



## Research article

# Antecedents and effect of creative accounting practices on organizational outcomes: Evidence from Bangladesh

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## ABSTRACT

This study examines the antecedents and effects of creative accounting practices (CAP) on organizational outcomes in Bangladesh. Thus, this research recognizes the antecedents of creative accounting, such as sustainable financial data (SFD), political connections (PC), corporate ethical values (CEV), future company orientations (FCO), and corporate governance practices (CGP). And also examine how the quality of financial reporting (QFR) and decision-making effectiveness (DME) are influenced by CAP. This study incorporates these fundamental antecedents of creative accounting practices on organizational outcomes by collecting survey data (n = 354) from publicly traded companies in the Dhaka Stock Exchange (DSE), Bangladesh. The study model has been tested through the "Partial Least Square- Structural Equation Modelling" (PLS-SEM) technique using Smart PLS v3.3 software. In addition, we pass various model fit measures, i.e., reliability, validity, factor analysis, and goodness of fit. This study finds that SFD does not work as an antecedent of creative accounting practices. But, the outcomes of the PLS-SEM confirm that PC, CEV, CFO and CGP work as an antecedent of CAP. Furthermore, the results of PLS-SEM also confirm that CAP influence the QFR in the positive direction and CAP influence the DME in the negative direction. Finally, QFR has a positive and significant impact on DME. Any study that has tested the impact of CAP on QFR & DME is yet to be found in the literature. However, policy-makers, accounting bodies, regulators, and investors can consider these findings to formulate policy and investment decisions. Mainly, organizations can focus on PC, CEV, CFO and CGP to reduce CAP. But organizations need QFR and DME, which are critical components of organizational outcomes.

## 1. Introduction

Creative accounting is the application of advanced accounting techniques & knowledge supported by existing laws and regulations. By employing advanced creative accounting literacy, management influences accounting reports frequently. These practices are

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popularly known as creative accounting, earnings management, or aggressive accounting [1–5]). There is a growing debate on creative accounting globally because of its impact on organizational outcomes. Thus, the concept is linked to the ethical standards of accounting and general ethics [6]. Firms have lost their operation capabilities or even become bankrupt due to cooking the accounts or manipulating the financial statement. Most interestingly, the existing loopholes in accounting standards create platforms for firms to use creative accounting techniques [7]. Proponents have agreed that published financial information positively links investment decisions [8]. As investors depend on a published annual report, investors cannot predict the market if the report is manipulated and biased. More importantly, with the consent of higher authority, managers often intentionally manipulate the financial statement to beat the competitors in the market [9].

This study uses DSE-listed banking and financial institutions to test its conceptual framework. Such an approach is needed to promote generalizability and demonstrate a framework's applicability across cultures [4,10]. This study uses DSE-listed companies as a sample to examine the antecedents and effects of CAP on organizational outcomes. Bangladesh has two financial markets: the Dhaka Stock Exchange (DSE), founded in 1954 & the other is the Chittagong Stock Exchange. Dhaka Stock Exchange has facilitated 34 banks and 23 financial institutions to strengthen Bangladesh's economy since its founding. However, most Bangladeshi banks and financial institutions are concerned about using CAP [11,12]. Additionally, One Bank Limited, a DSE-listed bank, used CAP to falsify the financial statement [13]. Furthermore, PK Halder, former Managing Director of a bank and financial institutions, was found guilty of laundering 100 million takas from multiple financial institutions (Daily Star, 2021). Furthermore, DSE also identified evidence of share manipulation by a business headed by cricketer Shakib Al Hasan. These are the DSE, Bangladesh's newest controversies [14]. However, the stock market scandal may hurt domestic economic activity and international investors [15]. It is mentioned that DSE-listed banking and financial companies frequently use CAP.

Professional accounting regulators allow changes to accounting estimates and policies per IAS:8 (Accounting Policies, Changes in Accounting Estimates and Errors). However, top-level executives have frequently used these loopholes to manipulate the firm's position. Bangladesh has a history of scandals, from the 1996 IPO stock market crisis to the 2010–11 Dhaka and Chittagong stock exchange scams. As a result, the market went up 62% in 2009 and 83% in 2010 but dropped 10% in January 2011. The Bangladeshi financial scandals of 2008, 2009, and 2010 were widely acknowledged as the country's largest scandals, such as Oriental Bank, Basic Bank, and Sonali Bank, which are listed in DSE and the reserve transfer of Bangladesh Bank [16,17].

Furthermore, investors found it difficult to figure out creative accounting techniques [18]. Consequentially, companies like Enron, World.com, and Arthur Anderson collapsed due to creative accounting practices [8], although these companies were financially stable. In addition, scholars have found multiple reasons for these collapses, including inadequate financial reporting [19], misapplication of financial data [10], lack of corporate ethical values [13,20,21], company future orientation without creating value [1,22], and poor corporate governance practices [13,19]. Hence, creative accounting practice is an alarming issue for Bangladesh. Moreover, reviewing the recent financial crisis emanates questions regarding creative accounting, whether it is a blessing or a curse.

The global financial crisis, including the lack of sustainable financial data, high political affiliation, lack of corporate ethical values, high company future orientation, and poor compliance with corporate governance code, have pushed companies worldwide to pay greater attention to the antecedents of creative accounting practices. Moreover, the literature lacks a holistic study on SFD, PC, CEV, CFO, and CGP, whether or not working as antecedents of CAP [10]. However, past researchers have examined how SFD and PC affect CAP [10], but they have not been fully disclosed.

Although there is an inverse relationship between CEV and CAP, recent studies indicate that high ethical values firms also practice creative accounting. Likewise, the company's future orientation will profoundly affect CAP and QFR, which have not been established in Bangladesh [23]. In contrast, CAP is closely associated with CGP, QFR, and DME in accounting and finance. However, financial reporting does not constantly improve decision-making effectiveness [24]. No studies have examined the association between a CFO and CAP. Even though the relationship between corporate governance practices and creative accounting practices has been pointed out often due to the double externality problem deriving from creative accounting, creative accounting does not result only from weak corporate governance practices. It also stems from inadequate financial reporting, non-compliance with SEC (Securities & Exchange Commission) guidelines and lack of ethical concern [10,19].

Enormous studies have been carried out on the issue of creative accounting and corporate governance, and all of these are based on secondary data, even if the application of proxy variables [25–32], except a few ones [10]. Due to the discretionary accruals measure of creative accounting, known as the Modified Jones Model, past research findings are heavily questioned [33,34]. Thus, the modified Jones model, which evaluates firms' earnings management strategies, is ineffective in Bangladesh and in other similar economies but effective for developed economies [33,35,36]. Conversely, the Yoon & Miller model proposes a better explanatory power even though the adjusted R-square of the two models is nearly the same [35]. Few empirical research has attempted to link earnings management with firm performance across Europe, Africa, the Middle East, and Asia [37]. No single study has been found in the south Asian country region [10]. Additionally, previous studies were conducted from an oriental culture perspective [10].

