



Original Research Article

Do Microcredits from Banks and Employer-Based Lending Facilities Foster Entrepreneurship and Job Retention among Public Sector Workers in Tanzania? Quantitative Evidence from National Institute for Medical Research

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ABSTRACT

Background: There is a general shortage of evidence on the role of financial institutions and allied organizations on promoting entrepreneurship and job retention among public sector employees through microcredits services in developing countries.

Objective: This paper reports evidence from interviews made with National Institute for Medical Research (NIMR) workers in Tanzania regarding their perceived role of micro-credits opportunities from banks and NIMR-based Savings And Credits Cooperative Societies (SACCOS) on fostering NIMR workers' entrepreneurial initiatives and job retention in NIMR.

Findings: Most respondents acknowledged microcredits opportunities offered by banks and SACCOS, but viewed that such institutions tend to favour more high salaried workers than low-salaried ones and this as are high loan interest rates, short loan repayment periods, negligence of staff working in NIMR projects on temporary contract terms, and employer's official assignments reducing time for supervising private businesses, discourage some potential borrowers. Only some respondents acknowledged the employer's guarantorship to those wishing to access microcredits from banks or SACCOS contributing to motivate the staff to continue working in NIMR.

Conclusion: Lending opportunities from banks and employer-based lending facilities help to motivate employees at workplaces. However, the microcredit authorities concerned should review the lending conditions so as to attract many employees to borrow money from microcredits providers for business related investments.

Key words: entrepreneurship, microfinance, motivation, human resources

BACKGROUND

Theories and studies show that every person can become an entrepreneur as long as the person concerned is courageous or commitment to be a risk taker and endure hardships if confronted in the course of carrying out a business undertaken (1-2). While on one hand analysts observe the link between genetic factors with entrepreneurial spirit or character (3), the link between one's demographic characteristics, social and occupational background(s) as well as the institutional and environmental factors and their entrepreneurial initiatives is more widely supported by empirical evidence (4). The UN has appealed to governments to establish a conducive policy environment for allowing banks and other microfinance institutions (MFIs) to reduce poverty and unemployment by providing micro-credits at affordable interest rates and with other favourable borrowing conditions (5). Experts view that through MFIs providing micro-credits opportunities to individuals interested in venturing into small and/or medium enterprises (SMEs), improvement in the living conditions at family level and growth of country's economy can be realized (6-7). Banks and MFI continue being reported of their failure to trickle down their services to the poor segment of society (8-10).

Since the government of Tanzania launched the national microfinance policy of 2000, commercial banks (CBs) and MFIs have continued being opened in the country (10-13). Besides the banks, employer-based Savings and Credits Cooperative Societies (SACCOS) have continued being launched (14). So far, empirical data from systematic

evaluations of the performance of micro-credit facilities and entrepreneurship development among formal sector workers in Tanzania is still limited while the few reports available indicate mixed evidence on the experience gained in the real world (15). Majority of the evidence reports micro-credits provided to individuals employed in the informal sector whereby most of the credits providers lend their customers through collateral or core guarantee including cash collaterals and/or tangible properties and for the formal sector employees they require letter of introduction from a recognized employer. These requirements and other bureaucratic procedures associated with loan processing tend to discourage potential borrowers (4, 16).

In light of the above premises, this paper reports a study that was undertaken to assess the role of CBs and employer-based SACCOS on fostering entrepreneurship and job retention among the employees of the National Institute for Medical Research (NIMR) through micro-credits services.

METHODOLOGY

Research Design

This was a cross-sectional case-study of different cadres of NIMR workers based at different NIMR duty stations in Tanzania. The study objectives were to describe the socio-economic characteristics of the staff borrowing from NIMR-SACCOS and CBs; factors influencing NIMR workers to borrow; identify the types of business undertakings initiated by the workers after securing the loans; examine whether or not the opportunity for accessing micro-credits

from NIMR-SACCOS or CBs under the employer acting as a guarantor contributes to motivating such workers remain working in NIMR; and suggest policy options for enhancing public sector workers' motivation for borrowing from banks employer-based lending facilities in their desire to initiate and/or run their SMEs.

Inclusion criteria

Interest being to include the borrowers and non-borrowers in the study, the individuals approached had either already been registered to NIMR-SACCOS or CBs for microcredit purposes or had not. However, all NIMR employees have personal bank accounts through which their monthly salaries are deposited and for this reason this gives them an opportunity for borrowing from the banks. Also, all workers involved were permanent and pensionable employees of NIMR and for this reason they were eligible for applying for loans from NIMR-SACCOS and CBs under their employer's guarantorship.

Sampling Approaches

The number of staff members covered at different NIMR stations is shown while overall 182 staffs were covered (Table 1). Participants were selected randomly among a list of NIMR employees who were present during the planned study period. Some workers were missed either due to the mobility nature of duties as some of them were on research commitments away from their duty stations, others were on leave or official travel. After consultation with a statistician, a sample of 80% of all permanent and pensionable employees was targeted, out of nearly 500 employees. Among all these workers only 140 were registered to NIMR-SACCOS (Table 1).

Data Collection methods

The data were collected using a structured questionnaire. To maximize the response rate, two approaches were used for approaching the workers and these include the interviewers administering the questionnaires through face-to-face meeting with the workers or a self-administered questionnaire approach whereby the individual respondents were asked to fill answers themselves with guidance from the principal investigator and his assistants. This was unavoidable as it was difficult to meet all workers for face-to-face interviews. Of 450 questionnaires prepared for the overall study, 350 were posted to different duty stations outside Dar Es Salaam at the NIMR HQs in different quantities depending on the number of staff at each duty station. Unfortunately, not all those who promised to fill questionnaires complied. Of the 100 questionnaires allocated at the NIMR HQs alone for data collection, 18 individuals could not respond due to lack of time or after losing interest. Among the 82 staff who responded at the latter station, about a quarter responded through a self-administered questionnaire. Informed consent to participate in the study was sought from the respondents who were given explanation about the expected benefit of the study, right to decide participation voluntarily and to withdraw from the study any time even after consenting to participate, anonymity of any confidential information given and other conditions. All of the respondents signed an informed consent form. The research proposal was reviewed and approved by the School of Postgraduate Studies of the Kampala International University (KIU), Dar Es Salaam a copy of which was reviewed and retained by the Ethic Review Department at the NIMR HQs.

