Policy Support and Research Productivity among Lecturers in Ugandan Public Universities: Case of Kyambogo University

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Abstract

In today's competitive global higher education market, research productivity has become a dominant criterion for determining the university's effectiveness. Besides, high-quality research benefits individual academics, their departments and institutions by raising their global rankings, recognition and prestige, with multiple accruing benefits. However, in a situation of low research output from Ugandan public universities, there is urgent need for increased organisational support to facilitate lecturers in conducting this cardinal university function. This mixed-methods study was, therefore, intended to evaluate the effect of the university research policy on lecturers' research productivity in Kyambogo University, one of the biggest but relatively new public universities in Uganda. A correlational survey design guided the study using both qualitative and quantitative approaches. A sample of 127 PhD-holding lecturers, three faculty deans, Directors of Quality Assurance and Human Resource, the University Bursar and the University Librarian participated in the study. Data collected using questionnaire and interviews were analysed using structural equation modelling for quantitative data while thematic content analysis was used for qualitative data to establish relationships between the variables. The findings revealed moderate policy support for research productivity with a mean value of 3.07, a positive and significant relationship between the variables with a beta value of .416 and a P-value of .000. The study recommended the formulation and implementation of favouring and supportive policies to increase lecturers' research productivity in public universities. The findings will likely be used to inform university managers on generating practical policy interventions to boost research productivity among lecturers in public universities.

Keywords: *Lecturers; Policy support; Public university; Research productivity*

Introduction

Globally, universities continue to produce and transfer knowledge, and to act as a workplace for the discovery of new technologies through students' and academic staff research and innovation (Ghabban, Selemat, Ibrahim et al., 2019). High-quality research benefits individual academics, their departments and institutions by raising their global rankings, recognition and prestige, with multiple accruing benefits (McGill & Settle, 2012increasing research productivity in postsecondary institutions provides direct benefits to those institutions, departments, and individual faculty, and this re-search productivity is often dependent on institutional support. Understanding this relationship is important for doctoral students, as many enter academia after completing their studies, and their success as faculty can be highly dependent on their success in establishing a strong research pro-gram. The authors conducted a study to determine if individual computer science faculty receive institutional resources and support congruent with research requirements set forth in tenure and promotion guidelines. The results identify hidden requirements for tenure and promotion, includ-ing an emphasis on research collaboration, and find that the level of support in the 2009-10 aca-demic year remained stagnant from the previous year. Results indicate that faculty are not satis-fied with their level of institutional support and that the three areas in which additional support would enable them to increase their research productivity include staff support, release time, and funding for attending conferences. Results also indicate that untenured faculty receive less staff support, less funding for summer salaries and workshops and training, and less funding for im-provements to office space or facilities than their tenured colleagues.","author":[{"droppi ng-particle":"","family":"McGill","given":"Monica M.","non-dropping-particle":"","parse-nam es":false,"suffix":""},{"dropping-particle":"","family":"Settle","given":"Amber","non-dropping-particle":"","parse-names":false,"suffix":""}],"container-title":"International Journal of Doctoral Studies","id":"ITEM-1","issued":{"date-parts":[["2012"]]},"page":"167-198","title":"Identifying effects of institutional resources and support on computing faculty research productivity, tenure, and promotion","type":"article-journal","volume":"7"},"uris":["http://www.mendeley.com/documents/?uuid=bf65683e-7dd8-4a96-b9af-673956a63e92"]}],"mendeley":{"formattedCitation":"(McGill & Settle, 2012; Henry et al., 2020; Jameel & Ahmad, 2020). Research has thus moved from being an essential function to becoming a principal function for university standing, hence the need for increased organisational support in terms of policies, management structures and infrastructure to facilitate lecturers in conducting this dominant university function. The university research function has evolved into an elaborate and complex endeavour that requires well-laid-out policy guidelines, management structures and systems, adequate funding and a supportive research infrastructure. Worldwide, this has resulted in a sharp increase in university research productivity. However, at Kyambogo University, lecturers' research output remains low (AD Scientific Index, 2022; Fosci, Loffreda, Chamberlain et al., 2019; Kyaligonza, Kimoga, & Nabayego, 2015; Rukanyangira & Oidu, 2021).

Currently, the university is praised for churning out big numbers of graduates onto the employment market, but not for generating and disseminating applied knowledge for societal transformation. Several university rankings have revealed low levels of research and innovation in Kyambogo University. For instance, the AD Scientific Index Rankings (2022) has revealed low research productivity in the university, with only 24 active researchers among Uganda's top 500 scientists. Kyambogo did not post any researchers among the top 40 in Uganda. In many regional (African) university rankings based on research, Kyambogo does not appear among the top 200,while

in others, there is simply no data available on it (QS World University Rankings, 2021; Shanghai, 2018; SCIMAGO, 2022; THE, 2021; Webometrics, 2022). Such a deplorable state of affairs necessitated this study, whose aim is to establish the extent to which the university research policy supports its lecturers to undertake and sustain its research function. Research policy in this study refers to the availability of a supportive university research policy that prioritises and promotes lecturers' research as a core university function.