Furthermore, organizational structures are becoming increasingly complex and diverse as the fourth industrial revolution progresses. Consequently, investors are more anxious about their investments and their expected returns. Hence, companies are under pressure from regulators and public concerns to maintain market stability. For this purpose, antecedents and effects of creative accounting are of interest to investors, scholars, professional organizations, business analysts, and subject specialists. As a result, business professionals need to know the consequences of these antecedents to minimize the negative impact. However, financial reporting has previously demonstrated conflicting views on creative accounting and decision-making effectiveness [19]. Considering these issues, this study set out a framework to test whether these factors work as antecedents of creative accounting and how creative accounting affects the QFR and DME in Bangladesh's financial sectors and the specific economic sectors in which it is applied.

These gaps in the existing literature point out several scopes for future study that this study tries to explore. Firstly, scholars call for

further research to examine the association between antecedents of creative accounting and organizational outcomes. Secondly, the study explores the links between creative accounting, decision-making effectiveness, and financial reporting quality. Thirdly, it illuminates the link between financial reporting quality and business decision effectiveness. Hence, the research question emanates from the objectives: Do sustainable financial data, political connections, corporate ethical values and future company orientations work as the antecedents that trigger creative accounting practices? Does corporate governance compliance help to eliminate creative accounting & enhance the reliability of financial reporting? Lastly, do creative accounting techniques impede the quality of financial reporting and decision-making?

We provide five principal contributions to the current literature on creative accounting and organizational outcomes to answer these questions. Firstly, the research paper will serve as a policy paper in accounting and finance literature, outlining the steps to ensure organizational outcomes through sustainable reporting and substantial decision-making. The Bangladesh stock market issue is concerning due to the shaky financial and banking sector. Nonetheless, creative accounting techniques are alarming Bangladeshi businesses. Therefore, this comprehensive study will aid policymakers, trade associations, regulators, and investors. Secondly, this study contributes to the current body of knowledge in multiple ways relevant to the new and emerging researcher. First, to the author's best knowledge, this is the first study in this research domain because prior studies have focused on developing countries and middle east countries while ignoring emerging countries' perspectives, such as Bangladesh. Thirdly, this study concentrated on maximizing sustainable financial data, limiting political connections, and preserving corporate ethical values to ensure better firm outcomes. Fourthly, Bangladesh is the world's 13th best-emerging economy; consequently, the conclusions gained in Bangladesh can be generalized to the world's other emerging economies. Finally, in terms of methodology, this study will employ structural equation modelling (SEM), a powerful estimating technique to run the suggested model, introducing a new dimension to the research topic [38].

Although this study includes banking and financial institutions, the sample was taken only from Bangladesh. Therefore, the findings may not apply to a broader context. Thus, further validation of the model and generalization of results would be essential for other countries.

The rest of the paper includes Section 2: literature review and hypothesis development; section 3: methodology; section 4: results; section 5: discussion; section 6: implications for theory and practices; & Section 7: limitations and future research direction.

## 2. Literature review and hypothesis development

### 2.1. Sustainable financial data and creative accounting practices

SFD (Sustainable Financial Data) is an overall concept that includes enhanced data control and management methods that aid in a company's overall strategy, aid in outcomes, and reduce risk. Long-term growth must be sustained by generating value from sustainable data governance. Data governance is managing significant data assets that sync with business priorities while having complete control, decentralizing authority, and establishing a consensus-based decision-making mechanism [39]. Incorporating data governance into an organization is advantageous because it facilitates institutional awareness and provides the necessary resources to inform data relevance. Authors [40] stated that data governance appears to be gaining the utmost attention, especially in the academic and professional fields of business. Data Governance effectively enables the accountant to add value to the organization [41].

Organizations with a high degree of a sustainable data structure are likely to utilize aggressive tools in accounting, such as updated and advanced procedures, compared to firms with low data governance [10]. Creative accounting advocates believe it benefits short-term business operations by employing manipulative financial data but harms long-term financial performance, insolvency, and even bankruptcy. Conflicts over resource allocation between stakeholders originate from creative accounting applications (Ababneh & Aga, 2019). Proponents of financial data argue that financial data are used for earnings manipulation [41].

On the other hand, it multiplies a firm's operations, accelerates its operations' strength, and simplifies decision-making [42]. Sustainable financial data allows businesses to ensure an effective decision-making process. There has been much debate on the main benefits of sustainable financial data and the criticality of effective data management [40]. Hence, sustainable financial data aims to capitalize on loopholes in accounting opportunities, and this study explores the degree to which sustainable financial data leads to creative accounting. In line with those above, the current study develops the following hypothesis.

**H1.** Sustainable financial data work as an antecedent of creative accounting practices.

### 2.2. Political connection and creative Accounting Practices

Author [43] mentioned that seeking to correlate the adoption of creative accounting practices, and significant political connections discovered that political ties are a small component of creative accounting practices. However, previous research has shown that people with more political ties are more likely to manipulate financial patterns [44]. In addition, the auditor's independence is compromised by political connections [8,45].

Conversely, some research on political ties has found an opposing and contradictory link between political connections and creative accounting procedures (political connections negatively affect the effective tax rate) [3]. Various empirical analyses have discovered mixed findings (for example, mixed influences between political relationships and earnings management; mixed forces between political connections and reporting policies). People in senior management who have ties to politics are more likely to use creative accounting processes [10]. Contradictory information warrants further evaluation of this critical study domain due to the conflicting information. So, conflicting information necessitates additional consideration of this crucial research domain. Based on the above

arguments, the following hypothesis is developed.

**H2.** Political connections work as an antecedent of creative accounting practices.

### 2.3. Corporate ethical values and creative Accounting Practices

This study attempted to link corporate ethical values and creative accounting practices. Modern authors [2] investigated accountants' moral perceptions and earnings management while compiling their records. The study discovered disagreement over applying globally accepted ethical principles and values. Auditor or corporate ethics significantly impact the capacity to identify creative accounting techniques [1]. In addition, ethics had a favourable effect on fraud detection. An ethical auditor can find fraud in his clients' financial accounts because of his honesty and objectivity [7]. On the other hand, it was discovered that auditors' unethical practices hinder audit quality. That means the auditor failed to affect audit quality, indicating that he no longer adheres to his professional standards [46].

