Fund Accounting Practices in Public Universities of Bangladesh

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Abstract

Fund accounting is a self-balancing set of accounts, emphasizing accountability rather than profitability, used by government and non-profit organizations, segregated for specific purposes following laws and regulations or special restrictions and limitations. This study endeavours to assess the compliance of fund accounting in public universities of Bangladesh. Mainly, the study was based on primary data sources collected through administering semi-structured questionnaires among the top and middle-level officials of the accounts office of public universities. The dichotomous procedure is used to ascertain the fund accounting compliance practices. Statistical results signify that the Fund Accounting Compliance Index (FACI) is satisfactory (76.19) but not outstanding in the public universities under study. Agricultural universities secure the highest FACI, whereas science and technology universities secure the lowest FACI under the survey. The regression model was an excellent fitted model since the model is capable of explaining 77.4 percent of total variation by R^2 and 70.6 percent of total change by $AdjR^2$ though financial activities and universities' category are statistically insignificant at a 5 percent level of significance. More emphasis should be given to fund accounting practices to ensure budgetary control, transparency, accountability, and fairness of universities' financial activities.

Key Words: Fund Accounting, Fund Accounting Compliance Index (FACI), Fund Accounting Compliance Score (FACS), Public Universities, Bangladesh.

1 Introduction

Fund accounting (FA) is used as a trustworthy weapon to achieve the goal of public sector accounting. It is a technique of internal financial reporting of governmental and non-governmental non-profit organizations. It is also an essential and effective method of accounting for governmental and nonprofit entities around the globe. Introducing FA aims to increase transactions' comprehensibility and fair presentation, typical for governmental and non-profit organizations. It provides guidelines and principles for maintaining governance, fairness, transparency, and accountability relating to the government's earmarked funds to spend on a specific purposes and segments. A fund is a fiscal purpose accounting entity with a self-balancing set of accounts. It records cash and other financial resources, all related liabilities and residual equities or balances, and adjusts therein, which is separated to carry on specific activities or achieve particular objectives based on individual regulations, restrictions, or limitations. Public and government universities run with the foremost share of the budget provided by the government and little share of universities' own sources. The central part of the revenue of the university is collected through tuition, fees, etc., from the students. To ensure the proper utilisation of the budget and ensure good governance, a suitable accounting method must be introduced. In this context, it examines the fund accounting practices levels in Bangladesh's public universities to achieve the goal.

2 Review of Literature

Here a review of related and relevant available literature at home and abroad is presented to find out the research gap and adornment of research questions and to limit the scope of the present research.

Bangladesh inherited an outdated public financial management system initially designed to meet the necessities of the colonial administration in the Indian sub-continent (Shil & Chowdhury, 2020). A well-functioning government accounting system helps identify straightforward financial indicators, provides policymakers with information to recognize challenging areas, and empowers them to make informed and consequential choices (Islam, 2017). In the last few decades, there have been notable changes in public administration and financial management systems driven by the needs and expectations of society in Bangladesh (Shil & Chowdhury, 2020). Global attention is growing on managing and overseeing public sector assets and liabilities (Chowdhury, 2019). There is a widespread belief that implementing efficient accounting practices within the public sector can be crucial in combating corruption (Lewis & Hendrawan, 2020). Fund Accounting (FA) is used as the rational response to serve as a reliable control technique to act as the executor to protect and manage public money and discharge accountability (Salleh et al., 2014). The accomplishment of a practical approach to fund accounting heavily relies on the existence of well-defined financial plans that are firmly grounded in reliable resources (Tadele, 2016). Governmental accounting structures should be organized and operated on a fund basis. The creation and development of fund accounting aim to increase the comprehensibility and fair presentation of transactions typical for non-profit organizations (Popovcic-Avric et al., 2014). A fund is defined as a fiscal and accounting entity with a self-balancing set of accounts recording cash and other monetary resources, together with all related liabilities and residual equities or balances and changes therein, which are segregated to carry on specific activities or attain particular objectives following special regulations, restrictions, or limitations (Hay & Wilson, 1995). Governmental accounting is usually understood as the official financial reporting of national, non-profit organizations, whereas fund accounting represents a concept which generally refers to internal financial reporting of both governmental and non-governmental non-profit organizations (Popovcic-Avric et al., 2014). The concept of a "fund" and its utilization are similar as they originate from the requirements for governance and internal control based on information (Pavan et al., 2018). In the United States of America (USA), government funds such as the General Fund, Special Revenue Funds, Debt Service Funds, and Capital Projects Funds use the modified accrual basis of accounting with a measurement focus on current financial resources (Governmental Accounting Standards Board, 1998 cited in Salleh et al., 2014). FA remains relevant in the transformation journey of the Federal Government in Malaysia for an accrual accounting environment (Salleh et al., 2014). Accounting of government and non-profit organizations is operated based on FA (Leping, 2018). FA was used to promote control and accountability over restricted resources. The government had established separate resources into multiple types of funds to ensure they complied with the restrictions placed upon them by legislators, grantors, donors and other outside parties (Lynn & Freemann, 1983, cited in Salleh et al., 2014). Funds are established distinctly to attain a definite goal or to complete different actions in accordance with precise regulations, restrictions, or limitations (Leping, 2018). Public universities in Bangladesh are spending a notable amount from undisclosed, unidentified, or unexplained sources. That fact suggests a lack of transparency in budget execution and noncompliance with the budget manual (Sarkar et al., 2014). The fundamental purpose of prudent public sector financial management is to manage the public financial resources with the economy, efficiency and effectiveness. The primary goal is to provide the citizens with targeted services and products for which the Parliament has allocated resources (Hakeem, 2012).