Data management and analysis

After data entry using Epi-Data software package, the data were cleaned and analysis executed using Stata 10 statistical software package. MS-Excel spreadsheets were also used for analysis of simple data. One way tabulations indicating the frequencies of responses obtained from the individual questions were supplemented by cross-tabulations and logistic regression (LR) analyses (LRA). Associations between dependent/outcome and predictor/explanatory variables were tested of their statistical significance using Pearson's Chi square tests (χ^2) or Fisher's Exact tests at 5% levels of significance ($P \leq 0.05$). LRA was used for assessing the effect of individual predictor variables on the outcome variable at 95% confidence interval (CI). The definition of the dummy variables used in the LRA was defined depending on the nature of the study questions and the presumed outcome variables. The key outcome variable in this case was based on the question on whether

or not one has ever borrowed from SACCOS or a bank or both. The predictor variables included demographic characteristics such as age, sex, marital status, highest level of education attained, family size, monthly salary scale, and one's years spent working within and/or outside NIMR. A multivariable LRA was the primary focus of the analysis. A common sense was used for identifying the variables included in LRA from the analyst's viewpoint (17-18).

RESULTS

Reports based on descriptive statistics

Distribution of the employees interviewed at different NIMR duty stations and their socio-economic characteristics

Of all the 450 questionnaires distributed, only 182 (40.44%) were completed and collected (Table 1) because of the reasons explained under data collection section above.

Table 1. Number of workers interviewed at different NIMR workplaces (N = 182)

Location's name	Number of Respondents	Percentage
NIMR Headquarters (HQ)	82	45.0
Amani Centre	28	15.4
Mwanza Centre	25	13.7
Tukuyu Centre	20	11.0
Tanga Centre	14	7.7
Ngongongare Station	10	5.5
Muhimbili Centre	4	2.2
Tabora Centre	1	0.6
TOTAL	182	100.0

From Table 2, it can be seen that a simple majority (43%) of the respondents possessed at least one university degree. Among the degrees holders 10 had doctor of philosophy degrees (Ph.D). Also, majority of the degree holders were research scientists and laboratory technologists, and these were closely followed by officers working in the

finance and administration departments. Moreover, majority (69.8%) out of 179 interviewees who stated sizes of their families came from households with large family sizes (≥ 5 people living under the same roof). Ethnically, most of the interviewees were Chagga, Sambia, Nyakyusa and Sukuma, and these were

represented by 27 (15.70%), 16 (9.30%), 13 (7.56%) and 10 (5.81%) of all respondents, respectively; the rest belonged to other ethnic groups. Occupation-wise, a larger proportion (26.3%) of the respondents out of the 171 whose specific designations were

recorded were research scientists, 23.4% were Office attendants, 13.45% were laboratory technologists. The cadre labelled 'Others' combines those who worked in the sections such as computing, reception, procurement, cleaning, and security.

Table 2. Experience of the workers interviewed on whether they had ever approached NIMR-SACCOS or CBs or both for credit seeking purposes: combined data for two questions asked separately about the credit seeking experience from SACCOS and CBs (N=182).

Variable	% Contacted NIMR-SACCOS only	% Contacted CBs only	% Contacted NIMR-SACCOS and CBs	% Neither contacted NIMR-SACCOS nor CBs	Total	Number of employees	P-Value
Marital status	14.8	24.2	45.1	15.9	100.0	182	0.038
Married	13.7	26.0	47.9	12.3	100.0	146	
Not married	18.2	18.2	30.3	33.3	100.0	33	
Widow	33.3	0.0	66.7	0.0	100.0	3	
Family size	15.1	24.6	44.1	16.2	100.0	179	0.156
<5 people	11.8	30.9	36.8	20.6	100.0	68	
≥5 people	17.1	20.7	48.7	13.5	100.0	111	
Years spent working with NIMR	15.1	24.6	44.7	15.6	100.0	179	<0.001
<5 years	14.9	29.8	10.6	44.7	100.0	47	
≥5 years	15.2	22.7	56.8	5.3	100.0	132	
Salary earned per month (in Million TZS)	14.9	24.3	45.3	15.5	100.0	181	0.156
<0.5	16.7	25.0	41.7	16.7	100.0	72	
0.5-1.5	15.8	26.3	44.7	13.2	100.0	76	
>1.5	9.1	18.2	54.6	18.2	100.0	33	

Number of Years spent working with NIMR and other employers

mean and median years spent there being 4.3 and 13 years, respectively.

Most of the respondents reported to have so far worked in NIMR for more than five years (mean=12.2 years, median=10 years, and range of 0.5-24 years). Among 179 respondents who specified their working period in NIMR, 47 (26.3%) had less than 5 years; 50 (28%) had 5-10 years, 19 (11%) had 11-15 years, and 63 (35.19%) had 16 or more years. Having worked in organizations other than NIMR before was reported by 112 (62.56%) out of 179 respondents, the

Experience with seeking loans from the NIMR-SACCOS and Banks

The majority of the respondents reported to have approached NIMR-SACCOS and CBs before for microcredit purposes. Of all 182 interviewees, only 29 (16%) denied to have had approached the latter credits providers; 27 (15%) had approached NIMR-SACCOS only; 44(24%) approached CBs only, while 82 (45%) had approached both NIMR-