The objective of this study was to establish the effect of the research policy support on lecturers' research productivity in Ugandan public universities, with reference to Kyambogo University. To that effect, the study was guided by a research question: "What is the level of research policy support provided to lecturers in Kyambogo University for their research activities?" and a hypothesis: "There is a statistically significant effect of the research policy support on lecturers' research productivity in Kyambogo University".

Literature Review

Research policy

A policy is an important factor in achieving the objectives and reaching the level of success that any organisation aims to achieve. Supportive policies and their effective implementation thus remain a cornerstone of the enhancement of university research productivity. To that end, universities require research policies that support the achievement of their research goals in line with the national development research needs (Muia & Oringo, 2016). Formulating and implementing a supportive research policy in a university is the best way to enhance research productivity and make the measurement of research progress in a university easy to monitor (Cloete, Maassen, & Bailey, 2015; Ghabban et al., 2019; Kasozi, 2017; Santos & Horta, 2018). As a merger product of three basically teaching institutions, with research only being emphasised as a teaching component, Kyambogo University started without the necessary supportive research policies, research management structures and a supportive research infrastructure to implement the policies. Although the first Kyambogo University Research and Innovations Policy was formulated in 2014, the research function has remained weak in the university. It, therefore, remains unclear whether it is the policy that is not supportive enough to promote research output from the university academic staff.

Research policy and research productivity

Scholars like Ghabban et al. (2019), Heng, Hamid and Khan (2020), Latif (2015), Okendo (2018), Ryan and Daly (2019), Shahbazi-Moghadam et al. (2015), Sondari et al. (2017) and Starovoytova (2017b) tried to relate research policy to research productivity. For instance, Okendo (2018) identified the absence of an institutional policy on research productivity and sound policy guidelines to support research activities as major institutional constraints on research productivity in a Tanzanian university. Ryan and Daly (2019) identified lack of sound policies to facilitate and reward intensive research among other barriers to innovation and knowledge generation in the United Arab Emirates, while Starovoytova (2017b) found that the lack of institutional policy on research and publication was one of the institutional barriers to effective research performance among the School of Engineering academics from Moi University in Kenya.

The world over, universities have increasingly become modern entrepreneur engines and generators of knowledge through research, as a prerequisite for national development. This requires aligning university research policies with national development aspirations. This assumption is in line

with previous findings from the Kenya Commission for University Education report (2013),which revealed that poor alignment of university research with national development goals and aspirations was a strong predictor of the low research productivity in Kenya, while Latif (2015) reported that an increase in scholarly publications in Saudi universities was attributed to supportive policies to promote research, in line with the Saudi government's development policy focus shift from oil to a competitively advanced science- and technology-based economy.

Other scholars (Quimbo & Solabo, 2014; Sondari et al., 2017) found that lack of supportive university research policies and implementation systems were key factors leading to low research productivity among university academics in the Philippines and Indonesia. Ghabban et al. (2019) established that the university policy towards research was the most important factor in enhancing research productivity in Saudi universities. Similarly, Heng, Hamid and Khan (2020) found institutional orientation and research policies to be the most cited institutional factors influencing academic research productivity in the Global South. Similar findings had also been earlier confirmed by Shahbazi-Moghadam et al. (2015), among higher education institutions in Malaysia, Taiwan, Japan and China, hence concluding that the university research policy had a strong positive relationship with the enhancement of research performance in higher education institutions in the selected countries.

However, some of the studies cited above relied on secondary data from systematic literature review, which left methodological gaps. Other studies did not specifically concentrate on universities but higher education institutions in general, hence subject gaps. Some studies were conducted in emerging Asian economies with varying political, economic and social settings that were different from those in Uganda, hence contextual gaps. Other studies were conducted in private universities with policy frameworks that varied from those of public universities, hence contextual gaps. Lastly, the studies focused on different measures for research productivity, with only publication and/or citation as the indicators of research performance, while others considered the patents registered, grants won and reviews conducted to measure research output, hence conceptual gaps. The above gaps necessitated this study to fill them, by studying research productivity from a wider conceptual outlook, including publications, authorship, presentations and graduate research supervision as applicable to Ugandan public universities.

Methodology

Research design

The study employed the concurrent triangulation mixed research design, with correlational cross-sectional and exploratory survey designs to collect and analyse quantitative and qualitative data at the same time but separately (Creswell, 2014; Hanson, Creswell, & Petska, 2005). This enabled the study to confirm, cross-validate and corroborate results, as well as to offset the weaknesses in one method with the strengths in the other, for better understanding of the research problem (Cresswell, 2014; Cresswell & Plano Clark, 2011).

Study area

The study was conducted at Kyambogo University, one of the nine public universities, the first to be created under the Universities and Tertiary Institutions Act (2001). It is the second largest in the country, with seven academic units in both sciences and humanities, hence large enough and of importance as a model academic institution for upcoming universities. Kyambogo, just like other

public universities, follows the same financial and other administrative regulations and faces similar infrastructural and funding challenges. It was thus assumed that the organisational conditions that affect research productivity in Kyambogo are likely to prevail in other public universities managed under the same public policy framework, hence the generalisability of the study findings from Kyambogo to other public universities.

