

Greening the Medicaid Supply Chain: An ESG-Integrated Framework for Value-Based Procurement Anchored in Stakeholder Theory and the Triple Bottom Line

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Abstract- The growing environmental footprint of healthcare systems and persistent inequities in access and outcomes have intensified calls for procurement reform within publicly funded healthcare programs. Medicaid, as the largest public purchaser of healthcare services in the United States, occupies a strategic position to drive systemic change through its supply chain. This paper develops an ESG-integrated framework for greening the Medicaid supply chain, anchored in Stakeholder Theory and the Triple Bottom Line (TBL). Drawing extensively on contemporary literature in sustainable supply chain management, healthcare procurement, and ESG governance, the study reconceptualizes value-based procurement beyond cost containment to include environmental stewardship, social equity, and institutional accountability. The paper synthesizes theoretical foundations, operational mechanisms, and policy instruments, particularly Section 1115 waivers to propose a practical roadmap for embedding ESG principles into Medicaid procurement. International benchmarking with the UK National Health Service (NHS) Net Zero strategy further demonstrates feasibility and scalability. The framework contributes to both theory and policy by positioning Medicaid procurement as a lever for climate action, health equity, and long-term system resilience.

I. INTRODUCTION

As one of the most resource-intensive sectors of a contemporary economy, supply chain operations contribute significantly to the global healthcare business in terms of the environment, social and economic costs, and resources (Leal Filho et al., 2024). The US healthcare delivery system's supply chains are intricate and multi-layered, involving waste management systems, pharmaceutical and medical device manufacturing, logistics, and energy-intensive clinical procedures. In addition to being economical, these supply chains are coming under greater scrutiny for their role in poor working

conditions, environmental deterioration, greenhouse gas emissions, and health disparities (Dada et al., 2024).

Medicaid plays an especially significant role in this bigger system. Medicaid is the largest publicly funded health care insurance program in the US that provides health care to tens of millions of vulnerable and low-income people and has far-reaching purchasing power in the healthcare sector (Donohue et al., 2022). Medicaid procurement decisions, whether based on pharmaceuticals, medical supplies, information systems, or logistics services, impact supplier behavior, production standards, and innovation incentives (Balogun et al., 2025). Nevertheless, cost-containment mandates that are founded on federal rules regulating fiscal discipline and cost-efficiency have historically prevailed in Medicaid procurement often prioritizing lowest-price sourcing over more holistic thinking about sustainability and social value (Lolli and Daniele, 2024).

This limited understanding of value has grown further out of touch with new policy realities. First, the impact of healthcare on climate change has become a well-documented phenomenon, and the supply chain-related (Scope 3) emissions constitute the biggest proportion of the overall healthcare emissions (Cerceo and Singh, 2024). Second, the presence of ongoing disparities in healthcare outcomes and access to the care highlights the necessity of procurement approaches that consider social determinants of health, such as employment, environmental quality, and community resilience (Adefolaju et al., 2024; Paul et al., 2024). Third, new regulatory and governance structures are placing growing pressure on the accountability of public

institutions, who are expected not only to perform well in financial stewardship, but also in environmental performance and social performance (Whitelock, 2019).

It is in this context that the introduction of environmental, social, and governance (ESG) principles in the Medicaid procurement is a strategic redirection, and not a fringe policy modification. ESG integration reinforces procurement as a driver of systemic change and allows public buyers to affect upstream production processes, logistics patterns, and supplier governance formats (Olaogun et al., 2024). ESG-oriented supply chains have been linked to better environmental performance, higher resiliency, and cost effectiveness over the long term in decreasing waste, energy savings, and risk management in healthcare settings (Azabi et al., 2023; Man et al. 2024).

Notably, the institutional structure of Medicaid offers the possibility of innovation in this field. The model of cooperative federalism that supports the program enables states to test various procurement and delivery models under federal supervision, with the most significant one being the Section 1115 waivers (Stimpson et al., 2019; Stimpson et al., 2020). Although these waivers were historically associated with coverage expansion and service delivery reform, recent scholarship indicates that they might be applicable to procurement innovation, especially in situations in which purchasing decisions interact with social and environmental determinants of health (Ayodimeji-Alaba et al., 2025; Shodimu et al., 2025).

