The Impact of Lean Leadership on SME Sustainability in Iraq

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ABSTRACT.

Small and medium-sized enterprises (SMEs) are critical for job creation, economic growth, and private sector development. But they are frequently limited in their own long run sustainability by poor access to finance, poor managerial and leadership skills, lack of skills and knowledge, and vulnerability to economic and environmental disturbances. One group in particular suffers, a large number of Iraqi SMEs with a unique and resource-constrained business conditions. While Lean practices can result in increased operational efficiency and lower waste, maintaining them in practice relies on leadership practices that promote organizational learning, employee engagement, and coordination between corporate goals and day-to-day operations. This theoretical paper presents a framework analysing the proposed lean leadership and sustainability link among Iraqi SMEs. While lean leadership is characterised by a culture of continuous improvement, as well as the development and empowerment of staff and the alignment of strategy and practices, SME sustainability is analysed in economic, environmental, and social terms. Based on the Natural Resource-Based View and a structured integrative literature review and theory synthesis , this framework suggests that lean leadership could serve as a contributor to sustainability through minimisation of operational waste, better management of scarce resources, enhanced employee capacity and sustainability in decision making of the organization. The paper moves the focus from lean tools to the leadership capabilities needed for sustainable SME performance and the study can serve as a foundation for future empirical research in Iraq.

Keywords: Continuous improvement, Employee empowerment, Iraqi SMEs, Lean leadership, SME sustainability and strategic alignment.

INTRODUCTION

Small and medium-sized enterprises (SMEs) are an important part of contemporary economies, due to the employment of entrepreneurs who contribute not only to the economy but also are involved in entrepreneurship, innovation and regional development and economic diversification. Apart from their economic capacity, SMEs are being requested to become more resilient and to make a contribution to the environmental and social sustainability measures as well. Yet SMEs often have more significant difficulty securing the finance, capabilities, tools, knowledge, skills, and resources to adopt sustainable practices, compared with big firms. It was emphasized in a recent OECD (2023) that SMEs rely on the external network for strategic resources, building their productivity, resilience, innovation, and sustainability. Sustainability for SMEs goes beyond profits or profits per unit, to long-term viability. It entails the ability of an enterprise to achieve economic profitability while mitigating the negative impact on the environment and creating positive results for employees and stakeholders. Hence, sustainable SME operations can be seen in three interlinked lines: economic, environmental and social sustainability.

Economic sustainability is a function of productivity, cost containment, competitiveness, quality and long-term continuity. Sustainable development focuses on energy and material use, waste and sustainable reduction of adverse environmental impacts. Social sustainability is concerned with employee development, participation, occupational satisfaction, workplace safety and responsible relationships with stakeholders. Given the small and medium-sized enterprise business context (SMEs) being resource constrained, balance between these dimensions needs managerial management methodologies that integrate high efficiency with sustainable, responsible, and sustainable decision making. This is a serious matter in Iraq, especially when private sector activities exist within a difficult institutional and economic setting. Access to finance is a concern for Iraqi SMEs, and as such, they also lack institutional support, regulatory burdens, and financial and non-financial services. Despite previous assistance programs having provided insufficient private sector development, a World Bank assessment prioritizes access to finance as a key determinant of SME entry, growth, and survival in Iraq, acknowledging that it is one of the key drivers of development in the country (World Bank, 2023b). Constraints such as these result in greater demands for management modalities to facilitate the enhancement of SMEs' own internal capabilities, minimize wasteful use of resources, training staff, and enhance their resilience to economic and operational uncertainties. Lean thinking is one potential answer to these problems. On the whole Lean practices are focused on customer value creation with a reduction in resource usage, waste and to improve processes with the aim of creating value to the customers, solve operational problems and maintain performance. Lean in the SME context can contribute to sustainability by means of cost minimisation, the minimisation of defects and waste, the enhancement of resource conservation and quality and productivity. Previous research has indicated that Lean can play an important role in different dimensions of SME sustainability, especially if integrated with sustainability orientated innovation and larger organizational improvement initiatives (De et al, 2020).

