

Sierra Leone research and knowledge systems: a rapid literature review

Mamoud Idriss Tarawallie

About the Viewpoints series

INASP is continually exploring options for further work and new projects. As part of these exploratory measures, several in-depth country profiles have been commissioned to bring insight into research and knowledge systems in various countries. In this document, we look at Sierra Leone; the country's background, the research landscape, higher education system and extent of use of research in policy making. In the interests of openness and sharing, INASP makes these reports available online for use by peer organizations and other interested parties. Views are the authors' own.

About the Authors

Mamoud Idriss Tarawallie is a PhD candidate at SOAS, studying the impact of decentralisation on service delivery and peacebuilding in post conflict Sierra Leone. He holds a BA in political science from the University of Sierra Leone and an MA in International Development (Politics and Governance) from the University of Manchester, where he was a Commonwealth Scholar. He was previously a Teaching and Research Assistant in the Department of Political Science, University of Sierra Leone and worked for several years in development management in post-conflict Sierra Leone and Liberia. Mamoud has worked for Leonard Cheshire Disability as Livelihoods Programmes Manager based in Freetown, and currently manages BBC Media Action's capacity building project in Sierra Leone for local media, aimed at creating dialogue between local people and their leaders and supporting the creation of the required spaces for rural participation and improvement of rural service delivery.

1 Background

Sierra Leone has made remarkable progress in her post-conflict recovery drive after 11 years of a destructive civil conflict that vandalized and looted the country's already ailing research and higher education infrastructures (Jackson 2006, Fanthorpe et al, 2011)¹. Since the end of the war in 2002, the government, together with its donor partners, has taken results-driven initiatives to reform the public sector. This has included local governance and decentralization (Zhou 2009), security and justice sector transformation (Gbla 2006) and education sector review (Ministry of Education, Science and Technology, 2007).

The 12 years of security and democratic stability before the outbreak of the Ebola Viral Disease (EVD) in May 2014 witnessed a steady population growth from 4.9 million in 2004 (Statistics Sierra Leone, 2006) to 6.3 million in 2015; representing a 2.6% annual growth rate dominated by a youthful population (about 70%) between the ages of one and 35².

A positive economic outlook from 2009 to 2013 put Sierra Leone among the fastest growing economies within the sub-region, with the country recording double-digit GDP growth rates of 15.2% and 20.1% in 2012 and 2013 respectively (African economic Outlook, 2015:3). This positive economic outlook was driven largely by an iron ore mining boom – led by two major companies, African Minerals and London Mining Ltd - and investment in commercial agriculture through large-scale land acquisition by foreign agricultural companies such as Addax Bio-energy company and the SOCFIN agricultural group. The mining and agricultural boom were preceded by huge state investment in

¹ Despite recent setback due to the biggest deadliest Ebola outbreak since 1976 - when the disease was first diagnosed in the Democratic Republic of Congo – with over 11,000 infections and close to 4,000 fatalities. See the Government of Sierra Leone National Ebola Recovery Strategy 2015-2017

² See World Bank Country Profile Data for Sierra Leone @ <http://data.worldbank.org/country/sierra-leone>.

infrastructural projects, such as road construction, and a rapid growth in financial service intuitions, from five commercial banks in 2001, to 13 by 2010 (Ministry of Trade and Industry, 2009).

However, Sierra Leone's second and third generation poverty reduction strategy papers (PRSPs) – dubbed the Agendas for Change and Prosperity respectively - did not single out research and higher education as key priority areas of intervention, despite government's audacious commitments to harness technology and trade to promote infrastructure, agriculture, education and investment, as conduits for economic growth (Government of Sierra Leone, 2008, 2012).

Whilst the positive development prospects propelled by growth in the mining, agriculture, infrastructure and financial services sectors provide opportunity for employment creation and positive economic returns to government coffers, unemployment (especially for young people) and poverty levels remain pervasive with low HDI ranking at 183rd out of 187 countries (UN HDI Report, 2013). Part of the explanation for the high poverty levels and low HDI ranking - despite the mining and agricultural boom - is the fact that employment opportunities in these sectors hinges on the availability of appropriate skills sets, specific expertise and technical requirements to maximize the emerging opportunities locally. It calls for synergies between higher education institutions and the private sector; to train and produce graduates relevant to the needs of the job market, and to conduct collaborative scientific research, relevant not only to industry, trade and investment, but also to policy formulation and governance.

It is in this sector that Sierra Leone is fundamentally lagging behind, as the country lacks a comprehensive national policy on research excellence and publication, and state organized and funded research councils to direct research output both at the higher education and public sector governance levels (Mannah and Gibril, 2013; World Bank, 2013). In effect, Sierra Leone faces a crisis similar to what Mama (2003:104) refers to as a 'knowledge society' severely short of highly-trained personnel and higher education intuitions to lead the process of research generation and dissemination, and training the country's human resource capacity in line with the emerging market, industry and technology needs.

This study; commissioned by INASP, provides a rapid review of the relevant literature on research and knowledge system in Sierra Leone and aims to provide a brief, but thoroughly grounded desk review of literature on the overall research and knowledge systems (including policies, priorities, actors, interaction and funding); knowledge production, communication and access; ICT infrastructure, availability and use and; the extent of gender mainstreaming in knowledge generation and dissemination within the higher education landscape.

2 Findings

The findings of this rapid literature review are akin to the overall objective of the review itself: to navigate the almost uncharted territory of knowledge generation and dissemination in Sierra Leone's research and higher education terrain. This in itself is a difficult and ambitious goal. It was no surprise therefore, that one of the most profound, among review findings, is the dearth of literature with detailed analysis on Sierra Leone's higher education and research sector, especially its relationship with public policy formulation and the depth of its gender inclusivity. The following sections; organized in six coherently interrelated themes, explore the knowledge systems, access, ICT infrastructure, research production and dissemination research influence on public policy formulation and, gender inclusivity in Sierra Leone's research higher education topography.

2.1 Research and knowledge systems

2.1.1 *National vision, strategies and priorities, government agencies, and other actors:*

The relevance of research-led higher education as an engine for economic growth and development in Africa - has been well documented (Monga and Zongo, 2013; Yizengaw, 2008; Bloom et al., 2006; Teferra and Altbach, 2004). Research has been as identified as an important component of higher education, long before humanity entered the so-called global knowledge era (Teferra and Altbach 2004). By the beginning of the new millennium, the World Bank - a leading actor in cutting state expenditure on higher education in the 1980s and 1990s – had acknowledged that research-driven higher education is a ‘critical pillar for human development’; supplying not only the labour market’s skills requirements, but also public service delivery professionals such as nurses, doctors, engineers, and lawyers (Mama, 2003:103).

