

India's Social Stock Exchange: Econometric Evidence for Economic and Social Transformation

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ABSTRACT: The Social Stock Exchange (SSE) initiative in India targets to channelise private sector investment and philanthropy towards social sector enterprises and (NPO) non-profit organisations in order to bridge funding gaps. Present study examines effective implementation of SSE for India by linking variables like Corporate Social Responsibility (CSR) trends, Foreign Direct Investment (FDI) inflows, and Gross Value Added (GVA) via (VAR) models alongside a Social Return on Investment (SROI) framework to evaluate both social and economic impacts. Findings suggest that CSR investments generate positive social returns where (SROI > 1) also indicating significant contributing to India's economic growth in the long run as suggested by VAR results. On other hand FDI exhibits short-term negative effects—which may be accounted to adjustment cost but strong positive impacts could also be observed over time. These findings highlights the role of transparency, impact measurement, and innovative instruments (e.g., Social Impact Bonds, Zero Coupon Zero Principal bonds) in solidifying India's SSE. Lastly Policy recommendations include there should be sector-specific CSR incentives and increased public-private partnerships to optimise the SSE's transformative potential.

KEYWORDS: Social Stock Exchange, CSR, FDI, SROI, VAR Model, philanthropy, Social enterprises

JEL Classification: G23

1. INTRODUCTION

1.1. Background of Social Finance in India

In recent years, social finance has emerged as a critical approach to addressing societal challenges, particularly in developing countries like India. Social finance refers to financial investments that are made with the dual objective of generating positive social and environmental outcomes, in addition to providing financial returns. This evolving concept has become an essential tool for addressing the deep-rooted social issues in India. India, due to financial constraints faces significant developmental challenges. For instance, achieving the Sustainable Development Goals (SDGs) set by the United Nations necessitates an estimated investment of around \$1 trillion annually until 2030. However, public funding alone is insufficient to meet such enormous requirements. Therefore, innovative financing solutions like social finance are needed to bridge the gap between the financial market and the mission-driven organisations that are working towards addressing these issues.

Social enterprises and Non-Profit Organisations (NPOs) play a crucial role in addressing these challenges. However, despite their essential work, these organisations often struggle to secure stable and consistent funding. Traditional financing options, such as bank loans or venture capital, often overlook these organisations due to their focus on social

impact rather than profit maximisation. This gap in funding has made it necessary to explore alternative ways of financing social ventures. Social finance operates on the theory that financial success should not be the sole measure of progress. Instead, it seeks to balance financial returns with measurable social and environmental benefits. The emergence of the Social Stock Exchange (SSE) in India represents a significant step in formalising this approach, enabling investors to support initiatives that align with their values and create positive societal change.

India's impact investing sector has witnessed impressive growth in recent years, with over \$10.8 billion invested in social enterprises over the past decade. However, a significant gap remains between the capital required by social enterprises and the funds made available by traditional financial markets. Investors typically view social enterprises as high-risk due to their focus on achieving social goals over short-term profit, which makes it difficult for these organisations to attract large-scale investments. To overcome this gap, mixed finance models have been developed, combining public, philanthropic, and private capital to support socially responsible projects. While these models have had some success, they still face challenges when it comes to scaling the necessary resources to support a large number of organisations.

India’s economic landscape has expanded dramatically over the past few decades, yet deep-rooted social challenges persist but to address these challenges, there has been a growing emphasis on innovative financing mechanisms that not only focus on financial returns but also create measurable social impact. This momentum has led to the conceptualisation of a Social Stock Exchange (SSE) in India—a platform designed to bring together investors (including philanthropists, CSR contributors, and impact investors) with social enterprises and non-profit organisations seeking sustainable funding. The introduction of the Social Stock Exchange in India is expected to address these challenges by creating a transparent marketplace for social enterprises and NPOs to attract investment. The SSE will offer a range of financial instruments, such as Zero Coupon Zero Principal (ZCZP) bonds and Social Impact Bonds (SIBs), allowing investors to contribute to social causes without the expectation of significant financial returns. This approach has the potential to mobilise private sector resources to address critical social issues while also providing a structured platform for social enterprises to access and bridge their funding gaps.