However, implementing lean tools does not automatically make organizational improvement ongoing. Lean programmes run into their wane or even vanish entirely when, instead of serving as a permanent organizational philosophy, managers focus on short-term cost-cutting projects with lean as their guiding principle. Sustainable lean implementation involves managers who possess growth-driven traits, are an encourager of employee development, capable of solving problems, and link strategic focus and daily work. Recent scoping review (Hilverda et al. 2023) has verified that lean leadership activities are related with the continuous-improvement maturity status and leadership as a central player in the innovation and implementation of lean principles. Lean leadership hence, lean management focuses less on the technical tools of lean management and more on the actions and competences of leaders. Lean leaders are also expected to build people capacity, embrace learning, stay in touch with workplace processes, promote joint problem-solving and ensure that improvement objectives are consistently operationalized. Lean leadership is thus conceptualized as three interlocking elements in the current approach: culture of continuous improvement, employee development and empowerment, and alignment with strategy and operations. Continuous improvement culture communicates a leader’s commitment to knowledge, experimentation, problem solving and continuous waste reduction. There are 2 major aspects of employee development and empowerment that focus on building employees’ capabilities, as well as their ability to be involved in decisions and problems. Strategic and operational alignment means connecting long-term organizational goals with the workplace practices, responsibilities, and daily improvement activities of the leader. The relevance of leadership in regards to SME sustainability is backed by recent studies demonstrating that leadership competences have direct effects on innovation, performance, adaptability and the ultimate sustainability of the organization. Some evidence from a developing-country manufacturing environment shows that entrepreneurial leadership is related to firm performance and can indirectly influence firm sustainability through an organization's capability to innovate and enhance organizational capabilities (Alharthi, 2025).

the literature has largely focused on transformational leadership, sustainable leadership, entrepreneurial leadership, lean manufacturing, or individual lean practice. By contrast less emphasis has been given to lean leadership as an enabler for a broader organizational capability that can, directly, contribute to the better economic, environmental and social sustainability of SMEs. In addition, much of the lean and sustainability literature has focused on manufacturing and supply chain processes in developed or emerging countries, aside from Iraq. While these studies build important links between lean practices and sustainable

performance, they do not articulate how lean principles can be sustained by leadership behaviours in case of Iraqi SMEs under financial, institutional, and capability constraints. Thus, the direct conceptual connection between lean leadership and sustainable SME practices remains unexplored in the Iraqi context. This is both a contextual gap, as Iraq has very limited evidence available to address this, and conceptual gap, as leadership has often been treated as a supporting factor rather than a focal explanatory construct. To mitigate the above gaps in our understanding, the purpose of this paper is to construct a conceptual model to show the influence of lean leadership on the sustainability of the SMEs in Iraq. It does more so and focuses on the impact that culture of continuous improvement, development and empowerment, strategic and operational alignment could have on the economic, environmental and social dimensions of SME sustainability.

This paper utilizes the Natural Resource-Based View in illustrating that lean leadership can be a capability in the enterprise that allows for resource deployment, waste management, employee development and sustainability considerations to be incorporated into corporate strategy, which are essential to sustainability considerations. The paper offers contributions in three main fields. First, it adds to the lean literature by moving the focus away from lean tools and production practices and towards the leadership skills necessary to sustain continual improvement. Secondly, it links lean leadership with 'multidimensional' SME sustainability, economic, environmental, and social. Third, it presents an Iraq-specific conceptual framework for the framework-driven study of these issues in the future which not only would provide a guide to empirically informed policy makers (as owners, managers, and all stakeholders in Iraqi enterprises), but might also provide practical knowledge for policy makers in order to strengthen the resilience and sustainability of Iraqi SMEs. The rest of the paper is organized as follows. The next section describes the conceptual-review process of literature search and synthesis. This is then coupled with a discussion on lean leadership, SME sustainability, and the theoretical framework of the relationship we want to propose. This paper next generates research ideas and then introduces the concept. Finally, we examine the implications for theoretical theory and practice, limitations, future research directions and ideas and conclusions.

LITERATURE REVIEW

Lean Leadership

Lean leadership is one of the leadership dimensions of lean management through which lean principles are passed on through sustained organisational behaviours, routines, abilities, and capabilities. As a whole, Lean means creating more value for the customer while using fewer resources and reducing what is not adding value and experimentation for the continuous improvement of work processes. But sustainable lean implementation will only go so far beyond the adoption of technical tools like 5S, value-stream mapping, visual management, standardised work, or just-in-time methods. Leaders who link these tools with employee learning, organisational learning, customer value, and continual improvement (Dombrowski & Mielke, 2013).

And (Dombrowski & Mielke (2013) introduced the term Lean Leadership as a systematic managerial method for the execution, maintenance, and continuous improvement support of a lean production system, supporting its application and maintenance. They propose five fundamental core principles which include a continuous improvement culture, self-development, employee qualification, workplace-based leadership, and goal and performance indicator setting. These principles suggest that the concept of lean leadership encompasses more than the eradication of operational waste—the aim is to create the organisational and the human conditions that ensure improvements can be sustained. At the heart of lean leadership is a transition away from command management and to coaching, developing employees with the right skills and problem solving within a team. Lean leaders don't just tell employees to hit targets in advance.