An auditor must follow published guidelines such as the CPA Code of Ethics and established guidelines to ensure audit quality and discover creative accounting techniques [47]. Previous scholars [48] discovered considerable disparities in how corporate ethical values are perceived according to age, gender, employment status, and other demographic characteristics. According to previous studies, corporate ethical standards or values are an effective principle for developing ethical behaviour and generating sound judgments. However, a strong culture and good communication are required to ensure that corporate ethical values are implemented practically in businesses [49].

Few prior studies have demonstrated that, despite strict ethical rules, the Enron affair rattled the market due to creative accounting practices and a breakdown of ethical rules and values [50]. Enron's directors violated their ethical standards twice [51]. WorldCom also had ethical guidelines, although these were not followed until 2002. Later, WorldCom was engaged in an \$11 billion accounting fraud in 2004, despite ethical standards but not these guidelines influencing WorldCom leaders. It is expected that corporate ethical values will pressure managers and professional accountants to improve the accountability of financial statements and, therefore, discourage them from manipulating accounts. However, mixed findings are also observed [52]. So, we posit the following hypothesis.

**H3.** Corporate ethical values work as an antecedent of creative accounting practices.

### 2.4. Company future orientation and creative Accounting Practices

The ability to change market conditions to achieve strategic and long-term growth is called company future orientation [23]. A firm's future orientation directly impacts how the company manages its operations. Futurists believe that corporate positive value-driven future orientation might lead to more creative decision-making. However, manipulation of actual position happens when firms engage in creative accounting. On the contrary, companies adopt creative accounting techniques when facing unfavourable financial situations. This is linked with prior studies [23].

Furthermore, creative accounting will be a more appealing method for shaping the company's future direction. Creative accounting methods have a strong relationship with corporate governance, financial reporting, and decision-making effectiveness in accounting and finance. Hence, financial reporting does not constantly improve decision-making effectiveness in these contexts [24]. Few scholars have tried to evaluate the relationship between a company's future orientation and creative accounting methods. Scholars have discovered a negative correlation between future direction and the development of accounting techniques. As established by the preceding study, creative accounting can alter a company's outcomes, influencing the firm's future trends. The company's long-term goal is to create and achieve goals to meet long-term obligations. The research aims to show a direct and beneficial association between a CFO and CAP. As a result, this study formulated the following hypothesis.

**H4.** Company's future orientation work as an antecedent of creative accounting practices.

### 2.5. Corporate governance practices and creative accounting practices

The top financial crime or scandal has recently increased the relevance of corporate governance and creative accounting practices across the globe. Corporate governance is about establishing and maintaining relationships between firm management, a board of directors, numerous stakeholders, and regulatory authorities [53]. Corporate governance practices are the new research domain for emerging economies like Bangladesh, reducing creative accounting practices and improving financial reporting quality. Prior research has established that corporate governance acts as a catalyst for improving the integrity of accounting information. Previous studies and experts support this association and recommend the agency issue to understand better the relationship between corporate governance policies and creative accounting methods [54].

Agency concerns shareholders and the board of directors conflicting [55]. Likewise, the authors found that knowledge asymmetry drives novel accounting processes in the corporate governance paradigm. Corporate governance practices can rein in creative accounting techniques by acting as a watchdog [25–29], except a few ones [10].

Earlier scholars used different tools to measure the degree to which corporate governance (such as audit committee, auditor independence, CEO duality, and board size) helps to reduce earnings management. However, previous studies examine the nexus between corporate governance and firm performance through proxies variables. Hence, the findings of these studies are strongly criticized by the proponents of modern experts due to the employment of proxies variables [25–31,56], even if these proxy variables

are relevant for developed economics not fit for emerging economics like Bangladesh [33,34]. Moreover, scholars found mixed relationships among corporate governance, accounting outputs and organizational outcomes [57–59]. As a result, there are contradictions in existing literature conclusions [60,61]. The following hypothesis contributes to the debate.

**H5.** Corporate governance practices work as an antecedent of creative accounting practices.

## 2.6. *Creative accounting practices, quality of financial reporting, and decision-making effectiveness*

Major organizational goals include effective financial reporting and decision-making, which depend substantially on creative accounting techniques. The previous scholars suggested that creative accounting reduces the usefulness of corporate reporting, and the value of decision-making may be ineffective [62,63]. In accounting literature, “creativity” refers to manipulating financial statement components. As a result, an asset is overvalued, indicating an extensive stock, changes in the pattern of expenditure, the structure of provision, and depreciation policies. The such manipulative application generally limits the applicability of reporting process [64]. In developing economics, creative accounting applications were considered a significant factor influencing a firm’s propensity to adhere to reporting frameworks to achieve predefined goals. Accounting regulations, the role of auditors, and the ethical principles of those accountable for financial reporting are all affected by creative accounting methods. Additionally, according to financial reporting advocates, creative accounting is strongly linked to financial reporting [2].

In profit manipulation, there has been a lot of debate about whether or not accounting and financial reporting have an inverse connection [65]. Prior scholars commented that greedy accounting practices substantially impact bank distress. It is viewed as a bad connotation for accounting data [65]. Firms with a more creative approach to accounting are more likely to succeed in decreasing their reporting status [10]. Window dressing, artificial accounting, profit management, income smoothing, and accounting fraud are all well-known creative practices that companies use to entice investors to purchase their shares and boost their market value [8]. These are called “art of balance sheet falsification. Due to a lack of accounting competence in creative accounting practices, stakeholders cannot notice or understand financial games. An individual or small investor cannot carry out an in-depth financial study. Due to creative accounting methods, investors’ decisions are ineffectual [6].

Even though the application of creative accounting limits the quality of financial reporting has been pointed out many times due to the portfolio effects of corporate reporting. However, the integrity of financial reporting is restricted not only by creative accounting practices. Limited compliance with corporate governance regulations and accounting standards’ loopholes are also to blame. Creative accounting strategies have been found to significantly impact the quality of financial reporting [62]. As per recent studies, creative accounting techniques paradoxically reduce corporate reporting accuracy and decision-making effectiveness [59]. Consequently, scholars can conclude that the impact of creative accounting on the accuracy of financial reporting and the efficacy of decision-making is not always apparent.

However, the previous study has shown that creative accounting factors have minor effects on financial reporting quality. However, financial reporting quality and creative accounting are still on track to generate renewed research interest. Even though prior research has indicated that creative accounting practices have a minimal impact on financial reporting quality, the phenomena of financial reporting quality, decision-making effectiveness and creative accounting are still on the track to producing new research interests. Based on the above ground, we postulate the following hypothesis.