The reviewed literature guided that there is a research gap in fund accounting practices at public universities in Bangladesh. So, there is an inevitable scope to study in the said area. That is why the present study tries to fill this gap.

3 Justification of the Study

Government accounting is mainly based on a fund system and the government creates different types of funds to perform various kinds of government activities. Fund accounting is an appropriate way to ensure

the proper use of funds collected from citizens for different purposes. The study has both academic and applied values, and it is essential for several reasons. First, the study's findings will add value to the existing stock of knowledge in fund accounting. Second, the survey results would help the policy planners and the implementation level authorities to make suitable policy measures to benefit fund accounting.

4 Objectives of the Research

The main objective of the research is to examine fund accounting practices in Bangladesh. Some specific goals branded to achieve the main objective as-

i. To find out the methods of fund accounting practices in public universities of Bangladesh;
ii. To find out the digression (if any) of fund accounting practices in Bangladesh's public universities.

5 Methodology

The methodology includes the nature of the study, population and sample, scoring technique, data collection and analysis, variables and hypotheses development, and multiple regression models.

5.1 Nature of the Study

The research was empirically based on both primary and secondary sources of data.

5.2 Population and Sample

Top and middle-level officials of public universities concerned with the maintenance of accounts and preparation of financial reports are considered population. Out of 37 public universities, four universities (BSMRMU, BOU, NU, and IAU) were excluded from the study due to the nature of activities being different from all others to generalize. The population size of the study was 33, including one official from each university. Based on Krejcie and Morgan's table (1970 cited in KENPRO), the study requires a sample size of 30 (32 as the population size is 35) as a finite population. Thirty questionnaires were distributed among the officials of 30 public universities to achieve the target. Out of 30, 14 respondents returned the survey with their valued ideas. As a result, the study's sample size was limited to 14.

5.3 Information Items Included in the Fund Accounting Compliance Index

The primary task of the present research is to develop a suitable compliance index comprising items of fund accounting information that is expected to include. Eighteen subjects were selected through reviewing related literature and principles and concepts of fund accounting (Appendix-1) to determine the levels of FA practices.

5.4 Scoring in the FACI

Each university's Fund Accounting Compliance Score (FACS) was ascertained to determine the FACI. A dichotomous procedure followed where the compliance information item was awarded a score of '1' if the university appeared to comply with the condition and '0' otherwise to compute FACS. FACS of each university were obtained by accumulating the score of all compliance information items of the university as follows:

$$FACS = \sum_{i=1}^{n} d_i$$

Where,

d = one if the item d_i complies

d = 0 if the item d_i does not comply

n = number of items

FACI is computed by using the following formula:

$$\text{FACI} = \frac{\text{FACS of Individual University}}{\text{Maximum Possible Score Obtainable}} \times 100$$

5.5 Collection of Data

Data for the study was collected from both primary and secondary sources. Primary data were collected from the relevant officials of public universities through administrating semi-structured questionnaires. The questionnaire was a set of open-ended and close-ended questions related to the opinion on fund accounting. Some secondary data were also collected from the review of related literature.

5.6 Data Analysis Techniques

Descriptive statistics like frequency, percentile and inferential statistics like multiple linear regression models were used.

5.7 Dependent Variables, Explanatory Variables and Hypotheses

FACI, as the dependent variable, has been calculated for each university studied. The explanatory variables used in the study have considered previous studies undertaken by other researchers. Three corporate attributes considered are size (proxied by the seat in an undergrad program), financial activities (proxied by revenue budget size), and university categories. The following paragraphs provide a rationale for considering the corporate trait chosen as explanatory variables.