In Sierra Leone, as in most post-independence Africa countries, the higher education landscape is controlled, funded and supervised by the government through the education ministry (World Bank, 2013). The 2004 Education Act³ consolidated the Education Ministry’s grip over the management, funding and supervision of higher education (Ministry of Education, Science and Technology, 2007). Despite this overwhelming authority – evidenced by the fact, until 2005, Sierra Leone had only one state-owned university⁴ - of the higher education sector by the government, Sierra Leone lacks a coherent research and higher education policy; embodying government’s strategic plan for the development and harnessing of research and higher education in line with the changing demographic, economic and scientific realities of the 21 century, and the country’s development priorities (Davies, 2005).

This is further exacerbated by the fact that Sierra Leone has no research funding council – similar to the Economic and Social Research Council (ESRC) of the UK – to fund, shape and direct research and knowledge dissemination across sectors of national and academic endeavours (The Economist Intelligence Unit, 2014). However, education remains central – at least in principle – to the government’s development priorities; as both the government’s poverty reduction strategy papers (PRSPs) –the Agenda for Prosperity (2013-2018), and its predecessor, the Agenda for Change (2007-2012) - emphasize the need to strengthen education as a key pillar for economic growth and development.

Following this commitment, and persistent strike actions by the academic staff associations of the two main universities, close to the presidential and parliamentary elections in 2012, the government unsurprisingly⁵ increased its subvention to the two public higher education institutions by over 100% – from 49 billion Leones in 2011 to 105 billion in 2012 (Dumbuya, 2014). In addition to this, the finance ministry has signed multiple loan agreements with OPEC Fund for International Development (OFID) and the Arab Bank for Economic Development in Africa (BADEA) to rehabilitate and expand dilapidated infrastructure in the country’s two public universities (The Sierra Telegraph Newspaper, 21 July, 2013) - University of Sierra Leone (USL) and Njala University (NU). However, the secrecy that

³ The successor to the 1964 Education Act

⁴ The 2005 Universities Act, unbundled the University of Sierra Leone into two: Universities of Sierra Leone and Njala, and allowed for the creation of private universities; leading to the establishment of the University of Makeni (UNIMAK) by the Catholic Church - the first private university in Sierra Leone’s higher education history.

⁵ Considering the politics of vote gathering and image presentation and the cult of personality in politics, the action of academic staff in the two public universities to embark on a sit-down action was going to cost the government a huge political capital – and by extension votes, due to the sensitivity of public universities. In effect, government’s hands were tied at the back by the academic staff association of the two universities. Above all, there were claims that the president also wanted to present himself as the ‘saviour of the nation’, and the ultimate provider of public service (See Conteh, 2014).

cloaked the loans negotiation process has heighten public uncertainties about whether the rehabilitation and expansion projects will include facilities and funding for research, energy and ICT and whether the two public universities will benefit equally (Ibid). The finance ministry has also cautioned that current government expenditure levels in the two higher education intuitions is unsustainable, and that the limited focus of higher education intuitions on teaching – especially in the humanities and social sciences – with a limited research output capacity, overdependence on government funding without a pro-business mentality, in light of the country’s limited economic resources and other competing national development priorities, is bound to fail in the not too distance future (Dumbuya, 2014).

Alongside the government commitment to support education as outlined the Agenda for Prosperity (Government of Sierra Leone, 2012), in 2012 the Ministry of Trade and Industry developed a Local Content Policy (LCP) to promote effective linkages between the local economy and private sector investors and foster partnerships between research and higher education institutions and the private sector (Ministry of Trade and Industry, 2012:14) ; by providing support to higher education sector to grab the growth opportunities by:

- Transforming the education curriculum of tertiary institutions to prioritize science and technology according to the skills requirements of the industrial sector;
- Aligning the education curriculum in tertiary institutions with the growth sectors of the economy, such as mining, oil and gas, fisheries, agriculture, to produce a skilled workforce for these sectors by 2025.

Sierra Leone’s higher education landscape is crowded by a combination of mostly uncoordinated, local and international actors, in a terrain that is never short of well-written and well- choreographed policies and legislations designed to regulate funding, delivery, management, access and quality assurance of higher education (World Bank, 2013; Ministry of Education, Science and Technology, 2013 and 2007). What Sierra Leone is not so good at; and sometimes unwilling to do, is to implement its raft of well-written legislations and policies (William, 2014; Mannah and Gibril, 2013). At the national level, the key actors are the two main public universities, (USL, and NU), and quite recently Unimak; the regulatory agencies - the Tertiary⁶ Education Commission (TEC) and the National Council for Technical, Vocational and other Academic Awards (NCTVA) - and SLARI – Sierra Leone Agricultural Research Institute (Ministry of Education, 2007). At the international level, the support base for higher education is less crowded - this is understandable considering the focus of international donor partners on basic education (especially after 2000 when the Millennium Development Goals were set), leaving higher education entirely to national governments (Bloom et al., 2006) - with few actors such as : the African Development Bank (ADB), UNICEF, the Global Partnership for Education (GPE), the World Food Programme (WFP), and the cooperation agencies of Germany (GIE), DfID and Swedish International Development Agency - CIDA (William, 2014; Ministry of Education Science and Technology, 2007).

By 2002, when the civil war ended, five main legislations plus a number of other policy documents to regulate and guide higher education and research landscape have been developed and adopted by the Government of Sierra Leone:

- a) The Tertiary Education Commission Act (2001): establishes the Tertiary Education Commission for the purpose of developing, managing and supervising the quality of tertiary education;
- b) The National Council for Technical, Vocational and other Academic Awards Act (2001): dissolves the institute of education – an arm of the former university of Sierra Leone – and create a semi-autonomous body whose key function is to examine and validate courses and

⁶ Section 10(1) of the Education Act 2004, defines Higher/Tertiary Education (HTE) as formal education received after the completion of secondary schooling, in institutions demanding entry qualifications not lower a number of General Certificate of Education Ordinary or Advanced Level subjects or both or the West African Senior School Certificate of Education or its equivalent

- programmes in higher education institutions that are judged to below degree awarding status;
- c) The Polytechnics Act 2001: provides for; the establishment of the National Polytechnic Council and polytechnic institutions across the country. The functions of the polytechnic council include the supervision of polytechnic institutions; provision of instruction for learning, research and documentation;
 - d) The 2004 Education. The acts is the key education policy legislation, acts as the master plan and strategy for education as it outlined and described the structure of the entire education system from pre-primary to tertiary level, distance and special needs education. It provides for universal basic education and makes primary education free for all children in Sierra Leone;
 - e) The Universities Act 2005: Provides for the creation of two public universities – University of Sierra Leone and Njala University – through the unbundling of the old University of Sierra Leone into two and also provides – for the first time – allows the registration of private universities;
 - f) The Tertiary Education Commission Regulation 2006: Following the enactment of the 2005 Universities Act which makes provision for the registration of private universities, a gap was created on the registration, accreditation and quality assurance of private universities as the TEC act provides no mandate for this. In response, the TEC regulations (2006) were passed by parliament and gives subsidiary authority to the TEC for the regulation, accreditation and quality assurance of private universities;
 - g) The Education Policy 2005: Titled ‘moving education forward’, is a revision of the 1995 wartime education policy and summaries government strategic aims and goals for education after the civil war.