The paper states that to green the Medicaid supply chain, a theoretically based and operationally consistent framework is necessary to redefine the value-based procurement beyond the aspect of cost containment. The study is based on the Stakeholder Theory and Triple Bottom Line (TBL); the analysis promotes an ESG model of integration that would balance the economic efficiency with a sustainable environment and social justice. The paper draws on the findings of sustainable supply chain management, healthcare logistics, ESG governance, and public policy literature to establish Medicaid procurement as

a policy tool that is essential in promoting climate action, health.

II. THEORETICAL FOUNDATIONS: STAKEHOLDER THEORY AND THE TRIPLE BOTTOM LINE

2.1 Stakeholder Theory as a Governance Lens for Medicaid Procurement

The Stakeholder Theory offers a strict analytical tool for understanding procurement governance within the complex public healthcare system (Duong et al. 2019). Instead of focusing on the efficiency or cost-minimization goals, the theory assumes that the organizational legitimacy and long-term performance is shaped by the effectiveness with which decision-makers can strike the balance between the interests of all factors that influence or are influenced by organizational activity. With procurement choices in healthcare supply chains defining not only financial performance, but also patient safety, labor conditions, environmental exposure, and community well-being, stakeholder-oriented governance is especially relevant (Whitelock, 2019).

The Medicaid supply chain is a highly institutionalized stakeholder ecosystem. The federal regulators, state Medicaid agencies, healthcare providers, pharmaceutical and medical device manufacturers, logistics intermediaries, technology vendors, patients, and local communities are key stakeholders (Schneller et al., 2023). These stakeholders are connected by contractual, regulatory and ethical associations with incentives and risks being transmitted across the system through the procurement decisions. The suppliers react to purchasing requirements by changing production quality and innovation focus, whereas the patients and communities receive downstream consequences in the form of care accessibility, cost-effectiveness, and environmental integrity (Oluwole et al., 2024).

From the stakeholder theory perspective, the governance aspect of the entity (organization, Centers for Medicare and Medicaid Services, us federal health agency) plays a critical role. CMS sets federal policy parameters, reimbursement regulations, and compliance expectations, which influence state-level

procurement practices and supplier involvement (Gemar, 2022). Simultaneously, contracting modalities, selection of suppliers, and strategies of implementation remain at the discretion of state Medicaid agencies (Balogun et al., 2025). This form of cooperative federalism establishes a stratified system of governance that is dependent and not hierarchical, increasing the necessity of coordination and alignment with stakeholders.

Empirical evidence indicates that procurement systems that are based on stakeholder inclusion have been found to be better in their resilience, transparency and value creation as compared to purely transactional models. Duong et al. (2019) shows that by leveraging manufacturers, distributors, and medical professionals, there is an improved reach of the essential medicines because the procurement incentives are combined with the priorities of the population health. Similarly, Dhamija, (2025), demonstrate how clinical community and supply chain actors can enhance value-based results, through the incorporation of the three factors which includes cost, quality, and availability. These results highlight the fact that stakeholder engagement is not marginal, but the foundation of successful healthcare procurement.

The stakeholder theory is also characterized by a normative component that is especially relevant in publicly funded healthcare. Medicaid primarily targets communities that are socioeconomically vulnerable and disproportionately vulnerable to environmental and health dangers (Hall et al., 2023). Procurement practices that ignore labor standards, environmental externalities, or community impacts are dangerous as they can strengthen structural inequities and erode societal trust (Hamilton, 2022). A stakeholder strategy grounded on ESG is thus a way of redefining Medicaid procurement as a form of public stewardship where accountability is not simply financial compliance but also social justice and environmental responsibility.

2.2 The Triple Bottom Line and the Redefinition of Value-Based Procurement

While the stakeholder theory explains the interests of the stakeholders who need to be taken into

consideration during the procurement of Medicaid, the Triple Bottom Line (TBL) offers a systematic approach to the analysis of value creation and evaluation (Sadabadi, 2025). TBL defines organizational performance on three mutually supportive dimensions; economic viability, social equity, and environmental sustainability that goes against the traditional procurement paradigms that equate value solely with the lowest price or short-term budgetary savings (Srivastava et al., 2022).

