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ADDRESSING THE CHALLENGES OF UNIVERSITY RESEARCH IN SUB-SAHARAN AFRICAN UNIVERSITIES: A CAMEROONIAN PERSPECTIVE FOR PERFORMANCE BASED MANAGEMENT

Bilola Theresia Samfoga Doh

University of Turku, Finland

The purpose of this conceptual and descriptive paper is to provide an overview of the state of university research in Cameroon with reference to its major challenges. It will outline the need for a 'new' management system for university research in Cameroon and how the model would ameliorate the challenges encountered. The analysis in this paper would make a contribution to the literature on higher education in Cameroon. Some scholars have carried out studies on scientific research in Cameroon from a general perspective as well as studies on access to research in universities but little has been done in terms of strategic management of university research or its relevance to the objectives of higher education in Cameroon. This paper would discuss the state of university research as well as how performance based management can address the challenges. Given the pressures for university research to become more relevant to societal needs, be accountable to its stakeholders, maintain quality, and use the least possible resources (human, physical and fiscal) there is a need for studies on how university research can address challenges that hinder the response to these demands. The paper attempts to answer the following question and sub questions:

How can performance-based management address the challenges of university research in Cameroon?

a. What are the challenges of university research in Sub-Saharan Africa and Cameroon in particular? How does performance-based management (PBM) address these challenges?
b. Are there any good practices (policy, lines of action, practices) that have been undertaken in Cameroon (system level and University of Buea) that can address the challenges or serve as starting points for performance-based management of university research?

Keywords: Performance-based management, University research, Cameroon, Accountability, Relevance.

INTRODUCTION

The motivation for this paper stems from a 2009 study which revealed that management and funding of research by performance had the potential to ensure efficiency, accountability and relevance (see Samfoga Doh, 2009). In the said study a performance-based management scheme was seen to have increased staff research productivity as well as involvement in other activities targeted by the scheme. But because this paper is focused on research, it would mostly allude to the contribution that was made to research. This paper would discuss some current challenges of

university research in Cameroon state universities within the framework of accountability and relevance of higher education. It also considers the contribution that instituting a performance management system could make to the alleviation of accountability and relevance problems of university research in Cameroon. The essence of performance management rests on accountability, efficiency and effectiveness (relevance). This paper posits that performance management can ensure accountability and relevance of university research in Cameroon.

This paper also takes a novel approach as compared to most literature on higher education in Cameroon and Africa which posit that finances are highly insufficient and need to be increased. They argue that sufficient funding will address the problems of higher education. The thrust of this paper is the need for accountability and efficiency for the already grossly insufficient resources before considering their increase. Increased resources will not remedy the challenges if it is not accompanied by effective and strategic management. Given the important role that higher education plays in development, it is even more paramount that scientific research should be given attention in a developing country that needs research both to alleviate its perennial problems (poverty, disease etc) as well as provide the necessary tools for development.

Performance based management offers benefits for university research amongst which are: i. providing a structured approach to focus on strategic performance objectives. It focuses on the achievement of objectives deemed important to the university and its stakeholders and not on the number of research activities the university undertakes. ii. Providing a mechanism for clearly reporting to funders and stakeholders. It removes the guesswork out of the attempt at answering the "how are we doing?" and "are we doing the right things" questions. In a performance-based management system, all research activities in the university endeavour to fit within the predetermined objectives, the end result is an accurate picture of individual, team, and research unit /laboratory research activities. It is a participatory form of management as it brings all interested parties into the planning and evaluation of research activities. Performance-based management brings customers/stakeholders (students, government representatives, etc), researchers and administration together to plan strategies and goals as well as to evaluate performance. The keyword is involvement of those who should be involved in the process of managing research. It provides a mechanism for linking research performance to budget expenditures. At the beginning of each cycle (in this case financial year) performance based management provides a framework for articulating what goals will be pursued by university research and what resources will be required to accomplish those goals. At the end of the financial year, it shows what resources were used to achieve the results identified at the beginning of the year.

The Context: Universities as Hubs for Research

Cameroon is a West African country with a population of approximately 19.4million (housing and population census 2010). It is a bilingual (French and English-speaking) country owing to its colonial history with the British and French. This is equally reflected in the bicultural nature of its higher education and law system as well as the distribution of the population (80 per cent French and 20 per cent English). Cameroon has seven state universities and several private universities (specific number not available due to the existence of both accredited and unaccredited private universities). Scientific research in Cameroon is the premise of universities and research institutes in the public and private sector. The Sub-Saharan university was established on the heels of independence with the major objective to produce skills for the new civil service of the state. The universities were also mandated to conduct research of relevance to their countries and the African continent. The research mission mandated to higher is evident in the following policy document statements.

> *"…….The state assigns to higher education the fundamental missions of production, management and dissemination of scientific and cultural knowledge as well as ethics for national development and the progress of humanity*."[1]

The research mandate of the University of Buea as spelt out in Decree N° 93/034 of 19th January 1993 is to "*encourage, promote and conduct research in all fields of learning and human endeavour; contribute to national development and promote socio-cultural values*"[2].

