Albanian j. agric. sci. 2014;13 (1): 7-15 *Agricultural University of Tirana*

RESEARCH ARTICLE (Open Access)

Underfunding of Research in Nigeria: Exploring Strategy for Intervention at Cocoa Research Institute of Nigeria

FOLARANMI D. BABALOLA[1*]

[1]Forest resources Management, University of Ilorin, Ilorin, Kwara State, Nigeria
Centre for Environmental Economics and Policy in Africa, University of Pretoria, Pretoria, South Africa

Abstract

Inadequate funding has been identified as critical issue confronting researchers in Nigeria. However, information on the financial challenges faced by researchers in research institutes is scanty. The study therefore evaluates the funding issues faced by researchers in Cocoa Research Institutes of Nigeria (CRIN). Structured questionnaire was administered to randomly selected researchers across different cadres and sections of the institute. It was noted that the Government provides bulk of the funding use for research in the institute, but this fund is inadequate and irregular. The ease of getting information on funding and sponsorships (p=0.000), research funding (p=0.005), and provision of fund by the institute to attend conferences (p=0.001) are significant and depend on cadres of the researchers. Lower cadres of the researchers in the institute received the least funding opportunities. As a coping strategy, quite a number of the researchers spent their salary to conduct research, publish their research findings, and attend conferences. There is need for the institute to diversify its source of funding, and initiate collaborations with industry and other private sector. The researchers also need to initiate linkages and network with other researchers at local and international levels.

Keywords: ***CRIN, research fund, funding agencies, collaboration, research staff, research cadres.***

1. Introduction

The contributions of research to national development cannot be overemphasised. Despite this, Food and Agricultural Organisation of United Nations (FAO) has reported financial instability in research institutions [1]. The linkage of persistent underinvestment in research and development (R&D) and weak research capacity has also been documented [2]. This then calls for adequate intervention.

In Nigeria, Research Institutes (RIs) play significant roles in the production of technologies that are disseminated to target end users. As at year 2010, about 205 technologies were identified to have been produced by 14 RIs in Nigeria which include 58 biological and technological; 56 mechanical; 19 chemical; and 72 management technologies. A number of these technologies were disseminated to the grassroots to improve their level of productivity and quality of their final products [2]. Despite the roles of RIs in Nigeria, quite a number of them are faced with challenges that hinder their optimal and effective performance. These challenges, as identified by Ragasa et al. [2], include inadequate funding, inadequate research staff, unstable power supply, lack of training for research staff, and of lack of appropriate research facilities and equipment. Under the auspices of Joint Research and Allied Institutions Sector Union (JORAISU), the Nigeria RIs have jointly embarked on strikes to make their grievances known to the Federal Government, especially on the neglect of RIs and non-payment of necessary fund demanded by the researchers [3,4,19]. Despite these industrial actions, the desired level of development is yet to be achieved in majority of the institutes.

The issue of funding is an incessant one affecting both the research and educational institutions in Nigeria [6,7,20]. According to Aina [8], about 90 percent of the funds required for the administration of Federal Universities in the country is provided by the government. However, it has been noted that, in practice, that government may not be able to adequately fund University System [9,10,11,12]. The proportion of Federal Government budget allocated to education in Nigeria from 1990 – 2006 did not come close to the 26 percent minimum recommended by UNESCO [13]. Like the Federal Universities,

*Correspondnding author: Folaranmi D. Babalola; E-mail: folababs2000@yahoo.com
(Accepted for publication 20 March 2014)
***ISSN**: 2218-2020, © Agricultural University of Tirana*

majority of the RIs in Nigeria are funded by the Federal Government.

Reliance on annual budgetary allocation of the Federal Government [5], which seems inadequate and also experiences delay in the disbursement most of the time [6,7], has culminated into low productivity of majority of the RIs [2]. Subvention released to research institutes from the national supervisory bodies hardly meet (if any) research needs. Moreover, the quantum of funding does not provide adequate and appropriate facilities (standard infrastructure, nursery, lab, equipment, among others) to conduct quality research in many of Nigeria RIs [2]. Refusal of the government to honour the agreement signed with the RIs has degenerated to inadequate coordination of the institutes [3]. The issue of political instability, national insecurity, among others have also complicated the issue and resulted to lack of investment and involvement of private institutions in the research sector [2,15]. In the face of the current funding challenges, researchers in majority of the RIs are left with the option of seeking international funding to conduct research meant to develop technologies for local end users. This option is again faced with the challenge of stiff criteria for the available fund, and reduction in international funding due to global economic crisis. Inadequate funding has therefore resulted into brain drain of both researchers and academics from Nigeria to other countries within and outside Africa [14].