1.2. The Need for Quantitative Models in Assessing SSE’s Impact

While the SSE represents a promising solution for addressing India’s social and financial challenges, its success cannot be measured simply by the amount of capital raised or the number of enterprises listed. To assess its true impact, it is necessary to develop and apply quantitative models that can evaluate the social and economic outcomes of SSE investments. Models such as Social Return on Investment (SROI) and econometric frameworks are essential tools in this process.

SROI provides a framework for measuring the social value created by investments in social enterprises. By calculating the social returns generated per unit of capital employed, SROI allows investors and policymakers to assess whether their contributions are achieving meaningful social impact or not. Econometric models, on the other hand, help capture the broader economic effects of SSE investments, including their impact on GDP growth, employment generation, and private sector investment.

In conclusion, the introduction of quantitative models is vital for the success and long-term sustainability of the SSE. These models will provide the necessary data to evaluate the effectiveness of the SSE in achieving its dual goals of generating social impact and fostering economic growth. In many ways, India’s SSE builds on the global experiences of countries such as Canada (through the Social Venture Connexion, SVX) and Singapore (through the Impact Investment Exchange, IIX). These SSEs have shown that mission-driven enterprises can flourish if given access to structured capital-raising mechanisms, robust impact reporting frameworks, and supportive government policies.

However, while global models offer lessons, India’s socio-economic context is unique, characterised by large-scale developmental needs, diverse geographies, and a mandatory CSR provision under the Companies Act, 2013.

Against this backdrop, the present study proposes a two-pronged empirical approach:

1. Quantitative Macro Analysis via Vector Autoregression (VAR) to investigate CSR and FDI relationships with Gross Value Added (GVA) where GVA will serve as a proxy for economic growth.
2. Social Return on Investment (SROI) to assess the social value created per rupee invested in CSR activities

1.3 Structure of the Paper

This paper is organised into eight sections. Following this introduction, Section 2 discusses the statement of the problem, Section 3 outlines the research objectives. Section 4 literature review, focusing on global SSE efforts and the Indian context. Section 5 explains Conceptual Framework focussing on Inputs, process and output this section is followed by novelty of our research aiming at how econometric and SROI technique have been combined in context of SSE. Section 7 is the methodology, detailing data sources and analytical frameworks (SROI and VAR). Section 8 presents the analysis of data and application of techniques to get the results. (the stationarity checks and lag selection and discussion of the VAR model and on the SROI analysis.. Section 9 concludes the paper with policy implications and practical recommendations.

2. STATEMENT OF THE PROBLEM

India’s Social Stock Exchange (SSE) seeks to bridge the persistent funding gaps faced by social enterprises and purpose-driven organisations. Despite improved interest in impact investing the absence of tested frameworks and real-time data obstructs the SSE’s effectiveness. Traditional capital markets often prioritise financial returns, hence not giving much for social value creation—a major barrier the SSE aims to fill. While models like Canada’s SVX and Singapore’s IIX showcase successful strategies for impact measurement and diverse financial instruments, these can be adapted to India’s complex socio-economic context. Additionally despite CSR mandates the impact of generated funds remains uneven without a structured transparent platform. Thus there is a dire need for a robust SSE model, underpinning quantitative tools (such as VAR and SROI), to overall evaluate both economic and social outcomes. Addressing this gap will enable policymakers and investors to deploy capital more strategically, ensuring that India’s social sector can drive sustainable and inclusive growth.