The University of Addis Ababa's mission includes: "*…4. Disseminate research results so as to raise awareness about critical issues central to the lives of local, national and global communities……..11.Pursue research and teaching from distinctively African perspectives and address challenges facing Africa*."[3]

According to the Makerere University Strategic plan, Uganda's increasing shift to a knowledge economy provides Makerere University the opportunity to prioritise research as a strategic thrust that will generate the requisite knowledge to boost Uganda's economy. It further asserts that research is the mechanism through which universities become the locus of scientific discoveries that drive national economies forward. It is therefore a pillar of both institutional and national development. The capacity for knowledge production, innovation and effective utilization are recognized as the key sources for growth in the competitive global economy. The strategic plan states the enhancement, transformation, and utilization of knowledge, research and innovations as one of its goals.[4]

The Central University of Technology, Free State in South Africa emphasises three key areas in its research and development plan: "*the development of a sustained research culture, improvement of research outputs, development of strategic research partners and programmes*".[5] African universities are also required to impact on their communities and some are even created along specific socio-political agendas. For instance, in Cameroon it is an unwritten assumption that the establishment of a university in a region encourages socio-economic development first in the immediate environment and the nation as a whole. The establishment of universities in Cameroon has equally been used as for equality and national integration between the different regions. The creation of universities has followed the logic that every region should have a university and its creation is always regarded as a boost to socio-economic development. These assumptions are irrespective of perceptions of ivory towerism (Djangmah, Anyimadu & Ohene, n.d.) and eliteness (the UB strategic plan expresses that there is insufficient appreciation of the role of the university in development). As the province of the state, African universities depended solely on the state for financing (most are still largely financed by the state). The case in Cameroon was free tuition, subsidized food and housing as well as non-repayable bursaries. Understandably, there was an urgent need for man power to fill the civil service post independence but the welfare system could not sustain itself in the face of the exponential increase in student numbers, rising costs, pressure from other government sectors and pressing development targets. The economic crises of the late 70s and 80s rendered the fate of the African university even more unfavourable.

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[1] The Law on the Orientation of Higher Education in Cameroon, 16th April 2001. (p.1, Article 2).Reiterated in The University of Buea 2010 Annual Report (p.8).

ftp://www.minesup.gov.cm/Ministere/Lois/LOI_PORTANT_ORIENTATION.pdf

[2] The University of Buea Strategic Plan 2007-2015 (p.8)

[3] Addis Ababa University-Wide Strategic Plan. 2008-2013.

http://www.aau.edu.et/AAUBPR%20TOBE/University_Level_SP,_Final_Revision,__Jan__2008.pdf

[4] Makerere University Strategic Plan 09/2008-09/2018

[5] CUT 2009 Annual Report: Research and Innovation (p.5-6).

http://studmail.cut.ac.za/extfiles/cut_annual_report_3_12_1_2011.pdf

There is no doubt that the training mandate of the university has been substantially realized. Products of the universities have replaced the colonial expatriates. The civil service has been served by indigenes for the past 50years. But has it been an easy task for universities in the region to move from predominantly educating for the civil service to become the 21st Century University that needs to continuously adapt to change; address competition; cater to multiple and sometimes contradicting stakeholder/customer needs while at the same time being efficient and accountable; adapt to doing more with less? What challenges have been faced by university research in Cameroon? How can performance based management contribute to minimizing these challenges? Several studies have revealed the crucial role that higher education has to play in Cameroon. Amin & Awung (2005) conclude from their study on rates of return to education in Cameroon that different educational levels show increasing rates of return from lower to higher levels. They assert that this is evidence that investment in tertiary education is important. So the role of African universities may have changed but their importance has never been more evident.

METHODOLOGY

The study employs qualitative content analysis of policy documents as the source of evidence for challenges of university research in Cameroon. These documents include laws, decrees, newsletters, annual reports, strategic plans and ministerial texts. Literature on higher education in general and Cameroon are also reviewed to identify challenges. Performance-based management literature is used to provide a framework for the analyses and recommendations. This article attempts to identify the challenges of university research in African universities based on a university in Cameroon. The thrust of this paper is on the management side of research regardless of the source or amount of funding allocated. It seeks to address the issue of how to maximize the use resources for research for the right purposes despite the inherent challenges involved.

It is worth-mentioning the objective is not to critique the management of university research as an end in itself but to outline the challenges that are involved and how they can be addressed if there is an increased focus on management by performance rather than just overall governance procedures. Owing to the fact that this paper was intended to be limited to document analysis, no field work has been done.

LITERATURE REVIEW

University Research in Cameroon

Extensive university education in Africa is a postcolonial occurrence. Exceptions include North Africa with its different history and South Africa with its special circumstances in terms of history and resources. Only eighteen of the forty-eight countries in sub-Saharan Africa had universities or university colleges before 1960. Research or ‘modern science’ in Cameroon was introduced during colonisation and was mostly the premise of explorers, missionaries, the colonial administration as well as isolated researchers/ academics. At independence Cameroon inherited an estimable research infrastructure but the number of trained researchers was very small and universities were focused on teaching to accumulate man power to replace the colonial administration. Priority was given to research especially in the higher education sector for the first few years after independence and received considerable support up till the 80s. In the early

80s, Cameroon was one among African countries having invested most in research and funding available to Cameroonian researchers were comparable to French levels at the time. Funding revenues were to a large extent from petroleum revenues but there was also a genuine political will to train and have access to a research elite corps. It was during this period that a majority of the present Cameroonian scientific research elite were trained (Gaillard & Zink, 2003, pp 13-14). For the purpose of this paper it is worth mentioning that some researchers from Gaillard & Zink's study (ibid) remember that good advantage was taken of the juicy funding situation without necessarily contributing to the advancement of knowledge, "many participated in programmes without publishing anything and just collected travel claims related to a given programme". The government of Cameroon like many other sub-Saharan countries had an ardent trust in higher education and this can be evident not only in the research investments but also the incentives and welfarism which was accorded to higher education as a whole.