1. Size of the Universities

Several studies have found a significant positive association between the size of the company and the extent of corporate disclosure in the corporate annual report in both developed and developing countries. From this perspective, larger universities may hypothesize to complied fund accounting practices in their books of accounts and financial statements than smaller universities for a variety of reasons. Several measures of size are available (e.g., number of seats in the undergrad program, student output, total area, number of employees, etc.). However, the first two proxies for size are highly correlated. The undergrad program's seat number has been used to measure university size in the study. The following specific hypothesis has been tested regarding the size of the universities:

H_0: *There is no relationship between FACI and university size.*

H_1: *There is a relationship between FACI and university size.*

2. Financial Activities

Economic activities may be used to evaluate the level of fund accounting practices. Several measures of economic activities are available (e.g., revenue budget size, actual expenditure, etc.). However, the two proxies for financial activities are highly correlated. In the study, the size of the revenue budget has been used as the measure of universities' financial activities. The following specific hypothesis has been tested regarding the financial activities of the universities:

H_0: *There is no relationship between FACI and the financial activities of universities.*

H_1: *There is a relationship between FACI and the financial activities of universities.*

3. University Categories

A few researchers have used industry type as an explanatory variable for differences in disclosure levels in the corporate sector. The variable may be considered in the case of FACI of universities. The following specific hypothesis has been tested regarding university categories:

H_0: There is no relationship between FACI and university categories.

H_0: There is a relationship between FACI and university categories.

5.8 Multiple Regression Models

Multiple linear regression models were developed for the study problem as-

FACI = $\alpha + \beta_1 UNVSIZ + \beta_2 UNVFINACT + \beta_3 UNVCAT + \epsilon$

Where FACI = fund accounting compliance index

α = the constant

ϵ = the error term

A description of the three independent variables, their labels, expected signs and relationships is presented in Table 1.

Table 1: Independent variables, their labels, signs and relationships in the regression

Variable Labels	Variables	Expected sign and relationship
UNVSIZ	Universities Size	UNVSIZ has a negative association with the levels of fund accounting compliance.
UNVFINACT	Universities Financial Activities	UNVFINACT has a negative relationship with the levels of fund accounting compliance.
UNVCAT	University categories	UNVCAT has a positive association with the levels of fund accounting compliance.

6. Results and Discussion

The section is divided into three parts. The basic characteristics of the universities are presented in the table with a brief interpretation in the first part. Fund accounting compliance practices are presented in the table with a short description in the second part. In the third part, a model was developed in the third part of the study.

6.1 Basic Characteristics of the Universities

Here some descriptive analysis was shown considering different attributes of the universities under the study.

6.1.1 Categories of Universities

Table 2 shows that the maximum number of respondents (35.7 percent) of the study were from science and technology universities, and the minimum (14.3 percent) were from agricultural universities.

Table 2: Categories of the Universities

Categories	Frequency	Percent
General	4	28.6
Engineering	3	21.4
Science and Technology	5	35.7
Agricultural	2	14.3
Total	14	100.0

Source: Analysis of Primary Data.

6.1.2 Age (in the group) of the Universities

Table 3 shows that most respondents (57.1 per cent) were from universities established between 10 and 15 years old. It should be mentioned here that it was hardly possible to collect any response from the respondents of the universities whose ages are more than twenty years due to the lengthy bureaucratic process and the non-cooperative attitude of the officials of those universities. It is a sign of a lack of transparency.

Table 3: The age distribution of the Universities

Age (in the group)	Frequency	Percent
< 10	2	14.3
10 - 15	8	57.1
15 - 20	4	28.6
20 +	0	0
Total	14	100.0

Source: Analysis of Primary Data

6.1.3 Seat at Undergrad Level of the Universities

Table 4 shows that the mean seat at the undergrad level of the universities is 921, SD is 464.3 and the range is 1870. Statistical results indicate that the variability of the seat at the undergrad level among the universities under study is too high.

Table 4: Seat at the undergrad level of the Universities

Statistics	Result
Valid number	14
Mean	921
SD	464.3
Minimum	330
Maximum	2200
Range	1870

Source: Analysis of Primary Data.

6.1.4 Revenue Budget of Universities

Table 5 demonstrates that the mean revenue budget of the universities under the study is 39.18 Million Taka; SD is 15.36 and the range is 40.80. The statistical result implies that the variability of revenue budget among the universities is very high. The central part (about 69 percent) of the revenue budget of public universities in Bangladesh is an earmark for salaries and pension, whereas less than one-tenth is for education contingencies.

