and social infrastructure for students' learning. The government has set one of its priorities to have basic education provision for all and donors and government have pumped in a lot of resources. The government does not view higher education as a priority for the moment and its budget vote will depend on what the government can afford and not what is needed for the sector.

The Government of Rwanda has seen an expanded higher education sector with 17 public higher learning institutions and 13 private higher learning institutions. As highlighted previously, public higher learning institutions draw their budget from the state for infrastructure funding and students' tuition and considering the science tuition fee per student of USD 2,093 and USD 1,423 (MINEDUC, 2011). Private institutions in Rwanda are fully funded privately from investor's equity and tuition fees collections from students, whereas public institutions are funded by the government through budget allocation. The current cost sharing approach could be made better if the financial means testing approach for one to qualify was reviewed to ensure that it is corruption free. This will help widen access and recoveries from recipients and more so, the interest charge could be waived to make repayments affordable for students. The catch, however, is that private higher learning institutions in Rwanda charge less compared to public institutions. Again, private students enrolled in public institutions pay less compared to government sponsored students. Private institutions in Rwanda charge less by about 50% when compared with public ones. This is one of the reasons why the government is of the view that it would be cheaper if higher education funding in terms of tuition fees payment and leaving allowances was left as the responsibility of the learner.

A good number of private higher learning institutions have been set up in Rwanda (MINEDUC, 2011). These institutions have been recognized for providing quality education in the country at affordable costs. These institutions are well recognized and regulated by government to ensure provision of quality education in the country. The government should consider encouraging admission of private sponsored students at public higher learning institutions. This would increase financial resources of universities and foster competition, which leads to raising of standards to the benefit of students. The government would wish to gradually phase out in providing students' tuition fees and also reduce funding for other activities in higher learning institutions, a situation that will create funding gaps (MINEDUC, 2011), and hence a call on institutions to look for funding

sources like use of public-private partnership (Jonathan and Peter, 2011). The current per capita income of Rwanda is about \$1,600 having improved from \$291 in 1998 (NBR, 2012). There is a big income disparity between the rich and the poor. People with some relatively stable income leave in the urban centers whereas village dwellers have very low incomes. The presupposition here is that, the people with stable incomes will afford to fund their children's higher education while those in poor backgrounds will face some challenges. This may bring imbalances in economic development and levels of literacy.

Rwanda uses a cost sharing approach for funding its higher education. This approach apportions financial responsibilities to both the students and the government. This approach needs the corporation of provincial, district and other local leaders who help to determine potential beneficiaries of government assistance. Currently, HESLD (2011) asserts that there has been challenges since poor assessments are done by the local leaders. This leads to poor decisions being made in facilitation of students. This system could be improved with strengthening of the assessment mechanism for the potential beneficiaries. Higher education funding could be done using public-private partnerships funding mechanism as has worked in sub-Saharan African countries (Jonathan and Peter, 2011). This approach could work for Rwanda if the necessary infrastructure has been created for interested investing firms in the higher education sector. Organizations like UNESCO among others have been at the fore front of funding higher education in Sub-Saharan countries and it is therefore vital to find whether or not such avenues can be used in Rwanda and hence the justification for the study on funding higher education in Rwanda. The government of Rwanda would have to negotiate with financial institutions in the country that would provide study loans to students on favorable terms. This would ease accessibility of the loans. It would also help if the government in its capacity can provide the loans at 0% interest rates as opposed to the 8% charge on the leaving allowance support given to the students supported by the government. This higher percentage has led to slow collections and bad debts (HESLD, 2011).

### **Funding higher education through cost sharing**

Cost sharing could be one of the ways to fund higher education in Rwanda and this is to say that governments could give higher learning institutions some funds for students' support and the rest generated by individual students or institutions. Cost sharing involves shared responsibility for higher education funding. This approach was adopted in Rwanda in 2008 (HESLD, 2011). It was adopted as good policy and financial assistance is given after a financial means testing (FMT). This has not worked successfully in Rwanda as it is riddled with many

challenges like corruption in doing the financial means testing to identify those who are financially able and those that are not. This leads to leaving out potential beneficiaries and this denies a chance to some people in accessing higher education. Another example of this type of approach was presented by the study developed by Adeniyi and Taiwo (2011) that analyzed higher education cost sharing in Nigeria and their finding showed a positive response, though they did not analyze other methods of funding. Therefore, it is vital to contextualize the cost sharing to the Rwandan situation and explore its applicability and this is what the researcher has done. The findings showed that the continued survival of higher education in Nigeria will depend on the mutual contributions between the parents and the government in pre-determined proportions by the government.

Cost sharing is good due to sharing of financial responsibility between the learner and the government, which reduces the government financial burden, though a challenge is associated with parents in accepting this kind of arrangement. It was adopted in Rwanda in 2008. The government has been honoring its part of the bargain, but students have not been forthcoming in repayment of the loan percentage (25 and 50% given to students for arts and science courses respectively). The Government of Rwanda gives priority to science education and that is why it allocates students more funds compared to arts and humanities. However, lack of employment has been cited as a major reason as to why loans recovery from student beneficiaries has not been good (HESLD, 2011). There is also a belief that employers have also not been forthcoming in deducting some funds from employee's salaries to cater for their loan obligations received from the Higher Education Students' Loans Department. Students' loans in Rwanda are recovered through deductions from an employee's salary by an employer and credited directly to Higher Education Students' Loans Department.

The Government of Rwanda has emphasized the teaching of science and technology in the country (MINEDUC, 2011). This is a government policy and its emphasis has been zeroed on the argument that, it is science and technology that helps in jobs creation and quick development of the economy. Arts and humanities students also get appropriate funding from government; the difference is that, they pay more back to the government compared to sciences students. The argument, however, would be that it takes long to train a science students and they need to do a lot of practical work and in a sense, they will need more financial resources when compared to arts students who train for a short period and may not need to do a lot of practical work.

Teferra and Altbach (2004) argue that cost sharing is inevitable if the higher education funding is to be realistic; for instance in Tanzania, the policy provides for cost sharing between the government and the students. Under

this arrangement the government has to deal with financing direct costs of higher learning institutions and then costs in form of leaving allowances should be met by students with the help of their families. The current situation in Rwanda puts a student at a line of paying their full tuition and leaving allowances and this will financially strain them. The higher education funding has been reduced by 25% putting less development budget for institutions and this will constrain physical infrastructure development in form of lecture halls, laboratories, etc. Yet, students' enrolment has increased to about 65,000 based on the 2010/11 statistics (MINEDUC, 2011).

Increased students' enrolment in higher learning institutions is a good outcome for the country. The numbers could have probably been higher if the costs sharing approach in the country was regarded as fair and affordable and the financial means testing was adopted efficiently and effectively. The reliance on local leaders to do the financial means testing for the beneficiaries has so far not worked as expected. The definition of financially able parents in the villages has not been done well by the local leaders due to lack of definable and proper indicators. This has caused a lot of grief to parents who are considered financially able and yet they are not. Children of such parents are being denied financial support on faulty financial assessment. The Government of Rwanda has realized this problem and is moving in to find ways of how the financial means testing can be made more efficient and reliable. There is a need to strengthen the Higher Education Students' Loans Department such that its officers are facilitated to work with other government agencies at district levels to ensure a fair assessment. At the moment, HESLD (2011) estimates that disbursements are higher when compared to recovery; since the introduction of costs sharing in higher education funding in 2008, about USD 102,249,488.8 has been disbursed and only about USD 1,573,069.058 has been recovered. This puts question marks on the success of this students financing approach in Rwanda.

According to Rwanda's vision 2020, one of its priorities is to produce graduates that are internationally comparable in terms of quality and the argument here is that quality education comes with costs attached; for example, heavy investment in employing high qualified personnel, construction of lecture halls, good library, construction and equipping of laboratories etc. Funding for higher education should be adequate and more to say is that once higher education funding reduces, this will have an impact on quality of education. A study done by Culkin and Mallick (2011) indicates that producing ready employable graduates in the United Kingdom was vital and yet higher education funding keeps going down and would reduce to £4.2 billion by 2012 to 2015. A comparison here can be made to Rwanda, which aspires to produce graduates of international credence and

comparability and yet, it is continuously reducing funding for the sector. The aspiration is to produce practical graduates ready for the job market but this may not be possible if investment is not done in the teaching of the practical subjects that are hands on and vital for job creation. It is therefore fundamental that this study explores the link between higher education funding and the quality of graduates from Rwandan higher learning institutions as the findings would help the government revise its higher education funding decisions accordingly.

### **Political role in higher education funding**

The allocation of government resources is done with the approval of parliament. Parliament has the power to approve and reject proposed government budget allocations. These politicians may decide, support and approve allocation of more funds to the higher education sector. It is clear that once a sector is considered crucial and a priority for the government, it will have the power to allocate it more financial resources which will have the support of cabinet and parliament. The education sector has a big budget vote from government; it should be at ministry of education level to allocate a big part of it to higher education provided there is good political will (MINEDUC, 2011). Political influence is deemed to have a role in funding of higher education. For instance, McLendon et al. (2009) talk about higher education funding in the US that tends to have a lot of support from politicians and if this is linked to the situation in Rwanda, for the country to transform its economy through producing quality graduates, there are needs of political support in allocation of state funding to the higher education sector and generally the study explores this assumption. The findings by McLendon et al. (2009) indicate that states in the US with powerful politicians lobby for good funding allocations to their states from the central government and the individual states themselves to ensure that a good percentage of their budget is allocated to higher education. The point here is that in Rwanda, some sectors with strong politicians would have a good budget allocation. The education sector gets a huge budget allocation, but the problem is that the higher education sub sector is not allocated enough resources, a factor that has constrained service delivery at higher learning institutions.