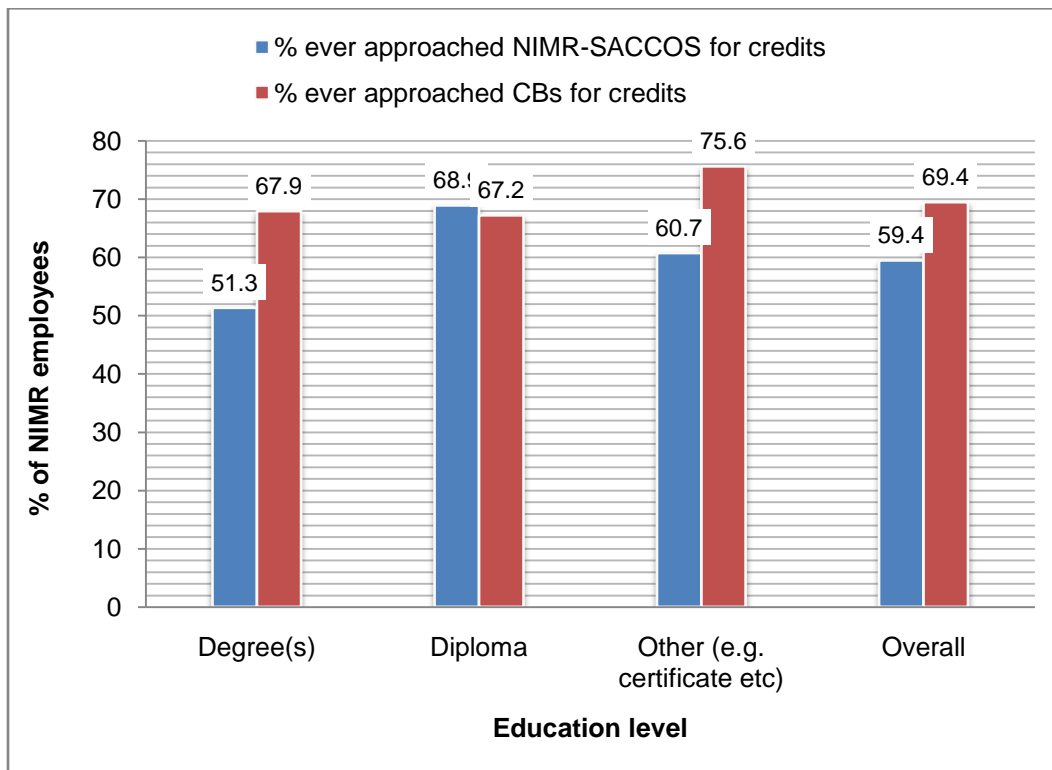
SACCOS and CBs. The results also indicate that staff with different demographic characteristics has ever approached the microcredits providers at different degrees, as the detail further below:

Analysis according to respondents' different levels of education

It was found that having previously borrowed from NIMR-SACCOS was experienced by 51.3% out of 78 respondents with at least one degree and about 69%

among the diploma holders. Also, 67.8% of degree holders affirmed to have approached CBs, the rest denied. Among the diploma holders, 68% out of 61 respondents affirmed to have approached CBs. Similarly, most of the certificate holders affirmed to have had approached CBs as indicated by nearly 76% out of 31 holders of primary or secondary education certificates. No statistically significant difference between the responses expressed by the holders of different levels of education qualifications was noted in this regard (Figure 1).

Figure 1. Credits seeking experience with NIMR-SACCOS or CBs by levels of education among NIMR employees, 2011 (N=180).



Analysis according to respondents' different sexes

Out of 181 respondents whose sex statuses were identified among those who responded to the question on whether or not they had ever borrowed from NIMR-SACCOS, 118 (65.2%) were males, the rest were females. Among the male respondents, only 69 (58.5%) testified to have contacted NIMR-SACCOS, the rest denied. Of the remaining 63 female respondents, 40 (63.5%) affirmed to have approached NIMR-SACCOS. Statistically, no significant difference was found in terms of experience with borrowing behaviour between the male workers and female workers ($\chi^2(1)=0.43$; $P=0.511$). As for

those who responded to question on whether or not they had approached CBs, it was found that 86 (47.51%) were men, the rest were females. However, the difference in the reported borrowing experience was not statistically significant ($\chi^2(1)=1.71$; $P=0.191$).

Analysis according to other personal and occupational characteristics of the respondents

The findings indicating the proportion of the respondents to the question addressing their experience with borrowing from either NIMR-SACCOS or CBs or both arranged according to other demographic and occupational characteristics of the respondents are also presented (Table 3).

Table 3. Reported experience of the workers interviewed in 2011 about whether or not they had ever approached NIMR-SACCOS or CBs or both for credit seeking purposes: combined data for two questions asked separately about the credit seeking experience from SACCOS and CBs (N=182).

Variable	% Contacted NIMR-SACCOS only	% Contacted CBs only	% Contacted NIMR-SACCOS and CBs	% Neither contacted NIMR-SACCOS nor CBs	Total	Number of employees	P-Value
Marital status	14.8	24.2	45.1	15.9	100.0	182	0.038
Married	13.7	26.0	47.9	12.3	100.0	146	
Not married	18.2	18.2	30.3	33.3	100.0	33	
Widow	33.3	0.0	66.7	0.0	100.0	3	
Family size	15.1	24.6	44.1	16.2	100.0	179	0.156
<5 people	11.8	30.9	36.8	20.6	100.0	68	
≥5 people	17.1	20.7	48.7	13.5	100.0	111	
Years spent working with NIMR	15.1	24.6	44.7	15.6	100.0	179	<0.001
<5 years	14.9	29.8	10.6	44.7	100.0	47	
≥5 years	15.2	22.7	56.8	5.3	100.0	132	
Salary earned per month (in Million TZS)	14.9	24.3	45.3	15.5	100.0	181	0.156
<0.5	16.7	25.0	41.7	16.7	100.0	72	
0.5-1.5	15.8	26.3	44.7	13.2	100.0	76	
>1.5	9.1	18.2	54.6	18.2	100.0	33	

In the first row the numbers shown in bold indicates the proportion of the respondents for each variable – marital status, family size, monthly salary earned and years or working in NIMR. Below each of these variables are the sub-categories of the broad characteristic. It can be seen that experience with borrowing from the said microcredits providers varied with the individual characteristics of the respondents as reflected by the different proportions of the respondents pertaining to different characteristics.

As an example in the interpretation of the data presented, it can be observed that out of 182 interviewees whose marital statuses were recorded, the married respondents who reported to have approached NIMR-SACCOS only amounted to 13.7%; 18.2% of the unmarried (single or separated or divorced) respondents affirmed to have done so; as was also done by 33.3% of the widow(ed) respondents. A similar pattern of the responses pertaining to those who reported to have borrowed from CBs only and those who had approached both SACCOS and CBs is indicated in the third and fourth columns of the table, respectively. The number of respondents for each category of the respondents is shown in the last but one column of Table 3. In this case, the observed differences in credit sources by marital status were statistically significant ($P=0.038$). A similar approach can be used to interpret the data presented in the table for the rest of the subsequent characteristics.

