

Impact Factor (SJIF: 2023) 6.042

ISSN-L 0972-1754

**VOLUME 28 • NUMBER 2 • December 2024**

**INDIAN  
ACCOUNTING  
REVIEW**



**INDIAN ACCOUNTING ASSOCIATION  
RESEARCH FOUNDATION**

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December, 2024

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# **Philosophy of Accounting and the Changing Dimensions of Corporate Financial Reporting<sup>1</sup>**

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## **ABSTRACT**

Over time, it appears that, the philosophy of accounting is open to accommodate interest of all the stakeholders of an economic unit operating in a society. On the contrary, financial reporting is getting more and more focussed to the owner-investors, i.e. the providers of risk capital only. Accordingly, an attempt has been made in this paper to unveil the truth underlying (i) some changes in corporate financial reporting that appear to deviate from the ideals of accounting and also (ii) some developments beyond the domain of corporate financial reporting that are meant to meet the ideals of accounting.

**Key words:** Limited liability, Users of accounting, Value added income, Going concern, Financial statements, Conceptual framework, Integrated report, Sustainability disclosure

## **I. INTRODUCTION**

This paper is intended to unveil the truth underlying the changes in the financial reporting in the light of basic concepts of accounting. Based on the entity concept, equity is defined as claim of owners over net assets of the entity, but not as claim against owners in case of negative net assets since the protection of limited liability of shareholders restricts the claim of the creditors against the shareholders. Both the international and Indian accounting standards were revised to recognise only primary users and to drop employees, customers, governments and their agencies and the public from the list of users of financial statements. Initially, international accounting standards encouraged to present Value Added Income statements but in the revised version this encouragement disappeared, pushing value added statements outside the scope of financial reporting. The Great Depression taught accountants to strengthen the historical cost basis of accounting based on the concept of the firm as a going concern. However, the current trend is to move steadily towards market-based exit value, away from historical cost or entity specific value-in-use, which appears not to be consistent with going concern concept. Such inconsistencies along with increased volume and complexity of information make financial reports too complicated to

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<sup>1</sup>This is the revised version of G.D.Roy Memorial Lecture delivered by the author on 21.09.2024 in the Seminar Hall of EILM-Kolkata, Kolkata700 091.

the ordinary investors. Complicated general purpose financial statements lead to information advantage of the sophisticated investors over ordinary investors. While accountability to all the stakeholders is ideal for accounting, it appears that the focus of financial reporting is narrowing down to investors of financial capital only. However, there are significant developments in the recent years outside the domain of financial reporting promoting Integrated Reports, disclosure of ESG initiatives and sustainability reports. This paper is a humble attempt to review changes in corporate reporting in the light of philosophy of accounting, where philosophy of accounting stands for cultivation of basic concepts and ideals of accounting, the raising of arguments, and the approach of finding truth underlying apparent changes in corporate reporting. The rest of the paper is arranged as follows. Discussion is made on some changes in corporate financial reporting that appear to deviate from the broad ideals of accounting in section II and on some developments beyond the domain of corporate financial reporting that are meant to meet the ideals of accounting are given in section III, and the paper is concluded in section IV.

## **II. SOME CHANGES IN CORPORATE FINANCIAL REPORTING**

### **1. Limited liability of the investors and the basic accounting equation**

Financial reporting is considered as the outcome of financial accounting. Corporate financial reporting is made through financial statements that consists of Balance sheet, Statement of changes in equity, Statement of profit and loss, Statement of cash flows and Notes.

Entity concept is one basic idea of double entry system of accounting, where a business unit (firm) is considered as an entity separate from the owner of the business. Based on that concept, accounting equation stands as:

$$\text{Equity} = \text{Assets} - \text{Liabilities}$$

$$\text{Or, Equity} + \text{Liabilities} = \text{Assets}$$

This equation is underlying all the balance sheets of a firm. When assets are greater than liabilities, equity is positive and interpreted as claim of the owner over the net assets of the firm, to be distributed to the owners in case of dissolution of the firm. But problem arises if liabilities are greater than assets, leaving a negative balance of equity. It may not be simply interpreted as claim of the liabilities (creditors) over the equity (owner), to be collected from the owners in case of dissolution of the firm. Because, protection is provided to the shareholders of limited liability companies by the legislation of the countries across the world restricting the claim of creditors over shareholders only to the extent of the nominal value of the share capital.

With the formation of East India Company in 1600 and Dutch East India Company in 1602 the separate legal entity was recognised but shareholders liability was not limited initially. It took over three centuries to complete the conversion from unlimited liability of the shareholders to the modern shape of limited liability. In the nineteenth century in the middle way of the journey of the conversion, there were instances of some additional protection in favour of the creditors.

In Britain, in the 19<sup>th</sup> century common practice was issuing only partly paid shares, keeping the uncalled amount eventually to be used as security for corporate creditors. In the UK banking in the 1880s another additional liability was created 'reserve liability' – a sum of capital that could be called only upon insolvency and liquidation of the company.

In 1863, the Federal Government of the USA entered the field of banking regulation with the National Banking Act, which stipulated that 'each shareholder shall be liable to the amount of the par value of the shares held by him' in addition to the amount invested in such shares. Most states implemented the federal legislation in their own laws, making shareholders in banks bear proportionate double liability (Blumberg, 1985).

However, even today the concept of reserve capital has not entirely lost. The Companies Act, 2013 Section 65 requires unlimited company to provide for reserve share capital on conversion into limited company, by increasing the nominal amount of equity share to create an uncalled amount or by specifying a part of available uncalled amount that could not be used except in the event of, or for the purpose of, the company being wound up. As of January 2024, in India over 1.65 million were companies limited by shares, 11359 limited by guarantee and 295 were unlimited liability companies.

In India, The Co-Operative Societies Act, 1912 under Section 33 provided 'that after at least one-fourth of the net profits in any year have been carried to a reserve fund, payments from the remainder of such profits and from any profits of past years available for distribution may be made among the members. The Companies (Transfers of Profits to Reserves) Rules, 1975 also provided for mandatory transfer from profits to reserve before declaration of dividends, but it has been removed. The Companies Act 2013 Sec 123(1) provided for no mandatory percentage of transfer. The overall trend is clear. Shareholders of joint stock companies are predominantly being more and more protected by limiting their liability at the expense of the lenders and creditors.

## **2. Users of accounting information and the purpose of accounting**

The Framework 2000 of the ICAI recognises investors, employees, lenders, suppliers and other trade creditors, customers, governments and their agencies and the public as users of financial statements.

Accounting Standards consider the financial statements as "general purpose" that is intended to satisfy the common information needs of all the users.

But going further we find:

- (i) the restricted meaning of the 'general purpose'--  
'As providers of risk capital to the enterprise, investors need more comprehensive information than other users. The provision of financial statements that meet their needs will also meet most of the needs of other users that financial statements can satisfy'
- (ii) financial statements to show 'the results of the stewardship of management, or the accountability of management for the resources entrusted to it'.
- (iii) the stated examples of economic decisions are 'to hold or sell their

investment in the enterprise or whether to reappoint or replace the management’,

By the restricted meaning of general purpose and by the nature of economic decisions, it seems only financial capital that is intended to be meant by ‘the resources entrusted to it’, and focus is only on the investors as the target users of accounting information.

The Conceptual Framework (2020) of the ICAI recognises only three user groups, (i) existing and potential investors, (ii) lenders and (iii) other creditors as primary users in making decision about: (i) buying, selling or holding equity or debt instruments, (ii) providing and settling loans or other forms of credit, or (iii) influence management’s actions. It removed from the framework other stakeholders of the society viz., employees, governments and their agencies and the public as users of financial statements.

The trend is again obvious. Other stakeholders are gradually losing importance in the corporate financial reporting in course of time.

We further examine the status of the employees as user of financial statements globally. American Accounting Association (1973) Committee recognises importance of human capital accounting in order to improve the quality of financial decisions. The IASB in 2010 Conceptual Framework identifies information needs of the employees and believes that financial statements prepared for general purpose meet the common needs of most users, including employees, to assess the ability of the entity to pay and provide other benefits to its employees. However, the IFRS foundation in 2018 revised Conceptual Framework, which neither recognises human capital as economic resource nor identifies information needs of the employees in its latest revision. Rather they pushed out employees as user out of the financial statements.

‘As with most goals, the *Conceptual Framework*’s vision of ideal financial reporting is unlikely to be achieved in full, at least not in the short term, because it takes time to understand, accept and implement new ways of analysing transactions and other events. Nevertheless, establishing a goal towards which to strive is essential if financial reporting is to evolve so as to improve its usefulness’(The Conceptual Framework of the ICAI, 2020). But it appears the revisions taking place over time moves it away from the vision of ideal reporting.

### **3. Value Added Income (VAI)**

The concept of value-added income has been introduced as an expansion to financial reporting since the publication of ‘The Corporate Report’ by the Accounting Standard Steering Committee (ASSC), London in 1975 and it has been gaining popularity in the 1970s and 1980s all over the world including India as a voluntary corporate financial supplementary statement. Value added income approach recognises the contribution to and share of other stakeholders, viz., employees, lenders and governments over and above the investors in the value-added income generated by an economic enterprise. In the 1997 version of the IAS 1 (1997: par. 9), “enterprises are encouraged to present such additional statements if the management believes they will assist users in making economic decisions”. In the revised version of the IAS 1 starting from 2004, this

encouragement disappeared, pushing value added statements outside the scope of the International Financial Reporting Standards (IFRSs). Again, we observe that the corporate financial reporting recognising non-investor stakeholders are declining over time.

#### **4. Going concern, historical cost and fair value**

Around 1920s frequent overstatement of capital assets was a common practice in absence of regulatory control. When values of such assets came crashing down in 1929 Great Depression, accountants realised the vulnerability of market-based valuation. The outcome was a strengthening of the historical cost basis of accounting based on the concept of the firm as a going concern (Scott, 2015). IFRS and Ind AS both suggest to prepare financial statements on a going concern basis for a continuing entity. At the same time, the standards are more and more shifting towards fair value, a market-based exit value, away from historical cost or entity specific value-in-use. It is not consistent with promoting going concern concept.

#### **5. Contents and complexity of corporate financial statements in Indian context**

For convergence with IFRS there are instances of increase in the contents and complexity of the financial statements. Consider, for examples, the following.

- (i) One additional financial statement has been introduced with equal prominence to others, Statement of changes in equity divided in two parts: Equity share capital and other equity.
- (ii) One additional balance sheet, called third balance sheet as at the beginning of the preceding period for giving retrospective effect of change in accounting policy.
- (iii) One additional section in the statement of profit and loss: other comprehensive income

The bottom line of the statement of profit and loss is the total comprehensive income, the sum total of profit or loss and other comprehensive income, a composite measure of items of different characters.

- (iv) *Other comprehensive income* comprises items of income and expense that are not recognised in profit or loss as required or permitted by other Ind ASs. *Profit or loss* is the total of income less expenses, excluding the components of other comprehensive income. Such kind of circularity of definition may increase complexity.
- (v) Components of other comprehensive income are of changes in value as specified in the inclusive list of items under Ind AS 1. Reporting of these items appears to be more rule based than principle based.
- (vi) Hybrid financial instruments (e.g., convertible debt and redeemable preferred stock) were generally accounted for as a financial liability or equity instrument in their entirety. Ind AS requires a compound financial instrument to be separated into a liability and an equity component based on the substance of the contract. It appears to be more inclined to subjectivity rather than objectivity.

- (vii) Consolidation is required not only for subsidiaries (Ind AS 103 and 110) but also for joint ventures and associates (under Equity Method vide Ind AS 28).
- (viii) For consolidation under Ind AS 110, non-current assets and liabilities of subsidiary are measured neither at book value nor at fair value. They are measured at fair value at the acquisition date plus post-acquisition changes in book value. Thus, the reported value is a combination of book value and fair value.

The changes are meant to serve the interest of the investors with increased amount of information and complexity, along with some inconsistencies too in the process. It makes financial reports more complicated for the ordinary investors.

Higher<sup>2</sup> is the volume and complexity of public information released by the firm in the financial statements, higher is the information advantage of the sophisticated investors over ordinary investors and higher is the abnormal return of the sophisticated investors at the expense of the ordinary investors.

### III. NEW FRONTIERS OF CORPORATE REPORTING

There are *significant developments* in corporate reporting that go beyond the domain of financial reporting.

#### 1. Two recent significant international developments in corporate reporting are embracing both financial and non-financial information.

- (i) IFRS Foundation assumed responsibility for the Integrated Reporting Framework in August 2022 and
- (ii) IFRS Foundation issued two IFRS Sustainability Disclosure Standards effective from 01-01-2024

#### A. Integrated Reporting Framework

The International Integrated Reporting Council (IIRC) developed the International <IR> Framework 2021 superseding the 2013 Framework. In 2022 IFRS foundation accepted it when the Value Reporting Foundation (VRF) (erstwhile IIRC) was consolidated into the IFRS Foundation. Integrated Reporting aims among other objectives to enhance accountability and stewardship for the broad base of capitals (financial, manufactured, intellectual, human, social and relationship, and natural) and promote understanding of their interdependencies and integrate the framework in the standard setting process. IR benefits all stakeholders interested in an organization's ability to create value over time, including employees, customers, suppliers, business partners, local communities, legislators, regulators and policy-makers.

#### B. IFRS Sustainability Disclosure Standards

IASB issued two IFRS Sustainability Disclosure Standards effective from 01-01-2024.

<sup>2</sup>Maffet (2012) distinguished between ordinary and sophisticated investors. 'Sophisticated investors are investors with sufficient expertise and resources to develop their own private information about future firm performance that is superior to that of ordinary investors. We can view sophisticated investors as insiders.'

## **IFRS S1 General Requirements for Disclosure of Sustainability-related Financial Information**

The objective of IFRS S1 General Requirements for Disclosure of Sustainability related Financial Information is to require an entity to disclose information about its sustainability-related risks and opportunities that is useful to primary users of general-purpose financial reports in making decisions relating to providing resources to the entity.

Information about sustainability-related risks and opportunities is useful to primary users because an entity's ability to generate cash flows over the short, medium and long term is inextricably linked to the interactions between the entity and its stakeholders, society, the economy and the natural environment throughout the entity's value chain.

