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The Roles of Corporate Social Responsibility, Circular Capabilities and Environmental Accounting toward Circular Economy in the Textile Industry of Saudi Arabia

Khalid Alshammari[1], Zubir Azhar[2], Md Aslam Mia[3]

[1]School of Management, Universiti Sains Malaysia, Penang, Malaysia, [2,3]School of Management, Universiti Sains Malaysia, Penang, Malaysia

Email: khalids8@student.usm.my, zubirazhar@usm.my, aslammia@usm.my

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Abstract

The study explores what fundamental elements of corporate social responsibility (CSR) with environmental accounting and circular capabilities drive businesses to implement circular economy (CE) practices. CSR demands businesses to execute sustainable processes beyond profits, thus creating ethical business operations with environmental responsibility. The integration of environmental accounting provides business organizations with both evaluation tools for ecological effects and numerical methods to measure environmental impact and achieve transparent execution of CE strategies. Resource-efficient looped systems represented by circular capabilities lead businesses toward both waste reduction and improved resource consumption efficiency. External forces created by consumers along with stakeholders and regulators plus investors determine how businesses integrate CSR programs with sustainability goals develop environmental reporting capabilities and increase circular innovation potential. Businesses benefit from circular practice implementation under strict regulations because they uphold regulatory standards as well as increase their industrial competitiveness. Organizations gain strategic capabilities to design sustainable initiatives by analysing these interactions, which creates long-term business resilience and compliance results. The research establishes CSR alongside environmental monitoring and circular capabilities as essential parts needed to build sustainable economic growth and fulfil environmental duties.

Keywords: Corporate Social Responsibility, Environmental Accounting, Circular Capabilities, Stakeholder Pressure, Circular Economy, Sustainability.

Introduction

The world has started to recognize the circular economy (CE) as a sustainable replacement for the conventional linear economic system of “take” - “make”- “dispose” (Geissdoerfer et al., 2017). Waste reduction and resource management, together with closed-

loop system development, make up the core strategies of this framework (Kirchherr, Reike, & Hekkert, 2017). Multiple business success factors influence companies during their circular model transition period, including corporate social responsibility (CSR) together with environmental accounting and circular capabilities. Stakeholder pressure functions as a moderation factor because it both encourages organizations to adopt sustainable business practices and demands proper sustainable practice implementation. An organization demonstrating CSR makes ethical sustainable practices that positively affect society (Carroll, 1999). Bansal and DesJardine (2014) demonstrate that CSR has a positive effect on sustainable business practices, which include implementing CE models. Organizations integrating CSR for their activities produce better waste reduction and product extension and resource reuse policies. Such dedication to societal expectations helps firms maintain successful long-term market positions (Hart & Dowell, 2011).

Organizations use environmental accounting to measure and report their environmental impact thus obtaining an understanding of their ecological footprint (Schaltegger & Burritt, 2017). Organizations need accurate environmental reports to establish CE practices because these reports enable an open view of resource consumption and waste disposal activities. The research by Burritt and Schaltegger (2010) showed that organizations with superior environmental accounting methods can detect operational inefficiencies while incorporating sustainable resource systems effectively into their business operations. Companies that deploy and control circular systems to create material loop closures possess circular capabilities (Lüdeke-Freund, Gold, & Bocken, 2019). Businesses equipped with these capabilities focus on creating novel business approaches combined with product redesign efforts and reverse supply chain management and resource retrieval methods. Firms showing high development of circular capabilities will probably adopt CE practices, which leads to lower operational costs and reduced environmental effects according to research conducted by De Angelis, Howard, and Miemczyk (2018). The current corporate sustainability landscape heavily depends on stakeholder pressure, which originates specifically from customers together with regulators and investors and advocacy groups (Freeman, Harrison, & Wicks, 2007). Organizations under significant stakeholder pressure enhance their environmental performance and adopt circular innovations according to the findings of Darnall et al. (2010). The rising expectations of stakeholders regarding corporate disclosure require transparency and accountability, which strengthens the influence of CSR activities and environmental disclosure and circular capabilities on CE implementation.