The success observed in universities and research institutes was abruptly ended by the economic crisis of the 80s and the effects were no more recruitments, delayed salaries, end of funding for some research projects and the waning of motivation for research activity. While the student population skyrocketed and the demands from university research multiplied, the economic malaise necessitated big cuts to research funding. Moreover, disbursement of approved budgets became irregular and often incomplete. The number of national researchers stagnated until the 90s and then began decreasing. Financial constraints of research institutes also implied that many researchers resigned. For example, the researchers in IRAD (Institute for Agricultural Research and Development) were 284 in 1992 but only 198 in 2003. Much has been written about the colonial origins of the university in Africa (Devish, 1999; Eisemon & Salmi, 1992). Fifty years after independence, the legacy of the Cameroon university system still justifies its insufficient relevance to the needs and problems of its society as well as to the rapidly changing international environment. With the emergence of the knowledge economy, expectations for university research are increasing as much as the demand for higher education, with increasingly parsimonious and insufficient funding. Alongside this paradox, there is an accountability and relevance crisis which greatly compromises the ability of the scientific research to flourish and be productive.

Performance-Based Management in Higher Education

Performance management is an agreement-based interactive management model. Its operational dynamic is the ability of the parties involved to find an appropriate balance between available resources and the expected results (Finnish Ministry of Finance, 2006). Performance management in this paper embodies efficiency "doing things well", effectiveness "doing the right things", relevance and accountability to stakeholders (meeting the needs of the stakeholders and keeping them informed).

Performance based management systems may work in organisations with clear and easily recognisable goals. But how do these sometimes rigid systems translate in the complex and contradictory world of higher education? Can the 'something for something' approach enhance the accountability in the management of university research in Cameroon as well as the relevance of research results? Higher education is not different from other state institutions in the sense that it is a complex system existing in an environment that is increasingly exerting unpredictable pressure on it. Higher education (HE) mirrors the developments of other sectors, such as increasing interest in performance management and the continuous enlargement of the basis for performance management from financial, operational, and stakeholders' towards developmental perspectives (Sarrico 2010, p. 145).In management literature, it relates to the process by which organisations try to understand the links between goals and the management of

the determinants of those goals. Those organizations that better understand these and manage these mechanisms can improve performance continuously by actively managing the determinants to produce better results (Fritzgerald, Johnston, Brignall, Silverstro & Voss, 1991).But Grönroos (2000) holds that as soon as an organization delivers its stakeholders' demands, their expectations rise. This is the very essence of the state of HE today both in the developed and developing countries. According to the European Foundation for Quality Management (2003) excellent performance is not something you attain; it is something you pursue continuously. Well performing organizations typically have integrated performance management systems, they are characterized by a link between strategy and performance measurement.

Notions of usefulness and quality need to be rethought in order to groom the new generation of HE graduates for the future. According to Salmi, (2010) in Ashcroft (2010), 90 per cent of HE graduates in developing countries are not ready for expert thinking and complex communication. It's no longer about skills, but about creativity. Development in the higher education sector in Cameroon is not about the money only, the shape and structure of the management system undoubtedly affects what a system can afford to do. Innovation needs more than basic undergraduate education, it requires intellectual free spirits and entrepreneurs: graduates not only looking for jobs but seeking to create jobs.

In higher education, results may relate to teaching, research, knowledge transfer, widening access, students' learning experience and linkages with the economic sector but emphasis depends on the institution's strategy. According to Sarrico and Dyson (2000), no institution can excel in all at the same time as both resources and time are not infinite. In addition some goals may be mutually exclusive. The simultaneous pursuit of conflicting goals is a serious threat to higher education today given the differing expectations placed on them by their various stakeholders: students, government, labour market, international and regional entities, and society at large. This calls for an integrated performance management in higher education that will link strategy to performance measurement and balance the different pressures exerted on it by its different stakeholders. Organisational performance management has been better studied in the manufacturing than in the service industry but it is a fact that services like higher education are increasingly a very important part of the economy. It is especially true with the growing importance of the knowledge economy. Higher education which is more of a service than a manufacturing sector exhibits the characteristics of a service organisation in terms of its processes and outputs-intangibility, heterogeneity, perishability. These characteristics make the measurement of higher education outputs an uneasy task: what to measure and how to measure? Most often performance measures focus on the easily measure aspects of performance. Performance measurement in the public sector is a result of the boom in the performance management in the private sector and the rise of the new public management. The delivery of better public services has much to benefit from the substantive theory of services management (Osborne, 2010). Performance in the public service is assessed on a set of dimensions that assure value for money for the citizen-client.

Effectiveness - doing the right things-is the relation between obtained results and planned results. It is the extent to which the process output conforms to the requirements of stakeholders. It may be difficult to actually measure but is the most important dimension of performance. Some authors define effectiveness as having to do with value. Does university research and its products have measurable value for its stakeholders/customers?