## **IFRS S2 Climate-related Disclosures**

The objective of IFRS S2 Climate-related Disclosures is to require an entity to disclose information about its climate-related risks and opportunities that is useful to primary users of general-purpose financial reports in making decisions relating to providing resources to the entity.

This Standard requires an entity to disclose information about climate-related risks and opportunities that could reasonably be expected to affect the entity's cash flows, its access to finance or cost of capital over the short, medium or long term. For the purposes of this Standard, these risks and opportunities are collectively referred to as 'climate-related risks and opportunities that could reasonably be expected to affect the entity's prospects'

Thus, the IR Framework and the IFRS sustainability standards (IFRS S1 and IFRS S2) are complementary tools for investor-focused communications. When used together, the Integrated Report portrays a holistic view of a company's value creation process and the disclosures required by the IFRS sustainability standards make the company's sustainability and climate-related information comparable with other companies' disclosures.

## **2. Value Added Income (VAI)**

Although the concept of VAI has recently been ignored in financial reporting, it has not been lost in the wider domain of accounting and reporting. Global Sustainability Standards Board (GSSB) issued GRI 201 in 2016. It requires reporting of Economic Performance by measurement of direct economic value generated and distributed (EVG&D) on an accrual basis.

## **3. CSR reporting in India**

Corporate Social Reporting has been made mandatory for every company covered under Section 135 of the Companies Act, 2013. From February 11, 2022 by notification of MCA such companies shall furnish a report on Corporate Social Responsibility in a given format of E-Form CSR-2 to the Registrar of Companies.

## **4. Business Responsibility and Sustainability Report (BRSR) in India**

From 2012 SEBI made reporting of ESG initiatives by Business Responsibility Report (BRR) mandatory for top 100 companies based on market capitalisation,

which continued till FY 2021-22 mandatory for top 1000 companies. From 2022-23, top 1000 companies would be required to submit a new report on ESG parameters, namely, Business Responsibility and Sustainability Report (BRSR) mandatorily (voluntarily other companies). There are 9 principles in section C of the BRSR based on which the companies are required to demonstrate their performances on ESG parameters providing information under Essential Indicators category (while information under Leadership category is optional).

## 5. BRSR Core in India

Based on the recommendations of the ESG Advisory Committee and pursuant to public consultation, the Board (SEBI) decided to introduce the BRSR Core. [Gazette notification no. SEBI/LAD-NRO/GN/2023/131 dated June 14, 2023]. BRSR Core is applicable to top listed companies (by market capitalisation) from the financial years as stated below:

Financial Year	Top listed companies
2023-24	Top 150 companies
2024-25	Top 250 companies
2025-26	Top 500 companies
2026-27	Top 1000 companies

The BRSR Core is a sub-set of the BRSR, consisting of a set of Key Performance Indicators (KPIs) / metrics under 9 ESG attributes providing quantitative data as listed below:

1. Green-house gas (GHG) footprint
2. Water Footprint
3. Energy Footprint
4. Waste Management
5. Employee Wellbeing and Safety
6. Enabling Gender Diversity in Business
7. Enabling Inclusive Development
8. Fairness in Engaging with Customers and Suppliers
9. Open-ness of Business

## IV. CONCLUSION

While accountability to all the stakeholders is ideal for accounting, it appears that the focus of financial reporting is narrowing down over time to primary users among all the stakeholders, to the investors of financial capital among the primary users and to the sophisticated investors among the investors.

However, in the new frontiers of corporate reporting outside the scope of financial reporting there are both encouragement for voluntary reporting and provision for mandatory reporting to serve the information needs of all the stakeholders with enhanced objectivity.

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# **The Impact of Firm Performance on Stock Price: A Study of Traditional and Sophisticated Indicators in Indian Stock Market**

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## **ABSTRACT**

This paper tries to explore the responsiveness of the market to some traditional and sophisticated indicators of firm performance. Using panel data regression models on performance indicators and price data of selected listed 172 firms of NSE from 2011 to 2022, this paper tries to explore the reflection of different firm performance indicators on the stock price. Three traditional (ROA, ROCE, and EPS) and one sophisticated (EVA) firm performance indicators have been selected as independent variables, and stock price selected as the dependent variable. Results show sophisticated as well as traditional firm performance indicators have a strong influence on the stock price. The findings of the study suggest that the Indian market is sufficiently responsive to the traditional as well as sophisticated indicators of firm performance indicating that the market is not only rational but mature too.

**Key words:** Return on Assets, Return on Capital Employed, Earnings per Share, Economic Value Added, Panel Regression

## **I. INTRODUCTION**

According to traditional finance, markets are efficient in the sense that the share prices behave rationally by reflecting all available information which supports the concepts of Efficient Market Hypothesis (Fama,1970). On the other hand, behavioural finance argues about such a kind of rational behaviour of an efficient market. As per behavioural finance, financial decisions are greatly influenced by human emotions, biases, and cognitive limitations of the mind. Thaler (1999) extends the idea of behavioural finance by incorporating psychological components in all financial models in the future, as he suggests that the market is irrational implying that the prices do not reflect all the fundamentals. However, despite many market anomalies, the efficient market hypothesis is still the dominant area of study (Yalcln, 2010). Several studies have been conducted to date which have evaluated the rationality of the Indian stock market. If the stock market moves rationally, it means that the share price can reflect all information related to fundamental factors. Fundamental factors include economy-wide, industry-specific, and company-specific factors.

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Firm performance is one of the major fundamental company-specific factors. If the market moves rationally, the firm performance should have its expected impact on the share price. In an advanced economy capital market is expected to be efficient and to move rationally which means that the stock price is expected to reflect the firm performance. In fundamental analysis, the expected firm performances are considered the basis for valuations of stock. However, the stock market is not always efficient enough to reflect the fundamental value of a stock. There are several studies in India and abroad on the influences of the fundamental factors on share price, based on several indicators of firm performance.

Firm performance can be measured by using various accounting, financial, and value-based measures, which we name Firm Performance Indicators (henceforth FPIs). In this study, firm performance indicators are used to find the impact of firm performance on stock price. Firm performance indicators are divided into traditional indicators and 'sophisticated indicators' (Peixoto, 2002). Traditional firm performance indicators are Return on Asset (ROA), Return on Capital Employed (ROCE), Earnings per Share (EPS) (Gentry et. al, 2010) and sophisticated firm performance indicators are Economic Value Added (EVA). Evidence is available in extant literature that traditional as well as sophisticated FPIs are used by market players in advanced economies. If the market can capture the effect of traditional firm performance indicators (ROA, ROCE, and EPS) on stock price means the market is rational and if the stock price is influenced by the sophisticated firm performance indicator (EVA) then the market is not only rational but mature too, alike the market of advanced economy.

The motivation of this study is to find whether the Indian market has a rational as well as mature component that uses firm performance indicators, both traditional and sophisticated.

## II. LITERATURE REVIEW

To study the impact of firm performance on stock price, an effort has been made to review the various empirical and conceptual studies conducted by multiple researchers from time to time. A survey of literature has been conducted in the following sections.

### **Literature associated with Traditional Firm Performance Indicators:**

Liljeblom (1989) used 89 sample stocks listed in the Stockholm stock exchange to study the predictive power of EPS for stock return and the study results showed that EPS had a good predictive power to predict stock return, Chenn & Dodd (1997) revealed that traditional accounting indicators of profitability (EPS, ROE and ROA) outperformed EVA. Gentry et al. (2010) found that market-based measures (TOBIN's Q, market return) and accounting profitability (ROE, ROA, ROS) both types of financial performance could be treated as Firm performance measures. Srinivasan (2012) advocated that EPS and Price Earnings (PE) ratio were the strong determinants of the share price. Malhotra & Tandon (2013) investigated that a firm's book value per share, EPS, and PE ratio had a positive association with stock price while dividend yield had an inverse association with the stock price. ROA is the popular method of a firm's profitability as per Al-Matari et al.

(2014).

**Literature associated with sophisticated Firm Performance Indicators:**

EVA & MVA (Market Value Added) were correlated positively with stock return according to Lehn & Makhija (1996). Garvey et al. (2000) suggested that any metric adopted for managerial compensation must be highly correlated with changes in shareholder's wealth, keeping in mind the stochastic nature of stock price. Awan, Siddique & Sarwar (2014) suggested that stock return was associated with EVA by using the panel data technique of selected 59 listed companies in KSE100. Sauro & Tafirei (2016) used seven commercial sample banks listed in the Johannesburg stock exchange to investigate the relationship between EVA and stock return by using ordinary least square methods. The study revealed that EVA and stock return were positively correlated and thus influenced the Bank's financial performance. Nautiyal & Kavidayal (2018) advocated that fundamental factors had a significant effect on the stock price: Subedi et al. (2020) investigated that Public or State-Owned Enterprises (SOE, PE) could take more wise investing and operating decisions which lead to improves overall firm performance after adoption of EVA as a performance evaluation measure. They used 2274 firm-year observations for the periods of 2009 to 2010 in China.

**Literature associated with Traditional Performance indicators versus sophisticated firm performance indicators:**

Biddle, Bowen, &Wallace (1997) revealed that earnings were more highly associated with returns than EVA. Ferguson et al. (1998) found that EVA was a better measure of operating performance and compensation management. Chenn & Dodd (2001), revealed that Operating Income (OI), and residual Income (RI) had higher information content than EVA. Worthington and Western (2004) suggested that stock return is strongly connected with EVA compared to residual income, earnings, and net cash flow. Ismail (2006) revealed that NI and NOPAT outperform EVA and RI using 2252 firm-year observations for eight years of study periods. Sharma & Kumar (2012) suggested that EVA should be used together with traditional measures (EPS, ROE, ROA, NOPAT &RI) when exploring investment strategies in India. Shen et al. (2013) investigated that the cash holding of Central State-Owned enterprises (CSOEs) in China improved after the implementation of EVA as a performance evaluation technique. Altaf (2016) used 325 Indian manufacturing and service firms and found that operating income had a stronger linkage with MVA (as a proxy of Market return) than EVA. Tarika (2012) suggested that traditional measures outperform EVA. Khan et al. (2016) used the panel data regression technique for their study (2009-2012) to prove that accounting measures outperformed EVA for the Pakistani market. Gupta et al. (2016) investigated the best measures between EVA and other accounting measures using relative and incremental information content tests. Results of the fixed effect model showed EVA was a better performance measure than other accounting measures to explain stock return.

### III. RESEARCH GAP

Several empirical studies have been conducted to test the statement given by Stern Stewart (Stewart, G.B,1994) that EVA is a better value-based performance

measure compared to traditional accounting measures. The different results have been found from various studies. Firstly, some studies state that EVA is positively associated with stock return and increases shareholder wealth compared to traditional measures. (Lehn & Makhija,1997; Lefkowitz, 1999; O'Byrne,1996; Uyemura et al., 1996; Forker and Powell, 2004; Garvey,2000; Worthington,2004;). Conversely, some studies fail to find any support for Stern Stewart's statement (Stewart, G.B.,1991) that EVA is better than traditional measures (Biddle et al,1997,1998; Chenn &Dodd 1997; Maditions et al, 2006, 2009; Ismail, 2006; Altaf, 2016).

The works of literature discussed above were mainly conducted in the US (Milunovich and Tsuei, 1996; O'Byrne,1996; Biddle et al,1997, 1998; Uyemura et al., Chenn &Dodd 1997; Bao and Bao,1998; De Villiers and Auret, 1998; Turvey et al., 2000; Kyriazis and Anastasis, 2007) or other developed economies (Worthington and West, 2001,2004; Ismail, 2006; Maditinos et al., 2009) and very few empirical works have been done in developing markets. (Banerjee,2000; Awan et al, 2014; Altaf, 2016; Agarwal et al,2019). Hence, the market of developing countries is not similar to the market of developed countries. As per the literature discussed above, it was proved that the stock market of developed countries has the knowledge of EVA which means the market of developed countries has the knowledge of sophisticated measures which means the market is mature. If EVA value is positive then there is a reflection on stock price too. If the stock price can able to read the effect of fundamental factors that means the market is the rational market. If the market has the knowledge of fundamentals or traditional measures along with sophisticated measures that means the market is not only rational the but market is mature too. Many studies have been conducted to date to prove whether the market is rational or not but few of them are based on the Indian context. But this study tries to find whether the same is applicable for the Indian market too or not which means the market is not only able to read the traditional measures but market can able to reflect the sophisticated measures of firm performance on stock price or not. The motivation of the study is to check whether the market has the knowledge of traditional measures along with other sophisticated fundamental factors or not i.e., the market is not only rational but the market is mature too; high EVA indicates shareholder's value creation and it increases stock price. So, this study tries to check the influence of stock price behaviour concerning firm performance indicators: (traditional and sophisticated) in the context of the Indian stock market.

#### **IV. RESEARCH OBJECTIVE**

- To investigate the impact of the traditional firm performance indicators (ROA, ROCE, EPS) on stock prices in the Indian stock market.
- To investigate the influence of the sophisticated firm performance indicator (EVA) on stock prices in the Indian stock market.

#### **V. METHODOLOGY**

The present study is analytical in nature. The methodology adopted in pursuing the study has been organized in the following manner:

## Data and variables

**Sources of data:** The study is based on secondary data which was collected from the Centre for Monitoring Indian Economy (hereafter, CMIE) Prowess IQ database. Using the PROWESS database, this study uses firm-specific variables of Indian corporate firms that are listed at the NSE (National Stock Exchange) for the period 2011 to 2022. To know the influence of sophisticated and traditional firm performance indicators on stock price for the period from 2011-2022 of companies listed in NSE the data has been collected and after deleting the missing data the final sample includes all information for all variables have been fixed for 172 firms. So, the study got a balanced panel data set with about 2064 observations.

**Period of study:** Yearly (31<sup>st</sup> March) firm-specific variables of NSE-listed firms were collected for twelve (12) years which started in 2011 and ended in 2022. All annual firm-specific data are March-end data. The Share Price data have been collected for 30<sup>th</sup> June of every year starting from 2011 and ending in 2022. The anticipation is March end firm-specific information will be reflected after the first quarter is announced.