Study population

The study target population consisted of PhD-holding lecturers, deans of faculties and schools, the Director of Quality Assurance, the Director of Human Resource Management, the University Bursar, the University Librarian and the Director of ICT, totalling 168. There were 156 PhD-holding academic staff (Kyambogo University newsletter (Jan/Feb. 2021; records from faculties and departments). The focus on only the PhD-holding lecturers was guided by the university human resource policy requirements (Kyambogo University Human Resource Policy, 2014; Makerere University Appointment and Promotion Policy, 2006–2014), which consensually set a doctorate as the minimum requirement for one to fully qualify as a "lecturer" in a university. Secondly, PhD holders are deemed to be more research-competent and -confident (Heng et al., 2020) after receiving the required training for conducting the research and publication function, hence assumed to have the capacity to conduct research and publish findings (Alhija & Majdob, 2017; Brew, Boud, & Namgung, 2011; Heng et al., 2020; Henry et al., 2020).

Sampling design

The sample size was determined by Krejcie and Morgan (1970)'s table of sample size determination, which suggested a minimum of 145 out of the 156 lecturers.

Table 1: Population of PhD-holding academic staff from faculties/schools and the samples obtained

No.	Faculty/School	No. of PhDs	Sample
1	Arts and Social Sciences	36	33
2	Education	27	25
3	Engineering	16	15
4	Science	43	39
5	Special Needs and Rehabilitation	08	8
6	Vocational Studies	17	16
7	School of Management and Entrepreneurship	09	09
	Total	**156**	**145**

Source: Guidelines to Kyambogo University Faculty websites, 2021; KYU Vice Chancellor's speech at the induction of the new General Assembly, 2021

The sampled population was divided into seven clusters, each corresponding to one of the seven academic units. To obtain a representative sample of lecturers from the seven faculties, cluster sampling was used, while convenience sampling was employed to get the respondents from each faculty. The sample of participants required for interviews was subjectively selected by purposive sampling to obtain the required data from a sample deemed highly representative of the target population (Kumar, 2011).

Table 2: Summary of the study population

Category of participants	Target population	Sample size	Accessed population
Lecturers (PhD holders)	156	145	127
Faculty/school deans	7	7	3
Directors of directorates/departments	3	3	2
University Bursar	1	1	1
University Librarian	1	1	1
Total	**168**	**157**	**134**

Data collection

Of the 145 respondents to whom the questionnaire was distributed, only 127 lecturers responded and filled copies were returned, representing a return rate of 88%. Out of the seven faculty/school deans, the researcher managed to access three deans for interview sessions. Of the three directors – that of Quality Assurance, that of Human Resource and that of the ICT Department – the researcher managed to access two, while the University Librarian and the University Bursar were also interviewed, bringing the total of the accessed population to 134 participants. Data collection involved the use of two data collection methods, namely a questionnaire survey and interview method. A five-point Likert scale self-administered questionnaire was directed to the lecturers, while an open-ended interview guide was used to collect qualitative data from faculty deans, the Directors of Quality Assurance and Human Resource Management, the University Librarian and the University Bursar.

Data quality control

The data collection tools were treated to expert opinion validation by three management experts, two of whom were at the rank of senior lecturer and the third at associate professor rank for content validity whose index was 0.882 for policy support and 0.750 for research productivity. The questionnaire was pilot-tested on lecturers at Makerere University Business School and reliability tests were conducted using SMART-PLS. The generated measurement models revealed Cronbach alpha and composite reliability values of 0.843 and 0.882, respectively, for policy support, while the same values for research productivity stood at 0.797 and 0.881 respectively. Changes that were recommended by the validation panel and those identified as needed during the pilot test were incorporated into the instruments.

Data collection procedure

The study was approved by the Kyambogo University Graduate School, cleared by the Gulu University Research Ethical Committee, Uganda National Council for Science and Technology and the Kyambogo University Secretary to obtain data from the university. The researchers contacted lecturers through the faculty administrators and heads of department who made available the respondents' telephone and e-mail address contacts. They called and sent e-mails to those who could not pick up their calls, requesting them to participate in the study and for the preferred mode of questionnaire delivery. They obtained 149 positive responses, of which 27 opted for online questionnaires that were sent using the Google forms application, while 122 received hard copies. Similarly, written requests for interviews were distributed together with interview guides, introductory and clearance

letters, and consent forms. Three deans, two directors, the University Librarian and the University Bursar accepted the request, and interview dates and time appointments were fixed.

Operationalisation and measurement of study variables

The dependent variable of the study was operationalised as number of journal articles published in peer-reviewed journals, book chapters published, research conference papers presented and graduate students (at master's and PhD levels) supervised to completion per lecturer in the previous five years (2015–2019). This is a popular approach for measuring research productivity and has been employed by several scholars (Albert et al., 2016; Henry et al., 2020; Ifijeh & Ogbomo, 2018; Jameel et al., 2019; Jung, 2012; Iqbal & Mahmood, 2011; Kim, Pedersen, & Cloud, 2007). Specifically, Kim et al. (2007), used a scale of eleven items to measure research productivity as listed below: "*Submitted articles for publication in an academic or professional journal. Published non-refereed, research-related articles. Published or accepted refereed articles for publication. Published chapters in a book. Submitted a research proposal to a governmental or private agency. Written a research report for an agency, institution, or other group. Presented at professional conferences. Received institutional grants. Received external grants. Advisor for completed master theses. Advisor for completed doctoral dissertations*". Similarly, Ifijeh and Ogbomo (2018) used a scale of six items to measure their research productivity: *"Number of Journal articles published in referred and non-referred journals. Number of Books published. The number of Book reviews. The number of conference presentations. Number of grants obtained"*. From the above two studies, this study selected and adapted five widely used items that fit the Kyambogo University research context. The broad operationalisation of the dependent variable accounted for the different research productivity modes across disciplines in the university. The items on research policy were adopted and modified from Okendo (2018) and Ghabban et al. (2019). However, some additional items on research policy were incorporated by the researcher to align with the provisions of the Kyambogo University research policy and its supposed implementation set-up in the university.