In the framework of Medicaid, the economic pillar of TBL is not only to contain costs in the short term, but also to develop in the long term the fiscal sustainability of the system, its system efficiency, and risk management. Literatures on healthcare supply chain management has shown that waste can be minimized, demand predictability guaranteed, and the overall cost of ownership decreased by green logistics, optimized inventory system, and energy-efficient operations (Nagy and Szentesi, 2024). Similar strategic procurement practices have also been found to benefit in the Medicaid and Medicare cost containment in situations where the purchase decision focuses on the lifecycle value rather than just unit price (Balogun et al., 2025).

The social dimension of TBL is closely aligned with Medicaid's redistributive and equity-oriented mandate. Socially responsible procurement incorporates criteria such as ethical labor practices, supplier diversity, local economic participation, and equitable access to essential medical goods (Cooper, 2024). Empirical research indicates that inclusive sourcing practices enhance reliability in supply and delivery of health care in underserved areas through development of trust, accountability, and local capacity (Adefolaju et al. 2024). Incorporating social metrics into procurement evaluation therefore connects purchasing actions directly to socially determined health determinants, such as job security, environmental security, and societal strength.

The TBL environmental pillar concerns the ecological footprint of healthcare industry, specifically, emissions and waste produced in supply chains. The life cycle-oriented procurement techniques allow purchasers to examine

environmental effects of production, transportation, use, and end-of-life phases and identifying opportunities for decarbonization and resource efficiency (Azabi et al. 2023). Evidence from healthcare logistics and digitalization research suggests that such practices not only reduce environmental harm but also enhance supply chain resilience by decreasing dependence on resource-intensive inputs and vulnerable logistics networks (Man et al. 2024).

Importantly, TBL focuses on the interrelationship of its three pillars. Ecological efficiencies can be converted into economic savings by means of less energy consumption and wastage, social investments in supplier development and labor standards can aid in more dependable and versatile supply chains. When operationalized within Medicaid procurement, TBL transforms value-based purchasing into a multidimensional governance tool rather than a narrow financial control mechanism.

2.3 Integrating Stakeholder Theory and the Triple Bottom Line for ESG-Oriented Governance

The integration of stakeholder theory and the Triple Bottom Line provide a coherent conceptual foundation for ESG-oriented Medicaid procurement. Stakeholder theory identifies the actors, relationships, and power dynamics that must be governed, while TBL supplies the evaluative criteria through which procurement performance can be assessed. Together, they enable the translation of ESG principles from abstract commitments into concrete procurement rules, performance metrics, and incentive structures (Ashraf et al., 2022).

In the Medicaid context, this integrated framework is particularly powerful because procurement decisions intersect with public accountability, intergovernmental governance, and market regulation. Embedding ESG criteria into supplier selection, contract design, and performance monitoring aligns stakeholder incentives with economic, social, and environmental objectives. This alignment mitigates perceived trade-offs between cost containment and sustainability by reframing them as complementary dimensions of long-term public value creation.

III. ESG INTEGRATION IN THE MEDICAID SUPPLY CHAIN

3.1 Environmental Integration: Life-Cycle Thinking, Decarbonization, and Green Logistics

Environmental integration is a key pillar of ESG-oriented Medicaid procurement because most healthcare-related emissions and waste are hidden in the upstream and downstream supply chain processes rather than the point-of-care delivery (Mittal, 2024). Contemporary scholarship consistently recognizes Scope 3 emissions, the emissions generated by the purchased goods, transportation, and waste management as the most contributing factor of the healthcare environmental footprint (Osisiogu, 2023). Medicaid, as a large-scale public purchaser, has the structural ability to affect such emissions by setting procurement standards that focus on life-cycle performance and not unit price.

Life cycle assessment (LCA) is a methodology that is used to operationalize environmental factors in procurement. LCAs allow purchasing agencies to determine carbon- and waste-intensive steps in medical supply chains by assessing any environmental effects in the entire product life cycle, comprising raw material extraction and production, distribution, use, and disposal at the end of life (Subramanian et al., 2021). The empirical research examining the healthcare logistics proves that LCA-inspired procurement aids specific interventions, including low-carbon transportation, energy-saving warehousing, reusable medical equipment, and reverse logistics to recycle and valorize waste (Azabi et al. 2023).