Efficiency/ Economy -doing things well/right-is the relation between the results and the resources used (ratio of output to input). It is the most emphasized in public service performance management and sometimes seen as synonymous to performance. This has often contributed to the negative connotation given to performance measurement in the public service. It is also doing things at the least possible cost- is the relation between input and the least possible amount of resources that could be used to achieve the same objective. In the desperate search for economy,

excessive funding cuts may instead forestall objectives leading to organizational anorexia. Consciousness of the cost is very essential for effective planning.

Equity is ensuring equal access to services of appropriate quality to people with equal needs. It is unlikely that a public service that does not abide by this principle can be effective thus this dimension should be embedded in that of effectiveness.

Even though there might be differences in the dimensions used to evaluate performance in the private sector and higher education institutions, the administrators of both need to identify a set of measures to satisfy their key stakeholders and avoid unintended consequences. Despite this similarity, there are equally important differences to account for. It could be argued that HE policy makers need to put more effort into measuring qualitative aspects of performance of a long range nature and more complexity in order to achieve explicit objectives. They need to face more significant conflict of interests between stakeholders and even from the same stakeholders with conflicting objectives (e.g. expanding access and quality assurance as state expectations. According to the US Office of Personnel management, performance management is a system where:

1. Work is planned(strategic plan) and expectations(goals, mission, vision) are set
2. Performance of work is monitored (Performance measures, indicators, accountability)
3. Staff ability to perform is developed and enhanced (continuous improvement: measure performance to identify gaps between objectives and practice/achievements).
4. Performance is rated or measured and the ratings summarized(PIs)
5. Top performance is rewarded (incentives)

In the foregoing logic one can assert that performance management is inherently linked to the success of a strategic plan, it is part of the process of strategic planning as well as a mechanism for its implementation and evaluation. On its face, Performance management has much to offer. According to Halachmi (2005, p.510) performance measurement where outside control is replaced by greater managerial flexibility may hold the key to success. Such an approach can be found by the following set of assertions by McNamara (1999), performance management:

- Helps you think about what results you really want. You are forced to be accountable, 'put a stake in the ground'.
- Depersonalise issues. Focus is on behaviours and results and not people.
- Validates expectations. In today's HE world of high expectations when organisations are striving to transform themselves and society, having measurable results can verify whether grand visions are realistic or not.
- Ensures equity as appraisal and rewards are based on results
- Optimizes research operations in the institution because goals and results are more closely aligned.
- Cultivates change in perspective from activities to results and impacts.
- Performance reviews are focused on contributions to institutional research goals e.g. forms include the question "what organisational (institutional) goals were contributed to and how?"
- Supports ongoing communication, feedback and dialogue about goals. Supports communication between administration and researchers.
- Provokes focus on the needs of customers/stakeholders.

- Cultivates a system perspective, focuses on the relationships and exchanges between sub systems e.g. departments, processes, teams and employees. Accordingly staff focus on patterns and themes in the organization rather than specific events.
- Specificity in commitments and resources.
- Specificity for corrections, direction and planning.
- Redirection of attention from bottom-up approaches (e.g. doing job descriptions and performance reviews first then 'rolling up' results to the top of the institution) to top-down approaches (e.g. ensuring all subsystem goals and results are aligned with the institution's and national research priorities).

Truetdhardt (2004, p.5) asserts that, the process of management by results may not fully meet the needs of faculties and departments. Management by results represents the 'modern era of universities' in which universities are more than ever before treated similar to any other public sector organization accountable to the state. The power of discipline-rooted authority has declined in relation to institutional authority. Besides traditional missions of research and teaching, today's universities are expected to co-operate with industries and the business world as well as facilitate transfer of expertise to working life. Such developments directly and indirectly stress the need for the development of such performance-management systems. Universities are responsible for their outputs not only vis-à-vis the ministry but also to the broader society, that is, citizens and business. In such a situation it is necessary to reconsider the management approach and accountability to the state and other HE (higher education) stakeholders. One central aim of PBM (performance-based management) is to ensure a more achievement-oriented allocation of public funds. In response to the 'resentment' of performance based management by the academic community, this paper upholds the assertion by Johnston (2005) that performance management has other purposes than 'control' (verify that intended objectives are being met) and improvement (continuously achieving more ambitious objectives). Performance based management plays a significant role in communication with stakeholders; promoting healthy competition and the quest for quality.

Performance-based management is not void of drawbacks or negative effects. As several scholars agree, management by performance may produce unintended effects whose consequences need to be monitored (Frølich & Klitkou, 2006, p.4). Such unintended effects include increase in the quantity of research output, not necessarily matched by increase in the quality of research, or emphasis on publishing resulting in mainstream research being given priority rather than more critical research. This author however holds that these unintended consequences of performance-based management can be minimized if the establishment of a performance based management system is preceded by an inclusive strategic planning process where all stakeholders are involved and their input is the substance of strategic objectives (see appendix 2). A feeling of ownership, responsibility and accountability for research activities is instituted. Quality becomes 'value for resources invested', 'fitness for predetermined purposes' and 'excellence'. Focus on relevant research activities monitored and managed by performance criteria would improve quality rather than dilute it. There however, needs to be a balance between quantitative and qualitative aspects of performance criteria.