**H6.** There is a negative correlation between creative accounting practices and financial reporting quality.

**H7.** There is a negative correlation between creative accounting practices and decision-making effectiveness.

## 2.7. *Quality of financial reporting and Decision-Making Effectiveness*

Financial reporting is extensively developed and considered the best decision-making tool. But although financial reports are a fundamental component of the corporate accounting system, they still differ widely concerning their comprehensiveness and information quality. This study investigates the association between the quality of financial reporting and decision-making effectiveness and addresses the debate on the implications for sustainable business strategies. The structure of financial reporting and decision-making strategies has changed significantly due to the pressure from the stakeholders and demands for sustainable information. Hence, financial reports of banks and financial institutions can lead a direction of reliance to users towards effective decision-making [55].

Previous results revealed that some managers’ motives to gain short-term interest are mainly due to the malpractice of corporate ethical values, which turn to poor corporate financial reporting [2,66]. Hence, the quality of financial reporting substantially impacted the decision-making effectiveness. Prior studies have highlighted a positive relationship between financial reporting quality and decision-making effectiveness [46,67]. However, financial performance and higher profitability are expected for companies, resulting in good reporting. Moreover, firms’ financial ranking depends on their preferred method of reporting [68]. These techniques produce too optimistic financial forecasts and accounting records, “making for low-quality financial reporting” [46]. Authors [24] also noted that financial and accounting reporting quality is a significant decision-making factor”. On the other hand, the efficacy of financial reporting for investors, notably annual financial statements, has recently been questioned [67]. Furthermore, prior scholars have shown why conventional financial reporting has lost its decision-making effectiveness [69–71]. Thus, the IASB works on initiatives to improve financial reporting relevance [67]. Moreover, prior evidence has focused on developed countries like US, UK & Australia [67, 70–72] and a few developing countries [10] while ignoring the emerging economics in south Asia, like Bangladesh, India, & Sri Lanka.



As a result, the findings from industrialized economies can be generalized to emerging economies like Bangladesh. So, the study concludes that the nexus between the QFR and DME has been a topic of debate. Hence, the following hypothesis can be proposed.

**H8.** There is a positive relationship between the quality of financial reporting and decision-making effectiveness.

The relationship between these variables and the structural model of the study is depicted in Fig. 1.

### 3. Methodology of the study

#### 3.1. Data and sample

This study used a quantitative approach, with a well-designed questionnaire prepared to test the theoretical framework and hypothesis, as the prominent researcher of the creative accounting regime employed questionnaire approaches [73]. To construct the model, the research idea, the framework's development, and the framework for item development are discussed with subject experts, academics, researchers, and professional accountants [73]. Extensive academic and professional literature analyses and current issues are examined to develop SFD, PC, CEV, CFO, CGP, CAP, QFR, and DME. This technique argues that a closed-ended questionnaire survey can reach a more significant number of respondents regardless of their location or time of day [74]. Ten respondents pre-tested the anticipated questionnaire because it is usually sufficient to pre-test with five to ten respondents [75]. A few questions were updated to meet the suggested study model based on their responses during the pre-testing procedure. The questionnaire was developed on a five-point Likert scale where 1 = "strongly disagrees" and 5 = "strongly agree." The primary users of audited financial statements are the investors and potential investors, top management personnel, creditors, regulatory bodies, and pressure groups. The critical respondents of the study are the chief financial officer, investors, academicians, directors, and professional accountants. The non-probability sampling strategy was used (convenient sampling), as randomization would be problematic due to the enormous population ([76,77]). During the face-to-face interview phase of the survey, participants will be made aware that their information will not be shared with any third parties and will only be used for research purposes. The names of the chief financial officers and directors were drawn at random from a list of names posted on the websites of the financial institutions listed on the Dhaka Stock Exchange. On the basis of who owns shares on the Dhaka stock exchange, investors were selected at random. (DSE). Professional accountants were selected randomly from the website of ICAB (Institute of Chartered Accountants of Bangladesh) and ICMAB (Institute of Cost & Management Accountants of Bangladesh). Academicians who were chosen randomly from different universities are experts in this

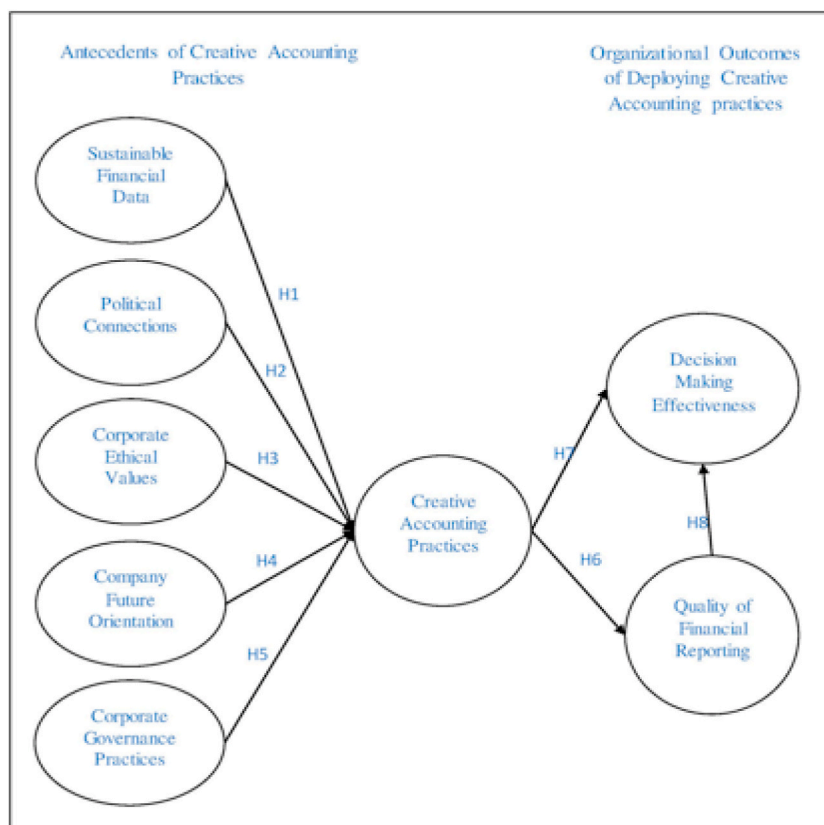


Fig. 1. Conceptual model of the study.

field. It is also confirmed that all participants gave informed consent to conduct the study survey.