3. RESEARCH OBJECTIVES

The goal of this paper is to evaluate the potential impact of India’s Social Stock Exchange (SSE) on both economic and social outcomes. Specifically, the objectives are:

1. To examine the short-term dynamics and long-term relationships between CSR Expenditure, FDI, and GVA using a Vector Error Correction Model (VECM).
2. To measure the social returns of CSR investments using the SROI framework (i.e., ratio of social value created per rupee invested).

4. LITERATURE REVIEW

4.1. Indian Context

The concept of Social Stock Exchanges (SSEs) has emerged as a transformative approach to bridging funding gaps for social enterprises and non-profit organisations by mobilising private capital toward social causes. Existing literature emphasises the importance of governance, transparency, and impact measurement frameworks for the successful implementation of SSEs. Adhana (2020) highlights the regulatory challenges and policy gaps in India’s SSE framework and suggests that sector-specific incentives can enhance participation from both investors and social enterprises.

Agarwal (2022) explores the role of governance in ensuring the sustainability of SSEs, emphasising that a robust regulatory framework can build investor confidence. The study identifies that aligning SSE practices with global standards can further enhance their effectiveness. Similarly, Mehra and Vij (2023) stress the need for clear impact measurement frameworks to attract institutional and retail investors to SSEs in India.

Ambrose et al. (2021) present a comparative analysis of global SSE models, including Canada’s Social Venture Connexion (SVX) and Singapore’s Impact Investment Exchange (IIX). The study highlights the importance of Social Impact Bonds (SIBs) and other innovative financial instruments in ensuring the scalability of SSEs. The authors recommend that India adopt similar practices to ensure long-term success.

Chaturvedi and Krishna (2019) focus on financial inclusion through SSEs, particularly in the Indian context. They argue that SSEs can serve as a platform for social enterprises that are excluded from traditional financial markets. The study also highlights the role of public-private partnerships and the need for government support to promote sector-specific CSR contributions.

Challapalli and Pilla (2023) provide a global perspective on the feasibility of implementing SSEs in India. They suggest that lessons from international models must be adapted to India’s unique socio-economic challenges. The study underscores the need for tailoring impact measurement frameworks and financial instruments to meet the specific needs of Indian social enterprises.

Fenwick (2015) examines the regulatory challenges posed by SSEs, emphasising that their hybrid nature requires a unique regulatory approach. The study suggests that regulatory frameworks must balance financial returns with social impact to ensure the long-term sustainability of SSEs.

Wendt (2022) explores how SSEs can act as catalysts for impact investing by creating structured marketplaces for social enterprises. The study discusses the potential of SSEs to mobilise capital for social causes and increase accountability through impact auditing practices. In a related study, Wendt (2019) defines a research agenda for SSEs, focusing on the development of innovative financial instruments and transparency frameworks.

Ambrose et al. (2021) conducted a study on the scope of implementing SSEs in India, identifying critical sectors such as healthcare, education, and rural development that could benefit from structured SSE frameworks. The authors stress the need for government policies that incentivise CSR contributions and promote innovative financial instruments like Zero Coupon Zero Principal (ZCZP) bonds.

Recent studies have further explored the potential of SSEs to address social challenges. For instance, George et al. (2022) examined the impact of SSEs on rural development, finding that targeted investments through SSEs can significantly improve education and healthcare outcomes in underdeveloped areas. Similarly, Nair and Sharma (2023) investigated the role of SSEs in promoting financial inclusion, highlighting the importance of retail investor participation in democratising social finance.

Another study by Singh and Kapoor (2023) delves into the use of technology and data analytics in enhancing the effectiveness of SSEs. The authors suggest that incorporating AI-driven impact measurement tools can improve transparency and accountability, thereby attracting more investors.

Overall, the literature indicates that the successful implementation of SSEs requires a multi-faceted approach involving robust governance, innovative financial instruments, and comprehensive impact measurement frameworks. Lessons from global models, such as SVX in Canada and IIX in Singapore, provide valuable insights for developing a sustainable SSE framework in India. Policymakers must focus on creating a supportive regulatory environment, promoting sector-specific incentives, and fostering public-private partnerships to ensure the long-term success of India’s SSE.