2.1.2 Interaction dynamics and sector development constraints

The relationship among higher education actors in Sierra Leone is a critical one. Understanding their power dynamics and relationships require more than a mere scratch of the surface of national legislations and policy documents (Economist Intelligence Unit, 2014). The role of external actors in the higher and research has traditionally been tailed towards short term interventionism and targeted budgetary support to public higher education institutions – especially SLARI, which in recent times has received tremendous support from World Bank funded projects, via the agriculture ministry to support research towards agricultural productivity and food security⁷. Unlike SLARI – especially its World Bank funded WAPP project - other donor interventions on higher education in Sierra Leone are mostly based on routine budgetary assistance to the government in support of the education sector, without a direct hands-on approach on research and public policy development.

Technically, the TEC and the NCTVA are responsible for registration, supervision and accreditation of higher education institutions, and should generally decide on technical matters regarding teaching, research and publication⁸. However, politics and politicians play a major, if not the most important role in research and higher education management. The President is by law (Universities Act, 2005) the Chancellor of two public universities. Although the position of Chancellor is largely ceremonial; on the advice of the minister responsible for education, the President appoints the Vice Chancellors – the administrative and academic heads of the two public universities - and the directors of the of TEC, NCTVA and SLARI⁹. In effect, it is the nominees of the political establishment that occupies critical positions within the research and higher education sector. In many instances therefore, it is the politicians, and not the professionals that calls the shot. Apart from central government control, NCTVA and the TEC lack collaboration and coordination in the discharge of their duties (Williams, 2014). By law, the TEC is responsible for the registration of all higher/tertiary intuitions (including universities and polytechnics), validate programmes of study, lead the process of research and peer

⁷ See WAPP – Sierra Leone website @ www.waapp-sl.org

⁸ See the TEC Act 2001, TEC Regulation 2006 and the Universities Act 2005

⁹ The minister responsible for agricultures, forestry and food security, advises the president on the appointment of the Director General of SLARI

review at the university level. The NCTVA on the other hand, is supposed to provide accreditation and examinations services and oversight for higher institutions (already registered by the TEC) that are judged to be below university status (Economist Intelligence Unit, 2014). However, the lack of coordination between the two, and limited human and material capacity to supervise higher education institutions, meant that over the years, the TEC has pegged its remit on registration and supervision of universities, whilst the NCTVA deals with accreditation, examination and the registration of polytechnics and teacher training colleges.

2.1.3 Research thematic areas: how are they defined, are some better funded than others?

The lack of a national research and higher education policy; including research and funding councils suggests that any analysis on thematic research prioritisation in Sierra Leone can only be speculative. At the university level, USL, NU and Unimak, prioritise research – with some bits of disciplinary specialisation¹⁰ - as part of their overall commitment to teaching, research and community service¹¹. However, since the end of the war in 2002 and following consistent abysmal performance of students in public examinations from 2004 to 2008 – especially in mathematics and sciences (Awareness Times Newspaper, 22 May 2009), the education ministry has prioritised its scholarship to fund training in Science, Mathematics, Engineering and Technology (SMET) disciplines at the tertiary education level (William, 2014; World Bank 2013). The number of students enrolled in science and engineering disciplines in the country's higher education institutions account for less than 15% of the total student enrolment in higher education institutions (Economist Intelligence Unit 2014; World Bank 2013). This is due, partly, to the low turnout of science and engineering graduates to teach in schools – a proxy for the quality of teaching in schools - and the lack of laboratory equipment and other facilities to support effective teaching and enhance pass rate in mathematics and sciences - two crucial entry requirements for university admission in engineering and sciences (Ministry of Education, Science and Technology, 2007; Alghali et al., 2005).

The recent boom in the mining and agriculture sectors, meant that traditional disciplines such as education; social sciences, business and law - accounting for over 60% of enrolment in higher education institutions – have fallen out of favour and have become less competitive in the job market (Shifa, 2014;). In their place, mining and petroleum engineering, crop science, farm management, and middle-level technical skills such as mechanics, technicians, heavy duty equipment/plant operators, have become the sought-after skills in the job market (Mannah a Gibril 2013). In addition, the post-conflict food security and value chain addition in the agriculture sector, has increased government, donor and private sector investment in agriculture and agricultural sciences research-related disciplines (Momoh, 2014). Government's priority over the last decade, therefore, is to strengthen SMET subjects - considered vital for national economic development – by prioritising its scholarship award criteria in favour of students admitted in SMET disciplines in the country's higher education institutions¹².

2.1.4 Main institution producing research: Scientific and policy-related, size (academic staff and students) and other notable organizations

The lead institutions and agencies supporting the production and dissemination of research in Sierra Leone are the University of Sierra Leone – made up of three constituent colleges: Fourah Bay College

¹⁰ Traditionally, USL (especially Fourah Bay College) has a focus and speciality on humanities, engineering and pure and applied sciences, whilst Njala focuses on agriculture, education and environmental sciences

¹¹ See website of USL (www.usl.edu.sl), NU (www.njala.edu.sl) and UNIMARK (www.universityofmakeni.com) for their mission statements and commitment to research and community service

¹² In its advertisement for government scholarships – locally known as Grant in Aid (GIA), the education ministry emphasizes its priority on SMET disciplines.

(FBC), the Institute of Public Administration and Management (IPAM) and the College of Medicine and Allied Health Science (COMAHS); Njala University – Njala and Bo campuses; the University of Makeni, the Sierra Leone Agricultural Research Institute, plus international donor partners (notably the World Bank, UNDP and DFID) and the private sector – especially mining and agricultural companies. In terms of size, the two public universities are still the biggest and most populous. The University of Sierra Leone is the biggest with a total student enrolment of 9,408 (2011/12 academic year), and 349 academic staff – 34 of them with PhDs - followed by NU, with a total student enrolment of 6,154 (2011/12 academic year) and 319 academic staff – with 20 PhD holders (World Bank, 2013). The University of Makeni has student enrolment of roughly 1,000 and 90 teaching staff (University of Makeni, 2013). The Sierra Leone Agricultural Institute (SLARI) was established in 2008 with five agricultural research centres: Njala Agricultural Research Centre (NARC) - conducts research on roots, tubers, and legumes; Rokupr Agricultural Research Centre (RARC) conducts cereal research; Kenema Forestry and Tree Crops Research Centre (KFTCRC); Teko Livestock Research Centre (TLRC), and Magbosi Land & Water Research Centre (MLWRC) which conducts research on soils and water quality (Momoh, 2013: 4). SLARI is Sierra Leone's principal agricultural research institute, with a total full time staff compliment 70 (by 2013) ; charged with the responsibility of conducting scientific and policy-related research aimed at promoting agricultural productivity and food security (Ibid). The institute is fairly well resourced relative to other research centres across the country. But as Momoh (2014) argued, despite recent government and donor funding - and the fact that SLARI accounts for over 80 of both funding and staff compliment of all agencies and institutes engaged in agricultural research, it is yet to produce enough state of the art scientific research relative to its sub-regional counterparts.