University Research Management in Cameroon: The Case of the University of Buea

The University of Buea is supposed to provide opportunity for quality research in a conducive environment and in a manner that makes its research responsive to the needs of the local community and national priorities. The institutional and national funding, mainly through the

ministry of higher education falls far below the income from external funding sources as well as the expected income or targets set. For instance the 2008-2009 annual report of the university stated that the university failed to achieve the set target of 5 per cent of the university budget out of which the portion from national sources was less than 30 per cent. The rank of the teaching staff reveals that most of them are relatively early career researchers (teaching assistants, assistant lecturers and lecturers) who need training for research in order to boost their involvement in research both in quantity and quality.

The university is governed by consultation and devolution of management with structures like the council, senate, and committees on which staff and students are represented. The university has been able to establish important links with other universities for mutually beneficial academic and cultural activities. It is a member of several scientific networks. Despite the relatively less attention paid to research in its early years, individual researchers can be credited for obtaining significant research funding mainly from international sources.

The national framework for research management is defined by the state. Using the 1993 university reforms as its starting point, the state has progressively defined policy and the management structure in the higher education sector. This gives the universities considerable autonomy in management and encourages innovation within the framework of national policy. The management structure of the University of Buea like every other state university includes two research support units- the division of research and publications and; the division of cooperation. These two units are presently under the department of academic affairs and are under the supervision of the director and deputy vice-chancellor in charge of research, cooperation and relations with the business world. After the appointment of the heads of these units, the development and implementation of a clear operational framework is the premise of the universities. The earliest attempt to provide an institutional framework was the 1993-1998 strategic plan which defined objectives for research and capacity building. The first attempt at actually formulating research policy only began in 2001 in the service of the deputy vice-chancellor for research and cooperation. The exercise was however very slow and given low priority at a time when there were urgent needs in programme development and undergraduate training.

The 2006-2007 academic year was a turning point in the research mission of the University of Buea. The first resolute step was taken to lay down a framework for the conduct and management of research and to proactively involve stakeholders in the community and local industries. The process was characterized by extensive consultation with all identified stakeholders resulting in the publication of the research policy and management guide. It was complemented with the second strategic plan of the university. These two documents outline institutional reforms mandated and approved by the state.

Major innovations of these reforms which are valuable for accountable and efficient management of research include:

- Strategic planning for research and identification of priority areas
- Strategic objectives for the training in the management of research, dissemination, knowledge/technology transfer and university-community/industry interactions.
- A management structure (see figure 1) which expands the provisions common to other state universities, including oversight committees and postgraduate programme coordinators. The management structure clearly distinguishes between administrative and research operational units and provides for shared responsibility in the management of research between the faculty administrative units and the programme/project or team heads and the university administrators.

Despite these innovations by well intended actions and practices, there is still a big gap to be filled as evident by the IDRC[6] commissioned research on the state of research in Cameroon, the IDRC revealed the following as challenges:

- Poor completion rates for projects;
- Compliance to contractual requirements for funded research, especially for institutional Ministry of Higher Education grants;
- Difficulties in tracking projects because of non-compliance to guidelines on submission and reporting;
- Low level of reporting on research activities;
- Heavy teaching loads which means time for research becomes difficult to find;
- Uncertainties in the rhythm of disbursement of funds for research (according to the IDRC study, this is receiving the very close attention of the administration). The rhythm of state funding for research is equally uncertain;
- Inadequate laboratory space and lack of equipment;
- Inadequate access to training for the conduct and management of research.

The following section elaborates on some of these challenges and how management by performance can address them.

Challenges of University Research in Cameroon Reflect Sub-Saharan Africa's

The core challenge of higher education and by implication university research in Africa is the continuously shrinking resource base. But there are other challenges which aggravate the funding challenge. In addition to facing in more acute forms the major challenges of higher education worldwide- intensification of the pressure for new knowledge, greater accountability for resources- sub-Saharan universities have to meet challenges specific to their condition: redefinition of their mission and mandate; outstanding loss of quality at the time when competition and excellence are increasingly important; and crucial migration of brains. Against this gloomy background, sub-Saharan university research is expected to reposition itself to: support national effort at meeting essential human needs in a sustainable manner; and contribute to the competitiveness of the nation and its enterprises through the development and application of science, technology and other forms of knowledge. To a greater extent than anywhere else, Africa's universities continue to provide the bulk of its research and train virtually all its researchers. Alternative sites for knowledge production are emerging) private research institutes, firm-based research units, regional and sub-regional centres and nongovernmental organisations) but the trend is at its infancy. Even in Francophone African countries where non-university research has been a tradition, the importance of university research is increasingly advocated. Recognition of these realities, formulation of appropriate policies, mobilization of the relevant constituencies and resources in their support are strategic imperatives that call for national policy leadership of the highest order. Over the last two decades, African countries have tended to underfund and run down their universities and research institutions, in favour of strengthening primary education. The university's most recent annual reports allude to the fact that faculties are still using terms of reference which are even older than the research and management policy guide provisions. This is a deterrent to its full implementation and evaluation.