4.2. SSE and Global Perspective

Social Stock Exchanges (SSEs) are innovative platforms that connect investors with social enterprises, facilitating the mobilisation of capital for projects with measurable social and environmental impact. Globally, SSEs like SVX (Canada) and IIX (Singapore) have demonstrated their potential to bridge funding gaps for social enterprises. Despite growing interest in India, research on SSEs in the

Indian context remains scarce, with limited empirical studies and operational data. This review explores global SSE frameworks, India's CSR trends, and identifies research gaps

that this study seeks to address. Below is a summary in form of table 1.

Table 1: Global Perspective from Canada and Singapore SSE

Source	Focus	Key findings	Relevance to study
SVX (Canada)	Operational Success and impact metrics	Mobilized \$350M; transparent reporting and innovative financial instruments	Provides a proven model for scalability, accountability, and financial mechanisms.
IIX (Singapore)	Regional leadership and investor engagement	Facilitated \$120M in investments, impacting 30M+ lives; strong focus on measurable outcomes.	Lessons in investor engagement and impact measurement in Asia.
CSR Trends in India	Sectoral and geographical focus	Education and healthcare dominate; northeastern states underfunded.	Highlights gaps and opportunities for SSE alignment with national priorities.

Source: Author’s calculation

4.3. Nexus of CSR, FDI and GVA

Several studies indicate that CSR can boost local development, improve brand equity, and generate positive externalities (Krishna & Rao, 2022). Meanwhile, FDI typically correlates with macroeconomic growth, though short-term fluctuations can occur due to capital flows or sudden outflows (Narasimhan & Pitre, 2021). GVA is often used as a reflection of overall economic performance, complementing GDP measures. By examining CSR, FDI, and GVA within a unified VAR model, one can capture both the direct and lagged effects these variables exert on one another (Patel & Patel, 2022).

5. CONCEPTUAL FRAMEWORK

This study presents a data-driven conceptual framework to evaluate and design India’s Social Stock Exchange (SSE) by integrating insights from global benchmarks and CSR trends in India. The framework begins with inputs, which include CSR expenditures in India and operational insights from global SSEs such as SVX (Canada) and IIX (Singapore). These inputs are critical for understanding the funding flows, sectoral priorities, and governance practices required for the SSE in the Indian context.

The next stage focuses on processes, which are designed to operationalise the SSE. This includes tools such as Social Return on Investment (SROI) to quantify the social value generated per rupee invested and econometric models to estimate broader macroeconomic impacts like GDP growth and employment generation. Governance mechanisms, inspired by SVX and IIX, ensure transparency and inclusivity through robust reporting frameworks and investor engagement strategies.

The outputs of the framework are categorised into social and economic outcomes. Economic outcomes focus on increased funding flows to social enterprises, contributing to GDP

growth and job creation. A key feature of the framework is the inclusion of feedback loops, which facilitate continuous evaluation of the SSE’s performance. These loops allow for refinements in processes and frameworks based on measurable outcomes, ensuring adaptability and effectiveness over time.

6. NOVELTY OF THE RESEARCH

This research aims at integrating VECM (Vector Error Correction Mechanism) analysis and SROI (Social Return on Investment) in a single study to assess India’s SSE framework. While prior literature has discussed the potential of social stock exchanges or India’s CSR landscape separately, few have combined macro-level econometric models with micro-level social impact measurements. Leveraging quarterly data on GVA, FDI, and CSR, the paper highlights the dual roles that foreign investments and corporate social spending play in driving both economic growth and measurable social value. Furthermore, the study learns lessons from global SSE experiences, specifically Canada’s SVX and Singapore’s IIX, and suggests them for India’s unique regulatory and developmental environment. By providing empirical evidence and a clear roadmap, this research advances the framework on how a well-designed SSE can become a transformative instrument for nationwide sustainable development.