Research and publication is not only a major component of the core functions of higher education institutions in Sierra Leone; it is also a career progression benchmark for faculty members within the university system. However, the lack of active research and publication within the higher education system has led to a stunted growth in career development for faculty members. In the 2009/10 academic year for instance, from a total 1,779 academic staff in ten major higher education institutions, there were only 20 full professors and nine associate professors; representing a mere 2% of the full time academic staff capacity among higher education intuitions across the country (The Economist Intelligence Unit, 2014; World Bank, 2013) . The fact that the professorial cadre of academic staff is as low as 2%, suggest that scientific research output is limited. However, in 2011, Njala University generated 75 million Leones from research and consultancies, representing a paltry 3% of its internally generated revenue (The Economist Intelligence Unit, 2014). Apart from Njala, no other public higher education institution reported to have generated income from research and consultancies. Such self-reported income should be treated with caution as public universities lack monitoring systems to ensure faculty members who undertake consultancy work report to the university. Even in situations where the consultancy is given in the name of the university, it is not uncommon for staff members to use the name of their universities to secure consultancies and then implement them without reference to the university – depriving universities of much need resources¹³

The private sector is also a key player and major funding counterpart towards research and knowledge dissemination in Sierra Leone. The post war growth in the mining and commercial agriculture and state regulations on environmental and social impact assessment preconditions for mining and agricultural companies has increased research and consultancies from the private sector. (The Economist Intelligence Unit, 2014; Mannah and Gibril, 2011; Government of Sierra, 2008). Increasingly and perhaps most significantly, is the ever increasing rate of donor-funded and donor-led in-country research. The need to generate information on the political economy of the context on donor interventions, has led to the growth of research and knowledge production on many development sectors in Sierra Leone (World Bank 2014, Jibao and Prichard 2013, Fanthorpe et al., 2011). Whilst such researches have increased the knowledge data base; and sometimes the only

¹³ In 2013, IPAM organized a conference to stretched research and consultancy with the college and to control what it then called 'unreported consultancy contract' by faculty members

source of information, the field is largely dominated by foreign researchers with little local input – and where Sierra Leonean researchers do get involved, they are mostly co-opted to justify local knowledge and participation (Conteh, 2014). In most cases, initial research output is in the form of policy-like reports for the client consumption. However, it is not uncommon for such researchers to later use the basis of the consultancy research to publish academic papers in peer reviewed journals¹⁴.

2.2 Research: publication and communication

2.2.1 *Research type (Academic, consultancy or postgraduate), postgraduate enrolment, what's published*

Scientific research and publication is one of the most serious challenges in the research and higher education systems in Sierra Leone. Publication among faculty members of higher education institutions in peer reviewed journals is at its all-time low since the beginning of the civil war in the early 1990s. This is largely due to reduction of central government funding to higher education at the peak of structural adjustment in the late 1980s and early 1990s, the destructive civil war (especially on higher education facilities and the killing of its scarce personnel) and the resulting brain drain of top university academics to Europe and other parts Africa (Williams 2014) According to Adams et al (2010, cf World Bank 2013:24), Sierra Leone's scientific research output is ranked below countries like Rwanda, the Gambia, Eritrea, Guinea Bissau, Rwanda, Mauritania, Central African Republic, Guinea, Chad and Burundi in terms of quality and volume of publication between 1998 and 2008¹⁵ from locally based higher education faculty members. Sierra Leone research community is shrinking everyday due to poor conditions of services and the non-availability of research and publication facilities, such as internet and subscription to academic journals (The Economist Intelligence Unit, 2014).

The lack of scientific research and publication has direct implication for the training of the country's future researchers. Due to limited senior academic capacity among higher education institutions, and poor data collection and regulatory framework both within the TEC and higher education institutions themselves, there are no clear figures on the number of current postgraduate students enrolled in the country's higher education institutions and the quality of research produced – if any is produced at all. Although the two main public universities have postgraduate schools – whose job it is to coordinate postgraduate study and research with the supervision of the TEC – there are no structured postgraduate research programmes with the explicit aim of producing scientific research worthy of publication in a peer reviewed journal¹⁵. Whilst masters level degree programmes are common and popular, with roughly 500 master's degree students registered in the country's main universities per academic year, PhD level is much more less structured and mostly offered by existing university academic staff for long and unspecified periods, compared to standard PhD durations in other parts of the world (Kargbo, 2013).

It is almost impossible to quantify the research output from higher education institutions in Sierra Leone. However, a number of faculty members have been fairly engaged in research and publication activities on an individual basis¹⁶. In addition IPAM has a growing Short Course and Consultancy Unit (SCCU) which generates reasonable resources and produce research content through consultancies and short courses. At Njala University – linked with SLARI, the situation is slightly different. Recent

¹⁴ See research on decentralisation in Sierra Leone by Srivastava and Larizza 2011, and Zhou 2009 for instance

¹⁵ In the 2014 graduation ceremony, the Vice Chancellor of the University of Sierra Leone; Professor Ekundayo Thompson, acknowledge the challenge of postgraduate teaching and research in expanding research and publication within the university system due to lack of investment, personnel and facilities at the postgraduate level. See Awoko Newspaper Monday May 04, 2015

¹⁶ See the following article links @ (www.tandfonline.com/doi/pdf/10.1080/13533310500424843) and, (<http://lis.sagepub.com/content/38/2/71.full.pdf>)

donor and government investment in agricultural research and food security, together with the boom in commercial agriculture contributed to Njala to self-report over 75 million Leone in 2011, as resources from research and consultancies (World Bank, 2013); and jointly publishing an unspecified number of scientific and consultancy related papers and reports on agricultural productivity and environmental impact assessment before the outbreak of Ebola in 2014¹⁷.