Significance of Adopting Circular Practices in Contemporary Business Operations for Achieving Long-Term Sustainability

The adoption of CE principles during present-day business operations is essential to sustain business operations in the future. CE system promotes resource efficiency by concentrating on material reuse and recirculation, and re-manufacturing practices to minimize waste production and limit dependency on scarce resources (Lacy & Rutqvist, 2015). The implementation of circular practices leads toward environmental sustainability because it decreases carbon emissions and energy usage to serve as core solutions against climate change (Kirchherr et al., 2018). A business decision to shift from linear to circular strategies enables waste reduction and product service models that produce cost efficiencies (Bocken et al., 2016). Businesses must adopt circular practices because consumer demand for sustainability is rising, which forces organizations to compete and fulfill emerging

environmental requirements (Bocken et al., 2014). The practice implementation of circularity enables organizations to meet stricter environmental regulations, which results in operational sustainability and regulatory compliance (Geissdoerfer et al., 2017). Implementing circular business models allows companies to boost operational effectiveness and minimize risks while inspiring innovative solutions, which leads to future business success in resource-limited environments (Stahel, 2016).

Scope of the Literature Review

The CE framework has emerged as a vital approach in recent years since it allows businesses to support environmental sustainability through waste reduction and resource operation improvement. The research analyzes CSR, Environmental Accounting and Circular Capabilities as drivers that affect CE implementation under particular influence from Stakeholder Pressure. The approach of companies toward sustainability depends significantly on implementing CSR. CSR drives companies to reach beyond financial success by making them evaluate the total environmental and social repercussions of their management activities (Carroll, 1999). Studies indicate businesses dedicated to CSR use CE practices since they focus on social and environmental objectives (Bocken et al., 2014). The culture established by CSR initiatives enables businesses to adopt sustainability practices, which enhances their ability to implement CE principles.

Environmental Accounting serves as the major supporting factor for implementing CE. A business enhances its traditional financial reporting by incorporating environmental costs to gain insights into monetary and ecological operational effects (Schaltegger, 2017). Using this analysis, organizations can identify ways to enhance resource management as well as minimize waste while following the CE principles (Epstein & Roy, 2001).Companies need Circular Capabilities as internal competencies and supporting infrastructure to shift their business model from linear to circular operations. The essential elements for embracing CE are product design for reuse, together with re-manufacturing and recycling capabilities. Companies that demonstrate robust circular capabilities have better prospects of achieving sustainable practice implementation successfully. Stakeholder Pressure influences the relationship between CSR, environmental accounting and circular capabilities on CE adoption. Business sustainability demands become essential for companies because external stakeholders, including consumers and regulators and investors, apply pressure to adopt circular practices and achieve sustainability targets (Freeman, 2010).

Objectives of the Review

The objectives of this literature review includes:

1. To provide a comprehensive understanding of the role CSR, environmental accounting, and circular capabilities play in facilitating or hindering CE.
2. To examine the theoretical and empirical literature on stakeholders pressure and its influence on CE adoption.

Conceptual Framework

Corporate Social Responsibility

Many sectors now view CE practices as essential because they understand the long-lasting environmental and social along with economic benefits they provide through circular strategies. Manufacturers benefit from CE by being forced to transform their production

approach to waste minimization and resource reclamation and energy optimization systems (Geissdoerfer et al., 2017). Manufacturing businesses now create products with simple disassembly capabilities to achieve sustainable goals while saving costs. The retail industry faces a fundamental transformation through circularity, which changes product design and sales and management approaches. Retail businesses are now implementing circular business approaches through their strategy of selling durable reusable items and establishing consumer goods recycling systems. These sustainable practices help environmental sustainability efforts and satisfy the increasing demand for environmentally responsible products (Bocken et al., 2014). The textile and electronics industries, together with many others, accept circularity as their new operational model. The electronic industry now recovers materials from discarded products alongside the textiles sector, which designs durable sustainable products to counter fast fashion environmental impact. The adoption of circular procedures represents a vital solution to manage resource exhaustion and waste disposal, which affects various industries (Schaltegger, 2017).