Data analysis

Qualitative data analysis began with the commencement of interview data collection. Data was recorded in field notes and transcription done verbatim. Data was coded, categorized and themed to extract common themes and establish conceptual links, which were presented in the results section. Quantitative data was analysed by both descriptive and inferential analysis using the Statistical Package for Social Sciences (SPSS) computer program version 23 and SMART-PLS. The inferential analysis employed structural equation modelling (SEM) to measure the strength and direction of the relationship between variables.

Results

The study sought to establish the level of support provided by the Kyambogo University Research and Innovations Policy to lecturer' research productivity, in order to answer the research question "What is the level of policy support provided to lecturers in Kyambogo University for their research activities?" The descriptive statistics and interview findings gave the pertinent results.

Descriptive statistics for organisational support

Table 3.0: Research policy descriptive results (N = 127)

	Research Policy		SD	D	UN	A	SA	Mean
1	Promotes the provision of a high-quality research training environment for its lecturers							**3.23**
		%	8.7	23.6	15.0	41.7	11.0	
2	Supports lecturers to prioritise research among their core activities							**3.06**
		%	9.4	28.3	18.1	35.4	8.7	
3	Provides for the hiring of research assistants to support lecturers' research activities							**2.33**
		%	30.7	33.9	14.2	14.2	7.1	
4	Does not support the formation of inter-departmental research teams (R)							**3.19**
		%	7.9	25.2	18.9	36.2	11.8	
5	Does not support the formation of inter-faculty / school research teams (R)							**3.00**
		%	8.7	33.9	18.9	26.0	12.6	
6	Does not promote collaborative publishing of journal articles among lecturers in a department (R)							**3.06**
		%	7.1	33.1	18.1	29.9	11.8	
7	Promotes collaborative publishing of journal articles among lecturers across departments							**3.00**
		%	10.2	30.7	16.5	33.9	8.7	
8	Does not encourage lecturers to collaborate and publish articles with researchers from other institutions/ universities (R)							**3.11**
		%	8.7	33.9	12.6	27.6	17.3	
9	Provides for recognition of individual lecturers for promotion according to their research productivity							**3.72**
		%	3.1	17.3	7.9	48.0	23.6	
	Overall Mean for Research Policy							**3.07**

Source: Primary data

The results from Table 3.0 above revealed that the research policy provided moderate support for lecturers' research productivity, with an overall mean of 3.07 on a five-point Likert scale. The results further revealed that six out of the nine items used to measure the research policy had cumulative percentages showing divided opinions on the level of support provided by the university research policy. For example, on the reversed item "The research policy does not promote collaborative publishing among lecturers in the department", 42% agreed with the statement while 40% disagreed and 18% remained undecided. This implies that many lecturers (60%) did not feel that the university policy promotes internal research collaborations within academic departments, which would be vital for promoting lecturers' productivity through mentorship of junior members by senior lecturers in areas like scholarly article writing and publishing within departments. On the item "The research policy promotes collaborative publishing among lecturers across departments", 43% agreed with the statement as opposed to 41% who disagreed, while 16% remained undecided. This also implies that 57% of the lecturers felt that the university research policy does not promote interdepartmental research collaborations despite the interdisciplinary synergies derived from them, among other benefits. However, most of the lecturers (62%) agreed that the policy provides for recognition of individual lecturers for promotion based on their research productivity, as opposed to 20% who

disagreed. The item also had the highest mean (3.72). Nevertheless, most lecturers (65%) felt that the policy does not support the provision of research assistants to assist lecturers in their research activities like data collection and analysis, having the lowest mean value of 2.33. It is also worth noting that a sizable number of lecturers (16%) on average remained undecided on the level of support provided by the research policy to their research productivity. This could imply that such lecturers were not aware of the university research policy provisions, or were not actively engaged in research activities. The moderate research policy support for lecturers' research activities implies that the university needs to formulate and implement a more supportive research policy to boost its research function.

Qualitative findings

Level of research policy support. The research policy was indicated by three emerging themes that included *Institutional Research Guidelines*, *Collaboration Protocol* and the *Direct Assistance Policy*. Concerning Institutional Research Guidelines, guidelines on lecturers' workloads and on journals for article publication emerged as major elements of the research policy guidelines in the university. The key informants revealed that the university has maintained the minimum standard of 10 contact teaching hours a week, after which lecturers should engage in research and publication work. They also revealed that since the research publication activity does not generate any immediate financial returns to meet their financial obligations, lecturers take on extra teaching loads to generate additional income to make ends meet due to the economic dictates and obligations, mainly from conducting evening and weekend classes. The interview findings, therefore, reveal that once lecturers observe the requirements and guidelines for their teaching responsibilities from which they generate immediate and direct income, research and publication activities remain secondary since they do not generate immediate financial benefits that they need to keep their lives and families running. The findings imply that the mandatory teaching workload is appropriate but the need to make more money pushes lecturers to look for extra teaching loads, which reduces the time available for them to undertake research activities.