2.2.2 Popular research areas: the development priorities of the day

The priority and popularity of research interest is largely dictated by the research funding agendas of the day (See section c below) and the available research expertise – humanities, social sciences, business and law – and the dominant disciplines of postgraduate study. In the first five years after the end of the civil war in 2002, the focus then (both on the government and the international community) was on peace building, governance reform; including security sector reform, local government and decentralisation, disarmament and resettlement, and bureaucratic efficiency (Varisco, 2014; World Bank, 2014; Zhou, 2009; Gbla, 2006; Halon, 2005; Keen, 2005). Whilst this is understandable, considering the need to build peace and strengthen governance effectiveness after the civil war, these research outputs¹⁸, are largely written by European and European based academics, mostly contracted by the leading donor agencies - such as DfID, World Bank, the EU, Commonwealth and other international development organizations - active in the post-war recovery and peace building process, with little input from locally based researchers and higher education centres. Of course, the usual mantra is the lack of local capacity – both from higher education intuitions and faculty members – to conduct such research at internationally acceptable standards, considered appropriate for donor requirements. It will be naïve to dismiss such as claim, just as much it is to believe that there are absolutely no locally available researchers that can be utilised locally. In recent times however, some international development agencies – notably DFID – have taken a step further by recruiting international researchers and peering them with locally based academics to add context, and provide much needed local research capacity¹⁹. Whilst such laudable ventures are still in a micro-level, the norm is still to recruit internationally based academics to conduct research in Sierra Leone.

A decade after the end of the civil war, the research focus – as is the international development agenda – has shifted quite a bit from post-war security and governance reform, to investment and economic growth, human rights and individual liberties²⁰. In 2009, the government of Sierra Leone with support from DfID, organized the Sierra Leone Conference on Trade and Investment at the Queen Elizabeth Conference centre in London ; and also launched a national private sector development strategy; setting the legal basis for opening up the country to foreign trade and investment (United States Embassy, 2013). With the slight change in focus from security and governance reforms, to trade and investment, the research landscape has also shifted a bit to agriculture, agri-business, mining, environmental management and the use of technology to harness growth potentials in mining , education and investment (Momoh 2014, Songu 2014, Maconachie, 2008). In 2014, Sierra Leone together with her neighbours – Guinea and Liberia – suffered from the one of the worst outbreak of Ebola since the discovery of the virus in 1976. Over a 11,000 people were infected with about 4,000 fatalities. It is anticipated that post-Ebola, the government and development community will begin to rethink their health investment and research policies and strategy in Sierra Leone, which might increase health research investment and promotion in the coming years (Government of Sierra Leone, 2015).

¹⁷ Comments in an email exchange with a senior academic staff at Njala University

¹⁸ Including many more not referenced here

¹⁹ Comments by a former DfID staff in Sierra Leone

²⁰ This is not to suggest that the previous research and development agendas have become redundant

2.2.3 Who commissions/ funds research: government and other actors - NGOs, donor partners the question of agenda setting)

The research community in Sierra Leone is a bit opaque. It is difficult to exactly pinpoint who commissions and pays for the plethora of researches – scientific and policy – in the past and at present. However, one can safely say that a good number of the in-country researches are commissioned by international development agencies such as the UN family especially UNDP, UNICEF and UNFPA – , the World Bank, DfID, the Africa Development Bank, the government of Sierra Leone and other international NGOs such as Plan International, Save the Children and Oxfam²¹. At the government level, emphasis on food security and agricultural productivity in the last five years has seen joint donor and government funded projects such as the Small Holder Commercialisation Programme (SCP), the Rural and Private Sector Development Project and the West African Agricultural Productivity Project (WAPP) commissioning and funding research aimed at promoting agricultural productivity (Momoh, 2014; Sannoh 2011, Government of Sierra Leone, 2009; Okyere et al, 2009). Funded by the World Bank, the West Africa Agricultural Productivity Program (WAAPP) is a two-phase, ten-year, horizontal and vertical Adaptable Program Lending (APL) to generate and disseminate research on improved technologies in agricultural priorities areas, to boost farming and crop production in in six West Africa countries: Benin, The Gambia, Sierra Leone, Togo, Liberia and Niger²². On a business and invest front, the boom in mining and commercial agriculture has led to research consultancies on environmental impact assessment as provided for by the Environmental Protection Act of 2008.

At higher education institutional level – especially within the two main public universities - research is mostly funded by existing university funding mechanisms from the government and its external donor counterparts. At the moment, there is very little, in terms of funding from the government to universities for research and publication. State universities no longer receive (as of last academic year) a subvention from government; instead, government gives a fee subsidy (after undergraduate students have provided proof that they have met their own allotted percentage of tuition, which varies by degree, the government tops up through the subsidy). However, both NU and USL have prioritised research in their strategic curriculum and research development planning and aims to allocate reasonable percentages of their budgets to research, going forward²³. In the absence of central research funding councils, the patchwork of research funding windows are tailored to the needs and development priorities of the funding agencies, which are not necessarily consistent with national priorities or the individual research interests of faculty members in higher education intuitions. In fact, most research consultancies – if not outsourced to foreign-based researchers – they revolve around a few well established academics and consultancy firms with the right connections and previous research exposure.

2.2.4 Impediments/challenges

Based on this review, and the analytical lens added to it, the challenges of research and higher in Sierra Leone are almost self-evident. First, it is clear from the review that Sierra Leone's research/academic community has been on a rapid downward trajectory since the 1990s. The rapid decline of senior academic and research capacity is not unconnected with the effects of the rebel war and the mass exodus of the country's best academics to safer parts of the world where conditions of service are better and research and publication prospects are higher (Mama, 2003; Banya, 1993). The rebel war and long years of abandon and disrepair of higher education institutional facilities meant that they lack the basic facilities needed in today's technological age, to promote teaching, research and publication. Such challenges have implication for the future of research and publication on multiple fronts. On a sustainability front, the current challenges present a potent threat on the ability of the country to train its future academics and researchers, where there are few experienced

²¹ Of course this list is not exhaustive

²² See WAPP – Sierra Leone website @ www.waapp-sl.org.

