STRATEGII MANAGERIALE

MANAGEMENT STRATEGIES

Revistă editată de
Universitatea „Constantin Brâncoveanu"
Pitești

Anul XIII, nr. III (53) / 2021

Editura
Independența Economică

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© Editura „Independenţa Economică”
Piteşti, Calea Bascovului nr. 2A
Tel./Fax: 0248/21.64.27

Editură acreditată de către C.N.C.S.I.S.

ISSN 2392 – 8123
ISSN–L 1844 – 668X

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IDENTIFICATION OF UNDERLYING FACTORS OF STUDENTS' DROPOUT AFTER PRIMARY EDUCATION: A CASE STUDY

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Abstract

This paper deals with dropout problem of students after primary education. The focus of this study is on identification of underlying factors of students' dropout after primary education in Katwa Municipal area West Bengal. A sample of 21 dropout students has been taken at random from 4 boys and 3 girls schools situated at the studied area. Concerned school-teachers, parents, neighbours, political leaders, officers and members of the voluntary organization have been selected to take their opinion about the dropout problem of the students, after primary education. The data has been collected visiting door to door by the investigator himself and scored & tabulated keeping in mind the Likert scoring technique. To analysis the data rank correlation, t-test of rank correlation and chi-square test has been used. The study reveals that there are so many socio-economic factors are responsible for students' dropout after primary education though the degree of influence is unequal. The author recommended some policy to arrest the growth of these factors.

Keywords: *After primary education, Students' dropout, Teacher, Neighbour, Parent, Political leader, Officers and Members of the voluntary organizations.*

Introduction

School dropout is widely recognized as a negative life event which is often followed by further problems. Dropping out of high school has the negative long-term effects of creating social, economic, and personal challenges for the individual and the surrounding community. Mostly dropping out students are those unable to completing their high school study. As a result the individually and the society are highly affected by the issue. It has to be put more efforts and strength to reduce the dropout rate in the particular area because only through education that the life can be better and the society also can be improved. A dropout is a considered a student who for any reason other than death leaves school without transferring to another school. Dropout is a social problem and is also associated with delinquency and low school achievement.

This article deals with a socio-economic problem, which is students' dropout after primary education in Katwa Municipal area of Purba Bardhaman District, West Bengal, India. 'Dropout' means here the students' leaving from school during the transition from Class-V to Class-VIII (i.e. left out from school). Dropout is a dangerous problem relating to our education system, not only in primary education but also in upper primary level. Numerous factors are responsible for this problem. If the major factors of the problem are detected, the necessary steps can be taken to solve the problem gradually and in consequence of that effort, dropout after primary education may be checked.

This type of thinking creates the interest of the investigator to take up the study. In the present study, attempts have been taken to find-out the underlying the factors responsible for the problem in the studied area.

Review of Existing Literature:

Few early researches, national and international level in this field are being highlighted below:

In a study, Chimombo (1999) observes that though the enrolment in school is almost same for girls and boys, boys have a higher likelihood of continuing school compared to girls.

To find out the causes of daughters' dropout, Fuller and Laing (1999) and Grant and Hallman 2006) found an association between a family's financial strength and the likelihood of the daughter's dropout in South Africa.

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Distance to schools, poor quality of education, inadequate facilities, overcrowded classrooms, inappropriate language of instruction, teacher absenteeism and, in the case of girls school safety, are common causes for school dropout (Colclough, et al. 2000).

Holmes (2003) also found that girls overall attain less education and tend to dropout earlier as compared to boys.

Leung and Zhang (2008) found that parents' preference for sons encourage more of them to invest for in their sons' well-being to take care of parents in the future. In fact, parental gender bias investment occurs particularly when parents have limited or lower income and resource, causing girls to leave school earlier than boys.

From the families' perspective, Ghosh, Susmita & Sengupta (2012) observe that in poor households in India, the costs of schooling for girls are likely to be higher while the benefits more tenuous for them than the boys.

A growing body of literature shows that girls' dropout rates are higher compared to boys' in most parts of the world. For instance, according to UNESCO (2012), the dropout rate is higher for girls in 49 countries compared to boys

Biswarupa Dash (2014) identified that major reason for school dropouts among tribal communities has been non-availability of books and teachers in their own language. Girls are more interested in going to schools if female teachers are there in the schools. They feel more comfortable with female teacher.

Dr. Md. Afsar Ali (2014) revealed that parental decision to dropout their wards from primary education does not depend upon gender, but depend upon their economic status. Poverty influences the parents to withdraw their wards from school.

The results of Mrityunjoy Jana et.al (2014) study revealed that drop out of pupils from school in rural backward area were reluctance of parents and participation in domestic activities. Another major reason was problem of financial constraints. The parent's educational status was poor and they did not give much importance to the education of girls as they did to their sons. They perceived that sons support them in their old age.

Sateesh Gouda M & T. V. Sekher (2014), observed that the dropout was high among the children belonging to Muslim, Scheduled Caste and Scheduled Tribe families. Parental characteristics also play a significant role in determining school education. The dropouts among the children belonging to illiterate parents were four times higher than that of the literate parents. It was also observed that if parents were not working, the possibility of dropout among their children was relatively high. The study suggests that unless and until there is considerable improvement in the economic status of households and change in the social attitudes of parents, achieving the goal of universalisation of school education will remain a major challenge for India.

Chinmayee Mohanty (2018), studied the three region of Odisha such as Southern region, Northern Region and Coastal Region, the dropout rate has lowered in coastal region and highest in Northern region. The reason may be the backwardness of northern region, distance of school due to hilly areas and so on. In the trends of dropout in the two districts of Odisha such as Koraput and Sonpur it has been seen that although both the district belong to the same region that is southern region, Koraput has highest dropout rate in compare to Sonpur.

S.V. Halawar (2019), attempted to understand the nature of student strength and school dropouts. The results reveals that female student strength is comparatively high in the government schools from 2011-12 to 16-17 and male strength in private schools and later during 2017- 18, this scenario has changed and also observed the significant difference in the school dropouts year wise.

Anwar Hussain et. al (2020), showed that the major causes of dropouts in the research area were crowded and large schools; uncaring, untrained and irresponsible teachers; usage of passive teaching methods; inappropriate curriculum design; inappropriate evaluation procedure; lack of parents' involvement; lack of checks and bureaucratic system and long distance and lack of extra co curricular activities.

In the present study attempt has been made to investigate the causes of drop outs in Katwa Muinicialpal area under the district of Purba Bardhaman, WB, because no such work has been undertaken in this area.

Statement of the Problem:

The statement of the problems of the study is "Identification of underlying factors of students' dropout after primary education in Katwa Municipal area of Purba Bardhaman District, West Bengal, India".

Objective of the Study:

The main objective of the study is to determine the underlying factors of dropout after primary education in the studied area. In order to determine the factors, the following studies have been taken:

(a) To find out the relationship between students' dropout and economic condition, consciousness, educational standard, cultural standard, frustration, negligence of the neighbors etc. of the students' family. The significance of the relationships has been tested.

(b) To find-out the relationship between students' dropout and administrative initiative, activities of the voluntary organizations, political parties initiative, teachers' negligence etc. The significance of the relationships has also been tested.

Moreover, attempts are taken to judge the influence of the students' sexual status and residential status on students' dropout after primary education.

Apart from these, economic condition, cultural standard, consciousness, educational standard, neighbours' negligence, frustration of the students' parents and administrative initiative, voluntary organisations' activities, political parties' activities, teachers' negligence has been assessed.

Hypotheses:

In order to realize the objectives of the study the following null hypotheses are proposed to be formulated.

1) **H_0**: There exists no significant relationship between students' dropout and

(a) economics condition.
(b) cultural standard.
(c) consciousness.
(d) educational standard
(e) neighbours' negligence.
(f) parents' frustration.
(g) administrative initiative.
(h) voluntary organizations activities.
(i) teachers' negligence.
(j) political activities.

An alternative hypothesis formulated is:

H_a: There exists significant relationship between students' dropout and

(a) economic condition.
(b) cultural standard
(c) consciousness
(d) neighbours' negligence
(e) parents' frustration
(f) administrative initiative
(g) voluntary organization activities

(h) educational standard
(i) political activities
(j) teachers’ negligence

2) H_0: Sexual status of the students and students’ dropout is independent to each other.

An alternative hypothesis formulated is:

H_a: Sexual status of the students and students’ dropout is dependent to each other.

3) **H_0**: Residential status of the students and students’ dropout is independent to each other.

An alternative hypothesis formulated is:

H_a: Residential status of the students and students’ dropout is dependent to each other.

Delimitation:

The study is confined to the jurisdiction of Katwa Municipal area under the district of Purba Bardhaman, West Bengal, India. The present study is based on 21 sample students of that area. Conclusions drawn on the basis of the above small sample may not beyond criticism.

Descriptions of Attributes:

1) Students’ Dropout (S.D): In the present study it has been taken as an important attribute. Here drop-out means here students’ leaving from school during the transition from class V to Class VIII (i.e. left out from school). Students’ dropout at the upper primary level is a severe problem not only at the primary stage of education but also at the upper primary level.

A relationship between students’ droupout and families’ economic condition, cultural standard, consciousness, educational standard, ‘neighbours’ negligence’, ‘parents’, ‘frustration’, ‘administrative initiative’, ‘voluntary organizations activities’, ‘political parties activities’, ‘teachers’ negligence’ may therefore be expected.

2) Economics Condition: In the present study it has been selected as an attribute. It means economic condition of the families of the studied students. Economic condition of a family is measured in terms of real income earned by the family per year. More specifically, it can be said that how strong is their families economics position. It is obvious that strong economic position of a family may not be the cause of students’ dropout conversely may be the cause of this problem.

A relationship between students’ dropout and families’ economic condition may, therefore, be expected.

3) Cultural Standard: In the present study it has been selected as an attribute. It means cultural standard of the dropout students’ families. It includes families’ consciousness about child’s education, health, co-curricular activities, parents’ education, progressive thinking and awareness etc.

A relationship between students’ dropout and families’ cultural standard may, therefore, be expected

4) Consciousness: In the present study. It has been selected as an attribute. It means consciousness of the studied students’ families. Consciousness includes sincerity, seriousness and careful attitude of the parents towards the education of their child.

A relationship between students’ dropout and families’ consciousness may, therefore, be expected

5) Educational Standard: In the present study it has been selected as an attribute. It means educational standard of the families of the studied students. Families’ educational standard is determined by the parents and forefathers’ academic knowledge. This knowledge makes the parents conscious about their children’s educational property.

A relationship between students’ dropout and families’ educational standard’ may, therefore, be expected.

6) Neighbours’ Negligence: In the present study it has been selected as an attribute. Here ‘neighbour’ means educated neighbours of the families of the studied students. Neighbours have a responsibility to convince and make the parents conscious about their children’s proper education, co curricular activities, health and potentiality. When the neighbours are deviated from these duties, it is called neighbours’ negligence.

A relationship between students’ dropout and ‘neighbours’ negligence’ may, therefore, be expected.

7) Parents’ Frustration: In the present study it has been selected as an attribute. Dropout students at maximum belong to the family of the lower income group of the society. Parents of those poor students cannot think that education of those students may give financial support to their family. Because, on behalf of them it is very troublesome to meet the minimum expenditure for elementary education. Considering the fact, parents of the studied students became frustrated and they do not think about their children’s education.

A relationship between students’ dropout and ‘parents’ frustration’ may, therefore, be expected.

8) Administrative Initiative: In the present study it has been selected as an attribute. Administration of the studied area should have not macro level plan for children education, health, fooding, co-curricular activities and also for the children who have already become dropouts.

A relationship between students’ dropout and ‘administrative initiative’ may, therefore, be expected.

9) Voluntary Organisations’ Activities: In the present study it has been selected as an attribute. Registered clubs, N.G.Os, Charitable institutions etc are fallen under the voluntary organizations. In the studied area these organizations have a vital role regarding the child education of the area. If the organizations are inactive in this regard, the society is deprived of this service. Responsible members of these organizations can take a responsibility about the development of child education, child health, child culture, child-co-curricular activities etc.

A relationship between students’ dropout and ‘voluntary organization activity’ may, therefore, be expected.

10) Political Initiative: In the present study it has been selected as an attribute. Political initiative means activities of the political workers of the different political parties regarding children education in the studied area. Political parties have a social responsibility to remove the different social curses like dropout problem’. They should have a macro level plan for child’s elementary education and continuation of that education, health, food and co-curricular activities. The steps taken by the different political parties to get rid of the trap from students’ dropout problem are known as political initiative.

A relationship between students’ dropout and families’ ‘voluntary organization activity’ may, therefore, be expected.

11) Teachers’ Negligence: In the present study it has been selected as an attribute. If any teacher avoids or does not take special care for education of the backward students, if is called teachers’ negligence. If is a vital cause of students’ dropout problem.

A relationship between students’ dropout and ‘teachers’ negligence’ may, therefore, be expected.

Design and Methodology:

Selection of Sample: The study has been conducted within the Jurisdiction of Katwa Municipal area under the district of Purba Bardhaman, West Bengal, India. There exists 4 boys high schools and 3 girls high schools. Out of each boys school 3 dropouts (male) and each girls schools 3 dropouts (female) has been selected at random. The sample size of the students is 21. On the other hand, out of the 21 sample students, 9 (i.e 3x3) students of the total sample students are female. Concerned school-teachers, neighbours, parents, political leaders, officers and members of the voluntary organizations have been selected to take their opinion about the dropout problem of the students, after primary education.

Selection and Description of Tools:

Primarily data have been collected by the investigator, in person, visiting door to door of the students, parents, teachers, neighbours, officers, members of the voluntary organizations and political leaders using 7 type of questionnaire. Data have also been collected likewise from the above mentioned persons by direct interview. These are discussed below:

A) Questionnaire for Students: Questionnaire for dropout students is prepared emphasizing their cause of dropout and non enrolment after completing primary education. They are asked about their family's economic condition and how far it is responsible for their irony. Apart from that, sexual status and residential status are also included in the questionnaire. It is short sized structured, close ended questionnaire. There are three scales of opinion (very much, moderate, not at all) having different scores for each of them. The medium of the questionnaire is Bengali for easy comprehension and communication.

B) Questionnaire for Parents: Questionnaire for parents is prepared emphasizing the aspects, viz. economic condition, cultural standard, educational standard, consciousness of the parents. It is a moderate sized, structured, close-ended questionnaire. There are three scales of opinion (enough/moderate/not at all) having different scores for each of them. The medium of questionnaire is Bengali for easy comprehension and communication.

C) Questionnaire for Teachers: Questionnaire for teachers is prepared to get their opinion about the cause and acuteness of the students' dropout problem. Apart from these, teachers' sexual status and residential status are also included in the questionnaire. There are three scales of opinion (enough/moderate/ not at all) having different scores for each of them. The medium of questionnaire is Bengali for easy comprehension and communication.

D) Questionnaire for Neighbours: Questionnaire for neighbours (students) is prepared to know the initiative taken by them to remove the dropout of the students and the acuteness of the problem. They are asked about the steps taken by them spontaneously to get rid of the trap of students' dropout. It is a very short sized, structured, close-ended questionnaire. There are three scales of opinion (enough/moderate /not at all) having different scores for each of them. The medium of questionnaire is Bengali for easy comprehension and communication.

E) Questionnaire for Officers: Questionnaire for officers is prepared emphasizing the aspects, viz. administrative initiative regarding students' dropout problem, general standard of the studied area and the acuteness of the problem. The officers, sexual and residential status are also included in the questionnaire. It is a short size, structured, close-ended Questionnaire. There are three scales of opinion (good/moderate/bad) having different scores for each of them. The medium of questionnaire is Bengali for easy comprehension and communication.

F) Questionnaire for Members: Questionnaire for the members of the voluntary organizations is prepared to know the initiative taken by them to remove the students' dropout problem and the acuteness of the problem. It is a very short sized, structure close-ended questionnaire. There are three scales of opinion (good/moderate/not at all) having different scores for each of them. The medium of questionnaire is Bengali for easy comprehension and communication.