The proportion of respondents reporting to have borrowed from NIMR SACCOS only was similar between employees who had so far worked with NIMR for at most (\leq) and at least (\geq) five years (14.9% versus 15.2%) However, those who reported to have borrowed from CB only, both NIMR SACCOS and CBs and

none of these sources varied by the number of years spent at NIMR. Generally, a majority of those borrowing from both NIMR-SACCOS and CBs had worked at NIMR for at least 5 years. Statistically, the differences observed in terms of the reported credit sources between those with less than and those with at least five years working at NIMR were highly significant ($P<0.001$). Among the respondents who had neither borrowed from SACCOS nor CBs were those who claimed either that their salaries were too low to allow monthly deductions by the credits providers or that they were yet inadequately convinced to borrow (these were heard saying during face-to-face conversation).

Of all the interviewees, 72 (40%) reported to have been earning a monthly salary of less than half a million (500,000) Tanzanian Shillings (TZS) and nearly the same proportion were earning between 500,000 and 1,500,000 TZS; the rest minority - 33 (18%) were earning more than 1.5 million TZS. No statistically significant difference was found in the testimonies given about credit seeking experience between the employees reporting to earn smaller salaries and those earning large salaries (Exchange rate was US\$1 = TZS 1,450 – 1,550 in the local foreign exchange markets) ($P=0.156$).

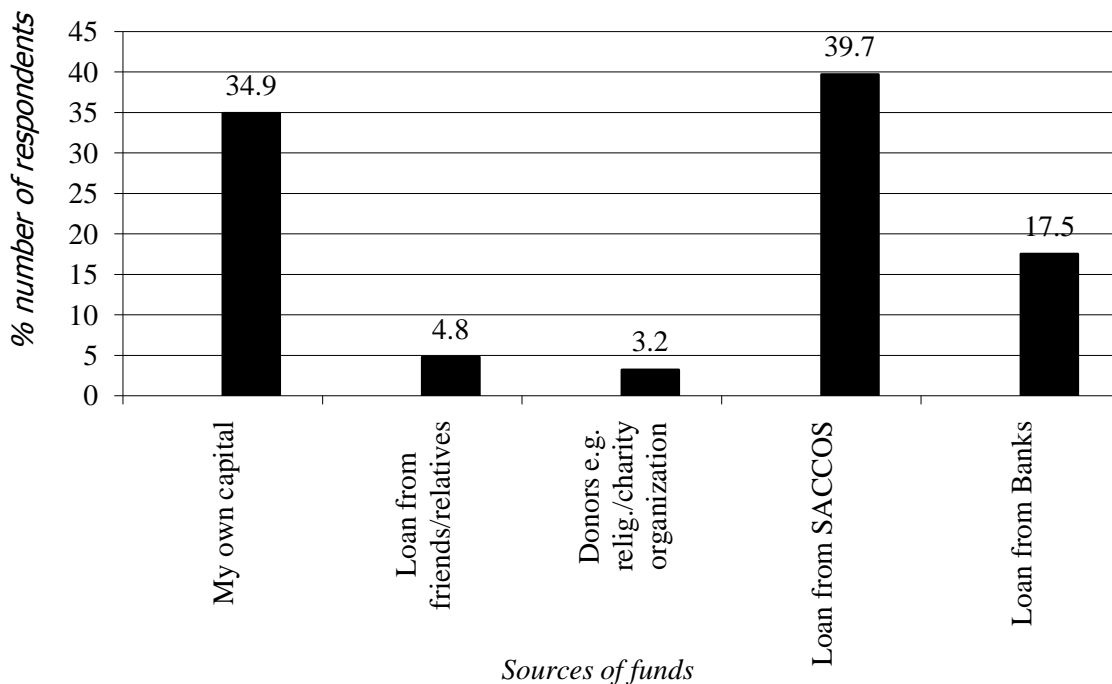
Furthermore, out of overall 182 interviewees, 179 (98.35%) had family dependants other than their own spouses and children with whom they shared same roof. Of those with dependants, 68 (37.98%) had less than five people, the rest had five or more people. As to whether or not one has ever approached SACCOS or CBs or both for credit purposes, answers from 179 respondents indicate that only 29 (16.20%) had neither contacted SACCOS nor CBs. Although statistically no significant

difference was found in relation to the reported credit seeking experience, the majority of those affirming to have approached either one provider or both came from households with a large number of dependants (data not shown in Table 3).

Ownership and engagement in SME related activities and types of business carried out Of the 181 interviewees who answered the question on whether or not they were owning any income generating enterprise, only 64 (35.2%) affirmed, the rest denied. Of those who affirmed, 32 (50.5%) had at least three years experience with operating

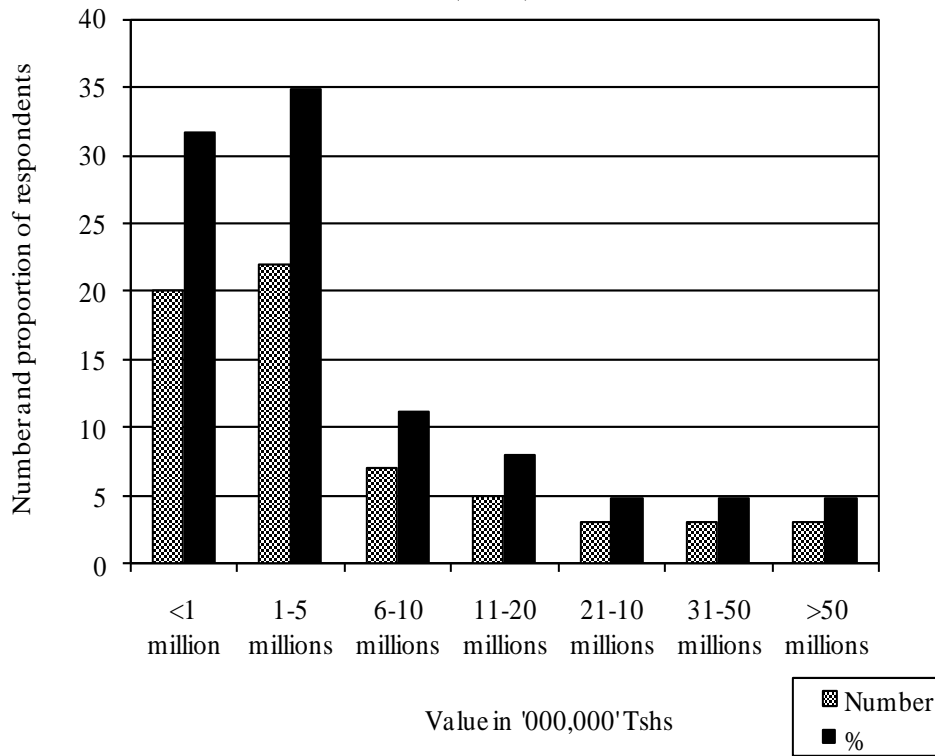
such enterprises, 16 (25.0%) had about two years experience, 5 (7.8%) had almost one year while the rest - 11 (7.2%) had 1-6 months. As for the sources of money invested in their businesses, 22 (34.92%) had invested their own money rather than money borrowed from other sources. Borrowing from NIMR-SACCOS or CBs for business investment was reported by 25 (39.68%) and 11(17.46%), respectively; the rest had borrowed from either their employer under arrangements other than SACCOS or from friends or relatives or colleagues (Figure 2).