They assist employees in getting a handle on processes, finding the root causes, testing potential solutions, and gaining lessons from execution issues. Thus, leadership responsibility shifts from providing all answers to developing employees'/teams' problem-solving capabilities (Aij & Teunissen, 2017). Emerging evidence is that leadership is an essential underpinning of creating and maintaining continuous-improvement maturity. (Hilverda et al. (2023) also argued that Lean Leadership promotes continuous success in ensuring continuous improvement through direction, employee development, learning support, resources, and a

climate in which improvement activities become part of the everyday routine activities. Their critique also reveals that continuous improvement is unlikely to evolve well when managers reduce the process to the level of a one-time project or offload it entirely to improvement specialists. Lean leadership is of utmost importance in SMEs because most organisation's decisions about corporate priorities and employee behaviours, resource deployment, and readiness to change are typically made by the owner-manager or senior manager.

SMEs also have fewer 'open channels of communication' and fewer levels of hierarchy than big businesses, which could favour faster decision-making and closer collaboration with employees. But they have relatively little funding, technical and managerial resources and as such, their leadership commitment is particularly crucial for a successful implementation of lean practices (Alefari et al., 2020). The work of manufacturing SMEs in the United Arab Emirates proves that in a developing-economy context, leadership and employees are key to successful lean implementation. (Alefari et al. (2020) has found that the extent of lean adoption in SMEs can be influenced by management understanding, employee engagement, communication, and the leadership capacity for organisational change. It is noted that implementation of lean tools may result in piecemeal or fleeting results if the leadership does not possess such support. Following the lean leadership principles identified in the literature, in this work we have focused on the three interrelated dimensions in which leadership behaviours are related to: continuous improvement culture, employee development and empowerment, and strategic and operational alignment. Continuous improvement culture is leadership's commitment to learning, problem solving, experimentation and long-term improvement. Employee development and empowerment is leadership's approach towards employee qualification, coaching, capability development, participation and workplace problem-solving. Strategic and operational alignment is leadership's contribution to organisational goals and performance priorities and daily improvement. These three dimensions are an integrated product of lean leadership principles and are not different from the other dimensions of leadership.

SMEs Sustainability

SME sustainability denotes the capacity of a small or medium-sized organization to pursue long-term survival while generating economic value, reducing an adverse environmental impact, and fulfilling obligations to employees and public interests. Indeed, sustainability is far beyond short-term financial results. It is about whether an organisation is fit to compete, adapted to changing environment or market, efficient and resourceful, able and willing to maintain its labour resource and maintain relationships that form a backbone of its functioning (Malesios et al., 2021). Several approaches have appeared that discuss SMEs` sustainability from the triple-bottom-line: economic, environmental, and social. These are interconnection and not separation or stand alone. Economic vulnerability could impede SME's ability to pursue investments in environmental or staff-oriented advancements, whilst poor environmental or social habits could result in decline in productivity, image, employee loyalty and longer-run competitive advantage (Kosasih et al., 2023a).

Economic Sustainability

Economic sustainability is the capacity of an SME to sustain profitability, productivity, quality, competitiveness, market continuity, and financial resilience. This dimension is particularly vital for SMEs; they typically work on limited funding that is out of reach. As a result, operational inefficiencies, defects, under-allocated inventory, slow tasks, and waste of resources could challenge profitability as well as operational survival (De et al., 2020). But the economic sustainability can't come down to short-term cost savings. While a firm may cut costs, it could at the same time reduce its employees' ability to maintain quality, improve product quality, establish customer goodwill, or introduce new initiatives. Sustainable economic performance depends on a combination of present efficiency and the provision of capabilities that are sustained for the organization to compete and innovate through the future (Dey et al., 2020).

Environmental Sustainability

Environmental sustainability is the pursuit of reducing damaging environmental effects related to company operations. This would cover the efficient use of materials, energy, water, and others, also and reduction of the waste, emissions, pollution, defects and non-necessary use. The importance of environmental sustainability is growing for SMEs as resource efficiency can lower cost of operation and contribute in meeting the needs of stakeholders and governmental regulations (Kosasih et al., 2023a). In particular, lean and environmental practices can enhance each other as several types of operational waste also contribute to environmental problems. And failures use further resources and waste energy when materials can be wasted; wasting inventory needs storage and transport; inefficient processes result in increased resource consumption; and moving and waiting for goods unnecessarily produce unnecessary use of energy resources. However, lean and environmental sustainability are not the same thing. Lean practices need to be deliberately linked to environmental targets to ensure that operating efficiency translates into a visible environmental benefit by operationalized ecological performance (Kosasih et al., 2023a, 2023b).

