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Measuring The Social Value Of State-Owned Sugar Industries: Education, Healthcare, Rural Infrastructure and Agricultural Development in Bangladesh

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Abstract: Evaluating state-owned enterprises (SOEs) strictly through conventional commercial accounting metrics often fails to capture their broader welfare impacts in developing nations. The state-owned sugar sector in Bangladesh, managed by the Bangladesh Sugar and Food Industries Corporation (BSFIC), frequently faces criticism due to persistent operational deficits. However, this sector operates primarily as a socio-economic anchor across rural landscapes. This paper empirical-conceptually measures the non-market "Social Value" generated by state-owned sugar mills across four critical dimensions: public education, community healthcare, rural infrastructure, and regional agricultural development. Utilizing a Social Return on Investment (SROI) logic and institutional analysis, the study demonstrates that the socio-economic externalities—including climate-resilient farming, subsidized medical services, rural transport networks, and micro-economic liquidity—substantially offset recorded financial losses. The paper argues for an integrated evaluation framework that embeds social accounting into public sector performance appraisals to safeguard rural livelihoods and advance the UN Sustainable Development Goals (SDGs).

Keywords: State-Owned Enterprises, BSFIC, Social Value, Rural Development, Public Healthcare, Agro-Infrastructural Externalities, Bangladesh.

I. INTRODUCTION

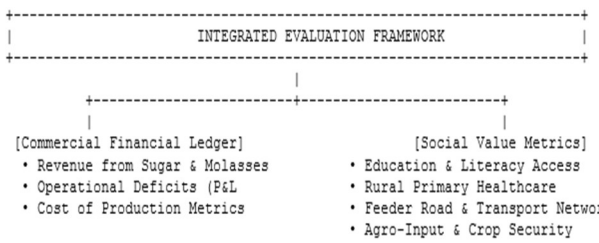
State-Owned Enterprises (SOEs) in agro-industrial sectors of the Global South carry a double mandate: maintaining basic commercial operations while serving as instruments for state-led welfare and rural stabilization. In Bangladesh, the public sugar industry—administered under the Bangladesh Sugar and Food Industries Corporation (BSFIC)—encompasses 15 sugar mills situated largely in the agrarian regions of North-Western and Western Bangladesh.

Scribd In recent decades, neoclassical financial evaluations have framed BSFIC enterprises as economic liabilities. Low sucrose extraction, outdated machinery, and high production costs relative to imported refined raw sugar have driven recurring operational deficits. Consequently, policy responses have tilted toward defensive disinvestment and temporary mill closures.

However, evaluating these industrial complexes purely through a Profit and Loss (P&L) statement ignores their foundational role as civic and economic hubs in remote rural areas. Beyond sugar production, state-run mills fund local schools, operate free or subsidized primary healthcare clinics, construct and maintain rural feeder roads, and provide critical agronomic inputs to smallholders. This study addresses this evaluation gap by establishing a structured framework to quantify the social value generated by BSFIC units across four core domains: Education, Healthcare, Rural Infrastructure, and Agricultural Development.

II. THEORETICAL FRAMEWORK AND METHODOLOGY

This study employs a Social Value and Public Value Governance framework, drawing on Social Return on Investment (SROI) methodologies. Public value theory asserts that government entities create value whenever unpriced social benefits exceed public expenditures.



Agro-Input & Crop Security

To quantify non-market outcomes, social valuation maps direct, indirect, and induced benefits using economic proxies:

1. Direct Value: Expenditures on civic amenities (schools, clinics, roads).

2. Indirect Value: Avoided healthcare and transportation costs for rural households.

3. Induced Value: Regional multiplier effects resulting from seasonal cash distributions to sugarcane growers.

III. DIMENSIONS OF SOCIAL VALUE CREATION

A. Educational Externalities

BSFIC sugar mills systematically operate as educational hubs within isolated agrarian zones. Each major mill complex maintains primary and secondary high schools—and in some instances, degree colleges—originally established to educate employees' children, but which predominantly serve the broader rural populace.

1. Literacy and Human Capital: Mill-administered educational institutions provide affordable instruction in areas where private or public educational infrastructure is underdeveloped.

2. Socio-Economic Mobility: By offering subsidized tuition, free learning materials, and scholarship schemes, these schools improve secondary school completion rates among marginal farming families, facilitating multi-generational social mobility.