²³ Email exchange with a senior academic Njala University.

academic at professorial level with moribund facilities. On a competitive front, it presents a challenge on the quality of both the research training and higher education graduates produced and their ability to compete with their counterparts within the sub-region and globally. The fact that Sierra Leone's scientific research – both in its quantity and quality – is ranked below that of the Gambia – a country that had its first university about a decade ago, and whose citizens were sent to Sierra Leone for university education - is a good enough sign for the country to be worried about the competitiveness of its research and higher education (Redwood-Sawyer, 2012; Adams, 2010). Secondly, research and higher education faces a perennial problem of funding. Since the 1980s, government funding to institutions of higher learning has been on the decrease. This in part, can be explained by the financial crisis of the 1980s and the implementation of structural adjustment programmes to stabilise the ailing economies of developing countries (Bloom et al 2006). Universities and institutions of higher learning were particularly targeted to cut down the largesse they were receiving from central government. The cut in central government funding was not matched with the freedom for universities to charge competitive fees to students. Because education is seen as a social service, and the fact that university campuses were epicentres of anti-government movements in the 1970s in Sierra Leone, keeping the university campuses calm, with low to almost zero university fees, was an active political tool for student silence (Bolten, 2009). The huge slice in funding and the inability of higher education institutions to generate enough resources through tuition fees and research meant that they cannot pay subscription fees for journals or upgrade from chalk and board teaching, to power point and other internet-powered learning platforms. A crisis of resources has led to a crisis of modernity, access, production and dissemination of knowledge in an era of global education commodification and competitiveness.

Lastly, but by no means the least, research and higher education in Sierra Leone is constrained by the context in which it operates. One needs to be an extreme optimist to think that higher education institutions will excel in a context where the basic facilities that promote teaching and research are absent. Sierra Leone has one of the lowest energy outputs – less than 10% of the population has access to energy for 12 hours a day (The Economist Intelligence Unit, 2014) - and internet penetration in sub-Saharan Africa. University campuses, like most government departments, are dependent on diesel-powered generators for electricity. Where electricity and internet are erratic and inefficient, modern means of teaching and research – such as the use of internet-friendly teaching platforms, computers, access to journals and online library systems - are completely impossible. Yes, higher education institutions need to innovate, interact with the job market and generate resources to promote research and excellence, but they cannot power the cities and towns they are located, nor can they land internet submarine fiber cables. Until the context in which they operate changes significantly, minor interventions – like training and provision of computers – can only be temporary.

2.3 Access to research information

2.3.1 Access and awareness

Fourah Bay College – the country's premier university established in 1827 and affiliated to the University of Durham in the United Kingdom – was among the first in British colonial Africa and prides itself as the citadel of western education; providing western university education for the continent's post-colonial leaders (Redwood-Sawyer, 2011). Today, FBC's dilapidated campus (located at the top of Mount Aureol in Freetown) stands as a testament of its glorious past, and a pointer to the decaying higher education system in Sierra Leone. Once the beacon of education, with state-of-the-art lecture theatres, a big and well-resourced library and over four regular faculty journals, with subscription to almost all the main journals across the world, the university of Sierra Leone – as Njala and all other institutions of higher learning - has few functioning journals to promote publication locally, nor subscribed to any journal through which students and staff can access academic materials. Faculty-based peer-reviewed journals – such as the one in the faculty of engineering at FBC – have ceased to operate, partly due to the lack of qualified academic reviewers and low turnout of good quality publications. Students as well as academic staff and other researchers, are dependent entirely on old and outdated books in university libraries, the government central library in the major cities of

Freetown, Bo, Kenean and Makeni, and free online materials via Google search, Wikipedia and other internet search engines.

In recent times, an electronic journal, the Journal of Sierra Leone Studies - with an editorial board of mostly Sierra Leonean academics based in the diaspora— has been established to help harness research skills and promote publication among Sierra Leonean academics. The journal's fourth volume (2015) has been published online, and brings together materials from various themes and academics in and out of Sierra Leone²⁴. The journal can be accessed online for free, and provide a starting point for researchers and student to access and publish academic content. However, the situation is slightly different, and frankly better, for researchers in the leading donor agencies and big NGOs. In the midst of poor internet facilities, field offices of donor agencies such as the World Bank, DfID and the African Development Bank, enjoy some of the best internet connections in the country and have access to a pool of materials and resources due to the rate of their publication and out of Sierra Leone contacts and networks. A number of Sierra Leonean academics who have a reasonable publication pedigree, have relationship with other Africa researchers – mostly from Ghana and Nigeria - and research organizations such as CODESRA²⁵. This means that they can access publication via colleagues, friends, personal journal subscription and other academic networks. Grabbing the limited opportunities is strangled by the extent to which students and academics are aware about the available information access points. Ideally, this should not be a problem for academic staff of the university, as their career progression is tied to publication. However, a good number of them are not aware or unable to grab the few available publication opportunities, due to information asymmetry. The Sierra Leone Writers Series (SLWS); an association of Sierra Leonean writers across the board - from poetry to short plays and academic books - promotes the writing and publication skills of Sierra Leoneans in Sierra Leone and across the diaspora²⁶. In recent times, SLWS has secured the right to publish in Sierra Leone and now sell via Amazon and other similar platforms, books published in and about Sierra Leone, in Sierra Leone, by Sierra Leonean writers.

2.3.2 Obstacles

Researchers - both in higher education institutions, government and NGOs – and students in Sierra Leone face a number of challenges in accessing vital research information; challenges so hard to comprehend by researchers in Europe and America, for instance.

1. Access to books and journals: The golden age when libraries in higher education institutions— and the government owned central library board - used to buy the latest books - vanished over 3 decades ago. The newest books at FBC Library – the biggest in the country - at best is 15 years old, and probably the first edition, when the third would have been published a year to two ago. University libraries can't buy books any more: they depend on donations. The older collections have been either stole or turned apart by students: as the library loan system is done manually without an online tracking system. As much as there are few functioning in-campus journals, institutions of higher learning in Sierra Leone do not currently subscribe to many journals....making it hard for staff and student to access journals articles via the university system. It's a grim and dare situation, as students and staff struggle over few available resource materials mostly donated by former students, well-wishers and western universities emptying their old library shelves.
2. Access is also seriously limited by the low levels of internet access in the country. University campuses and research institutes either operate low and unreliable internet bandwidth or without internet access at all. The state of ICT facilities is so deplorable such that many academic staff do not have access to computers and internet, nor do students. IPAM has had a Department of Computer Science for many years but the labs everywhere are so-so. Njala University had a campus-based internet connection routed via VSAT connection from the US, but this is expensive, unsustainable, unreliable and not freely accessible to student.

²⁴ See Journal of Sierra Leone Studies website @ <http://thejournalofsierraleonestudies.com/>

²⁵ Like John Kargbo of the Institute of Library Studies and Osman Gbla of the Department of Political Science at FBC

²⁶ See SLWS website @ <http://thejournalofsierraleonestudies.com>.

But this is not only a challenge for universities and research centres; it's a nation-wide challenge with implication on several other fronts; from improving health care, governance, accountability and fighting crime.

3. Another big challenge not so popular in higher education discourses in Sierra Leone is the idea of mentoring and network building for early career researchers. The research and higher education landscape lacks a coordinated system to train, motivate and mentor young graduates with a passion for research and publication. Writing (academic or otherwise), is an art, which needs to be nurtured and developed over time. Training young graduates and linking them with other universities researchers and universities across the diaspora can be an important first step in the long road to higher education, research and publication.