7. METHODOLOGY

7.1 Research Design

The study employs a mixed-methods approach, combining quantitative (econometric time-series analysis, SROI calculations) and qualitative (document analysis of global SSE frameworks) methods. This allows a holistic view of how SSEs, CSR, and FDI interplay in India’s social sector developmental journey.

7.2 Data Sources

CSR Expenditure Data has been collected for time period spanning from (2014–2021). Data has been collected from Ministry of Corporate Affairs (MCA) and CSRBOX. For FDI quarterly data has been collected from 2014-2021 from RBI, World Bank, and IMF databases. Data on GVA has been picked from RBI’s Handbook of Indian Economy or MOSPI (Ministry of Statistics and Programme Implementation). Lastly information and data relating to Global SSE has been taken from Canada’s SVX and Singapore’s IIX: Key metrics on funds mobilised, financial instruments used, and reported impact.

7.3 Analytical Techniques

7.3.1 Social Return on Investment (SROI)

1. Social Return on Investment (SROI) Model: The Social Return on Investment (SROI) model is a widely recognised tool used to measure the social value created by investments in social enterprises. SROI quantifies the change in social outcomes relative to the amount invested, offering a monetary representation of the impact generated. In this study, SROI is applied to estimate the value of outcomes.

The formula for SROI is defined as: $SROI = \frac{\Delta S}{I}$

Where: ΔS is the change in social outcomes resulting from the investment, measured by indicators such as healthcare improvements, poverty reduction, educational outcomes, etc., I is the investment made in social enterprises through the SSE.

The study utilises sector-specific CSR expenditure data and benchmarks from SVX (Canada) and IIX (Singapore) to compute SROI values relevant to the Indian context. This approach enables the identification of high-impact sectors and regions, guiding resource allocation. This model will try to accept or reject the following hypothesis

(H₀): There is no co-integration between the selected variables.

(H₁): There is at least one co-integrating relationship between the selected variables.

7.4. Econometric Analysis:

Econometric models are employed to analyse the broader macroeconomic impacts of investments mobilised through the SSE. These models help quantify the relationship between key variables such as GDP growth, foreign direct investment (FDI), and CSR expenditure. This econometric model leverages quarterly GDP and FDI data alongside annual CSR expenditures to estimate the SSE’s potential economic contributions. It provides insights into how SSE investments can influence macroeconomic indicators like GDP growth and job creation. The relationship between SSE investments and key macroeconomic indicators is examined using a regression model. The model is represented as:

The econometric model can be represented as follows:

$$GDP_t = \alpha + \beta_1 \cdot SSE_{Investments_t} + \beta_2 \cdot PrivateInvestment_t + \beta_3 \cdot FDI_t + \epsilon_t$$

Where:

- GDP_t is the GDP growth rate at time t,
- SSE_{Investments_t} represents the total investments made through the SSE in year t,
- PrivateInvestment_t is the total private sector investments in year t,
- FDI_t Foreign Direct Investments at time t,
- α is the intercept, and ϵ_t is the error term.

7.4.1. Stationarity Check (Augmented Dickey-Fuller Test)

The stationarity check is an essential step in time-series analysis to ensure that the variables used in the model are not influenced by time trends. A stationary series is where mean and variance is constant over time and vice versa. A non-stationary series can lead to spurious regression results. The Augmented Dickey-Fuller (ADF) test is a widely used method to test for stationarity. It examines whether a unit root is present in the data, indicating non-stationarity. If the p-value from the ADF test is below a certain threshold (usually 0.05), the null hypothesis of a unit root is rejected, confirming that the series is stationary. For this study, GVA, FDI, and CSR Expenditure were found to be stationary at their first differences. The study will be based on following hypothesis

(H₀): The time series has a unit root (non-stationary).

(H₁): The time series does not have a unit root (stationary).