Face-to-face interviews were used for the survey, but due to COVID-19, some questions were sent through email and courier. No gifts or incentives were given to the respondents to eliminate bias, and they all participated voluntarily. The respondent groups were adequately qualified and experienced in accounting and auditing, with the majority possessing a high level of education [73]. A total of 22 of 400 questionnaire respondents did not answer (11.5% non-response rate). So, 354 valid responses were received. Separate datasets were created for early respondents (214 cases) and late respondents (140 cases). The mean differences between these two groups were assessed using a *t*-test. The lack of a discernible difference led this study to conclude that the dataset lacked non-response bias. The data were subjected to a reliability test using SPSS 24 (Version 24.0.) [78]. The Cronbach's alpha value was 0.85, falling from 0.70 to 0.9 [79]. The Jarque-Bera test [80] was used to determine the dataset's normality. A nonparametric statistical approach like bootstrapping was used because the result was significant at  $p < 0.05$ , demonstrating that the data set is not normal [81]. As a result, utilizing Smart PLS with the existing dataset is appropriate. Table 1 shows the sample characteristics.

### 3.2. Construct measurement

The data collection tool for this study is split into two sections. In the first, respondents are asked questions to create a demographic profile, and in the second, there are 30 items to measure the constructs. The respondent group, gender, year of experience, education, and types of organizations were all covered in the demographic questions. The informant's opinions were quantified using a five-point Likert scale for every 30 closed-ended questions spanning the eight constructs.

We used the [82] statement to measure sustainable financial data by adopting three items. First, political connections were quantified by four items created by Ref. [83]. Four items from existing literature operationalised creative accounting practices [84]. Then to measure corporate ethical values, this study adopted four items modified by Ref. [85]. Three items adopted from Ref. [85] were used to develop the company's future orientation [86]. Finally, the corporate governance practices were conceptualized using four items taken from Ref. [87]. This study used the statement [84] by adopting five items to measure the quality of financial reporting, while decision-making effectiveness was calculated using three statements from the questions developed by [84,88].

### 3.3. Data analysis

A structural equation model (PLS-SEM) is used in this study to analyze the research hypotheses. SEM is a sophisticated multivariate analysis tool used, particularly in the management and accounting research arena, to build and extend current ideas by testing the correlations between endogenous and exogenous variables [89,90]. If the model involves numerous constructs and items, includes a formative construct, violates the data set's normality assumption, deals with a relatively small sample size, and the research goal is to predict the key construct, PLS-SEM has advantages for predictions. It can even handle data deficiencies like heterogeneity [81], then PLS-SEM is a better option [91–93]. In addition, scholars contend that early SEM investigations emphasized factor-based techniques for estimating mediation and conditional process models [94]. However, the new version and advanced package of PLS-SEM resolve these worrying difficulties [95]. So, this study used structural equation modelling (SEM) as a statistical analysis method and turned the items into eight latent variables.

A three-step strategy is used to analyze the model, adhering to Henseler and Ringle's [75] suggested logical order of studies. Firstly, valid questionnaires were encoded, declared, and entered into version 24.0 of SPSS software. From the software, the data were further processed using factor analysis, descriptive statistics, and reliability testing before being used in PLS-SEM. The most prominent method for evaluating scale reliability was to examine the consistency of the entire scale using Cronbach's alpha and corrected item-total

**Table 1**  
Sample characteristics.

Items	Categories	Frequency	(%)
Respondents Group	CFOs	56	15.8%
	Investors	150	43.3%
	Directors	70	19.7%
	Auditors	45	12.7%
	Researchers	33	.97%
Gender	Male	270	76.2%
	Female	84	23.7%
Level of Education	'Graduate'	91	25.7%
	'Post Graduate'	150	42.3%
	'Professional Degree'	79	22.3%
	PhD/Others	34	0.96%
Year of Experience	Below 5 years	95	26.8%
	5–10 years	33	0.93%
	10–15 years	72	20.3%
	Above 15 years	154	43.5%
Types of Organization	Banking Companies	165	46.6%
	Financial Institutions	113	31.9%

Source: Developed based on collected data.

correlation. Secondly, the measurement model is assessed to determine whether the prerequisites for creative accounting for reflective and composite measures are satisfied and to examine at the correlations between the observable and unobservable variables. The final step assesses the structural model to investigate the causes and effects of creative accounting practices on organizational outcomes among the eight unobservable constructs. This order is used for the whole sample of banking and financial institution responses in the model assessment process.

## 4. Results

### 4.1. Measurement model output

The researcher used the structural equation model to analyze and fit this study's conceptual model. SEM is a robust methodology for multivariate research that encompasses correlation analysis, causal modelling, and path analysis, among others. Multivariate data were collected using customized survey items written in English [10]. The research hypotheses were tested using structural equation modelling (SEM) to determine the correlations between endogenous and exogenous factors [96]. The link between measurement items provided by various indicators and latent components is also investigated using SEM [97]. The model has several constructs and items, a formative construct, which violates the data set's normality assumption, and a small sample size. Hence PLS-SEM is better [98]. SmartPLSv 3.2 has been utilized to analyze the data gathered using a survey instrument [73]. As all of the analyses' findings are good, the model's validity in convergent and divergent situations is shown in the following sections.

Table 2 depicts the average variance extracted, composite reliability, and Cronbach Alpha of each latent variable, including the