Organizations now need CSR to be their essential decision-making component because it changes multiple business-level choices. Organizations base their decisions on CSR by using both financial results and social and environmental effects according to Bansal and DesJardine (2014). Organizations supporting CSR integrate sustainability into their core business, resulting in environmental conservation techniques, ethical workforce policies, and local community programs. CSR initiatives targeted at resource reduction together with social equity improvement and stakeholder relationship building lead to better business outcomes and risk management. Adopting sustainable practices depends on CSR involvement, especially when operationalizing within the CE framework. The CE supports businesses in their efforts to minimize waste and extend product lifecycles through resource efficiency measures which correspond to CSR's environmental responsibility objectives. The growing business awareness about economic-environmental balance stimulates CSR efforts to transition organizations from linear to circular business approaches. Companies dedicated to CSR principles establish leadership through CE practices, which include designing products differently and recycling waste, and using renewable materials (Carroll, 1999). CSR initiatives that focus on sustainability improve organizational reputation while bringing valuable ethical investors and loyal customers who contribute to sustained business success.

Environmental Accounting

The field of environmental accounting specializing in measuring and reporting and analyzing the environmental costs measurements associated with corporate operations (Schaltegger & Burritt, 2017). The system brings significant economic data about environmental initiatives, which allows businesses to calculate their environmental impact internally. Through environmental accounting, companies can monitor resource consumption together with waste outputs and environmental emissions to gain better insights into their operational environmental impact. Through this approach, organizations determine the economic viability of their environmental programs that include waste reduction improvements to energy efficiency and adoption of green technology. Environmental accounting enables organizations to measure sustainable business initiatives as economic values, which leads to better decision-making and strategic business-and-sustainability-alignment.

Corporate accountability within sustainability practices depends heavily on environmental disclosure transparency, according to CE principles. Companies must now share their environmental performance data with investors and the three stakeholder groups of consumers and regulators because the emphasis has moved towards resource efficiency and waste reduction, coupled with closed-loop systems. Environmental disclosure transparency strengthens company credibility and builds stakeholder trust, especially within CE, according to Schaltegger & Burritt (2017). Discoverable data allows investors to assess the performance of resource management operations and the degree of waste reduction, together with circular practices in recycling and re-manufacturing as well as product reuse. When businesses present their environmental reports transparently, they receive positive publicly held stock assessments and improved market placement opportunities and additional capital that drives better business outcomes. Companies that show environmental transparency tend to become successful in the long term through risk management of environmental threats and sustainable business opportunity exploration. The assessment of environmental impact together with potential CE practice adoption requires firms to maintain accurate environmental accounting records. Environment accounting allows businesses to assess both direct and indirect environmental implications from their operations through measurements which produce a complete environmental impact overview according to Burritt and Schaltegger (2010). Organizations need this information to locate specific operational areas that need waste reduction and resource conservation and productivity enhancement, which are essential elements of a CE. Companies that track environmental costs in a structured manner will find both inefficiencies and potential circular strategy options by observing aspects, including energy usage, water use and waste output. Environmental accounting accuracy provides companies with a measurement system to assess sustainability performance, which enables tracking circularity targets more efficiently. Organizations use environmental accounting to diminish their environmental consequences as well as develop sustainable circular business operations.

Circular Capabilities

Organizations use circular capabilities as practices and skillful methods, along with resources, to enter and sustain operations within the CE framework. Organizational capabilities for circular systems work to reach maximum resource optimization and waste reduction while maintaining perpetual material and product recycling or reuse. The main practices of circular capabilities include reverse logistics, together with product design for reuse and sustainable supply chain management (Lüdeke-Freund et al., 2019). Companies use reverse logistics as a system to collect goods from users before sending them to manufacturing facilities for regeneration or recycling operations. The practice allows recovery of resources instead of disposal to sustain material cycles. Product design for reuse involves developing products that remain durable and become both repairable and reusable, thus sustaining their life duration and lowering waste production. When products receive circular design, they become reusable by component disassembly, which minimizes dependence on virgin materials. The essential element of sustainable supply chain management in circular capabilities requires supply chain optimization for decreasing environmental affects. The supply chain requires renewable materials selection while decreasing its energy consumption and enhancing waste management across all supply chain operations. Firms establish circular capabilities through their work in innovative solutions and their networks of collaboration and their ability to share information.