Further The lag length selection is a crucial step in applying a Vector Autoregression (VAR) model. The number of lags determines how far back in time the model considers the influence of past values on current outcomes. Choosing an appropriate lag length ensures that the model captures both short-term and long-term relationships without overfitting. The Akaike Information Criterion (AIC) and Schwarz Information Criterion (SIC) are commonly used to determine the optimal lag length. In this study, the AIC recommended a lag length of 2, which was used in the VAR model to capture dynamic interactions effectively.

7.4.2. (VECM)

The Vector Error Correction Model (VECM) is a powerful econometric tool used when variables are non-stationary but have a long-term co-integrating relationship. Unlike a VAR model, VECM not only captures the short-term dynamics but also includes an error correction term (ECT), which adjusts for deviations from the long-term equilibrium. The ECT shows how quickly variables return to equilibrium after a shock. VECM is particularly useful for policy analysis as it helps in understanding both short-term fluctuations and long-term relationships between variables.

(H₀): There is no long-term equilibrium relationship between the variables.

(H₁): There is a long-term equilibrium relationship between the variables.

7.4.3. Co-integration: Long term association

Co-integration occurs when two or more non-stationary time series move together in the long run, despite being individually non-stationary. It implies the existence of a stable long-term relationship between the variables. The Johansen Co-integration Test is commonly used to determine the number of co-integrating vectors in a system. If co-integration is present, it suggests that the variables share a common stochastic trend and will not drift apart indefinitely, making it essential to apply models like VECM to capture both long-term and short-term dynamics. The following hypothesis will be tested

(H₀): There is no co-integration between the selected variables.

(H₁): There is at least one co-integrating relationship between the selected variables.

Table 2: Stationarity

Variables	Test Static at level	P-value	Test Static at First Difference	P-value	Second Difference	P-value
CSR	-0.082	0.95	-1.48	0.54	-65.20	0.00
GVA	-0.716	0.84	-7.34	0.00		
FDI	0.418	0.98	-7.24	0.00		

Source: author’s calculation

The results of table 2 show that both GVA and FDI become stationary after first differencing, while CSR Expenditure remains non-stationary even after differencing. Therefore values of CSR were transformed into log and than after doing second difference the p value came to be less than 0.05 hence becoming stationary at second difference. Stationarity ensures that the results of the econometric models are reliable and free from spurious correlations, a vital step highlighted by studies such as Gujarati (2004) and Brooks (2014). Recent studies, such as Phillips and Xiao (2020) and Wang et al. (2021), also emphasise the critical role of stationarity in improving model accuracy and ensuring robust results in time series analysis.

Table 3: Johansen Trace Test

Hypothesis	Test Stastic	Critical values (95%)	Results
r=0	128.04	29.79	Significant
r ≤ 1	21.31	15.49	Significant
r ≤ 2	7.46	3.84	Significant

Source: author’s calculation

8. RESULTS AND DISCUSSION

On the basis of applied techniques results showed that CSR Expenditure has a significant impact on economic growth (GVA), both in the short term and long term. FDI inflows adjust to long-term equilibrium relationships but show limited short-term influence. The SROI ratio confirms that CSR investments provide positive social returns, making a strong case for the potential of the SSE in mobilising funds for socially impactful projects. Results are further discussed.

8.1. Stationarity Check: ADF

The stationarity of the variables was assessed using the Augmented Dickey-Fuller (ADF) test. The results will be indicated on the basis of p-values. Results will be significant and hypothesis will be rejected when p-value is less than 0.05. The stationarity of variables is crucial in avoiding misleading results and ensuring accurate interpretation of dynamic relationships. Results of ADF are presented below in table 2.

8.2. Lag Length Selection: AIC

The optimal lag length for the VECM model was determined using the Akaike Information Criterion (AIC). The selection process recommended a lag length of 2, which captures both short-term fluctuations and long-term trends in the data. Selecting an appropriate lag length is critical for ensuring model stability and preventing overfitting. This approach is supported by Lutkepohl (2005), who emphasised the importance of lag selection in time series models.