The Government of Rwanda is considering having one state university system called the University of Rwanda and this has been done to monitor quality of higher education in Rwanda and to ease resource mobilization in form of research grants, gifts, etc. And looking at universities in countries like Germany and the Netherlands, funding is linked to the quality of education provided by higher learning institutions (Ingo, 2003). It is assumed that the operation of one state university system would among other issues ease resource

mobilization for higher learning institutions in Rwanda and this research has been on it to ascertain the correlation between the two as stated in this hypothesis. Examples of developing countries that have seen success in the proposed funding models include Uganda that has successfully implemented cost sharing approach at its public higher learning institutions; it has also succeeded in generating a lot of funds through tuition fees charges (Ssempebwa, 2011). Kenya higher education system has been successful in implementing a cost sharing approach and it has had successes in its loan recovery. Rwanda can learn from the Kenyan experience especially on what it has been done to make Kenyans believe in cost sharing in funding their higher education system and its efficient system of loans recovery from students. Tanzania has seen a success story on costs sharing funding mechanism and it has been successful on public- private partnership as a method of funding higher education (Teferra and Altbach, 2004). There is evidence that funding higher education through public- private partnerships has not been successful in Rwanda; for instance it failed at National University of Rwanda and Umutara Polytechnic. There is need to analyze the reasons for such failures and yet there have been successes in other developing countries.

### **Higher education funding in some selected developed and developing countries**

Developed countries like US, Netherlands, UK, Germany and most of European countries have been successful in funding their higher education systems using tuition fees, costs sharing, public- private partnerships, scholarships and grants (Ingo, 2003; Newfield, 2010). The issue of funding higher education in some countries has been met with increased tuition fees. For example, in the US in the state of California, there has been persistent tuition fees increment since 2004 to 2011 (Newfield, 2010). The issue is whether or not this can be adopted in Rwanda and the way to find out is if this is test driven on Rwanda higher education system. This has been done by analyzing different higher education funding options in Rwanda. The stakeholders or interest groups have an influence on the funding of higher education in a country (Tandberg, 2009) and this could be through lobbying, which will affect the funding allocated to the sector by the state. Rwanda is a country that is looking forward to sustained social economic development and this can be achieved with good quality higher education system that is adequately funded and not necessarily from state funding. Other avenues have to be explored as long as the policy favors government higher learning institution to be flexible in search for funding; for example Makerere University in Uganda can be singled out where 80% of students pay privately their tuition fees and this relieves the government of the financial burden (Teferra and



Altbach, 2004).

The current situation in Rwanda is lack of enabling environment to allow higher learning institutions to be given autonomy to find ways to generate and manage its cash resources which the researcher has evaluated. The idea here is that even if the institutions were successful in generating resources, the bureaucracy in government would make it difficult to spend swiftly in having quality education in the country. Developed countries have efficient and transparent systems and they have given their universities some good levels of financial and academic autonomy; for example the US has adopted AFT-American funding model in form of public-private partnerships and a big part of its higher education funding mostly comes from the private sector (Newfield, 2010). Public-private partnership has worked well in countries like Tanzania and Uganda Higher learning institutions but it came with its challenges; for instance some underfunding of research work since private investors would mostly be interested in infrastructure development where they can easily and quickly realize their returns. Universities like MIT gets most of its funding from research grants, endowment income, tuition fees, contracts etc; it never gets any direct funds from government. This has made the university center of excellence which has helped to create alliances with funding organizations (Ingo, 2003). This could be a learning lesson for Rwanda if it is to adopt public-private partnership and or any others like use of tuition fees, bank loans and costs sharing. This will allow higher learning institutions to generate supplementary financial resources and spend on resources needed for uplifting higher education academic quality in the country. Universities in Netherlands like University of Twente and University of Bristol in the UK get part of their funding annually from their respective governments, but they must generate additional funds by themselves through research grants, tuition fees, and other contracts etc. (Ingo, 2003). Bristol University is given by the government only 36% of its budget every year and it must strive to raise the remaining percentage by itself and this would not be possible if it is not academically and financially autonomous. These universities are empowered by their respective countries to find their own funding and this is what is needed in Rwanda for universities to be able to generate their own funds internally.

### **Higher education funding models in Rwanda**

This sub-section deals with current higher education funding model in Rwanda, and those which have been proposed by the government which include charging of tuition fees to students, public-private partnerships, and using internally generated funds by higher learning institutions. An analysis has been made on the link between HE funding and quality of HE, and the effect of poorly funded higher education on Rwanda's

development.

### **Current higher education funding model in Rwanda**

The current higher education funding structure in Rwanda is based on cost sharing depending on the unit costs of science and arts subjects. The determination of the beneficiaries of financial support depends on the financial means of families. The Government of Rwanda through Higher Education Students' Loans Department (HESLD) and district leaders used FMT (Financial means testing) to determine the beneficiaries of government's support for their higher education. FMT is based on family incomes and what they own in form of assets. For instance, the number of houses owned, cows, goats, monthly earnings etc. Local leaders help central government officials in making the analysis in the FMT construct. Students from families that lack assets and live on daily incomes of less than \$1 are beneficiaries of government sponsorship at higher learning institutions. The government, having seen and experienced the challenges with this method, has proposed other funding mechanisms namely use of tuition fees, loans, incomes generated internally by higher learning institutions and the use of public-private partnerships.

### **Funding higher education using tuition fees**

It is argued in developed European states that acquiring higher education should be free since those economies would use the trained manpower to develop their economies. This could be applicable where demand for higher education is low but where it is high, it puts pressure on governments to find resources for financing this sector. This may lead to a decision to charge increased tuition fees to students which may not be afforded by everyone hence leading to limited access to higher education (Vandenberghe and Debande, 2007). The reality of charging tuition fees at higher learning institutions in Rwanda seems to be based on the principle that the recipient of higher education benefits should be able to pay for it personally. The danger here is that those who cannot afford the tuition fees charged will miss out and this will affect accessibility and the country will not be able to realize its ambition of creating a pool of quality educated workforce to transform the economy (MINEDUC, 2011; Vandenberghe and Debande, 2007). The argument developed by Barr (2004) is that quality education is not cheap, and therefore, it should not be left to only the state; owing to the importance of higher education in attaining economic development, countries like United Kingdom have made some reforms allowing for charging of tuition fees ranging from £0 to £3000 per annum and this leads to financial boost of higher learning institutions in the country. The issue, however, in Rwanda is that mechanism for admitting private fee paying

students in higher learning institutions is there and the tuition is in the range of USD 1,574 per annum. The challenge however, is that most eligible students are not able to afford such amounts and this would call for need of access to loans which can be provided by financial institutions or even the state; such option of private tuition fee loans for students is not currently readily available in Rwanda. The students' tuition loan facility should be enough to cover the tuition and leaving allowances of students at higher learning institutions; though it should be appreciated that loans can be risky as they are security free and there is a danger of non-payment. And this may explain why the Government of Rwanda would need to be cautious enough in adopting a policy of loans advance to students that have to pay back when they complete their education and get a job (Gwosc and Schwarzenberger, 2011; MINEDUC, 2011).

### **Funding higher education using public-private partnerships**

Public-private partnerships in education involve having private players helping in supporting funding of education. A good example where public-private partnership has been successful is Nigeria where the University of Ibadan had arrangement with Mac Arthur Foundation that provided the university with a grant of \$100,000 in 2001 and in 2002, it gave the university a grant of \$3,000,000 for strengthening its operations, research and ICT (Jonathan and Peter, 2011). Rwanda could learn some good lessons from such a country and encourage its universities to solicit for such arrangements from the international arena. Rwanda has to realize that it is good higher education system that drives economic development and earning potential of its citizens.

### **Funding higher education using internally generated funds**

This is a really good option if the right environment is created for higher learning institutions. A good example of an institution in Rwanda that was able to generate in 2002 about 35% of its incomes internally is KIST (Kigali Institute of Science and Technology) and the percentage has since gone up; by 2008, it was projected to be more than 50% (Butare, 2004). This is a good case in point that other higher learning institutions in the country could emulate and overtime, the government could even pull out of funding completely recurrent expenditure and dedicate its efforts to funding only capital expenditure. KIST, having realized that its budget allocation by the government is not enough to support its activities, devised ways to generate its own resources and started projects in ICT like selling of internet services to the general public, and providing general IT solution to the public, in order to generate some money (Butare, 2004).

These are some of the projects among the many being undertaken at Kigali Institute of Science and Technology (KIST). National University of Rwanda (NUR) has projects like a radio station, houses for rent, consultancy firm, etc which provide some additional income for it (NUR, 2012).

### **Effect of reduced higher education funding on the quality of higher education in Rwanda**

Lack of enough HE funding has been the cause of low levels of research in higher learning institutions in Africa and the problem has been compounded by poor pay for lecturers. This could lead to low motivation and can have an effect on higher education since students will not get the best recent research materials from their instructors (Devarajan et al., 2011). Carrying out research makes tutors abreast with current developments locally and internationally vital for students' learning. It is quite unfortunate in Rwanda that most lecturers do not engage in research due to lack of financial support and this really does not develop them intellectually to make them current with their ideas; and this means students will not get up-to-date knowledge. The student population in Africa is projected to be 18 to 20 million by 2015 in about 10 countries in Africa including Rwanda whose student population currently stands at 73,674, showing that it has been going up since 1994/1995 when it was 3,261 representing about 96% increment (MINEDUC, 2011 and Devarajan et al., 2011). The increment in student population is a good thing for Rwanda provided that, adequate facilities are put in place to ensure good learning environment for students, which is not the case. Rwanda strives to ensure that it gets a pool of quality graduates from its higher learning institutions as they will have a lot to offer in terms of skills needed in the economy to transform itself and better the lives of its citizens; and again it is true that better qualified graduates get better pay for their services which increases their disposable incomes and tax base (Demange et al., 2008). Researchers like Ssempebwa (2011) argue that higher education in African countries like Uganda tends to be commercialized in a sense that public and private higher learning institutions recruit large numbers of students without considering the available physical and social infrastructure that aids learning, and this affects quality of education. Rwanda has been conservative in its students' enrolments in public higher learning institutions, only attracting government sponsored students. This trend has changed and private students are being enrolled in all the 7 public universities. This has led to numbers shooting up while facilities like university building have not been expanded, there is shortage of ICT equipment, well equipped laboratories, etc, and definitely these create negative effect on the quality of higher education. Higher learning institutions in Rwanda depend mostly on academic staff sourced from

neighboring countries like Uganda, Kenya, Tanzania, Zimbabwe and India. The problem, however, is that salaries offered are not attractive and this leads to attraction of less qualified staff. Higher learning institutions do not put enough research funds for staff and there is also shortage of publishers and access to international journals. The Ministry of Education has urged higher learning institutions in Rwanda to facilitate their academic staff to do research as this improves a university's rating and career development of the researcher. The problem of shortage of funding in Rwanda higher learning institutions is in both private and public ones.