Cocoa Research Institute of Nigeria (CRIN) is in the fore front of the first generation of RIs in Nigeria. It was established by Nigeria Statute, Act No. 6 of 1950. The institute succeeded the defunct West African Cocoa Research Institute (WACRI) in 1964. With headquarters at Tafo, Ghana, WACRI was established in 1944 to produce improved and disease-resistant cocoa. Through Nigerian Research Institutes Act No.33 of 1964, the scope of CRIN was expanded to include research on kola and coffee, while it was further broadened in 1975 to include cashew and tea. Currently, CRIN has national mandate of conducting research on cocoa, kola, coffee, cashew and tea. To effectively conduct research on its mandate crops and disseminate its technologies to appropriate end users, the institute has six sub-stations with experimental sites in locations where the crops are cultivated [16]. Unlike the educational institution counterpart, information on the financial challenges that the RIs are facing is scanty.

The study was therefore conducted to evaluate the issues of funding and financial challenges faced by research staff in CRIN. It is worthy of mention that findings of this study is not to downgrade the research potential of CRIN nor the responsibility of its administration in providing fund and other forms of sponsorship to its research staff. Rather, the paper was set to investigate the funding challenges that researchers of the institute are facing with the view to facilitating adequate intervention. In addition, information generated through the study could be valuable in building a business case for financial intervention to the research institute with the view to improving its research outputs and technologies. This information could also be valuable to other RIs in the country and elsewhere in solving issues of surrounding research funding. The research questions set the basis for this study include: (i) what are the challenges faced by the researchers in CRIN in getting research funds? (ii) is there relationship between the different cadres of the research officers at CRIN and their accessibility to funding? and (iii) how are the researchers in CRIN coping with inadequate funding of research and fulfilling their research responsibilities?

2. Methodology

The study was conducted in April 2011. Research staff in CRIN located in Ibadan, southwest Nigeria (Fig. 1) constituted the sample population. Prior to commencement of the study and design of research tool, reconnaissance survey was conducted among the research staff of the institute to seek their views on issues and challenges with regards to research funding and sponsorships. The administration of the institute was also contacted to intimate on the proposed study and to seek due approval. Majority of the research staff contacted were in support of the study and the administration gave approval with the determination to implement outcomes of the study.

Structured questionnaire for the study was designed based on the information provided during the reconnaissance survey. The questionnaire was specifically designed to provide information required to answer the research questions. The questions

covered funding and sponsorships that the researchers had obtained within the institute and those secured from international funding agencies; funding opportunities applied for (both successful and not successful); challenges encountered during application for funding opportunities; issues relating to funding and sponsorships; and suggestions for improving funding and sponsorship among the researchers in the institute.

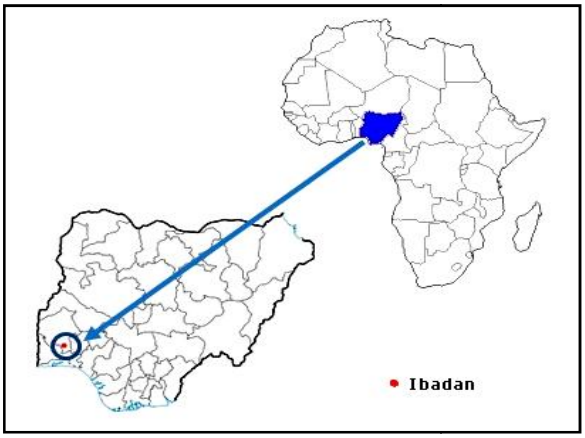

Figure 1. Map of Nigeria showing the location of CRIN in Ibadan, Southwest Nigeria. Inset is map of Africa showing location of Nigeria.