Table 5: Revenue budget (in Million Taka) of the Universities

Statistics	Result					
	Total	Salary	Pension	Education	Repair	General
Valid number	14	14	14	14	14	14
Mean	39.18	25.40	1.46	3.87	1.39	4.81
SD	15.36	11.51	1.87	1.29	0.80	2.25
Minimum	20.55	10.18	0.00	1.78	0.39	1.80
Maximum	61.35	44.10	6.00	6.70	3.00	10.02
Range	40.80	33.92	6.00	4.92	2.61	8.22

Source: Analysis of Primary Data.

6.2 Fund Accounting Practices

Here the nature and extent of the fund accounting disclosure have been analyzed and discussed through descriptive statistics.

6.2.1. Descriptive Analysis

Here 18 items considered for compliance with fund accounting are examined and discussed separately.

6.2.1.1 Maintenance of General Fund

Table 6 testimony that most universities (64 percent) under the study maintained general fund for account daily activities. All agricultural universities are maintained general fund whereas one-fourth of general universities, two-thirds of engineering universities, and one-fifth of science and technology universities do not comply with that issue.

Table 6: Distribution of Maintenance of General Fund

Category of University	Maintain general fund		Total
	Yes	No	
General	3.0 (75%)	1.0 (25%)	4.0 (100%)
Engineering	1.0 (33%)	2.0 (67%)	3.0 (100%)
Science and Technology	3.0 (60%)	2.0 (40%)	5.0 (100%)
Agricultural	2.0 (100%)	0 (0%)	2.0 (100%)
Total	9.0 (64%)	5.0 (36%)	14.0 (100%)

Source: Analysis of Primary Data.

6.2.1.2 Spending Pattern of General Fund

Table 7 demonstrates that most of the universities (93 percent) under the study are spending the general fund budget for that fund. It indicates good governance, accountability, and transparency exist in the general fund operations.

Table 7: Distribution of Spending Pattern of the General Fund

Category of University	The budget of the general fund spending for the same fund		Total
	Yes	No	
General	4.0 (100%)	0.0 (0%)	4.0 (100%)
Engineering	3.0 (100%)	0.0 (0%)	3.0 (100%)
Science and Technology	4.0 (80%)	1.0 (20%)	5.0 (100%)
Agricultural	2.0 (100%)	0 .0(0%)	2.0 (100%)
Total	13.0 (93%)	1.0 (7%)	14.0 (100%)

Source: Analysis of Primary Data.

6.2.1.3 Maintenance of Special Revenue Funds

Half of the universities under the study (table 8) has not maintained special revenue fund for the revenues collected for a particular purpose, such as sports, cultural activities, etc., from the students. It shows poor governance and a lack of transparency and accountability. Every university should maintain different separate special revenue funds for subscriptions collected from students for particular purposes such as sports, cultural activities, etc. Agricultural universities are in the highest position, whereas science and technology universities are inferior positions under the study in this case.

Table 8: Distribution of Maintenance of Special Revenue Fund

Category of University	Maintain special revenue fund		Total
	Yes	No	
General	2.0 (50%)	2.0 (50%)	4.0 (100%)
Engineering	2.0 (67%)	1.0 (33%)	3.0 (100%)
Science and Technology	1.0 (20%)	4.0 (80%)	5.0 (100%)
Agricultural	2.0 (100%)	0 .0(0%)	2.0 (100%)
Total	7.0 (50%)	7.0 (50%)	14.0 (100%)

Source: Analysis of Primary Data.

6.2.1.4 Spending Pattern of Special Revenue Funds

Most of the universities (77 per cent) under the study are spending the budget of each special revenue fund only for that fund (table 9). The compliance scenario of that issue is comparatively inferior in general universities than other categories of universities under study.

Table 9: Distribution of Spending Pattern of Special Revenue Fund

Category of University	The budget of each special revenue fund spent for that fund		Total
	Yes	No	
General	2.0 (50%)	2.0 (50%)	4.0 (100%)
Engineering	2.0 (100%)	0.0 (0%)	2.0 (100%)
Science and Technology	4.0 (80%)	1.0 (20%)	5.0 (100%)
Agricultural	2.0 (100%)	0 .0(0%)	2.0 (100%)
Total	10.0 (77%)	3.0 (23%)	13.0 (100%)

Source: Analysis of Primary Data.

6.2.1.5 Unspent Balance of Special Revenue Fund

Most universities (77 percent) under the study transferred the unspent balance of the special revenue fund to the general fund (table 10). The compliance scenario of that issue is comparatively inferior in agricultural universities than in other categories of universities.