Concerning guidelines to journals for article publication, the key informants revealed that there were no clear policy guidelines for lecturers on the specific journals in which to publish their research findings, but it was left to individual lecturers to use their knowledge and experience to decide. Such findings imply that the research policy does not strongly guide the prescription of research publication outlets for the university academic staff as a supportive mechanism for quality research. Regarding Collaboration Protocol, the status of the policy requirement to guide the formation of research teams and the acquisition of partnerships and collaborations with external organisations to promote lecturers' research productivity was found to be inadequate. For instance, it was revealed that the university does not have a systematic policy approach to the formation of departmental and faculty research teams as well as institutionalised external collaborations. This is usually left to individual lecturers to look for research partners and establish collaborations that they deem helpful in promoting their research productivity. The policy is thus fundamentally inadequate on the collaboration function.

Regarding Direct Assistance, the findings revealed that the policy remains silent on the direct hiring and assigning of research assistants, as the case is with teaching assistants who help lecturers with teaching activities. They further revealed that the hiring of research assistants is catered for in terms of financing for up to two research assistants for senior lecturers and above in case there is

adequate funding from research grants, but that it was not in the policy structure to have research assistants in the university. The informants further argued that even when the policy framework could be assumed to adequately support research in the university, the research and innovations policy had not been implemented. The argued that the absence of the research policy implementation guide to streamline the management of research activities and promote productivity has contributed to the lag in research in the university, with academic staff remaining more active in teaching than in conducting research. The above revelations imply that as a tool of organisational support, the research policy does not strongly support lecturers' research activities to promote the university research function.

Quantitative findings

Inferential statistical analysis was conducted using SEM to establish the relationship between research policy support and research productivity in line with the study hypothesis that there is a statistically significant effect of the research policy support on lecturers' research productivity in Kyambogo University. Figure 1 and Table 2 give the pertinent results.

Figure 1: Structural equation model

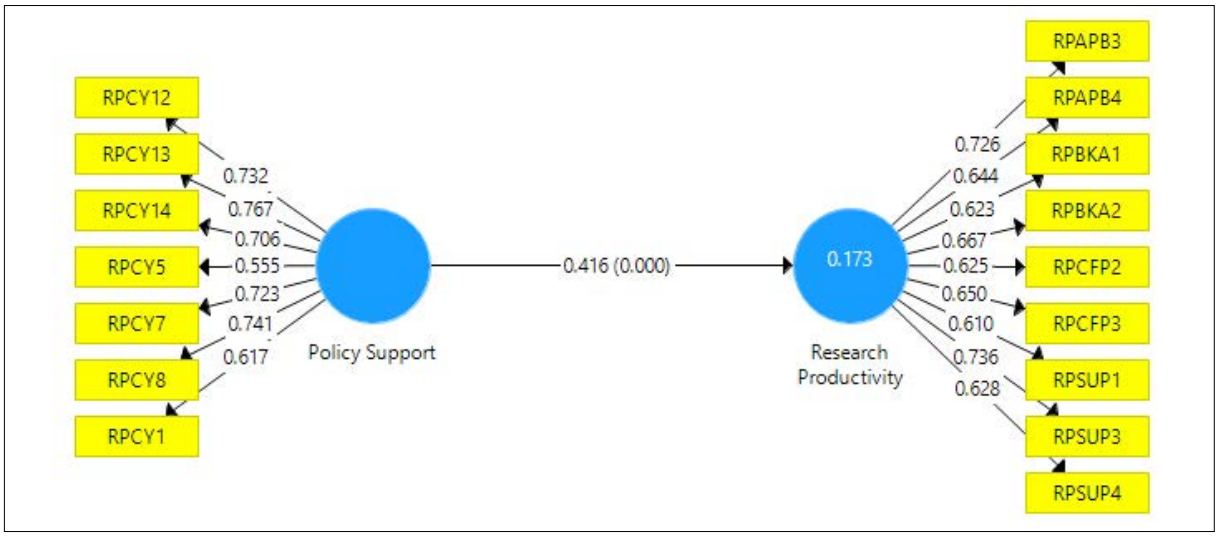

Table 4.0: Structural equation model results

	Beta	STDEV	T Statistics	P Values
Research Policy → Research Productivity	0.416	0.053	7.854	0.000

The structural equation model revealed that research policy has a significant and positive effect on lecturers' research productivity (β = .416. p< .05). The key indicators of the research policy support related to research collaborations expressed by RPCY13 – "Promotes collaborative publishing of journal articles among lecturers across departments" – which had an outer loading of .767, and research teamwork, which was expressed by RPCY 8– "Does not support the formation of inter-faculty / School research teams (R)", with an outer loading of .741.The finding led to the acceptance of the study hypothesis that there is a significant positive effect of research policy support on lecturers' research productivity.