Figure 2. Sources of financial capital invested in businesses run by NIMR workers interviewed in 2011 (n=63)



The participants in businesses were characteristically small-scale entrepreneurs, as a 35% reported to have invested 1–5 million TZS and 32% had investments worth <1 million TZS, thus less than 40% had invested 6 million or more TZS (Figure 3).

Figure 3. Monetary value of capital invested in business resources owned by the NIMR workers interviewed in 2011 (n=63)



Responding to the criteria used to arrive at decision on investing in the business areas they reported to own, 111 responses (as multiple responses were allowed) indicated the picture shown in Table 4, whereby the 'Others' category include such responses as (i) I felt that I could raise additional income to supplement my salary; (ii) I found it a project that can live longer, therefore, could be inherited and developed by children or other relatives during my absence (iii) The land for building and for other economic purposes appreciates in value as time goes on.

Table 4. Criteria used to choose investing in the business related undertaking as indicated by 111 responses from 63 NIMR workers interviewed in 2011

<i>Criteria used</i>	<i>Number</i>	<i>Percentage (%)</i>
Known/seeming to be a highly profitable business	20	18.02
Easy to carry out and supervise	31	27.93
There is little/no competition in that business area	3	2.70
Reliable product market	19	17.2
No specific criteria used/just decided to do it	28	25.23
Others	10	9.01

However, the some of the respondents had borrowed for purposes other than business investment per se since 66 (54.09%) responses indicated a mixture of income generating- and non-income

generating activities. The non-income generating activities include building residential houses, buying plots of land for the family residential purposes, paying school fees, drilling water wells for

domestic uses, settling medical bills for family members, and meeting transportation costs of personal belongings in case of transferring to other duty stations. Some of the respondents did not feel comfortable to identify the businesses they had borrowed money for. As for the income generating activities, the list include: investing in agriculture particularly growing cash crops and taming animals such as cattle for milk production or chicken for selling eggs and/or chicken themselves; building a residential or guest house for renting; drilling a water well for supplying water to other users on retail basis, and opening a garage for vehicle maintenance services. Of the remaining 56 responses, 11 (19.64%) indicated that the money borrowed was spent in purchasing cars for private/family use and/or for official uses; others used the vehicles for hiring purposes e.g. as taxis.

With regard to whether or not the kind of the businesses carried out is the same as those for which the loan was taken from the lending institutions, answers were obtained from 110 respondents only. Among these, only 69 (62.72%) affirmed to have engaged themselves in the activities they initially planned before borrowing from the MFIs, the rest denied. As for reasons for having decided to change the business plans after accessing the loans, answers were obtained from 17 respondents only among whom six (35.3%) indicated that the time was very limited to allow them undertake the originally planned/intended activities

comfortably and effectively to achieve the desired success. Five reasons indicated that the candidate made decision after noting that they could not realize the expected profit from the originally initiated business undertakings. Four responses indicated that at the beginning the individuals concerned had no specific criteria for initiating a business as it was a matter of try and error fashion after which they realized it was better to switch to other kinds of business. Only one response indicated the unfavourable taxation system having been a discouraging factor to continue with the initially planned business. The remaining response indicated the respondent concerned having decided to undertake other activities that seemed to be more or somehow unique considering what the majority of the local traders were doing in the market.

Facilitator and barrier factors for NIMR workers to approach micro-credits providers
Loan accessibility conditions

Interest rates on loans, the loan repayment period, amount of the loan a person is eligible to get from the lending organization, availability of a range of alternative credit providers and knowledge about them seemed to be the major facilitator or barrier factors for borrowing from MFIs. The respondents were able to express themselves in terms of how they rated the conditions associated with borrowing from SACCOS as compared to similar conditions associated with borrowing from CBs (Table 5).

Table 5. NIMR workers' ratings of the conditions of borrowing from employer-based SACCOS in comparison with those associated with borrowing from commercial banks (CBs) as per interviews carried out in 2011

<i>Rate of conditions associated with loans/credits provided by NIMR-SACCOS as compared to credits offered by CBs</i>	<i>Number</i>	<i>Percent. (%)</i>
<i>Interest rate on borrowing from SACCOS as compared to borrowing from CBs (N=182)</i>		
<i>Higher</i>	50	27.47
<i>Fair/moderate</i>	32	17.58
<i>Lower</i>	67	36.81
<i>Can't compare</i>	33	18.13
<i>Speed (Efficiency) of accessing credit from SACCOS as compared to accessing credit from CBs (N = 182)</i>		
<i>Higher</i>	65	35.71

