



How Transformational Leadership Drives Food Security Performance in the Public Sectors? A Systematic Literature Review

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ABSTRACT

Performance on food security in public sector-dominated food systems is uneven, implying that governance and leadership are key drivers beyond economic and technical aspects. This research provides a systematic review of evidence on the relationship between transformational leadership and performance in public sector wrought food security. Under PRISMA 2020 recommendations, a Systematic Literature Review (SLR) was performed using 58 peer-reviewed journal articles from 2015 to 2025, and indexed on Scopus, Web of Science and Google Scholar. These results suggest that transformational leadership impacts on food security performance via organisational learning, policy innovation, inter-agency cooperation, public service motivation and accountability. Yet the relationship is heavily conditional upon context, such as institutional capacity, quality of governance and decentralisation or socio-political circumstance. By linking public leadership theory and food system governance literature, we contribute to a fuller understanding of leadership influenced performance in public food systems with important implications for future research and policy.

INTRODUCTION

Food Security has become a key development area worldwide, especially for government and public sector agencies concerned with providing adequate access to safe, nutrient rich food for all residents Sustainable Development Goals (SDGS) (Candel, 2014; Smyth et al., 2021). Food security is defined by the Food and Agriculture Organization (FAO) as a condition when all people, at all times, have physical and economic access to sufficient, safe and nutritious food which meets their dietary needs and food preferences for an active and healthy life (Pinstrup-Andersen, 2009; Simelane, & Worth, 2020). Though there is sustained economic development

and technological advancement in several areas, challenge of food insecurity continues to be pervasive in both developing and developed countries (Pawlak & Kołodziejczak, 2020). The COVID-19 pandemic, climate change, geopolitical insecurity and disruptions to global flows are contributing further to the fragility of public food systems in terms of reduced control over declining availability, affordability and quality nutrition in multiple national contexts (Ogwu et al., 2024).

Even though there have been efforts worldwide to enhance food systems, profound differences regarding weather shocks in food security outcomes remain among countries. Data from the Global Food Security Index (GFSI), which is a benchmarking tool comparing affordability, availability, quality and safety in food systems across countries, provide stunning variation between countries that reflects on evidence of food security performance (Nel, 2024). Finland produced the top score (83.7/100) in the 2022 GFSI ranking, followed by other high-income nations such as Ireland and Norway this may reflect some of these factors—strong governance models, extensive social safety nets and robust supply chains. In the same clusters, Japan was at 79.5 and Canada scored at 79.1 thanks to strong food affordability and quality assurance systems. But a large proportion of lower-and middle-income countries are far behind these top performers. For example, Indonesia's GFSI score was around 60.2, a relatively moderate level performance on food security but still lower than the global average and has some issues in nutritional quality and those of sustainability dimensions. The unequal distribution indicates that increasing economic growth alone is not enough to ensure good levels of food security and the pivotal role played by institutional capacity and public sector effectiveness (FAO et al., 2025).

Numbers on global hunger give another indication of those ongoing challenges. Between 638 million and 720 million people were estimated to have been hungry in 2024, according to the report *The State of Food Security and Nutrition in the World* (FAO, 2025), with hunger levels decreasing slightly from heights achieved during COVID-19 but remaining far above pre-pandemic levels. This overarching indicator of food insecurity demonstrates how high inflation, disparities in access to food and low purchasing power still disrupt the journey towards SDG2 on ending hunger and malnutrition (FAO et al., 2025).

This variability is not limited to Southeast Asia; countries vary widely in terms of under-nutrition, child stunting and food access, to reveal deep-lying structural inequalities and institutional capacity deficiencies in the public sector governance of food (Akhtar, 2016). Research on food systems governance insists that robust public governance models, allowing for cross-sectoral cooperation and local action will be indispensable in delivering more equitable and sustained impacts with respect to food security (Moragues-Faus et al., 2017). For instance, recent writing on governance of food systems points to the importance of public sector leadership that connects policy, inclusive stakeholder engagement and evidence-based decision making which can provide a pathway for food system change that is equitable (Neely et al., 2021).