The socio-economic transformation of a country has a lot to do with the quality of graduates or the quality of higher education (Ajakaiye and Kimenyi, 2011). Now, the issue is that good quality education depends on the available resources to offer it, and in Rwanda, there are financial resource constraints from the state budget. Because of this challenge, institutions have been urged to generate resources internally through research and consultancy to fill the financing gap and there is also a need to understand its feasibility. It is good for universities to generate resources internally. Universities can engage in applied research such that their new inventions can be sold to governments and other corporations. This would help generate additional financial resources. Consultancy can also be a good source of income for universities; and letting out some of the unutilized facilities like building to the public could also be another good source of income among other possibilities. The problem, however, is that potential sources for such revenues are limited in the country. There is need to develop and expand the private sector from which the higher learning institutions can harness some funding from as the public sector is not rich enough to provide for consultancy opportunities for universities. Economic development of a country may not be attained with poorly educated work force. South Africa is a good example of an economy that is doing well or developing because of its well educated workforce and this could be a good learning model for most African countries, and Rwanda should not be an exceptional case (Ouma, 2010). The United States of America has been commended for its quality higher education leading to quite a number of technological innovations, and generally its economic success has been attributed to its highly educated workforce (Newfield, 2010). An analysis is needed to ascertain lessons that can be learnt by the Government of Rwanda from such model countries as this could help in forging a way to improve the quality of its workforce that is vital for her economic development.

### **Effect of reduced higher education funding on the social and economic transformation of Rwanda**

A country's social economic transformation depends on the quality and not the quantity of its labor force

graduating from higher learning institutions. According to a study by Rangel (2004), Mexico has invested heavily on this sector and its graduates have a key role in its economic development. The country's population is more than 97,483,412 and it has eligible work population of 34,154,854 and out of these, 33,730,210 are working; though 15.8% are in the primary sector, 27.8% in the secondary sector and a big number of 53.4% work in the tertiary sector. This should be attributed to education attained at different levels (Rangel, 2004). Mexico is a developing country and so is Rwanda. What Rwanda can learn from Mexico is that, for a country to develop, it must invest substantially in its higher education sub-sector and ensure that it has a well educated workforce. Educated people are able to fend for themselves locally and internationally and even when they get jobs, the returns are better than those that never got higher education.

Rwanda targets to have for example 275,000 graduates in the construction sector, 235,000 in transport and communication, 75,000 in mining and quarrying, 520,000 in manufacturing by the year 2020. Rwanda is heavily constrained with these skills because universities in the country have not been training people in these sectors and this leads to reliance on imported manpower from other countries, which is not enough. Lack of knowledge leads to deficiencies and Rwanda has had these sectors underdeveloped due to lack of professionals. Higher learning institutions have started training people to work in these sectors and the government hopes that such shortages will be no more as per its vision 2020. Training in such skills is quite expensive and needs to be financially supported by government through adequate funding which is currently not the case; otherwise such skills will remain in short supply and this will deter the country's economic growth and hamper attainment of its vision 2020. There is a body of knowledge by Taylor and Machado-Taylor (2010), which asserts that higher learning institutions training should relate to the social and economic skills required in an economy. The idea is a formidable one but a country like Rwanda will need to train adequate number of engineers in its higher learning institutions which obviously comes at a high cost; but its economy may not sustain since there are also other sectors' priorities that need funding. There is need for balance in resources allocated for training in different fields and skills so that there will not be surplus skills in some areas and shortage in others. Given this kind of situation, the higher education sector has to find resources to complement those provided by the state through, for instance, students' fees, philanthropists, public-private partnerships and income generating activities which the government has to champion policy-wise and through other governments' supported forum.

The Government of Rwanda in collaboration with international universities has overtime been offering students grants in form of tuition fee waivers. The government through HESLD provides leaving allowances to students,

which they must pay back with interest. The collaborating universities are mostly in US through the presidential scholarship schemes as well as South African universities; the financial responsibilities for study tuition and leaving allowances are shared between the Government of Rwanda and sponsoring universities. Partner universities give tuition waivers to students and the Government of Rwanda only pays for student's accommodation and leaving allowances (HESLD, 2011). This has helped many students from Rwanda to access quality higher education abroad at affordable costs. Rwanda as a country has different categories of people in terms of their social and financial status. Mostly people in the rural areas are the ones prone to failing to get tuition fees for their children due to limited incomes and hence a requirement for governments' support. Financially able parents in town are able to pay tuition fee for their children in universities. The researcher has to explore the affordability to borrow funds from private institutions, which may not be easy for people without collateral for such loans. This means that parents without collateral will have their children miss out on pursuing higher education. This could lead to imbalances in economic development in terms of regional development in a country. The state has to ensure such borrowing is affordable by all potential beneficiaries and this should be guaranteed by the sitting government. Higher education system in the United Kingdom allows for universities to look for funding to complement contribution from the government and this has enabled the higher education system to produce credible graduates needed in the economy (Scott, 2009). Scott states that an average university in the UK has £200 million turnover annually of which some is raised privately by an institution from fees, and users of the university services and such amounts would keep the university functioning properly. Rwanda has to borrow a leaf from such systems, though from advanced countries. They can be tailored to Rwanda environment and adopted accordingly as the reality is that the Government of Rwanda cannot adequately fund higher education sector in the country and hence it should encourage alternative sources of funding by higher learning institutions.

## RESEARCH METHODOLOGY

Research methodology is about designing ways systematically on how research questions can be solved or how the researcher intends to do his research. Alternatively, it could also be called the work plan; procedures to be followed by the researcher in conducting research study (Rajasekar et al., 2006). It is crucial that the researcher understands and presents clearly the techniques to be used during the research study and how the collected data are to be analyzed so as to provide answers to the outlined research questions. Appropriate data must be collected using the right methods depending on the study method.

This research has adopted a qualitative research and especially survey questionnaires and interviews to collect both primary and secondary data. The qualitative approach was adopted because of its ability to help the researcher to form a holistic and narrative

understanding of the problems associated with higher education funding models in Rwanda. This approach is quite appropriate when collecting data from population that require use of instruments like document reviews, observations and interviews employed in this research as supported by McMillan and Schumacher (1993).

Quite a number of secondary sources (MINEDUC Higher Education Action Plans, 2011; MINICOFIN Higher Education Budget Estimates, 2010) have supported this study. The analysis of information from secondary sources has helped to supplement primary data collected from the field. The study outcomes are coming up with a research report that gives analysis about higher education funding sources in Rwanda, and also analyze the impact of reduced higher education funding on the quality of education in and its impact on achieving millennium development goals especially on education. The researcher has adopted a qualitative research study methodology because it allows working without specific boundaries and hence inclusion of new concepts, innovation in the study and ability to find reliable answers to the research question and it allows for realistic findings as argued by Toloie-Eshlaghy et al. (2011).

The study data sample of 45 respondents from the central province was chosen purposively and randomly such that, reliable information could be got from the respondents. This sample was divided into two subsamples. The first subsample focused on 15 employees from HESLD and the second subsample on 30 students that have benefited from HESLD financing their higher education. It is argued by Marshal (1996) that small samples are appropriate for qualitative research studies and what should matter should be the quality of the chosen sample and the richness of the information obtained from them. Russell and Gregory (2003) also argue that small samples could be adopted in a qualitative study provided that the research questions can be fully answered and provocative issues could be generated and call for further research and again the researcher should have to exercise adequate judgment in identifying the study sample. This is why the researcher has used a smaller sample in this study with the view of generating credible findings since the respondents are rich with the information and experience about higher education funding in Rwanda. A qualitative study has been adopted because it allows for reasoning during the study investigation. This really helps for the analyzing of the reliable data used during the research study (Jahoda et al., n.d.). Data were collected in this study, using questionnaire due to its appeal in collecting reliable data and also gives the respondents time to respond at their own will. Interviews were also used for this study bringing the respondents face to face with the researcher; and this helped in getting answers to structured questions by the researcher. Generally, a survey approach was adopted and instruments also included use of interviews and case studies.

A pilot study was done to make sure that the designed questionnaire was appropriate and basically, it was about understanding its weaknesses in collection of appropriate data, such that it can be improved on with the help of the targeted respondents. It was found to be appropriate and it was adopted without any changes made on it. The study results had to be verified to ensure reliability. The reliability test has been done using triangulation and generalization of research findings as these are considered vital tests in qualitative research (Johnson, 1997). If the findings can be used as a basis for other researchers, this means they are reliable and if similar or related studies can be made by other researchers, and they obtain nearly or almost similar findings, this becomes a good test on reliability of findings. Also to ensure reliability of the study findings, data were collected with full understanding of research ethics as per the University of Liverpool guidance.

### Qualitative research study

Qualitative research method has been adopted for this study

because of its appropriateness to investigate the research questions stated. Data analysis was done continuously as information was being gathered from the field, and is possible under qualitative research as supported by Clissett (2008). Information collected from field survey was tabulated for interpretation using Excel worksheet software, and Ms Word for tabulation to facilitate easy analysis. Analyzing the higher education current funding model in Rwanda is a crucial question, which could have different variables involved; for instance, the argument that quality of higher education depends on adequate funding. Increased higher education funding may lead to high number of graduates needed in the market. It is vital that funding is channeled to training of skills that are needed in the country. The statistical tools that can be used in assessing and measuring this can be the SPSS, Excel and others. Use of these tools helps to understand and process the data accordingly. This kind of approach is crucial in improving reliability of research findings. A systematic study inquiry has been used in this study since it is supported under qualitative research method so as to get a holistic view on higher education funding in Rwanda and basically this method has been adopted because, it is fundamental when doing research on social issues in a country (McMillan and Schumacher, 1993). Data were collected in this study from natural setting especially from records on higher education form, MINEDUC, MINICOFIN and HESLD. Data collection methods like interviews, observations, review of documents or records, questionnaires, case studies were considered appropriate due to their appropriateness to collect reliable and massive data for such a study (Wiersma, 1995).