G) Questionnaire for Political Leaders: Questionnaire for political leaders is prepared to know their initiative to solve the students' dropout problem' and the acuteness of the problem. They are asked about the steps taken by them spontaneously to get rid of the trap of students' dropout problem. It is a very short sized, structured, close-ended questionnaire. There are three scales of opinion (enough/moderate/not at all) having different scores for each of them. The medium of questionnaire is Bengali for easy comprehension and communication.

H) Direct Interview: Direct interview has been made by the investigator to the sample students, parents, teachers, neighbours, officers, members, and leaders to collect more information about the said problem. Students and their parents are asked about the causes of such irony. Both are also asked about the unwillingness to take the upper primary education. Teachers, leaders, neighbours, officers, members are asked about the causes, acuteness of the said problem and also their venture taken for this purpose. They are also asked about whether the Govt. expenditure for meeting, seminar, conference, convention, workshop etc for this purpose is necessary or not. They are asked–Is the daily stipend to each such students by the Govt. be more effective to solve the students' dropout problem'? The opinion of these persons about the impact of sexual status and residential status of the sample students' on 'dropout problem' after primary education is sought for.

Collection of Data:

The data have been collected from students, parents, teachers, neighbours, officers, members of the voluntary organizations and political leaders through door to door investigation by the investigator himself. They are requested to give their natural, free and frank responses to the queries. They are taken into confidence and told that the information is required only for research purpose and will be strictly kept secret.

Tabulation and Scoring of Data:

The data which have been collected through 7 type of questionnaire are compiled on suitable tabulation sheets which are also prepared for the purpose.

The data obtained are scored, keeping in mind the 'Likert Scoring System' as follows:

(A) **Students' Questionnaire**: In this questionnaire students are subjected to answer one of the three options-very much, moderate, not at all. Score 10 is allotted to very much opinion. Score 6 is allotted to 'moderate' opinion and score 4 is allotted to 'not at all' opinion.

(B) **Questionnaire for Parents:** In the parents' questionnaire there are as many as six questions relating to their economic condition, cultural standard, educational standard, consciousness etc. These questions are subjected to answer one of the three options-enough, moderate, not at all. Score 10 is allotted to each 'enough' opinion. Score 6 is allotted to each 'moderate' opinion and score 4 is allotted to each 'not at all' opinion.

(C) **Questionnaire for Teachers:** In the teachers questionnaire there are three scales of opinion-enough, moderate and not at all. Score 10 is allotted to 'not at all' response, score 6 is allotted to 'moderate' response and score 4 is allotted to 'enough response.

(D) **Questionnaire for Neighbours:** In the neighbours' questionnaire three are three scales of opinion – enough, moderate and not at all. Score 10 is allotted to 'enough' response, score 6 is allotted to 'moderate' response and score 4 is allotted to 'not at all' response.

(E) **Questionnaire for Officers:** In the officers' questionnaire there are three scales of opinion-good, moderate and bad. Most of the cases score 10 is allotted to 'good' response, score 6 is allotted to 'moderate' response and score 4 is allotted to 'bad' response. In one case only the score has been changed' 4 instead of 10 and 10 instead of 4.

(F) **Questionnaire for Members:** In the questionnaire for members of the voluntary organizations, there are three scales of opinion- good, moderate and not at all. In most of the cases score 10 is allotted to 'good' opinion, score 6 is allotted to 'moderate' opinion and score 4 is allotted to 'not at all' opinion. In one case only the score has been changed-4 instead of 10 and 10 instead of 4.

(G) **Questionnaire for Political Leaders:** Questionnaire for political leaders is subjected to answer three scales of opinion- enough, moderate and not at all. Except one case, score 10 is allotted to each 'enough' response score 6 is allotted to each 'moderate' response and score 4 is allotted to each 'not at all' response. In only one case the score has been changed 4 instead of 10 and 10 instead of 4.

Statistical Technique used:

The data are tabulated and analysed keeping in view the objective spelt out and hypotheses formulated. Rank correlation coefficients (p) are calculated to study the relationship between "Students' Dropout Problem" and

(1) economic condition,
(2) cultural standard.
(3) educational standard.
(4) consciousness
(5) neighbours' negligence
(6) parents' frustration
(7) administrative initiative
(8) members' initiative
(9) political initiative.

In order to judge the significance of these relationship 't-value' of rank correlation coefficient (p) have been computed. Test has been made at 1% significance level in general. Chi-square (X^2) tests has been used to test the dependence of the attributes-'Students' Dropout Problem' and (i) sexual status of the students. (ii) residential status of the students. The test has been made at 1% significance level. Corrected value of chi-squares (x^2) [Yates correction] has also been calculated for these case.

Findings:

Table 1. Results of Statistical Tests

Attributes	Rank co-coeff (p)	Calculated value of 't' of 'p'	Table value of 't' at 1% sig lev	Calculated value of (x^2)	Corrected x^2 value	T.V of x^2 at 1% sig level	Degree of freedom	Hypothesis accepted H_o/H_a
a) Students' Dropout (S.D) Problem vs. Economic Condition	.69	3.79	2.86	-	-	-	19	H_a
b) S.D. vs. Cultural Std.	.79	4.65	2.86	-	-	-	19	H_a
c) S.D vs. Consciousness	.59	3.55	2.86	-	-	-		H_a
d) S.D. vs Edu. Std.	.71	4.89	2.86	-	-	-		H_a
e) S.D. vs. Neigs. Negl.	.07	1.79	2.86	-	-	-		H_0
f) S.D. vs. Parents' Frustration	.61	3.59	2.86	-	-	-		H_a
g) S.D. vs. Adm. Inite.	.41	2.03	2.86	-	-	-		H_0
h) S.D. vs. Vol.Org.Inite.	.43	1.83	2.86	-	-	-		H_0
i) S.D. vs. Pol.Par. Act.	.27	.97	2.86	-	-	-		H_0

Attributes	Rank co-coeff (p)	Calculated value of 't' of 'p'	Table value of 't' at 1% sig lev	Calculated value of (x^2)	Corrected x^2 value	T.V of x^2 at 1% sig level	Degree of freedom	Hypothesis accepted H_o/H_a
j) S.D. vs. Tea.Negli.	.63	3.29	2.86	-	-	-		H_a
k) S.D. vs. Students' Sexual Status	-	-	-	1.07	.56	9.21	02	H_0
S.D. & vs. Students' Res. Status (Dev. Area and Under Dev. Area)	-	-	-	1.01	.51	9.21	02	H_0

Source: Compiled by Author

Conclusions:

Factors related to students' family responsible for students' dropout:

(i) There exists a notable relationship between students' dropout problem' after primary education and their families' economic condition. The relationship is significant also.

(ii) There exists a significant relationship between 'students' dropout problem' and their families' cultural standard.

(iii) Consciousness of the students' family and 'students' dropout problem' is closely related. The relationship is significant.

(iv)The correlation between educational standard of the students' families and 'students' dropout problem' after primary education is significantly strong.

(v) There exists a relationship between the frustrations of the students' parents and 'students' dropout problem'. It is significant also.

(vi) There exists a strong relationship between students' dropout after primary education and teachers' negligence. The relationship is very significant.

The study reveals that the major underlying factors of students' dropout problem are: families' economic condition, families' cultural standard, Consciousness of the students' family, educational standard of the students' families, frustrations of the students' parents and teachers' negligence.

Other factors responsible for students' dropout:

(vii) There exists a light relationship between negligence of the students' neighbours and 'students' dropout problem'. It is not at all significant.

(viii) Though 'students' dropout problem' and lack of administrative initiative is to some extent related but the relationship is not strong at all.

(ix) There exists no significant relationship between 'students' dropout problem' and activities of the members of the voluntary organizations. There exists a negligible relationship between both attributes, though.

(x) The relationship between 'students' dropout problem' and political leaders' activities is not significant but there activities are not significant but there exists a light relationship between both the attributes.

(xi) The students' sexual status (male/female) is independent to 'students' dropout problem'. That means male/female ratio of the students is about the same in the studied area.

(xii) The students' residential status (developed/underdeveloped area) is independent to 'students' dropout problem'. It indicates that such type of students is coming at the same rate from the developed and under developed areas of the studied area.

The study also reveals that the minor underlying factors of students' dropout problem are: negligence of the students' neighbours, lack of administrative initiative, activities of the members of the voluntary organizations and political leaders' activities.

That means the underlying factors of the problem are mainly related to the students' family. More specifically and briefly it is directly related to the poverty of the students' family. Teachers also directly related to the problem. Apart from these other factors (discussed earlier) are indirectly related to such a socio-economic problem.

Implications of the study:

The study reveals a number of drawbacks of the parents, neighbours, administrations, voluntary organizations and political parties of the studied area. The state of affairs lead investigator to several implications for the concerned authorities. Suitable steps should, therefore, be taken by the respective authorities to remove the existing drawbacks. The following recommendations are made in this regard.

1. Parents should be conscious about their children's education and also their children's future.
2. Administration of the studied area has a great responsibility to remove this problem. The poverty of students' family is the major cause of this problem. Administration should take a macro level plan to get rid of the trap from the problem. It may be very effective to solve the problem if the Govt. provides daily stipend to each student at the upper primary level, cutting the government expenditure on meeting, convention, orientation programme, workshop etc for this purpose. It seems to the investigator that the 'daily stipend system' is the best way to solve the problem.
3. Neighbours should play their proper role to solve the burning problem. They should try to make the parents conscious of their children's education.
4. Teachers' should always try to find out the backward students whose attendance is irregular. They should apply interesting teaching technique for ensuring these students' attendance. "Joyful Learning' technique is very convenient in this purpose.
5. Voluntary organizations should take a continuous plan to solve the problem. They should also try to make parents conscious of their children's educations and of the future of their children.
6. Political parties should involve their workers to remove the problem. It seems to the investigator that as the 'dropout students' are not the vote bank of the political parties, naturally they neglect their duties to this problem. They should understand the depth and future of the problem and try to remove the problem.

References:

1. Ali, A. (2014). A comparative study on the dropout problem in Primary Education among Muslim community in relation to gender and economic status. *IOSR Journal of Humanities and Social Science (IOSR-JHSS), 19*(12), 76-78.
2. Chakrabarty, A. K. (2004). Poverty is not the significant cause of Child-Labour-Problem: A case study. *The Management Accountant, 39*(12), 1011-1017.
3. Chakrabarty, A. K. (2005). Causes of dropout and non enrolment after primary education: An empirical study with special reference to the state of West Bengal, India. *The Management Accountant, 40* (5), 637-643.

4. Dash, B. (2014). Analysing the Causes of Girls Dropout from the Schools in Odisha. *Odisha Review, LXXI* (4), 69-72.
5. Gouda, S. & Sekher, T. V. (2014). Factors Leading to School Dropouts in India: An Analysis of National Family Health Survey-3 Data. *IOSR Journal of Research & Method in Education (IOSR-JRME), 4(*6), 75-83.
6. Goyal, J.C. & Chopra, R. K. (1995). *The elementary school teacher-A profile*. New Delhi: N.C.E.R.T.
7. Halawar, S. V. (2019). A Study on School Dropouts and Student Strength of Dharwad District of Karnataka, India. *International Journal of Current Microbiology and Applied Sciences, 8*(02), 1887-1896.
8. Hussain, A. Khattack, N. Khan, A. Bangash, S. & Nazir, N. (2020). An Assessment of the Causes of Drop Outs in Primary Schools of Mountainous Areas of District Swat. *Journal of Managerial Sciences, IV*(1), 45-53.
9. Jana, M. et.al. (2014). Dropout Rate at Elementary Level in Two Primary Schools of Backward Area, Paschim Medinipur, West Bengal: A Comparative Approach. *American Journal of Educational Research, 2*(12), 1288-1297.
10. Mohanty, C. (2018). Dropout in Primary Education: A Case Study of Odisha. *IJRAR-International Journal of Research and Analytical Reviews, 5*(4), i309-i314.

REASSESSMENT OF UNDERLYING FACTORS OF JUVENILE DELINQUENCY IN THE PURVIEW OF COVID-19: A CASE STUDY

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Abstract

This paper is a reassessment of underlying factors of juvenile delinquency in the purview of Covid-19. The study tries to judge the relationship between juvenile delinquency and impact of media, heredity, environment, time, age, school performance, economic status, association etc. The significance of the relationships has been tested. Moreover, attempt has been made to study the influence of the juveniles' sexual status and residential status on juvenile delinquency. It is observed that juvenile delinquency inside the home has been increased during the lockdown period. The study reveals that media has a significant impact on juvenile delinquency. There exists no significant relationship between juvenile delinquency and age, economic status of the juveniles. The study proves that there exists a significant relationship between juvenile delinquency and heredity, environment, time, school performance, association etc. The study also proves that juvenile delinquency and juveniles' sexual status and residential status are not independent.

Keywords: *Covid-19, Juvenile Delinquency, Media, Heredity, Environment, Time, Age*

Introduction:

"Covid-19" or Coronavirus is a notorious virus which causes pandemic worldwide. At present it is not unfamiliar to human being due to its devastation. At first, Covid-19 originates and spreads in a state, Wuhan of China in the months of December 2019. Subsequently it grabs the countries of Europe, America, Africa and Asia miserably. Almost 213 Countries and Territories around the world have reported a total of 7,854,879 confirmed cases of the coronavirus Covid-19 that originated from Wuhan, China, and a death toll of 431,724 deaths till death**.** Top six largely affected countries in the world are USA, Brazil, Russia, Spain, UK and India. No specific drug or vaccine has yet been invented to control the Covid-19. Some restrictions such as lockdown, social distancing, compulsory using of musk, sanitizer, hand washing and maintenance of new life style are the tools to combat against the pandemic. There is no light of hope to arrest the muted virus so far. This unprecedented phenomenon simultaneously creating some social, economical and psychological problems, those have serious impacts on human binges also. Adolescent school students are confined in their home a long time due to lockdown. They are in a trauma which causes some behavioral changes among them. They become violent in some cases. Now the time to reassess the underlying causes of delinquency among the juveniles in the purview of Covid-19.

Growing nature of delinquency among adolescents is a global phenomenon. Countries across the world are suffering more or less from this problem. India can never be the exception to this. It is a matter of great concern. If we give our attention to daily news papers, we will see the offences are happening frequently among the juveniles. The society is changing rapidly in the breeze of globalization. Consequently, society is becoming complex and many social problems are originated. Juvenile delinquency is certainly a social problem. In developing countries like India the acuteness of the problem is very significant. Worldwide spreading of Covid-19 and subsequent imposition of lockdown aggravated the problem among the adolescents seriously. They are becoming more delinquent inside the home. Now the time is to reassess the causes of the problem and find out the remedies.

Review of Literature:

Juvenile delinquency is a subject of social science in broad sense. Many research works have been conducted on the issue in India and also abroad before occurrence of this pandemic Covid-19. Few of them are being highlighted below:

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World Youth Report (2003) indicates that the juvenile who receive less familial supervision, or who live in dysfunctional family settings or in disadvantaged families have more chances of getting involved in delinquent behavior.

He Len Chung and Laurence Steinberg (2006) indicates that when the neighborhood ties are weak and the social organization factors are not effective, the social control over the members of the society becomes weak, thus leading to delinquent tendencies. Along with the weak neighborhood, ineffective parenting and association of the youth with deviant peers leads to higher rates of offending.

According to Psacharapoulos (2007) early school leaving and criminal behavior of young people are two important concerns in every community as they can result in individual and public losses. School dropout is associated with lower economic growth, youth unemployment, decreases in gross income and with higher crime rates as well.

Piquero et al. (2007) and Bosick (2009) proves that the age-crime curve shows that the peak age of criminal behavior is in adolescence, between age of 15 and 19.

K. S. Williams (2012) explains delinquency from psychological view point, which support the Freudian concepts of id, ego and super-ego. When the id becomes too strong, and the super- ego becomes weak the ego develops into anti- social person.

Ombato, John Onyango et al (2013) concludes that social factors such as poverty and low education are also responsible for juvenile delinquency. Habits of substance abuse also make the youth vulnerable to offending. Broken families are directly related to higher rates of delinquency.