**Variables Used for Study:** The main objective of the study is to judge the influence of firm performance indicators on stock price for select NSE-listed firms. For this purpose, the dependent variable is considered as stock price data of selected firms. The annual closing price of 30<sup>th</sup> June of selected firms has been collected from the CMIE Prowess IQ database. The natural log of Closing price data will be considered a dependent variable (LOGCP). The firm-specific indicators are categorised as traditional firm performance (FM) indicators and sophisticated firm performance indicators and both traditional and sophisticated FM are used as independent variables for the study. The descriptions of firm-specific indicators and control variables used in these studies are as follows:

### Traditional Firm Performance Indicators

Under traditional firm-specific measures following variables have been selected as independent variables:

- **Return on Assets and Return on Capital Employed** have been used as the accounting-based measurement indicators for the profitability of firms. These two are profitability ratios which are collected for sample firms from the database Prowess and used as independent variables for the study. The formula used and descriptions for the variables are as under.

*Return on Asset:* Profit After Tax/Average Total Asset. Higher ROA also reflects the company's effective use of its assets in serving the economic interests of its shareholders (Ibrahim & AbdulSamad, 2011).

*Return on Capital Employed* (Lien and Piesse, 2005): Profit After Tax/ Average Capital Employed.

- **Earnings Per Share:** Earnings per share is a pure accounting variable (Liljebloom, E.,1989) that is directly collected from the database. The formula used in the database for EPS is Profit after Tax divided by the average number of common shares outstanding.

## Sophisticated Firm Performance Indicator

**Economic Value Added:** EVA is a sophisticated indicator of firm performance compared to other traditional indicators. It measures excess earnings over natural earnings, thus indicating growth. If the return (Net Operating Profit after tax or NOPAT) is higher than the capital charge [Weighted average cost of capital (WACC) \* Capital employed (CE)], then the EVA figure is positive which increases the shareholder's return. The variable EVA has been scaled by the value of average capital employed (AVGCE) for analysis to provide meaningful comparisons. [Gupta,2016]. So the EVA is used in this paper as Economic Value Added/Average Capital Employed (EVA/AVGCE).

While calculating NOPAT, interest expenses are added to the Profit before Tax to get the Profit before interest and tax. Then Profit before interest and tax is multiplied by the corresponding after-tax rate. (1-tax rate). The total capital employed is the sum of shareholders' funds as well as loan funds which is directly collected from the database. In determining the WACC, the cost of equity is measured based on the capital asset pricing method. Under the capital asset pricing model, the cost of equity, i.e.,  $K_e$  is given by the following:

$$K_e = R_f + \beta_i (R_m - R_f)$$

Where,  $R_f$  = Risk-free return,  $R_m$  = Expected market rate of return,  $\beta_i$  = Risk coefficient of a particular investment

Risk-free return is taken as a 12-month Government Bond rate for each year from RBI.  $\beta_i$  is extracted directly from the database PROWESS for each firm and each year.  $R_m$  is calculated using the compound annual return of the index Nifty 50.

The cost of debt has been calculated by using the below-mentioned formula:  
Interest Expenses/Debt (1-tax rate)

The formula for WACC is Cost of equity x proportion of equity in Capital Employed + Cost of Debt (1-tax rate) x proportion of debt in capital Employed.

### Control Variables:

- **Firm Size:** Firm size is an important factor to explain the stock return of listed firms. Smaller firms had higher returns and higher risk compared to larger firms. Firm size can be a proxy for one or more underlying risk factors linked to smaller firms. (Crain, M. A. (2011). Firm size can be measured by two indicators a) natural log of sales (LOGSALES); b) natural log of total assets (LOGTA) [Lahiri, P. (2013).]. Here LOGSALES and LOGTA have been used as indicators of firm size.
- **Leverage:** Firms add debt to their capital structure to get the tax shield benefit compared to equity. The cost of debt i.e. interest is cheaper than equity but debt also increases the chance of agency cost and bankruptcy cost for the firm. The optimal mix of debt and equity lowers the overall cost of capital and increases the value of the firm. (SUKESTI. et al,2021) As firm value maximised it has a direct impact on the stock price. In this study leverage is calculated using two ratios: i) Debt to equity ratio: the ratio between outsider's debt and internal equity;(DE) ii) Debt to a total asset: the ratio of debt and total asset. (DTA) These two ratios

have been used as a proxy for leverage.

- **GDP:** In this study GDP or gross domestic product has been used as a macroeconomic variable. GDP gives information about the size of the economy and how an economy is performing. The growth rate of real GDP is often used as an indicator of firm performance. In broad terms, an increase in real GDP is interpreted as a sign that the economy is doing well.

### Estimation Method

To evaluate the first objective of this paper- the effect of traditional firm performance indicators (ROA, ROCE, and EPS) on stock price, the linear panel data regression models are applied. The linear panel data models are of two types: Fixed effects and random effects. The fixed effects model estimates the parameters for each cross-sectional unit. Here in this paper, each cross section represents the companies (Paton, 2005). In the Random Effect model, the variations across entities are assumed to be random and uncorrelated with the independent variables included in the model. (Singh,2019) Hausman test has been used to choose between fixed and random effect models. If the p-value is less than 0.05 in the case of the Hausman Test then the method to be selected is the fixed effect model, The panel data regression equations for traditional measures are as follows:

$$1. LOGCP_{it} = \alpha_{1i} + \beta_1 ROA_{it} + \beta_2 DE_{it} + \beta_3 LOGTA_{it} + \beta_4 GDP_{it} + \varepsilon_{1it}$$

$$2. LOGCP_{it} = \alpha_{2i} + \beta_5 ROA_{it} + \beta_6 DTA_{it} + \beta_7 LOGTA_{it} + \beta_8 GDP_{it} + \varepsilon_{2it}$$

$$3. LOGCP_{it} = \alpha_{3i} + \beta_9 ROA_{it} + \beta_{10} DE_{it} + \beta_{11} LOGSALES_{it} + \beta_{12} GDP_{it} + \varepsilon_{3it}$$

$$4. LOGCP_{it} = \alpha_{4i} + \beta_{13} ROA_{it} + \beta_{14} DTA_{it} + \beta_{15} LOGSALES_{it} + \beta_{16} GDP_{it} + \varepsilon_{4it}$$

$$5. LOGCP_{it} = \alpha_{5i} + \beta_{17} ROCE_{it} + \beta_{18} DE_{it} + \beta_{19} LOGTA_{it} + \beta_{20} GDP_{it} + \varepsilon_{5it}$$

$$6. LOGCP_{it} = \alpha_{6i} + \beta_{21} ROCE_{it} + \beta_{22} DTA_{it} + \beta_{23} LOGTA_{it} + \beta_{24} GDP_{it} + \varepsilon_{6it}$$

$$7. LOGCP_{it} = \alpha_{7i} + \beta_{25} ROCE_{it} + \beta_{26} DE_{it} + \beta_{27} LOGSALES_{it} + \beta_{28} GDP_{it} + \varepsilon_{7it}$$

$$8. LOGCP_{it} = \alpha_{8i} + \beta_{29} ROCE_{it} + \beta_{30} DTA_{it} + \beta_{31} LOGSALES_{it} + \beta_{32} GDP_{it} + \varepsilon_{8it}$$

$$9. LOGCP_{it} = \alpha_{9i} + \beta_{33} EPS_{it} + \beta_{34} DE_{it} + \beta_{35} LOGTA_{it} + \beta_{36} GDP_{it} + \varepsilon_{9it}$$

$$10. LOGCP_{it} = \alpha_{10i} + \beta_{37} EPS_{it} + \beta_{38} DTA_{it} + \beta_{39} LOGTA_{it} + \beta_{40} GDP_{it} + \varepsilon_{10it}$$

$$11. LOGCP_{it} = \alpha_{11i} + \beta_{41} EPS_{it} + \beta_{42} DE_{it} + \beta_{43} LOGSALES_{it} + \beta_{44} GDP_{it} + \varepsilon_{11it}$$

$$12. LOGCP_{it} = \alpha_{12i} + \beta_{45} EPS_{it} + \beta_{46} DTA_{it} + \beta_{47} LOGSALES_{it} + \beta_{48} GDP_{it} + \varepsilon_{12it}$$

Where  $\alpha_1$  to  $\alpha_{12}$  are intercepts,  $i$  represents firms, here  $i=1,2, \dots, 172$  and  $\varepsilon_{1it}$  to  $\varepsilon_{12it}$  are random error term.

To evaluate the second objective, the impact of sophisticated firm performance indicators (EVA/AVGCE) on stock price, we use the same panel regression technique which has been discussed vividly above.

The panel regression equations for sophisticated measures are as follows:

$$1. LOGCP_{it} = \gamma_{1i} + \Phi_1 EVA/AVGCE_{it} + \Phi_2 DE_{it} + \Phi_3 LOGTA_{it} + \Phi_4 GDP_{it} + \mu_{1it}$$

$$2. LOGCP_{it} = \gamma_{2i} + \Phi_5 EVA/AVGCE_{it} + \Phi_6 DTA_{it} + \Phi_7 LOGTA_{it} + \Phi_8 GDP_{it} + \mu_{2it}$$

$$3. LOGCP_{it} = \gamma_{3i} + \Phi_9 EVA/AVGCE_{it} + \Phi_{10} DE_{it} + \Phi_{11} LOGSALES_{it} + \Phi_{12} GDP_{it} + \mu_{3it}$$

$$4. LOGCP_{it} = \gamma_{4i} + \Phi_{13} EVA/AVGCE_{it} + \Phi_{14} DTA_{it} + \Phi_{15} LOGSALES_{it} + \Phi_{16} GDP_{it} + \mu_{4it}$$

Where  $\gamma_1$  to  $\gamma_4$  are intercepts,  $i$  represents firms, here  $i=1,2, \dots, 172$  and  $\mu_{1it}$  to  $\mu_{4it}$  are random error term.

## VI. EMPIRICAL ANALYSIS

The interpretation of results of objective (1), effect of traditional firm performance indicators on Stock price, through panel data regression technique, have been vividly discussed here. The panel data regression results for both fixed effect and random effect have been reported in Table 1 to Table 3.

TABLE 1  
**Fixed Effect, Random Effect Regression result for ROA**

Variables	Dependent Variables									
	FIXED EFFECT					RANDOM EFFECT				
	MODEL 1	MODEL 2	MODEL 3	MODEL 4	MODEL 5	MODEL 6	MODEL 7	MODEL 8		
ROA	0.0486*** (0.0059)	0.0442*** (0.0063)	0.0490*** (0.0060)	0.0458*** (0.0064)	0.0634*** (0.0058)	0.0523*** (0.0062)	0.0624*** (0.0059)	0.0548*** (0.0063)		
DE	-0.0004 (0.0026)		-0.0002 (0.0027)		-0.0016 (0.0027)		-0.0009 (0.0027)			
DTA		-0.6472*** (0.3078)		-0.4516 (0.3276)		-1.3773*** (0.2682)		-0.9335*** (0.2873)		
LOGTA	1.0662*** (0.0858)	1.0293*** (0.0875)			0.5386*** (0.0479)	0.5161*** (0.0477)				
LOGSALES			1.7303*** (0.1894)	1.6337*** (0.2019)			1.7397*** (0.1924)	1.5398*** (0.2017)		
GDP	0.0929*** (0.0074)	0.0937*** (0.0074)	0.0990*** (0.0078)	0.0988*** (0.0078)	0.0867*** (0.0076)	0.0890*** (0.0076)	0.0988*** (0.0079)	0.0984*** (0.0079)		
CONS	-5.9482*** (0.8318)	-5.3669*** (0.8759)	-11.8191*** (1.7724)	-10.7592*** (1.9319)	-0.8822*** (0.4716)	-1.835 (.4866)	-11.9382*** (1.8018)	-9.7428*** (1.9216)		
Observations	2064	2064	2064	2064	2064	2064	2064	2064		
F value	85.47	86.76	66.15	66.69						
R square within	0.1533	0.1553	0.1229	0.1238	0.1335	0.1369	0.1214	0.1218		
Wald chi2					358.02	388.79	304.6	316.67		
Hausman Test	126.07***	107.83***	65.57***	58.57***						



TABLE 3  
**Fixed Effect, Random Effect Regression result for EPS**

Variables	Dependent Variables									
	FE					RE				
	MODEL 17	MODEL 18	MODEL 19	MODEL 20	MODEL 21	MODEL 22	MODEL 23	MODEL 24		
Independent Variables										
EPS	.0010*** (.0003)	.0000*** (2.27e-06)	.0000*** (2.33e-06)	.0000*** (2.32e-06)	.0016*** (.0002)	.0000*** (2.29e-06)	.0000*** (2.33e-06)	.0000	.0000*** (2.31e-06)	.0000
DE	-.0015 (.0027)		-.0013 (.0027)		-.0028 (.0027)		-.0022 (.0027)			
DTA		-1.4325*** (.28879)		-1.3390*** (.3052)		-2.0483*** (.2587)			-1.7628*** (.2736)	
LOGTA	1.0248*** (.0878)	.9665*** (.0871)			.5466*** (.0539)	.5435*** (.0539)				
LOGSALES			1.6804*** (.1899)	1.4017*** (.1995)			1.6793*** (.1903)	1.3128*** (.1978)		
GDP	.09414*** (.0075)	.0917*** (.0074)	.0961*** (.0078)	.0953*** (.0078)	.0890*** (.0076)	.0880*** (.0075)	.09611*** (.0078)	.0950*** (.0078)		
CONS	-5.4576*** (.8493)	-4.3947*** (.8663)	-11.2352*** (1.7768)	-8.1866*** (1.9006)	-.8527 (.5292)	-.1014*** (.5458)	-11.2236 (1.7829)	-7.2156*** (1.8809)		
Observations	2064	2064	2064	2064	2064	2064	2064	2064	2064	2064
F value	68.84	88.83	62.88	68.26						
R square within	0.1273	0.1584	0.1176	0.1264	0.1143	0.1479	0.1175	0.1256		
Wald chi2					273.29	361.4	252.92	296.45		
Hausman Test	62.47***	44.87***	32.64***	10.71***						

Table 1, Table 2, and Table 3 indicate the results of the panel data regression based on fixed effects and random effects respectively. Each Table shows the results of regression models (1) to (24). It is evident from Table 1, Table 2 and Table 3 that traditional firm performance indicators i.e. ROA, ROCE, and EPS have a positive and statistically significant influence on share price (LOGCP) for models (1) to (24). As these measures reflect the firm's profitability, the positive relation indicates a change in ROA, ROCE, and EPS, which leads to a positive change in stock price. Hausman test suggests that the p value is less than 0.05, so the alternative hypothesis is accepted i.e. Fixed Effect model is more appropriate for model (1) to model (24). F statistics are significant for the above models, whereas the highest value of F statistics ensures the best fit for the model. From Table 1 it is clearly shown that as per the highest F statistic value, the best-fit model for ROA is Model 2(86.76), ROCE is Model 10 (90.46), and for EPS is Model 18(88.83). The above empirical results are consistent with existing empirical works mostly on developed countries. (Chenn &Dodd, 1997; Ismail,2006; Altaf,2016 Sharma, et. al,2012).