Table10: Distribution of Unspent Balance of Special Revenue Fund

Category of University	The unspent balance of the special revenue fund transferred to the general fund		Total
	Yes	No	
General	3.0 (75%)	1.0 (25%)	4.0 (100%)
Engineering	2.0 (100%)	0.0 (0%)	2.0 (100%)
Science and Technology	4.0 (80%)	1.0 (20%)	5.0 (100%)
Agricultural	1.0 (50%)	1 .0(50%)	2.0 (100%)
Total	10.0 (77%)	3.0 (23%)	13.0 (100%)

Source: Analysis of Primary Data.

6.2.1.6 Maintenance of Account for Capital Project Fund

Table 11 demonstrates that the maximum (86 percent) of universities under the study are maintained a separate account for capital project funds (development projects). All of the engineering universities, agricultural universities, and science and technology universities have fully complied on that issue, whereas half of the general universities are not maintained separate books of account for a development project.

Table 11: Distribution of Maintenance of Account for Capital Project Fund

Category of University	Maintain a separate account for capital project fund		Total
	Yes	No	
General	2.0 (50%)	2.0 (50%)	4.0 (100%)
Engineering	3.0 (100%)	0.0 (0%)	3.0 (100%)
Science and Technology	5.0 (100%)	0.0 (0%)	5.0 (100%)
Agricultural	2.0 (100%)	0 .0(0%)	2.0 (100%)
Total	12.0 (86%)	2.0 (14%)	14.0 (100%)

Source: Analysis of Primary Data.

6.2.1.7 Balance of Capital Project Fund

All universities under the study are refunded the unspent balance of development project (capital project) funds to the granting authorities (table 12).

Table 12: Distribution of Balance of Capital Project Fund

Category of University	The unspent balance of the capital project fund is refunded		Total
	Yes	No	
General	4.0 (100%)	0.0 (0%)	4.0 (100%)
Engineering	1.0 (100%)	0.0 (0%)	1.0 (100%)
Science and Technology	5.0 (100%)	0.0 (0%)	5.0 (100%)
Agricultural	2.0 (100%)	0 .0(0%)	2.0 (100%)
Total	12.0 (100%)	0.0 (0%)	12.0 (100%)

Source: Analysis of Primary Data.

6.2.1.8 Reserve for Encumbrances

Table 13 demonstrates that a maximum (93 percent) of universities under the study maintained a reserve for encumbrance accounts to record commitment for payment.

Table 13: Distribution of Reserve for Encumbrances

Category of University	Reserve for encumbrances recorded in the budget register		Total
	Yes	No	
General	4.0 (100%)	0.0 (0%)	4.0 (100%)
Engineering	2.0 (67%)	1.0 (33%)	3.0 (100%)
Science and Technology	5.0 (100%)	0.0 (0%)	5.0 (100%)
Agricultural	2.0 (100%)	0 .0(0%)	2.0 (100%)
Total	13.0 (93%)	1.0 (7%)	14.0 (100%)

Source: Analysis of Primary Data.

6.2.1.9 Cancellation of Reserve for Encumbrances

It is evident from table 14 that maximum (92 percent) universities under the study recorded cancellation of the reserve for encumbrances at the time of payment of committed expenditure or cancellation of commitment for payment. All universities except half of the agricultural universities have complied with the issue.

Table 14: Distribution of Cancellation of the Reserve for Encumbrances

Category of University	Cancellation of the reserve for encumbrances recorded		Total
	Yes	No	
General	4.0 (100%)	0.0 (0%)	4.0 (100%)
Engineering	2.0 (100%)	0.0 (0%)	2.0 (100%)
Science and Technology	5.0 (100%)	0.0 (0%)	5.0 (100%)
Agricultural	1.0 (50%)	1 .0(50%)	2.0 (100%)
Total	12.0 (92%)	1.0 (8%)	13.0 (100%)

Source: Analysis of Primary Data.

6.2.1.10 Maintenance of Special Trust Fund

Table 15 demonstrates that a maximum (86 percent) of universities under the study are maintained a special trust fund for an account for donation. All engineering and agricultural universities under the survey have complied with the issue. In contrast, one-fourth of general and one-fifth of science and technology universities have not fulfilled the issue.

Table 15: Distribution of Maintenance of Special Trust Fund

Category of University	The special trust fund is maintained		Total
	Yes	No	
General	3.0 (75%)	1.0 (25%)	4.0 (100%)
Engineering	3.0 (100%)	0.0 (0%)	3.0 (100%)
Science and Technology	4.0 (80%)	1.0 (20%)	5.0 (100%)
Agricultural	2.0 (100%)	0 .0(0%)	2.0 (100%)
Total	12.0 (86%)	2.0 (14%)	14.0 (100%)

Source: Analysis of Primary Data.