Social Sustainability

Social sustainability includes employee well-being, occupational health and safety, skills development, participation, fair treatment, job quality, and constructive relationships with communities and other stakeholders. In SMEs, employees often hold specialised experiential knowledge of customers and daily operations. Their involvement is therefore important not only as an ethical principle but also as a source of organisational learning and improvement (Aij & Teunissen, 2017; Malesios et al., 2021). A sustainable lean system should not achieve efficiency by intensifying workloads or placing additional pressure on employees. Instead, it should improve the design of work, reduce unnecessary activities, develop employee capabilities, and provide employees with meaningful opportunities to participate in problem-solving. Lean leadership is relevant to social sustainability because its principal behaviours—coaching, empowerment, respect, communication, and workplace engagement—can strengthen employee competence and organisational commitment (Aij & Teunissen, 2017; Hilverda et al., 2023). Recent systematic evidence similarly confirms that lean implementation is generally associated with economic, environmental, and social sustainability outcomes, but the evidence is uneven across the three pillars. Pierli et al. (2025) found that the economic and environmental dimensions have received greater research attention than social sustainability. This imbalance strengthens the need for conceptual frameworks that explain how leadership can support all three dimensions simultaneously.

Relationship between Lean Leadership and SME Sustainability

Lean Leadership and the Sustainability of Small and Medium-Sized Enterprises (SMEs)

Lean leadership enhances SME sustainability by translating lean principles into organisational routines that increase resource efficiency, employee capability, learning, and adaptability. Technical lean practices identify waste but leaders decide whether employees can engage in problem solving, whether improvement activities are adequately supported, and whether performance improvements are linked to wider sustainability goals (Dombrowski & Mielke, 2014; Hilverda et al., 2023).

From an economic standpoint, lean leadership guides SMEs to eliminate defects, delays, excess inventory, duplicated work, and other non-value-adding activities. Such enhancements do not only reduce costs, but also contribute to improved productivity, quality, delivery reliability, and customer responsiveness (Dey et al., 2020).

Regarding environmental issues, lean managers can integrate resource optimization and waste minimization into the everyday work of improvements. Through integrating lean work with environmental focus, SMEs may minimize material and energy waste and enhance sustainability performance (Kosasih et al., 2023a, 2023b).

It is also socially empowering, coaching and empowering employees, communicating effectively, and solving problems as a team. This helps with development, trust, participation, and embracing of organisational change in favour of employees (Aij & Teunissen, 2017; Alefari et al., 2020).

Lean management also enhances organizational flexibility through the promotion of ongoing learning and the quicker response to changes in the organization's operations and the market. As such, its contribution goes beyond cost decrease to uplifting the economic, environmental, and social future of SMEs.

Iraqi SME context

The Iraqi context provides a rich platform for assessing the link between lean leadership and sustainability of SMEs. Iraq's private sector is highly dependent on oil, private sector development has been constrained, access to finance is limited, and institutional and business environment constraints remain. Such conditions make it difficult for SMEs to invest in technology, employee development, formal management infrastructure and long-term sustainability (International Finance Corporation [IFC], 2022; World Bank, 2023).

One of the most important contextual features of the Iraqi private sector is the high level of informality that is very obvious. The International Labour Organization (ILO, 2021) says that much of the private sector in Iraq is informal and shows that legal, administrative, labour-market and institutional obstacles prevent firms and workers from entering the formal sector. Similarly, (Moosa et al. 2023) have pointed out that informal businesses are prevalent in major Iraqi cities (the World Bank's Informal Sector Enterprise Survey) and in Baghdad and Basrah as well. This may limit the use of formal managerial procedures, employee development processes and performance and improvement practices. This suggests that leadership commitment may be especially important for institutionalising continuous improvement and disciplined organisational routines in SMEs where formal management systems are less developed from the perspective of the present study.

In some sense, there is a relevant context to ownership structure too. A World Bank study of the private sector in Iraq revealed that almost all firms in the formal private sector are micro and small family-owned businesses (World Bank, 2023). Most decisions in such organizations may be driven by owners and senior managers and therefore the strategic and operational decisions might be very much influenced by those. This concentration of decision-making in principle would make lean leadership a more effective model as owners can directly influence employee participation, resource allocation, continuous improvement and how that is connected with longer-term sustainability. Conversely, highly concentrated decision-making can be considered a restriction for employee empowerment when it is so centralized in leadership.

Institutional fragility also shapes the working conditions of Iraqi SMEs. World Bank assessments indicate that Iraq has experienced repeated conflict, economic instability, and poor governance and institutional structures and a variety of overlapping and sometimes inconsistent frameworks for private sector support (World Bank, 2023). These conditions can create uncertainty for SMEs and hinder their long-term planning and capability development processes. Lean leadership should not be considered to be an alternative to a more comprehensive financial, regulatory or institutional reform. Rather, it may be seen as the internal capacity to use existing resources, improve employee participation, maintain continuous improvement and adaptability in uncertain scenarios.