The study of female inmates in Bangladesh by Maruf et al (2015) reveals that there can a strong link between psychological condition of the youth and delinquent tendencies. Very high incidence of psychiatric disorder among the offenders of Female Juvenile Center, showed high incidence of substance abuse.

S. Choudhary (2017) categorizes the causes of Juvenile delinquency into three groups: 1.Biological 2.Socio-Environmental and 3. Psychological, Physiological and personal. Juvenile delinquency is an ongoing problem in today’s society, there needs to be more programs created in order to correct this issue.

D. Agarwal (2018) tries to find out the underlying causes of juvenile delinquency and indicates increasing involvement of the juveniles in heinous crimes. To contain the problem of juvenile delinquency in India, the Act pertaining to Juvenile Delinquency has been amended and now trial of juveniles involved in heinous crimes is held as adults.

In the present article, an attempt has been made to reassess the causes of juvenile delinquency during the lockdown imposed subsequently after the outbreak of Covid-19. So far knowledge goes such type of research work is scarce in the studied area till date. If the causes are detected specifically and are dealt with properly, it may be possible to solve the problem in near future.

Objective of the study:

The objectives of the study are:

1. To study the relationship between juvenile delinquency and

a. the impact of media

b. the heredity of the family

c. the environment of living

d. the impact of time

e. the impact of age

f. the school performances

g. the economic condition

h. association of the juveniles.

2. The significance of the relationships has also to be studied

3. To study the influence of the juveniles' sexual status and residential status on juvenile delinquency.

3. To assess and consider the heredity, environment, economic condition of the juveniles' families, theirs association, schools' performances and age of the juveniles.

4. To judge, whether the variances of opinion of guardians and also teachers regarding the impact of media on juvenile delinquency are consistent or not.

Hypothesis:

In order to realize that objective of the study, the following null hypotheses have been formulated.

(1) H_o: There exists no significant relationship between juvenile delinquency and (a) media, (b) environment, (c) heredity, (d) time, (e) age, (f) performances, (g) economic condition, (h) association

An alternative hypothesis formulated is

H_a: There exists significant relationship between juvenile delinquency and (a) media, (b) environment, (c) heredity, (d) time, (e) age, (f) performances, (g)economic condition, (h) association

(2) H_o: The variances of opinion of guardians and also teachers regarding impact of media is significantly consistent.

An alternative hypothesis formulated is

H_a: The variances of opinion of guardians and also teachers regarding impact of media is significantly inconsistent.

(3) H_o: Sexual status of the juveniles and juvenile delinquency are independent to each other .

An alternative hypothesis formulated is

H_a : Sexual status of the juveniles and juvenile delinquency are dependent to each other.

(4) H_o: Residential status of the juveniles and juvenile delinquency are independent to each other.

An alternative hypothesis formulated is

H_a: Residential status of the juveniles and juvenile delinquency are dependent to each other.

Delimitation:

The study is confined to the jurisdiction of Burdwan Municipality under the district of Purbabardhaman, West Bengal, India. The present study is based on only 21 samples of juvenile delinquent of the studied area. The major portion of the study stands on the opinion of 21 teachers of these sample juveniles.

Description of Attributes:

1. Juvenile Delinquency: In the present study it has been selected as the only dependent attribute. Juvenile delinquency means here the crimes or offences committed by the juvenile at the period of adolescence. Destructive activities, physical and mental torture to their associates, blood shed, stealing, eve teasing, use of slang, audacity, disobedience, etc. are the examples of juvenile delinquency. Such types of offences are increasing in recent time all over the world.

A relationship between juvenile delinquency and impact of media, heredity, environment, time, age, performance, economic status, association may, therefore, be expected.

2. Media: In the present study it has been selected as independent attribute. Media means here both the audio visual and print media. Television., Cinema, Video etc are under the audio visual media and newspapers, magazines, journals are termed as print media. It is a fact that the impact of audio visual media as well as print media on society is very significant.

A relationship between juvenile delinquency and impact of media may, therefore, be expected.

3. Heredity: In the present study it has been selected as an independent attribute. Heredity is the process by which the characteristics of parents are transferred to their next generation. It is a continuous biological process. It means if the parents genetically inherit the characteristic of juvenile delinquency, it must be transferred to their sons and daughters.

A relationship between juvenile delinquency and impact of heredity may, therefore, be expected.

4. Environment: In the present study it has been selected as an independent attribute. Here nonphysical environment is explained. It includes sociological, cultural, economic, political, educational, religious atmosphere of the area where the juveniles are living in. Environment both inside the home and outside the home, is considered here.

A relationship between juvenile delinquency and impact of environment may, therefore, be expected.

5. Time: In the present study it has been selected as an independent attribute. Time means a period required for changing a society. It is consensus that the nature and habit of human being changes with the changing of society. So time plays a vital role in changing the activities of human beings.

A relationship between juvenile delinquency and impact of time may, therefore, be expected.

6. Age: In the present study it has been selected as an independent attribute. Here age means the impact of chronological age of juveniles on their body and mind. It is a fact that a radical change takes place in the body and mind of juveniles at the period of adolescence.

A relationship between juvenile delinquency and impact of age may, therefore, be expected.

7. Performance: In the present study it has been selected as an independent attribute. Performance means academic performances of the juveniles. It includes results of school examinations, co-curricular activities etc. Continuous poor performances in school evaluation system create frustration in the mind of juveniles and may, sometimes, be the cause of juvenile delinquency.

A relationship between juvenile delinquency and impact of poor performances may, therefore, be expected.

8. Association: In the present study, it has been selected as an independent attribute. Association means here the close companion of juveniles. In broader sense, association means the friends, parents, school teachers, private tutors, close relatives, near neighbors of the juveniles.

A relationship between juvenile delinquency and impact of association may, therefore, be expected.

Methodology:

The study has been conducted on the juvenile delinquency within the jurisdiction of Burdwan (23.2324° N, 87.8615° E) Municipality in the district of Purbabardhaman, West Bengal, India. 21 delinquent juveniles including 7 female have been selected at random assuming true representatives of the total population. All sample juveniles are school students, belonging to the age group of 13 years to 16 years. 21 teachers of these sample juveniles are choosed who are closely associated with them. 21 guardians of these juveniles are picked up with due sincerity.

Selection and Description of Tools:

Primary data have been collected by the investigator, in person, using whatsapp from the 21 teachers and 21 guardians on the basis of two types of questionnaire. Data have also been collected from the sample juveniles by direct interview conducted through telephone. These are discussed below:

(A) **Questionnaire for Teachers:** Questionnaire for teachers is prepared to get the opinion of teachers of the sample juveniles about the degree of delinquency, impact of media on their mind, environment where they live in, their heredity, impact of time and age on their mind, their academic performances, economic condition of their family and their association. It is a big sized, structured, close ended questionnaire. There are three scales of opinions (high, medium, low/good, moderate, bad) having different scores for each of them. The medium of questionnaire is Bengali for easy comprehension and communication.

(B) **Questionnaire for Guardians:** Questionnaire for guardians are prepared to get the opinion of guardians of the sample juveniles about the impact of audio visual and print media on the mind of juveniles. They also asked about whether the juveniles are under the coverage of media or not. It is a short sized, structured, close-ended questionnaire. There are three scales of opinions (high, medium, low) having different scores for each of them. The medium of questionnaire is Bengali for easy comprehension and communication.

(C) **Direct Interview:** Direct interview has been conducted by the investigator through telephone to the sample juveniles and their teachers to collect more information about the said problem. Juveniles are asked about the cause of delinquency and reluctance in study, their families, environment where they live, whether they are under the coverage of media or not, association of them, school performances etc. Teachers are asked about the aspects viz. juveniles' sexual status, juveniles' residential status, their opinion regarding the cause and acuteness of the problem. They are also asked about the influence of sexual status and residential status of the juveniles on juvenile delinquency.

Collection of Data: The data have been collected directly from 21 juveniles, 21 teachers and 21 guardians through telephone & whatsapp by the investigator himself. Sample juveniles, their teachers and guardians are requested to give their natural, free and frank responses to the queries. They are taken into confidence and are told that the information is required only for research purpose and will be strictly kept secret.

Tabulation and Scoring of Data: The data which have been collected through two type of questionnaire are compiled on suitable tabulation sheets which are also prepared for the purpose.

The data obtained from teachers and guardians are scored, keeping in mind the 'Likert Scoring System' as follows:

(A) **Teachers Questionnaire:** In the teachers questionnaire there are as many as eight questions relating to their opinion about the juveniles' family, impact of media, age, association and performance on juveniles mind. These questions are subjected to answer one of the three options – high, medium, low/good, moderate, bad. Score 10 is allotted to each 'high'/ 'good' opinion. Score 6 is allotted to each 'medium'/ 'moderate' opinion and score 4 is allotted to each 'low'/ 'bad' opinion.

(B) **Guardians Questionnaire:** In the guardians questionnaire there is only one major question relating to the impact of audio visual media and also print media on the mind of juveniles. The question is subjected to answer one of the three options high, medium, low. Score 10 is allotted to each 'high' option. Score 6 is allotted to each 'medium' option and score 4 is allotted to 'low' option.

Statistical Technique Used:

The data are tabulated and analysed keeping in view the objective spelt out and hypothesis formulated. Rank Correlation Co-efficients(ρ) are calculated to study the relationship between juvenile delinquency and (1) impact of media, (2) heredity, (3) environment, (4) time, (5) age, (6) performance, (7) economic condition and (8) association. In order to judge the significance of these relationships 't-value' of rank correlation co-efficient (ρ) have been computed. Test has been made at 1% significance level in general. Chi-Square (χ^2) test has been used for independence of the attribute – juvenile delinquency and (i) sexual status of the juveniles, (ii) residential status of the juveniles. The test has been made at 1% significance level. 'F-test' has also been used to study whether the variances of opinion of teachers and also guardians regarding impact of media in the mind of juveniles are significantly consistent or not. The test has been made at 5% significance level.

Findings:

Table 1 shows the result of all statistical methods have been used to analyse the collected data which outcomes the following findings:

(1) There exists a high degree of positive relationship between juvenile delinquency and media. The relationship is significant.
(2) There exists a notable relationship between juvenile delinquency and heredity of juveniles. The relationship is significant also.
(3) There exists a significant relationship between juvenile delinquency and impact environment in the mind of juveniles.
(4) Juvenile delinquency and impact of time in the mind of juveniles are very closely related. The relationship is not only close but also significant.
(5) There exists little relationship between juvenile delinquency and age of juveniles. The relationship is insignificant.
(6) Poor school performances of juveniles are a cause of juvenile delinquency. Because the relationship between two attributes is significant.
(7) Economic condition of the family and juvenile delinquency is not significantly related to each other. That means juvenile delinquency does not necessarily depend upon families' economic condition.
(8) There exists an important relationship between juvenile delinquency and impact of associations on the mind of juveniles. The relationship is very significant.
(9) The opinion of teachers and also guardians regarding the impact of media on juveniles is significantly consistent. It means the opinion of both is more or less the same. It confirms the impact of media on juveniles is not significant at all.
(10) Juveniles' sexual status (Male/Female) is not independent of juvenile delinquency. That means male/female ratio of delinquent juveniles differs in the studied area.
(11) Juveniles' residential status (developed/underdeveloped) is not independent to juvenile delinquency. It indicates percentage of delinquent juveniles which varies between developed and underdeveloped region of the studied area.

Conclusions:

Juvenile delinquency has been increased during the lockdown period. The study reveals that impact of media in the mind of juveniles is significant during the lockdown period, caused due to outbreak of Covid-19. There exist a high degree of positive relationship between media and juvenile delinquency. It also reveals that most of the sample juveniles under the coverage of media both print and electronic. The opinion of the teachers and the guardians of sample juveniles regarding impact of media on juvenile delinquency support the above hypothesis. Similarly, age and economic status of the juveniles has no significant impact on juvenile delinquency. Though sometimes it is presumed that the impact of age and economic status of the juveniles are two important causes of juvenile delinquency, but the study proves that the presumption is not true fully. Because all tender aged having poor economic condition does not become delinquent. The investigator identified 6 major causes viz. media, heredity, environment, time, school performances, association which are significantly responsible for this problem. It is also observed that the problem varies in respect of juveniles' sexual status and residential status.

Implications of the Study:

The study reveals a number of drawbacks of the guardians, teachers and administrations of the studied area. The state of affairs led the investigator to several implications for the concern authorities. Suitable steps should, therefore, be taken by the respective authorities to remove the existing drawbacks. The following **recommendations** are made in this regard.

(i) Guardians should be conscious of their children's education and also their children's future. Restricted use of media by the juveniles is permissible. They have to sacrifice many things for the development of their children. In some cases the advice of psychologist or psychiatrist may be taken.

(ii) Central Government, State Governments and local administration have a great responsibility to remove this problem. Administration should try to make the guardians of the juveniles conscious of their children's proper education. Administration should also take a macro level plan to get rid of the trap from the problem.

(iii) School teachers and private tutors should take necessary care for the backward and maladjusted students whose school performances are very poor. Special teaching method is recommended for these students to create interest among the juveniles.

(iv) Bad associations of the juveniles must be eliminated. The role of guardians and teachers is very important in this regard.

References:

Agarwal, D. (2018). Juvenile Delinquency in India- Latest Trends and Entailing Amendments In Juvenile Justice Act. *People: International Journal of Social Sciences* , *3* (3), 1365-1383, https://dx.doi.org/10.20319/pijss.2018.33.13651383.

Amove, R.F., Dewan, S.S., (1976). *Educational Television*. New York: Praeyer Publishers.

Choudhary, S. (2017). Juvenile delinquency: Elementary concepts, causes and prevention. *International Journal of Humanities and Social Science Research, 3*(5), 52-59.

Chung, Le Hen, and Lawrence Steinberg (2006). Relations between Neighborhood Factors, Parenting Behavior, Peer Deviance and Delinquency among Juvenile Offenders. *Development Psychology*, *42* (2), 319-331, https://doi.org/10.1037/0012-1649.42.2.319.

Gill, Rina. (1986). Television for Children in India. *Social Change* , 16, (1), 46.

Juvenile Delinquency. (2003) World Youth Report. 189- 211. Available at www.un.org.

Kanwar & Chauhan. (2004). Teenagers' vision about Educational Television Programmes. *Journal of Indian Education*, *NCERT*, *XXIX* (4), 89-96.

Levinsohn, F. H. (1977). Is TV really the plug in drugs?. *School Review*, *85* (4), 566-76.

Maruf, Muntasir, M., Rhaman, F. et al. (2015). Socio- Demography, Substance Abuse and Offence Among Inmates with Psychiatric Disorder in Female Juvenile Center, Bangladesh. *PEOPLE: International Journal of Social Science*, *1* (1), 500- 508.

Mayuri, K and P. Mohite. (1992). Television – Children's viewing patterns. *Social Change*, *22* (4), 55-61.

Ombato, John Onyango, Gerald O. Ondick et al. (2013). Factors Influencing Youth Crime. *International Journal of Research in Social Sciences*, *1* (2), 18- 21.

Sheley, J.F. and Ashkins C.D. (1981). Crime News. *Public Opinion*, *45*(4), 49-56.

William, T. M., (1981). How and what do Children from television. *Human Communication research*, *7*(2), 180-192.

Williams, K. S. (2012). *Criminology*. U. K: Oxford University Press.

https://www.worldometers.info/coronavirus/?utm_campaign=homeAdvegas1?%20

Table 1. Results of Statistical Analysis

A. Juvenile Delinquency(J.D) vs. Media.	.75	4.85	2.86						Ha
B. J.D. vs. Heredity.	.74	4.82	2.86						Ha
C. J.D. vs. Environment	.67	3.95	2.86						Ha
D. J.D. vs. Time	.71	4.35	2.86						Ha
E. J.D. vs. Age	.25	1.12	2.86						Ho
F. J.D. vs. Performance	.69	4.17	2.86						Ha
G. J.D. vs. Eco. Condn.	.31	1.42	2.86						Ho
H. J.D. vs. association.	.76	5.17	2.86						Ha
I. Tea. Op. vs. Guardain. Op. reg. Imp. Of Media.	-	-				1.21	2.91	V_1=12/ V_2=10	Ho
J. J.D. vs. Juv. Sex. Sta	-	-		10.01	9.21			2	Ha
K. J.D. vs. Juv. Res. sta.	-	-		11.07	9.21			2	Ha

ONLINE VERSUS TRADITIONAL ASSESSMENT IN HIGHER EDUCATION

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Abstract

Assessing higher education students' knowledge has been subject to criticism for many years, hence the wide array of suggestions of evaluation methods put forward by scholars and teachers alike. The shift to online teaching has brought along the shift to online assessment, which, if carefully performed and well monitored and followed-up, can prove to be a useful means for bringing to a standstill the memorization of information in isolated and unlinked chunks, most of which were to be quickly forgotten, shortly after the exam. This paper aims to make a comparison between traditional and online assessment and to outline the benefits and drawbacks of each, based on some students' point of view. Notwithstanding the efficiency and reliability of old-paradigm, time-constrained written tests, we aim to suggest a number of ways in which assessment can be improved.