6.2.1.11 Non-expendable Trust Fund

It is evident from table 16 the majority (64 percent) of universities under the study operated non-expendable trust funds. All of the engineering and agricultural universities have fully complied on that issue. In contrast, half of the general and the majority (60 percent) of science and technology universities are not maintained non-expendable trust funds.

Table 16: Distribution of Operations of the Non-expendable Trust Fund

Category of University	The non-expendable trust fund operated		Total
	Yes	No	
General	2.0 (50%)	2.0 (50%)	4.0 (100%)
Engineering	3.0 (100%)	0.0 (0%)	3.0 (100%)
Science and Technology	2.0 (40%)	3.0 (60%)	5.0 (100%)
Agricultural	2.0 (100%)	0 .0(0%)	2.0 (100%)
Total	9.0 (64%)	5.0 (36%)	14.0 (100%)

Source: Analysis of Primary Data.

6.2.1.12 Spending Pattern of Trust Fund

Table 17 demonstrates that the majority of the universities (71 percent) under the study are spending the money of the trust fund only for that fund. It indicates good governance, accountability and transparency in their operations. However, two-thirds of the engineering, one-fourth of general, and one-fifth of science and technology universities under study do not comply with the condition.

Table 17: Distribution of Spending Pattern of the Trust Fund

Category of University	The money of the trust fund is spent only on that fund		Total
	Yes	No	
General	3.0 (75%)	1.0 (25%)	4.0 (100%)
Engineering	1.0 (33%)	2.0 (67%)	3.0 (100%)
Science and Technology	4.0 (80%)	1.0 (20%)	5.0 (100%)
Agricultural	2.0 (100%)	0 .0(0%)	2.0 (100%)
Total	10.0 (71%)	4.0 (29%)	14.0 (100%)

Source: Analysis of Primary Data.

6.2.1.13 Maintenance of Pass-through Agency Fund

It is evident from table 18 the majority (71 percent) of universities under the study operated pass-through agency funds for utility bills of residential buildings of the universities. Agricultural universities under the survey have fully complied with the issue, whereas one-fourth of general, two-thirds of engineering, and one-fifth of science and technology universities do not comply.

Table 18: Distribution of Pass-through Agency Fund

Category of University	A pass-through agency fund is maintained		Total
	Yes	No	
General	3.0 (75%)	1.0 (25%)	4.0 (100%)
Engineering	1.0 (33%)	2.0 (67%)	3.0 (100%)
Science and Technology	4.0 (80%)	1.0 (20%)	5.0 (100%)
Agricultural	2.0 (100%)	0 .0(0%)	2.0 (100%)
Total	10.0 (71%)	4.0 (29%)	14.0 (100%)

Source: Analysis of Primary Data.

6.2.1.14 Separate Agency Fund for Long-Term Provident Fund

Table 19 demonstrates that the majority (79 percent) of universities under the study maintained long-term agency funds for the account provident fund of the employees. All general and agricultural universities under the survey have fully complied, whereas two-thirds of engineering and one-fifth of science and technology universities do not comply with that issue.

Table 19: Distribution of Provident Fund as a Long-term Agency Fund

Category of University	Provident fund as a long-term agency fund is maintained		Total
	Yes	No	
General	4.0 (100%)	0.0 (0%)	4.0 (100%)
Engineering	1.0 (33%)	2.0 (67%)	3.0 (100%)
Science and Technology	4.0 (80%)	1.0 (20%)	5.0 (100%)
Agricultural	2.0 (100%)	0 .0(0%)	2.0 (100%)
Total	11.0 (79%)	3.0 (21%)	14.0 (100%)

Source: Analysis of Primary Data.

6.2.1.15 Benevolent Fund as Separate Long-Term Agency Fund

As evident from table 20, most of the universities (93 percent) under the study maintained benevolent funds as long-term agency funds. All universities except one-fifth of the science and technology universities have complied with the issue.

Table 20: Distribution of Benevolent Fund as a Long-term Agency Fund

Category of University	Benevolent fund as a long-term agency fund is maintained		Total
	Yes	No	
General	4.0 (100%)	0.0 (0%)	4.0 (100%)
Engineering	3.0 (100%)	0.0 (0%)	3.0 (100%)
Science and Technology	4.0 (80%)	1.0 (20%)	5.0 (100%)
Agricultural	2.0 (100%)	0 .0(0%)	2.0 (100%)
Total	13.0 (93%)	1.0 (7%)	14.0 (100%)

Source: Analysis of Primary Data.