The questionnaire was subjected to pre-test on selected staff for appropriateness and consistency. Questions which were not properly structured were re-designed and those not appropriate were removed. The final draft of the questionnaire was administered to researchers in different sections of the institute. Complete list of all the researchers in each of the sections of the institute was obtained. These names were subjected to stratified sampling using random numbers. The researchers with the names picked through the random number were then contacted for questionnaire administration. Those that were not around were contacted through phone calls and their questionnaire sent through emails.

To maintain confidentiality of the respondents and the information provided, the respondents were instructed not to include their names on the questionnaires, and the questionnaires did not contain code that could be used to trace the respondents. Except the coordinator of the research, the final list of randomly selected respondents were also treated as a secret and not publicly disclosed during and after the research. To give due representative of the institute's administration in the survey, one of the Directors and Assistants Directors were purposively selected as a respondents. In all, 50 copies of the questionnaire were administered but 39 were eventually retrieved for final analysis and interpretation.

The questionnaires completed by the respondents were coded and analysed using statistical package for social science (SPSS) version 12. Both descriptive and inferential analysis was used for the analysis and interpretation of the data. For the descriptive analysis, frequency and percentage were employed to evaluate the research funding (such as grant, scholarship and fellowship), and sponsorships (such as travel assistance); years that the researchers were employed into the institute; and type of funding obtained by cadre of the researchers. Results of descriptive analysis are presented using tables and graphs. For the inferential analysis, chi-square independent was used to determine the dependence of the different levels of cadre of the researchers (independent variable) and issues relating to research funding and sponsorships (dependent variables). Results of these analyses are presented in tables.

3. Results

Funding opportunities among the research cadres

As presented in Table 1, the cadre of Research Officer constituted majority of the researchers in the institute, therefore making up majority (71.8%) of the respondents. The average number of funding obtained per cadre of the researchers has a downward trend from the Director to Research Officer. This means that the cadre of Director has the highest number of funding opportunities (10 funding per respondent), closely followed by the Assistant Directors (6 funding per respondent). None of the researchers in the cadre of Research Officer indicated receipt of funding opportunity as the time of this study.

As presented in Fig. 2a, about 89.7 percent of the researchers indicated that Government is the major provider of research funds in the institute while only 10.3 percent indicated international funding agencies. None of the researchers indicate industry or private sector as major funder of research in the institue. Only 41 percent of the researchers have obtained funding and other forms of sponsorship opportunities through successful applications (Fig 2b). Out of the successful applications for funding and sponsorships, 69 percent was individual while the remaining 31 percent was collaborative (Fig. 2c). Topmost among the types of

funding opportunities obtained by the researchers was research grants (33 percent), this was followed by travel sponsorship (23 percent), fellowship (18 percent), training sponsorship (18 percent), and academic scholarship (8 percent) (Fig. 2d).

Figure 3 presents that different funding organizations and agencies that the researchers indicated that awarded them with funds and other sponsorships. Ranking on top of these opportunities was Netherlands Fellowship Programme with four fellowships; this was followed by Technical Centre for Agricultural and Rural Cooperation (CTA) three sponsorships.

Table 1: Distribution of respondents by cadre and sections

Cadres of the researchers	Freq (n=39)	Percent	Total Funding	Average funding per respondent
Director	1	2.6	10	10
Assist Director	3	7.7	18	6
Chief Research Officer	1	2.6	4	4
Principal Research Officer	4	10.3	4	1
Senior Research Officer	2	5.1	3	1.5
Research Officer	28	71.8	0	0