[6] International Development Research Centre

Malnourished or Underdeveloped Research culture

France has had a tradition of regarding research as too important a mission to be left to universities. Research in France was the premise of special research institutes or its unique and elitists *grandes écoles.* These were usually situated out of the university and enjoyed a higher status in terms of employability of graduates and access to state resources. In the wake of the knowledge economy revolution France realized the importance of universities and tried to amend its policies concerning them. Even though the French university system is still not in the best shape, it is far from the plight of the Cameroonian university system which is still struggling to prioritise higher education and university research. As earlier mentioned, the higher education sector in Cameroon, like in most Francophone African countries pictures that of France, hence the greater importance accorded to research carried out in research units and elitist state institutions. The little importance accorded to university research until recently has promoted parsimonious allocation of resources while the research institutes, ministerial departments and other research-active entities are placed above universities. This situation has also been exacerbated by the policy of the World Bank and other international donors to focus on primary education. The importance of the tertiary education sector in Africa has only been a relatively recent priority for these institutions. The culture of university research not just for its own sake but in response to community and national needs is a relatively new phenomenon in Cameroon. This should be an explanation of why the university researcher in Cameroon and his contribution to the society is not yet clearly seen as compared to other researchers. The level of this recognition has been evident in the resource allocation for university research from the state. The University of Buea has made several strides in this direction by consulting stakeholders in the process of setting research priorities and organising expo days where university research is 'sold' to the public and interested stakeholders. Performance-based management implies that clear objectives are set along the demands of stakeholders; research activities carried out and reported to the stakeholders (society, students, and the state, international sponsors). Managing research by performance will enable all the stakeholders to clearly see where university research is heading to and be able to evaluate if the targets have been met (when university widely disseminates research activities). The research culture of the university will therefore be nurtured, accountability instituted and a continuous input from the informed stakeholders ensures the legitimacy of university research and 'right' to resources.

Accountability, Misallocation and Relevance Crises

Accountability for research funds is very minimal especially for research income earned in salaries. In some cases these funds are used to 'make ends meet'. This is a mark of inefficiency and can be seen from the earlier mentioned situation in Cameroon where researchers took advantage of the generous funding system without any research productivity. According to WARIMA (West African Research and Innovation Management Association), "research in the 21st century is less about the pursuit of knowledge and advancement for its own sake, but more about delivering economic benefits and an improved quality of life for all sections of the society". It becomes imperative that universities not only lead research but it has to be relevant research answering questions that contribute to development and societal welfare. But Ngotho (2008, p.1),corroborates the views of other scholars of university research in Africa when he asserts that studies on higher education management in Africa have concluded that effective use and management of the very limited resources is jeopardized by poor accountability. The 1999

study of the ADEA/WGHE also confirms this when it reports that gross mismanagement and irregular funding was noticed in most of the universities. According to Ngotho, management systems in other countries ensure; access to additional funding for research, that these funds are used in a way that meets the demands of the sponsors and results are effectively disseminated. The extent and evidence for such challenges may not be the same in all African countries and financial situation varies, but overall funding challenges are positioned very high in African research studies. The implication for research is the high dependence on external donors. This naturally affects the nature and impact of the university research endeavours. Ngenefeme (2008, p.23) asserts that in the area of defining priority areas for research, there has not been the necessary convergence and there is the need to review the priority research areas. The very essence of performance-based management for higher education is to render universities accountable for resources. Given that higher education institutions are expert institutions, sponsors (who are usually not able to assess university performance) need to ensure that their objectives are being achieved and the society is being served by university research. The university in Cameroon is the property of the state and has to be accountable to it. Recently the ministry of higher education created a fund for university research but it is earned by all university staff (despite research performance) as part of their salaries. There is therefore no follow-up or accountability mechanism to ensure that the funds are actually used for research. In a performance-based management system, such funds are allocated through a competitive call for applications which are reviewed on the basis of predetermined performance criteria. The research process is then continuously reviewed and a final report of research is done (checking for relevance, quality and impact).

Increasing Institutionalisation of Research Management

Most universities are government-sponsored and even where there is revenue from the payment of registration and other fees by students, it does not amount to a significant percentage from which research activities could be funded. For instance, between 1986-1996 research programmes dependent on national funds were stopped due to salary cuts. Only projects with external funding could be pursued without funding related interruptions. In recent years there has been an increased recourse to outside funding sources that usually favour large scale, more applied projects. As the focus shifts from the individual and the scale of operation increases, funders tend to move away from individual researchers and seek institutional oversight for funded projects. The resulting increase in the role of institutions on the procurement, management, monitoring and certification, influences the success of research outcomes. It could be seen as a mixed blessing. On the one hand, some sponsors require institutional cover/ backing of individual researchers or research groups as a supervisory authority of the research funds. In this sense, availability of effective research management and support facilities within an institution has become important for university research. On the other hand, this trend towards increasing institutionalisation of research obviously promotes undue bureaucracy and poor institutional responsiveness can greatly limit performance. Unsatisfactory recordkeeping, ineffective structures and systems of coordination are negative conditions for conducting research or building research competences. In a performance management system there is a possibility that university research gains more legitimacy and visibility by paying attention to its stakeholders. Visibility and legitimacy broaden funding opportunities and reduces the need for time-consuming bureaucratic practices. Since there is clarity about what has to be achieved, disbursement of funds should be easier as long as the research meets the performance criteria in

the strategic plan and the finances have been given to the university from the outside funding body just for the purpose of management.