6.2.1.16 Pension Fund as Separate Long-Term Agency Fund

Table 21 demonstrate that most of the universities (79 percent) under the study maintained pension fund as a long-term agency fund. The entire engineering and agricultural universities have complied, whereas half of the general and one-fifth of the science and technology universities have not complied with the matter.

Table 21: Distribution of Pension Fund as a Long-term Agency Fund

Category of University	Pension fund as a long-term agency fund is maintained		Total
	Yes	No	
General	2.0 (50%)	2.0 (50%)	4.0 (100%)
Engineering	3.0 (100%)	0.0 (0%)	3.0 (100%)
Science and Technology	4.0 (80%)	1.0 (20%)	5.0 (100%)
Agricultural	2.0 (100%)	0 .0(0%)	2.0 (100%)
Total	11.0 (79%)	3.0 (21%)	14.0 (100%)

Source: Analysis of Primary Data.

6.2.1.17 Security Deposit as Separate Fund

Table 22 reveals that most universities (79 percent) under the study maintained security deposits as separate funds. Whole engineering and agricultural universities have complied, whereas half of the general and one-fifth of the science and technology universities have not met the issue.

Table 22: Distribution of Security Deposit as a Separate Fund

Category of University	A separate fund maintained for the security deposit		Total
	Yes	No	
General	2.0 (50%)	2.0 (50%)	4.0 (100%)
Engineering	3.0 (100%)	0.0 (0%)	3.0 (100%)
Science and Technology	4.0 (80%)	1.0 (20%)	5.0 (100%)
Agricultural	2.0 (100%)	0 .0(0%)	2.0 (100%)
Total	11.0 (79%)	3.0 (21%)	14.0 (100%)

Source: Analysis of Primary Data.

6.2.1.18 Interest on Security Deposit

Table 23 demonstrates that a minority (38 percent) of universities under the study transferred interest on the security deposit to the university's general fund. All science and technology, one-third of engineering, and half of the other two categories of universities do not transfer interest on the security deposit to the university's general fund.

Table 23: Distribution of Interest on the Security Deposit

Category of University	Interest on the security deposit transferred to the general fund		Total
	Yes	No	
General	2.0 (50%)	2.0 (50%)	4.0 (100%)
Engineering	2.0 (67%)	1.0 (33%)	3.0 (100%)
Science and Technology	0.0 (0%)	4.0 (100%)	4.0 (100%)
Agricultural	1.0 (50%)	1 .0(50%)	2.0 (100%)
Total	5.0 (38%)	8.0 (62%)	13.0 (100%)

Source: Analysis of Primary Data.

6.2.2 Fund Accounting Compliance Index (FACI)

It is evident from table 24 that the overall FACI of public universities under the study is satisfactory (76.19). Agricultural universities under the investigation obtained the highest FACI score (86.11), engineering universities are the second highest (79.63), general universities got the third position (73.61) to FACI, whereas science and technology universities gained the lowest FACI (72.22). Considering the above result, it is clear that general, and science and technology universities under study are comparatively inferior positions than agricultural and engineering universities regarding fund accounting practices.

Table 24: FACI

Categories	FACS	Obtainable FACS	FACI	Sample Size
General	53	72	73.61	4
Engineering	43	54	79.63	3
Science and Technology	65	90	72.22	5
Agricultural	31	36	86.11	2
Overall	**192**	**252**	76.19	14

Source: Analysis of Primary Data.

6.2.3 Descriptive Statistics of FACI

As evident from table 25, the mean FACI is 76.19, which is a satisfactory index. However, there is a high deviation of FACI among the universities with a high standard deviation (12.41) and a large volume of range (50). The variation infers that the mean cannot entirely represent the overall scenario due to the high standard deviation of FACI among the universities. Statistical results indicate that though the mean index is satisfactory, it is not the actual scenario of all sample universities. Some of the universities are not up to the mark concerning practices of fund accounting.

Table 25: **Descriptive Statistics of FACI**

Mean	76.19
Maximum	88.89
Minimum	38.89
Range	50.00
Standard Deviation	12.41
Standard Error	3.32

Source: Analysis of Primary Data.

6.2.4 Fund Accounting Compliance Score

The study considered 18 FA compliance information items based on the literature review. Study results indicate that (table 26) 43 percent (6 universities) universities under the study secured the second-highest score (15 out of 18), and only 7 percent (1 university) universities under the survey got the highest score (16 out of 18).