#### **Data collected for the study**

The data collected from the field were about the current higher education funding model based on a costs sharing approach in Rwanda. Specifically, primary data were collected on the perception of the model by the respondents, its successes and failures, funds disbursements and collections under this method and what can be done to improve the model. Data were also collected on the perceptions of the targeted respondents on the other government proposed higher education funding models, which use of loans from private banks, internally generated resources by higher learning institutions, and public-private partnerships. Secondary data were collected through document reviews on higher education, HESLD budgets and analysis of funds disbursements and collections by HESLD and government new proposed higher education funding models (MINEDUC, 2011 and MINICOFIN, 2012).

#### **Data sample**

The data sample was chosen as a judgment sample targeting departments involved in funds allocation in the higher education of Rwanda, and these are loans disbursement and recovery at Rwanda education board where HESLD agency falls. These two departments have been sampled because they are the ones that deal with funding of higher education and so the researcher considered them appropriate for this study. From this data obtained from the selected samples, the researcher is able to understand the suitability of current higher education funding model in Rwanda after analyzing its advantages and disadvantages and also to understand the implication of adopting the other government proposed higher education funding models. The government would therefore need to step in and act accordingly on the appropriate model if it is to make its higher education vibrant so as to avert the disadvantages of a failed higher education system, which could impact on its economic development.

#### **Study period**

The period considered for this study is 2009 to 2011. Higher education financing in Rwanda during this period underwent through reforms in terms of higher education financing. The government was faced with heavy financial burden of supporting students going to public higher learning institutions. The dilemma here was that many students were qualified to join universities but the capacity of the state to financially support them was not enough. This the same period that the Government of Rwanda opted for costs sharing such that the state and the learners share the financial responsibilities (HESLD, 2011). This is the same period that the Government of Rwanda vigorously started urging higher learning institutions to look for alternative sources of financing. Among the options were public private partnerships, generating funds internally by higher learning institutions through research and consultancy and engaging financial institutions in the country to support higher education funding in Rwanda (MINEDUC, 2011).

#### **Data collection instruments and design**

Data were collected from both primary and secondary sources in this study. For secondary sources, the research reviewed budget documents from HESLD, disbursements and loans recovery documents, and Rwanda higher education policy documents (MINEDUC, 2011). This was done through observation by reading and analyzing the contents therein those documents. Primary data were collected from HESLD using questionnaires and group interviews. Primary data in this case are regarded as first hand collected data from the field. The research held two group interviews: one with loans disbursement department, and the second one with the loans recovery department of HESLD.

The researcher also held individual interviews with the Director General of HESLD and the statistician of the agency. The questionnaires had both open and closed ended questions with multiple choice questions. The questions were about the advantages and disadvantages of costs sharing, use of internally generated funds, public private partnerships, and use of bank loans in funding higher education in Rwanda. The questionnaire also had questions about the relationship between higher education funding and quality of education and economic growth of Rwanda, and what can be done to improve current higher education funding in Rwanda. The structure of the questionnaire is addressed in the next section.

These instruments were adopted for use in this study because of their easy applicability. Questionnaires were adopted because they allow the respondents freedom to give information without disclosing their personal details. There is no fear of being reprimanded by superior colleagues. This allowed for high response rate of about 90 percent. The respondents were preselected with the help of administration at HESLD and 10 workers in the two departments were selected to give information about the study problem. Out of the 10 questionnaires distributed to the respondents, 9 were received back by the researcher. This represented 9/10 response rate on the side of HESLD employees and a good response rate from the students was achieved (26/30 response rate). This kind of response allowed the researcher to give representative findings about the research topic, which is about higher education funding in Rwanda. The respondents had to be knowledgeable in the subject to ensure reliability of responses. The respondents fortunately were workers and students who were once also beneficiaries of funding from HESLD. This also helped in improving reliability of the information. The nature of sample organization-HESLD and its sensitivity deal with financial matters and students' financial affairs; the respondents were comfortable

with the group interviews divided into two. Higher education loans department has only two functional departments.

### Questionnaires and their design

The questionnaires composed of both open and closed ended questions. The questionnaire design was based on literature from secondary sources of information especially from ministries of education and finance published documents (MINEDUC, 2011; MINICOFIN, 2012). The information that was particularly useful was that on higher education financing and the models used. The closed ended questions took the form of multiple choice questions based on 1 to 5 scale. This Likert scale helped in understanding the feelings, attitudes and opinions of the respondents on the subject matter (Brown, 2000). The reason was to identify the support levels given to current and government proposed higher education funding models. The open ended questions were aimed at understanding the respondent's perspective on how they look at higher education funding in Rwanda against her economic development and how a failed higher education funding system affects the HE quality. This was an appropriate data collection instrument as it allowed for easy data collection from the respondents, questions were clear and easy to understand and respond to. The structure of the questionnaire consisted of two sections: A had questions about the current and proposed higher education funding models in Rwanda and their appropriateness and suitability. The section B of the questionnaire had questions about the relationships between higher education funding and quality of education in the country and how higher education funding impacts the economic growth of Rwanda. This kind of approach was adopted because it helped to collect the required data about the major research question, which is about analyzing the current higher education funding model of costs sharing in Rwanda and the other government higher education proposed funding models. The link in the quality of higher education as a result of adequate funding had to be analyzed and this also goes with the economic development of the country resulting from a vibrant higher education system. The questionnaire is attached as an appendix and it contains questions to respondents on this point.

### Interviews and their design

The targeted study population at HESLD was its two departments of loans disbursement and recovery. HESLD has only two departments. They were all considered for this study. This was because the loans disbursement department is responsible for identifying and giving out funds to the student beneficiaries and the loans recovery department is responsible for collection of the loans disbursed to students during their study. For interview purposes, each department was interviewed as a group. The researcher used group interviews in the study and this was mainly because it is a good method for understanding the feelings and thoughts of the respondents about the research problem (Kothari, 1985). Four staff members from the loans recovery department formed one group and three staff members from loans disbursement formed another group. The group's interviews were good since they helped in avoiding controversy in answers given to the interview questions. The groups would not agree when a wrong answer was given to a question posed by the researcher. This helped the researcher in getting reliable information during the data collection.

### Observation and design

This instrument was used by the researcher to observe higher

education financing trend, which has been turbulent under the 2009 to 2011 period considered for this study. It was done through documentary reviews from the ministries of education, finance and economic planning. There was no particular design for this research instrument. This approach enabled the research to collect primary data by observing situations, actions and people at HESLD and this helped to collect data that respondents were not able to reveal especially on their attitude towards the current costs sharing on funding higher education in Rwanda. Some respondents were not willing to freely criticize it due to some fears. Again, through observation, it was clear from the respondents that they had reservation on the government proposed higher education funding models especially on the use of commercial loans and PPP, which they felt could be expensive in the long run in form of interests payments and the hidden costs that may be associated with public-private partnerships in higher education.

### Data analysis

As regards the analysis of collected data, this has been done using Excel and Ms Word as they have features for analyzing the collected data and more so it is easy to come up with information that can be graphically presented for illustration purpose and understanding of the end users of the project report. The process involved editing the raw data to remove errors and ambiguities; the data were classified into groups depending on the questions asked and answers obtained. Tabulation of data was done to help explain the findings from the research. Since this is a qualitative study, there has been a content analysis of the information obtained from the survey as codes were assigned to different questions and responses from the survey based on the themes; and from this, a study analysis is made to make some recommendations on the findings of the study. The data collected from the survey using questionnaires, group interviews were done using SPSS to find frequencies. This helped in explaining the findings logically.

### Validity and reliability of research results

The study questions were fully answered since the survey method, which employed use of questionnaires, group interviews, and observation used to collect data was reliable. Johnson (1997) argues that as long as the study findings can be generalized to different circumstances and wider groups, this becomes a good test for the validity of study findings. The findings from this study can be generalized to different wider groups and the trustworthiness of the source of information increases the validity of the study results. Triangulation is also a vital test on reliability of study findings (Mathison, 1988) as different methods are used in collecting data and analyzing them. The researcher has use questionnaires, interviews, observation and review of past literature about higher education in Rwanda as the use of such various techniques increases reliability of the study findings.

The questionnaires, interviews, and observations were done appropriately by the researcher to ensure research was well done. The study gaps identified in the literature that shaped the research questions for this study have to be narrowed since the findings from this study have come up with some answers and the way forward. Patton (2002) argues that reliability and validity of a study are paramount as the audience needs to be convinced of the research findings and the argument here is that the researcher has to trust his sources of information for the qualitative study. The source of information for this study is trusted and hence the results are reliable. There cannot be reliability if the information is not valid; there is some argument that validity of information in qualitative research is not crucial (Creswell and Miller, 2000). However, there is need to find some ways on how research findings should be

measured and to check out for its correctness depending on the rigor involved in the study. This qualitative study approach involves rigor, quality procedures that ensure the findings are valid and reliable and can be depended on for further research in the area.

## RESULTS AND DISCUSSION

This chapter gives details about the research findings from this study. The study is about the evaluation of the current HE financing model in Rwanda. It is vital to have a good higher education system in Rwanda if the country is to achieve economic development that is sustainable (MINEDUC, 2011). Rwanda aspires to achieve an educated middle class of entrepreneurs who are knowledgeable and equipped with business skills needed for making investments in the country as laid down by MINICOFIN (2012). A good higher education system in the country can help to achieve its dream of creating a middle class who would for instance take risks based on the projected returns which have to be compared with risks and then understand how the risks can be mitigated. It is through taxes paid by such investors that the government uses to set up other infrastructure needed to support economic growth for instance setting up of hydro power projects for electricity needed to run factories and other business installations.