Green logistics practices also complement the environmental performance through lowering the fuel consumption, optimizing routing, and reducing inventory obsolescence. Research in healthcare supply chain management demonstrates that the use of transportation optimization and demand-driven inventory systems can greatly decrease emissions while maintaining the reliability of services (Bvuchete et al., 2021). These can be improved with the integration of digital technologies such as big data analytics and artificial intelligence, which allow predictive demand planning, tracking it in real time,

and evaluating its performance in supplier networks (Alonge et al., 2023). In the case of Medicaid, including such requirements in the procurement contracts will provide some incentives to suppliers across the industry to invest in cleaner technologies and low-carbon logistics infrastructure.

3.2 Social Integration: Health Equity, Ethical Sourcing, and Supplier Inclusion

The social aspect of the ESG integration in Medicaid procurement cannot be separated from the very nature of the program as required to serve the low-income and vulnerable groups. Decision-making in supply chains has a direct impact on socially determined health issues because of employment, environmental exposure, and geographic distribution of healthcare resources (Adefolaju et al., 2023). As a result, socially responsible procurement goes beyond the labor laws to include supplier diversity, economic involvement in the locality, and fair access to necessary medical supplies (Thomas et al. 2022)

Inclusive sourcing policies can be effective in enhancing healthcare service provision in underserved communities by increasing supply resilience and creating trust between providers and patients (Ramanadhan et al., 2023). Stakeholder involvement and community-based procurement systems improve system responsiveness and patient care in decentralized and resource-constrained health systems and strengthen the social value of supply chains (Adefolaju et al. 2023). For Medicaid, the implementation of social requirements into the supplier evaluation processes follows the principles of aligning the purchasing decision with the overall equity concerns and averting the threats of supplier concentration and geographic dependence.

Other forms of ethical sourcing include labor standards, occupational safety, and human rights in manufacturing global medical supplies. Studies in sustainable healthcare procurement highlight that failure to consider such dimensions may weaken the continuity of supply as well as the institutional legitimacy when disruptions reveal the existence of exploitative working conditions or unethical business practices (Duque-Uribe et al., 2019; Whitelock 2019). By incorporating social performance measures

into procurement contracts and monitoring structures, the Medicaid agencies are able to encourage responsible production processes as well as strengthen social accountability.

3.3 Governance Integration: Transparency, Accountability, and Digital Enforcement Mechanisms

Governance mechanisms offer an institutional framework in which environmental and social purposes are converted into binding procurement deliverables. The success of ESG integration should be based on open contracting, uniformity of performance measures, and accountable monitoring mechanisms that can overcome the healthcare supply chain complexities (Ashraf et al., 2022). The problem of weak governance has been cited as one of the main obstacles to ESG compliance, especially in fragmented procurement settings with limited data visibility and uneven enforcement capacity (Tsang et al. 2024).

Transparent procurement processes foster accountability in the sense that it minimizes the asymmetry of information between buyers and sellers. Healthcare and pharmaceutical supply chain empirical evidence shows that tendering and contract management transparency enhances supplier performance and minimizes opportunistic behavior (Juma & Jackson 2025; Moreira and Rodrigues 2023). Unified ESG reporting systems also enhance governance because they provide comparability among suppliers and allow making evidence-based decisions (Subramanian et al. 2020).

Digital technologies play a vital role in strengthening governance. The use of AI-based compliance technologies allows processing vast amounts of data to detect risks of non-compliance, oversee the work of suppliers, and assist in real-time audits of complex supplier networks (Benzidia et al., 2021). Smart contracts also have other advantages, such as implementing sustainability terms into self-executable agreements, which promotes the enforcement of agreements, lowers transaction costs, and increases trust in the procurement procedures (Emma, 2024).