Discussion

Level of research policy support

The qualitative findings revealed low policy support while descriptive statistics revealed a moderate level of support from the research policy for research productivity in the university. For instance, concerning policy guidelines to journals for article publication, the qualitative results revealed that there were no institutional guidelines by faculties on the journals for lecturers to publish their research findings. This may consequently expose young lecturers who do not have wide experience in publication journals to publish in predatory journals, thus reducing the quality of their research output in terms of citation impact and visibility of their work. This is because when lecturers publish their research findings in low-rated outlets, their scholarly works cannot be easily and widely cited at international level. Consequently, such works cannot be indexed by popular scholarly databases like Scopus and Web of Science, hence low research visibility. Such an observation is in line with the findings of Kwanya (2018), who revealed that the low publication and visibility of Kenya's academic scholars was also attributed to lack of preferred and recommended peer-reviewed journals by university academic departments to guide their members on where exactly to publish.

Regarding research collaboration protocol, both qualitative and descriptive statistics findings established that the policy requirement for the formation of research teams within and between academic departments and for securing of partnerships and collaborations both within and outside the university was inadequate. Internal research collaborations provide training and mentorship support, especially to junior lecturers, aimed at creating a bigger pool of competent researchers within academic units. Inter-departmental and inter-faculty research collaborations also help to promote multi-disciplinary research, which equips participating lecturers with diverse research skills and increases their productivity. External university research collaborations not only promote research training, mentorship and scholarly visibility, but also bring with them external funding opportunities for improved research infrastructure in the form of research laboratory and field equipment, computer sets, internet connectivity and better library services in the university. To that end, any functional university research policy should adequately support research collaboration in all its possible forms for increased productivity.

The university research policy was also analysed with regard to supporting direct research human resource assistance in the form of research assistants. Both qualitative and descriptive statistics findings revealed that the policy does not support the hiring of permanent or part-time research assistants to help lecturers in their research activities such as literature search, data collection and conducting computer data entries. Ideally, university lecturers would not spend their valuable time in the field collecting data or on computer sets entering data. Such functions would be delegated to research assistants who would mainly come from among graduate students as part of their research training. Such policy support guidelines would increase lecturers' research output.

Research policy and research productivity

Structural equation modelling results from testing the hypothesis that a supportive research policy is a significant predictor of lecturers' research productivity. These findings confirm those from previous scholars (Okendo, 2018; Ryan & Daly, 2018; Sondari et al., 2017; Starovoytova, 2017b; Kenya Commission of University Education, 2013; Latif, 2015; Ghabban et al., 2019; Heng et al.,

2020; Shahbazi et al., 2015), who found a significant positive relationship between the university research policy and research productivity.

The purpose of the Kyambogo University research and innovations policy (2014) is to strengthen the research culture, build research capacity and increase the contribution of the university to knowledge generation and innovations for national development. The policy sets out guiding principles that include creating an enabling environment for research and innovations, creating effective and efficient coordination of research management, providing adequate resources for research and innovations, and providing incentives and rewards for research and innovations, among others (Kyambogo University Research and Innovations Policy, 2014). Such principles come across as intended to provide a supportive framework for promoting the research function in the university. However, the ineffective implementation of the policy has made the achievement of such policy objectives a wild dream. This observation lends support to that of Latif (2015), who reported that the increase in scholarly publication among Saudi academics was a result of the deliberate effort by their government to shift its national development policy focus away from oil to developing the kingdom as an advanced competitive knowledge-based economy in science and technology, hence a supportive research policy in all its universities to promote both basic and applied research for the above cause.

Besides the weak perception of the research policy as supporting lecturers' research activities, interaction with respondents revealed that some lecturers were not aware that the university had a research and innovations policy while others were not acquainted with its content details. This finding aligned with the report on the gaps identified by the Kyambogo University Research and Innovations Policy Review (2020), whose first identified gap was the limited awareness about the existence of the policy six years after its approval. This implies that the university research policy has not been popularised and publicised among lecturers as a supportive framework for organising, coordinating and managing research activities in the university, hence a contributing factor to the university's low research productivity. Such findings are in agreement with those of Starovoytova (2017b), who found the absence of institutional policy on research and publication to be one of the institutional barriers to effective research performance among university academics from Moi University in Kenya.

The study findings also lend credence to the assumptions of organisational support theory which guided the study. The theoretical argument that employees' performance outcomes are directly related to their beliefs about the level of support they receive from the organisation (Eder & Eisenberger, 2008; Eisenberger, Cummings, Armeli et al., 1997) is augmented by the positive relationship between the perceived policy support and lecturers' research productivity. However, the supportive policy aspects were found to be low, yet they form part of the strategies for achieving the policy objectives, such as objective three which emphasises the need to identify and mentor potential researchers by building the capacity of staff and students to write research proposals and projects (Kyambogo University Research and Innovations Policy, 2014). The mismatch between what the policy states and what lecturers feel about its supportiveness could be attributed to the lack of policy awareness mentioned earlier and the ineffective policy implementation practices, hence the feeling of low policy support and, consequently, low research productivity. Such a position is also in conformity with that of Okendo (2018), who, in particular, identified the absence of an institutional policy on research productivity and sound policy guidelines to support research activities as major institutional constraints on research productivity in Mwenge University in Tanzania.