The relationship between lean leadership and SME sustainability should therefore be viewed in the context of the institutional and organisational context in Iraq. Informality, family ownership, concentrated decision-making, resource constraints and institutional uncertainty are all important contextual conditions that may influence lean leadership and what they add to the economic, environmental and social sustainability of the organisation. This contextualisation is in contrast to studies that are more formalised and institutionally consistent and studied in the formalised and institutionally stable business landscape.

Natural Resource-Based View (NRBV).

The Natural Resource-Based View (NRBV) serves as a theoretical basis for the link between lean leadership and SME sustainability. Originating from Hart (1995) and the Resource-Based View, the NRBV states that the long-term competitive advantage of a firm will be directly influenced by its capacity to develop resources and capabilities that respond to the constraints and opportunities in the natural environment. Hart (1995) identified three interrelated strategic capabilities: pollution prevention, product stewardship, and sustainable development. These capabilities are centered around the efficient use of resources, waste and pollution reduction, stakeholder engagement and the integration of sustainability into the organisation's strategy.

The NRBV is particularly relevant for lean leadership because lean leadership can be viewed as an organizational capability that enables SMEs to deploy their limited resources more efficiently and embed continuous improvement and responsible resource use in everyday organizational practices. Rather than using lean tools from the perspective of a mechanical approach, lean leadership focuses on managerial commitment, employee development, problem-solving, organizational learning and operational alignment with longer term strategic objectives (Dombrowski & Mielke, 2013; Hilverda et al., 2023). These leadership behaviors can help to create organisational routines that provide for efficient use of materials, less waste and a more systematic consideration of sustainability in the decision-making process.

From an economic sustainability perspective, continuous improvement and disciplined resource utilization can be used in order to improve productivity, quality, cost efficiency and organisational continuity. From an environmental sustainability perspective, leadership practices which are about waste reduction and responsible resource management are consistent with the pollution-prevention and sustainable-development philosophy of NRBV. From a social sustainability perspective, employee development and empowerment, participation and organizational learning are also organizational resources with which sustainability-oriented practices can be embedded and maintained. Thus, the NRBV serves as the theory-based framework in this study as well as the economic, environmental and social aspects to which lean leadership can contribute.

This theoretical model is especially important to Iraqi SMEs, which are under significant resource and institutional constraints. With this in mind, sustainability may depend not only on access to additional resources but on how effectively existing resources, employee knowledge and organizational capabilities are developed and deployed. Lean leadership may therefore allow Iraqi SMEs to enhance their internal capacity to improve in the area of continuous improvement, responsible resource utilization, employee involvement and strategic alignment. As a result, the NRBV lays out an intuitive theoretical explanation for the relationship between lean leadership and the multidimensional sustainability of Iraqi SMEs.

Research Gap

Although there is a lot of literature on lean management and sustainability, little is known about how lean leadership contributes to the multidimensional sustainability of SMEs. Most previous studies have focused on lean practices, sustainability-oriented innovation and integrated lean–green approaches on organizational and sustainability performance (De et al., 2020; Dey et al., 2020; Kosasih et al., 2023a, 2023b). Although these studies contribute significantly to operational improvement and sustainable performance, they are different from an explicit examination of lean leadership as an organisational capability. Hilverda et al.also stressed the role of lean leadership for continuous improvement maturity whereas other studies focused on economic and environmental dimensions of sustainability (Pierli et al., 2025). All these research streams are important foundations but do not explain how the different dimensions of lean leadership can contribute to economic, environmental and social sustainability in a single conceptual framework. The present study bridges this conceptual gap by identifying three dimensions of lean leadership (continuous improvement culture, employee development and empowerment and strategic and operational alignment) and proposing differentiated relationships between these dimensions of leadership and the three pillars of SME sustainability. Based on NRBV (Hart 1995), the study views lean leadership as an organizational capability that may support resource efficiency, capability development of employees and integration of sustainability considerations in managerial and operational decision making .The contribution of this study is to combine

dimension specific lean leadership propositions with multidimensional understanding of sustainability in resource constrained and institutionally challenging Iraqi SMEs. Instead of assuming that lean practices will lead automatically to sustainable outcomes the proposed framework shows how leadership related mechanisms might support such outcomes. These relationships are theoretical propositions for future empirical testing.

CONCEPTUAL FRAMEWORK

The proposed framework designates lean leadership as the independent variable and SME sustainability as the dependent variable. The dimensions of SME sustainability are economic sustainability, environmental sustainability, and social sustainability. This framework assumes that lean leadership leads to economic sustainability by providing efficiency, quality, customer value, productivity, and organisational adaptability. It aids in the environmental sustainability of the organization through the efficient utilization of materials, energy, and other resources and by integrating waste reduction into continuous-improvement activities. It addresses the needs of employees by supporting employee development, participation, workplace learning, communication, and shared problem-solving, thus contributing to social sustainability. The relationship proposed here is expressed as follows:

Lean Leadership → SME Sustainability.