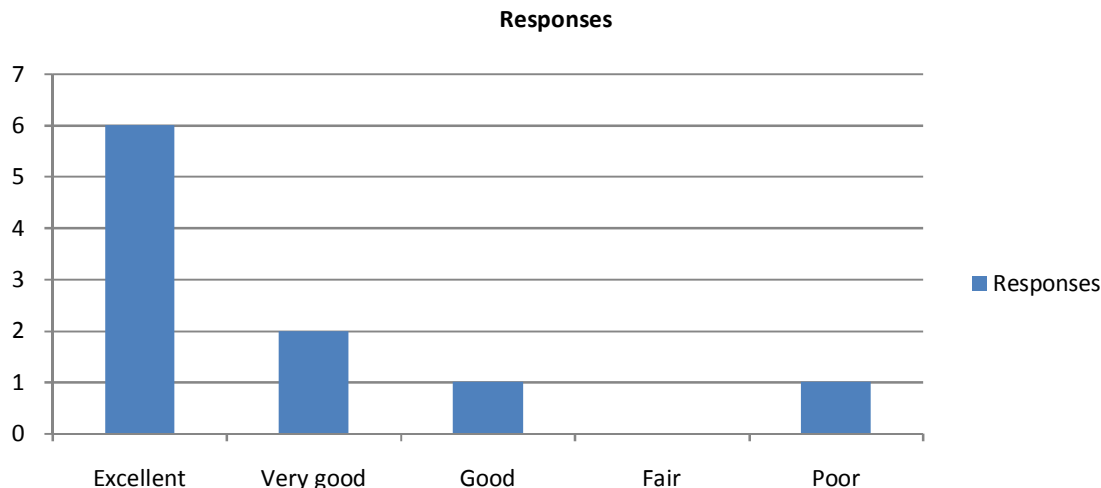
This may not be possible if a country has its higher education sector underfunded and this is the case in Rwanda (HESLD, 2011). Rwanda currently uses the system of costs sharing where the financing responsibility is shared between the government and the student. This has been proven to be quite expensive and unsustainable since the financial means testing (FMT) being used is seen as unfair when selecting the potential beneficiaries who are supposed to be from poor backgrounds (MINEDUC, 2011; HESLD, 2011). There is need to have this model improved and if possible to look at and analyze other possible funding models like PPP, tuition fees and internally generated funds. This study has sought views from the respondents about the costs sharing approach employed for funding higher education in Rwanda, analysis of the use of tuition fees, PPP, bank loans and internally generated funds funding models for higher education in Rwanda. The other research questions are to find if there is a link between higher education and economic development of Rwanda, and also if there is a relationship between higher education funding and its quality. The chapter is structured as follows: cost sharing in Rwanda, various other funding models, effect of higher education funding on quality of higher education, and higher education funding and its impact on economic development of Rwanda.

### Cost sharing in Rwanda

This is the current higher education funding model used

in Rwanda (HESLD, 2011). This method is viewed by respondents as one where the parent and the state both make financial contribution for a student pursuing her/his studies at Rwandan higher learning institutions. Findings from the study showed that Rwanda uses a costs sharing approach to fund its higher education system since 2008. From the 67% questionnaires received from respondents, 60% of them rated it as excellent, 20% as a very good system, 10% rated it as good and 10% also rated it as poor (Figure 1). No respondent rated as fair. This means that, whereas it may be a good funding policy, its method of implementation is not good. It may also seem to suggest that, the model receives different supports from the respondents and one would think that the respondents were rating it on how fair or unfair it is as a policy instead of just giving it weight based on Likert scale rating. The majority rated it as excellent giving reasons like; it is a government policy and therefore, it should be adopted and thus make a parent and state both responsible for funding higher education in the country. This finding compares well with those of Adeniyi and Taiwo (2011) on costs sharing in Nigeria where this method has been used for quite a long time. Whereas the findings from the rating of current higher education model by respondents showed excellent support, there is a need to look at affordability by parents and students. This approach could be excellent for countries that have attained some good level of economic development and parents have enough savings, which they can use to support their children at higher learning institutions in Rwanda. The FMT approach used in selecting beneficiaries of funding support from government should be reviewed and strengthened to ensure support goes to those that deserve it. This may also help to close the gap between the rich and the poor and in the long run, this may bring about balanced regional economic development. As regards the FMT, the government could think of employing a neutral private firm that could do the assessment of all applicants for financial support from the government; one would think that this is fairer than just using politicians at districts who may not do well in this regard.

The questionnaire had a question seeking for views from the respondents on how they rate the current cost sharing system of funding higher education in Rwanda. Guidance was given on the rating where an excellent rating score was 5, very good was 4, good was 3, fair was 2, and poor rating was 1. Figure 1 shows that a total number of 60% respondents at HESLD gave cost sharing system funding model of funding higher education system an excellent score and this means that, they view it as a good model. Only 20% respondents view it as very good, 10% as good, 10% as poor and none rated it as fair. Such rating disparity shows that the model is good and what the Government of Rwanda might need to do is to improve loans assessment methods and recovery mechanisms from students. This could be done by



**Figure 1.** Graphical illustration of responses from HESLD.  
Source: Author.

automatically giving financial assistance to all students who meet the cut off points of entering the higher education institutions (HEIs) in Rwanda and also putting up a system that compels the student to pay back the loans upon employment without any difficulties. It is clear from Figure 1 that the majority of respondents from HESLD support costs sharing as a policy and what needs to be done is to improve on it and also the Government of Rwanda should make steps to educate parents on why this policy should be supported. The state could argue that, they are trying to ensure that students from poor backgrounds get financial support and those from rich backgrounds are individually supported by their parents. It should be clear that what is being discussed here is the leading allowances and memoir fees. Regarding the tuition fees, every student who meets the government cut off point for entering HEIs gets it and the contentious issue is only the monthly allowances for students, which support during their stay in the universities. The rating of poor should not be dismissed as what should be done is to address the loopholes in the model as a way forward; instead of using politicians, the government could opt to use teachers and head teachers that may know the economic background of these students since they would have interacted with them at high school.

#### **Rating of costs sharing model of funding higher education in Rwanda by students**

The student respondents almost gave the opposite rating of the current higher education funding model of costs sharing whereby, of the 83% responses received from student respondents to the questionnaire, 40% respondents rated it as poor, 36% gave it a fair rating, 16% rated it as good, and 8% rated it as very good. The argument advanced by students for this poor rating is

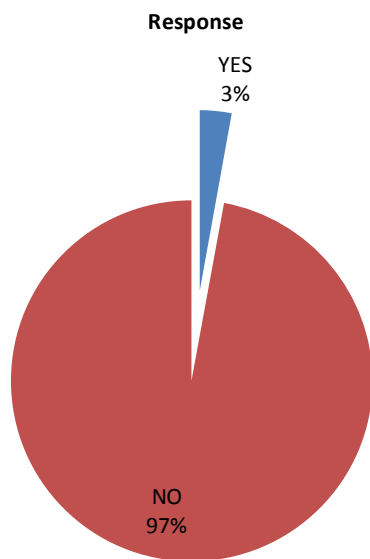
attributed to unfairness in the evaluation process which uses the FMT (financial means testing). This makes some eligible students to miss out due to miss evaluation by some corrupt government officials. The students in their responses are not sure whether or not the errors in the evaluation process are innocent or intentional. The other reason for not giving costs sharing a good rating is that people in Rwanda are poor and they may not be able to meet their financial obligations or contribution to their higher education funding since they may not be employed as this makes the situation economically worse (MINEDUC, 2011; MINICOFIN, 2011). When one looks at a similar study in Tanzania by Teferra and Altbach (2004), it was argued that costs sharing can only be possible if the parents are economically empowered and this compares appropriately with situation in Rwanda where this policy might not receive a lot of support from students since they are fully aware of their poor economic positions, which makes them run to seek for government's support on their study leaving allowances and memoir fees.

As seen in Figure 2, students do not find costs sharing an attractive funding model, and hence the reason for this very poor rating, with 0 as excellent and 10 as poor. The rating is based on the information from the field and these are students' responses to the question that requests students to give a rating of cost sharing model of funding higher education in Rwanda from excellent, very good, good, fair and poor and the assigned scale was 5, 4, 3, 2, 1 respectively based on the Likert scale. Though, from 0, the rating keeps going up in terms of number of respondents who rate from excellent to poor. This means that virtually, this model is not well rated by students and the logic here is that students may not want the financial obligation attached to their studies where they have to contribute and also, they may be seeing it as unfair in





**Figure 2.** Graphical representation of students’ responses.  
Source: Author.



**Figure 3.** Graphical representation of students’ support level of costs sharing.  
Source: author.

### Support for cost sharing findings

Respondents were asked in the questionnaire on whether or not they support the current cost sharing model of funding higher education in Rwanda. The responses from HESLD showed this pattern: 90% answered NO, and 10% answered YES. The reasons advanced for NO is that Rwandan students are not able to financially support their studies, and that students should instead get full tuition and leaving expenses loans which they can pay when they get employment after completing their studies. The YES response came with a reason that a student must somehow also take some financial responsibility as this would make them more serious with their studies and responsible students. All the 100% student respondents do not support costs sharing and the argument advanced by students is that it is expensive for them and it is not fair. They feel the government should take full responsibility for funding higher education in the country as a way of providing a social service to its citizens. Figure 3 shows that 97% of respondents do not support the current system of funding higher education, which is based on costs sharing between the government and the students.

terms of its implementation by the state. Again if the students never fairly benefitted from it, they would give it a bad rating and more so, students may have issues with funds recovery from them where they may not wish to have their salaries deducted to cater for the loans received from government when they were in the universities.

However when one looks at these responses, one wonders whether or not the policy on higher education funding adopted by government is fair to its beneficiaries; and according to MINEDUC (2011), costs sharing is the way to go and it is the policy that was eventually adopted by government in 2008, but it has come with challenges especially with application of FMT and high poverty levels in the country. The major issue with student respondents

is that the country is poor and does not adequately make students and parents able to meet their contribution for students to be able to attain their higher education degrees. Barr (2004) argues that it is crucial for students and parents to contribute to their higher education financing as nothing comes cheap in this sector. Students should not hide under the veil of arguing that it is expensive. In any case, it is the state that pays all the funds and the student pays only upon getting employment and really it is a small percentage that is deducted from the salary of the beneficiary and this is done for a reasonable period time that will not financially hurt them (HESLD, 2011).

Figure 3 shows that 97% do not support costs sharing and 3% support it. It would be squarely clear from the students' perspective that the government could have better options or be fair still; it could improve this model and say offer 0% interest loans and then to ensure that beneficiaries of the scheme are fairly chosen based on merit only. The 3% support could be improved if such mentioned issues herein are addressed and again one would think that, it would be fair to combine the costs sharing approach with other funding models like use of bank loans and PPP etc.