**Table 2**  
Measurement model analysis.

	Statements	FL	CR	AVE	CA
	<b>Sustainable Financial Data (SFD)</b>		0.856	0.60	.836
SFD1	"To have financial data ownership, value analysis, and management, we have identified key decision-makers in our firm".	0.63			
SFD2	"We employ steering committees to monitor and review financial data values and costs".	0.83			
SFD3	"In our firm, we "Educate users and non-IT managers regarding financial data storage, utilization and costs."	0.81			
	<b>Political Connections (PC)</b>		<b>0.923</b>	<b>0.67</b>	<b>0.914</b>
PC1	"Members of our top management team have held top government, military or political posts in the past".	0.77			
PC2	"Members of our top management team hold active political posts."	0.79			
PC3	"Members of our top management team share strong ties with members of the parliament or other political parties."	0.89			
PC4	"Members of our top management team enjoy legal protection due to their ties with political entities."	0.83			
	<b>Corporate Ethical Values (CEV)</b>		<b>0.942</b>	<b>0.80</b>	<b>0.946</b>
CEV1	"Managers in our company often engage in behaviours that you consider to be unethical."	0.87			
CEV2	"To succeed in our company, it is often necessary to compromise one's ethical values."	0.91			
CEV3	"Suppose a manager in our company is discovered to have engaged in unethical behaviour that results primarily in personal gain (rather than corporate gain). In that case, they will be promptly reprimanded".	0.90			
CEV4	"Suppose a manager in our company is discovered to have engaged in unethical behaviour that results primarily in corporate gain (rather than personal gain). In that case, they will be promptly reprimanded."	0.90			
	<b>Company Future Orientation (CFO)</b>		<b>0.848</b>	<b>0.66</b>	<b>0.838</b>
CFO1	"When a company want to achieve something, the company sets goals and considers specific means for reaching those goals."	0.84			
CFO2	"Before planning, our company weigh the costs against the benefits."	0.97			
CFO3	"Our company completes projects on time by making steady progress."	0.59			
	<b>Corporate Governance Practices (CGP)</b>		<b>0.949</b>	<b>0.82</b>	<b>0.940</b>
CGP1	"Having a good governance structure has improved our overall performance."	0.91			
CGP2	"Compliance with laws, codes and standards that meet the BSEC needs has improved our overall performance."	0.93			
CGP3	"Complying with ethical leadership and corporate citizenship has improved our firm performance."	0.88			
CGP4	"Complying with integrated reporting has improved our competitiveness in the market."	0.91			
	<b>Creative Accounting Practices (CAP)</b>		<b>0.933</b>	<b>0.83</b>	<b>0.933</b>
CAP1	"Our organization use creative accounting practices to meet analysts' profit expectations."	0.90			
CAP2	"Our organization use creative accounting practices to meet directors' earnings forecasts."	0.89			
CAP3	"Our organization use creative accounting practices because of the absence of an audit committee."	0.95			
CAP4	"Our organization use creative accounting practices because of poor outside director representation."	0.86			
	<b>Quality of Financial Reporting (QFR)</b>		<b>0.922</b>	<b>0.70</b>	<b>0.912</b>
QFR1	"Environmental liability recognized for the first time are usually debited to accumulated profit"	0.79			
QFR2	"In our financial reports, provision for warranty costs is recognized."	0.72			
QFR3	"In our financial reports, impairment loss on the asset is recognized."	0.83			
QFR4	"Restructuring provisions are incorrectly recognized as a liability at the acquisition date (r)."	0.92			
QFR5	"Our financial reports recognise revenues before installation is completed."	0.91			
	<b>Decision-Making Effectiveness (DME)</b>		<b>0.804</b>	<b>0.59</b>	<b>0.681</b>
DME1	"The quality of decisions has improved with sustainable financial data governance."	0.96			
DME2	"The speed at which we analyze decisions has increased with sustainable financial data governance."	0.74			
DME3	"We have an increased understanding of our customers/clients/suppliers and competitors with the use of sustainable financial data governance."	0.56			

CA=Cronbach's Alpha, CR= Composite Reliability, AVE = Average Variance Extracted, FL=Factor Loadings.



factor loading for each measured variable element. The model of interest was examined using the PLS-SEM methodology. The Fornell-Larcker criterion and Heterotrait-Monotrait (HTMT) ratio were used to assess divergent validity. The reliability coefficients (alpha and composite reliability (CR), convergent validity (i.e., standardized factor coefficients of the items, their t-statistics, and average variance extracted (AVE), are also employed to fit the model. Research items with low and negligible standardized factor loadings were not included in this study. Only 04 items estimated loadings below 0.50, whereas the majority of factor loadings were determined to be above 0.50. Items with factor loadings below 0.50 have been eliminated (SFD4, CGP3, CAP3, & CAP5). Likewise, Structural Equation Modeling (SEM) was used to achieve the final results in Table 2.

Fig. 2 depicts the retained item loadings above the 0.50 criterion and the retained item loadings that are statistically significant [99, 100]. Internal consistency of the scale items was assessed using composite reliability and Cronbach’s alpha; for each construct, the value above 0.7, a commonly accepted cutoff, revealed an AVE larger than 0.5 [98,101].In summary, this result demonstrates the instruments’ reliability and convergent validity. Discriminant validity was determined using the HTMT ratio and the Fornell–Larcker criterion. The correlation of the HTMT-ratio was less than 0.9 [102], and AVEs were greater than squared inter-construct correlations [101]. In summary, this result demonstrates the instruments’ diverging validity. (see Table 3)

4.2. Goodness of fit

The performance of the model and the goodness of fit have been measured through R<sup>2</sup> (“Coefficient of Determination”), which has been utilized to evaluate the model’s performance and its goodness of fit and f<sup>2</sup>, “Standardized Root Mean Squared Residual” (SRMR) and “Normed Fit Index” (NFI). A value of R<sup>2</sup> between 0.25 and 0.50 is optimal, while anything above 0.20 is passable [103]. Table 4 shows R<sup>2</sup> = 0.481 means SFD, PC, CEV, CFO, and CGP can explain 48% of the variation in CAP. In addition, it illustrates CAP alone can account for about 56% of the variation in the QFR. In the same way, CAP and QFR together account for 49% of the total variation in DME from Table 4 (see Table 5).

4.3. Test of hypothesis

PLS-SEM output in the table 5 shows no significant association between SFD and CAP (β = 0.171, ρ = 0.331). Consequently, hypothesis 1 was rejected. CAP is highly influenced by PC in a positive direction (β = 0.53, ρ = 0.000). Therefore, hypothesis 2 was confirmed. CEV in business has a major, negative effect on CAP (β = −0.20, ρ = 0.018). As a result, hypothesis 3 was confirmed because the current study indicated a negative correlation. CFO substantially promotes CAP in a positive direction (β = 0.29, ρ = 0.000). Therefore, hypothesis 4 was confirmed. CGP significantly influence CAP in the negative direction (β = −0.34, ρ = 0.00). Consequently, hypothesis 5 was validated, as this investigation predicted a negative correlation. Positively, CAP substantially impacts the QFR (β = 0.35, ρ = 0.018) and represents 56% of the variability in QFR. As a result, hypothesis 6 was not validated because the current investigation projected a negative correlation. CAP significantly influence DME in the negative direction (β = −0.34, ρ = 0.00). Therefore, this study predicted a negative connection, supporting hypothesis 7. The QFR had a major impact on the DME (β = 0.49, ρ = 0.000). As a result, hypothesis 8 was confirmed. (see table 5)

5. Discussion

Unlike what we predicted, sustainable financial data had no discernible effect on creative accounting. Prior research indicates that proper compliance with corporate governance codes and strong corporate ethical values can help reduce creative accounting practices and boost corporate performance [104–107]. Although, in addition, the study focuses on sustainable financial data, such approaches did not affect nor aid in the development of creative accounting practices. But the previous finding supports [10], who found that SFD did not have an appreciable impact on creative accounting. Firstly, accounting and finance concerns may be less involved in corporate sustainability management than other company areas [108]. Secondly, companies may be aware of using SFD and CAP. This surprising discovery necessitates additional research attention in future scholarly activity in Bangladesh.