Keywords*: e-assessment, motivation, memorization, leaners' knowledge, theory-based, authenticity*

JEL classification*:* I 121

An overview on assessment

Besides other universal teaching competences, such as good knowledge of subjects and curricula, efficient lessons planning, competent mastering of technology in the classroom, the assessment process is extremely important. Assessment, in its most varied forms, has always represented a complex process in education, likely to emphasize not only the amount of knowledge learners have acquired but also the quality of such information as well as hints needed to continuously enhance learners' performance. According to Allen H. Miller et. al. the 3 main reasons assessment is undertaken in higher-education are: "to provide systematic indications of the quality of students' learning for both teachers and students; to maintain standards in professional education and higher education generally; to motivate students throughout their studies" (Allen H. Miller, 2013, p. 4). Other roles assessment plays are that of providing useful data on learners', i.e. their level of performance among the others, the learning style, the trigger in learning, also helping to improve the teaching process. Its importance in the teaching and learning process is huge, as learners' future sometimes depends on passing or failing an exam. That is why, acquired knowledge assessment has been subject to criticism for many years, one consequence thereof being a wide variety of evaluation methods implemented and used nowadays.

Either formative (at the end of a lesson or unit) or summative (at the end of a course or term), traditional classroom assessment used to include standardized time tests with one single right answer, consisting in multiple-choice tests, true/false tests, short answers and essays. Such means of assessment have already been criticised for certain drawbacks such as: focusing more on the outcome (the score) rather than on the learning process itself, lack of flexibility in designing the test format, the score itself type of feedback, the high probability of giving decontextualized information.

The emergence of world widely practiced online assessment

Involving new forms of technology and learning together, the online education, world widely imposed due to COVID 19, has also come with a new form of assessment: the online assessment or e-assessment. This new form of assessment involves new processes of examining students and new strategies of assessment. Students undergo online assessment on their own devices, basically at home. As they cannot be checked upon during the assessment, the most serious concerns occurring among teachers is the increased possibility of cheating. In their attempt to "beat the system" and pass all exams with as little effort as possible, students tend to become outcome-oriented instead of task-oriented. For such students high grades are the ultimate goal, the

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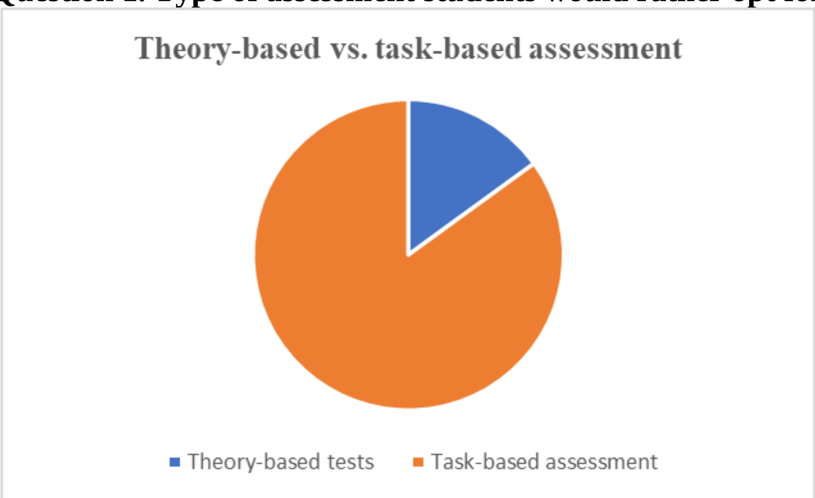
actual task to be done in the exam being only the necessary medium for achieving their goal. Under such circumstances, traditional methodologies of assessment are no longer valid and applicable in online assessment. With the Internet considered to be one of the catalysts for cheating[1], a common trend has emerged in the process of assessment, i.e. preparing the tasks so as to avoid, or at least to prevent cheating, thus bringing to a standstill the memorization of information in isolated and unlinked chunks, increasing to a certain extent students' benefits on a long-term basis. Consequently, task-based simulations, where students must use certain recommended resources and their thinking skills to solve tasks, have replaced the traditional forms of assessment, with students seated in a large lecture room, supervised by an invigilator.

One advantage of such task-based simulations is that the task must be as realistic as possible. Other adaptive e-assessment strategies could include open ended questions, which do not have pre-defined, theory-based tasks, or problem-solving case studies. Students' knowledge can be thus checked by encouraging learners to solve real-life cases. Moreover, by randomizing questions, using pools of questions with different variables, each student has a unique paper, reducing thus the probability of cheating. Open-book or open-notes exams could also be a valid alternative, allowing candidates to consult a standard set of resource materials and having them informed in advance – in case of hard copies – or on the spot – in case of online resources. Such a technique would mean no emphasis is put on students being required to remember facts, formulas, figures, focusing instead on their ability to look for and synthetize important information, on their ability to find their way round the contents of books or larger chunks of data from multiple online resources. Designed as such, assessment would focus on verifying students' capability of retrieving information, of responding to tasks efficiently and of selecting the best problem-solving strategies.

In an attempt to see the effectiveness of e-assessment against traditional classroom assessment, the survey conducted focused on the students' satisfaction, measured in terms of the four most important criteria of assessment, i.e. validity, reliability, authenticity and transparency[2]. The focus group consisted of 40 students, 20 freshmen and 20 seniors, including both male and female, aged 18-35. For personal information security reasons, respondents did not have to provide their names and the questionnaire was an informal one, including 4 questions.

Question 1. Type of assessment students would rather opt for



[1] Acc. to A. E. G. Roldán et al., —Pedagogical approaches for e-assessment with authentication and authorship verification in higher education, British Journal of Educational Technology, vol. 50, no. 6, 2019, available at https://bera-journals.onlinelibrary.wiley.com/doi/full/10.1111/bjet.12733.

[2] Philip Race, Sally Brown, Brenda Smith (2005), 500 Tips on Assessment, Tylor and Francis E-Library, p. 15.

Only 15% percent of respondents were in favour of traditional knowledge checking tests, so more than 50% are supporters of a more practical kind of assessment.

Depending on their choice, respondents were further asked to provide at least one advantage of their favourite form of assessment and/or one drawback of the other form of assessment. Only 17 respondents provided such answers and some of the most relevant are presented below:

"I think online assessment is more efficient as it measures how good we are at finding proper, logical answers to real problems we can face at our future jobs. When you memorize something, you cannot see the practical part in it, and when faced with actual problems, you cannot use the definitions you have learnt."

"Unfortunately, traditional written tests used to check our acquired knowledge only *represent a snapshot of our performance, but they are not a reliable indicator for future stakeholders."*

"With on-the-spot task-based simulations our teachers can be sure we will not cheat; they can be sure the solution found belongs to the candidate being assessed and not to someone else."

"I hate memorizing and I think it is a waste of time. I acquire lots of useful knowledge when I do research on my own and I am encouraged to think critically as it happens in on-the- spot task-based simulations we do online."

"Projects, portfolios, practical works are my favourite. I can work systematically, structure my information, do a lot of research, and more than this, take time to think about the topic as I am not time-constrained."

"If I have to sit in an exam at the end of the term I end up learning just 2-3 days before the exam. When I start learning for the next exam I will have already forgotten what I have learnt before. When it's about something more practical, surveys, giving presentations, case-studies, surveys, I make steady progress and I gain more knowledge at the end."

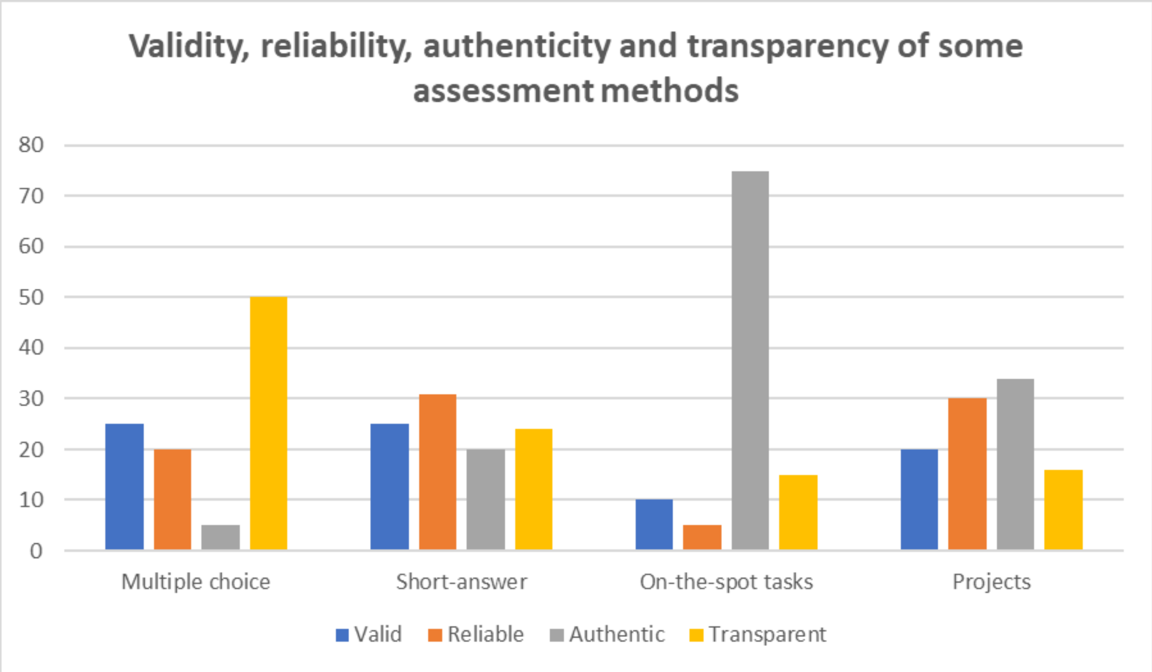
"*Memorizing encourage surface learning, so it is good such techniques cannot be applied in e-assessments."*

Based on student respondents' answers to this question, here are the main benefits of modern online assessment:

- The score/mark is known instantly, after a click of the mouse;
- Online assessment encourages independent learning;
- Online quizzes teach students how to manage their time efficiently;
- Learners become more responsible of the intended learning outcome;
- Students are motivated to study continuously;
- Critical thinking and debating skills are developed and improved.

Nevertheless, some of the respondents mentioned that exam anxiety is felt stronger, because students lack the competitive environment featuring large lecture rooms, where everybody sits in for the same test.

Question 4. Validity, reliability, authenticity and transparency



Open-book exams with on-the-spot tasks are considered by respondents as the most authentic, with 15 respondents giving the highest score. Multiple-choice tests are the most transparent for 2 respondents (although they have a total score of 50 for transparency). The presentation of projects and portfolios is considered as a most valid assessment only by one respondent.

Conclusions

Considering the recent shift in education needs and requirements, assessment should meet the 3 main purposes higher education will always have: academic, professional and social, i.e. extending and passing on knowledge in the context of an intellectual culture and subject to the government policy and labour market needs, producing qualified individuals who are fitted to enter particular professions and who have the attitudes and capabilities for lifelong learning (Allen H. Miller, 2013, p. 15). In the context of a complex overhaul of the curricula in higher-education, with a main focus on problem-based learning, assessment and course delivering will have to meet new challenges. Another aspect to be considered is the enrolment of those students who want to expand their knowledge in different fields with no particular interest in obtaining a qualification following their studies, as many of them already possess a degree.

All of the above taken into account, assessment will no longer have the only goal of verifying students' acquisition of knowledge as it will equally have to consider inquisitiveness, knowledge of where to look for information, the ability to synthesize both the knowledge already acquired and the new information, the ability to find solutions and make decisions, the ability to work in a team, communication and people skills.

Some of the most frequently encountered concepts to be considered related to learners' assessment are the accuracy, objectivity, responsibility, fairness, preparedness of those in charge with assessing. Authenticity is strongly related to students' motivation, as when students perceive an assessment as authentic, they feel more motivated to prepare, considering they have the opportunity to gain more professional skills which will benefit them in the future.

Bibliography

1. A.E.G. Roldán et al., —Pedagogical approaches for e-assessment with authentication and authorship verification in higher education, British Journal of Educational Technology, vol. 50, no. 6, (2019), available at https://bera-journals.onlinelibrary.wiley.com/doi/full/10.1111/bjet.12733 , accessed on April 30th, 2021
2. Allen H. Miller, Bradford W. Imrie, Kevin Cox (2013), Student Assessment in Higher Education, A Handbook for Assessing Performance, Routledge, New York.
3. Fulcher, Glenn (2010), Practical Language Testing, London, UK: Hodder Education.
4. Gibbs, Graham (2010), Using Assessment to Support Students' Learning, Leeds, Leeds Metropolitan University.
5. McKay, Penny (2006), Assessing Young Language Learners, Cambridge, Cambridge University Press.
6. Philip Race, Sally Brown, Brenda Smith (2005), 500 Tips on Assessment, London, Routledge.
7. Ramsden, Paul (1992), Learning to Teach in Higher Education, London, Routledge.
8. Trowler, Vicki, and Paul Trowler, Student Engagement Evidence Summary, York Higher Education Academy, available at https://www.heacademy.ac.uk, accessed on 2nd January 2022.

Questionnaire sample

For personal information security reasons, respondents did not have to provide their names and the questionnaire was an informal one, including 3 questions.

1. Which form of assessment do you consider to be more advantageous for you, as learners?

A. Traditional, predefined, theory-based tests
B. Modern means of assessment (e.g. task-based simulations, projects, practical work, portfolios, problem-solving case studies etc.)

2. Mention at least one advantage of your favourite assessment form (online or traditional depending on your choice above)

3. Mention at least one drawback of your favourite assessment form (online or traditional depending on your choice above)

4. Evaluate the following forms of assessment in terms of the four most important criteria of assessment, i.e. how valid, reliable, authentic and transparent they are (1 is the lowest score and 5 the highest):

	Multiple-choice questions	Theory-based short-answer tests	Open-book exams (on the spot tasks)	Projects/ Portfolios/ Presentations
Valid				
Reliable				
Authentic				
Transparent				

CORPORATE BOARD ATTRIBUTES AND EARNINGS MANAGEMENT IN NIGERIAN BANKING SECTOR

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ABSTRACT

Every business entity has a common goal of achieving sustainable development, particularly in the areas of growth and profitability indices. Earnings manipulation by corporate managers may hinder the attainment of this lofty target. The study examined the relationship between corporate board attributes and earnings management in Nigerian banks for the period 2009-2018. The dependent variable (earnings management), was derived using modified Jones model's discretionary accruals, while four corporate board attributes (size, independence, gender diversity and board meetings) served as independent variable. The Random effect generalised least square regression results reveal a negative and significant relationship between board size, board independence and earnings management. Board gender diversity and board meetings, however, have no significant association with earnings management. It is recommended that corporate governance legislation should support large number of directors (subject to a manageable size) and more of external directors sitting on corporate boards.

Keywords*: Agency cost, Board of directors, Corporate governance, Earnings management, Nigeria*

Introduction

The past four decades have witnessed series of financial reporting scandals (such as Enron and Worldcom in the USA and Cadbury, Oceanic Bank and Skye Bank in Nigeria), which have suggested the existence of ethical failures from weak corporate governance mechanisms in place by these companies. These events have seriously impacted negatively on the reliability of financial reports produced by corporations for the stakeholders, capital market and the public, thereby affecting the sustainability development of these corporations.