Building on the reviewed literature and the Natural Resource-Based View (NRBV), the proposed framework conceptualizes lean leadership at two complementary levels. At the overall construct level, lean leadership is expected to contribute positively to the economic, environmental, and social sustainability of Iraqi SMEs. At the dimensional level, continuous improvement culture, employee development and empowerment, and strategic and operational alignment are proposed to provide distinct but complementary pathways to sustainable outcomes.Continuous improvement culture may support economic sustainability through systematic problem-solving, waste reduction, operational learning, and productivity improvement (Dombrowski & Mielke, 2013; Dey et al., 2020). Employee development and empowerment may contribute to social sustainability by strengthening employee participation, workplace learning, professional capabilities, and involvement in organizational improvement (Aij & Teunissen, 2017; Hilverda et al., 2023). Strategic and operational alignment may support environmental sustainability when leadership explicitly incorporates resource efficiency, waste prevention, and environmental objectives into organizational priorities and daily practices (Hart, 1995; Kosasih et al., 2023a, 2023b). These dimension-specific relationships represent theoretically proposed pathways rather than exclusive associations. The three leadership dimensions may also contribute to other sustainability outcomes and reinforce one another. Accordingly, the framework develops both overall and dimension-specific research propositions.

P1: Lean leadership is positively associated with the economic sustainability of Iraqi SMEs.

P2: Lean leadership is positively associated with the environmental sustainability of Iraqi SMEs.

P3: Lean leadership is positively associated with the social sustainability of Iraqi SMEs.

P4a: Continuous improvement culture is positively associated with the economic sustainability of Iraqi SMEs.

P4b: Employee development and empowerment is positively associated with the social sustainability of Iraqi SMEs.

P4c: Strategic and operational alignment is positively associated with the environmental sustainability of Iraqi SMEs.

Together, propositions P1–P3 describe the overall relationships between lean leadership and the three dimensions of SME sustainability, whereas propositions P4a–P4c specify the proposed contributions of individual lean leadership dimensions. This two-level perspective extends the conceptual discussion beyond

the application of lean tools by identifying leadership-related pathways through which Iraqi SMEs may pursue economic, environmental, and social sustainability. The propositions provide a basis for future empirical examination and do not establish causal effects.

Lean Leadership	**P1–P3** →	**SME Sustainability**
Continuous Improvement Culture	**P4a** →	Economic Sustainability
Employee Development and Empowerment	**P4b** →	Social Sustainability
Strategic and Operational Alignment	**P4c** →	Environmental Sustainability

figure 1. Proposed Conceptual Framework

Source: Developed by the researcher based on the reviewed literature.

Note: The arrows represent theoretically proposed relationships and do not indicate empirically established causal effects.

METHODOLOGY

Research Design

This study has adopted a conceptual research design which is based on a structured integrative review and theory synthesis. Therefore, this approach is indeed appropriate as the aim of this study is to assimilate existing knowledge, clarify the link between lean leadership and SME sustainability, and develop theoretically grounded propositions rather than testing them with primary data. For a conceptual study, it must have a well justifiable research design and a clear statement on how theories and previous findings are linked to build the model (Jaakkola, 2020).

Literature Search Strategy

A systematic literature search will be conducted using Google Scholar as the primary academic search engine to identify publications relevant to the topics of Lean Leadership, the sustainability of small and medium-sized enterprises (SMEs), and the specific context of such enterprises in Iraq. The search will focus primarily on publications released between 2020 and 2026, while also incorporating key foundational studies published prior to 2020, where necessary, to establish the theoretical underpinnings of the research.

Search terms will include: "Lean Leadership," "Lean Management," "SME sustainability," "economic sustainability," "environmental sustainability," "social sustainability," "Lean-Green practices," and "SMEs in Iraq." Appropriate combinations of these terms will be used to locate studies that address the relationships between Lean Leadership, organizational capabilities, and sustainability outcomes.

To enhance methodological transparency, the search and selection process will be documented; this will include reporting the number of records identified, screened, and excluded, as well as those ultimately selected for inclusion, based on the actual search results. Publications will be chosen based on their relevance to the research topic, academic credibility, and contribution to the development of the proposed conceptual framework. The selected literature will also be synthesized to identify the theoretical relationships between agile leadership and the economic, environmental, and social dimensions of sustainability in small and medium-sized enterprises (SMEs).