Political connections affect creative accounting methods (Su et al., 2019). The current study found a strong association between

**Table 3**  
Correlations, convergent validity and HTMT.

Instruments	1	2	3	4	5	6	7	8
1 Sustainable Financial Data	<b>.77</b>	.19	.26	.46	.49	.58	.48	.41
2 Political Connection	.56	<b>.81</b>	.48	.55	.46	.30	.21	.22
3 Corporate Ethical Values	.26	.22	<b>.89</b>	.49	.28	.22	.54	.29
4 Company Future Orientation	.23	.29	.21	<b>.81</b>	.44	.56	.37	.40
5 Corporate Governance Practices	.38	.40	.54	.30	<b>.90</b>	.53	.37	.47
6 Creative Accounting Practices	.46	.47	.37	.22	.49	<b>.91</b>	.46	.22
7 Quality of Financial Reporting	.28	.22	.37	.56	.39	.55	<b>.83</b>	.29
8 Decision Making Effectiveness	.44	.29	.46	.53	.46	.49	.49	<b>.76</b>

Noted: It should be noted that “the square root of AVE” is shown diagonally (in bold and highlighted), the latent variable intercorrelations are shown below the diagonal, and HTMT is shown above the diagonal [101].

Source: PLS-SEM output

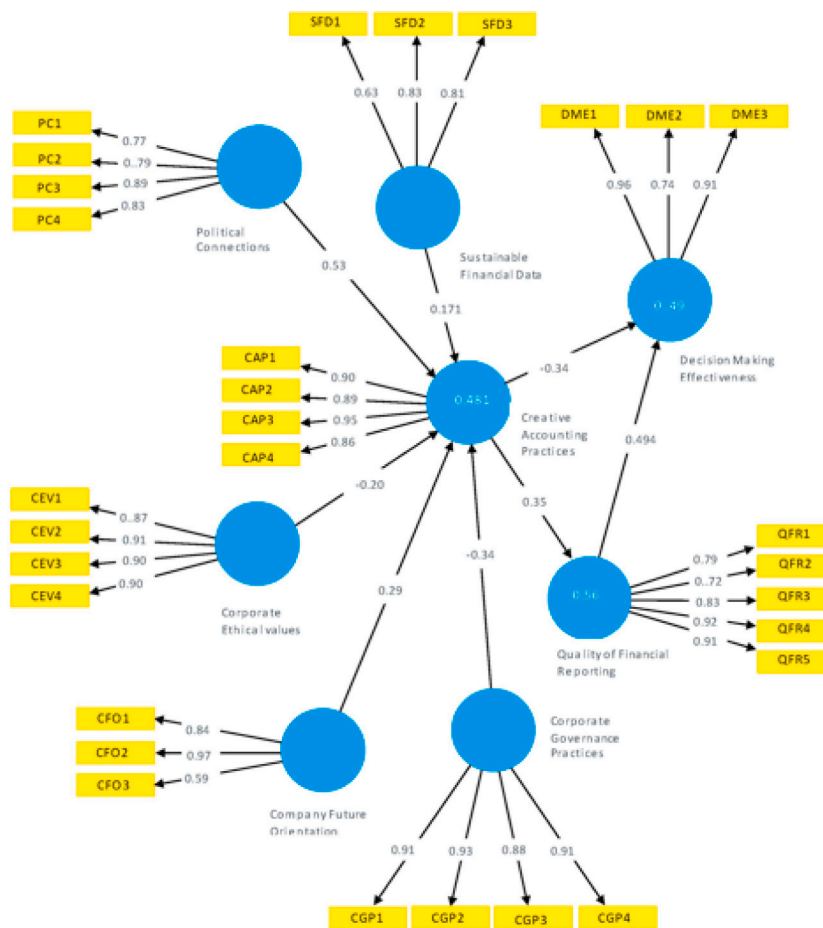


Fig. 2. Beta values, standardized factor loading, beta values, and R.<sup>2</sup>.

Table 4  
Structured model results.

Constructs	R <sup>2</sup>	SRMR	NFI
SFD			
PC			
CEV			
CFO			
CGP			
CAP	.481	0.054	0.863
QFR	.562	0.054	0.863
DME	.490	0.054	0.863

SRMR needs less than 0.01 [99], while NFI values close to 01 indicate a satisfactory model fit. Since the NFI value is 0.86, close to 01, and the SRMR computed 0.054 (Table 4), which is less than the threshold limit of 0.08, this model is fit [103].

political connections and creative accounting practice. Political connections considerably impact accounting practices and influential antecedents of creative accounting. The current finding is consistent with prior assertions [10] and that political connection significantly influences creative accounting. However, emerging and developing economies are less likely to insure such firms [109]. Previous scholars suggested that politically linked enterprises are more innovative in their processes [83]. To our knowledge, no study has explored the relationship between PC and CAP in considering primary data and potential economic contexts like Bangladesh.

It is found that company ethical values negatively and significantly impact creative accounting practices. The current findings are in line with previous results. Previous research reveals that compliance with corporate ethical values can reduce creative accounting practices and enhance company performance [110]. That means companies with high compliance with corporate ethical values are lower in applying creative accounting practices. So the existence of corporate ethical values can minimize creative accounting

**Table 5**  
Results of hypothesis testing.

Hypothesis	Relationships	Coeff. Beta( $\beta$ )	t-Statistic	p values	Comments
H <sub>1</sub>	SFD→CAP	0.171	11.452	0.331*	Not Supported
H <sub>2</sub>	PC→CAP	0.531	12.331	0.000**	Supported
H <sub>3</sub>	CEV→CAP	-0.201	14.572	0.000**	Supported
H <sub>4</sub>	CFO→CAP	0.291	13.403	0.000**	Supported
H <sub>5</sub>	CGP →CAP	-0.341	12.821	0.000**	Supported
H <sub>6</sub>	CAP →QFR	0.352	6.384	0.018*	Not Supported
H <sub>7</sub>	CAP→DME	-0.341	15.462	0.000**	Supported
H <sub>8</sub>	QFR→DME	0.494	11.536	0.000**	Supported

\* $<0.05$ ; \*\* $<0.01$ .

practices. Therefore, we suggest companies focus on maintaining good corporate ethical values [110].

Further on, the current study linked the association between company future orientation and creative accounting practice, for which this study found a strong association. The findings support the study of Rohrbeck 2010, who stated that they are often involved in creative accounting practice to get the desired result that attracts potential investors. In Bangladesh, where the stock market is in weak form and unstable, often easy to practice creative accounting to get the desired output. Current research findings established a strong association between company future orientation and creative accounting practice. So company future orientation is one of the key antecedents of creative accounting practice.