Dissemination and Access to Research

The ultimate value of research lies in its availability for use and consultation through publication. Publication is at the core of the academic research enterprise and serves the purposes of information distribution, measurement of research productivity and a criterion for research career advancement. It is important to mention the difference between mainstream and local science at this point. The latter is primarily important within the context of a country or region and usually addresses the problems of the context. Mainstream science on the other hand is relatively more visible because its findings have implications for researchers across geographical regions. Mainstream science is available in international journals and languages. African mainstream science is marginal as compared to other regions and is highly concentrated in two countries- South Africa and Egypt which account for 50 per cent of the continent's productivity. Another group of countries; Morocco, Tunisia, Kenya, Nigeria and Algeria account for 26 per cent followed by Cameroon, Ethiopia, Ghana, Senegal, Tanzania, Uganda and Zimbabwe which regularly produce 70-180 papers per year (Adams, King & Hook, 2010). In addition, the dissemination of research findings is limited due to inadequate follow up especially in the case of project funding, when the funding ends, the research is forgotten about. If the mission of university research is creation and dissemination of knowledge, then this is one problem which Cameroonian universities need to endeavour to alleviate. Access to print journals in Cameroon universities is very minimal. In 1996, UNESCO[7] noted that the field of scientific research in most developing countries is compressing due to insufficiency not only of local resources but also to a lack of access to international research resources. Even though the internet has become a part of student and instructors' lives it is still not fully exploited for research and knowledge. The Willinsky et al., (2005, p.6) study found out that in the then six state universities only 10 per cent of the students reported having university access to internet. In addition the libraries are unable to maintain subscriptions to print journals. According to a Cameroonian graduate student in the Willinsky study (ibid) 'there are obsolete documents'. Faculty and students are barely able to keep up with the available resources which indicate an emerging research culture held back in some part by the state of the libraries and grossly insufficient access to current research publications. Yet, according to Willinsky et al., (2005) there are aware of what they are missing out on. The Willinsky study was carried out more than half a decade ago but the hindrances to research that were identified seem to still prevail today. The University of Buea's 2010 Annual Report still features departments reporting the absence of computers and the inadequacy of library web facilities. It is evident that full advantage still has to be taken of the new information and communication technologies. Increasing communication and opening up access to knowledge and research findings presents opportunities for plugging African research into a flexible knowledge society. But access alone is not enough; researchers need to be equipped with appreciation and skills for accessing and appropriating such worldwide knowledge.

Other challenges which exacerbate the foregoing exist. Faculty is overburdened with teaching loads in the absence of both modern teaching aids and the support of teaching assistants. Due to the overall resource constraints, involvement of academic staff in non- academic activities to supplement low official incomes is not uncommon. Such distractions from teaching

[7] United Nations Educational, Scientific and Cultural Organisation

and research are reinforced by poor incentive systems and slow promotions partly from the limited access to publishing outlets and international conferences and seminars, as well as absence of mentoring by senior colleagues and other researchers. The challenge of dissemination is inherently addressed by the provisions for relevance and accountability in a performance-based management system. In a bid to meet these, the more the publications and researchers strive to make their research as visible as possible to those whom they consider as stakeholders or likely users of research.

Accreditation and Organisation of Units

Research in the university of Buea, like in other Cameroonian universities is carried out in research teams, laboratories/research units, and individually. The functioning of the research units is governed by the research policy and management guide drafted in 2007. In principle there are structural links between the university's research architecture and the government sector responsible for higher education. Several avenues exist and provide a structured platform for exchanges. At the institutional level there are several academic committees and at the system level there are interuniversity committees and the conference of rectors but according to a study on research governance at the university of Buea (Signing & Nguiessi, 2009) the impact of these structures is not felt and there is the impression that these structures are just a financial waste because there are no results from their meetings- words are not complemented by actions. The same study reveals that there are normal structural links between university research and other ministries but in practice the links are either non-existent or strictly individual. In a performance management system there is clarity of responsibility and ownership of the various processes. Given that performance reviews are done regularly, at least once a year, it would be difficult for operational units to be out of line with the university research policy and structures. Performance indicators can serve to heighten pressure on academics to invest greater efforts in activities which are measured and rewarded by indicators (Taylor & Taylor 2003, p.78 in Samfoga Doh, 2010). The above authors agree that motivation by extrinsic monetary rewards will inspire staff to work harder or more efficiently if they expect their behaviour to result in desired outcomes, in this case receipt of extrinsic rewards. Thorn et al., (2004, p.8 in Samfoga Doh, 2010) posit that identifying indicators is the heart of designing a performance-based funding scheme. Thorn corroborates Burke's assertion that "what gets measured is often what gets valued and what gets funded is even more prized" (Burke, 2001a in Samfoga Doh, 2010).