Assessing operational transitions to circularity demands companies to evolve their business conduct toward financial profitability alongside social and environmental benefits. Incorporating circular capabilities into a business requires product and process redesign for optimizing resource usage and waste minimization. To establish reverse logistics operations, businesses must create necessary systems for returned goods management while developing relationships with customers along with external organizations. Successful product design for reuse requires design teams comprising sustainability experts and process specialists and product designers to develop products that maintain easy maintainability and disassembly and recyclability. New technologies, along with materials compatible with the CE principles, must be used for this application. Organizations must fully collaborate with suppliers to monitor both sustainability practices and sustainable procurement methods. The complete examination of supply chain environmental affects together with finding waste and energy reduction methods forms the basis of this concept. The implementation of circular market practices by companies leads to multiple advantages, which include reduced operating expenses, improved resource management and strengthened organizational standing in markets. Compliance with regulations along with access to new sustainable markets becomes possible through implementing CE strategies.

Stakeholder Pressure

Quoting Freeman (1984) in his stakeholder theory, businesses maintain obligations towards shareholders while simultaneously meeting the needs of stakeholders connected to or able to influence firm initiatives. The organization needs to consider six key groups of stakeholders: customers, suppliers, investors, employees, regulators and members of the community. Freeman et al. (2007) indicate that stakeholder theory denies the conventional business model, which treats business as a profit-making tool for its owners. Organizations need to choose decisions which negotiate the interests between all stakeholders who matter in their operations. Corporate behavior shows a strong dependence on stakeholder influence since they actively shape organizational decisions about sustainability, along with ethical practices. People who act as customers show an increasing interest in environmental sustainability and CSR because they expect businesses to pursue environmentally friendly operations and maintain open reporting channels. Companies receive influence from their suppliers by receiving environmentally friendly materials together with fair trade initiatives. Long-term investors increasingly emphasize sustainable ESG factors in their investments, so businesses must implement environmentally friendly operational practices. The regulatory system created by regulators implements environmental-related disclosure standards and sustainable practice requirements for business operations. External stakeholder pressure acts as a central driver for both CE practices along with CSR initiatives.

Companies face pressure from stakeholders, which forces them to embrace social and environmental responsibility as explained by Darnall et al. (2010). Multiple entities generate such pressure through their expectations for sustainable practices, including environmentally conscious product demands from customers and regulatory requirements and investor interests in sustainable practices. Organizations must redesign their products after customers show interest in sustainable options, which incorporates CE principles. Environmental raw materials supplied by companies could push businesses into sustainable practice implementation, while suppliers often demand sustainable protocols from end to end. Investors along with financial institutions now view sustainable practice companies as more

resistant to market challenges in the long term, so they drive businesses toward stronger CSR and environmental accountability requirements. Businesses apply circular practices to meet regulatory requirements that include sustainability reporting and carbon emission regulations, thus avoiding legal consequences and financial penalties. The impact of stakeholders acts as a moderator to increase the effectiveness of CSR, environmental accounting and circular capabilities towards CE implementation. Sustainability advocacy by stakeholders strengthens the effect of corporate sustainability initiatives, according to Darnall et al. (2010). About CSR initiatives work better when marketplace pressures from customers and financial backers integrate with company targets so organizations increase their sustainable innovation expenditures. Environmental accounting practices experience better adoption rates along with accurate implementation when regulatory and investor bodies establish requirements to report environmental performance data. Decreased waste and material reuse become more important factors for business model integration when suppliers alongside customers and regulatory authorities strongly urge these circular capabilities. Organizations implement sustainability practices because of stakeholder pressure at the same time. This pressure strengthens corporate sustainability because business success depends heavily on environmental performance.