The study findings also uphold some of the propositions of the organisational support theory used to underpin this study. One of the antecedents of organisational support theory is organisational rewards and job conditions in the form of payments, financial rewards, promotions and favourable deployments. Most of the lecturers feel the policy does not recognise and reward active researchers through accelerated promotion and deployment as a motivation for increased productivity. A supportive research policy should thus provide for a mechanism to reward active researchers through automatic recognition for promotion and deployment of lecturers based on their research expertise, and accelerated promotion for highly active researchers in the university. This would require the policy to provide for monitoring and tracking lecturers' research progress right from departments through faculties, the graduate school, the Quality Assurance Department and the Human Resource Department, all coordinating to monitor, track, support, recognise and reward active researchers for increased productivity. Unfortunately, the policy remains silent on such managerial support, and this can explain the lecturers' perspective that the research policy is not supportive enough to the university research function.

In institutional management, all institutional activities are nested in the institutional policy frameworks that guide and support employee performance and help the institution to attain its formation objectives. The finding that the research policy is not strongly felt calls for immediate attention from university management to close the gaps in the research and innovations policy, to promote its awareness among academic staff, and to develop implementation guidelines and undertake ongoing policy implementation monitoring, evaluations and reviews for continuous improvement as a supportive framework to promote research in the university. This observation is supported by findings by several scholars (Ghabban et al., 2019; Heng et al., 2020; Shahbazi et al., 2015), who, in varying contexts, established that university policy towards research was considered a critical factor in enhancing research productivity in Saudi universities, China, Taiwan, Malaysia, Japan and other countries of the Global South. The majority of lecturers and key informants felt that the policy suffered from major gaps that make it ineffective in supporting the university research function. Its failure to promote quality research training and mentorship, to forge formal research collaborations, to hire research assistants, to recognise and reward research output and to provide implementation guidelines on issues like research dissemination and research management units and support structures constituted the major reason for the respondents' and participants' widely held view that the research policy was not strong enough to support high-level research productivity in the university.

Conclusions

It has been confirmed that there is a statistically significant positive relationship between research policy and research productivity. A functional and supportive policy is, therefore, a critical organisational support factor for enhancing the university research function, as it harmonises the infrastructural, funding, managerial and human resource capacity aspects to support lecturers' research activities. However, qualitative findings also revealed that many lecturers were not aware of the existence of a university research policy. This implies that policy formulation without creating adequate policy awareness and publicity among university lecturers, as key stakeholders, may not elicit the intended perceived support in order to achieve its objectives and promote the university research function in general.

Recommendations

Kyambogo University management ought to formulate a comprehensively supportive research and innovations policy, develop implementation guidelines for the policy and create policy awareness through departmental, faculty and quality assurance-based workshops, seminars and online debates among academic staff and management in order to increase the supportiveness perception of the policy towards the research function. This requires a critical review of the existing policy to make its provisions fair and supportive towards lecturers' research efforts, and robust implementation of the policy to generate a positive perception of the policy support to enhance research performance among university lecturers.

Policy Contribution

The findings of this study and its recommendations shall guide the institutions in national higher education sector like the Directorate of Higher Educational and Training, the National Council for Higher Education (NCHE) and university managers to formulate research policies that promote research training and mentorship, alongside policies that promote the institution of a supportive research infrastructure to promote the university research function. The findings will also guide university managers to create policy awareness among lecturers through both physical and online debates, workshops and seminars to get well acquainted with the research policy contents, in order to clearly understand and possibly improve on the supportiveness of the policy towards their research activities. Since the university research and innovations policy was found to lack a policy implementation guide, this study will guide the management of Kyambogo University, in particular, and other universities, in general, to always develop policy implementation guides alongside policy formulation to support effective policy implementation.

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Conflict of Interest/Competing Interests

The researcher did not encounter any conflict or competing interests related to this study.
Availability of data and materials. The datasets used and/or analysed during the study are available from the corresponding author on reasonable request.

References

AD Scientific Indiex (2022): Uganda Top 500 Scientists. "AD Ranking For Scientists, 2022 Version 1" .

Albert, C., Davia, M.A., & Legazpe, N. (2016). Determinants of research productivity in Spanish academia. *European Journal of Education*, *51*(4), 535–549.

Alhija, F. M. N. A., & Majdob, A. (2017). Predictors of teacher educators' research productivity. *Australian Journal of Teacher Education*, *42*(11), 34–51.

Brew, A., Boud, D., & Namgung, S.U. (2011). Influences on the formation of academics: Perspectives of Australian academics. *Studies in Continuing Education*, *33*(1), 51–66.

Cloete, N., Maassen, P. A. M., & Bailey, T. (2015). Knowledge production and contradictory functions in African higher education. *Journal of Student Affairs in Africa, 2*(1), 101–104.

Cresswell, J.W., & Plano Clark, V. L. (2011). *Designing and conducting mixed method research (2nd ed.)*. Thousand Oaks: Sage.

Creswell, J. W. (2014). Qualitative, quantitative and mixed methods approaches.

Eder, P., & Eisenberger, R. (2008). Perceived organizational support: Reducing the negative influence of coworker withdrawal behavior. *Journal of Management*, *34*(1), 55–68.