2.3.3 ICT infrastructure

Sierra Leone has one of the slowest and lowest rates of internet penetration and usage in the world (African Development Bank, 2011:129-130). The civil conflict in the 1990s, suggest that Sierra Leone missed out in the first phase of the submarine fibre cable laid along the West African coast in the mid-1990s. In 2009 however, the government of Sierra Leone developed and adopted an ICT policy in line with 2007 ICT policy of the Economic Community of West Africa States – ECOWAS (Government of Sierra Leone, 2009). Among other provisions, the ICT policy set itself the objectives of: a) improving the education system through the use of ICT to promote e-learning, and b) to subsidise access for high-speed internet subscribers in schools and higher education institutions across the country (Ibid). The objective was to multiply, by 'seven-fold, the ICT penetration rate from the current low level of 0.27% to 2% by 2015' (African Development Bank, 2011:130). This will be achieved by establishing a landing station in Sierra Leone, connected to the submarine fibre optic cable - laid down on behalf of the Africa Connect Europe (ACE) consortium - and building a terrestrial backbone that delivers broadband internet connectivity service deep into rural areas of Sierra Leone (Ibid).

In October 2011, the ACE submarine cable was landed in Sierra Leonean's capital - Freetown - admits jubilation and optimism that the landing of the cable will revolutionaries internet connectivity in the country²⁷. Over three years since the submarine cable was landed, internet penetration still remain low at around 1.3%; way below the low-income countries' average of 6.2%, with a connectivity bandwidth of 1,994 bps per internet user, compared to an average of 9,141 bps for low-income countries (The Economist Intelligence Unit, 2014:9-10). The poor internet connection has negative impact on the already ailing research and higher education landscape in Sierra Leone. None of the higher education institutions in Sierra Leone is currently using internet-based online learning platforms – considered the norms in Europe and America – such as Moodle and blackboard. Although the Njala and University of Sierra Leone have small computer laboratories for student use, they lack the professional skills to teach IT courses, most of the computers are broken, not connected to the internet and faculty members don't have access to official computers and internet.

The University of Makeni on the other hand, had a campus-based internet connection routed via VSAT connection from Italy, but this is expensive, unreliable and not freely accessible to student²⁸. Both staff and students of higher education institution in Sierra Leone, lack basic technologies and communication networks such as institutional emails and internal network communication systems; many top university professors and administrators use yahoo and Gmail addresses, although there are university-wide email systems, for example at the University of Sierra Leone²⁹. However internet access and delivery via mobile platforms is on the increase. With the introduction of 3G mobile

²⁷ Reuters, 11 October, 2011 Sierra Leone gets fibre optic link to Internet

²⁸ Considering the university is established by the catholic church, its main source of income and technical support has been from Italy

²⁹ See email contact address of the Vice Chancellor of USL @ www.usl.edu.sl.

technologies, a good number of students in higher education institutions now use mobile phones with internet for social media and online Google search for research purposes³⁰.

2.3.4 How research is used in policy and or practice

The extent of research influence on public policy formulation in Sierra Leone remains largely an uncharted territory. A number of policy documents and legislations have been passed post the civil in Sierra Leone, but there seems to be no particularly focus on research-oriented policy formulation. Perhaps one of the reasons why DfID and ESRC, in 2012, funded a research project titled ‘the influence of DfID-sponsored state building-oriented research³¹ on British policy in fragile, post-conflict environments’ aimed at understanding whether and how research and knowledge on issues such as security sector reform (SSR) influenced the development and implementation of the UK’s SSR assistance policy in the aftermath of the civil war in Sierra Leone (Varisco, 2014:90).

There is little evidence to suggest that the policy formulation framework in Sierra Leone is influenced by rigorous academic or policy research. In the government’s flagship development policy document – the Agenda for Prosperity (A4P) for instance - apart from referencing UN and World Bank commissioned country studies, a couple of national surveys (Garrido, 2013; World Bank, 2012; Ministry of Education, Science and Technology, 2011; Statistics Sierra Leone, 2011; UNDP, 2011 2012; United Nation Populations Fund, 2011; Demographic Health Survey, 2008), NGO reports, regional and UN data bases, there is no evidence to suggest that the A4P was informed by rigorous and meticulous academic or policy research. In fact, apart from national survey reports, there is no evidence of locally generated research content (especially from indigenous Sierra Leonean academics) that was referenced in the government’s flagship policy document.

This is not entirely surprising because the policy formulation landscape in Sierra Leone is dominated by political leaders, and not policy experts. The Agenda for Change - the predecessor to A4P - was by every stretch of imagination, the manifesto of the APC, rewritten to incorporate and expand on few issues - such as agricultures - after the party’s 2007 electoral victory. The phrase; ‘agenda for change’ was the exact headline banner of the party’s 2007 elections manifesto³². Of course, it is the norm for the campaign policies of political parties to be implemented as national programmes after electoral victory. However, they should be based on well informed national development priorities, designed on the basis of scientific research. Following the APC’s victory in 2007, a Strategy and Policy Unit (SPU) was established in 2008 at State House, to enhance policy analysis, coordination and implementation, and provide technical expertise and strategic advice to the President, and serves as ‘in – house think thank’ for the presidency³³. Unfortunately, the unit is staffed by mostly political appointees whose policy formulation and analysis credentials cannot be vouched for. What has transpired over the years is a truncated policy formulation process influenced by donor partners at presidential and ministerial levels. Government’s engagement with research on public policy formulation, is therefore based on a careful selection of research evidence that supports government’s political choices, rather than a critical analysis based on sound independent research evidence. The Presidency in Sierra Leone has been accused of been less consultative in his policy choice. A case in point was in 2010 when the president launched – what many have referred to is as a *Fatwa* or a military *decree* - the Free Health Care Policy (FHCP) aimed at providing free medical support to pregnant women, children under five and lactating mothers (Government of Sierra Leone, 2012; Conteh, 2014). Laudable as the initiative was, the entire decision was taken at state house without consultation with health care service providers, local councils, civil society groups and

³⁰ See link on the role of mobile internet and changing lives in Sierra Leone @ www.bedigitalgiants.com/how-mobile-internet-is-changing-lives-in-sierra-leone/

³¹ The ESCR defines research as ‘any form of disciplined inquiry that aims to contribute to a body of knowledge or theory’ and involves the systematic gathering and analysis of data in a structured manner that makes complete sense

³² See Sierra Herald Newspaper online Vol.,9 No. 1 @ <http://www.sierraherald.com/apc-manifesto.htm>

³³ See Sierra Leone’s State House Website @ <http://www.statehouse.gov.sl/index.php/office-of-the-chief-of-staff/1038-strategy-and-policy-unit-spu>.

opposition politicians. The outcome was a huge logistical nightmare, corruption and misinformation at the very inception of the intervention (Ibid).