8.3. Co-integration Test Results: Johansen trace stats

In order to check for log term association between selected variables co-integration test was applied. The Johansen Co-integration Test (table 3) demonstrates whether long-term relationships exist or not. The significance of results is based on critical values being less than statistical values.

As evident from above table 3 at $r=0$, $r \leq 1$ and $r \leq 2$ the test statistic is 128.04, 21.31 and 7.46 which is greater than the 95% critical value (29.80, 15.49 and 3.84) indicating presence of long term association among selected variables. The Johansen Co-integration Test confirmed the presence of three co-integrating relationships at the 95% Level of Significance (LOS) between GVA, CSR Expenditure, and FDI. This indicates that these variables share a long-term equilibrium relationship, justifying the use of the Vector Error Correction Model (VECM). The existence of co-integration suggests that these variables, despite short-term fluctuations, move together over time toward a stable relationship. The existence of co-integration suggests that

these variables, despite short-term fluctuations, move together over time toward a stable relationship. Further studies, such as **Cheung and Lai (2021)** and **Juselius (2020)**, have reaffirmed the importance of co-integration analysis in understanding long-term equilibrium relationships in macroeconomic variables.

8.4. VECM Results

The Vector Error Correction Model (VECM) is used to check for both long-term equilibrium relationships and short-term dynamics between CSR Expenditure, FDI, and GVA in the context of India's Social Stock Exchange (SSE). Results are presented below in table 4

Table 4: Vector Error Correction Model (long-term and short-term dynamics)

Equation	Coefficient EC1	EC1 P-value	EC2 Coefficient	EC2 P-value	P-values
log-CSR	-3.92	0.00	-0.09	0.00	Significant
log_GVA	-0.99	0.00	-0.01	0.76	Significant
log_FDI	-1.98	0.00	2.04	0.00	Significant

Source: author’s calculation

Results of VECM under table 4 indicate CSR expenditure plays a crucial role in long-term economic growth (GVA) and adjusts quickly to deviations from equilibrium.

FDI adjusts to long-term equilibrium relationships, but its short-term influence is limited.

GVA is significantly influenced by CSR, both in the short-term and long-term, highlighting the importance of CSR investments in driving India's economic growth. The error correction term (EC1) for the Log_CSR equation is -3.92 with a p-value of 0.000, indicating that CSR expenditure adjusts quickly to deviations from the long-term equilibrium. This rapid adjustment demonstrates that CSR spending has a self-correcting mechanism, which is crucial for ensuring sustainable growth through social investments.

Similarly, the EC1 term in the Log_GVA equation is -0.99, showing that GVA also returns to equilibrium at a 99% rate per quarter. This finding aligns with the study **Lopez & Weber (2019)** and **Sims (2022)**, who emphasised the importance of error correction terms in maintaining long-term stability in dynamic economic systems, who emphasised that error correction terms are key indicators of long-term stability in economic systems.

The short-term coefficients highlight that CSR Expenditure significantly impacts GVA in both the short and long term. The second lag of Log_CSR is significant in the GVA equation, with a coefficient of -0.25 and a p-value of 0.006, indicating that CSR has a positive influence on economic growth.

8.5. Social Return on Investment (SROI) Analysis

The SROI model was applied to evaluate the social impact of CSR expenditures. The SROI ratio measures the social value created per unit of CSR investment. SROI= Social Value Created/ CSR expenditure

The results are based on the following:

- SROI > 1 it, indicate that CSR investments consistently generates more social value than the amount spent.
- If the value of SROI ratio varies across quarters, it reflects fluctuations in social impact due to external factors such as economic conditions and policy changes. Further the summary is mentioned below under table 5.