Eisenberger, R., Cummings, J., Armeli, S., & Lynch, P. (1997). Perceived organizational support, discretionary treatment, and job satisfaction. *Journal of Applied Psychology*, *82*(5), 812.

Fosci. A., Loffreda. L., Chamberlain. A., Naidoo. N, (2019). *Assessing the needs of the research system in Nigeria: Report for the SRIA programme*. London. The UK Department for International Development.

Ghabban, F., Selamat, A., Ibrahim, R., Krejcar, O., Maresova, P., & Herrera-Viedma, E. (2019). The influence of personal and organizational factors on researchers' attitudes towards sustainable research productivity in Saudi universities. *Sustainability (Switzerland)*, *11*(17). https://doi.org/10.3390/su11174804

Hanson W.E., Creswell, J.W., Plano Kelly, V.L., Petska, S., & Creswell, J.D. (2005). Mixed methods research designs in counseling psychology. *Journal of Counseling Psychology, 52*, 224.

Heng, K., Hamid, M., & Khan, A. (2020). Factors influencing academics' research engagement and productivity: A developing countries perspective. *Issues in Educational Research*, *30*(3), 965–987.

Henry, C., Ghani, N., Hamid, U.M.A., & Bakar, A.N. (2020). Factors contributing towards research productivity in higher education. *International Journal of Evaluation and Research in Education*, *9*(1), 203–211.

Iqbal, M.Z., & Mahmood, A. (2011). Factors related to low research productivity at higher education level. *Asian Social Science*, *7*(2), 188.

Jameel, A.S., & Ahmad, A. R. (2020). Factors impacting research productivity of academic staff at the Iraqi higher education system. *International Business Education Journal*, *13*(1), 108–126.

Jung, J. (2012). Faculty research productivity in Hong Kong across academic discipline. *Higher Education Studies*, *2*(4), 1–13.

Kasozi, A.B. (2017). The impact of governance on research in Ugandan universities. *Makerere Institute of Social Research*, *MISR Workiing Paper, No.32*, 60.

Kenya Commission for University Education report (2013).

Kim, H. S., Pedersen, E., & Cloud, R. (2007). Social support, research interest, stress, and research productivity of textiles and apparel faculty. *Clothing and Textiles Research Journal*, *25*(2), 156–170.

Kumar, R. (2011). *Research methodology: A step-by-step guide for beginners (3rd ed.)*. London: Sage Publications Ltd.

Kwanya, T. (2018). Publishing and perishing? Publishing patterns of information science academics in Kenya. *Information Development, 36(1), 5–15.* https//doi.org/10.1177/0266666918804586

Kyaligonza, R., Kimoga, J., & Nabayego, C. (2015). Funding of academic staff's research in public universities in Uganda: Challenges and opportunities. *Makerere Journal of Higher Education*, 7(2), 147–162. *https://doi.org/10.4314/majohe.v7i2.10*.

Kyambogo University Human Resource Policy (2014).

Kyambogo University Research and Innovations Policy (2014).

Kyambogo University Research and Innovations Policy Review (2020).

Latif, R. (2015). Medical and biomedical research productivity from the Kingdom of Saudi Arabia (2008–2012). *Journal of Family & Community Medicine*, *22*(1), 25.

Makerere University appointment and promotion policy, 2006 – 2014.

Muia, A.M., & Oringo, J. O. (2016). Constraints on research productivity in Kenyan universities: Case study of University of Nairobi, Kenya. *International Journal of Recent Advances in Multidisciplinary Research*, *3*(8), 1785–1794.

Okendo, O. E. (2018). Constraints of research productivity in universities in Tanzania: A case of Mwenge Catholic University, Tanzania. *International Journal of Education and Research*, *6*(3), 201–210.

QS World University Rankings 2021.

Quimbo, M. A. T., & Sulabo, E. C. (2014). Research productivity and its policy implications in higher education institutions. *Studies in Higher Education*, *39*(10), 1955–1971. *https://doi.org/10.1080/03075079.2013.818639*.

Rukanyangira. N., & Oidu M.K (2021). *Higher education institutions contribution to research & innovation through public private partnerships* (PPP).

Ryan, J. C., & Daly, T. M. (2019). Barriers to innovation and knowledge generation: The challenges of conducting business and social research in an emerging country context. *Journal of Innovation & Knowledge*, *4*(1), 47–54.

Santos, J.M., & Horta, H. (2018). The research agenda setting of higher education researchers. *Higher Education*, *76*(4), 649 – 668.

SCIMAGO Institutios Rankings 2022.

Shahbazi-Moghadam, M., Salehi, H., Ale Ebrahim, N., Mohammadjafari, M., & Gholizadeh, H. (2015). Effective factors for increasing university publication and citation rate. *Asian Social Science*, *11*(16), 338-348.

Sondari, C. Rejito, & Layyinaturrobaniyah, L. (2017). *Identifying research supporting factors: What should institutions provide*? Ideas for 21st Century Education. Taylor & Francis Group, London.

Starovoytova, D. (2017b). Research-productivity at engineering-school: Number of publications per faculty-member. *Journal of Education and Practice*, *8*(November), 14–38.

Times Higher Education (THE). *World University Rankings 2021*.

Universities and Tertiary Institutions Act, 2001.

Webometrics (2022). *Ranking Web of Universities.*