## Other higher education funding models in Rwanda

### *HESLD responses*

Respondents from HESLD were asked about other government proposed funding methods of using tuition fees, bank loans, setting up firms to generate funds internally and use of PPP. The responses took this pattern: of the total 67% responses, 20% support use of tuition fees and 80% do not support use of tuition fees for funding higher education. The reason identified for not supporting using tuition fees charges is that Rwandan students or parents may not be able to afford it due to high levels of poverty in the country. Those who answered yes believe that as the country is not rich, it should be the burden of the students to find ways to support or fund their higher education. The responses for internally generated funds as a source of funding higher education had 30% yes and 70% no; and the reason advanced for high rate of disapproval is that the government would still slow them down due to its bureaucracy and those that support it advance an argument of relieving the government some financial burden and such funds can be allocated to other sectors of the economy. Bank loans as a proposed form of funding higher education in Rwanda is the one that received a lot of support from respondents as out of 67% responses, 0% respondents support it and only 100% did not support it. This is because bank loans can be expensive in interest payment and they may not be readily available on the market. This makes it unattractive for the majority of

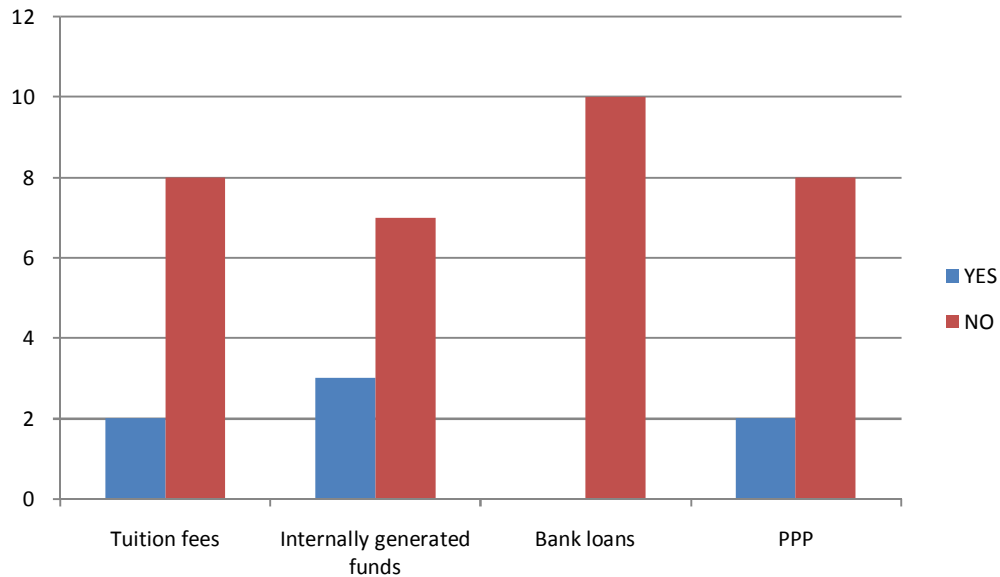
students.

The responses received about use of PPP were with mixed reactions, where 20% respondents believe that use of this method is good especially for infrastructure development. The rest of the 80% responses did not show support. The reason advanced for this is that, the Rwandan Government may not have the expertise to deal with such arrangements and again they believe that such arrangements have been tested in Rwandan higher learning institutions and have failed especially at NUR and Umutara Polytechnics. The issue here is lack of understanding of how PPP works, and they had failed to make prior studies on where such arrangements had been successful. They were adopted by these institutions and the financing arrangements became a problem making their services unaffordable by students and also became difficult on the side of these institutions. Jonathan and Peter (2011) argue that PPP is good provided the arrangements have been negotiated well between the players and the service user should be able to afford the cost; but this seemed not to be the case at NUR and Umutara where these initiatives were adopted.

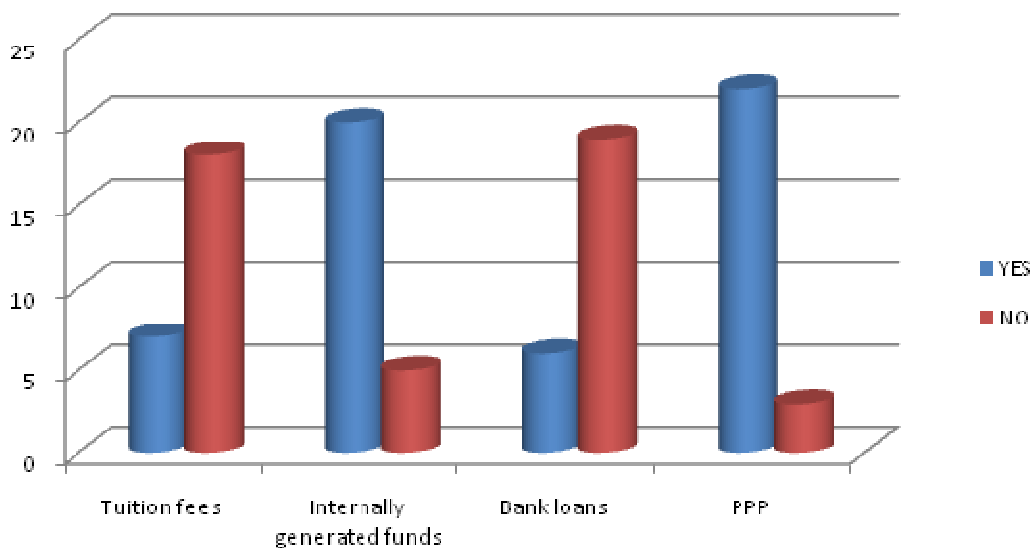
Figure 4 shows that, bank loans are not a favored option to HESLD respondents. All the 67% respondents gave it a NO, 80% responded NO to using of tuition fees and using of PPP and 70% responded NO to use of internally generated funds. When one looks at this trend of responses, it leaves one thinking that all these options may not work well in Rwanda; for instance, the banking sector is not well developed and prepared to offer student financing as they may fear the risks involved. HEIs may also abuse the tuition fees policy by charging high fees. For the case of PPPs, these may be difficult to find and manage and may be abused by some investors. As far as use of internally generated funds is concerned, this may not be a very feasible funding model as the sources for such a model may not be many and hence rendering it not sustainable and unsuitable long term higher education funding model in Rwanda.

### **Students' support of the various funding models**

The situation illustrated in Figure 5 shows that of all the proposed funding models, use of internally generated funds is highly supported by students as compared to other options and this is generally fine as it puts higher learning institutions on the lime light of not depending on the vote from government. Butare (2004) argues that it is great for higher education institutions (HEIs) to generate their own resources which they can use for the operations of the institutions. It is clear from his study at KIST that such resources are instrumental in the development of the institution and the general welfare of its human resources as they get 50 %top up on their salaries and this improves the morale of lecturers as well as having a knock on effect on their service delivery. There is no



**Figure 4.** Graph showing hesld support of various funding models.  
Source: Author.



**Figure 5.** Graphical illustration of students' support for other funding models.  
Source: author

support for bank loans as an option for funding higher education because they are not affordable; this is valid given the poor economic situation in the country.

**Discussing students' support for proposed higher education funding models**

The student respondents strongly believe that use of PPP is a very attractive option for funding higher education in Rwanda. The support given is 88% for yes and 12% for

no. The issue here should be to get the arrangement right and to ensure that the benefits from this arrangement outweigh the costs and there is also need to understand that this arrangement could be good for capital project development and not for say equipping of laboratories and buying of books which the HLIs should be responsible for. The other huge support was on use of internally generated resources; it had 80% support and 20% no. This method makes the institution responsible for generating resources through say consultancy work, research and other activities as argued by Butare (2004).

Here, the government has to be cautious not to lock the generated funds into unnecessary bureaucracy. This might not help to make the situation better for HLIs if such red tape on government institutions spending is not addressed even if the funds are generated. In other words, higher learning institutions should be given some level of financial autonomy by the government. There is little support for funding higher education in Rwanda using tuition fees where 72% say no and 28% say yes. The disapproval could be associated with the fear that HLIs could use it as an opportunity to charge high fees to students and this will be unaffordable by majority of Rwandan students. Vandenberghe and Debande (2007) argue that charging tuition fees could be used as long as it is done right and fairly and the student does not suffer some much loss. The point here is that tuition fees policy should be clear and fair to all parties and it should be used solely for funding higher education. The use of bank loans is also not supported and it has received 76% no responses and 24% yes; and arguable, this could be attributed to the weak banking sector in Rwanda. The existing banks may not all be ready to provide education loans to students without some form of guarantee from government and some other institutions (MINICOFIN, 2012).

Figure 5 shows there is high support for adoption and need for use of public- private partnerships and use of internally generated resources to fund higher education in Rwanda. A question in the questionnaire requested student respondents to support or not support the current cost sharing and other proposed funding models; the responses received are indicated in Figure 5. The least supported models by students are the use of tuition fees and use of bank loans. The fear here is that both models can be misused by HEIs and financial institutions to exploit students.

### **Higher education funding and its effect on quality education in Rwanda**

The findings indicated that 100% respondents agree that when higher education is poorly funded, it will affect its quality. No response was against it. All the 67% responses received from HESLD show that, they all believe that higher education subsector in Rwanda is underfunded and this is also the belief of all the 100% responses received from students. The arguments for the support are that, it is vital to give adequate funding for research, infrastructure development, equipping of learning facilities, and paying lecturers and other employees. This all leads to provision of quality learning. Devarajan et al. (2011) believe that to have a quality education, all the necessary study apparatus and all functions in the HLIs should adequately have all the necessary resources. The findings from this study show that quality is just not achieved, it must be sought for; and it would require

some heavy financial investment; for example capacity building and putting up infrastructure and other systems that support quality development and enhancement. The Government of Rwanda should inject some more funds in the sector for this to be realized.