Weak corporate governance structure affords managers the opportunity to engage in behaviour that would deplete reported earnings quality (Gonzalez & Garcıa-Meca, 2014). This manifests in the form of financial statement fraud perpetrated by management through creation of distortions in the reporting of earnings (otherwise known as earnings management, creative accounting, big bathing, or financial statement manipulation). This action by corporate managers has further questioned the effectiveness of the system of corporate governance mechanisms in checkmating managerial opportunistic behaviour.

The behaviour of managers in involving in earnings management can be attributed to the separation of ownership and control couple with need to produce and report financial statements that shows hat they perform better in the reporting year. Campello, Graham and Harvey (2011), and Habib, Uddin and Islam (2013) submit that the quest to conceal poor performance may propel management to opt for accounting choices that increase reported earnings as the reported earnings plays a unique role in attracting investments of fund from investors (Norwani, Mohamad & Chek, 2011). Musa and Muhammad (2018) suggest that wrong choice of accounting policy triggered by the laxity which managements enjoy in the choice of accounting policy and coupled with the deficiencies in laws regulating financial reporting preparation and presentation as well as defective corporate governance practices further afford management the opportunity of engaging in financial reporting malpractices. In order to curtail the activities of management of corporations in reducing earnings management to the barest minimum will require additional agency cost of monitoring on the part of the owners (shareholders). Mahrani and Soewarno (2018) observe that good corporate

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governance is a major requirement for effective and efficient running of organisations like banks for the achievement of depositors' confidence and equal treatment of all stakeholders.

In an attempt to address the poor status of corporate governance practices, various governments have introduced series of corporate governance reforms that aimed at strengthening corporate governance practices for improved accountability, transparency, adequate disclosure, financial statement reporting quality and sustainability in firm growth and profitability. In Nigeria, the various regulatory agencies have developed corporate governance codes for deposit money banks and public listed companies. Despite series of reforms that have been introduced in Nigeria, fraudulent practices are still predominant among Nigerian banks (Omoye & Eriki, 2014 and Soyemi, Oluyemi & Adeyemi, 2020). A typical recent example is Skye Bank which collapsed principally from weak corporate governance practices.

In the empirical literature, the bulk of evidence suggests a mixed and inconclusive association between governance attributes and earnings management. In related Nigerian studies, there were conflicting proxies used in capturing the independent variable (board attributes) and inappropriate methodologies which perhaps resulted in mixed empirical outcomes. For instance, studies conducted by Uwuigbe *et al*., (2018), and Shiyanbola, Ogbebor, Okeke and Okunade (2019) revealed no significant influence of board attributes on earnings management. Obigbemi *et al*., (2016) and Mominah (2017) however reported significant influence. These studies also made use of pooled ordinary least square (POLS) technique as analytical tool, a method due to its numerous limitations, is considered inappropriate for this type of study.

Limited research work in this area still exists in Nigerian banking environment. This study is therefore premised on the fact that series of corporate scandals that involved financial statements manipulation arising from deficient system of governance have been seen over time in the Nigerian financial sector and this had led to the collapse of many banks despite various codes of corporate governance that are in place.

The study has its objective of assessing the influence of four attributes of corporate boards (size, independence, gender diversity and meetings) on earnings management in Nigerian listed banks. It attempts to improve on the gaps identified in prior literature, especially those ones conducted in Nigeria, by using data from ten deposit money banks for the period of ten years (2009 - 2018) and with adoption of appropriate analytical tool.

The remaining part of the paper is organised in the following manner: review of literature is presented in section 2. Methodology adopted for the study is in section 3. Section 4 discusses research findings, while the conclusion and recommendations are treated in section 5.

REVIEW OF LITERATURE

Earnings management

Earnings management refers to the manipulation of financial reporting process by management in an attempt to achieve certain incentives (Olaoye & Adewumi, 2019). Healey and Wahlen (1999) refer earnings management as a reported earnings situation that involves the use of managerial discretion to structure transactions in such a way that will tamper with financial statements with intention to mislead the users or influence its contractual outcomes. The alarming cases of reported earning manipulation have been an issue of great concern to investors and regulators in the world over particularly in Nigeria and has raised investors scepticism on the credibility of financial reports of companies (Musa & Muhammad, 2018). This act has also affected the sustainability development of hitherto viable business enterprises.

Zhou and Chen (2004) suggest three reasons why corporate managers indulge in earnings management practices. These are signalling, income smoothing or earnings management and capital management. Regarding signalling factor, Wahlen (1994) opines that banks used discretionary loan loss provision to indicate higher earnings in following period. Earnings management proponents (such as Rivard, Bland & Morris, 2003) submit that loan loss provision is increased during periods of higher earnings under the assumptions of smoothing of income to enhance financial performance. The capital management factor indicates that management utilises loan loss provision to influence regulatory capital unjustly.

Attributes of corporate governance

Corporate governance is simply the various mechanisms put in place by investors in an organisation which seek to protect them against opportunistic behaviour of the internal management (La Porta *et al*. 1999). In most of codes of corporate governance issued by various governments around the world, there are some attributes that are included as part of principles that have the tendency to curtail the activities of corporate management in expropriating the owners of the business as well as preventing "window-dressing" (earnings management) of the financial reports to the barest level. Four of such attributes, which incidentally form the focus of the study's empirical analysis, are hereby discussed in turn.

Board size

This comprises the executive and non-executive/ independent directors sitting in corporate boardrooms. According to Fama and Jensen (1983), board size should be determined in such a way that will reflect the scope and complexity of its production process implying that larger and complex organisations will require larger board size and vice versa. There exist two main opposing views on board size and board effectiveness. The first group argues that smaller board size is more effective than larger ones due to difficulty of coordination (Yermack, 1996), which may in turn affects presentation of quality financial reporting. The opposing view suggests that a large board is more effective as they are able to leverage on informational and expertise of members (Dalton *et al*., 1999 and Xie, Davidson & DaDait, 2003).

Board independence

The structure of the board that is dominated by sufficient non-executive directors, who bring independent judgement to the foray, is generally believed to be associated with lesser earnings management practices. Shafi, Adamu, Ooi and Kwong (2020) stress that non-executive directors are independent of managers and they contribute their wealth of experience to the firm by diligently carrying out their oversight functions. For effective board functioning, the board must be balanced. A balanced board is one that is not dominated by executive directors but also comprise of non- executive directors who are independent of managers and shareholders. Independent board, according to Klein (2002), is one of the effective tools in monitoring the accounting process. This is expected to enhance accounting quality by reducing all forms of financial reporting malfeasance to the barest minimum., thereby achieving sustainable growth of the corporation.

Board gender diversity

Women are generally perceived to be associated with less fraudulent practices. The inclusion of women on corporate boards may likely reduce the opportunistic tendency of appointed managers and enhance accounting quality. In corporate management, women are found to be more risk averse as they are less likely to take risks and act unethically in a bid to gain private benefits (Gul, Fung & Jang, 2009). The inclusion of women on the board may therefore serve as a control mechanism towards reducing earnings management from occurring and improving the quality of financial statements and enhancement of sustainable development of corporate entities.

Board meetings

Board meeting is the frequency at which the board of directors hold meetings to deliberate on important issues of concern to the entity. As financial reporting is among the core responsibility areas of management, frequency of meetings can help in improving financial reporting quality. This will ultimately reduce to some extent the occurrence of manipulation of financial statements and achieving a sustainable development of business enterprises.

Theoretical framework

A theory that perhaps best explains board attributes - earnings management nexus is Agency theory, as proposed by Jensen and Meckling (1976). The theory suggests that there is tendency for the management (agents) to involve in some activities that will profit them as managers but which are against the interest of the owners (principal). One of such activities is involvement in financial accounting manipulations (earnings management) with intention of dubiously encouraging the shareholders and potential investors alike to invest in the business, despite the fact that the entity is not operating at a level presented by the management.

Fama and Jensen (1983) posit that corporate governance structure assists in monitoring managerial behaviour towards reducing agency problem. In line with this proposition, several studies have documented significant influence of corporate board attributes on the integrity of accounting information (Patelli & Prencipe, 2007 and Hashim & Devi, 2008).

Empirical review

Mominah (2017) assessed corporate governance and earnings quality of 38 retail and wholesale companies quoted on London stock exchange between the time frame of 2010 and 2014 by using simple regression as analytical tool. The result suggested that all the corporate governance variables have no influence on earnings management practices.

Damak (2018) analysed the influence of board gender diversity on earnings management in 85 French companies for the financial year 2004-2014. The result of the study showed an inverse relationship between the two variables.

Uwuigbe *et al*., (2018) examined the links between corporate governance and quality of financial statements of 15 Nigerian banks from 2008 to 2015. The regression result indicated that size of board and board independence have indirect and no significant association with the timeliness of financial reports.

Shiyanbola, *et al*., (2019) explored the effect of corporate governance on reported earnings quality in 10 Nigerian banks for period covering 2000-2017. No significant relationship between board size, firm size, board independence and reported earrings quality was found. The study however established significant positive effect of foreign directors on reported earnings quality.

Olaoye and Adewunmi (2019) revealed from the study of corporate governance and earnings management of Nigerian banks from 2006 to 2015 that audit quality had positive but no significant effect on earnings management, while board size and leverage had insignificant negative effect on earnings management.

El Diri, Lambrinoudakis and Alhadab (2020) examined corporate governance and earnings management in concentrated markets. The result of the findings presented evidence in support of corporate governance effectiveness in reducing earnings management in non-concentrated markets while reverse is the case for concentrated market as corporate governance drives managers to substitute accruals with real earnings management.

Chatterjee and Rakshit (2020) examined effect of corporate governance on earrings management of Indian firms by employing regression analysis. The findings revealed that board independence and diligence showed significant and adverse effect on earnings management.

Hypotheses

Having reviewed extant literature and some prior empirical studies in this subject, the following hypotheses in null forms, are postulated:

H_{01}: No significant influence exists between board size and earnings management practices.

H_{02}: No significant influence exists between board independence and earnings management practices.

H_{03}: No significant influence exists between board gender diversity and earnings management practices.

H_{04}: No significant influence exists between board meetings and earnings management practices.

METHODOLOGY

Data source and sample

Data were sourced from published financial statements of banks as contained in their websites and Nigerian stock exchange Factbooks for the period of study, 2009-2018. As at December 31, 2018, the population of Nigerian listed deposit money banks was fifteen out of which a sample of ten banks was selected through judgmental sampling technique and availability of data for analytical exercise.

Model Specification

The general model of the study is in form of functional relationship as stated in equation 1.

$$EMG = f\,(BSZ, BIN, BGD, BMT, FAG, LEV) \quad (1)$$

The specific model is as presented in equation 2.

$$EMG_{it} = \beta_0+\beta_1 BSZ_{it}+\beta_2 BIN_{it}+\beta_3 BGD_{it}+\beta_4 BMT_{it}+\beta_5 FAG_{it}+\beta_6 LEV_{it}+e_{it} \quad (2)$$

Where,

EMG- Earnings management
BSZ - Board size
BIN - Board independence
BGD - Board gender diversity
BMT - Board meetings
FAG - Firm age
LEV - Firm leverage
$\beta_{1\ldots\ldots}\beta_6$ Coefficient of independent and control variables

For better financial reporting quality to be achieved, the *a priori* expectation is that the sign of the coefficient of each of the four board attributes in relation with earnings management should be negative $(\beta_1, \beta_2, \beta_3, \beta_4 < 0)$.

Variable description and measurement

The dependent variable of the study is earnings management. Following Aygun, Ic and Sayim (2014), Eriabie and Izedonmi (2016), Alhebri and Al-Duais (2020) and Soyemi *et al*., (2020), the study employed the most commonly and accepted approach for measuring earnings management, Discretionary Accruals (DA), as put forward by Jones (1991), with modification by Dechow, Sloan and Sweeney (1995). The operationalisation of DA is as provided in equation 3.

$$DA_{it} = TAC_{it}/A_{it-1} - \alpha_{1t}\,[1/A_{it-1}] + \alpha_{2i}\,[(\Delta REV - \Delta REC)/A_{it-1}] + \alpha_{3i}\,[PPE_{it}/A_{it-1}] \quad (3)$$

Where,

TAC - Total accruals, defined as accounting earnings less operating cash flow
A_{it-1} - Total assets in previous year
ΧREV - Change in revenue
ΧREC - Change in receivables
PPE - Property, plant and equipment

In line with empirical literature reviewed, the study has four independent variables that are capable of influencing earnings management practices in the Nigerian banking environment. These are board size, independence, gender diversity and meetings.

There are some other variables that have tendency to influence earnings management but not adequately represented in the model of the study. To mitigate the impact of these variables on the overall result, the study made use of two- firm age and leverage as control variables.

The operationalisation of independent and control variables is exhibited in Table 1.

Table 1: Operationalisation of independent and control variables

Variable	Type	Acronym	Measure	Studies
Board size	Independent	BSZ	Number of directors sitting in boardroom	Dabor and Dabor (2015), Abata and Migiro (2016)
Board independence	Independent	BIN	Ratio of external directors on total board membership	Uwuigbe *et al*., (2018), Akintayo and Salman (2018), Shubita (2020)
Board gender diversity	Independent	BGD	Ratio of female directors on total board membership	Osemene Adeyele and Adinnu (2018), Nguyen (2017)
Board meetings	Independent	BMT	Number of times board meetings hold in a year	Adegbie, Salawu and Shiyanbola (2019)
Firm age	Control	FAG	Natural log of the age of firm	Pranesh and Chinmoy (2017), Salah (2018), Kajola, Olabisi, Soyemi and Olayiwola (2019)
Firm leverage	Control	LEV	Ratio of total debts to total assets	Kajola, Desu and Agbanike (2015), Samad (2015), Hajawiyah , Wahyudin, Sakinah and Pahala (2020)

Source: Authors' compilation as in Table 1

Data estimation technique

Unlike some prior studies in the literature that employed pooled ordinary least squares (POLS) as analytical tool, this study adopted panel data methodology with fixed effects least square (FE) and random effects generalised least squares (RE) as analytical techniques.

POLS technique was not used because the method, unlike FE and RE, does not take into cognisance heterogeneity or individuality that may present among the selected banks.

For the purpose of making an unbiased inference, the Hausman (1978) specification test was conducted to discriminate between the FE and RE techniques.

RESULTS AND DISCUSSION

The results of the descriptive and inferential analysis are presented in this section.

Descriptive statistics

Table 2 presents summary results of the descriptive statistics.

Table 2: Summary of descriptive statistics

Variable	Mean	Minimum	Maximum	Standard deviation
EMG	0.101	0.001	0.559	0.110
BSZ	13.54	6	20	2.862
BIN	0.637	0.467	0.90	0.108
BGD	0.170	0.000	0.333	0.103
BMT	5.87	2	12	2.043
FAG	1.547	1.23	1.547	0.243
LEV	0.087	0.000	0.684	0.084

Source: Authors' Computation, 2020

Table 2 reveals that mean earnings management is 0.1013 and it ranges between 0.001 and 0.559. It suggests that the extent of financial statements' manipulation on the average is about 10.1%. The board size averages 14, with minimum of 6 and maximum of 20 members. External directors sitting in the boardroom (BIN) averages 63.70%. Female directors average 17% of total board membership, while the highest is 33.33% and with some banks having no female representation during the period of study. Board meetings were held on the average 6 times (BIN = 5.87). This is above the benchmark of 4 meetings as provided for in the Nigerian Securities and Exchange Commission (2018) code for public companies. The sample banks are low-geared as the mean leverage is about 8.7%, although the maximum leverage of 68.4% is shown. The mean age of the banks is about 35years (log inverse 1.547). Board size has the highest deviation from the mean (standard deviation = 2.862) and the least deviation variable is leverage (standard deviation = 0.084).

Multicollinearity test

Consistent with submission of Gujarati and Porter (2009), Variance Inflation Factor (VIF) and Tolerance Value (TV) approaches were used to test for collinearity among the variables adopted in the study. Gujarati and Porter (2009) suggest that any variable with VIF of above 10.0 or TV of less than 0.1 has a multicollinearity issue. Table 3 presents the results of both VIF and TV approaches.