Table 26: Fund Accounting Compliance Levels

FACS (Out of 18)	Frequency	Percent	Cumulative percent
7	1	7.1	7.1
12	1	7.1	14.3
13	3	21.4	35.7
14	2	14.3	50.0
15	6	42.9	92.9
16	1	7.1	100.0
Total	14	100.0	

Source: Analysis of primary data

6.3 Results of the Regression Model

Table 27 indicates that the estimated value for the university category is 0.519 and its t-value is 0.295 with a p-value of 0.774, the estimated value for university size is -0.023, and its t-value is -5.491 with a p-value of 0.00. The estimated value for universities' financial activities is -0.061, and its t-value is -0.490, with a p-value of 0.635. Although universities' size is significant at the 5 percent level, all other variables are insignificant at the 5 per cent significance level. The variance inflation factor (VIF) ideals for all three independent variables are less than five, which designates no multi-collinearity in the data. Upon review of the correlation matrix, the highest value is 0.276, which is much lower than the value of $0.7\pm.1$. Result of the correlation matrix evidence that there is no variable with a higher correlation in the data set. The Durban Watson test statistics value is 2.807, which is not a normal range of 1.5 to 2.5. Field (2009) suggested that values under 1 or more than 3 are a definite cause for concern. So the result is the undecided area regarding autocorrelation. The histogram indicates that the data set is normally distributed. The R^2 value for the model is 0.774, and $AdjR^2$ value is 0.706. Therefore, the predictor variables can explain about 77.4 percent of the total variation by R^2 and about 70.6 percent of the total variation by $AdjR^2$.

$$FACI = 96.257 - 0.023UnvSiz - 0.061UnvFinAct + .519UnvCat$$

Table 27: Regression Coefficients^a

Model	Regression Coefficients	t	P-value	Collinearity Statistics	
	B			Tolerance	VIF
(Constant)	98.612	13.341	.000		
Size	-.023	-5.491	.000	-.032	-.014
Financial Activities	-.061	-.490	.635	-.336	.215
Category	.519	.295	.774	-3.404	4.443

a. Dependent Variable: FACI

Source: Analysis of primary data.

7 Conclusion

Public sector accounting aims to ensure the proper utilization of resources for earmarked purposes. Appropriate application of fund accounting is a way to ensure the use of public sector accounting. Fund accounting is a method of accounting for government institutions. It facilitates ensuring accountability, transparency, fairness, and reliability. The study was conducted to find out the scenario of fund accounting practices in the public universities of Bangladesh. Most of the data for the research was collected from the primary source by administering a semi-structured questionnaire. Some secondary sources of data were also received by reviewing the literature. The dichotomous procedure is used to measure the compliance index of fund accounting. Descriptive statistics such as frequency, mean, standard deviation, range, minima, and maxima are used. Inferential statistics, such as the regressions model used to analyze data. The study result indicates that the fund accounting compliance index (76.19) is satisfactory but not outstanding in public universities of Bangladesh. There is a significant deviation of FACI among the categories of universities under the study. Agricultural universities secured the highest index, whereas science and technology universities got the lowest. The regression result implies that the model is well-fitted because the predictor variables can explain about 77.4 percent of total variation by R^2 and about 70.6 per cent by $AdjR^2$. However, financial activities and university categories are insignificant at a 5 percent significance level.

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Appendix-1

List of fund accounting compliance information

No.	Information Items
1.	Maintain one general fund
2.	Strictness followed to spend the budget of the general fund for the specific purpose
3.	Maintain special revenue fund(s) for tuition and fees collected under different sub-heads from the students
4.	Strictness followed to spend the budget of each special revenue fund for that fund(s)
5.	The unspent balance of the special revenue fund transferred to the general fund after the expiration of the fund duration
6.	Income-expenditure of capital project fund (development project) of the university accounted for separately
7.	Unspent balance of capital project fund (development project) transferred to the granting authority after the expiration of the project period
8.	Committed expenditure of different funds of the university recorded as a reserve for encumbrances in the budget register
9.	At the time of payment or cancellation of the commitment of expenditure is recorded as cancellation of the reserve for encumbrances in the budget register
10.	A special trust fund formed to maintain the donated money for donation
11.	The trust fund operated on the principle of the non-expendable trust fund
12.	The money of the trust fund is spent only on that trust fund
13.	Utility bill (gas, electricity) of the residential building of the university paid under a pass-through Agency Fund
14.	A separate agency fund for long-term provident funds is maintained
15.	A separate agency fund for long-term benevolent funds is maintained
16.	A separate agency fund for long-term pension funds is maintained
17.	A separate fund created to maintain the security deposit account
18.	Interest earned from the security deposit account transferred to the general fund

Source: Review of related literature and concept of fund accounting