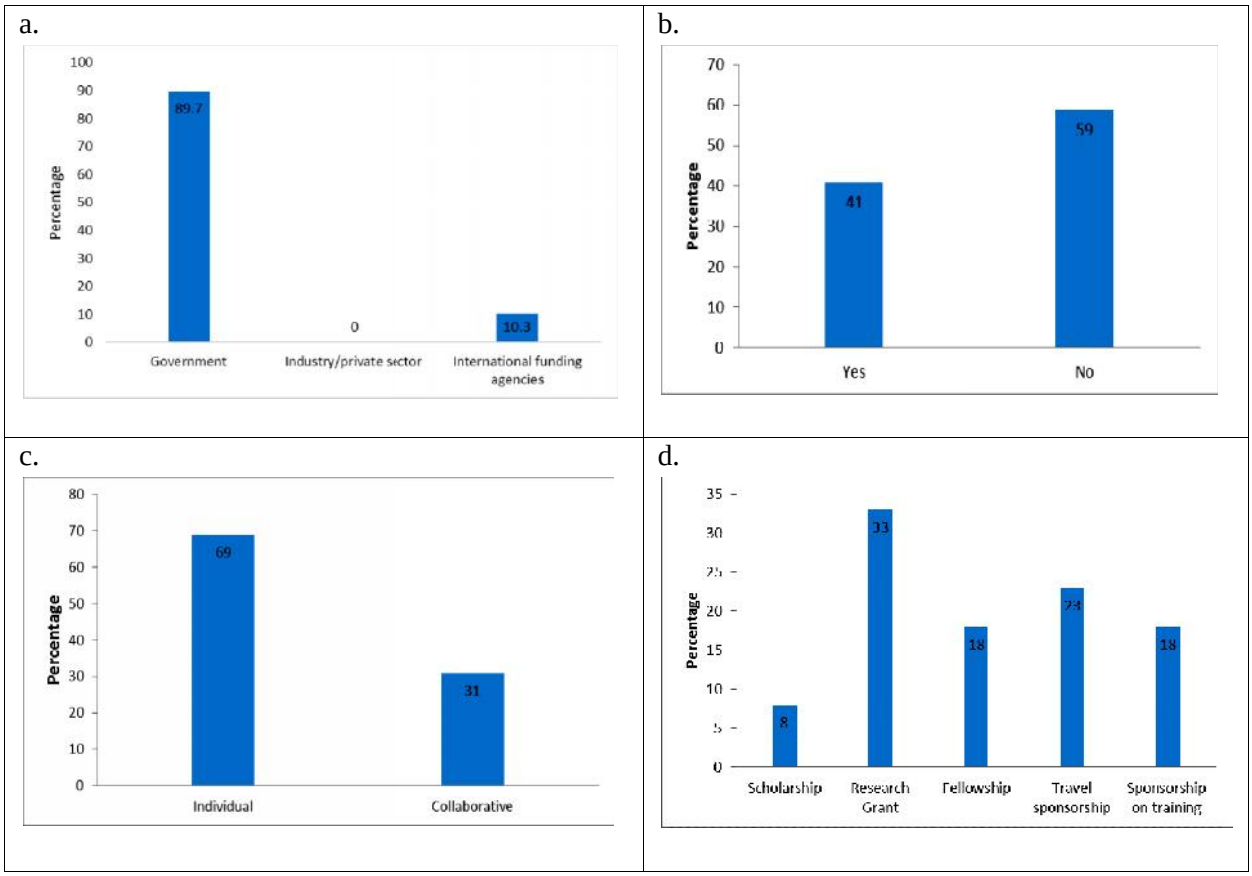

Figure 2. Categories and types of funding and sponsorships among the researchers (a) Major Sources of funding to the institute (b) Success of applications for funding (c) Categories of funding obtained (d) Types of funding opportunities obtained.