Table 1. Literature Search Strategy

Element	Specification
Research design	Conceptual paper based on a structured integrative review and theory synthesis.
Databases	Google Scholar.
Core keywords	"lean leadership", "lean management", "SME sustainability", "economic sustainability", "environmental sustainability", "social sustainability", "Iraqi SMEs", and related Boolean combinations.
Publication period	Primarily 2020-2026, with selected seminal sources retained when necessary for theoretical grounding.
Document types	Peer-reviewed journal articles, systematic reviews, conceptual studies, and authoritative institutional reports.
Analytical approach	Studies were compared and synthesised around lean leadership behaviours, sustainability dimensions, theoretical explanations, and the Iraqi SME context.

Source: Prepared by the researcher.

Selection Criteria

Peer-reviewed journal articles, systematic reviews, conceptual studies and reports from recognised international institutions were included in the review. Studies were selected when they discussed lean leadership, lean implementation, SME sustainability, lean-green integration, or the economic and institutional conditions of Iraqi SMEs. For all data, unverified websites, opinion-based material and studies lacking direct relevance to the proposed relationship were excluded.

Table2. Inclusion and Exclusion Criteria

Criterion	Included	Excluded
Topical relevance	Studies addressing lean leadership, lean implementation, SME sustainability, lean-green integration, or closely related constructs.	Studies unrelated to leadership, lean management, SMEs, or sustainability.
Context	SMEs across manufacturing and service settings, with priority given to developing economies and Iraq-related evidence.	Studies focused only on large corporations when their findings could not inform the SME context.
Evidence quality	Peer-reviewed publications and reports from recognised organisations.	Unverified websites, opinion pieces, non-scholarly material, and sources with unclear authorship.
Language	English-language publications.	Publications without an accessible English version.
Time period	Mainly 2020-2026, supplemented by essential foundational studies.	Older studies with no clear theoretical or contextual relevance.

Source: Prepared by the researcher.

Literature Synthesis and Framework Development.

The literature was thematically analysed into: lean leadership behaviours; the economic, environmental and social aspects related to SME sustainability; theoretical underpinnings to the relationship; and the Iraqi SME context. The results were compared to determine common trends, disagreements, and gaps in the research. The conceptual framework was developed using Natural Resource-Based View (NRBV) as a theoretical basis and integrating lean leadership, SME sustainability and Iraqi SME research literature. This theoretical synthesis is used to reorganise fragmented knowledge structures and construct an explanatory model and research propositions (Schreiber et al., 2024; Jaakkola, 2020) . The resultant framework proposes that lean leadership directly adds to the economic, environmental and social sustainability of Iraqi SMEs.

PROPOSED CONCEPTUAL FRAMEWORK AND PROPOSITIONS

The proposed conceptual framework integrates lean leadership with SME sustainability in the Iraqi context. Lean leadership is represented by three interrelated dimensions: continuous improvement culture, employee

development and empowerment, and strategic and operational alignment. SME sustainability is represented by its economic, environmental, and social dimensions.

Lean leadership may, in fact, be viewed as an organizational capability that enables the efficient utilization of scarce resources as well as waste minimization, employee capabilities building, and alignment of daily activities with sustainably-oriented goals through a sustainable framework-oriented approach. A culture of continuous improvement may promote learning, problem-solving, and operational efficiency. This, workforce involvement, accountability, adaptability and organizational knowledge may gain strength from employee development and empowerment. Alignment on a strategic and operational level may be of help in the realization of sustainability goals that directly influence management decisions and workplace behavior. From a Natural Resource-Based View, it appears that these leadership competencies could allow SMEs to harness key organizational resources in a sustainable way for increased sustainable performance.

Lean Leadership can play a role in economic sustainability for economy and business continuity through productivity gains, quality improvement, cost control and business continuity. It might help environmental sustainability – using resources more effectively and creating less waste and it may promote social sustainability – including participation of employees, better skills development, workplace safety and responsible stakeholder relationships. This framework includes the propositions established in Section 2.7; these are not repeated here. The framework's relationships are theoretical and do not capture an empirically established effect of these underlying mechanisms. Rather, they lay a foundation for further empirical investigation of the impact of lean leadership on the sustainability of SMEs as they unfold in Iraq.

DISCUSSION

The proposed framework suggests that the contribution of lean leadership to SME sustainability is not limited to lean tools. The core argument is that leadership is a mechanism of organisational process for continuous improvement, employee development, resource discipline and strategic alignment that are embedded in everyday practice. In this sense, lean tools alone may lead to operational improvement but not necessarily sustained economic, environmental and social benefits.

From the standpoint of economic sustainability, lean leadership may help SMEs to use scarce resources more efficiently, reduce non-value-adding activities, strengthen problem-solving and remain committed to continuous improvement. The research has shown that lean practices can improve productivity, quality, cost efficiency and organisational performance (De et al., 2020; Dey et al., 2020). The argument that lean implementation could be sustained through leadership capability is further strengthened by the framework proposed here.