The empirical evidence also shows the widespread divergence in food security performance among countries similar of economic terms. Numerous food security initiatives led by the public sector continue to struggle with issues like disjointed governance systems, poor inter-agency cooperation, weak institutional capacity and failed policy execution (Béné et al., 2019; Biesbroek & Candel, 2020). These difficulties indicate that food security is not so much a technical, resources conflicts of interest The authors declare that the research was issues as an organization and leadership problem. In this sense, leadership within public sector organisations is central to anchoring key strategic priorities, galvanising resources, fostering collaborative relations between actors and driving policy coherence along the food system continuum (Lindquist & Marcy, 2016).

Earlier studies are increasingly acknowledging the relevance of leadership for public sector performance – particularly in multistakeholder policy domains such as food security, public

health or sustainable development (Eweje et al., 2021; Breeman et al., 2015). Transformational leadership as compared to other leadership styles, transformational leadership has received considerable academic interest because of its focus on vision expression and sharing, inspiring motivation, intellectual stimulation, and personal treatment (Bass & Riggio, 2006, 2015f; Eaton et al., 2024). Transformational leaders are proposed to improve organizational effectiveness by inspiring public servants to work beyond self-interest, encourage innovation and long-term societal objectives. These attributes are particularly pertinent in food security governance which requires experimental decision-making, inter-sectoral collaboration and enduring policy commitment in the face of uncertainty (Pandey et al., 2016; Hapsari et al., 2021).

Empirical evidence is also increasing on the positive effects of transformational leadership on agricultural productivity, rural development, policy efficiency and sustainable resource management—all central elements to food security performance (Jankelová et al., 2020; Hejkrlik et al., 2023). Research in public administration have also illustrated that transformational leadership promotes organizational learning, policy innovation and service delivery efficiency—crucial to building resilient public food systems (Soomro et al., 2021; Nguyen, 2024). The evidence base for such matters is, however, fragmented across public management, agricultural policy, development studies and sustainability research and generally is not focussed on particular outcomes but food security performance as an integrated conceptualisation.

It is becoming clear that leadership matters, but there are some lacunae in the literature. For one, studies on food security performance have mostly focused on structural, economic and technological drivers with little consideration of leadership and managerial capabilities within government institutions (Timmer., 2017). Second, those studies that do consider leadership tend to analyze public sector performance in general or sustainability results rather than explicitly associating a form of transformational leadership with food security outcomes (Backhaus & Vogel, 2022; Muralidharan & Pathak, 2018). Third, the absence of a systematic synthesis accounting for how and why transformational leadership influences food security performance among public agencies constrains theoretical development and evidence-informed policy recommendations.

To address these gaps, a systematic literature review (SLR) is essential. SLRs offer a rigorous and transparent approach to synthesizing existing knowledge, identifying dominant themes, theoretical foundations, methodological trends, and unresolved debates (Tranfield et al., 2003; Snyder, 2019). Accordingly, this study is guided by the overarching research question:

RQ1: How is food security performance conceptualised and operationalised in public sector-led food systems?

RQ2: How is transformational leadership conceptualised and applied within public sector institutions addressing food security challenges?

RQ3: What mechanisms explain the relationship between transformational leadership and food security performance in the public sector?

RQ4: What contextual factors moderate the impact of transformational leadership on food security performance in public sector settings?

By systematically integrating prior research, this review aims to clarify conceptualizations, uncover underlying mechanisms, and identify contextual conditions shaping the leadership–food security performance relationship.

The novelty of this study lies in its integrative and interdisciplinary perspective. Unlike prior reviews that focus either on food security determinants or leadership in isolation, this SLR bridges public leadership theory and food security research, positioning transformational leadership as a strategic driver of food security performance. The primary objective of this study is to synthesize empirical evidence on this relationship, identify research gaps, and propose a future research agenda to advance theory, policy, and practice in public sector-led food security governance.