<i>Rate of conditions associated with loans/credits provided by NIMR-SACCOS as compared to credits offered by CBs</i>	<i>Number</i>	<i>Percent. (%)</i>
<i>Fair/moderate</i>	60	32.97
<i>Lower</i>	26	14.29
<i>Can't compare</i>	31	17.03
<i>Bureaucratic procedures to follow to access credit from NIMR-SACCOS as compared to accessing credit from CBs (N = 182)</i>		
<i>Higher</i>	18	9.89
<i>Fair/moderate</i>	32	17.58
<i>Lower</i>	48	26.37
<i>Can't compare</i>	34	18.68
<i>None at all</i>	50	27.47
<i>Amount of the credit approved by NIMR-SACCOS as compared to amount of credit offered by CBs (N = 182)</i>		
<i>Higher</i>	6	3.30
<i>Fair/moderate</i>	16	8.79
<i>Lower</i>	33	18.13
<i>Can't compare</i>	42	23.08
<i>Depends on one's salary contributions</i>	85	46.70
<i>Amount deducted from salary to repay the credit approved by NIMR-SACCOS as compared to amount deducted if borrowing from CBs (N=182)</i>		
<i>Larger</i>	23	12.64
<i>Smaller</i>	12	6.59
<i>Average/Fair</i>	105	57.69
<i>Can't compare</i>	42	23.08
<i>Duration (period) of paying loan from SACCOS as compared to period of paying the loan from CBs (n=181)</i>		
<i>Longer</i>	13	7.18
<i>Shorter</i>	30	16.57
<i>Fair/moderate</i>	98	54.14
<i>Can't compare</i>	40	22.10
<i>Creditworthiness conditions of accessing credit from SACCOS as compared to accessing credit from CBs (n=181)</i>		
<i>Better</i>	45	24.86
<i>Poorer/Worse</i>	24	13.26
<i>Fair/moderate</i>	80	44.20
<i>Can't compare</i>	32	17.68

Some of the respondents who perceived the interest rate on loans from NIMR-SACCOS as being higher than those on CBs loans had never borrowed from SACCOS, others did. Alternatively, those who avoided contacting NIMR-SACCOS reported to have approached CBs. In contrast, those who perceived the CBs' interest rates on loans as being higher than that those from NIMR-SACCOS still did not borrow from NIMR-SACCOS and rather approached CBs. The reason given was that the amount of funds they could obtain from NIMR-SACCOS would be less than they could get from the CBs. Similarly, still some workers borrowed from both NIMR-SACCOS and CBs despite having rated the conditions associated with the credit provided by such MFIs differently. Generally, the individuals were in favour of the MFIs they perceived to offer better loan conditions than others. The point named 'Can't compare' in the last row under each of the conditions listed

(Table 4) reflect the position of those who had neither borrowed from SACCOS nor CBs.

Knowledge about the existing micro-credits facilities from banks and CBs

Different degrees of awareness of the credits opportunities given by banks and NIMR-SACCOS to eligible workers were expressed. Of 182 interviewees, NIMR-SACCOS being a credits provider to NIMR workers were known by 171 (93.96%) respondents. Those aware of CBs and other MFIs other than NIMR-SACCOS accounted to 173 (95.05%). The rest in each case were unaware. Furthermore out of all 182 interviewees 108 (63%) and 127 (70%) acknowledged to have ever approached SACCOS and CBs before, respectively. Meanwhile, some respondents denied to have either borrowed from SACCOS or banks/other MFIs despite having been informed of the presence of such institutions. Notably, awareness about the micro-credits providers

other than NIMR-SACCOS increased the chance of respondents to approach such providers: for instance, statistically the proportion of those reporting to know CBs and other MFIs other than NIMR-SACCOS while having had ever sought loans from such providers was significantly larger than that of those who never had contacted such credits providers ($\chi^2(1)=5.73; P=0.017$)).

How the role played by the employer (NIMR) acting as a guarantor to workers wishing to borrow from CBs and MFIs as a job motivational and retention factor was perceived

Only 174 respondents answered the question about the extent to which they agreed with the point that the opportunity available for the NIMR workers to access loans from NIMR-SACCOS and CBs under their employer (NIMR) acting as the guarantor motivated them to continue working in NIMR. Of the respondents, 121 (69.54%) strongly agreed with that point, 46 (26.43%) fairly (somehow agreed), but 8 (4.59%) totally disagreed.

Interest being in assessing whether or not there were differences in the opinions expressed by the respondents with different socio-economic characteristics, the results from cross-tabulations of selected questions refer:

Views according to respondents with different sexes

Of the 120 records, a strong agreement with the point was expressed by 79 (65.83%) male workers, the rest being female workers. Forty-six were in fair/moderate agreement and among them 30 (65.21%) were males. The respondents who were in total disagreement accounted to eight and a half of them were females. There was no statistically significant difference in the expressed degree of satisfaction with the point between the male and female respondents ($\chi^2(2)=0.83; P=0.661$)

Views from the respondents with different period spent working in NIMR

From 172 clear answers, it was found that 125 (72.67%) respondents had so far worked with NIMR for ≥ 5 years; the rest had worked there for less than five years. Among the latter category of the respondents, 27 (57.45%) were in strong agreement with the point, 18 (38.30%) fairly agreed while only 2 (4.26%)

totally disagreed. As for those who had worked there longer, 92 (73.60%) were in strong agreement, 27 (21.60%) fairly agreed while only 6 (4.80%) totally disagreed. However, no statistically significant difference was observed in terms of the feelings expressed by the two categories of the respondents ($(\chi^2(1)=4.95; P=0.084)$).

By combining the answers from the respondents who reported different periods of working in NIMR and those who had worked outside NIMR as one variable representing work experience, it was found that 119 (69.6%) out of 171 respondents had worked for more than years. Among these, only 11 (6.4%) were in agreement; the rest were in disagreement, and the difference in the views expressed was statistically significant ($\chi^2(2)=5.49; P=0.019$).

Views expressed by respondents with different monthly salary earnings

Generally the employees earning relatively higher salaries were p in more agreement with the point raised than those earning lower salaries. From 174 respondents whose data were analysed, 67, 75 and 32 reported to earn TZS <0.5 million, 0.5-1.5 million, and >1.5 million, respectively. Of those earning <0.5 million, 54 (45.0%), 12 (26.0%) and 1 (12.5%) were in strong agreement, fair/moderate agreement and total disagreement, respectively. Of those earning 0.5-1.5 million, 47 (62.7%), 25 (33.3%) and 3 (4.0%) were in strong agreement, fair/moderate agreement and total disagreement, respectively. Of 32 reporting to earn >1.5 million, 19 (59.4%), 9 (28.1%) and 4 (12.5%) indicated a strong agreement, fair agreement and total disagreement, respectively. The observed difference in all these cases was statistically significant ($\chi^2(4)=11.21; P=0.024$).