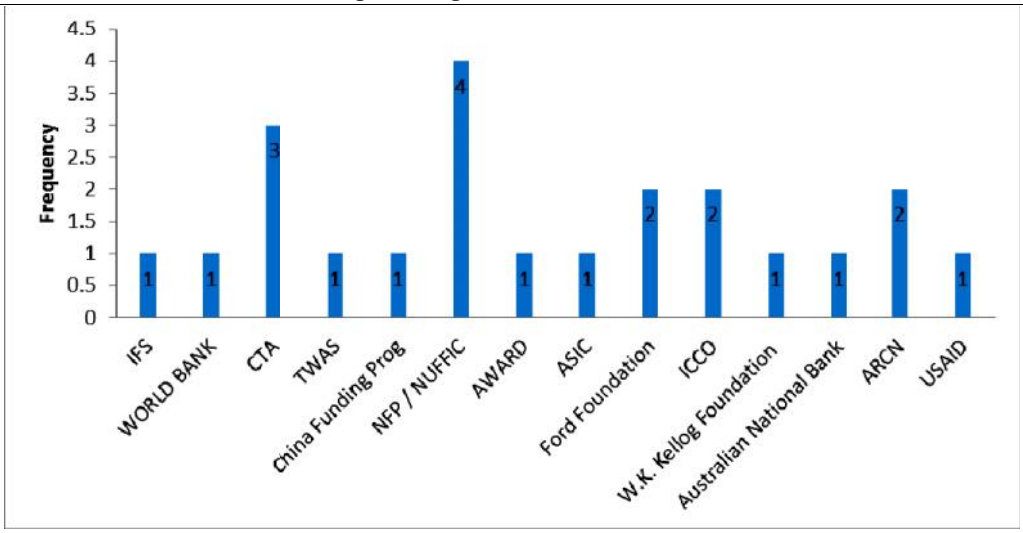

Figure 3. Distribution of funding organizations that awarded the researchers

Challenges on research funding and sponsorships in the institute

As presented in Table 2, about 64.1 percent of the researchers strongly disagree and 33.3 percent disagree that it is easy to obtain information on funding and other sponsorships. In addition, 79.5 percent strongly disagree and 20.5 disagree that it is easy for researchers in the institute to obtain research funding.

About 56.4 percent of the researchers disagree and 43.6 percent strongly disagree that it is easy to conduct research without funding. The lack of funding to conduct research and publish research findings in the institute was brought to light by the responses of 69.2 percent of the researchers who disagree and another 25.6 percent that strongly disagree to provision of funding by the institute for research. Furthermore, 46.3 percent of the researchers disagree that the institute provide funding and assistance to attend scientific conferences for the presentation of their research findings. To make up for these funding shortcomings, about 51.3 percent of the researchers agree that they use their salary to conduct research and publish their research findings. In addition, 48.7 percent indicated that they use their personal money to attend conferences and other scientific forum to present their research findings.

Dependence of variables on obtaining funding and sponsorships with cadre of the researchers

The results of chi-square independent analysis between the level of cadres of the researchers (independent variables), and other issues relating with research funding and sponsorship (dependent variables) are presented in Table 3. The results show that obtaining information on funding and sponsorships (p=0.000), the ease of getting research funding (p=0.005), and provision of fund or sponsorship by the institute to attend conferences (p=0.001) are significant therefore depend on the cadre of the researchers.

4. Discussions

Funding and sponsorships in the research institute

The Cocoa Research Institute of Nigeria relies on Federal Government for provision of bulk of its research fund. This is characterised of majority of the academic and research institutions in the country in meeting their financial needs and funding for research. It has been reported by Donwa [15] that the Federal Government of Nigeria provide about 98.81 percent of funds use for research and academic institutions in Nigeria with only 1.19 percent provided by foreign agencies. In addition, the percentage of research fund in Nigeria GDP is below one percent. It has been reported that over reliance on government's funding, which is adequate and irregular, has implication on research and development. Ayoola and Abdullahi [20] identified the factors causing setbacks for research and development (R&D) in Nigeria to include low allocations of funds by government in national budget, high instability of statutory allocations, uncertainty of intervention funds, and pronounced delays and discrepancies between planned and disbursed funding allocations in both capital and recurrent budgets. Inadequate funding has therefore been ranked on top of the issues facing the country's academic and research institutions [2]. Oduleye [17] has reported

that the quantum of funds made available to each academic and research institutions by the Federal Government have been decreasing hence the search for alternative sources of funding.

Table 2. Challenges on research funding and sponsorships

Statements on funding, sponsorships and management		SA	A	D	SD	NR
I easily obtain information on funding and sponsorship	Freq.	0	1	13	25	0
	Percent	0	2.6	33.3	64.1	0
It is easy for researchers obtain research funding	Freq.	0	0	8	31	0
	Percent	0	0	20.5	79.5	0
It is easy to conduct research without funding	Freq.	0	0	22	17	0
	Percent	0	0	56.4	43.6	0
The institute always allocate fund to researchers to conduct research and publish their findings	Freq.	0	2	27	10	0
	Percent	0	5.1.	69.2	25.6	0
The institute provide fund or sponsorship to attend conferences	Freq.	0	7	18	0	14
	Percent	0	17.9	46.2	0	13.0
I use my salary to conduct research and publish my research findings	Freq.	12	20	7	0	0
	Percent	30.8	51.3	17.9	0	0
I use my personal money to attend conferences to present my research findings	Freq.	0	19	7	0	13
	Percent	0	48.7	17.9	0	33.3