LITERATURE REVIEW

Public Sector Performance in Food Security

In more recent public administration and food systems literature, the performance of food security is conceptualized as a multi-dimensional institutional outcome that reflects how well (or not) the public sector in governance utilizes its resources to achieve enhanced stable, equitable and sustainable access to food. Food security performance is considered less and less as an agricultural or market outcome; it is defined as a public sector performance construct that depends on policy coherence, institutional capacity and inter-organisational coordination (Lu et al., 2021; Zembe et al., 2022). Empirical research highlights the importance of public food systems in shaping availability, affordability, nutritional quality and system resilience in contexts where markets are not perfect or there are high levels of social vulnerability (Borazon et al, 2025; Béné, 2020).

Food security performance in public sector-led systems is operationalized through composite indicators, which integrate outcome-based and process-based components. Results-based indicators often include food availability ratios, price instability trends, dietary diversity scores and prevalence of undernourishment that are probably associated with tangible outcomes of public policies on food (Manikas et al., 2023; Roba et al., 2019). Concurrently, process-based indicators such as policy effectiveness (Gava et al., 2020), coordination across ministries, supply chain governance and social protection coverage are increasingly mobilized to measure how public institutions deliver food security results. This binominal operationalisation takes into account that good performance in terms of food security results not just from outputs but also from the characteristics of governance structures.

A more recent approach takes into account resilience, sustainability and adaptive capacity in food supply performance framing (Paloviita et al., 2017). Public sector performance is now appraised in terms of its capacity to foresee, absorb and address systemic shocks posed by climate change, pandemics and geopolitical instability (Hynes et al., 2020). Considerations of food security performance Eating habits should be linked to governance capabilities, not just policy outcomes Food security instruments and practices should be understood as a dynamic governance capability rather than as a static policy outcome. This framing makes food security a strategic indicator of the effectiveness of public goods provision and policy, premised on the necessity for leadership, institutional learning and adaptive governance in driving sustained development impacts from the performance of the food system (Pereira & Ruysenaar, 2012).

Transformational Leadership in Public Sector Institutions Addressing Food Security

Transformational leadership in public sector agencies is largely represented as values-based leadership when it supports (public) organisations to step up and tackle complex, long-term societal challenges such as food security (Joseph, 2015). Based on the ground-breaking work of Burns and Bass, recent empirical research underscores transformational leadership as a multidimensional concept that includes idealized influence, inspirational motivation, intellectual stimulation and individualized consideration which later help define collective commitment and strategic orientation in public organizations (Saad Alessa, 2021). With the advent of food security governance, transformational leadership is considered increasingly as a vital ability to handle policy complexity, uncertainty and cross-sectorial coordination (Giambartolomei et al., 2021).

Empirical studies suggest that transformational leadership in the public sector leads to policy innovation, inter-agency collaboration and organisational adaptability all critical to addressing food insecurity challenges exacerbated by climate risks, supply chain breakdowns and socio-economic disparities (Danso & Opoku, 2025). Transformational leaders motivate public leaders to transcend entrenching bureaucratic routines by promoting a shared vision, learning-attuned cultures, and proactive problem-solving (Sun& Henderson, 2017). These leadership requirements are especially important in food system governance; here, an

intersectoral linkage of agriculture, trade, health and social protection institutions is needed to ensure policy implementation.

Transformational leadership in the public sector food system is characterized by leaders who engage with stakeholders, make evidence-based decisions, and use institutions for learning (Leeuwis et al., 2021). Research shows that transformational leadership has a positive effect on public sector performance through improved employee motivation, trust and commitment that increases the quality of services delivery and policy responsiveness in food programmes (Top et al., 2015). Furthermore, studies show that transformational leadership fosters adaptive governance by facilitating government organisations to more effectively react towards exogenous shocks and emergent food security risks (Sirisawat & Chaiya, 2025). As a result, transformational leadership is becoming regarded as a strategic enabler of good food security governance, rather than as just an isolated leadership characteristic.

Linking Transformational Leadership and Public Sector Performance in Food Security

The association between transformational leadership and food security performance in the public sector is accounted for by a series of linked organisational, behavioural and governance mechanisms that condition the manner in which public entities manage the development and delivery of policies relevant to food. Transformational leadership contributes to performance through creating a common vision, encouraging organisational commitment and linking personal motivation with collective public objectives, which improves the ability of public organisations in dealing with complex food security challenges (Bass & Riggio, 2006, 2015; Chai et al., 2017). Within food system governance, it is especially important to pay attention to these mechanisms because food security interventions cross sectors and levels.