The environmental dimension also needs a more deliberate leadership role. While waste reduction and resource efficiency are central to lean thinking, operational efficiency should not be viewed as solely a matter of environmental sustainability. Environmental outcomes are more likely as leaders intentionally link continuous improvement activities to material use, energy efficiency, waste reduction and responsible resource management (Kosasih et al., 2023a, 2023b). In the NRBV perspective adopted in this study, lean leadership may therefore be the vehicle through which organisations can integrate resource efficiency and sustainability considerations into the way they make decisions.

The framework also includes the social aspect of sustainability. Employee development, empowerment, participation, communication and collaborative problem-solving are central components of lean leadership (Aij & Teunissen, 2017; Hilverda et al., 2023). These practices will help to develop employees' capabilities and learn from them as well as enable them to engage directly in the improvement process. Lean leadership may therefore contribute to sustainability not only in terms of operational efficiency, but also through the development of human and organisational capabilities.

The Iraqi SME context is also very relevant. Iraqi SMEs are under considerable financial, institutional, managerial and market constraints (IFC, 2023; World Bank, 2023a). In this context, lean leadership should not be an alternative to financial or institutional reform. That is, it is a potential internal organisational

capability for SMEs to use their existing resources more systematically, enhance employee involvement and contribute more to the continuous improvement of business processes.

The new framework is about not only lean tools but also leadership ability to sustain their organisational effects. It also integrates economic, environmental and social sustainability into a single SME context and places these relationships in the under-studied Iraqi context. The relationships we have proposed here are theoretically based and should not be taken as established causal relationships. Testing will be required to establish whether and under what circumstances these relationships are supported by Iraqi SMEs.

Theoretical Implications

This study has theoretical implications. First, it extends lean management literature by treating lean leadership as an organisational capability rather than as a supporting condition of lean tools. Second, the model links lean leadership with the three major dimensions of SME sustainability: economic, environmental, and social sustainability. It also provides a broader theoretical understanding of lean leadership beyond performance.

Third, this study employs the Natural Resource-Based View (NRBV) as the general theoretical framework to explore how leadership capability can support responsible resource utilization, continuous improvement, employee development, and sustainability-oriented organisational practices. Lastly, by applying the theory to Iraqi SMEs, the study takes lean leadership and sustainability discussions to a resource-limited context, in the context of a specialised and institutionally challenging setting which has received little attention in the literature to date.

Practical Implications

The proposed framework has practical implications for SME owners, managers and policymakers too. For SME owners and managers, this framework is clear: The successful implementation and sustained application of lean practices require more than technical tools; they also depend on leadership commitment, employee development, and continuous improvement capabilities.In the context of Iraqi SMEs in resource constraints, these leadership practices may be especially relevant since they focus on making better use of existing resources, employee knowledge and internal problem solving. SME development policymakers and organisations may also consider incorporating leadership development, continuous-improvement capabilities, employee participation, and sustainability-oriented management into SME support and capacity-building programmes.

LIMITATIONS AND FUTURE RESEARCH

This study has several limitations. First, as a conceptual study, it does not provide empirical evidence to validate the proposed relationships between lean leadership and the economic, environmental, and social sustainability of Iraqi small and medium-sized enterprises (SMEs). Consequently, the propositions should be interpretedas theoretically grounded associations rather than empirically proven causal effects. Second, the framework was developed specifically for Iraqi SMEs; its application to other institutional and economic contexts requires further research. Therefore, future empirical studies should examine the proposed relationships—both in general and with respect to each specific dimension—using data collected from Iraqi SMEs.The proposed framework shall be empirically tested in future research based on the data on Iraqi SMEs. Quantitative studies could provide insights on the relationship between lean leadership and economic, environmental, and social sustainability, and whether the three dimensions of lean leadership have different impacts on sustainability. Research could also look at the potential moderating or contextual factors including firm size, industry sector, organisational maturity, digital capabilities and institutional conditions. Comparative research across industries or countries may also help to determine whether the proposed framework is context-specific or generalisable to other SMEs.

CONCLUSION

This conceptual paper provides a framework on lean leadership and its impact on the multi-dimensional sustainability of SMEs in Iraq. The framework conceptualizes lean leadership through continuous improvement culture, employee development and empowerment, strategic and operational alignment, and SME sustainability through economic, environmental and social dimensions.Based on the Natural Resource-Based View, the paper argues that lean leadership could be an organisational capability that enables SMEs to use resources more effectively, continuously improve, develop employees and incorporate sustainability considerations into organisational decision-making. The framework then shifts the focus away from the technical implementation of lean tools to the leadership skills that enable organisations to maintain their organisational advantages.By combining lean leadership, multidimensional sustainability and the Iraqi SME context, the study provides a theoretical basis for future empirical study. These relationships are conceptual in nature, and therefore we should examine them empirically with evidence from Iraqi SMEs.

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