Key: SA - Strongly Agree; A- Agree; D - Disagree; SD - Strongly Disagree; NR - No response

Table 3. Chi-square independent analysis for the level of cadres of the researchers and issues relating with research funding and sponsorship

Perception of the researchers	Pearson Correlation	Sig. (2-tailed)
Obtaining information on funding and sponsorship with ease	0.764	0.000**
Getting research fund with ease	0.445	0.005**
Motivation to conduct research without funding	-0.034	0.837
Allocation of fund to researchers by institute to conduct research and publish research findings	0.218	0.182
Provision of fund/sponsorship by the institute to attend conferences	0.526	0.001**
Usage of salary to conduct research and publish research findings	-0.235	0.149
Usage of personal money to attend conferences to present my research findings	0.196	0.231

*** Significant at the p<0.01*

Majority of the funding obtained by the researchers were individual while only few were collaborative. This shows that majority of the researchers have neither been involved nor take advantage of collaborative research. The individual funding opportunities are also in the form of research grants. Some of the researchers informed that they prefer applying for individual funding because it is very easy to apply for without looking for people to collaborate with. Also, the fund is easy to manage and the whole process not cumbersome. Furthermore, some of the researchers informed that some funding are not collaborative, such as travelling sponsorship, mobility grant, personal training sponsorship and fellowship, and academic scholarship, therefore they are categorised as individual.

Netherland Fellowship Programme was ranked topmost with four fellowships among the researchers. Most of these fellowships were awarded to women in the institute. From information, it was discovered that the female researchers were at the favour of the period that NFP targeted at women in developing countries for their sponsorship. Other funding obtained were mainly competitive international funding Technical Centre for Agricultural and Rural Cooperation (CTA), Agricultural Research Council of Nigeria, International Cocoa Organisation, among others. A number of funding agencies are now on the internet

and posting their calls for funding and other opportunities for researchers. Getting access to these online opportunities is another challenge in the institute. Majority of the researchers informed they are incapacitated from making use of online information due to non-functional internet facilities at the institute. Getting personal internet facilities is also beyond the reach of majority of the researchers who have personal responsibilities to cater for with their meagre salary.

Relationships between funding and cadres of the researchers

From the results of the average funding per respondents, it was observed that researchers at the lower cadres did not receive funds and other sponsorships like those at the top of the cadre. Some of the researchers explained that information about fund and funding opportunities, as well as accessibility to those information as at when due, are not easy to obtain in the institute. These results could be corroborated with the responses of about 97.4 percent of the respondents that at least disagree that it is easy to obtain information on funding and other sponsorships in the institute. However, a number of the researchers informed that it may be easy for researchers at the top of the cadre to obtain funding information as well as have access to funding than those below the cadres. This claim was confirmed from the results of correlation analysis which was significant between the cadres of the researchers and their accessibility to funding and sponsorships information, as well as the ease of getting research funding.

Furthermore, it was explained that researchers at the top of the cadres and in administrative positions (especially Directors, Assistant Directors, and Head of Sections) are in positions that put them at advantage of getting first-hand information about funding opportunities coming into the institute and deadlines for such opportunities. This was confirmed from the result of the correlation that cadres of the researchers were significant with provision of fund or sponsorship by the institute to attend conferences. Those at the top may take advantage of available funding provided to the institute than those at the lower cadres, hence more funding recorded for the top cadres. In addition, some of the researchers revealed that researchers in the higher cadres may use their positions to the disadvantage of those at the lower cadres by not providing information about available funding opportunities available in the institute or section of the institute. All these are likely to be responsible for the recorded high funding opportunities.