3.4 Economic Alignment and the Myth of the Green Premium

One recurring issue in the context of the procurement in the public sector is the assumed trade-off between sustainability and cost-effectiveness (the so-called green premium). Nonetheless, there is an increasing amount of empirical evidence that challenges this belief and proves that ESG-integrated supply chains might provide long-term economic value in terms of efficiency, risk mitigation, and innovation (Gupta & Gupta 2025; Gan and Yusupov 2025). Within the healthcare context, green supply chain practices are linked to minimized waste, decreased energy use, and enhanced operational robustness, which are all connected to the overall reduction of the total costs in the long term (Balakrishanan and Dines, 2024).

Strategic procurement studies also suggest that the value-based buying frameworks focusing on the lifecycle expenses and performance results can be aligned with the Medicaid and Medicare cost reduction goals (Balogun et al. 2025). The downstream costs incurred by supply disruptions, regulatory non-compliance, and poor health outcomes in the population can be prevented by the Medicaid agencies through internalizing the environmental and social externalities into the procurement requirements. Integrating ESG is thus not a new financial obligation, but a re-structuring of procurement arguments to become long-term oriented towards creating value to the population.

IV. POLICY INSTRUMENTS AND ECONOMIC VIABILITY OF ESG-INTEGRATED MEDICAID PROCUREMENT

4.1 Leveraging Section 1115 Waivers for Sustainable Procurement Innovation

The policy instruments needed to ensure successful integration of ESG principles in the Medicaid supply chain should offer both flexibility and accountability. The section 1115 waivers are considered one of the most powerful instruments that state Medicaid programs can experiment with and immerse themselves in innovation (Stimpson et al., 2019). In the past, alternative models of cover, reforms of delivery systems, and payment mechanisms were

tested with the help of these waivers. However, recent scholarship and policy commentaries indicate that their application can be expanded to include procurement reform, especially in areas where purchasing decisions intersect with health equity, environmental sustainability, and systems efficiency; (Stimpson et al., 2020).

From a governance perspective, 1115 waivers provide a formal framework that would allow states to test ESG-based procurement plans and retain federal controls (Duque-Urbe et al., 2019). Indicatively, states might develop waiver demonstrations that focus on suppliers that comply with proven environmental requirements, might mandate high-volume medical products to disclose their lifecycle emissions or might encourage low-carbon logistics by contracting on performance. These programs are consistent with the findings that a procurement requirement can have a considerable impact on supplier conduct, investment in innovation, and the design of the supply chain (Balakrishanan and Dines 2024).

Importantly, waivers also enable states to align procurement with social determinants of health. By incorporating supplier diversity requirements, local sourcing incentives, or ethical labor standards into Medicaid purchasing frameworks, states can link procurement directly to employment, community development, and environmental quality outcomes. Empirical studies highlight that decentralized and stakeholder-engaged procurement models improve access and system responsiveness in emerging and underserved healthcare contexts (Adefolaju et al. 2023). Section 1115 waivers therefore provide a legally and institutionally credible pathway for embedding ESG objectives into Medicaid procurement without undermining program integrity.

4.2 Addressing Economic Concerns and Long-Term Fiscal Sustainability

A central concern in public-sector sustainability initiatives is the perceived tension between ESG integration and fiscal discipline. Procurement reforms are a frequent subject of budgetary evaluation in Medicaid that experiences acute budgetary pressures with the prism of short-term cost effects (Gupta &

Gupta 2025). However, a growing body of literature challenges the assumption that sustainable procurement necessarily entails higher costs. Rather, it has been implied that ESG-supplies chains have the potential to enhance long-term fiscal sustainability by driving efficiency, reducing waste, and minimizing risks (Gan & Yusupov 2025).

Supply chain practices that are green (optimal transportation, energy-effective warehousing, and material intensity reduction) have been found to reduce the cost of operations in the long-term, as well as enhance resilience to disruptions in supply (Balakrishanan and Dines 2024). Such efficiencies are especially useful in the case of healthcare facilities, as the global market on medical supplies is highly unstable, and the number of climate-related disruptions is on the rise. The strategic procurement research also proves that value-based buying approaches focused on lifecycle cost and performance are consistent with the Medicaid and Medicare cost-containing goals (Ayodimeji-Alaba et al., 2025).