Table 3: Collinearity test result

Variable	VIF	TV
BSZ	1.948	.513
BIN	1.938	.516
BGD	1.212	.825
BMT	1.051	.952
FAG	1.153	.867
LEV	1.250	.800

Source: Authors' computation, 2020

Result from Table 3 suggests that none of the variables has VIF of more than 10. The highest is 1.948 while the least is 1.051 Also, there is no variable with TV of less than 0.10, highest being 0.952 and the least value of 0.513. Thus, there is no presence of multicollinearity problem among the variables.

Correlation

Correlation matrix reflects association between variables and is also regarded as a powerful tool that can be employed in detecting multicollinearity among variables. The Pearson correlation matrix for the study is as presented in Table 4.

Table 4: Correlation matrix

Variable	EMT	BSZ	BIN	BGD	BMT	LEV	FAG
EMT	1						
BSZ	-.294***	1					
	(.003)						
BIN	-.250**	-.603***	1				
	(.018)	(.000)					
BGD	-.094	.351***	-.338***	1			
	(.355)	(.000)	(.001)				
BMT	.133	.019	-.048	.098	1		
	(.187)	(.851)	(.636)	(.331)			
LEV	-.112	-.214	-.037	-.066	.150	1	
	(.266)	(.218)	(.712)	(.511)	(.136)		
FAG	.127	.090	.379***	-.015	.065	.174	1
	(.232)	(.372)	(.000)	(.890)	(.540)	(.100)	

*** = 1%, ** = 5%, * = 10% significance level; sig values in parentheses

Source: Authors' computation, 2020

Result of Pearson correlation matrix as presented in Table 4 indicates that board size (BSZ) is indirectly correlated with earnings management (EMT) at 1% level. Board independence and EMT are also negatively correlated and this is significant at 5%. However, board gender diversity (BGD) and board meetings (BMT) have insignificant correlation with EMT. The two control variables, leverage (LEV) and firm age (FAG), also have no significant association with EMT.

The correlation matrix only shows the direction of association between variables and not strength of relationship. It is therefore not a powerful technique that can be used for interpretation and discussion of results. It is however useful for testing of multicollinearity among independent variables. Following Gujarati (2003) and Wooldridge (2009), a variable with coefficient value of 0.8 and above has a collinearity issue. It can be seen from Table 4 that no variable has coefficient of 0.8 and above, the highest being -0.603 (association between BIN and BSZ variables). This further provides proof that all the study variables are free from collinearity problem.

Regression

Table 5 depicts the result of the regression based on the two models- FE and RE. Summary result of the Hausman test as revealed in Table 5 indicates probability of 0.2708 and this is not significant at 5% level (prob > 0.05). It therefore suggests that RE is better than FE as analytical technique for purpose of interpretation of regression results (Gujarati & Porter, 2009). Hence, discussion of the result and test of hypotheses are based on the outcome of the RE regression.

Table 5: Regression result

	Fixed	Effects		Random	Effects	
	Coeff.	**t-stat**	**prob**	**Coeff.**	**t-stat**	**prob**
Constant	0.1591	0.4374	0.6648	0.2177	0.8450	0.4003
BSZ	-0.1341	-2.305**	0.0259	-0.3336	-2.2171**	0.0321
BIN	-1.4354	-2.140**	0.0434	-0.2990	-2.2474**	0.0261
BGD	-0.0194	-0.1549	0.8773	-0.0096	-0.7733	0.4413
BMT	-0.0027	0.4676	0.6413	-0.0102	-1.8714*	0.0644
FAG	-0.2589	-1.0214	0.3100	-1.2093	-1.8757*	0.0642
LEV	0.0731	0.4865	0.6279	0.0691	0.3948	0.6941
R^2	0.5237			0.5930		
Adj. R^2	0.4387			0.4628		
F-Stat/ (Prob)	6.158*** (.000)			4.554*** (.000)		
Durbin-Watson	2.0574			2.0943		
Hausman Chi-square/ (Prob)			7.5769 (.2708)			
Observations		100			100	

*** = 1%, ** = 5%, * = 10% significance level

Source: Authors' Computation, 2020

The R^2 is 0.5930 and this indicates that 59.3% of the variation in earnings management is explained jointly by variation in the four explanatory and two control variables, while 40.7% is due to other factors not captured in the study model. F-stat of 4.554 ($p = 0.000$), shows that the independent variables are jointly significant and the model fits well. Durbin-Watson value of 2.0943 reveals that no existence of serial autocorrelation in the model.

From Table 5, board size (BSZ) has a significant negative relationship with earnings management at 5% level. It shows that number of directors has an adverse influence on earnings management. With more people in the boardroom, it will be difficult for management to manipulate financial reports (earnings management) and inhibit the sustainable development of corporate entities because of the high level of scrutiny that will be made by directors sitting on the board on financial reports prepared by management. The outcome is in agreement with the works done by Obigbemi *et al*., (2016), Uwuigbe *et al*., (2018) and Olaoye and Adewumi (2019). It is however contrary to the studies conducted by Santiago and Brown (2009), which suggested positive and significant relationship. Null hypothesis 1 is rejected. Thus, board size has a significant relation with earnings management.

Board independence (BIN) has a significant indirect effect at 5% level on earnings management. This suggests that outside directors has significant impact on the ability of management to involve in earnings management practices. The involvement of outside directors in boardroom activities is a good corporate governance mechanism because of their ability to use their skills and experience to monitor the actions of the management (including scrutiny of financial reports) objectively and effectively. This will also have positive influence in the attainment of sustainable growth in corporate entities. The finding has the support of Kao and Chen (2004), Samaila (2014) and Chatterjee and Rakshit (2020). The study by Shinyobola *et al*., (2019), however revealed a contrary result as no significant association was reported. Null hypothesis 2 is rejected. Thus, board independence has significant relationship with earnings management.

Board gender diversity (BGD) has a negative but no relationship with earnings management at 5% level (prob > 0.05). Although the negative sign of the relationship is in line with *a prori* expectation, it is however insignificant. It shows that female directors sitting on the board try to prevent earnings management practices but their efforts show no significant impact. This is not unexpected as a result of the negligible size of female representation in the boardrooms of the sampled banks and in many of African corporations. In this study, the average representation of female directors was mere 17%. The outcome is in line with the findings by Emilia and Sami (2010), Wang (2015) and Mominah (2017). On the contrary, Damak (2018) study revealed a negative significant relationship. The study therefore fails to reject Null hypothesis 3. Thus, there is no significant effect of board gender diversity on earnings management.

Board meetings (BMT) and earnings management relation is negative but not significant at 5% level (prob > 0.05). Finding suggests that regular meetings of the board have the tendency to reduce manipulation of financial statements by management but it is not effective enough. The outcome is consistent with the work by Uwuigbe, Amilolamen, Uwuigbe and Jafaru (2017). It is however inconsistent with the study by Adigbie *et al*., (2019) that produced significant negative relationship. Null hypothesis 4 is failed to be rejected. Thus, board meeting has no significant relationship with earnings management.

The findings regarding control variables suggest no effect of firm age (FAG) and leverage (LEV) on earnings management as result indicates insignificant relationship at 5% level.

Conclusion and Recommendations

The study assessed the influence of board attributes on earnings management of ten deposit money banks in Nigeria for the period covering 2009-2018. With the use of Random effects generalised least square technique, results suggested that two of the board attributes- board size and board independence, are powerful corporate governance attributes used by the selected banks in curtailing financial reports manipulation (earnings management) by management. The empirical result however did not provide evidence in support of board gender diversity and board meetings as effective board attributes in reducing earnings management practices.

Following the empirical findings and for sustainable development of these corporate organisations to be achieved, it is hereby recommended that corporate governance code in Nigeria should be revised in such a way to encourage bank shareholders to elect more members as directors (subject to a manageable size) to perform oversight functions on activities of corporate managers. Regarding board membership, more external directors should dominate the corporate boardrooms. For effect of female directors sitting on the board to be felt, government policy makers and regulatory institutions should revise the existing corporate governance code in Nigeria by mandating every listed company to have at least one-third of their board membership as female. Regular board meetings and attendance by directors be made mandatory, especially when issues of financial reports and appraisal of management are to be considered.

In future, researchers should consider other economic areas such as insurance, conglomerates and manufacturing sectors. Increasing the size of the sample and study time frame is also encouraged. Cross-country studies can also be done, especially for countries operating within similar economic or regional bloc.

REFERENCES

Abata, M. A., & Migiro, S. O. (2016). Corporate governance and management of earnings: Empirical evidence from selected Nigerian listed companies. Investment Management and Financial Innovations, 13(2), 189 – 205.

Adegbie, A. A., Salawu, F. F., & Shiyanbola, R. O. (2019). Effect of corporate governance on conservatism of quoted financial and non-financial firms in Nigeria. International Journal of Business and Management Invention. 8(4), 25 – 36.

Akintayo, J. S., & Salman, R. T. (2018). Effects of audit quality and corporate governance on earnings management of quoted deposit money banks in Nigeria. World Academy of Science, Engineering and Technology, International Journal of Economics and Management Engineering, 12(6), 690 – 696.

Alhebri, A. A., & Al-Duais, S. D. (2020). Family businesses restrict accrual and real earnings management: Case study in Saudi Arabia. Cogent Business & Management, 7, 1 – 15.

doi: 10.1080/23311975.2020.1806669

Aygun, M., Ic., S., & Sayim, M. (2014). The effects of corporate ownership and board size on earnings management: Evidence from Turkey. International Journal of Business and Management, 9(12), 123 – 132. doi:10.5539/ijbm.v9n12p123

Campello, M., Graham, J. R., & Harvey, C. R. (2011). The real effects of financial constraints: evidence from a financial crisis. Journal of Financial Economics, 97(3), 470 - 87.

Chatterjee, R., & Rakshit, D. (2020). Association between earnings management and corporate governance mechanism: A study based on select firms in India. Global Business Review, 1 - 19.

doi:10.1177/0972150919885545

Dabor, A. O., & Dabor, E. L. (2015). Audit committee characteristics, board characteristics and financial reporting quality in Nigeria. International Journal of Economics, Commerce and Management, III (II), 1292 – 1304.

Dalton, D. R., Daily C. M., Johnson J. L., & Ellstrand, A. E. (1999). Number of directors and financial performance: A meta-analysis. The Academy of Management Journal, 42(6), 674 –- 686.

Damak, S. T. (2018). Gender diverse board and earnings management: Evidence from French listed companies. Sustainability Accounting, Management and Policy Journal, 9(3), 289 – 312. doi:10.1108/SAMPj-08-2017-0088

Dechow, P. M., Sloan, R. G., & Sweeney, A. P. (1995) Detecting earning management. Accounting Review, 70(2), 193 – 225.

El Diri, M., Lambrinoudakis, C., & Alhadab, M. (2020). Corporate governance and earnings management in concentrated market. Journal of Business Research, 108, 291 - 306.

doi:10.1016/j.jbusres.2019.11.013

Emilia, P., & Sami, V. (2010). Female executives and earnings management. Journal of Managerial Finance, 36(7), 629 – 645.

Eriabie, S. O., Izedonmi, F. (2016) Impact of audit committee attributes on financial reporting quality in Nigerian quoted companies. ICAN Journal of Accounting & Finance, 5(1), 117 – 137.

Fama, E., & Jensen, M. C. (1983). Separation of ownership and control. Journal of Law and Economics, 26(2), 301 – 325.

Gonzalez, J. S., & Garcia-Meca, E. (2014). Does corporate governance influence earnings management in Latin American markets? Journal of Business Ethics, 121(1), 419 – 440.

Gujarati, D. N. (2003). Basic econometrics, New York: McGraw-Hill

Gujarati, D. N., & Porter, D. C. (2009). Basic econometrics. New York: McGraw-Hill/Irwin.

Gul, F. A., Yu, S., Fung, K., & Jang, B. (2009). Earnings quality: Some evidence on the role of auditor and auditors' industry expertise. Journal of Accounting and Economics, 2(4), 65 – 76.

Habib, A., Uddin, B. B., & Islam, A. (2013). Financial distress, earnings management and market pricing of accruals during the global financial crisis. Managerial Finance, 39(2), 155 - 180. doi:10.1108/03074351311294007

Hajawiyah, A., Wahyudin, A., Sakinah, K., & Pahala, S. (2020). The effect of good corporate governance mechanisms on accounting conservatism with leverage as a moderating variable. Cogent Business & Management, 7, 1– 12. doi:10.1080/23311975.2020.1779479.

Hashim, H. A., & Devi, S. S. (2008). Board independence, CEO duality and accrual management: Malaysian evidence. Asian Journal of Business and Accounting, 1(1), 27 – 46.

Hausman, J. A. (1978). Specification tests in econometrics. Econometrica, 46(6), 1215–1271.

Healey, P. M., & Wahlen, J. (1999). A review of the earnings management literature and its implication for standard settings. Accounting Horizons, 13(4), 365 – 383. doi:10.2308/acch1999.13.4.365

Jensen, M. C., & Meckling, W. H. (1976). Theory of the firm: Managerial behaviour, agency and ownership structure. Journal of Financial Economics, 4, 305 –360. doi:10.1016/0304-405X(76)90026-X

Jones, J. (1991). Earnings management during import relief investigations. Journal of Accounting Research, 29(2), 193 – 228. doi:10.2307/2491047

Kajola, S. O., Desu, A. A., & Agbanike, T. F. (2015). Factors influencing dividend pay-out policy of Nigerian listed. International Journal of Economics, Commerce and Management, 3(6), 539 - 557.

Kajola, S. O., Olabisi, J., Soyemi, K. A., & Olayiwola, P. O. (2019). Board gender diversity and dividend policy in Nigerian listed firms. ACTA VSFS Economic Studies and Analyses, 13(2), 135 – 151.

Kao, L., & Chen, A. (2004). The effects of board characteristics on earnings management. Corporate Ownership & Control, 1(3), 96 – 107.

Klein, A. (2002). Audit committee, board of director characteristics and earnings management. Journal of Accounting and Economics, 33(3), 375- 400. doi:10.1016/S0165-4101(02)00059-9

La Porta, R., Lopez-de-Silanes, F., & Shleifer, A. (1999). Corporate ownership around the world. Journal of Finance, 54, 471 – 517. doi:10.1111/0022-1082.00115

Mahrani, M., & Soewarno, N. (2018). The effect of good corporate governance mechanism and corporate social responsibility on financial performance with earnings management as mediating variable. Asian Journal of Accounting Research, 3(1), 41 – 60. doi:10.1108/AJAR-06-2018-0008

Mominah, W. K. (2017). Corporate governance and its effect on earnings quality in retail industry of the United Kingdom. Asian Journal of Applied Sciences, 5(5), 849.

Musa, A. F., & Muhammad, A. I. (2018). Earnings management of listed deposit banks in Nigeria: A test of Chang, Shen and Fang (2008) model. International Journal of Finance and Accounting, 7(2), 49 – 55. doi:10.5923/j.ijfa.20180702.04

Nguyen, T. C. T. (2017). The impact of female board of directors on firm performance and dividend payout policies: Evidence from Vietnam. International Research Journal of Finance and Economics, 164, 56 – 67.

Nigerian Stock Exchange (2009 – 2018). Factbook, Lagos.

Norwani, N., Mohamad, Z. Z., & Chek, I. A. (2011). Corporate governance failure and its impact on financial reporting within selected companies. International Journal of Business and Social Science, 2, 205 – 213.

Obigbemi, I. F., Omolehinwa, E. O., Mukoro, D. O., Ben-Caleb, E., & Olusanmi, O. A. (2016).Earnings management and board structure: Evidence from Nigeria. SAGE Open, July – September, 1 – 15.
doi:10.1177/2158244016667992

Olaoye, F. O., & Adewumi, A. A. (2018). Corporate governance and earning management of deposit money banks in Nigeria. International Journal of Scientific & Engineering Research, 9(7), 184 - 199.