Findings from logistic regression analysis

In relation to specific objective 1 of the study, multivariable logistic regression models involved the variables that seemed to be more relevant for explaining some possible relationships/associations between the outcome and predictor variables (Table 6). As noted from the results, the likelihood of having borrowed from NIMR-SACCOS before was:

- about 5.6 times higher among the employees aged ≥ 45 years than those aged 25-24, the

observed difference being statistically significant (OR=5.68; CI:1.95-16.55; $P=0.001$); and was about 2.4 times higher among those aged 35-44 than those aged 25-34, although in this case the difference was not statistically significant (OR=2.35; CI: 0.91-6.07).

- about 90.8% lower among the holders of primary education certificates than the degree holders, however, the observed difference was not statistically significant (OR=0.92; CI: 0.22-3.85); and was almost the same between the secondary school (form four or six) leavers who held diploma and the degree holders (OR=1.05; CI: 0.37-2.95).

- 90.4% lower among the respondents belonging to families with higher number of dependants were about 90.4% those from families with fewer dependants. However, the

observed difference was not statistically significant (OR=0.96; CI: 0.45-2.06).

- 30% higher among those earning amount of salary amounting to 1.5 million TZS or more than those receiving less than half a million TZS, although the observed difference was not statistically significant (OR=1.29; CI: 0.31–5.39). Likewise, those receiving between 0.5 million TZS and 1.5 million TZS per month were about 60% more likely to have borrowed than those receiving <0.5 million TZS, although also the difference was not statistically significant (OR=1.61; CI: 0.59-4.37).

- Lower among the married respondents than the unmarried ones by 42%, although the observed difference was not statistically significant (OR=0.58; CI: 0.23-1.43).

Table 6. Multivariate logistic regression model of background characteristics associated with credit seeking experience among NIMR employees, 2011 (n = 173)

Variable	Adjusted Odds Ratio (AOR)	95% Confidence Interval (CI)	P-value
Age (in years)			
25-34	1.00	–	–
35-44	2.35	0.91-6.07	0.078
≥45	5.68	1.95-16.55	0.001
Sex			
Male	1.00	–	–
Female	0.64	0.29-1.40	0.260
Marital status			
Currently married	1.00	–	–
Currently not married	0.58	0.23-1.43	0.233
Education			
Degree	1.00	–	–
Diploma	1.05	0.37-2.95	0.934
Certificate	0.92	0.22-3.82	0.913
Family size			
<5 people	1.00	–	–
≥5 people	1.51	0.63-3.58	0.353
Number of dependants			
<5 people	1.00	–	–
≥5 people	0.96	0.45-2.06	0.924
Salary earned per month (in Million TZS)			
<0.5	1.00	–	–
0.5-1.5	1.61	0.59-4.37	0.354
>1.5	1.29	0.31-5.39	0.726

Opinions regarding potential measures for enabling workers to borrow from MFIs
Emphasis was put on need for the MFIs to review their policies on interest rates loans, amount an individual is allowed to borrow, bureaucratic procedures involved in applying for credit, creditworthiness conditions, and the loan repayment periods. The issue of creditworthiness was discussed in terms of collateral requirement (especially of unmovable properties and/or pension allowances that can be taken in part or in full if the borrower fail to pay the loan). Therefore, proposals were that there is an urgent need for the authorities concerned to review the micro-credits policies so as to make them more customer-friendly. The lending conditions by both the banks and employer-based SACCOS were perceived as being much more favouring the creditors to pool huge profits at the losing side of their customers. In addition, the respondents were concerned with information asymmetry whereby lack of transparency in terms of how the borrowers would benefit from the loans created as well as the discriminatory policies seeming to favour the highly salaried and permanently employed workers than the low salaried ones and the temporary workers.

DISCUSSION

Relationship between socioeconomic characteristics and individuals borrowing behaviour

The present study confirms that different cadres of NIMR employees belonging to different sexes had benefited from loans offered by CBs and NIMR-SACCOS. Also, it reveals that at least most of those who had not yet borrowed from the latter lending organizations were informed of the existence of such credits providers,

but the concern expressed regarding the failure of the MFIs to be open to their clients regarding the issues of microcredits disappointing the potential borrowers among the NIMR employees. Moreover, the present study reveals that other socio-economic characteristics of the individuals concerned including family backgrounds, age and, income earnings have a bearing on the borrowing behaviour of the family members from the existing MFIs even though not all the tested differences in the observations made were statistically significant. The majority of the borrowers from the NIMR-SACCOS were registered at the NIMR HQs and these include even some of those who were based at duty stations other than the HQs. This reflects the trust such workers have had had with the HQs-based SACCOS leadership. These findings are consistent with reports from other studies revealing that personal characteristics such as age, income level, knowledge and family size/commitments as well as geographical accessibility to credit facilities and one's trust in the lending organizations are important determinants of people's loan/credit seeking behaviour and their loan/credit repayment behaviour ⁽¹⁹⁾.

The logistic regression analysis revealed that borrowing from CBs or SACCOS was relatively less experienced by the degree holders than the employees with lower qualifications although the lower staff cadres expressing complaints about more microcredits opportunities being available to the highly salaried workers who are mostly the degree holders. The more a person is educated the more they may be able to analyse issues critically, and this includes issues related to their working environments ⁽²⁰⁾. Therefore, it is not strange to find that the reported tight conditions related to high interest rates, loan payment period and

bureaucracy of accessing loans have been analysed more critically by the highly leaned workers than the less educated ones. Dr. Donath Olomi of the University of Dar Es Salaam Entrepreneurship Centre once depicted that university graduates in Tanzania ⁽²¹⁾ are mainly reluctant to initiate business enterprises due to psychological factors affecting them and these include lack of motivation to perform business and inconveniences caused by institutional bureaucracy, besides the issue of lack of skills and experience.