B. Rural Healthcare And Community Wellbeing

Public sugar mills maintain on-site medical centers staffed by full-time medical officers and healthcare personnel.

1. Preventive and Curative Care: These health complexes deliver primary medical consultations, emergency triage, essential pharmaceuticals, and immunization drives to both mill workers and surrounding village communities.

2. Disaster & Epidemic Response: During regional health emergencies or seasonal disease outbreaks, mill health units function as auxiliary public health centers, alleviating pressure on overwhelmed district-level government hospitals.

C. Rural Infrastructure And Connectivity

The establishment of a sugar mill requires substantial physical infrastructure that transforms peripheral rural geography into connected economic zones.

1. Feeder Road Networks: BSFIC enterprises construct and continuously repair miles of heavy-vehicle feeder roads linking remote sugarcane collection centers (cuse centers) to processing facilities. These roads serve as vital arteries for general public transport, regional commerce, and emergency travel.

2. Civic Infrastructure: Mill complexes introduce localized electrical grid extensions, deep tube-well water systems, and drainage infrastructure, generating positive infrastructure spillovers for surrounding settlements.

D. Agricultural Development And Agronomic Security

Sugarcane is a long-duration, deep-rooted crop highly resilient to extreme weather events such as floods and droughts.

1. Agronomic Inputs and Extension Services: BSFIC, in collaboration with the Bangladesh Sugarcrops Research

Institute (BSRI), distributes high-yielding cane varieties, bio-fertilizers, and crop protection chemicals on credit to smallholders.

2. Liquidity and Income Security: Procurement programs deliver substantial cash infusions into rural banking networks during the harvesting season. This guaranteed market pricing acts as an economic buffer against the extreme price volatility typical of perishable horticultural crops.

3. Environmental Sustainability: Sugarcane functions as a high-capacity carbon sink. Recent environmental initiatives, including mill-zone afforestation programs, further enhance environmental stability in northern Bangladesh. Bangladesh Sangbad Sangstha (Bss)

IV. Empirical Evaluation Social Value vs. Financial Deficits

To illustrate the divergence between commercial accounting and holistic social valuation, a comparative matrix highlights key performance dimensions:

Evaluation Metric	Conventional P&L Lens	Integrated Social Value Lens
Primary Output	Refined White Sugar Sales	Sugar + Education + Healthcare + Infrastructure
Financial Health	Recorded Loss (BDT ~500 Cr/year)	Subsidized Public Good Provision
Farmer Engagement	Procurement Overhead	Guaranteed Income Anchor for ~100,000 Smallholders
Infrastructure Impact	Maintenance Expense	Multi-Village Road & Transport Connectivity
Environmental Value	Waste/Effluent Management Challenge	High Carbon Absorption & Bio-Fertilizer Potential

V. POLICY IMPLICATIONS AND RECOMMENDATIONS

To prevent the systemic erosion of rural livelihoods resulting from mill shutdowns, public policy must shift from narrow commercial appraisals toward strategic modernization:

1. **Adopt Social Value Accounting (SVA):** The Ministry of Finance and Planning Commission should mandate SROI and ESG (Environmental, Social, and Governance) impact reporting alongside traditional financial audits for all BSFIC units.

2. **Co-Generation and Product Diversification:** Modernize mill technology to support bagasse-based power co-generation, bio-ethanol production, and organic fertilizer manufacturing. Transforming single-product sugar mills into integrated agro-energy complexes can offset operational losses while preserving social programs.

3. **Inter-Ministerial Cost Sharing:** Financial burdens associated with running schools, healthcare units, and regional road maintenance should be co-funded by the Ministry of Primary and Mass Education, Ministry of Health and Family Welfare, and Ministry of Local Government, Rural Development and Co-operatives.

VI. CONCLUSION

Evaluating Bangladesh's state-owned sugar industry solely through a profit-and-loss framework presents an incomplete picture of its national impact. While financial efficiency and technological modernization remain essential goals, state-owned sugar mills generate substantial social value through education, healthcare, infrastructure, and rural economic support. Recognizing these non-market externalities transforms the policy narrative from one of industrial failure to one of multi-dimensional public investment, offering a sustainable path for rural development and economic resilience in Bangladesh.

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