Furthermore, corporate governance practices negatively and significantly influence creative accounting practices. The previous scholar has stated that a practical corporate governance framework may help to reduce creative accounting practices [111]. The current study findings also reveal the same results, which means corporate governance practices are negatively linked with creative accounting practices. In Bangladesh, where most firms are family-based, the current study suggests the organization maintains good corporate governance practices that ensure longevity. So corporate governance practices ensure company sustainability. So, CGP worked as a measure antecedent of CAP.

Additionally, CAP negatively impacted decision-making effectiveness. This study inferred that companies practising creative accounting limit their decision-making efficiency. Although companies try to capitalize on accounting standards' loopholes, the current study provides valuable insights into that creative accounting practice often leads to an ineffective conclusion. The study findings also support the previous research findings showing that artificial accounting may not provide sufficient and appropriate information to make decisions. That is why the company fails to make effective decisions, where creative accounting practices are high. The research finding focuses on the effective utilization of accounting standards to create an effective decision only when investors and concerned stakeholders benefit significantly.

Creative accounting affects the quality of financial reporting, contrary to assumptions. Studies suggest that creative accounting can affect the credibility of financial reports [104] or "result in unfair reporting of the firm's operations" [4]. Furthermore, given political connections, creative accounting could beget inadequate financial and accounting reporting standards [112,113]. Some earlier research has shown inconsistent results in this context (positive and negative) [113]. Finally, creative accounting supports opportunistic conduct [114]. Creative accounting may encourage unethical and opportunistic behaviour, negating its benefits.

Creative accounting practices have a significant beneficial effect on financial reporting quality, contradicting the study's expectations. Previous empirical evidence indicates that creative accounting can limit the trustworthiness of financial reports [104] or result in unfair reporting of a firm's operations [4]. Furthermore, creative accounting due to political connections, non-compliance with corporate ethical values, future company orientations, and ineffective corporate governance framework may also contribute to developing lax financial and accounting reporting standards [112–114]. This study supports the positive stream, showing that CAP do not invariably lead managers to act unethically.

Decision-making effectiveness depends on the quality of financial reporting. The current finding is consistent with prior assertions. An earlier study found that accrual accounting ingenuity in financial reporting supported and implemented accurate and practical decisions [46,115–117]. This study expanded and contributed to previous research by focusing on a south Asian cultural perspective. To conclude, this study examines the dynamic mechanisms through which PC, non-compliance of CEV, CFO, and ineffective CGP drive CAP, resulting in (low or high) financial reporting quality. Consequently, its affects decision-making effectiveness [117].

By linking the accounting practice to the organizational outcome, the current study tested the hypothesis and found that the antecedents of CAP have a conflicting influence on the QFR and DME. The study found that CAP significantly negatively influences DME. In contrast, CAP has been positively linked with the QFR, which contradicts the current study's prediction. These results reveal that the antecedent of creative accounting practice impacts organizational outcomes.

## 6. Implications for theory and practice

The study has numerous massive implications. Firstly, while the link between SFD and CAP is minor, research suggests that firms need a strong corporate governance framework to prevent creative accounting practices [106]. Additionally, this study advocates adopting sustainable financial data governance from a legal perspective to capitalize on the benefits of sustainable financial data.

Secondly, politically connected firms are more likely to use creative accounting, which harms the company's outcomes. For example, politically linked enterprises are more inclined to overinvest (including recruiting additional employees, increasing

charitable contributions, and raising capital expenditures to promote GDP) to fulfil the objectives of political affiliations. Although professional accounting bodies are working together to ensure the consistent application of accounting methods, study findings recommended that companies employ comprehensive accounting practices from year to year, as this would likely restrict the use of clever accounting backdoors.

Thirdly, substantial compliance with corporate ethical values limits creative accounting practice. Although the International Federation of Accountants (IFAC) makes compulsory ethical principles a code of conduct for professional accountants, the company should effectively enforce corporate ethical values in all firms to ensure better organizational outcomes [118]. The study findings support the theory of ethics and recommend that the company develop a culture of ethics that blends key ethical values into corporate culture.

Fourthly, although the association between company future orientation and creative accounting practice is solid and significant, study findings recommended that future direction creates positive revenue but not through creative accounting practice. Finally, the current study contributes theory building to creative accounting practice by identifying strong antecedents like company future orientation.

Fifthly, the relationship between CGP and CAP is significant and negative. This study stream advocated good corporate governance compliance to reduce creative accounting. Creative accounting is nearly always linked to poor corporate governance. This study also contributes to the existing accounting literature and promotes the harmonization of accounting, reducing the alternative uses of accounting treatment. Only when a practical corporate governance framework minimizes creative accounting practice.

Finally, creative accounting appears to increase “the likelihood of having good and poor financial reporting. Thus, organizations seeking accurate financial and accounting data should avoid creative accounting and use external auditors to examine books of account. In addition, creative accounting practices reduce organizational outcomes through manipulative financial reporting and ineffective decision-making. Therefore, the study recommends increasing the financial reporting quality that drives better decision-making. Additionally, accounting institutions should work to close legislative loopholes to reduce the propensity for creative accounting.

## 7. Limitations and future research directions

The current study has several limitations. Firstly, publicly listed companies, especially banking and financial institutions in the Dhaka stock exchange in Bangladesh, were considered. It restricts the generalizability of the outcomes. Second, the Bangladeshi pattern of culture, legal system, and scarcity of resources can significantly affect political connections, corporate ethical values, company future orientation, corporate governance practices, and associated consequences. Future research may examine comparable correlations in various national and cultural contexts, emphasizing wealthy countries endowed with abundant resources and governed by sophisticated regulations. Thirdly, the design is cross-sectional. Finally, sole data structure limits the reliability of making causal inference findings.

The authors suggest future research should incorporate longitudinal and mixed-method studies and artificial intelligence [119]. A helpful option for further research would be to test the moderating effect of legal structure and flexibility on the relationship between antecedents of creative accounting and corporate reporting accuracy. Adherence to recognized legal standards, regulators, and increased transparency mitigate this effect.

## Declarations

### *Author contribution statement*

Muhammad Shajib Rahman: Conceived and designed the experiments; Performed the experiments; Analyzed and interpreted the data; Contributed reagents, materials, analysis tools or data; Wrote the paper. Md. Jahid Hasan: Conceived and designed the experiments; Performed the experiments; Analyzed and interpreted the data; Contributed reagents, materials, analysis tools or data; Wrote the paper. Md. Saddam Hossain Khan: Analyzed and interpreted the data; Contributed reagents, materials, analysis tools or data; Wrote the paper. Ishrat Jahan: Analyzed and interpreted the data; Contributed reagents, materials, analysis tools or data; Wrote the paper.

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### *Data availability statement*

Data will be made available on request.

## Declaration of competing interest

The authors declare that they have no known competing financial interests or personal relationships that could have appeared to influence the work reported in this paper.

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