Firm size shows a positive and statistically significant impact on stock price. GDP shows a positive and significant relationship with stock price for models (1) to (24).

The results of panel data regression result for both the fixed effect and random effect of sophisticated firm performance indicators on stock price have been presented in Table 4.

TABLE 4  
**Fixed Effect, Random Effect Regression result for EVA**

Variables	Dependent Variables															
	LOGCP						RE									
	FE															
Independent Variables	MODEL 25	MODEL 26	MODEL 27	MODEL 28	MODEL 29	MODEL 30	MODEL 31	MODEL 32	MODEL 25	MODEL 26	MODEL 27	MODEL 28	MODEL 29	MODEL 30	MODEL 31	MODEL 32
EVA/AVG CE	2.9307*** (0.3644)	2.7028*** (0.3697)	2.9539*** (0.3711)	2.7534*** (0.3781)	3.5812*** (0.3619)	3.2162*** (0.3646)	3.6202*** (0.3647)	3.3224*** (0.3704)	2.9307*** (0.3644)	2.7028*** (0.3697)	2.9539*** (0.3711)	2.7534*** (0.3781)	3.5812*** (0.3619)	3.2162*** (0.3646)	3.6202*** (0.3647)	3.3224*** (0.3704)
DE	-0.0008 (0.0026)		-0.0006 (0.0002)		-0.0022 (0.0027)		-0.0015 (0.0027)		-0.0008 (0.0026)		-0.0006 (0.0002)		-0.0022 (0.0027)		-0.0015 (0.0027)	
DTA		-0.9798 (0.2942)		-0.8256** (0.3119)				-1.3855*** (0.2712)		-0.9798 (0.2942)		-0.8256** (0.3119)				-1.3855*** (0.2712)
LOGTA	1.0720*** (0.0859)	1.0163*** (0.0873)			0.5542*** (0.0497)	0.5080*** (0.0476)			1.0720*** (0.0859)	1.0163*** (0.0873)			0.5542*** (0.0497)	0.5080*** (0.0476)		
LOGSALES			1.7456*** (0.1897)	1.5694*** (0.2008)			1.7570*** (0.1922)	1.4626*** (0.2007)			1.7456*** (0.1897)	1.5694*** (0.2008)			1.7570*** (0.1922)	1.4626*** (0.2007)
GDP	0.0933*** (0.0074)	0.0943*** (0.0074)	0.0988*** (0.0077)	0.0984*** (0.0077)	0.0874*** (0.0076)	0.0898*** (0.0076)	0.0987*** (0.0078)	0.0981*** (0.0078)	0.0933*** (0.0074)	0.0943*** (0.0074)	0.0988*** (0.0077)	0.0984*** (0.0077)	0.0874*** (0.0076)	0.0898*** (0.0076)	0.0987*** (0.0078)	0.0981*** (0.0078)
CONS	-5.8541 (0.8320)	-4.9947*** (0.8690)	-12.0054*** (1.7955)	-10.0682*** (1.9367)	-0.0874 (.4890)	0.1871 (0.48222)	-12.1044*** (1.8207)		-5.8541 (0.8320)	-4.9947*** (0.8690)	-12.0054*** (1.7955)	-10.0682*** (1.9367)	-0.0874 (.4890)	0.1871 (0.48222)	-12.1044*** (1.8207)	
Observations	2064	2064	2064	2064	2064	2064	2064	2064	2064	2064	2064	2064	2064	2064	2064	2064
F value	84.81	88.05	65.47	67.45					84.81	88.05	65.47	67.45				
R square within	0.1523	0.1572	0.1218	0.125	0.1349	0.1391	0.1207	0.1229	0.1523	0.1572	0.1218	0.125	0.1349	0.1391	0.1207	0.1229
Wald chi2					339.22	397.25	292.65	323.19					339.22	397.25	292.65	323.19
Hausman Test	110.69***	105.13***	55.16***	60.86***					110.69***	105.13***	55.16***	60.86***				

The interpretation of the results of objective (2) has been elaborately discussed here. Table 4 shows panel data regression results for both fixed effect and random effect respectively; the Hausman test indicates that the Fixed Effect is more relevant as the p value is less than 0.05 so alternative hypothesis or  $H_1$  is accepted. Results indicate that sophisticated measures i.e. EVA/AVGCE have a positive and significant effect on share price (LOGCP). EVA/AVGCE can explain stock price; the market can capture the information regarding excess profit/growth that was created by EVA and reflect the same into the share price. The one-unit change in EVA/AVGCE leads to a positive change in stock price for models (25) to (32). F statistics are significant and Model 26 is a best-fit model as the F statistics value is the highest (88.05). These empirical results are consistent with existing works done in developed countries. (Lehn, K., & Makhija, A. K. 1996, Garvey et al, 2000, Worthington, 2004).

Debt Equity ratio (DE) and Debt to Total Asset (DTA) have a positive and significant effect on the share price. Firm size shows a positive and statistically significant impact on stock price. As GDP has a positive impact on the stock market, if GDP rises then there is a chance of increased corporate profits and a favourable investment environment, leading to positive trends in the stock market.

## VII. SUMMARY AND CONCLUSION

The present research aimed of empirically examine whether fundamental firm-specific factors have a significant influence on stock price indicating market rationality, efficiency, and maturity.

We have used traditional firm performance indicators (ROA, ROCE, EPS) and sophisticated indicator (EVA) to find their influence on stock price (LOGCP). The study utilized balanced panel data from 172 companies, covering traditional, sophisticated performance indicators and stock prices for the period 2011 to 2022. The panel regression methods are applied with Fixed effects and random effects. Traditional measures like ROA, ROCE, and EPS have a positive and significant influence on the stock price. The positive and significant relationship between traditional measures (ROA, ROCE, EPS) and stock price indicates market rationality. Thus, the analysis and findings addressed the first objective.

The literature supports that Economic Value Added is reflected in stock prices in the developed economies. This study's findings reveal that EVA indicates growth, and the Indian market considers these factors, responding accordingly, thereby enabling stock prices to reflect their impact. Thus, the second objective is fulfilled.

This supports that the Indian market can capture traditional performance measures along with sophisticated ones, meaning the market is not only rational but also mature enough to read sophisticated indicators like that of developed countries.

The statistically positive and significant relationship between sophisticated measures (EVA) and stock price implies that a unit change in these measures is reflected in stock prices. This ability to capture sophisticated measures demonstrates market maturity. The findings confirm that the Indian market also

responds to traditional indicators as well as sophisticated indicators like the stock markets in developed countries.

These findings are helpful for investors interested in firm performance to make informed investment decisions and are also important for employees and the government, who are indirect users of financial information.

In summary, while fundamentals like ROA, ROCE, and EPS influence stock prices in the Indian scenario, reflecting market rationality, the stock market has also been responsive to sophisticated performance indicators like EVA, indicating market maturity like that of developed countries.

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# **How do Stock Markets Respond during Periods of Political Instability? An Empirical Insight from Bangladesh during 2015-2023**

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## **ABSTRACT**

Using 108 observations from January 2015, to December 2023, the Dhaka Stock Exchange Broad (DSEX) and political upheavals are examined empirically in this study. While the quantile regression model indicates a strong negative correlation between the select variables with larger coefficients at the higher quantiles, descriptive statistics validate the non-normality of the data. Moreover, the GARCH (1,1) model confirms the existence of volatility within DSEX. Additionally, the Hodrick-Prescott (HP) filter is used to note the actual, trend, and cyclical components. Political protests, labour strikes, changes in leadership, political rivalry, uncertainty about upcoming policy decisions, inefficient policy implementation, and corruption can be cited as the key reasons behind such negative relationships and volatility between DSEX and WGI.

**Key words:** DSEX, Political Upheavals, Quantile Regression, GARCH (1,1), Hodrick-Prescott Filter, Bangladesh

## **I. INTRODUCTION**

Bangladesh is located in the north-eastern part of South Asia. The border of Bangladesh is situated in the west sharing border with West Bengal, and in the east lies the hilly and forested regions of Tripura, Mizoram, and Myanmar. The protest in Bangladesh began in June 2024, in response to the Supreme Court

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of Bangladesh reviving a 30 per cent quota for progenies of freedom fighters, overturning the government of Bangladesh's decision made in reciprocation to the 2018 Bangladesh quota refinement. Movement of Freedom Fighters and students embarked on perceiving that they have a restricted opportunity based on merit and due to the massive protest by the students Bangladesh's Prime Minister resigned from the post on August 5, 2024, and left the country also. Political turbulence had a great impact on the stock market (Roy et al., 2024).

The stock market plays a salient role in economic growth and development. Growth of the economy can be intense in both the fiscal and monetary sectors. The performance of the stock market is measured by the changes in its index (Ilyas, 2015).

But on account of such events, the Dhaka stock market instead of having negative impacts showed positive impacts.

However, there are studies depicting a negative impact on the volatility of the stock market that increases the uncertainty of the investment's anticipated cash flows (Ghosh, 2022).

This provides the authors with the opportunity to make an in-depth analysis of how the stock market of Bangladesh responds to the political upheavals factually.

## **II. SYNTHESIS OF LITERATURE REVIEW**

Though there is no dearth of existing studies belonging to the area, an ample number of studies from both national and international outlooks are exhaustively examined to arrive at the research gaps. The snap-shot of those studies is summarized below.

Hossin & Hamid (2024) intends to use market capitalisation, stock turnover, and GDP growth statistics from 2001 to 2018 to analyze the impact of capital market performance on Bangladesh's economy. To investigate this effect, this study used the Granger causality test, Toda-Yamamoto Granger non-causality test, autoregressive distributed lag model, non-linear autoregressive distributed lag model, vector error correction model, unit root test, and Johansen co-integration test. There is a long-term correlation between market capitalisation and stock turnover as independent variables and GDP, according to the vector error correction model's results. Once more, the findings of the autoregressive distributed lag model and the non-linear autoregressive distributed lag model demonstrated a strong positive correlation between Bangladesh's GDP and the stock market.

Mai et al. (2023) are of the view that the subcontinental stock exchanges of the Asia-Pacific are highly susceptible to changes in political events, the Pakistani stock exchanges are researched highly in this regard for having high volatilities. The study of Pakistan found that political instability has a significant positive impact on stock market performance while political instability has a negative impact on stock market performance.

Subhash, B. (2022) made an analysis of turmoil in Sri Lanka where he states that the long crisis period unravelled at the commencement of 2022 has highly created an impact on the citizens concentrating on the cause of unfortunate

situations, such as poor management by previous administrations on trade and investment policies.

Alamgir & Amin (2021) using a Nonlinear Autoregressive Distributed Lag (NARDL) model for 1997–2018, investigate the interactive relationship between oil prices and the stock market in the four select South Asian nations. The global oil price and the stock market index are found to be positively correlated, and the stock market index exhibits an asymmetric response to both positive and negative oil price shocks. Their findings also show that rising global oil prices boost stock values, indicating that South Asian nations do not adhere to the Efficient Market Hypothesis (EMH). They advise authorities to take steps to improve the efficiency of the South Asian stock market by lowering obstacles to its growth, building out the nation's infrastructure, increasing the market's capacity, and reviving investor confidence.

Haque & Chowdhury (2020) state that there exists a significant chance that the stock price returns be impacted on the basis of political events. So far different studies have been done where different events' impacts have been analyzed on stock market returns and analyzed ultimate impacts on stock market returns.

Hoque & Zaidi (2020) uses a three-regime Markov-switching strategy to investigate the nonlinear impacts of global and country-specific geopolitical risk uncertainty on the stock returns of Brazil, India, Indonesia, South Africa, and Turkey. This study finds that, in contrast to the linear framework, the Markov-switching model was able to capture the effects of both national and global geopolitical risk uncertainty on the stock returns of all fragile emerging economies. Based on contemporary time, lag time, volatility regimes, and stock market performance, the empirical findings show that global geopolitical risk uncertainty can have both positive and negative effects on stock market performance. With the exception of the Indian stock market, the results also show that political upheaval in each of the four fragile emerging economies had a negative impact on stock market performance throughout the course of volatility regimes. Therefore, before taking a chance at both domestic and international geopolitical uncertainties, investors should pay attention to market volatility behavior.

Kumar & Dhankar (2017) analyzed how global financial instability affects developing South Asian stock markets both immediately and over time. The study also looks into regional financial integration. For short-term causal relationships, the Granger causality test is employed. GARCH models with large shocks in the global financial market are used to examine the long-run spillover influence on stock returns since the findings of the preliminary test show that there are considerable autocorrelations in stock returns. The findings show that worldwide financial instability has a major impact on stock returns both in the short and long term. They draw attention to the South Asian stock markets where notable co-integration with the global economy. The degree of regional integration between India, Pakistan, and Sri Lanka is substantial, as evidenced by significant correlations between stock returns and volatility.

Based on the above studies, it is observed that studies pertaining to Bangladesh in the present context of political crisis are rarely found which may be highlighted as the primary research gap of this present study. So, the authors

decide to study the relationship between the Dhaka Stock Exchange and political upheavals along with actual, trend, and cyclical components.