Omoye, A. S., & Eriki, P. O. (2014). Corporate governance determinants of earnings management: Evidence from Nigerian quoted companies. Mediterranean Journal ofSocial Sciences, 5(23), 553 –565. doi:10.5901/mjss.2014.v5n23p553

Osemene, O. F., Adeyele, J. S., & Adinnu, P. (2018). The impact of the ownership structure and board characteristics on earnings management in Nigeria's listed deposit money banks. Economic Horizons, 20(3), 209– 220. doi:10.5937/ekonhori.8032150

Patelli, L., & Prencipe, A. (2007). The relationship between voluntary disclosure and independent directors in the presence of a dominant shareholder. European Accounting Review, 16(1), 5 - 33.
doi:10.1080/09638180701265820

Pranesh, D., & Chinmoy, R. (2017). Do firm specific characteristics influence earnings management? Contemporary evidence from Indian economy. Asian Journal of Research in Business Economics and Management, 7(6), 318 – 336. doi:10.5958/2249-7307.2017.00091.3

Rivard, R. J., Bland, E., & Morris, G. B. (2003). Income smoothing behavior of U.S. banks under revised international capital requirements. International Advances in Economic Research, 9(4), 288 – 294.
doi:10.1007/BF02296177.

Salah, W. (2018). The effect of firm characteristics on earnings quality: The moderating role of firm size. Proceedings of the 2nd International Conference of Industrial and Service Organisations Management, Hurghada, Egypt, 1-3, September.

Samad, A. (2015). Determinants of bank profitability: Empirical evidence from Bangladesh commercial banks. International Journal of Financial Research, 6(3), 173 – 179.

Samaila, A. I. (2014). Corporate Governance and Financial Reporting Quality: An Analysis of Nigeria Petroleum Marketing Companies, 2014, (Doctoral dissertation, Bayero University).

Santiago, M., & Brown, C. (2009). An empirical analysis of Latin American board of directors and minority shareholders' rights. Forum Empresarial, 14(2), 1 – 18.

Securities and Exchange Commission (2018). Code of corporate governance for public companies.

Shafi, M., Adamu, P. A., Ooi, C. K., & Kwong, W. C. G. (2020). Corporate governance and earnings management: Evidence from listed Malaysian firms. Journal of Critical Reviews, 7(2), 90 – 96. doi:10.31838/jcr,07.02.18

Shiyanbola, T. T., Ogbebor, P. I., Okeke, O. C., & Okunade, R. A. (2019). Corporate governance and reported earning quality in deposit money banks in Nigeria. International Journal of Business and Management Review, 7(5), 26 – 37.

Shubita, M. F. (2020). Earnings management and corporate governance: Evidence from Jordanian banks. International Journal of Recent Technology and Engineering, 8(5), 1724 – 1731.

Soyemi, K. A., Olufemi, O. A., & Adeyemi, S. B. (2020). External audit(or) quality and accrual earnings management: Further evidence from Nigeria. Malaysian Management Journal, 24, 31 – 56.

Uwuigbe, U., Amiolemen, O. O., Uwuigbe, O. R., & Jafaru, J. (2017). Disclosure quality and earnings management of selected Nigerian banks. Journal of Internet Banking and Commerce, 22(8), 1 – 12.

Uwuigbe, U., Eluyela, D. F., Uwuigbe, O. R., Obarakpo, T., & Falola, I. (2018). Corporate governance and quality of financial statements: A study of listed Nigerian banks. Banks and Bank Systems, 13(3), 12 –23.
doi:10.21511/bbs.13(3).2018.02

Wahlen, J. M. (1994). The nature of information in commercial bank loan loss disclosures. The Accounting Review, 69(3), 455 - 478.

Wang, L. (2015). Board gender diversity and accounting conservatism: Evidence from Finland. Available at: http://www.ssrn.com (Accessed 6 March 2020).

Wooldridge, J. M. (2009). Introductory econometrics: A modern approach, (4th ed.), Cambridge, MA: Cengage Learning.

Xie, B., Davidson, W. N., & DaDait, P. J. (2003). Earnings management and corporategovernance: The role of the board and the audit committee. Journal of Corporate Finance, 9(3), 201 – 219.
doi:10.1016/S0929-1199(02)00006-8

Yermack, D. (1996). Higher market valuation of companies with a small board of directors. Journal of Financial Economics, 40, 185 – 211.
doi:10.1016/0304-405X(95)00844-5

Zhou, J., & Chen, K. Y. (2004). Audit committee, board characteristics and earnings management by commercial banks. Working Paper. Available at: http://www.ssrn.com (Accessed 17 April 2020).

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THE IMPACT OF MONETARY POLICY ON PRIVATE CAPITAL FORMATION IN NIGERIA- AUTOREGRESSIVE DISTRIBUTED LAG APPROACH

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Abstract

The study examines the impact of Monetary Policy on Private Capital Formation in Nigeria over the period 1980 to 2020. The study adopts Keynes theory of capital formation as its theoretical framework. The stationarity tests result shows that there is mixed level of stationarity among the variables. Consequently, the study employs ARDL as its estimation technique. The study reveals that Monetary Policy has a positive impact on Private Capital Formation in Nigeria. Based on the findings, the study recommends that government should implement appropriate Monetary Policy which will continue to have more positive impact on Private Capital Formation. Secondly, the government should maintain a reasonable percentage of Monetary Policy rate (MPR) and as well as Real Gross Domestic Product (RGDP) and Reasonable Exchange Rate (EXCHR) to improve the level of Private Capital Formation in Nigeria. Lastly, the government should embark on policies that will curb inflation or help to reduce the rate of inflation in order to increase the level of Private Capital Formation.

Keywords: *Monetary policy, private capital formation, ARDL*

1. Introduction

One of the major objectives of Macroeconomics is maintaining a sustainable economic growth and the role of Private Capital Formation in achieving this objective is of a great importance (Robert, 2014). For a country to achieve impactful Private Capital Formation, the role of a government policy as well as its impact can never be over emphasized. Capital formation which is an increase or expanding of the stock of real capital such as machines, tools, factories, transport equipment in a country are usually geared towards future production of good (Suman, 2018). Savings and investment are indispensable in the addition of capital stock, and this can mainly be stimulated by monetary policy.

Due to the claim that monetary policy as one of the government policies determines the rate of accumulation of physical capital (otherwise called capital formation) through its mechanism, it therefore becomes an important factor in the increase of productive activities of the country and contributes to growth generally. monetary policy which is a deliberate action imposed by the government through the Central Bank in order to maintenance domestic price and exchange rate stability, balance of payment equilibrium, among others has been identified as a vital instrument that enhance private capital formation either by affecting the level of money supply through expansionary or [3]contractionary measures. It also influences the level and structure of interest rates and thus the cost of funds in the market depending on the prevailing economic conditions (Nzotta, 2004). Capital formation is otherwise said to be a prerequisite to an increase in physical capital stock of a country with investment in social and economic infrastructures (Atuma and Nweze 2017).

Over the years, the Nigerian government has adopted various monetary policies through the Central Bank in order to attain stabilization in economic growth which is one of the objectives of Monetary Policy. To achieve this, the Central Bank relies on Monetary Policy tools as its major barometer for adjusting economic activities designed by the monetary measures to be either expansionary or contractionary (Nwoko, Ihemeje and Anumadu, 2016). These policies seek to

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impact directly or indirectly on the supply of money, supply of credit to economy, the structure of interest rate with the purpose of achieving price stabilization, balance of trade equilibrium and sustainable rate of growth (Uwazie and Aina, 2015), which will result to either an increase or decrease in capital formation of the country which has the tendency of boosting the private sector or the public sector through increased economic activities.

Unfortunately, these policies are yet to drive the country's capital formation to its desired point. Hence the authority has moved further to introduce privatization and commercialization to encourage private investment as well as public investment due to the low productivity in the country which when encouraged will result to an increase in the Gross Domestic Product (GDP) of the country and ultimately the total capital formation. Private Capital Formation has the tendency to increase the level of investment and capital stock in the country which will also give rise to a stable Economic Growth (Osundina & Osundina, 2014). Despite the increase in the regulations of the Monetary Policy by the monetary authorities in Nigeria, the problems of shortage of private capital formation still persisit as such this study will investigate to determine the impact of monetary policy on private capital formation in Nigeria.

As a matter of fact, the reason for this current research is as a result of the desire to investigate the extent to which Monetary Policy instruments has contributed to Private Capital Formation in Nigeria. More so, the study seeks to add to existing body of knowledge. It will also be of great benefit to the government and policy makers in terms of helping them to understand the influence of monetary policies on private investment as well as building policies that will ensure increase and sustainable private investment growth in Nigeria. This study will be of vast help to policy makers, government and its agents as well as researchers in the area of Monetary Policy and Private Capital Formation.

This study will reveal that for Nigeria economy to be put along the path of sustainable growth and development particularly through an increase in private investment, Monetary Policy that directs credit to the private sector is expected to be embarked upon so as to encourage private investment in Nigeria. Given the important role of Monetary Policy and Private Capital Formation in Nigeria, this study will contribute enormously to the planning and implementation of Monetary Policy to contribute in increasing private investment in Nigeria.

2. Literature Review

Dang, et al (2020) sheds new light on the relationship between Monetary Policy and private investment in Vietnam. They found that private investment is positively affected by monetary policies through broad money, domestic credit and interest rate channels and no credible evidence yet regarding the effect in the exchange rate. Similarly, Okumoko and Akarara (2016) investigated the impact of Monetary Policy rate on savings and investment in the Nigerian economy over the period of 1960-2016. The study employed Vector Autoregressive (VAR) technique to estimate the data and they found that shocks such as increase in Monetary Policy Rate (MPR), increases both Savings Rate (SAVR) and Total Investment (INVR) in the short-run and in the long-run.

Hassan (2015) explored the impact of Monetary Policy on Private Capital Formation in Nigeria. The study covers the period of 1986-2013 and made use of Ordinary Least Square Multiple regression technique. The study showed that the GDP growth rate has not been attracting significant private investment, while money supply and the exchange rate have been relatively stable which has encouraged increase in private investment and has to an extent promote sustainable Economic Growth in the country through private investment. Ayodeji and Oluwole (2016) investigated the impact of Monetary Policy on Economic Growth in Nigeria between 1881 and 2016 using Johansen co-integration and vector error correction model. The findings revealed that money supply and exchange rate are positively related but has a fairly insignificant impact on Economic Growth also interest rate and liquidity ratio are negatively related but has a high significant impact on Economic Growth. The study advised that full autonomy should be in place for Central Banks of developing countries and Government interference should be encouraged.

Olatunbosun (2015) investigated the impact of Monetary Policy on corporate investment in Nigeria. The study revealed that there is no significant relationship between the volume of investment and interest rate and there exist a weak relationship between the cost of capital and interest rate. Ndidi (2015) examined the Private Capital Formation impact on the Nigerian economic growth between 1980 and 2013. From the empirical findings, it was discovered that there is a significant relationship between capital formation and Economic Development in Nigeria. The study recommended that the government should continue to encourage savings, create conducive investment climate and improve the infrastructural base of the economy to boost capital formation and hence promote sustainable growth. Anowor and Okorie (2013) reassessed the impact of Monetary Policy on Economic Growth in Nigeria between 1982 and 2013 They found that interest rate and Monetary Policy rate has a negative relationship with Economic Growth and cash reserve ratio has a positive relationship with Economic Growth. Ugwuegbe and Urakpa (2013) researched the impact of capital formation on Economic Growth in Nigeria over the period of 1982-2011 using Ordinary least square (OLS) technique. The study revealed that capital formation.

3. Method

3.1 Theoretical framework

This study adopts Keynes theory of capital formation as its theoretical framework. The theory places its emphasis that given the marginal efficiency of capita, a fall in the rate of interest will increase the volume of investment (capital formation). Keynes believes that the economy is always at or near the natural level of real GDP. The main function of this approach is to act as a medium of exchange and to determine the general price level of which goods and services are to be exchange (Blinder, 1987). The quantity theory of money is usually discussed in term of fisher's equation of exchange where it was believed that there is full employment in the economy. Thus, the amount of investment taken depends both on the expected returns and the cost of capital (interest rate). Investment will only be profitable at the point where the marginal efficiency of capital is equal to the cost of capital, assuming the price of capital goods changes over time, it becomes necessary to draw a distinction between marginal efficiency of capital (MEC) and marginal efficiency of investment (MEI).

3.2 Model Specification

This study employs the model of Hassan (2015) with modifications.

$$GFCF = F(MPR, INF, RGDP, EXCHR, PUBEXP) \quad \ldots\ldots (1)$$

where

GFCF = Gross Fixed Capital Formation
MPR = Monetary Policy rate
INF = Inflation rate
RGDP = Real Gross Domestic Product
EXCHR = Exchange rate
PUBEXP = Public expenditure

The econometric form of the model above is stated as:

$$GFCF_t = \beta_0 + \beta_1 MPR_t + \beta_2 INF_t + \beta_3 RGDP_t + \beta_4 EXCHR_t + \beta_5 PUBEXP + \mu_t \quad \ldots\ldots (2)$$

μ_t = stochastic error term

β_0 = constant intercept

$\beta_1 - \beta_5$ = coefficient of the associated variables

However, the dependent variable and one of the independent variables were not in the same unit, hence, they were logged so as to bring the data to the same level. Thus, the above equation (2) can be re-specified as;

$$LOG(GFCF)_t = \beta_0 + \beta_1 MPR_t + \beta_2 INF_t + \beta_3 RGDP_t + \beta_4\ EXCHR_t + \beta_5 LOG(PUBEXP)_t + \varepsilon_t \ldots (3)$$

where

4. Data analysis

4.1 Descriptive Statistics

The descriptive statistics of the variables used in this study are shown in table below:

Table 1: **The descriptive statistics:**

	GFCF	MPR	INF	RGDP	EXCHR	PUBEXP
Mean	630714.4	6.209944	18.89225	4.893821	97.62067	3869836.
Median	154362.5	6.709583	12.15500	5.260085	97.40000	1211066.
Maximum	2442704.	11.06417	72.84000	14.60438	365.9000	12700000
Minimum	10597.00	0.316667	5.380000	-1.583065	0.550000	14697.41
Std. Dev.	869090.4	3.056790	16.91599	3.669652	106.1097	4422113.
Skewness	1.196938	-0.234382	1.823960	0.409243	1.187449	0.601925
Kurtosis	2.728945	2.069166	5.151077	2.695332	3.795190	1.668728
Jarque-Bera	9.673521	1.810319	29.89076	1.271236	10.45412	5.369234
Probability	0.007933	0.404477	0.000000	0.529608	0.005369	0.068247
Sum	2522858	248.3977	755.6900	195.7529	3904.827	1.55E+08
Sum Sq. Dev.	2.95E+13	364.4147	11159.88	525.1876	439111.5	7.63E+14
Observations	40	40	40	40	40	40

Source: Author's own computation from the E-views result

From the result table above, the descriptive statistics indicates that from 1980 to 2020, all of the variables under consideration show an averaged positive mean value with 40 observations. The standard deviation showed that the highest standard deviation of (869090.4) is recorded by the GFCF while the least standard deviation is recorded by MPR. The skewness statistics from the table revealed that five of the variables are positively skewed, while one variable is skewed negatively. The kurtosis coefficients show that two of the variables are leptokurtic, suggesting that the distributions are high relative to normal distribution, three variables are mesokurtic, indicating not too flat topped, while one other variable is platikurtic, suggesting that the distributions are flat topped. The Jarque-Bera (JB) test statistic was used to determine whether or the variables (control variables) follow the normal probability distribution. The JB test of normality is a large-sample or asymptotic test that computes kurtosis and the skewness measures. We therefore examine the Sample mean, standard deviation, skewness and kurtosis, and the Jacque-Bera statistics as well as the p-values. The probabilities of Jarque-Bera test of normality for the variables indicates that four of the variables have values greater than 5% level of significance, thus indicating that the variables are normally distributed.