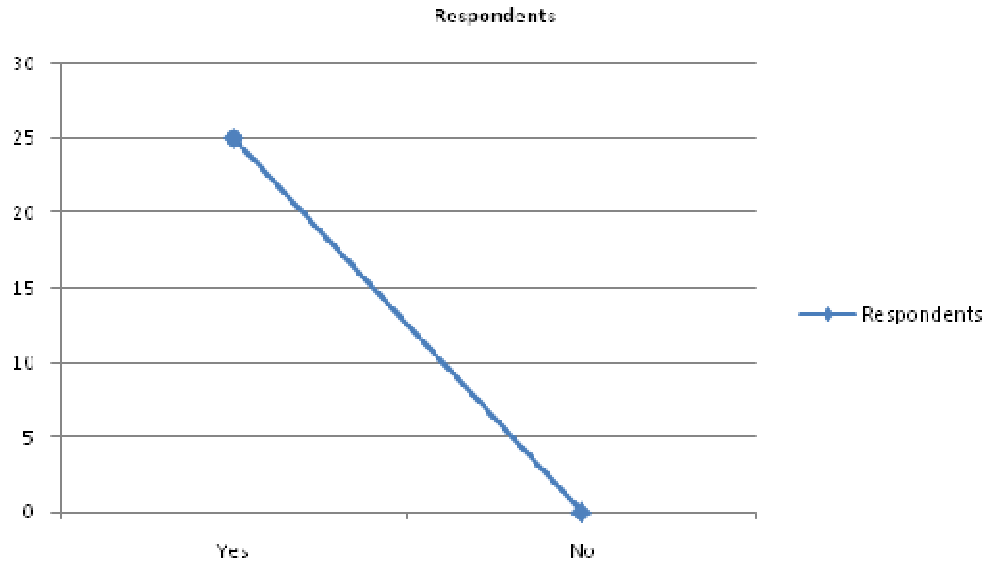
From Figure 6, one can easily say that the Government of Rwanda has to start rethinking its strategy of ensuring the higher education sub-sector is given adequate funding as a poorly funded one will impact service delivery at universities. However, the government ought also to understand that quality achievement is a responsibility for all the stakeholders and for it to be achieved, it will require some support from the top management of the institution and the Ministry of Education.

The scenario in Figure 7 showed that quality is affected by funding. This is the view shared by student respondents where all the 100% responses concur that poor funding of higher education affects quality. It is against such a background that government could review the HE budget upwards if it is to achieve an internally comparable higher education (HESLD, 2011).

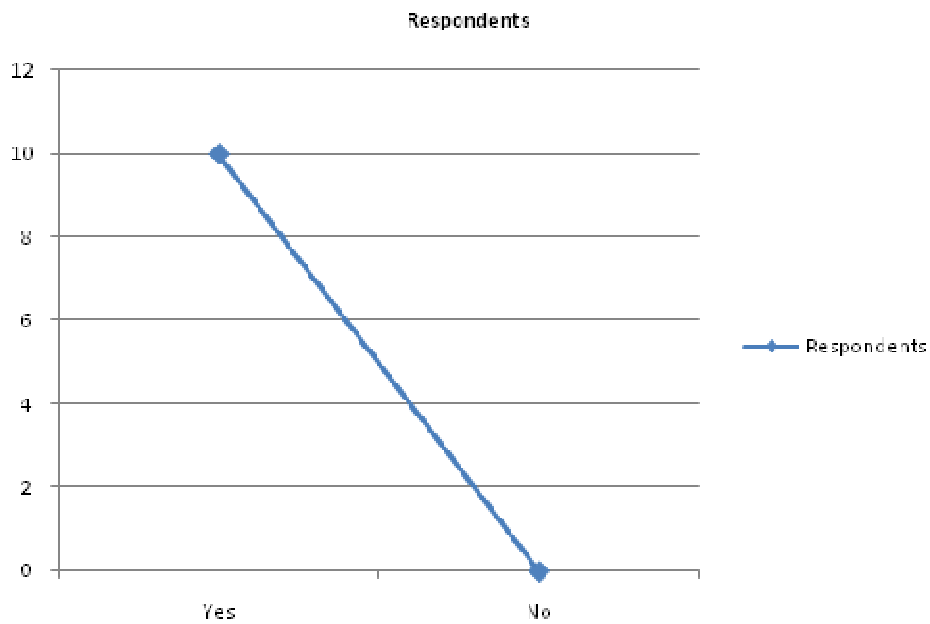
### **Higher education funding and economic development of Rwanda students' responses**

The study findings from questionnaires reveal that 90% of respondents agree that once you reduce higher education funding, this will have an impact on the economic development of the country. Those that do not agree are 10% as reflected in Figure 8 and their argument is that, they do not understand how higher education funding is linked to economic development. Those that agree that economic development can be hampered by a poorly funded higher education have advanced these reasons. The country will lack well educated workforce to help build the country. Also, the earning capacity of poorly educated workforce may not be good and this will deny the economy some taxes essential for her development. For a country to develop, it should have a well functioning higher education sector according to Rangel (2004). It is an educated workforce that helps to drive an economy, therefore, Rwanda has to provide funding for this sub sector such that, it will be able to have required manpower in all the key and no key areas in an economy. Arguably, it may not be possible to achieve social and economic transformation with lack of vibrant higher education that feeds different sectors of the economy with the required manpower (Ajakaiye and Kimenyi, 2011).

The analysis of the information in Figure 9 shows that 92% of respondents believe that a good education in an economy is paramount for its economic development and 8% think that there is no relationship between them. The emphasis of the government should be to provide quality of education to produce quality graduates that will work in service and non service sectors of Rwanda. This will enhance development, as argued by Sempebwa (2011)



**Figure 6.** Student respondents' view on effect of funding on quality education. Source: Author.



**Figure 7.** HESLD respondents' view on effect of funding on quality education. Source: Author.

that higher learning institutions should strive to produce well qualified graduates and this may not be achieved with inadequate funding of the sub sector.

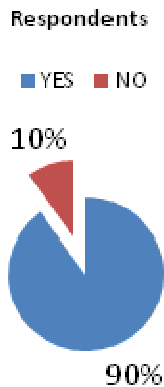
**Findings from research interviews and review of documents**

The results from the interview conducted in the two departments of loans recovery and loans disbursement

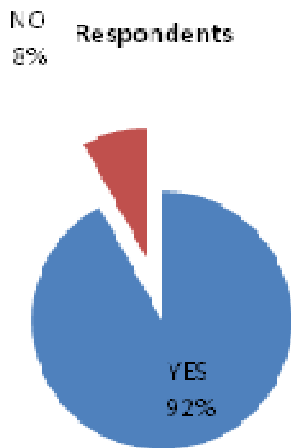
about the current higher education funding model yielded the responses as follows. Respondents were asked about the evolution of higher education funding in Rwanda. The responses received are discussed as follows.

**Evolution of higher education funding in Rwanda**

Students were only getting living allowance of \$19 per



**Figure 8.** HESLD responses on funding and economic development of Rwanda. Source: Author



**Figure 9.** Student responses on funding and economic development of Rwanda. Source: Author.

month (Student financing agency of Rwanda) during 1994-95. This was a small amount for a whole month. However, this was something and at the time there was only one university and this amount at least was paid to student's satisfaction (HESLD, 2011). This amount at the time was justified since the government did not have enough revenue to increase this figure and it was paid to all the beneficiaries as long as you qualified to enter the university. From 2001-2002, students were getting from SFAR \$19 per month as living allowance plus \$173 for dissertation. This now is a good improvement of the situation and it showed that the government was committed to improving quality and higher education funding in the country and this was really a step in the right direction taken by the government. Students started getting \$43 dollars as living allowances per month plus \$173 for dissertation from 2003-2007 and further still, this was an improvement of the higher education funding

situation in Rwanda. The emphasis at this point should have been on effective disbursement of these funds to students. It is from 2008, that costs sharing began with government and students' contribution. Unit cost was introduced. For science and technology courses, \$2,590 is provided to students per year. Here the student makes a contribution of 25% and the government makes a contribution of 75%. For non science courses and education, the unit cost is \$2,072 per year where government contributes 50% and the students contribute 50% as well. For education, the student contributes 25% and the government contributes 75%. All these initiatives are intended for the good of the students but the problem of non compliance from student in meeting their financial contribution still persists because due to lack of credible sources of income to support their educational investment (MINEDUC, 2011). FMT (Financial means testing) started in 2011 to help identify potential beneficiaries of financial support from government for their education. This means that funding was only given to those that are financially unable to fund their education or those from poor families. The ones from rich families do not qualify for financial support for HESLD to support their education. This kind of arrangement could work effectively if the government employees qualified FMT assessor who can do the work efficiently and competently. Until this is done, the FMT will keep riddled with inefficiencies and this will exacerbate the problem of loans disbursement and collections by HESLD. Cost sharing approach will continue facing challenges unless the parents and students are thoroughly educated on it such that all the parties make their contributions effectively.

**Student group interview**

The groups were asked about the \$43 per month leaving allowance paid to qualifying students on whether or not they thought it was enough. They all agree that, it is not enough and what makes matters worse is that students do not sometimes get it on time. This leads them to run out of essentials that they may need during their studies. The interviewees agreed that in some, there is selective payment of leaving allowances. They argued that because, the FMT is not fairly done as a result of corruption by local government officials as supported by HESLD (2011), financial assistance, in some cases, is given to the would be non-qualifying beneficiaries. About funding memoir, it was revealed in the interview, that, this ended in the year 2011. This means that the students at higher learning institutions no longer get \$173 to facilitate their research work.

**RECOMMENDATION AND SUGGESTIONS**

This study has analyzed the costs sharing approach of

funding higher education in Rwanda. This is the current funding model used in Rwanda since its adoption in 2008 (HESLD, 2011). This study also looked at other funding models as proposed by the government of Rwanda, which include using tuition fees, PPP, internally generated funds and use of banks. These models need to be analyzed further to ascertain clarity and their suitability for adoption in Rwanda. This study also tried to look at the relationship between higher education funding, quality of higher education and economic development. This is an area that can be analyzed further by future researchers. The findings from such a study would direct policy making by different stakeholders on how best they can find adequate resources to inject in the sector. The Government of Rwanda is committed to developing its higher education sector based on quality that can be compared to other international higher education systems (MINEDUC, 2011).

The current higher education funding model of costs sharing should be maintained since it is clear from the findings that once the FMT is done right and fairly, then the model is excellent. This model has worked well in Uganda and Tanzania and with the right approach, it would work also well for Rwanda since one would also argue that all these countries almost have the same economic realities as also argued and supported by Teferra and Altbach (2004).