Issues confronting research institute with respect to funding

Among the issues aggravating the issue of funding of research institutes in Nigeria is lack of collaboration between the institutes and industry and private sector. About 74 percent of research institutes in Nigeria had no international collaborators, and 61 had no regional or national collaborators [2]. Majority of industries, companies and firms in Nigeria prefer to engage the services of expatriate and foreign consultants in conducting research and training of their staff. Although involvement of industry in research sector is through provision of endowment for professional chairs in selected disciplines, construction of office and hostel blocks, and donation of laboratory equipment [15]. Lack of collaboration between research institutions in Nigeria is a critical challenge to the research sector and requires quick and appropriate intervention. A number of countries around the world have recorded successful collaboration between their research institutions and industrial sector. For instance, it was reported by Millar and Senker [18] that countries like Belgium, Germany, Ireland, Sweden, Switzerland and the USA have recorded funding of over 60% from industries, while countries like Korea and Japan have even recorded over 70% funding from industry.

Another issue confronting the researchers, especially those at the lower cadres, in obtaining sponsorship is the policy put in place by administration of the research institute. The policy does not support approval of some sponsorship for researchers at the lower cadres. This policy only permits approval of these selected sponsorships for researchers at the top cadres – especially those above Chief research officer. Some of the researchers informed that this policy have prevented them from applying for some sponsorships even though they were qualified. When asked about the policy, some officers at the top of the cadres, and in administration, informed that the policy is to control unnecessary travelling of the junior researchers out of the institute and to make them concentrate on their research. Also, researchers are not allowed to apply for sponsorships that involve travelling out of the institute unless he or she has spent a stipulated number of years in service.

Shortfall in research funding has affected researchers with impacts on their effective performance as well as presentation of their research findings at international scientific fora. A survey conducted on 43 organisations that involve in agriculture in Nigeria revealed that at least 60 percent of researchers are not members of international or continental organisation; at least 67 percent had not attended any international or continental conferences or consultations; and 20 percent had not joined any national professional conferences between 2007 and 2010. In addition, the study ranked performance of the research organisations as weak in collaboration and impact of technologies. The administration of CRIN informed that the institute is doing its best to provide necessary resources and facilities to meet the requirements of its researchers. For instance, until recent underfunding issues on the side of the government, the institute provides funding for all its researchers to cover the cost of research and travelling for local conferences to present their research findings. However, the recent subvention from the Federal Government for the institute is not adequate to cover the basic running costs within the institute, with impacts on funding its researchers.

Coping with inadequate funding by the researchers

Majority of the researchers (about 94.8 percent) indicated that institute does not allocate adequate fund for research and publishing of their research findings. To cope with the lack of funding, majority of the researchers informed that they spend their personal salary to conduct research in the institute. Some of the researchers that started some research with some internal or external funding, but yet not completed at the termination of such funding, informed that they had to continue and complete the research using their personal salary or money gotten from family members. In addition, personal salary, or money borrowed from family members, loan, and friends are used to either publish findings of research findings or attend local and international conferences. The researchers informed that they need to use personal or borrowed money to do all these or else they will not have mean of producing publications which are must for their next promotion. It's a common say among researchers that "you either publish or perish". The provider of the fund used to get the publication is not the issue, but getting the publication for your next promotion.

5. Conclusions

The study has revealed that researchers in CRIN are faced with a number of challenges with respect to research funding. Government provides bulk of the research fund to research institutes in Nigeria, but this fund is inadequate and irregular. Lower cadres of the researchers in the research institute under study are most affected in term of funding. As a coping strategy, quite a number of the researchers spent their salary to conduct research, publish their research findings, and attend conferences. Based on the findings of the study, the following are therefore recommended for possible intervention:

- There is need for research institute to diversify their source of funding and not rely on government alone.
- Research institutes need to initiate collaboration with industry and other private sectors for rendering of services that facilitate funding and sponsorships in return.
- Researchers should initiate and establish networks with other researchers at international level that could facilitate linkages with international funding agencies.
- Collaborations among researchers in Nigeria research institutes should be strengthened. This should facilitate sharing of equipment and other valuable information that increase quality and quantity of research outputs.
- Mentorship programme should be developed targeted at empowering researchers at the lower cadres. This should include training on writing of quality research proposal and linking with funding agencies. Provision of up-to-date and timely information on funding opportunities is also pertinent.
- The institute should make functional internet in the institute a priority with ease of accessibility.
- As the institute formulate internal policy, opportunities that lead to capacity building and development of researchers as should be ranked as priority.