Circular Economy

CE represents a new economic framework which seeks both waste prevention and improved resource usages. Under CE operating principles, the “reduce reuse recycle” model functions as an alternative to the linear economy that follows “take make dispose” methodology. The system focuses on developing perpetual material exchanges while preventing end-of-use disposal practices. Resource efficiency functions as the intrinsic value along with waste reduction and closed-loop systems promotion within the CE framework. The circular model depends on Resource Efficiency as its key concept. The process requires both limited raw material extraction alongside smart design techniques to increase product durability and repairability and reusability capabilities. Geissdoerfer et al. (2017) state that companies leveraging resource efficiency practices achieve both environmental footprint reduction and cost benefits, together with enhanced innovation. Applying renewable materials alongside sustainable production methods helps to preserve natural resources in order to support environmental protection. CE includes Waste Reduction as one of its important concepts. Circular systems reduce environmental deterioration through the move from disposal toward reuse and recycling. The adoption of waste reduction measures benefits both the environment and creates new income opportunities for companies by recovering reusable resources, which would become waste according to Schaltegger (2017). Product reuse practices with refurbishment operations lower the requirement for fresh materials, thus minimizing the environmental effects that occur in manufacturing.

Under the CE framework, a Closed-Loop System returns used product components to production cycles after the product reaches its end-of-life. The principle strives to remove conventional end-of-life outcomes by implementing methods that maximize material value duration. Manufacturing industries implement this strategy to create re-manufacturing and recycling processes which sustain resource flow from operations. Bocken et al. (2014) describe how manufacturing companies achieve sustainable practices by implementing strategies that implement product take-back systems and component reuse for creating closed-loop operations that minimize fresh material and energy usage. Many different sectors

now view CE practices as essential because they understand the long-lasting environmental and social along with economic benefits they provide through circular strategies. Manufacturers benefit from CE by being forced to transform their production approach into waste minimization and resource reclamation and energy optimization systems (Geissdoerfer et al., 2017). Manufacturing businesses now create products with simple disassembly capabilities to achieve sustainable goals while saving costs. The retail industry faces a fundamental transformation through circularity, which changes product design and sales and management approaches. Retail businesses are now implementing circular business approaches through their strategy of selling durable reusable items and establishing consumer goods recycling systems. These sustainable practices help environmental sustainability efforts and satisfy the increasing demand for responsible products (Bocken et al., 2014).

The textile and electronics industries, together with many others, accept circularity as their new operational model. The electronics industry recovers valuable materials from discarded devices and the textile industry designs products that can last long because both industries aim to combat environmental damage from fast fashion. Adopting circular procedures represents a vital solution to manage resource exhaustion and waste disposal, which affects various industries (Schaltegger, 2017).

Review of Empirical Literature

Corporate Social Responsibility and Circular Economy

Empirical studies show how CSR establishes a link with the adoption of CE principles. Bansal and DesJardine (2014) explain CSR adoption leads businesses to embrace CE principles in their operations. The alignment exists since CSR involves environmental, social governance (ESG) responsibilities that naturally support resource efficiency and waste reduction objectives of the CE. Research proves that organizations with heightened CSR responsibilities establish sustainable business plans alongside innovation-based CE model adoption. The transition toward circularity gets supported by CSR initiatives according to multiple case studies. Manufacturing, along with retail businesses, has transformed their supply systems into more sustainable operations by integrating waste minimization with material and product recycling, as stated in CSR programs. Implementing such changes results in closed-loop production systems, which represent key circularity principles. Firms that establish their CSR-based environmental initiatives have achieved lower material usage as well as decreased energy consumption while moving toward CE practices.

Implementing CSR leads businesses to enact particular sustainability programs while creating an organizational cultural transformation. Organizations with sustainability integration at their core level up their commitment to build sustainable business frameworks. The business models emphasize sustainable long-term value generation by implementing circular operations such as reverse supply chain management and green product development and sustainable supplier alliances. The CSR program allows businesses to transcend basic compliance standards by promoting complete operational and product lifecycle transformations that support CE principle adoption worldwide.

Environmental Accounting and Circular Economy

Environmental accounting plays a pivotal role in driving the adoption of CE principles by measuring, managing, and reporting a firm's environmental impact. Empirical studies have consistently demonstrated that robust environmental accounting practices provide the data and transparency necessary for businesses to transition from linear to circular models. Schaltegger and Burritt (2017) emphasize that firms with mature environmental accounting systems are better positioned to identify opportunities for resource efficiency, waste reduction, and closed-loop production—key components of CE. Several case studies illustrate the connection between environmental accounting and CE adoption. Companies that systematically track their environmental impact have discovered ways to repurpose waste, redesign products for longevity, and adopt reverse logistics. For instance, firms in the manufacturing and electronics sectors have utilized life cycle assessments (LCAs) to identify opportunities to reduce carbon footprints, decrease material usage, and create new business streams through product take-back programs and remanufacturing. These initiatives not only contribute to sustainability goals but also generate cost savings and new revenue streams.