### III. RESEARCH METHODOLOGY

This study considers the stock indices return of the Dhaka Stock Exchange Broad Index (DSEX) from January 2015, to December 2023, with 108 observations. Moreover, the world governance indicator (WGI) is also considered a proxy for political upheavals. All the data are converted into corresponding logarithmic returns. Different tools, namely descriptive tests, ADF unit root test, quantile regression model, Hodrick-Prescott (HP) Filter, and GARCH (1,1) model are used.

### IV. DATA ANALYSIS AND FINDINGS

#### 4.1 Descriptive Statistics

TABLE 1

**Descriptive Statistics of DSEX and WGI**

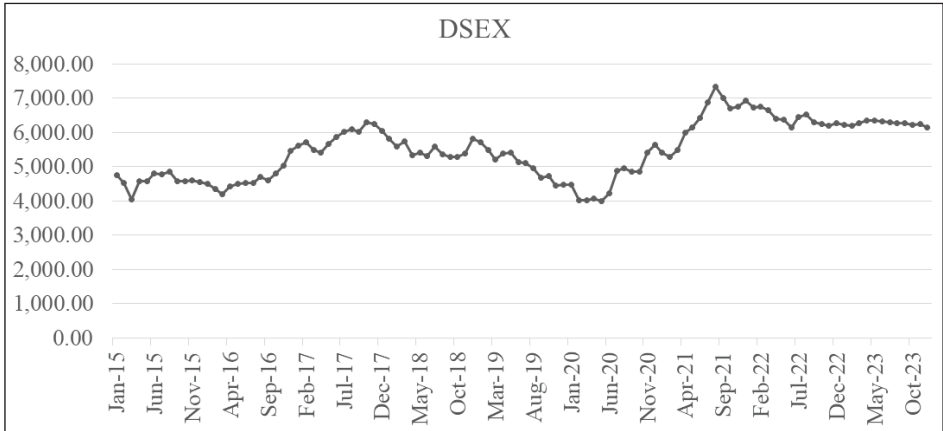
	DSEX	WGI
Mean	0.0020	-0.0012
Median	-0.0002	-0.0010
Maximum	0.1464	0.0401
Minimum	-0.1127	-0.0547
Std. Dev.	0.0424	0.0197
Skewness	0.4490	-0.4390
Kurtosis	4.3299	3.9139
Jarque-Bera	11.5883	7.2281
Probability	0.0030*	0.0269**
Observations	108	108

(\* indicates significance at 1% level, \*\* indicates significance at 5% level)

Table 1 provides the results of the descriptive statistics of the variables namely DSEX and WGI. The distribution of DSEX values is somewhat skewed to the right which suggests that most observations are on the lower side with a few numbers of extremely high values whereas WGI bears skewness to the left. For both variables, the kurtosis values are more than 3 indicating leptokurtic behaviour. The results of the Jarque-Bera test suggest that the distribution deviates strongly from normality.

The trend of the performance of the stock market index of Bangladesh is graphically represented in Figure 1.

FIGURE 1  
Trend of DSEX



#### 4.2 Augmented Dickey-Fuller (ADF) Unit Root Test

TABLE 2

##### Augmented Dickey-Fuller (ADF) Unit Root Test of DSEX and WGI

	Trend and Intercept			
	At Level		At First Difference	
	t-Statistic	Prob.*	t-Statistic	Prob.*
DSEX	-9.1444	0.00*	-11.8209	0.00*
WGI	-4.1413	0.01*	-8.2226	0.00*

(\* indicates significance at 1% level)

ADF unit root test (Table 2) suggests that there is no presence of unit root at the level and at first difference for both the variables and the dataset is free from the unit root. Hence, we may conclude that the dataset is stationary in nature.

#### 4.3 Quantile Regression Model

TABLE 3

##### Quantile Regression Model between DSEX and WGI

Quantiles	Variable	Coefficient	Std. Error	t-Statistic	Prob.
0.25	WGI	-0.2368	0.2429	-0.9751	0.00*
0.50		-0.1416	0.2932	-0.4831	0.00*
0.75		-0.1417	0.2478	-0.5697	0.00*

(\* indicates significance at 1% level)

Table 3 explains the non-linear relationship between the variables of the study, namely, DSEX and WGI. The quantile 0.25 explains the relationship at the lower quantile, the quantile 0.50 explains the relationship at the median, whereas

the quantile 0.75 explains the relationship at the higher end of the distribution. A coefficient of  $-0.2368$  means that an increase of one unit in WGI is correlated with a decrease of 0.2368 units in DSEX for observations at the 25th quantile of the dependent variable. A similar negative association is noted at the median and at the upper end. Additionally, the p-values suggest the relationship to be significant. It is also noteworthy that the association is much more commanding at the higher quantiles (Mai et al., 2023). This is also in line with the study conducted by Iqbal et al. (2018).

#### 4.4 Hodrick-Prescott (HP) Filter

FIGURE 2  
**Actual, Trend, and Cyclical Components of DSEX**

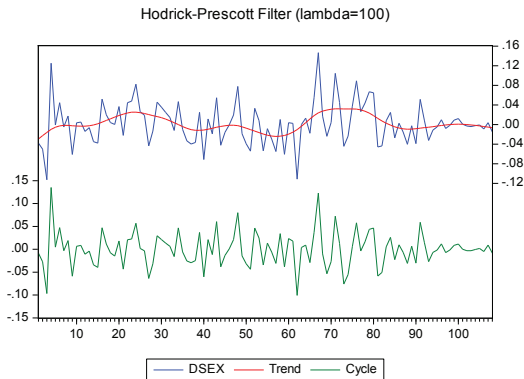
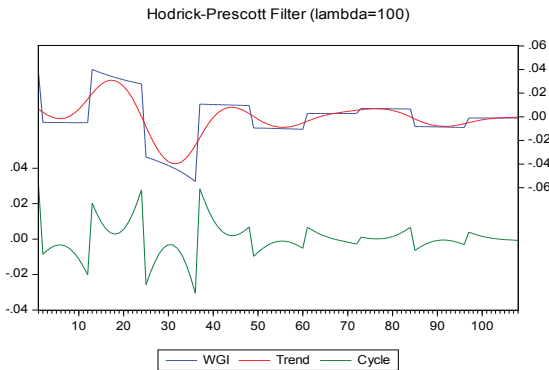


FIGURE 3  
**Actual, Trend, and Cyclical Components of WGI**



Figures 2 and 3 provide the results of the Hodrick-Prescott (HP) Filter which provides the actual, trend, and cyclical components of the variables, namely, DSEX and WGI.

#### 4.5 Generalized Autoregressive Conditional Heteroskedasticity (GARCH) (1,1) Model

TABLE 4  
GARCH (1,1) Model between DSEX and WGI

Variable	Parameter	Coefficient	Std. Error	z-Statistic	Prob.
WGI	ARCH ( $\alpha$ )	0.2804	0.1303	2.1520	0.0314**
	GARCH ( $\beta$ )	0.7457	0.0981	7.5945	0.00*
	$\alpha + \beta$	1.0261			

(\* indicates significance at 1% level, \*\* indicates significance at 5% level)

Table 4 denotes the results of the GARCH (1,1) model between DSEX and WGI during the study period from January 2015 to December 2023. This model is superior enough to capture volatility and volatility clustering within the dependent variable as a result of a shock occurring from the independent variable. Both the ARCH and GARCH terms are significant thereby confirming the existence of volatility and volatility clustering in DSEX from WGI. The coefficients are also noted positive indicating a positive correlation between WGI and volatility within DSEX. Moreover, the  $\alpha + \beta$  term is more than 1 indicating that the volatility will persist for a long time period instead of decaying gradually.

### V. RESULTS AND DISCUSSIONS

It is observed that during election years, Bangladesh has frequently seen political turmoil, with opposition parties abstaining from elections preceded by protests, strikes, etc. Investor sentiment suffered as a result of these incidents. Economic activity is frequently disrupted by political protests, especially those involving opposition movements, labour strikes, or calls for change. Moreover, investor confidence may be harmed by political instability brought in by changes in leadership, political rivalry, or uncertainty about upcoming policy decisions which can be cited as the key reasons behind such negative relationships between DSEX and WGI (<https://acleddata.com/2024/01/04/the-violent-politics-of-bangladeshs-2024-elections/>). Furthermore, through resource diversion and inefficient policy implementation, corruption can undermine investor confidence and obstruct economic growth. Inconsistent policy execution, a lack of structural improvements, and a delay in tackling economic issues are all consequences of weak governance. Public investment and private sector involvement may be impacted by a bureaucratic structure that is sluggish to move or ineffective (<https://www.undp-aciac.org/publications/other/undp/fc/corruption97e.pdf>).

Several factors namely uncertainties occurring out of elections, unrest in civil society, and political turmoil are the key factors behind stock market volatility in the market. During election seasons, Bangladesh has seen a great deal of political unpredictability. Investor hesitancy is frequently caused by worries about the outcome, changes in governmental policy, and the possibility of political unrest following elections (Bhowmik et al., 2017).

## VI. CONCLUDING OBSERVATIONS

Foreign investors and scholars have focused a lot of attention on the Bangladesh stock market, which is regarded as one of the significant growing markets in South Asia. It is observed that there is a significant negative non-linear relationship between DSEX and WGI during the study period which can be attributed to key factors, namely, frequent political turmoil in the country and civil society unrest. However, the volatility within the Bangladesh stock market can be reduced significantly to some extent by formulating policies in the national context to control the political topsy-turvy scenario. Moreover, if the necessary framework is developed that can mitigate the effects of the crisis within the financial markets, it will also enhance better functioning with superior returns to the investors. Thus, in practice, investors, traders, and regulators who intend to introduce stock index trading in the future, either locally or cross-border, may find the conclusions captivating.

### Acknowledgments

An earlier version of this paper was presented at the One-day seminar on Investment Ideas for Wealth Creation: Financial Education for Young Investors at the University of Gour Banga. Thanks go to some participants who made comments and suggestions for us to improve the paper.

We are also indebted to the honourable editor and the esteemed reviewers for their invaluable annotations that have given a new shape to the current study.

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# **Socio-Economic Conditions of Beedi Workers of Dhuliyān Municipality: An Exploratory Study**

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## **ABSTRACT**

Beedi making is one of the prominent employment generating small scale industries in India especially for women. It is a labour-intensive manufacturing work. It is widely believed that Beedi industry in general and Beedi workers in particular are facing some unique challenges arising out of the nature of employment which, in turn, affect their socio-economic conditions to a large extent. The paper aims at identifying those socio-economic issues and the issue of women empowerment in Dhuliyān Municipality, Murshidabad, West Bengal, through a field survey-based research work where primary data are collected from 250 respondents and analysed. The study highlighted that Beedi workers of Dhuliyān Municipality are facing a host of problems and don't enjoy even some basic facilities and welfare schemes associated with their work. Appropriate steps to address the problems are suggested which will have a positive impact on the socio-economic conditions of these workers.

**Key words:** Beedi, Beedi workers, Un-organized Sector, Women Empowerment, Welfare Scheme, Employment.

## **I. INTRODUCTION**

The Indian market of smoking is dominated by Beedi. A Beedi is a thin cigarette filled with tobacco flake and folded in a tendu leaf tagged with a yarn at one end. Beedi making is labour intensive work and hence a large number of men, women and children have been engaged in the whole process of Beedi rolling. The work is predominantly done after collection of raw materials in home in a sub-contracted system.

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Theoretically, however, Beedi making is organized under three-point systems. These are as follows:

<i>Type of system</i>	<i>Description</i>
1. Factory based system	Work carried out on factory premises under the supervision of manager.
2. Beedi rolling through Company	On behalf of the factory owner work is carried out at a local common shed or labour's own household.
3. Contractor or middle man-oriented system	Contractors act as middlemen. They supply raw materials to the workers and collect final product from them to supply to the factory.

*Source:* Adapted from Rustagi (2009), CWDS research team.

According to Government of India, there were about 300 major Beedi brands and thousands of small-scale contractors and manufacturers involved in bulk production. Estimated total sales of Beedi industries in 2005-06 was Rs. 31.6 billion which accounted for 0.5 % of total sales of all manufacturing sector and 1.8% of total sales of all unorganized manufacturing sector. West Bengal had the largest share with Rs. 7.3 billion, or around 1.8% of overall industrial turnover. In case of gross value added (GVA)<sup>1</sup>, Indian Beedi industry contributed 0.65% of total GVA and West Bengal accounted for the highest GVA with Rs.5.3 billion (Nandi, 2014). According to the Economic Survey of 2018-19, 93% of the total workers engaged in the Beedi industries are informal (Indian Express). The industry employs around 5.5 million workers (17<sup>th</sup> Report of Standing Committee on Labour, 2010-11).

In spite of having impressive statistics, it is widely believed that Beedi industry in general and Beedi workers in particular have been facing some unique challenges relating to their employment related issues which, in turn, affect their socio-economic conditions. Socio-economic conditions of these workers at present as well as in the past, as reported, have not been well.

## II. REVIEW OF LITERATURE

At the outset, it should be mentioned that there are very few research works available either on Beedi industry or on Beedi workers. In order to conceptualise the issues involved, the following studies have been consulted. The essence of these literature is given below chronologically.

Rajasekhar and Sreedhar (2002) focussed on the changing face of beedi industry in a coastal district of Karnataka state, Dakshin Kannada. Authors have mentioned that availability of beedi work recently comes down and workers moved to the agricultural work. As a result, wages of agriculture work also decreased. The paper concluded that most of the beedi workers are living in below poverty line and lack of basic amenities as well as low level of education and health.

Dolas (2010) focussed on the socio-economic conditions among beedi workers in Solapur municipal corporations of Maharashtra state. Both primary and

<sup>1</sup>GVA refers to the value of output minus value of intermediate consumption and it is used to calculate gross domestic product (GDP).

secondary data are used in the study and primary data were collected from 383 respondents on the basis of convenient sampling method. Author has concluded that most of the beedi workers are married, young and economically weaker. It found positive association between family size and family income.

Hemanalini et. al. (2010) have provided an insight on the work life balance of Indian women beedi workers through an exploratory study. Primary data are collected from 200 respondents of Vellore and Tirunelveli district, Tamil Nadu by using structured interview schedule. The paper concluded that working hour of beedi workers are very high but wages are provided much lower than minimum wages act and women worker are less aware about social security schemes.