However, over the years, the space for CSOs, NGOs and other international aid agencies in public policy influence has taken an upward trend, as government is now under immense pressure to listen to alternative voices and open the institutional spaces for state-civil society interaction on a number of public policy issues (World Bank, 2007). The softening of government position can be associated to a number of factors: First, the donor community has tremendous leverage over government policy due to the state's financial dependence on its donor partners. Undeniably, donors are the biggest players in policy research in the country. The World Bank and the DfID for instance, are not only among the biggest donors, they fund and commission some of the biggest and most widely referenced policy documents in the country. Their evidence and influence on policy issues cannot be ignored all the time. Secondly, the growth of the internet and access to online materials and information suggests that NGOs and civil society organization cannot only access information from a wider spectrum; they also generate and disseminate substantial information on public policy issues in the country. The growth of the media; powered by internet connectivity and new communication platforms via social media channels (Facebook, Twitter, Whatsapp etc.), meant that information can now be easily accessed and widely disseminated. Sierra Leone enjoys relative media freedom with over 40 community radios and 20 newspapers on daily circulation. This big media landscape and the recent freedom of information bill – which obligates by law, public functionaries to make classified information available under a freedom of information request – has the potential to shine a bright light on the opaque world of public policy formulation and governance in Sierra Leone. Despite this progress however, the balance of power in public policy formulation is still tilted towards the government. Government can unilaterally decide to close participatory space; the kinds of public policy formulation processes civil society, NGOs and donors can play a significant part in developing. During the last seven years, the politics of tribe and patronage has entered deep into the fabrics of civil society, and has led to corruption and political alliance based on tribe and region (The Guardian, Tuesday 17th February, 2015). Such challenges limit the moral credentials of CSOs to hold government accountable and engage in productive state-civil society relations.

2.3.5 Gender and research

Disaggregated data on the extent of gender inclusivity and diversity is difficult to come by in higher education intuitions in Sierra Leone. The lack of gender-related data makes it difficult, if not almost impossible, to construct a gender profile on research and higher education in Sierra Leone. In the first three decades in post-colonial Africa, it is estimated that women constitute a mere 3% of Africa's professoriate cadre and, women make up only 25% of student enrolment in African universities (Ajayi et al., 1996). To understand the issues that constrain women's participation in research and higher education, and their ability to influence policy and development in Sierra Leone, requires an understanding of women's enrolment and progression figures in higher education institutions in both absolute and proportionate terms³⁴. From 2000 to 2011, women's enrolment rate in higher education intuitions grew by a staggering 430% (from 2,585 to 11,092) surpassing men's enrolment growth rate (at 316%) and the national enrolment growth of 257% (World Bank, 2013:12). However, by 2011, women's total enrolment (11,092) account for only 36% of total national enrolment in public higher education intuitions; growing only by 7 percentage points in over a decade – from 29% in 2000 to 36% 2011 and mostly in social sciences, education, law and business (Ibid).

The fact that women's enrolment in higher education is still stagnating, or at best slowing growing, and only in disciplines considered as 'soft' and appropriate for women, suggest that their eventual contribution in research and public policy is dwarfed at the very beginning of their research and higher education career aspiration (Mama 2003). In 2011, there were an estimated 267 women, out of 1,779 academic staff in ten public higher education intuitions in Sierra Leone – representing an abysmal 18% of the combined academic and teaching staff (World Bank, 2013). Other sub-regional data sources suggest that the proportion of female full time academic staff range from as low as 6.1% in

³⁴ Including enrolment SMET subjects perceived as hard and the exclusive preserve of men.

Ethiopia, to as high as 19.7 in Uganda, 12.4% in Nigeria and 17.6% in Sierra Leone (Teferra & Altbach, 2003)³⁵. Apart from the unacceptable low proportions of women hired in full time academic roles, very few women in research and higher education institutions, progress to senior academic and managerial positions – in which they will be positioned enough to conduct and disseminate research and leverage on public policy (Mama 2003:103).

Beyond the low and unequal (across disciplines, departments and faculties) enrolment of women in higher education institutions, women's career development in research and higher education and eventual contribution to public policy is hindered by a largely patriarchal and highly misogynous society, where boys' education is preferred over girls', and men seen as strong enough to lead and women are expected to stay behind or follow their husbands, fathers or brothers, rather than lead or be independent (Assié-Lumumba, 2006; Banya, 1993). Although in principle women are not excluded from full participation in research and higher education; the Sierra Leonean society still perceives high level research and public policy positions³⁶ as a manifestation of conventional masculinity that structurally precludes the equitable participation and full realisation of women's potentials (Mama 2003). Even among educated intelligentsia in Sierra Leone, educated women beyond the first degree level - and worse more at the PhD level – are considered too educated for wife material- a repellent for suitors. As Mama (2003) strongly argues, women's inequitably participation in research and higher education in Africa (as in Sierra Leone) is mostly associated to their high drop-out rate, although there is little or no evidence to suggest that if women are equitable enrolled and provided with the same support channels as men, they still will be more likely, to drop-out of university. Despite the societal constraint and limitations, women are generally blamed for their inability to archive, easily stereotyped and downgraded as a piece incapable of studying 'hard' disciplines and therefore not in their interest to seek to be highly educated.

3 Conclusion

The general trend in the research and knowledge system in Sierra Leone points to an out-dated and broken system; under-staffed, under-motivated and under-resourced; and in dire need of overall reform to make it productive, efficient and competitive enough to meet current demands, and grab the growing post-conflict opportunities both in terms of enrolment and partnership with the private sector. As Wundah (2011: 97) argues, the case of Sierra Leone's research and higher education points to some modest progress since the end of the civil war - in areas such as student enrolment - but it does call for a complete overhaul of the system – including a new curriculum and training methodology, and investment system based on renewed political commitment in research and higher education to guarantee its usefulness and relevance in the country's post-war development aspiration. Rebuilding infrastructure - including lecture theatres, libraries and ICT facilities - a gender sensitive training programme, especially in SMET, to boost the number of senior academic staff, improved conditions of services and increased access to books and journals, developing a culture of research and publication through partnerships with the private sector and overseas universities and research institutes, and the establishment of research councils to fund, set standards and the research agenda, can provide a useful starting point in the system overhaul.

³⁵ The 18 percent proportion of women in academic staff positions in Sierra Leone appears to be consistent and within an average representation within the sub-region

³⁶ A plausible explanation why Sierra Leone is yet to see its first female Vice Chancellor in any of the country's top public universities

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