In addition, the ESG integration lowers the risk of exposure to regulatory, reputational, and operational risks. Environmental non-compliance, labor violations, and supply chain opacity can generate significant downstream costs through disruptions, legal liabilities, and emergency sourcing. By internalizing these risks into procurement evaluation criteria, Medicaid agencies can shift from reactive cost management to proactive risk governance. In this sense, ESG-based procurement facilitates financial accountability by enhancing the sustainability of the system over the long-term as opposed to reducing short-term spending.

4.3 Incentive Alignment and Federal–State Coordination

The effective execution of the policies demands that there be a correlation between the federal direction and state implementation. The federal health agency is also essential in expectation setting, technical support, and consistency between state Medicaid programs (Subramanian et al., 2020). States can be influenced to pursue sustainable procurement through federal incentives like the increased matching funds,

common frameworks of reporting ESGs, or performance obligations without compromising design and implementation flexibility (Galkaduwa, 2024).

Knowledge sharing and capacity building is also achieved through federal- state coordination. States that pilot ESG-integrated procurement via waiver authority have the ability to produce evidence regarding the cost, quality, and sustainability outcomes, and can inform wider policy dispersion. These kinds of iterative learning are critical to the process of scaling successful models as applied to other institutions and markets.

V. STRATEGIC ROADMAP FOR IMPLEMENTING ESG-INTEGRATED MEDICAID PROCUREMENT

5.1 Policy Design and Regulatory Frameworks

A coherent implementation strategy for ESG-integrated Medicaid procurement begins with clear policy design. Environmental, social, and governance criterion must be explicitly included in the procurement guidelines in addition to the conventional cost and quality measures (Subramanian et al. 2020). It necessitates standardized indicators of ESG that are specific to healthcare supply chains and allow consistency in assessment and comparison across suppliers and states (Olaogun et al., 2024).

The regulatory frameworks must focus on lifecycle value and performance-based contracts and not on the lowest-price choice. Through integration of ESG standards into requests of proposals, contract scoring systems and renewals decisions, the Medicaid agencies will be able to institutionalize sustainability in the normal procurement procedures.5.2 Data, Metrics, and Reporting Infrastructure

Effective data systems are required to convert ESG commitments into quantifiable results. Standardized reporting conditions allow Medicaid agencies to follow performance of suppliers, control compliance, and evaluate the progress of achievement of sustainability goals. Public health supply chain sustainability indices offer decision-makers a combination of metrics that reflect performance in

microeconomics, society, and various environments at the same time (Subramanian et al. 2020).

Digitalization also increases the power of monitoring. Risk detection, real-time performance monitoring, and evaluation of performance in complex supplier networks can be conducted with the help of big data analytics and tools powered by AI (Benzidia et al., 2021; Man et al. 2024). These technologies facilitate evidence-based procurement choices as well as reduce the administrative burden.

5.3 Capacity Building, Collaboration, and Market Development

Successful ESG integration depends on the capabilities of both purchasing agencies and suppliers. The implementation requires capacity-building, including training on lifecycle assessment, ESG reporting, and sustainable contracting. Cooperation between federal agencies and state Medicaid programs, healthcare providers, and suppliers leads to mutual learning and expedited best practices dissemination (Ijiga, et al., 2024). It is also essential to develop the market. Medicaid procurement can encourage suppliers to invest in green technologies, ethical labor practices, and new logistics solutions by indicating that there is long-term demand in the sustainable product and service provision. This demand-side leverage is particularly powerful given Medicaid's scale and purchasing influence.

5.4 Phased Implementation and Continuous Evaluation

Since healthcare supply chain is a complex process, ESG integration will require a step-by-step implementation approach. Preliminary pilots-which may be based on the waivers in Section 1115-give agencies a chance to experiment with procurement requirements, data infrastructure, and incentive frameworks and scale successful models. The constant review and feedback processes will make procurement reforms flexible and receptive to market dynamics and policy focus.

Taken together, Sections 4 and 5 demonstrate that both economically and operationally, ESG-integrated Medicaid procurement is workable. With the strategic

deployment of policy tools, unified governance, and the investment in information and capacity, Medicaid can use its buying authority to promote environmental sustainability, social fairness and financial soundness over the long term.