Table 5: Quarter-wise SROI Summary:

Quarter	CSR Expenditure (INR)	Social Value Created	SROI Ratio
1	2516.25	3648.09	1.44
2	2516.25	4228.01	1.68
3	2516.25	4007.87	1.59
4	2516.25	3873.67	1.53

Source: author’s calculation

The Social Return on Investment (SROI) analysis shows a consistent ratio of 1.5 across all quarters, indicating that for every rupee spent on CSR activities, INR 1.50 of social value is generated. This demonstrates the positive impact of CSR investments in creating long-term social benefits. The SROI ratio confirms that CSR investments provide positive social returns, making a strong case for the potential of the SSE in mobilising funds for socially impactful projects. According to works by **Richards & Brown (2020)** and **Anderson et al. (2021)**, SROI provides a comprehensive metric that captures both financial and non-financial returns, making it an ideal method for evaluating the effectiveness of CSR initiatives.

9. CONCLUSION

This study provides detailed insights into the potential economic and social impacts of the Social Stock Exchange (SSE) in India. With the use of advanced econometric techniques, including the VAR model and SROI analysis, the research highlights the critical role of FDI and CSR Expenditure in driving Gross Value Added (GVA) and achieving long-term socio-economic growth. The results suggest that CSR investments generate consistent positive returns, with SROI ratios exceeding 1 for all quarters, highlighting their effectiveness in generating social value. The findings from the VAR model exhibit that both FDI inflows and CSR investments have significant long-term impacts on India's economic growth. These findings emphasize the importance of connecting CSR activities with priorities relating to national development so as to enhance both economic and social outcomes. The study summarises that the successful implementation of the SSE can serve as an engine for inclusive growth, reducing funding gaps for social enterprises and highlighting critical social challenges in India.

Lastly, Global experiences, such as SVX (Canada) and IIX (Singapore), highlight the usage of best practices around impact measurement and innovative financing instruments that India can also introduce to reinforce its SSE. Ultimately, the harmony of strong regulation, private sector involvement and transparent reporting can help the SSE become a pillar for inclusive development while reducing funding gaps in social sector of India.

10. POLICY IMPLICATIONS

India’s Social Stock Exchange (SSE) can play a revolutionary role in unifying funding gaps for social enterprises by enhancing transparency, reliability, accountability and innovation. Global examples such as Canada’s SVX, which successfully generated \$350 million for social sectors focussing on healthcare and education and Singapore’s IIX, changing over 30 million lives, showcase the success of structured impact reporting and innovative financial instruments like Social Impact Bonds (SIBs). Implementing

these global successful practices can increase investor confidence in India’s SSE. Also companies like Reliance and Infosys that majorly contribute to CSR initiatives can also be pursued to channelise these funds through SSE to optimise social returns. For instance Infosys initiative of Foundation’s focus on education and health can be aligned with projects listed on SSE. To attract Foreign Institutional Investors (FIIs) the SSE must apply impact measurement tools like Social Return on Investment (SROI) to highlight the social value that is created per rupee invested. Instruments such as Zero Coupon Zero Principal Bonds encouraged by global models will help diversify funding providers while reducing the risks for investors. Regulators and Policymakers must focus on public-private partnerships while offering tax incentives to encourage sector-specific CSR contributions. Also the SSE must implement strict regulatory mechanisms to ensure funds are optimally used and reduce the risk of misuse of funds. Lastly education and awareness campaigns for retail investors should be held so as to delineate participation and promoting grassroots impact and making SSE a determining factor of inclusive growth in India.

11. FUTURE SCOPE

Future research can give findings on sector-wise performance of SSE in areas like rural development. There is also a scope to combine AI and machine learning models to forecast the social impact of investments. Regional impact studies can showcase the particular needs of underdeveloped and unexplored areas, while global comparisons with models from Canada and Singapore will help refining India’s SSE framework. Finally investigating policy gaps and providing solid suggestions can help the SSE evolve into a revolutionary tool for sustainable development.

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