6. Acknowledgements

My appreciation to the administration of Cocoa Research Institute of Nigeria (CRIN) for approving the permission to conduct the survey in the institute. Special thanks to all researchers that responded to the questionnaire.

7. References

1. FAO: Impact of foreign assistance on institutional development of national agricultural systems in sub-Saharan Africa. Research and Technology Paper 10. Food and Agriculture Organization of the United Nations (FAO), Rome; 2002.
2. Ragasa, C, Babu, S, Abdullahi, AS, Abubakar, BY: Strengthening Innovation Capacity of Nigerian Agricultural Research Organizations. IFPRI Discussion Paper 01050. IFPRI Discussion Paper 01050. International Food Policy Research Institute (IFPRI); 2010: 65pp
3. Punch: Research, allied institutes unions begin strike. Online version of Punch Newspaper, 13 August, 2012.
4. *Mosadomi, W:* Nigeria: No Going Back On Strike - Research Institute Workers. Vanguard Newspaper; *2013*
5. Eze, CC, Lemchi, JI, Ugochukwu, AI, Eze, VC, Awulonu, CAO, Okon, AX: Agricultural financing policies and rural development in Nigeria. The 84th Annual Conference of the Agricultural Economics Society. 29th to 31st March 2010, Edinburgh; 2010: 20pp
6. Idachaba, FS: Instability of national agricultural research systems in sub-Saharan Africa: Lessons from Nigeria. Research Report 13. The Hague. International Service for National Agricultural Research (ISNAR); 1998
7. Beintema, N and Ayoola, G: *Nigeria*. ASTI Country Brief 10. Rome: ASTI, IFPRI; 2004
8. Aina, OI: Alternative modes of financing Higher education in Nigeria and implications for university governance. In: *Issues in higher education: Research evidence from sub-Saharan African:* Babalola, JB and Emunemu, BO (Eds.). Lagos: Bolabay Publications; 2007
9. Saint, W, Hartnett, T, & Strassner, E: Higher Education in Nigeria: A status report. *Higher Education Policy* 2003; 16:259–281.
10. Arikewuyo, MO: Democracy and University Education in Nigeria: Some constitutional considerations, Higher Ed ucation Management and Policy. *A Journal of the Organization for Economic Co-operation and Development* 2004, 16:121-134.
11. Ibukun WO: The Organization and Management of Primary and Secondary Education in Nigeria. In: *Management of Primary and Secondary Education in Nigeria*. Fagbamiye, EO, Babalola, JB, Fabunmi M, and Ayeni, AO (eds). Ibadan. NAEAP; 2004
12. Idialu, JU and Idialu, EE: Entity, Ownership, Educational Subsidies and Funding of Nigerian Tertiary Institutions. *Current Research Journal of Social Sciences* , 2012; 4(1): 56-61
13. Okoli, EC: Funding tertiary education in Nigeria: The perspective of national emergency. A paper presented at the 2006 Conference of the National Association of Educational Administration and Planning. Enugu State University October 4-6, October, 2006.
14. Arikewuyo, MO: University management and staff unions in Nigeria: issues and challenges. *SA-eDUC Journal* 2006, 3(1):15-22
15. Donwa, PA: Funding of academic research in Nigerian universities. 13pp
16. ARCN: Cocoa Research Institute of Nigeria (CRIN). Agricultural Research Council of Nigeria (ARCN); 2013.
17. Oduleye, SO: Decline in Nigerian universities. *Tertiary Educ* , 1985; 14:17-40.
18. Millar, J and Senker J: International Approaches to Research Policy and Funding: University Research Policy in Different National Contexts; University of Sussex: SPRU Science and Technology Policy Research; 2000
19. Borokini, TI: Overcoming Financial Challenges in the Management of Botanic Gardens in Nigeria: A Review. Int Jor of Envt Sci, 2013; 2(2):87-94
20. Ayoola, GB and Abdullahi, AS: Nationally financed agricultural research: A case study on Nigeria. Background paper prepared for the ASTI–IFPRI/FARA Conference, Accra Ghana, December 5 – 7, 2011.