Srinivasan and Ilango (2012) studied the occupational health hazards faced by female Beedi workers at Khajamalli, Trinchipalli, Tamilnadu. The research design used for this study was descriptive and 50 families were selected for the study using purposive sampling method. The main objective was to know the working and health condition of female Beedi workers. It revealed that the Beedi workers were from the marginalized section of the society and therefore they were socially and economically backwards. Mukherjee et. al. (2014) studied the professional health hazards of Beedi workers in Murshidabad District of West Bengal. The study revealed that most of the Beedi workers were women and they were economically weak without having education. Most of them suffered health related disorder due to over exposure of harmful tobacco dust.

Biswas and Laha (2015) focused on the socio-economic as well as health status of the Beedi workers in Jangipur sub-division of Murshidabad district, West Bengal. This study concluded that Percentage of female workers were higher than male workers because male workers were engaged as Rajmistry (Mason), agriculture and other activities.

Hoque (2018) focused the quality of housing and health status of Beedi workers in Malda district of West Bengal on the basis of primary and secondary data. This study revealed that workplaces of Beedi industry were unhealthy and overcrowded devoid of drinking water and even toilet and first aid facilities.

Iti (2018) has tried to understand the nature and problems of beedi industry in Murshidabad district of West Bengal and analyse the socio-economic conditions of beedi workers. Primary as well as secondary data were used in the study. The study concluded that the demonetization of currency and heavy tax rate adversely affected the beedi industry.

Arora et. al. (2020) have focussed on the trends in employment and wages in the beedi industry through secondary data. These secondary data were collected from National Sample Survey Office (NSSO), the Central Statistics Office (CSO) and website of different government and non-government organisation. Authors have mentioned that beedi industry generate only 0.65% of total GVA by the entire manufacturing industries, employment provided in the industry through middle men or contractor and beedi workers earned only 17% of wages compared to workers in other manufacturing industries.

Lakshman (2020) identified and highlighted the socio-economic status of unorganized women workers in Nanguneri block of Tirunelveli district. The study concluded that women Beedi workers faced lot of problems. They didn't have the basic facilities. They were exploited by the contractors and deprived of their basic

rights.

Roy (2020) has focussed on the challenges and opportunities of women beedi workers of Suti block, Murshidabad district. Primary as well as secondary data were used in the study and primary data were collected through schedule questionnaire. Respondents are chosen on the basis of random sampling technique. The paper concluded that there are occupational and educational challenges but women beedi workers have achieved economic empowerment through beedi industry.

Islam (2021) tried to find out the importance of Beedi industry as a source of providing livelihood for the poor and illiterate people in relation to certain social, economic and health conditions. This study revealed that illiterate and landless people had chosen it as means of livelihood though it caused many serious diseases.

The review of literature points out that there are very few studies on the issue of nature of employment of Beedi workers and the role the industry plays on women empowerment especially with regard to the Dhuliyani Municipality which is one of the concentrating zones of Beedi workers. The present paper aims at exploring this research gap through a field survey-based research work.

### III. OBJECTIVE OF THE STUDY

The *general objective* of the study is to explore the socio-economic conditions of Beedi workers of Dhuliyani Municipality which is considered to be one of the concentrating zones for Beedi Industries. The *specific objectives* are:

- To explore the socio-economic conditions (in terms of sex, marital status, age, education, income, housing, family size and nature of employment) of Beedi workers of Dhuliyani Municipality;
- To identify the challenges faced by Beedi workers of Dhuliyani Municipality in terms of health, remuneration, exploitation, etc., and
- To highlight the level of women empowerment among the Beedi workers of Dhuliyani Municipality.

### IV. METHODOLOGY

- **Research Design:** Explorative and field survey-based research design is followed for the study.
- **Sampling Design and Sample Size:** Respondent Beedi workers were chosen based on convenient sampling (due to nonavailability of list of Beedi workers at the block level (BDO Office) or at the district level (District Labour Office) or any trade union office. 250 Beedi workers (53 Male and 197 Female) were chosen as sample.
- **Area of the Study:** Dhuliyani Municipality, Murshidabad District because it is one of the concentrating zones of Beedi industries as well as Beedi workers.
- **Data Collection:** Both primary and secondary data have been collected and used for analysis and interpretation. A structured questionnaire has been administered amongst the sample respondents for collecting

primary data. Whereas secondary data are collected from the published reports of Central and State Governments and other organizations. Articles published in various journals, newspapers, online resources were also taken into account.

- **Tools used:** Relevant statistical tools were used in this study like Cronbach alpha, ratio, pie chart, bar diagram, etc.
- **Period of the Study:** Present time frame i.e., 2022-23 year is considered for the study.

## V. DATA ANALYSIS AND INTERPRETATION

A structured questionnaire having 37 questions is administered among the selected sample respondents to collect necessary data. The collected data were tested for its internal consistency through Cronbach Alpha value. The computed value of Cronbach Alpha is 0.682, (as shown in table-1) which can be considered as satisfactory and reliable for further analysis.

TABLE 1

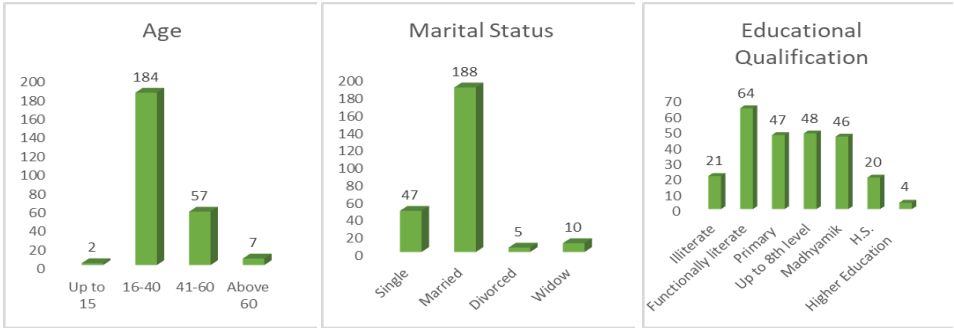
### Reliability analysis through SPSS

<i>Cases Processing Summary</i>			
		N	%
	Valid	100	100.0
	Excluded	0	.0
	Total	100	100.0
Reliability Statistics			
Cronbach's Alpha		No. of Items	
.682		37	

### Socio Economic Condition of Beedi workers in the Dhuliyān Municipality

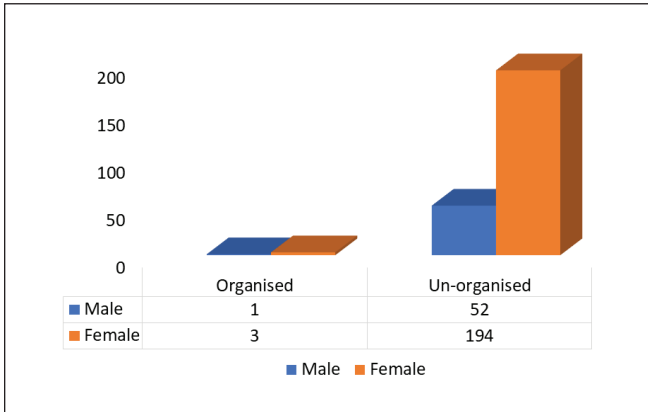
**Demographic Profile of Respondents:** Majority of respondents (73.6%) are young, aged between 16 to 40 years and only 2.8% respondents are over the age of 60. 75.2% respondents are married while 18.8% respondents are single. In terms of educational qualification, the sample lot is of mixed pattern with 8.4% respondents being illiterate, 25.6% functionally literate, 18.4% possessing Madhyamik qualification certificate, and 8% have passed the Higher Secondary exam. Although most of the respondents has own house with 16.4% owning pucca house, 38% semi kachha and semi pucca house, and 39.6% kachha house. Interesting fact is that 90% illiterate and functionally literate respondents are female whereas only 25% female respondents have higher educational background. But among this 8% higher secondary qualified respondents, 85% are female.

CHART 1  
**Demographic Profile of Sample Respondents**



Source: Field survey by the authors.

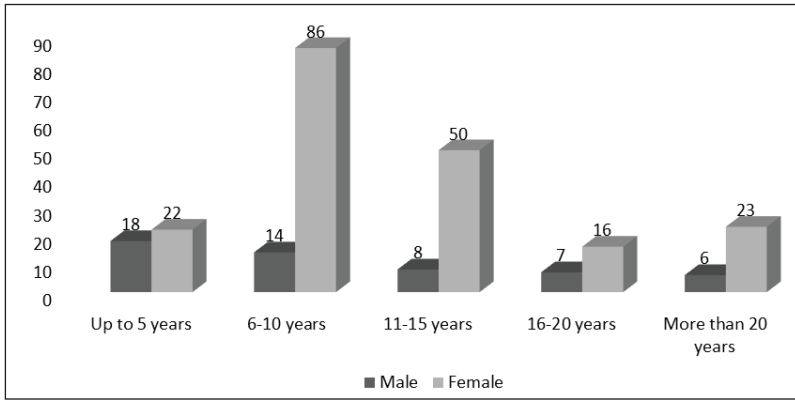
CHART 2  
**Analysis of Employment Category**



Source: Field survey by the authors

**Nature of Employment:** According to chart-2, the Beedi making is found to be predominantly carried out in the unorganized sector as 1.6% respondents are found to work for private organizations, while 98.4% are working under contractor/middlemen and as such may be considered as unorganized workforce. 75% of organized workforce is female. But 22.4% respondents have beedi identity card. The work is found to be done through unskilled labour who lacks the ability to get themselves employed in other productive sectors as 89% respondents admitted that they could not do anything else other than Beedi rolling.

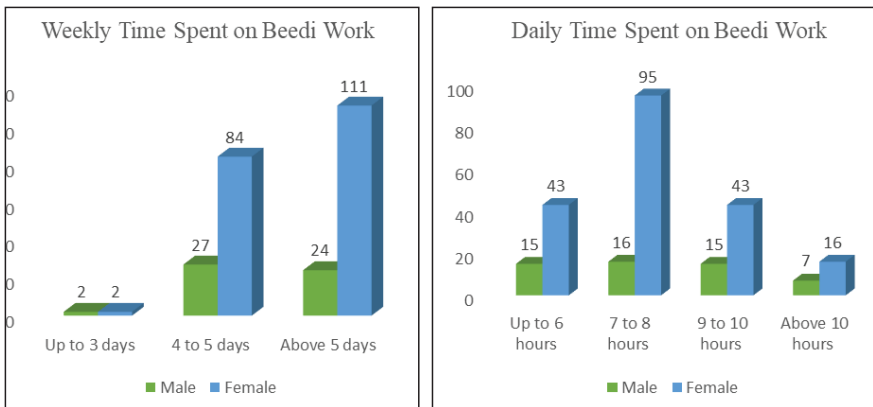
CHART 3  
**Analysis of Work Experience**



Source: Field survey by the authors.

**Experience of Respondents:** In regard to work experience of the sample respondents, a mixed profile is evident with 16% respondents found to have ‘up to 5 years’ of experience whereas 40% have 6 to 10 years’ experience in Beedi making, 23.2% have 11 to 15 years of experience and about 86% female respondents fall in this category and the rest (14%) are male counterpart. However, 11.6% have been found to have more than 20 years’ experience.

CHART 4  
**Analysis of Time Spent on Beedi Making**



Source: Field survey by the authors.

**Time Spent for Beedi Making:** Analysis of time spent on Beedi making highlighted that Beedi making has provided adequate employment opportunity for the sample respondents as majority of them (about 54%) are found to work for more than 5 days in a week, 44.4% worked for 4 to 5 days in a week, and remaining 1.6% worked for upto 3 days in a week. More than 56% female respondents are engaged in Beedi making for 5 days a week, whereas only 45% male counterpart

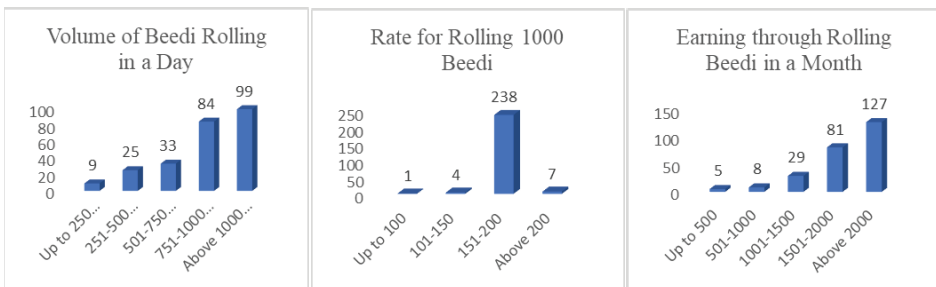
spent 5 days a week on Beedi making. 67.6% respondents spend 6 to 8 hours a day. However, 28.3% male and 22% female respondents spend more than 8 hours a day with beedi related work.

Further analysis revealed that Beedi making has become a family-oriented work in the Dhuliyian Municipality as 7.6%, 45.6% and 34.8% reported that more than three, three and two family members are engaged in the process of Beedi making respectively. Only 12% respondents indicated that one family member is engaged in Beedi related work. Interactions with the respondents revealed that one or two members of a family were used to take up the Beedi rolling work; the other members helped them in their spare time to increase the volume of production which, in turn, increased the earnings for the family. Volume of Beedi rolling differs widely among the respondents primarily because of time spent in the work. In a single day, 3.6% respondents rolled beedi up to 250 pieces, 10% rolled 251-500 pieces, 13.2% rolled beedi 501-750 pieces, 33.6% rolled 751-1000 pieces, and 39.6% rolled more than 1000 pieces. The volume of Beedi rolling was directly proportional to the involvement of number of family members.

**Wage Payment:** Majority of the respondents (95%) admitted that they receive wages @ Rs. 151 – Rs. 200 for rolling 1000 Beedi. Wages were received on weekly basis (98% respondents) and a very few (only 2%) reported to have received wages on daily basis. In terms of monthly earnings from Beedi rolling, the picture is not very bright for the Dhuliyian Municipality with 51% respondents reported earnings of more than Rs. 2000 per month from rolling Beedi, while 32% earned Rs.1500 to Rs.2000 per month. Though the amount of earnings is small but given the scarcity of alternative avenues of livelihood in the area and lack of skill on the part of Beedi workers to employ themselves in other more remunerative job, Beedi making has become popular in the Dhuliyian Municipality.