VI. CONCLUSION, POLICY IMPLICATIONS, AND DIRECTIONS FOR FUTURE RESEARCH

6.1 Conclusion

This paper sets out to reconceptualize Medicaid procurement as a strategic governance mechanism capable of advancing environmental sustainability, social equity, and long-term economic resilience. Drawing on the Stakeholder Theory and Triple Bottom Line (TBL), the paper has formulated an ESG-based model of greening the Medicaid supply chain, surpassing the traditional cost-containment paradigm that has been dominating the traditional public healthcare purchasing.

By synthesizing insights from sustainable supply chain management, healthcare logistics, ESG governance, and public policy literature, the paper demonstrated that procurement decisions are not merely administrative or transactional, but deeply consequential for population health, environmental outcomes, and institutional legitimacy. The analysis showed that environmental impacts in healthcare are largely embedded within supply chains, that social inequities are reinforced or mitigated through sourcing and contracting choices, and that governance structures determine whether sustainability objectives are enforceable or symbolic.

The proposed framework positions Medicaid as a uniquely powerful actor in the healthcare ecosystem. Given its scale, regulatory flexibility, and purchasing influence, Medicaid is well placed to shape supplier behavior, stimulate sustainable innovation, and align healthcare markets with broader societal goals. ESG integration, when anchored in stakeholder engagement and evaluated through the TBL lens, emerges not as a fiscal burden but as a pathway toward value-based procurement that internalizes long-term costs, reduces systemic risk, and enhances resilience.

6.2 Policy Implications

The findings of this study carry several important implications for policymakers, regulators, and public healthcare administrators. First, Medicaid procurement policy should explicitly incorporate ESG criteria alongside cost and quality metrics. This requires a shift from lowest-price contracting toward lifecycle-based evaluation frameworks that capture environmental and social externalities as integral components of value.

Second, federal leadership is critical for enabling and scaling ESG-integrated procurement. The entity ("organization", "Centers for Medicare & Medicaid Services", "us federal health agency") can play a catalytic role by issuing guidance, standardizing ESG reporting requirements, and providing technical assistance to states. Strategic use of Section 1115 waivers offers a practical mechanism for piloting procurement innovations while preserving program integrity and fiscal oversight.

Third, there should be investment in data infrastructure and governance capacity. ESG promises to remain mere aspirations without standardized metrics, transparent reporting, and digital compliance solutions. The policymakers are therefore encouraged to focus on developing sustainability indices of the supply chains of the public health and encourage the implementation of digital technologies which would strengthen monitoring, accountability as well as enforcement.

Finally, procurement reform should be treated as part of a broader health equity and climate strategy. Aligning Medicaid purchasing with environmental and social objectives reinforces the program's redistributive mandate and positions healthcare spending as a lever for inclusive and sustainable development.

6.3 Theoretical Contributions

This study contributes to the literature in several ways. Conceptually, it advances an integrated application of Stakeholder Theory and the Triple Bottom Line to public healthcare procurement, extending these frameworks beyond their traditional private-sector focus. By embedding ESG principles

within a public-sector governance context, the paper bridges gaps between sustainability scholarship, healthcare management, and public policy research.

The framework also responds to calls for more operationally grounded sustainability research in healthcare supply chains. Rather than treating ESG as an abstract or normative ideal, the study demonstrates how environmental, social, and governance objectives can be translated into concrete procurement mechanisms, performance metrics, and policy instruments.

6.4 Directions for Future Research

While this paper offers a comprehensive conceptual and policy-oriented framework, several avenues for future research remain. The application and performance of ESG-integrated procurement in various state Medicaid plans should be empirically studied. Depending on the procurement models the variations in cost, quality, equity, and environmental performance could be examined using comparative analysis.

Future research should also explore the responses of suppliers to the ESG-based Medicaid procurement, especially regarding the areas of innovation, entry into the market, and restructuring the supply chain. Besides this, the quantitative modeling of the lifecycle costs and emission in Medicaid supply chains would offer valuable evidence that could be used to design and evaluate the policies.

Lastly, an international comparative study, to look at how other publicly funded healthcare systems implement sustainable procurement, would provide lessons and benchmarks that can be transferred and used to continue improvement. Such research would further strengthen the case for positioning Medicaid procurement at the forefront of sustainable healthcare governance.

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