The creation of a state bank for funding education could work successfully provided that it has full support of the government. The Education Bank in Nigeria established in 1993 by decree no. 50 has been a success (Chuta, 1998). It has been able to support higher education funding successfully. Rwanda could set up such a bank and make it specific for the education sector and to make it more interesting, it should take a business model approach such that, it remains liquid and solvent. The use of internally generated resources by HEIs would be a good funding option if the institutions could get the right opportunities and funds are efficiently utilized by the HEIs with no corruption and embezzlement. Rwanda has zero tolerance for corruption and this means that, this option can be best suited model for funding higher education in Rwanda. Discussed here is an example where internally generated funds can be misused by HLIs if there are no proper financial controls put in place to safe guard the generated resources. One University called Maseno in Kenya lost about US\$660,000 in the 1995/96 financial year in financial malpractices according to Teferra and Altbach (2004). It is such vices that would make this model inappropriate in countries where people do not have good work ethics and skills in managing funds of an institution. Rwanda is a country where financial resources can be generated by HLIs and used for their intended purpose as corruption is heavily condemned.

Higher learning institutions should be allowed to charge tuition fees to students and the policy on this should be very clear (Adeniyi and Taiwo, 2011). The point is such

fees should be regulated by the responsible government for them to be affordable by parents and students. Government's higher learning institutions in Rwanda charge tuition fees to privately sponsored students. This has proven a success in generating funds, which they use to fund university activities (MINEDUC, 2011). This higher education funding model works well for Rwanda since regulations in Rwanda are closely respected by the institutions. Public- private partnerships are only good for funding higher education if they are properly negotiated and arranged by both the government and private investors and what is done should be to the interest of the education system. If one takes an example of the University of Bristol, it gets its 36% funding from the government and the rest of the funding is generated through PPP and tuition fees according to Ingo (2003). This is probably because the university is in a rich country and it has also built its reputation overtime and it can easily be supported and trusted by investors. The situation in Rwanda is different where most universities are young and the country is still poor. Such issues may not attract the interest of investors in the sector. This model may not currently work for Rwanda as the country and HEIs would need to grow their capability to deal with PPP.

## Conclusion

The study is about analyzing the current (costs sharing) higher education funding model in Rwanda so as to understand its suitability for the country. Other funding models analyzed in this study are use of internally generated funds by HEIs, bank loans, PPP, and tuition fees. This kind of analysis would influence a policy change on how the Government of Rwanda can best use the suited models to fund its higher education sector. Rwanda stands a high chance of attaining economic development if it develops and adequately funds this sector. Higher education funding methods in Rwanda have been changing since 1963 when funding was solely the responsibility of the state. Currently, the model used by the Government of Rwanda is based on the costs sharing method (MINEDUC, 2011). This is where both the Government of Rwanda and students make financial contributions towards Higher Learning Institution (HLI). The HLIs student population in Rwanda has increase from 3,216 in 1994 to 73,674 in 2011 (MINEDUC, 2011). The higher education sector in Rwanda has been growing from one university in 1994 to 31 HEIs at present (NCHE, 2011). The funding of higher education in Rwanda has not been enough and this has in most cases slowed down funding of activities and infrastructure needed by HEIs.

The funding models namely tuition fees, bank loans, public private partnerships and internally generated resources are being considered to fund its higher education

system in Rwanda (HESLD, 2011). All these models are being considered for adoption in Rwanda. Rwanda has been spending a lot of money on funding higher education through student financing and infrastructure development at HLIs and this has been a huge financial burden on the government's budget (MINEDUC, 2011). It is this situation that has taken the government to start looking at other models that can be used to fund higher education in Rwanda. There is also need to understand why the cost sharing has met a lot of challenges in Rwanda. The Government of Rwanda gives out a lot of loans to students, which are not properly recovered; for instance between 2008 to 2011, USD 115,261,894 was given out as loans and USD 1,754,385 is the only amount that has been recovered to-date (HESLD, 2011).

This is the current operation model or system used in funding higher education in Rwanda and it was introduced in 2008 (HESLD, 2011). The responses from the study showed that this approach is ranked favorably by staff of HESLD where 60% respondents rated it excellent; whereas students do not rank it favorably as 40% respondents rated it as poor, and 90% gave it a fair rating and none rated it as excellent. The approach has been used in countries like Tanzania according to Teferra and Altbach (2004). This approach to funding higher education can function properly in Rwanda if the HESLD was to review its operation efficiency by ensuring that students are selected fairly and their funds disbursed on time and students are sensitized on the essence of having their loan repayments commence upon getting employment. This helps to create some sort of revolving fund, which other student beneficiaries can benefit from.

This model is about using private funds to develop and complement investment made by the public sector into the higher education system (Jonathan and Peter, 2011). A number of HLIs in Rwanda like Umutara and NUR have tried using PPP and they have not been very successful. The 80% responses from the staff responses showed lack of support for this model and 88% student responses support use of PPP to fund higher education in Rwanda. The conclusion on adoption of this model in funding higher education can only be made after the Government of Rwanda and its other agencies have fully understood every detail necessary in adopting the model. This is because a wrong decision made can be very expensive for the government and the private investors. The adoption of this funding method in Rwanda should only be considered based on the principle that, it will not be abused by higher learning institutions to charge high fees to students which they may not be able to afford as argued by Vandenberghe and Debande (2007). The responses from the study showed that 72% do not support it and 80% HESLD staff do not support use of tuition fees as higher education funding model. The use of this model should depend on the ability of the government of Rwanda to regulate and be able to set an upper limit on how much fees higher learning institutions

are allowed to charge. This will help to protect students from high fees charges that may affect student's accessibility to higher education institutions.

Funding higher education using bank loans is the model that would require students to access funding privately from commercial banks in Rwanda at favorable interest rates (HESLD, 2011). This model has 0% support from HESLD responses and it received 76% no responses from student respondents. The pattern in these responses shows you that such an option is not currently suitable for Rwanda.

This approach call for higher leaning institutions to look for avenues of generating their own funds internally which they can use to fund their activities that help promoting and developing their individual institutions (Butare, 2004). Findings from this study indicate that 80% students showing support and 70% respondents from HESLD do not support it. There is need for the Government of Rwanda to appreciate that, the development of its higher education sector will depend on how well funded it is and in this regard, the higher learning institutions should be given some financial autonomy which allows them to source for funding needed by their institutions. Quality of higher education in a country is premised on accessibility to material required to enhance it (Devarajan et al., 2011). The higher education sector must be fully or adequately funded if tutors are to be able to do for instance research and publications, capacity building, developing education infrastructure and other facilities needed in advancing quality education. The economic development of a country depends partly on the quality of its manpower produced in its higher learning institutions (Rangel, 2004). The country can build a manpower pool if it has a well functioning higher education system. This means it will not lack human resources to work in different sectors of the economy.

## SCOPE FOR FURTHER RESEARCH

The FMT testing appraisal method should be studied further to ascertain on how best it can be done. This is a precursor to success of costs sharing model of funding higher education in Rwanda. The analysis of the PPP model is also crucial especially linking it to the developing economies to ascertain how they can effectively work there to the benefit of service users and the countries concerned.

The Government of Rwanda should look at how it can set up a specialized bank to fund education at higher level. This would involve the engagement of the right personnel who are knowledgeable in banking and higher education funding. The government has to put in place an enabling legislation for this to happen. As regards tuition fees charges by HLIs, the threshold and ceilings should be determined by government and legislated such that no any institution is able to overcharge students. This will



enable the government to get a well organized higher education system. There is need to explore all these in future research to ensure the right policies are set up by the government.

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## ABBREVIATIONS

**HE**, Higher education; **HLI**, Higher learning institutions; **HEI**, Higher education institutions; **PPP**, Public private partnerships; **FMT**, Financial means testing.

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**APPENDICES**

**Appendix 1: Questionnaire**

This questionnaire is about funding of higher education in Rwanda. HESLD has been chosen as a case study by the researcher. The information obtained will only be used for this academic research which is a partial fulfillment to attain an MSc corporate finance of the University of Liverpool.

**Section A**

The government of Rwanda has proposed the following models for funding higher education;

- A) Student bank loans
- B) Tuition fees
- C) Public private partnerships (PPP)
- D) Cost sharing
- E) Setting up private firms at HLIs for income generation.

**Please, tick as appropriate**

Qn. 1. How would you rate government proposed funding methods on a scale of **1-5**.

**1-Poor; 2-Fair; 3-Good; 4-very good; 5-Excellent**

A) Student bank loans;	1	2	3	4	5	
B) Tuition fees			1	2	3	4 5
C) Public private partnerships (PPP)			1	2	3	4 5
D) Cost sharing			1	2	3	4 5
E) Setting up of firms by HLIs			1	2	3	4 5

Qn. 2. Would you support using tuition fees for funding higher education?

- A) Yes
- B) NO

If yes; Why?-----  
-----  
-----

If NO; Why?-----  
-----  
-----

Qn. 3. Would you support using Student bank loans for funding higher education?

- A) Yes
- B) NO

If yes; Why?-----  
-----  
-----

If NO; Why?-----  
-----  
-----

Qn. 4. Would you support using public private partnership for funding higher education?

- A) Yes
- B) NO

If yes; Why?-----  
-----  
-----

If NO; Why?-----  
-----  
-----

Qn. 5. Would you support using cost sharing for funding higher education?

A) Yes B) NO

If yes; Why?-----  
-----  
-----

If NO; Why?-----  
-----  
-----

Qn. 6. Would you support setting up of firms by HLLs for funding higher education?

A) Yes B) NO

If yes; Why?-----  
-----  
-----

If NO; Why?-----  
-----  
-----

**Section B**

Qn. 7. Do you think reduced higher education funding has an impact on quality of higher education?

A) Yes B) NO

If yes; why?-----  
-----  
-----

If No; Why?-----  
-----  
-----

Qn. 8. Do you think a failed higher education funding will impact on economic development of Rwanda?

A) Yes B) NO

If yes; why?-----  
-----  
-----

If No; Why?-----  
-----  
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Qn. 9. What do you think the government of Rwanda can do better to facilitate improved higher education funding;

- 1-Increase budget vote for higher education
- 2-Get more funds from private investors
- 3-Empower HLLs to generate their owns funding
- 4-Pull out of funding higher education completely

Thank you for filling this questionnaire