CHART 5

### Analysis of Production and Earning from Beedi Making



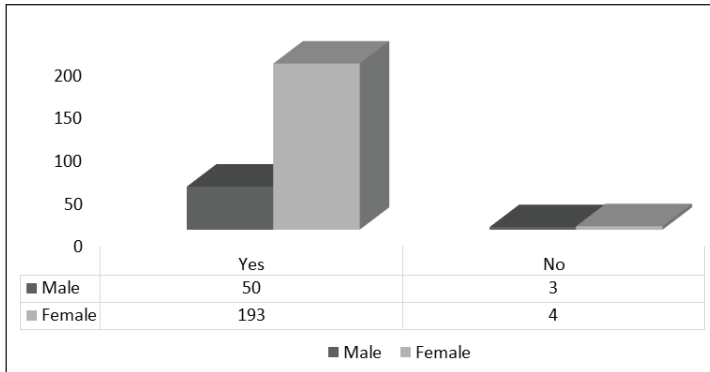
Source: Field survey by the authors.

### Challenges Faced by Beedi Workers

Field visits and direct interaction with the Beedi workers of the study area revealed that they are exposed to certain problems/challenges. The main challenges emanate from two issues – payment cut and health related hazards. 97% respondents (Chart 6) pointed out that they had to bear a payment cut (locally known as ‘Mutthi’) at the time of receiving wages. It is known through

interactions with respondent that workers bear payment cut @ Rs.38per 1000 pieces beedi rolling. Only 3% respondents denied the existence of such payment cut. 94% male and 98% female respondents pointed out the existence of payment cut. Even the organized sector Beedi workers (75%) are subject to such payment cut but the magnitude and intensity is higher in case of unorganized beedi workers (97.5%).

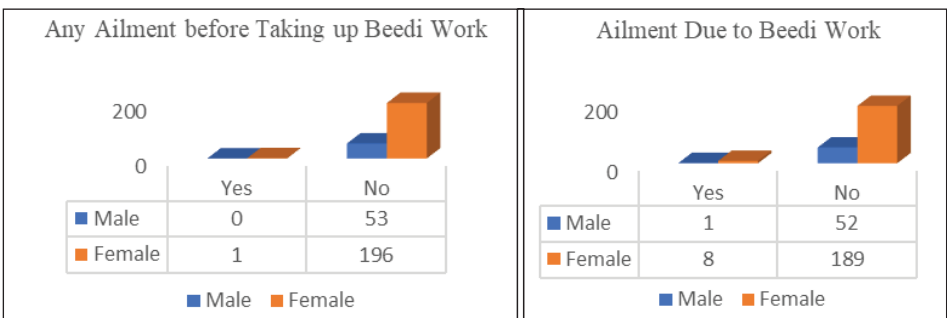
CHART 6  
**Analysis of Opinion on Payment Cut (Mutthi)**



Source: Field survey by the authors.

It is widely believed that Beedi rolling work for a longer period of time will affect the health of the workers adversely as they are exposed to tobacco dust. But the data obtained from the sample respondents do not confirm the point categorically. 4% respondents (Chart-7) admitted ailment of heart diseases, respiratory problems and many others after taking up Beedi rolling work. 60% of these 4% opined that their ailment was due to being associated with Beedi work and among these 4% respondents 90% were female workers. Only 1% respondents admitted that they had ailment prior to taking up beedi-related work.

CHART 7  
**Analysis of Health Hazards among Beedi Workers**



Source: Field survey by the authors.

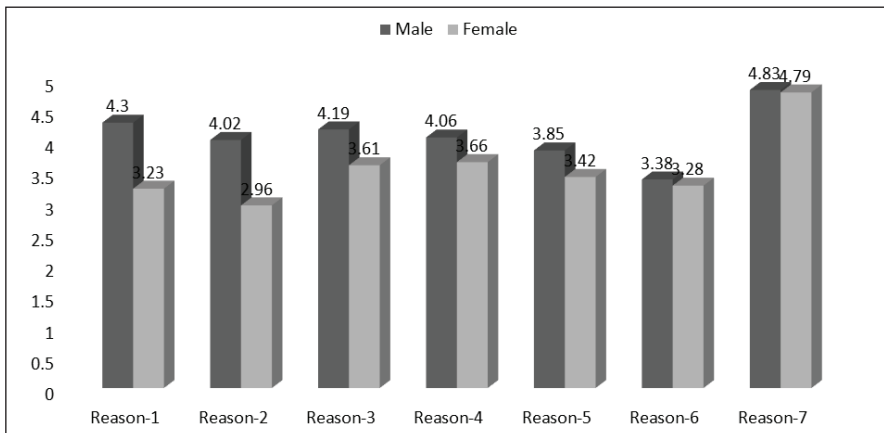
Further interactions with respondents cleared the apparent paradoxical evidence. The crux of the problem lies in the absence of reliable medication infrastructure in the area. Whenever a Beedi employee gets afflicted with a health problem, they seek therapy from a local medicine shop or a 'Quack Doctor' (with no valid degree) rather than from a qualified doctor. As a result, the actual reason of the ailment of the Beedi workers cannot be determined and there remains a genuine chance of misinterpretation about chronic ailment emanating from occupational hazards. In spite of having 'Swasthasathi Card' for majority (93% respondents), the mindset of these workers has not been changed. They accord convenience over reliability and authenticity of treatment. Moreover, they reported to have faced some difficulties to obtain better treatment from reputed private hospitals and doctors with the 'Swasthasathi Card'.

Table 2  
**Analysis of reasons for choosing beedi rolling**

Reasons	Male			Female		
	No.	Total Score	Average Score	No.	Total Score	Average Score
1. Lack of other employment	53	228	4.30	197	636	3.23
2. Lack of skill		213	4.02		584	2.96
3. Children education		222	4.19		711	3.61
4. Children marriage		215	4.06		722	3.66
5. Asset's creation		204	3.85		673	3.42
6. Loan repayment		179	3.38		647	3.28
7. Regular income		256	4.83		944	4.79

Source: Field survey by the authors.

CHART 8  
**Reasons for choosing beedi-related work**



Source: Field survey by the authors.

According to chart 8, majority of the beedi workers (both male and female) are choosing beedi rolling due to lack of other employment opportunities in the region (reason-1) and to create regular source of income (reason-7). Actually, lack of employment opportunities in the region and the lack of skills on the part of respondents to employ themselves in other productive areas compel them to choose beedi rolling to meet their regular living cost.

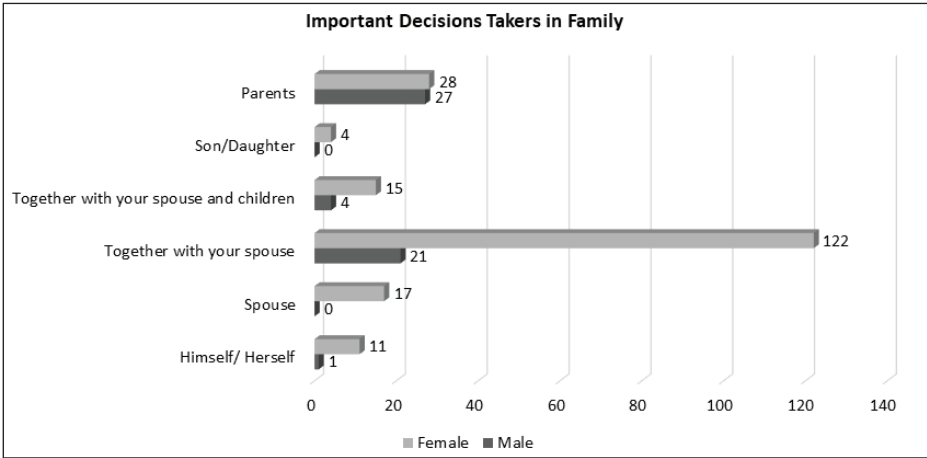
### **The Role of Beedi Making in Women Empowerment**

In order to understand the level and extent of women empowerment, several criteria have been chosen – influence of women Beedi workers in decision making of family, holding of bank account, access towards educational opportunities, etc. In chart 9, 91.4% females are involved in taking important decisions of her family but 8.6% females are depending on her spouse for taking important decisions. An interesting fact is that 5.5% females reported that they alone took important decisions in her family. Overall, female respondents are found to play a big role in family decision making, be in the form of housemaker or parent or herself.

97% female respondents have bank accounts in their own names and only 3% female respondents don't have a bank account (Chart10). On the issue of encouraging female family members for higher studies, male workers (73%) and female workers (71.5%). 28.5% female respondents are not interested in the education of female member of the family, majority of these respondents are either illiterate/functionally illiterate or primarily educated. As a result, they are unaware of the benefits of higher education for girl child.

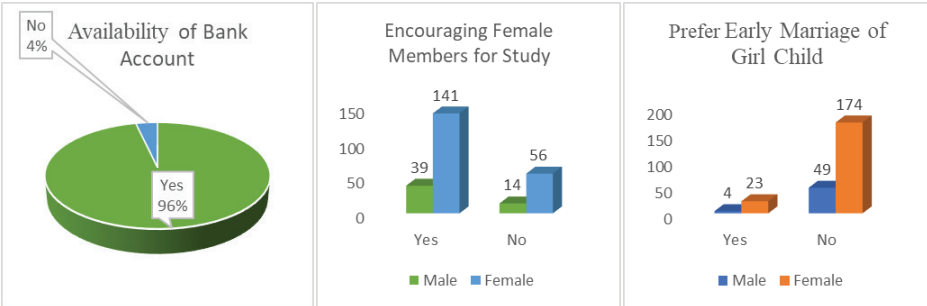
On the issue of early marriage of girl child, again the male workers are found more reluctant to early marriage of girl child as compared to female counterpart. Only 8% male respondents preferred early marriage of girl child whereas 12% female respondents are found in favour of early marriage. The interesting point is female respondents who preferred early marriage of girl child but not interested in their education. Interestingly, majority of these female respondents are either illiterate or functionally illiterate. Thus, creating a vicious circle where poor educational background of female workers leading to the popularity of early marriage of girl child and vice-versa. This indicates education has played a major role in shaping the mindset of Beedi workers towards the development of girl child in their families.

**CHART 9**  
**Analysis of Women empowerment**



Source: Field survey by the authors.

**CHART 10**  
**Analysis of Women empowerment**



Source: Field survey by the authors.

**VI. SUMMARY OF FINDINGS AND SUGGESTIONS**

The major findings obtained from the analysis and interpretation of field survey data have been summarised below:

**A. Socio-Economic Conditions**

Most of the beedi workers are from the young group (having age between 16 to 40 years). Female respondents are lagging far behind male’s counterpart with regard to educational attainment – 9% female respondents are illiterate as compared to 5.6% in case of male workers.

Beedi rolling in Dhuliyyan Municipality area is predominantly carried out in the unorganized sector as majority of the respondents (96%) belongs to unorganized sector and hence deprived of basic employment benefits, such as,

provident fund, pension, health benefits, etc.

The work of Beedi rolling is done largely by unskilled workers who lack ability to employ themselves in other productive sectors as majority of the respondents (89%) admitted that they cannot do anything else other than Beedi rolling. So, a supply side deficiency is found present in the local labour market which paves the way for concentration of Beedi rolling work in the area.

Although the experience profile showed a mixed trend, yet female workers are employed in the sector for longer time than male counterpart as more than 45% female respondents have an experience of more than 10 years which in case of male counterpart is only 39%.

Majority of workers got work for 5 days in a week and spending 6 to 8 hours a day in beedi related work. Beedi rolling is taken up as a family-oriented job where other family members (one, two, three or more members) lend their helping hand in their spare time which ultimately boosts up the volume of Beedi rolling and earnings for the family. Thus, the volume of Beedi rolling is directly proportional to the involvement of the number of family members. Majority of respondents (83%) earn more than ₹ 1500 per month from Beedi rolling.

The amount of earnings from beedi related work is small but given the scarcity of alternative avenues of livelihood in the area and lack of skill on the part of the workers to employ themselves in other more remunerative job, Beedi rolling has become popular in the Dhuliyān Municipality area.

## **B. Challenges Faced by Beedi Workers**

The Beedi workers generally get wages on weekly basis but have to bear a payment cut (locally known as *mutthi*). Almost all respondents (more than 97%) agreed to the existence of payment cut in one form or other.

The data do not provide any concrete evidence to the common belief that Beedi rolling over a long period of time generate health hazards as only 4% of respondents reported to have developed heart diseases, respiratory problems and many other ailments after taking up Beedi rolling work. 60% of these 4% respondents think that their ailment is due to being associated with Beedi making.

The above paradoxical evidence could be reconciled if we take into account the absence of reliable medication infrastructure in the area. Whenever a Beedi employee is afflicted with a health problem, they seek therapy from a local medicine shop or a 'Quack Doctor' (with no valid degree) rather than from a qualified doctor. As a result, the actual reason of the ailment of the Beedi workers cannot be determined and there remains a genuine chance of misinterpretation about chronic ailment emanating from occupational hazards.

In spite of having 'Swasthasathi Card' for majority (93%) respondents, the mindset of these workers has not been changed. They accord convenience over reliability and authenticity of treatment. Moreover, some difficulties are reported in the process of obtaining better treatment from reputed private hospitals and doctors with the 'Swasthasathi Card'.

### C. Women Empowerment

Beedi rolling work has been contributing positively towards women empowerment in the Dhuliyān Municipality area as can be evident from the increasing participation of women in family decision making, possession of bank account in own name (97% female respondents have bank account), encouragement for higher studies of girl child from male member (more than 73% male respondents) and increasing reluctance towards early marriage of girl child.

Male workers are found to be more reluctant to early marriage of girl child as compared to female counterpart. 12% female respondents preferred early marriage of girl child as compared to 8% of male workers.