4.2 Correlation

Under the correlation test, we conduct the test to ascertain the degree of relationship that exists between the dependent variable and the independent variables. This is done using the correlation matrix. In the correlation test, we test the variables to ascertain the degree of relationship that exist between the independent variables and the dependent variable. The relationships among the studied variables depicted in the model were tested using correlation matrix and the result presented below:

Table 2: **The Correlation matrix:**

	GFCF	MPR	INF	RGDP	EXCHR	PUBEXP
GFCF	1.000000	0.603761	-0.300488	-0.173753	0.872786	0.846234
MPR	0.603761	1.000000	-0.190167	-0.092143	0.615049	0.547866
INF	-0.300488	-0.190167	1.000000	-0.208966	-0.308031	-0.362926
RGDP	-0.173753	-0.092143	-0.208966	1.000000	-0.090602	0.050619
EXCHR	0.872786	0.615049	-0.308031	-0.090602	1.000000	0.815902
PUBEXP	0.846234	0.547866	-0.362926	0.050619	0.815902	1.000000

Source: Author's own computation from the E-views result

The correlation result shows that three of the variables have positive relationships with the private investment. The relationships are actually at 60%,87% and 84% respectively, while two variables, INF and RGDP indicate negative signs ranging from -30%, and -17% respectively. Hence, we conclude that there is no Multicolinearity among the variables under consideration.

4.3 Unit Root Test

Economic variables are generally non-stationary and they are a random process. Linear combination of non-stationary series in general is a non-stationary series and closely associated with economic theory. Because economic theory guarantees stagnation of combination of economic variables, in this study Dickey Fuller's generalized Test for investigation of stationary variables is used. In order to assess the time series properties of the data, a unit root test was conducted. As Engle and Granger (1987) argued, if individual time series data are non-stationary, their linear combinations could be stationary if the variables were integrated of the same order. The assumption is stated as follows: If the absolute value of the Augmented Dickey Fuller (ADF) test is greater than the critical value either at 1%, 5% or 10% level of significance at order zero, one or two, it shows that the variable under consideration is stationary otherwise it is not. The results of the Augmented Dickey Fuller (ADF) test obtained are as follow:

Table 3: **The Unit root test:**

Variable	**Level difference**	**Probability**	**Order of integration**	**First difference**	**Probability**	**Order of integration**
GFCF	4.713284	1.0000		-4.470275	0.0010	I(1)
MPR	-2.007436	0.2826		-12.68686	0.0000	I(1)
INF	-3.001260	0.0435	I(0)			
RGDP	-3.412167	0.0165	I(0)			
EXCHR	0.314309	0.9761		-3.863114	0.0052	I(1)
PUBEXP	-0.505734	0.8786		-10.80370	0.0000	I(1)

Source: Author's own computation from the Eviews result

The stationarity tests result indicates that three of the variables under consideration are stationary at level difference, while four other variables are integrated of order one at 5% level of significance. Since there exists a mixed order of cointegration, a bound cointegration test is therefore conducted.

4.4 Bound Auto Regressive Distributed Lag (ARDL) Testing Approach

Conducting the ARDL bounds test procedure, it is expected that the variables are I(0) or I(1), otherwise, the variable may be considered spurious. In the conduct of the ARDL test, we adopt the Augmented Dicky Fuller (ADF) test to determine the difference levels of the variables. We therefore compute an F-statistics test procedure to test the long-run relationship in which the maximum lag length p is 2 in the ECM. The results for the bounds F-test is therefore presented as follows:

Table 4: **The ARDL Bound test results:**

ARDL Bounds Test		
Null Hypothesis: No long-run relationships exist		
Test Statistic	Value	K
F-statistic	4.327165	5
Critical Value Bounds		
Significance	I0 Bound	I1 Bound
10%	2.26	3.35
5%	2.62	3.79
2.5%	2.96	4.18
1%	3.41	4.68

Source: Author's own computation from the Eviews result

The Bound test result from the table above indicates that the underlining ARDL model can be established to determine the long-run slope-estimated coefficients and the short-run dynamic-estimated coefficients for the private investment in Nigeria. The ARDL (1, 4) is selected based on Akaike information criterion (AIC).

4.5 The Short run Error Correction Coefficients

There is long-run equilibrium relationship among the variables in the regression model; however, it is the short-run that transmit to the long-run. Thus, Error Correction Mechanism (ECM) is therefore used to correct or eliminate the discrepancy that occurs in the short-run. The assumption of the ECM states that if two variables are cointegrated, then, there is error correction mechanism to revise instability in short term (Engle and Granger, 1987).ECM is used to see the speed of adjustments of the variables to deviations from their common stochastic trend. ECM corrects the deviations from the long run equilibrium by short-run adjustments. This shows us that changes in independent variables are a function of changes in explanatory variables and the lagged error term in cointegrated regression. The ECM result is therefore presented below:

Table 5: **The short run error correction coefficients results:**

ARDL Cointegrating And Long Run Form				
Dependent Variable: LOG(GFCF)				
Variable	Coefficient	Std. Error	t-Statistic	Prob
DLOG(GFCF(-1))	0.246864	0.167130	1.477076	0.1545
D(MPR)	0.037702	0.021846	1.725788	0.0991
D(MPR(-1))	-0.036036	0.021048	-1.712079	0.1016
D(INF)	-0.000966	0.002467	-0.391460	0.6994
D(RGDP)	-0.003000	0.011148	-0.269118	0.7905
D(EXCHR)	0.000441	0.000850	0.518653	0.6094
DLOG(PUBEXP)	-0.047848	0.065888	-0.726204	0.4757
DLOG(PUBEXP(-1))	0.070593	0.071935	0.981340	0.3376
DLOG(PUBEXP(-2))	-0.009619	0.070308	-0.136806	0.8925
DLOG(PUBEXP(-3))	-0.268678	0.069576	-3.861621	0.0009
ECM(-1)	-0.374290	0.094476	-3.961763	0.0007

R-squared	0.641354	Mean dependent var	0.132075
Adjusted R^2	0.402256	S.D. dependent var	0.238203
S.E. of regression	0.184164	Akaike info criterion	-0.251645
Sum squared resid	0.712243	Schwarz criterion	0.408155
Log likelihood	19.52961	Hannan-Quinn criter.	-0.021357
F-statistic	2.682396	Durbin-Watson stat	2.453156
Prob(F-statistic)	0.020083		

Source: Author's computation from the Eviews result

From the results table above, the equilibrium error-correction coefficient ECM (−1) is -0.374290. The coefficients have the expected negative sign and are statistically significant at 5% significant levels. This implies that there is a long run impact running from independent variables to dependent variable. It also confirms that all the variables are cointegrated or have long run relationship. We can therefore state that 37 percent gaps between long run equilibrium values and the actual values of the dependent variable have been corrected. It can be also said that the speed of adjustment towards long run equilibrium is 37 % annually. Its t-ratio is -3.961763 and the probability of the null hypothesis being true for zero is [0.0007], which is significant even when $\alpha = 0.05$. Thus, it can also be concluded that the adjustments are quite meaningful in the short-run ARDL relationship.

Statistically, the coefficient of determination R-squared is 0.641354. This implies that the independent variables explain the dependent variable to the tune 64%. The F-statistic shows that the overall estimate of the regression has a good fit and is statistically significant. Also, the Durbin Watson (DW) statistics DW = 2.453156 which is greater than the R^2 shows that the overall regression is statistically significance. Thus, the result indicates no serial auto correlation among the variables under consideration.

4.6 The Long run Relationship of Monetary Policy Rate and Private Investment in Nigeria

Table 6: **Long Run Coefficients results**:

Long Run Coefficients				
Variable	Coefficient	Std. Error	t-Statistic	Prob.
MPR	0.112365	0.061282	1.833583	0.0809
INF	-0.002580	0.006556	-0.393471	0.6979
RGDP	0.029949	0.037186	0.805393	0.4296
EXCHR	0.001178	0.002087	0.564343	0.5785
LOG(PUBEXP)	0.604552	0.096080	6.292199	0.0000
C	3.478699	0.944730	3.682215	0.0014

From the long-run elasticity of the independent variables contributing to private investment growth in Nigeria shows that the coefficient of MPR indicates a positive sign and significant statistically. It shows that the Monetary Policy rate in the long run affect the private investment positively in the long run. The results conform to the findings by Auer (2014) on the impact of Monetary Policy shock in the United States and Canada on the range of domestic aggregates, trade flow and exchange rate but also foreign investment income, that Monetary Policy action has a statistical and economic significant impact on both gross and net foreign investment income flow in both countries. The coefficients of RGDP and EXCHR show a positive sign and are insignificant statistically, while the coefficient of LOG(PUBEXP) indicates a positive sign and significant statistically. This conforms to the study conducted by Hassan (215) on the impact of Monetary Policy n Private Capital Formation in Nigeria find that Monetary Policy rate and exchange rate positively impact on Private Capital Formation in Nigeria. On the other hand, the coefficient of INF shows a negative sign and insignificant statistically

4.7 Diagnostic Test

To ensure the goodness of fit of the model, diagnostic test are conducted. Diagnostic tests examine the model for serial correlation, functional form, non-normality and heteroscedasticity.

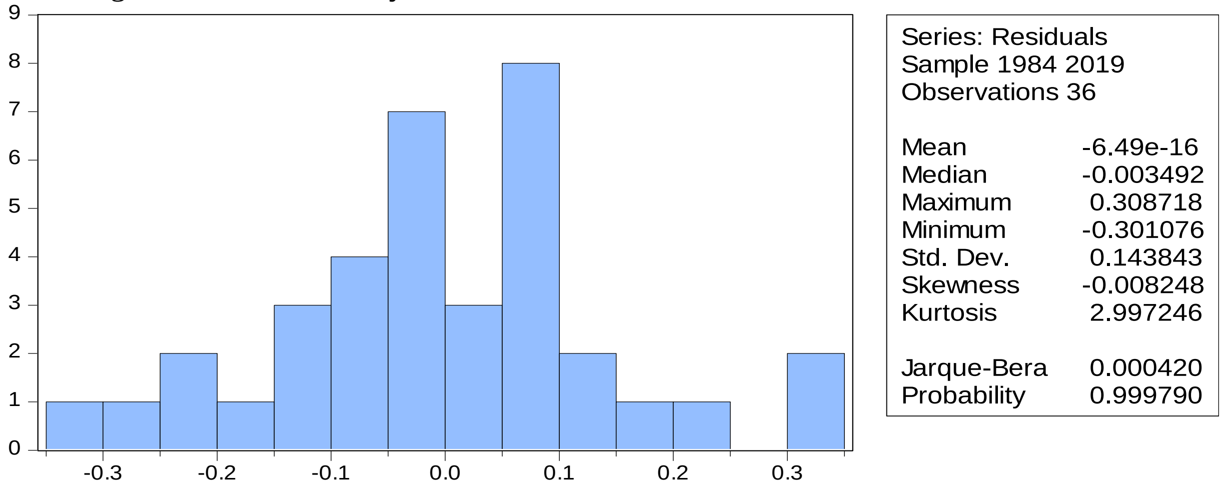
Table 7: **Serial correlation tests:**

Breusch-Godfrey Serial Correlation LM Test:			
F-statistic	5.070848	Prob. F(2,19)	0.0172
Obs*R-squared	12.52848	Prob. Chi-Square(2)	0.0019

Source: Author's computation from the Eviews result

The serial correlation test result obtained shows that the null hypothesis of a serial correlation is rejected and the corresponding probability values of the F-statistics are statistically insignificant at 5% level. Thus we conclude that there is no serial correlation among the variables under consideration.

Figure 1: **The normality test**



Source: Author's computation from the Eviews result

Ho: The sample data are not significantly different than a normal population
H1: The sample data are significantly different than a normal population.
Probabilities > 0.05 accept the null hypothesis
Probabilities < 0.05 reject the null hypothesis

From the result, the probability is 0.999790 and this is greater than 0.05 at 5% significant level and therefore, the null hypothesis is accepted. This implies that the residuals are normally distributed.

4.8 The Heteroskedasticity Test

Table 8:

Heteroskedasticity Test: Breusch-Pagan-Godfrey			
F-statistic	1.279684	Prob. F(14,21)	0.2965
Obs*R-squared	16.57333	Prob. Chi-Square(14)	0.2796
Scaled explained SS	5.631772	Prob. Chi-Square(14)	0.9749

Source: Author's computation from the Eviews result

Ho: homoscedasticity
H_1: heteroscedasticity
Probabilities > 0.05 accept the null hypothesis
Probabilities < 0.05 reject the null hypothesis

From the result, the probability of Chi-Square (14) is 0.2965and this is greater than 0.05 at 5% significant level and therefore, the null hypothesis is accepted. This implies and therefore confirms the absence of heteroscedasticity in the model. That is the error terms are homoscedastic i.e., they have constant variance in repeated sampling.

5. Conclusion and recommendation.

The study examined the impact of Monetary Policy on Private Capital Formation in Nigeria over the period 1980 to 2020. The study adopts This study adopts Keynes theory of capital formation as its theoretical framework. The stationarity tests result shows that three of the variables under consideration are stationary at level difference, while four other variables are integrated of order one at 5% level of significance. Based on the mixed result of the unit root test the study employs ARDL as its estimation technique. Based on the regression estimates, the study concluded that Monetary Policy has a positive impact on Private Capital

Formation in Nigeria, which means that Monetary Policy has contributed to the rising in the level of Private Capital Formation in Nigeria.

From the findings discussed above, the following recommendations were offered. Firstly, there is need for government to implement appropriate Monetary Policy which will continue to have more positive impact on Private Capital Formation. Secondly, the government should maintain a reasonable percentage of Monetary Policy rate (MPR) and as well as Real Gross Domestic Product (RGDP) and Reasonable Exchange Rate (EXCHR) to improve the level of Private Capital Formation in Nigeria. Thirdly, the government should embark on policies that will curb inflation or help to reduce the rate of inflation in order to increase the level of Private Capital Formation.

References

Anowor & Okorie (2013). a reassessment of the impact of Monetary Policy on Economic Growth: study of Nigeria. International Journal of Developing and Emerging Economies Vol.4, No.1, pp.82-90.

Atuma & Nweze (2017). International Journal of Research in Social Sciences, Vol. 7 Issue 2, pp:2249-2496

Ayodeji & Oluwole (2016). The impact of Monetary Policy on Economic Growth in Nigeria. Open Access Library Journal 2018, vol 5

Blinder, S., (1987). Keynesian economics. The Concise Encyclopedia of Economics. https://www.econlib.org/library/Enc1/KeynesianEconomics.html.

Dang et al, (2020). Impact of Monetary Policy on Private Investment: Evidence from Vietnam’s Provincial Data. Institute for Indian and Southwest Asian Studies, Vietnam Academy of Social Sciences.

Hassan, (2015). The impact of Monetary Policy on Private Capital Formation in Nigeria. Journal of Empirical Economics, 2015, vol. 4, issue 3, pp:138-153.

Ndidi, (2015). capital formation: impact on the Economic Development of Nigeria 1960-2013. European Journal of Business, Economics and Accountancy. Vol. 3, No. 3.

Nwoko, Ihemeje & Anumadu, (2016). Afrrev, 10 (3), S/NO 42, june, 2016 192

Nzotta, (2014). European Journal of Business and Management www.iiste.org ISSN 2222-1905 (Paper) ISSN 2222-2839 (Online) Vol.6, No.29, 2014

Olatunbosun, (2015). The Impact of Monetary Policy on Corporate Investment in Nigeria. International Journal of Managerial Studies and Research (IJMSR) Volume 3, Issue 6, Jun 2015, PP 56-62

Okumoko & Akarara (2016). The Impact of Monetary Policy Rate on Savings and Investment in the Nigerian Economy. FUNAI Journal of Humanities and Social Sciences 2016, Vol. 2, No. 1, 39-53.

Osundina K. C. & Osundina J.A. (2011).Vol.3 (3):151-155 (May-June, 2014) ISSN: 2319-8834 151 capital accumulation, savings and Economic Growth of a nation– evidence from Nigeria.

Ugwuegbe & Urakpa (2013). The Impact of Capital Formation on the Growth of Nigerian Economy Research. Journal of Finance and Accounting Vol.4, No.9, 2013

Uwazie & Aina (2015). Monetary Policy Variables and Commercial Banks’ Loans: A Causality Approach. Research Journal of Finance and Accounting, 2015.volume 6, pages 35-42.