Innovative and creativity ability of workers interviewed in business oriented enterprises

From the present study it can be seen that despite the participants expressing enthusiasm for engaging themselves in income generating businesses, the majority lacked innovative/creative skills for achieving their mission and possibly this is due to the individuals concerned lacking sufficient knowledge in the business field, for instance, those who claimed to have started business on a try and error fashion besides those who used the borrowed funds to purchase personal belongings such as vehicles or plots of land for residential purposes. This confirms what experts argue about lack an innovativeness contributing to the low growth of entrepreneurship status in Tanzania ^(4, 21).

Attitudinal and other psychosocial determinants of individuals borrowing behaviour

Experience from Uganda shows that it common for people to engage in some kind of business activities while being in wage employment or to run small business ventures at once ⁽²²⁾. The present study contradicts this as the results indicate the concern expressed by the respondents about shortage of time for executing including monitoring and supervising the privately owned enterprises and this having discouraged some workers to borrow from

SACCOS or banks. In large and highly traffic cities like Dar Es Salaam, formal workers normally wake up early in the morning and return home very late in the evening, therefore, for these it is likely to be hard to managing day-to-day business operations smoothly if the businesses concerned demand close monitoring and supervision.

Creditworthiness policies and the issue of guarantorship requirements for accessing loans

The present study reveals that individuals attitude toward borrowing for investing in business was partly influenced by institutional factors rather than individual workers' demographic or occupational qualities. As for the creditworthiness requirement, some workers who missed opportunities for accessing loans from the NIMR- SACCOS because of either having been working on projects on short contract periods or not already had deposited their minimum balance to the SACCOS Fund account was one of the greatest disappointments for such potential borrowers. This evidence supports the reports from other studies done previously in Tanzania indicating that besides the issue of lack of guarantors, the majority of people from poor households/families fail to access loans from formal financial institutions because of either such individuals not being in salaried employment or being unable to make pre-loan deposits ⁽²³⁾. The challenge is that even if the financial institutions would have wished to lend people, in a society whereby there is no obvious assurance for compensating financial institutions for the un-recovered loans the lenders cannot be blamed for taking the action they find to be appropriate for them to survive and grow in their business.

Enthusiasm for borrowing from MFIs may decrease if the potential borrowers are uncomfortable with the

amount they expect to receive from the lending organizations or with how they are treated by the lending organizations as compared to other individuals. This is explained by the concern expressed by the low salaried workers who perceived the highly salaried ones to be more favoured and the staff employed in projects on temporary basis as compared with the permanent and pensionable ones. These findings are consistent with the results from another study that involved econometric analysis and revealed the importance of the amount of the loan, customer's income and access to guarantor(s) on individual borrowers' behaviour (<http://congres.afse.fr/docs/164368individuaImicrocreditandsocialpressure.pdf>).

Also, reports from other countries within and outside Africa show that MFIs tend to favour the borrowers who are already well-off or have entrepreneurial spirit to succeed without loans from MFIs [7]. Furthermore, concerns about high interest rates on loans, short loan repayment period, and amount of the loan to be accessed especially by the low salaried workers have been found to disappoint a considerable number of potential borrowers from MFIs in other countries (24-25). It is interesting to know that as a last resort, NIMR employees decided to borrow from friends or close relatives rather than MFIs, thus confirming what other authors observed elsewhere in Tanzania about people sometimes finding it more convenient to borrow from colleagues (26). However, the extent to which informal borrowing from non-bank or other formal MFIs has succeeded to promote entrepreneurial initiatives in Tanzania requires more systematic research.

Strengths and limitations of the present study

This study is unique in that it attempts to establish empirical evidence

regarding the factors facilitating or hindering formal health sector employees to venture into income-generating businesses supported by microcredits facilities in Tanzania. The review made as part of this study and present paper indicate a general lack of published evidence on this topic in Tanzania. The weak side of the paper/study is that the sample size of the respondents covered is not adequate enough to allow generalizable statistical inferences besides the use of self-administered questionnaires that somehow compromise the quality of the data collected, as warned by theorists (27).

COUNCLUSION AND POLICY IMPLICATIONS

The key lesson from this study and the literature reviewed from Tanzania is that opportunities for accessing loans from banks and MFIs have been open to all public sector employees regardless of their differences related to salary earned, gender/sex, level of education attained and tribal/ethnic backgrounds. Unfortunately, time for investing in monitoring and supervising the businesses supported by the loanable funds from the existing MFIs is limited for the full time employees, besides the tight borrowing conditionalities established by the MFIs. It is evident from this study that the employer is a potential guarantor to the employees wishing to borrow and this is an incentive to the employees who feel encouraged to continue working in their organization. Nevertheless, there is an urgent need for the authorities concerned to review the lending policies/programmes including those that foster credits accessibility by the disadvantaged employees if the goal of attracting and retaining more potential borrowers to register for loans is to be attainable. Finally, further systematic research is required and studies should be done periodically to grasp evidence for

guiding the authorities to take appropriate actions based on the experience of what is desired and what actually exist on the ground in relation to the issue of microcredits services, as suggested by other authors ⁽²⁸⁾.

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GMM (Ph.D in Health Sciences; MBA in Finance and Accounting; M.A in Health Management, Planning and Policy; B.A-Economics; and Dip. in Research Methodology) is a Principal Research Scientist in NIMR-Tanzania, conceived the study and participated in all stages of the study from study design, data collection and report writing as part of his MBA thesis preparation project registered at the Kampala International University (KIU),

besides drafting the first and final versions of the present manuscript (MS). AE (BA. Statistics; MSc. In Population-based Epidemiology) is based at Ifakara Health Institute – Tanzania, and assisted GMM on sample design, data analysis and drafting this MS. MNM (ADPA, MBA, PhD Cand.) and BD (PhD) are both lecturers at KIU and commented on the thesis draft out of which this MS was developed and on the MS itself. ABD (Ph.D in Educational Planning/Economics of Education; MEd. In Educational Management; BA in English Studies) was the overseer of the study as the Director of Postgraduate Studies and Research (PGSR) at KIU, Dar Es Salaam College) and commented on the MS. RN (MCom.; PhD in Finance) mentored GMM in the dissertation the thesis preparation for his MBA degree programme at KIU.

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