Female respondents who preferred early marriage of girl child were also not interested in their education. Majority of these female respondents are either illiterate or functionally illiterate creating a vicious circle where poor educational background of female workers leading to the popularity of early marriage of girl child and vice-versa. This indicates education has played a major role in shaping the mindset of Beedi workers towards the development of girl child in their families.

In the light of the above findings, the following *suggestions* can be offered to improve the socioeconomic conditions of the Beedi workers of the area:

In order to improve the employability of Beedi workers in other sectors, Government can take initiative to train them for some alternate work/job.

Minimum wage rate should be fixed and implemented to avoid exploitation of beedi workers and all possible steps should be taken to arrest the malaise of payment cut.

Proper identity card for every Beedi worker should be provided to all genuine Beedi workers with host of facilities made available for them.

Efforts should be made to encourage the Beedi workers and their employer to enroll for provident fund, pension scheme and health benefit.

The government must promote housing scheme for the Beedi workers because majority of the beedi workers do not have pucca house. In this respect, Prime Minister Awas Yojana has been making positive contribution.

Promotion of educational facilities among Beedi workers should be given adequate importance and regular awareness programme should be undertaken to improve the educational qualification of family members of Beedi workers because only 1.6% respondents have higher educational qualification.

## VII. CONCLUDING OBSERVATIONS

In fine, it can be said that Beedi rolling has been providing a livelihood cum employment option for the unskilled workers of Dhuliyān municipality. As a result, it has emerged one of the biggest Beedi production centre in Murshidabad district. The importance of Beedi rolling for the area can easily be understood from the fact that majority of respondents accept the beedi related work as a family-oriented job where almost all the members contribute and boost up the production which ultimately yields higher income for the family. Consequently, Beedi industries of the area play a significant role in the socio-economic development of the area

including promotion of women empowerment to a considerable extent. But as the whole work is carried out in the unorganized sector, the workers are facing some genuine problems and don't have basic facilities and welfare schemes. Therefore, it becomes imperative on the part of Government to take appropriate steps to improve the working conditions as well as socio-economic parameters of Beedi workers of the area.

### VIII. LIMITATION OF THE STUDY

The paper suffers from the following limitations arising out of time and resource constraints:

- The study is based on non-probabilistic sampling technique. If respondents are chosen on the basis of probabilistic sampling technique, then the results could be generalized.
- Only 250 respondents were taken into consideration. Increase in sample size could provide better results.

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# **17<sup>th</sup> INTERNATIONAL ACCOUNTING CONFERENCE 2026**

*In collaboration with*



**International Association for  
 Accounting Education & Research (IAAER)**

&



**Eastern Institute for Integrated  
 Learning in Management (EILM), Kolkata**

**THEME**

**Changing Paradigm in Accounting and Finance:  
 The Role of Accounting Academics and  
 Professionals in the 21<sup>st</sup> Century**

**January 10 & 11, 2026 (Saturday & Sunday)**

**VENUE:**

**EILM Kolkata Campus**

DN 9, Sector V, Salt Lake City (College More), Kolkata- 700091

### **Indian Accounting Association Research Foundation (IAARF)**

The Indian Accounting Association (IAA) Research Foundation, an Associate of American Accounting Association (AAA), is also a member of International Association for Accounting Education & Research (IAAER). IAARF is a body constituted under the Societies Registration Act for promoting, among others, accounting, higher education and research in India and abroad. The Foundation has already earned a great deal of reputation in India and abroad through its activities of conducting national and international conferences, publishing research volumes, sponsoring research projects and conducting management development programs. The Foundation has been publishing Indian Accounting Review (IAR), a bi-annual research journal, since 1997. IAR has already made its mark as an international research journal in accounting and finance (see <https://journal.iaarf.in>). Its Impact Factor (SJIF: 2023) is 6.042.

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The 17th International Conference of the Indian Accounting Association (IAA) Research Foundation will be held at the EILM, DN 9, Sector V, Salt Lake City, Kolkata-700091 on 10th and 11th January, 2026 in collaboration with IAAER and EILM – Kolkata. For having a number of concurrent sessions on both days, there will be four small Halls each with 120 sitting capacity and an auditorium having 300 sitting capacity. The theme of the Conference is **Changing Paradigm in Accounting and Finance: The Role of Accounting Academics and Professionals in the 21st Century**.

Research based papers on the following topics are invited for the presentation at the Conference:

1. Business Responsibility and Sustainability Reporting
2. Financial Reporting including IFRS
3. Sustainable Finance
4. Climate Change – the role of academics and professionals in mitigating the impact
5. Artificial Intelligence in Capital Markets
6. Taxation in Digital Economy
7. Management of Public Enterprises
8. Improving Accounting Education and Research in India

## SUBMISSION GUIDELINES

- Soft copy of the paper should be submitted through official website (<https://www.iaarf.in/>). The text of the paper will be in double space, 12 font, Times New Roman, keeping a margin of one inch in three sides. MS Word (.doc format) is required. Each paper should be **preferably within 5000 words** including tables and references. **An abstract of not more than 500 words** in a separate page must also be sent.
- There should be a separate title page on each paper giving title of the paper, the topic /sub-topic to which the paper relates, details of author/s, affiliation, address, telephone numbers and e-mail.
- A declaration must be submitted, along with the paper, by the author(s) mentioning that the manuscript is not copyrighted, and has not been submitted / published elsewhere.
- Paper presentation will take place in concurrent sessions and abstract of each accepted paper will be published in the Conference Proceedings.
- Papers must be submitted within **20<sup>th</sup> September, 2025**.
- Notification about the acceptance or otherwise of a paper will be made by **15<sup>th</sup> November, 2025**.
- Papers submitted for presentation will be subject to blind review and the decision of the Scientific Committee will be final.
- Power point presentation must be submitted within **20<sup>th</sup> December, 2025** via email.

## IMPORTANT DATES

- Registration Starts (**01.08.2025**)
- Submission of Full paper by (**20.09.2025**)
- Paper Acceptance notification by (**15.11.2025**)
- Registration Ends (**25.11.2025**)
- Conference Dates (**10<sup>th</sup> and 11<sup>th</sup> January, 2026**)

## REGISTRATION FEES

For Delegates from India, other SAARC countries and Foreign Delegates

<i>Types of Participants</i>	<i>Early Bird Registration (on or before 20<sup>th</sup> September, 2025)</i>	<i>Late Registration (After 20<sup>th</sup> September, 2025)</i>
Member of IAARF	₹ 2250	₹ 2500
Non- Member	₹ 2500	₹ 3000
Research Scholar	₹ 1500	₹ 2000
Corporate Executive	₹ 4000	₹ 4500
Foreign Delegates (those other than from SAARC Countries)	US \$ 250	US \$ 300
Accompanying Person	US \$ 50	US \$ 75

- Accommodation charges for delegates from outside west Bengal only (for 3 nights. i.e. 9th, 10th & 11th): Rs 3000 Per delegate on double occupancy basis (\*Only a few rooms in different guest houses will be available on a first come, first served basis.)
- Foreign delegates will have to arrange their stay of their own. Only local hospitality will be provided during the conference days.
- Registration fees will cover 3 breakfasts, 2 lunches, 2 dinners, copy of Conference Proceedings and transport facilities within the city (for attending Conference only).
- Completing the registration, payment of registration fee, submission of abstract and full paper shall be done at IAARF official website (<https://www.iaarf.in/>)
- Deadline for Registration: **25/11/2025** (No spot Registration will be allowed).

## **ACCOUNT DETAILS FOR PAYMENT OF REGISTRATION FEES**

**Beneficiary Name: Indian Accounting Association Research Foundation**

**Account Number: 011010100013404**

**Bank Name: Axis Bank, Golpark Branch, Kolkata-700 019**

**IFS Code: UTIB0000011**

**SWIFT Code: AXISINBB011**

## **NAMITA BANERJEE BEST PAPER MEMORIAL AWARD**

**The best two papers will each be awarded Rs.2500/- (Rupees two thousand five hundred only)** to be selected by a panel of distinguished reviewers. Research papers submitted by the delegates from SAARC countries within the age limit of 40 years (as on January 01, 2026) will be considered for the purpose. In case of a joint paper, the junior faculty within the above age group will be entitled to the cash award although the certificate will be issued giving details of the paper with name of all the Co-author(s).

**Based on the same criteria, two more papers may be awarded Rs. 2.500 each—one by IAARF and the other by EIILM-K.**

## **ABOUT KOLKATA**

Kolkata, formerly known as Calcutta, is the capital and largest city of the Indian states of West Bengal. It lies on the eastern bank of the Hooghly River, 80 km (50 mi). It is the primary financial and commercial center of eastern and northeaster India. Kolkata is the Seventh most populous city in India with an estimated city proper population of 4.5 million (0.45 crore) while its metropolitan region Kolkata Metropolitan Area is third most populous metropolitan region of India with a metro population of over 15 million (1.5 crore). Kolkata is regarded as the cultural capital of India and a historically and culturally significant City in the historic region of Bengal. Kolkata's architecture includes many imperial landmarks, including the Victoria Memorial, Howrah Bridge and the Grand Hotel. The City's heritage includes India's only Chinatown and remnants of Jewish, Armenian, Greek and Anglo- Indian communities. Kolkata is home to institutions of national importance, including the Academy of fine Arts, the Asiatic Society,

the Indian Museum and the National Library of India. The University of Calcutta, first modern university in south Asia and its affiliated colleges produced many leading figures of South Asia. In December–January, the weather in Kolkata is pleasant, with temperature varying between 12C and 22C.



## IIILM KOLKATA – THE VENUE

**Location of the venue: DN-9, DN Block, Sector V, Bidhannagar, Kolkata, (College More) West Bengal 700091 (<https://g.co/kgs/xS9ix6F>).**

- Distance from Netaji Subhas Chandra International Airport 11km Approx time 30 mints
- Distance from Howrah railway Station 11.8 km approx. time 40 mints.
- Distance From Sealdah railway station 9.3 km approx. time 30 mints.
- Distance From Kolkata railway station 8.5 km approx. time 25 mints.

## CONTACT PERSONS FOR SENDING QUERIES AND REGISTRATION OF INTEREST

**CMA Dr. Bhabatosh Banerjee**

President, IAA Research Foundation

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**CMA Dr. Dhrubaranjan Dandapat**

Secretary, IAA Research Foundation

E-mail: [dhrubacal@yahoo.com](mailto:dhrubacal@yahoo.com)

**CA CMA Mr. Shubhayan Basu**

Treasurer, IAA Research Foundation

E-mail: [basushu@gmail.com](mailto:basushu@gmail.com)

**Note: Members and delegates are requested to go through occasionally the Foundation Website: [www.iaarf.in](http://www.iaarf.in) for updates.**

# INDIAN ACCOUNTING REVIEW

## Statement of Policy, Requirements & Guidelines

### Policy

Indian Accounting Review (IAR) is a bi-annual research journal published by the Indian Accounting Association Research Foundation. It is published in June and December each year. It is a refereed international journal with the review process being double blind. The scope of the journal encompasses all areas of accounting including auditing, taxation, management accounting and information systems. IAR seeks to publish high quality, research-oriented and original articles. It encourages both fundamental and applied research works.

### Submission requirements

Two copies of manuscripts along with a C.D. should be submitted for consideration for publication in IAR. Manuscripts from abroad should be accompanied by a US \$100 non-refundable submission fee payable by cheque in favour of 'IAA Research Foundation'. For authors from SAARC countries, non-refundable submission fee is ₹ 800 but for each published article, ₹ 1,500 will be awarded.

All manuscripts should be typed *one and half-spaced*. A separate list of references should be used, not made a part of the footnotes. Footnotes, also **one and half spaced**, should be listed at the end of the paper. **Manuscripts should not normally exceed 20 pages** including figures, tables, footnotes and references, printed on 8.5" x 11" paper.

Each manuscript should contain a non-mathematical abstract of not more than 100 words. There should be a title page containing the name of the article, authors' names (without designations), affiliations and corresponding author's address. The names of the authors should not appear on the first page of the manuscript to facilitate blind review. **Manuscripts must be prepared strictly following the guidelines.**

The submission of a manuscript to IAR means that the author certifies that the manuscript is not copyrighted, nor has it been accepted for publication (or published) by any refereed journal; nor is it being submitted elsewhere, at the same time.

### Manuscript-preparation guidelines

The following guidelines should be followed.

*Heading* : Bold, centred and 14 point. Each word should start with a capital letter.

*Author Name* : Centred 12 point, with affiliation below the name in 10 point but no designation,

*Abstract* : Indented from both sides in 10 point.

*Headings* : Bold, upper case only centred in 12 point.

*Sub-headings* : Bold, upper-lowers, 10 point, from left margin.

*Text* : In 12 point and there should be one-inch margins on all four sides.

*Tables and Figures* : Table in capital and centred in 10 point, and the table description in bold, upper lower 12 point.

**For further details** see Foundation's Website ([www.journal.iaarf.in](http://www.journal.iaarf.in))

### References: Samples:

- (i) **Book** : Choi, F.D.S., Frost, C.A. & Meek, O.K. (1999). *International Accounting*, Upper Saddle River, N.J.: Prentice Hall, 24-31.
- (ii) **Journal** : Rivera, J.M. (1991). Prediction performance of earnings forecasts : the case of U.S. multinationals. *Journal of International Business*, 22, 265-288.

### Submission address :

Manuscripts from the U.S.A., Canada, Mexico, South-American and European countries should be submitted to : **Professor Shyam Sunder**, Yale School of Management, Connecticut, USA.

Email: [shyam.sunder@yale.edu](mailto:shyam.sunder@yale.edu)

Manuscripts from other countries should be submitted to : **Professor Dhrubaranjan Dandapat**, Editor IAR, Department of Commerce, University of Calcutta, Kolkata - 700 073.

Email : [dhrubacal@yahoo.co.in](mailto:dhrubacal@yahoo.co.in) / [drdcaluniv@gmail.com](mailto:drdcaluniv@gmail.com)

## **INDIAN ACCOUNTING REVIEW**

*[ Vol. 28, No. 2 , December 2024 ]*

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Printed by Dr. Dhrubaranjan Dandapat, on behalf of IAA Research Foundation,  
at Rohini Nandan, 19/2, Radhanath Mallick Lane, Kolkata - 700 012  
(Mobile.:9231508276)