There are various challenges that emerge when incorporating environmental accounting methods into circular strategy development. The process of measuring environmental results such as carbon emissions alongside waste reduction demands substantial expenditures on data measuring technology. Several obstacles prevent the transparent reporting of metrics because different countries maintain diverse global standards and stakeholders seek varying metrics from organizations. Few companies which successfully exceed obstacles to achieve transparent reporting gain improved stakeholder faith and better involvement. The transparent approach stimulates both innovative solutions and fastens the development of CE strategies so businesses can meet worldwide sustainability targets.

Circular Capabilities and Circular Economy

The establishment of circular capabilities functions as a key enabling factor for making CE principles operationally succeed. Firms that develop capabilities for recycling operations along with re-manufacturing processes and product redesign for reuse have been proven to execute CE strategies better. Combining these abilities lets businesses restore the resource cycle while minimizing discards and environmental pollution. The findings of Lüdeke-Freund et al. (2019) show that organizations with enhanced circular abilities achieve better performance results against their competitors for both resource effectiveness and sustainability innovation. Circular capabilities achieve their strongest development through technological innovation. Modern business processes now use blockchain technology for supply chain tracking and AI and IoT platforms alongside predictive maintenance capabilities to help meet the goals of CE. AI and IoT solutions when implemented by companies improve product cycle monitoring which allows better material repurposing and eliminates the requirement for fresh materials.

Business model innovation conducts a vital function in this process. Business models such as product-as-a-service and pay-per-use boost product life duration and induce customers to select reuse before disposal. The new business models give companies the ability to direct products after use, which enables recycling and re-manufacturing processes. Partnerships with sustainability-oriented suppliers improve firms' capabilities to acquire

recyclable and biodegradable materials, therefore promoting CE practices. Companies that build circular capabilities as part of their operations will connect their activities to worldwide sustainability goals and decrease operational perils, and generate additional revenue streams within a circular economic framework.

Stakeholder Pressure and Circular Economy

The CE, along with other sustainable practices, experience their adoption mainly because of stakeholder pressure. Multiple research studies indicate that organizations which face extensive stakeholder pressure from regulatory bodies together with customers and investors alongside advocacy organizations implement circular systems. Darnall et al. (2010) explain that regulatory requirements, combined with customer demand for environmentally safe practices, push businesses to transform their established models by adding CE principles. Environmental regulations from regulators enforce stringent policies that force organizations to minimize waste while enhancing resource efficiency as well as adopting circular systems. Environmentally aware customers, together with investors, expect businesses to demonstrate truthful sustainability practices while they demand responsible actions at the same time. Exterior forces stimulate organizations to choose sustainable methods and direct their future business choices. The intervention between CSR and environmental accounting with circular capabilities toward CE adoption emerges through stakeholder pressure according to the research findings. Companies achieve better stakeholder satisfaction through strategic CSR practices with clear environmental accounting, which enhances their successful adoption of CE principles. A firm's ability to respond to stakeholder pressure leads to better circular capabilities alignment among its circular practices and circular industry goals. Companies which interact with their stakeholders gain enhanced potential to fast-track their adoption of sustainable circular business models through external pressure.

Synthesis of Literature

Direct Effects of CSR, Environmental Accounting, and Circular Capabilities on CE

Studies in the literature evaluate the direct causal relationships between CSR along with environmental accounting and circular capabilities development on CE adoption. The implementation of sustainable corporate culture through CSR initiatives facilitates firms to establish responsible practices that comply with CE principles. Organizations dedicated to social responsibility tend to focus on resource efficiency and waste reduction because these elements constitute fundamental requirements for implementing circular models according to Bansal and DesJardine (2014). Enforcing CSR initiatives helps organizations maintain transparency while achieving responsible sourcing which deepens the synergy between corporate strategies and CE implementation. Evaluating environmental impact and assessment of environmental financial values depends on environmental accounting systems. Robust environmental accounting systems developed by Schaltegger and Burritt (2017) grant businesses the ability to detect resource use inefficiencies, which leads to the discovery of closed-loop process potential. Business transparency enables better corporate accountability and continual growth while enabling companies to get circular solutions that rely on data analytics.