CONCLUSION

It can be concluded that there is a need for a new management system for higher education research in Cameroon. But it is also worth mentioning that the sector is not entirely new grounds. Several efforts have already been made. Even though they have been uncoordinated, they could serve as useful starting points in addressing the aforementioned challenges through management by performance. The analyses of policy documents reveal that there are several structures and initiatives with the intention of rendering university research more relevant and efficient. The problem is that these efforts have either ended at policy, structures and meetings without taking real action. this paper recommends a performance management system to ensure that policy is implemented, reviewed and revised, a cycle that ensures that words are translated into meaningful actions which can be accounted for. The table below (Table 1) summarises some of the functions that existing structures could assume in a performance management system. It

should be noted that the core challenge of university research in Africa is financial insufficiency. But, this paper argues that there are other challenges which influence and are influenced by these challenges. It is recommended that a move towards performance management is one solution to these challenges. One important challenge which has not been discussed in this paper is the insufficient cooperation within and between African universities. Cooperation will provide opportunities to share good practice, competition to enhance quality, relevance and visibility. The implementation of the bologna process to enhance readability of degrees presents a good opportunity for African university researchers to open up and enjoy the benefits of cooperation.

Table 1. Some Structures and their PBM Function.

Structure	Level	Current Role	PBM[8] Function
Ministry of Higher Education	System	Overall Governing Body for HE	Define Strategic Research Areas
Ministry of Scientific Research	System	-National Research Institutes -Link with University research very weak	-Manage Implementation of Research Policy -Allocate Budget for University Research based on performance -Collect Performance information about University research (monitor).
Deputy Vice-Chancellor for Research, Cooperation and Relations with the Business World	Institution	Administrative, Audit	-Institutional Strategic Planning Process based on strategic research areas and community needs
University Research Committee	Institution	Funding recommendations, policy interpretation	-Publicise Strategic plan for research within and out of the university.

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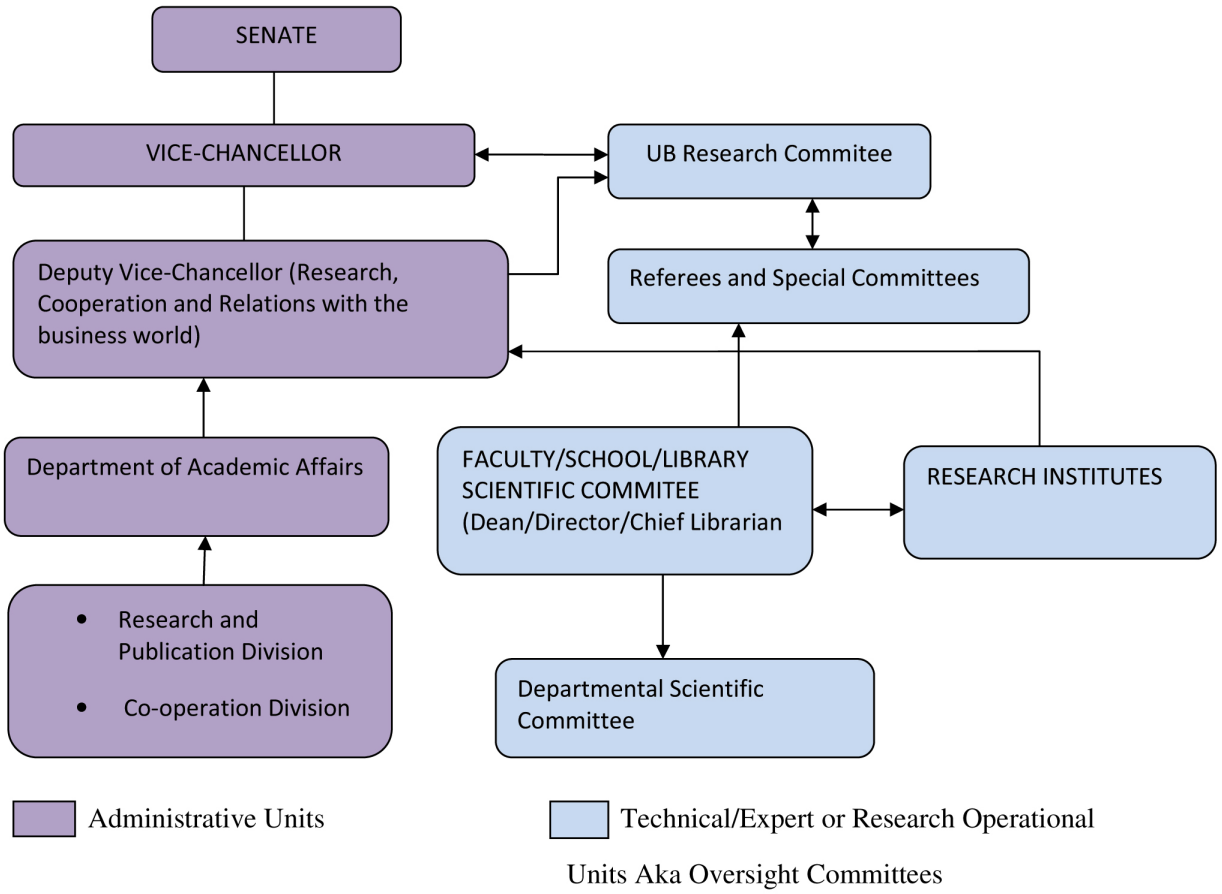
APPENDIX 1: THE UNIVERSITY OF BUEA RESEARCH MANAGEMENT STRUCTURE



Source: The University of Buea Research Policy and Management Guide 2007-2012.

APPENDIX 2: THE PBM SIG PERFORMANCE-BASED MANAGEMENT FRAMEWORK (AN ADAPTATION)