Implementing CE receives direct benefits from circular capabilities which involve reverse logistics together with re-manufacturing and product design strategies for reuse functions to enhance material recirculation while extending product use life. According to

Lüdeke-Freund et al. (2019) companies which have established strong circular capabilities maintain superior performance in handling regulatory requirements and market trends during their transition to sustainable growth through innovative business model development. Combining CSR practices with environmental accounting and circular capabilities defines business operational strategies to integrate circularity, which leads to the sustainable economic transition.

Moderating Role of Stakeholder Pressure

Employee pressure functions as a necessary element to boost sustainability practice effectiveness in business environments, particularly when focusing on the CE model. Multiple studies have validated that recipient stakeholders, including external regulators together with customers and investors and special interest groups, succeed in directing corporate conduct through sustainability programs (Freeman, 2010). Stakeholder pressure increases the benefits of CSR initiatives, together with environmental accounting activities and circular capabilities, to drive widespread adoption of CE strategies. Stakeholder demands form the basis which determines both how extensively and genuinely companies commit to sustainable corporate practices in their CSR initiatives. Darnall et al. (2010) states that organizations facing elevated pressure choose to launch vision-driven CSR programs that embrace CE doctrine focusing on minimizing waste and optimizing operational resources. Long-term environmental targets earn priority over short-term earnings within these organizations, as this leads them to implement circularity practices across their entire business operations.

The pressure from stakeholders enhances the need for environmental accounting systems. Organizations that share genuine environmentally related information with both their stakeholders and regulators can build dependable stakeholder relationships and achieve regulatory obligations. Firms under elevated observation implement advanced environmental accounting systems which let them both monitor their ecological influence together with circular possibilities more accurately, according to Schaltegger and Burritt (2017). Business stakeholders create pressure that drives organizations to develop circular capabilities through product redesigns and reverse supply operation implementation. Organizations under external pressure develop these capabilities because they need to fulfill sustainability expectations, according to Lüdeke-Freund et al. (2019). Stakeholder pressure serves as an initiative to enhance the effects between CSR activities and environmental accounting along with circular capabilities toward CE adoption, which leads to more sustainable business operations.

Research Gaps

The expanding literature about CSR, environmental accounting and circular capabilities as well as CE, still faces multiple unresolved research areas. The study has a significant gap because it fails to adopt a unified examination method that views these factors working together to generate circular practice adoption. Current research about these elements studies them from CSR's relationship to environmental metrics and operational capabilities for sustainable transformation (Schaltegger & Burritt, 2017; Bansal & DesJardine, 2014). Current research fails to thoroughly study the impact of variables which change according to specific industries. Research examining universal CE strategies exists but scientists have not investigated sector-specific challenges and favorable conditions that

manufacturing and technology, retail among others, experience (Lüdeke-Freund et al., 2019). Investigations focused on particular industries would offer specialized recommendations for circular business implementation, particularly when operating within extensive supply networks.

The sparse quantity of longitudinal studies exists that analyze the extended influence of CSR, along with environmental accounting and circular capabilities, on CE adoption. Research using current cross-sectional data provides only static views of sustainability practices at different firms. Scholars need longitudinal research to comprehend better how stakeholder forces combine with regulatory changes and technological evolutions to affect firms' transitioning into circular sectors (Darnall et al., 2010). Future investigations need to explore the ways emerging technological platforms like blockchain alongside artificial intelligence and IoT can boost environmental account accuracy and strengthen circular functional abilities. The investigation of these areas will provide more understanding of the development of sustainable and resilient business models of organizations.

Conclusion

This study identifies the influence of CSR, environmental accounting, and circular capabilities in the adoption of circular economy practices in the Saudi Arabian textile industry. It shows that CSR can trigger ethical business operations and sustainable operations, where businesses become resource-efficient and waste is reduced for profit purposes. Environmental accounting provides key accounting tools to quantify ecological impacts, support transparent reporting, and inform decision-making in support of CE. Circular capabilities, i.e. innovative product design and reverse logistics, allow firms to design efficient, waste-minimum systems that improve competitiveness and resilience. Moreover, that pressure from stakeholders comes from consumers, regulators, and investors, and that is why companies are under pressure to integrate sustainability into their core strategy.

With the acquirement of such insights from a CSR lens, businesses in the textile sector ought to incorporate CSR in their decision-making to create an environment where sustainability is a culture. Having sound environmental accounting systems in place will help to monitor and optimize the use of resources well. CE can be streamlined through capabilities in training and technology adoption, such as AI or blockchain, in order to develop circular capabilities. Finally, engaging stakeholders through transparent communication can strengthen the stakeholder's trust and support for sustainable initiatives. Then, these steps can help in long-term economic development and further the industry in being regulatory compliant and environmentally safe.

References

Bansal, P., & DesJardine, M. R. (2014). Business sustainability: It is about time. *Strategic Organization, 12*(1), 70–78.

Bocken, N. M. P., Short, S. W., Rana, P., & Evans, S. (2014). A literature and practice review to develop sustainable business model archetypes. *Journal of Cleaner Production, 65*, 42–56.

Bocken, N. M. P. (2014). A literature and practice review to develop a conceptual framework for circular business models. *Journal of Cleaner Production, 65*, 1–14.

Bocken, N. M. P., de Pauw, I., Bakker, C., & van der Grinten, B. (2016). Product design and business model strategies for a circular economy. *Journal of Industrial and Production Engineering, 33*(5), 308–320.

Burritt, R. L., & Schaltegger, S. (2010). Sustainability accounting and reporting: Fad or trend? *Accounting, Auditing & Accountability Journal, 23*(7), 829–846.

Carroll, A. B. (1999). Corporate social responsibility: Evolution of a definitional construct. *Business & Society, 38*(3), 268–295.

Darnall, N., Henriques, I., & Sadorsky, P. (2010). Adopting proactive environmental strategy: The influence of stakeholders and firm size. *Journal of Management Studies, 47*(6), 1072–1094.

De Angelis, R., Howard, M., & Miemczyk, J. (2018). Supply chain management and the circular economy: Towards the circular supply chain. *Production Planning & Control, 29*(6), 425–437.

Epstein, M. J., & Roy, M. J. (2001). Sustainability in action: Identifying and measuring the key performance drivers. *Journal of Business Ethics, 33*(3), 151–165.

Freeman, R. E. (2010). *Strategic management: A stakeholder approach.* Cambridge University Press.

Freeman, R. E., Harrison, J. S., & Wicks, A. C. (2007). *Managing for stakeholders: Survival, reputation, and success.* Yale University Press.

Geissdoerfer, M., Savaget, P., Bocken, N. M., & Hultink, E. J. (2017). The circular economy: A new sustainability paradigm? *Journal of Cleaner Production, 143*, 757–768.

Hart, S. L., & Dowell, G. (2011). A natural-resource-based view of the firm: Fifteen years after. *Journal of Management, 37*(5), 1464–1479.

Kirchherr, J., Reike, D., & Hekkert, M. (2017). Conceptualizing the circular economy: An analysis of 114 definitions. *Resources, Conservation and Recycling, 127*, 221–232.

Lacy, P., & Rutqvist, J. (2015). *Waste to wealth: The circular economy advantage.* Palgrave Macmillan.

Lüdeke-Freund, F., Gold, S., & Bocken, N. M. (2019). A review and typology of circular economy business model patterns. *Journal of Industrial Ecology, 23*(1), 36–61.

Schaltegger, S. (2017). *Contemporary environmental accounting: Issues, concepts, and practice.* Routledge.

Schaltegger, S., & Burritt, R. L. (2017). *Contemporary environmental accounting: Issues, concepts, and practice.* Routledge.

Stahel, W. R. (2016). *The performance economy.* Springer.