One such mechanism works through organisational learning and innovation. Transformational leaders promote intellectual stimulation, information sharing and evidence-informed approaches to decision-making, contributing to the policy capacity of managing food security risks such as climate variations, market fluctuations and supply chain disruptions (Brasier et al., 2023). Through the promotion of a learning culture, transformational leadership builds institutional capacity in developing better targeted and integrated food policies and programmes across Agriculture, Health and Social Protection (Mayes & Gethers, 2018).

Coordination and cooperation across public sector players are also a recurring theme. Specifically, transformational leadership improves inter-agency trust, communication and collaborative governance; reducing policy fragmentation and enhancing the coherence of food system-based interventions (Sirisawat & Chaiya, 2025). Better coordination also means more effective use of resources, greater speed of policy implementation and better involvement of relevant stakeholders, which are all important to achieve food security results (Trein et al., 2021).

At the behavioural level, transformational leadership exerts influence on food security performance through improving public service motivation; empowering and holding for accountability of public officials (Sun & Henderson, 2017). Empirical evidence indicates that transformational leadership fosters intrinsic motivational, moral commitment, and better-quality service delivery and more-responsive social protection/food aid programs (Ajmal et al., 2024). Combined, these mechanisms indicate that the facilitation of transformational leadership in public sector food systems does not directly impose control over food security performance outcomes, but rather conditions organisational capacities, governance processes and human behaviour that serve as a foundation for effective public sector emergence.

METHODS

This research utilises SLR system to synthesise and critically analyse academic evidence on how transformational leadership influences food security performance in public services agencies. SLR is especially well-suited to synthesizing fragmented knowledge strands in public administration, leadership studies and food system governance (Snyder, 2019) and for theory-building through systematic comparison of real-world findings (Tranfield et al., 2003). For transparency, methodological rigour and replicability, the review was carried out according to PRISMA 2020 guidelines (Page et al., 2021) and adhered to recognised core processes of systematic review methodology widely adopted in management and public policy research.

To start the review process, focused and viable research questions were identified using a modified PICO framework (Population [public sector institutions], Intervention [transformational leadership], Context [public sector-led food systems], and Outcomes [food security performance]). The review was organized around four research questions. RQ1 seeks to unpack the ways in which food security performance is being understood and applied within public sector food systems. RQ2 examines how transformational leadership is conceptualised and practised in public organisations that are grappling with food security problems. This is addressed in RQ3 (mediating mechanisms connecting transformational leadership to the performance of food security) and, in RQ4 we seek for contextual factors – e.g. institutional capacity, governance arrangements and socio political environment—moderating such associations.

Subsequently, a review protocol was developed prior to data collection in order to reduce selection bias and promote methodological rigour (Denyer & Tranfield, 2009). The protocol included the review objectives, search strategy, keywords, databases, inclusion and exclusion criteria, quality appraisal methodologies and methods of synthesis. The review intentionally limited the search for peer-reviewed journal articles published between 2015 and 2025, a time frame that encompasses current thinking on transformational leadership theory, public sector reform, sustainability governance, and food security challenges posed by climate change, global crises and institutional change. This ten-year span also reflects increasing evidence around the influence of leadership-on governance outcomes in complex public systems.

The systematic search was performed on key academic databases such as Scopus, Web of Science and Google Scholar in order to ensure coverage of a wide-angled spectrum and multi-disciplinary literature. Search strings joined terms related to transformational leadership, public sector leadership, food security performance and public food systems/governance and their synonyms. Only English full-text articles published from 2015 to 2025 were included to maintain conceptual relevance and empirical rigour. Selection of studies proceeded through a two-step screening process. Titles and abstracts were screened to exclude duplicate and irrelevant studies. Second, retrieved full text was screened using predefined inclusion criteria that targeted: public sector institutions or state-led food systems explicit focus on transformative leadership analysis of the institutional- and/or governance-level dimensions of food security performance, or its determinants. The studies outside the study period or regarding household level or private sector settings were excluded.

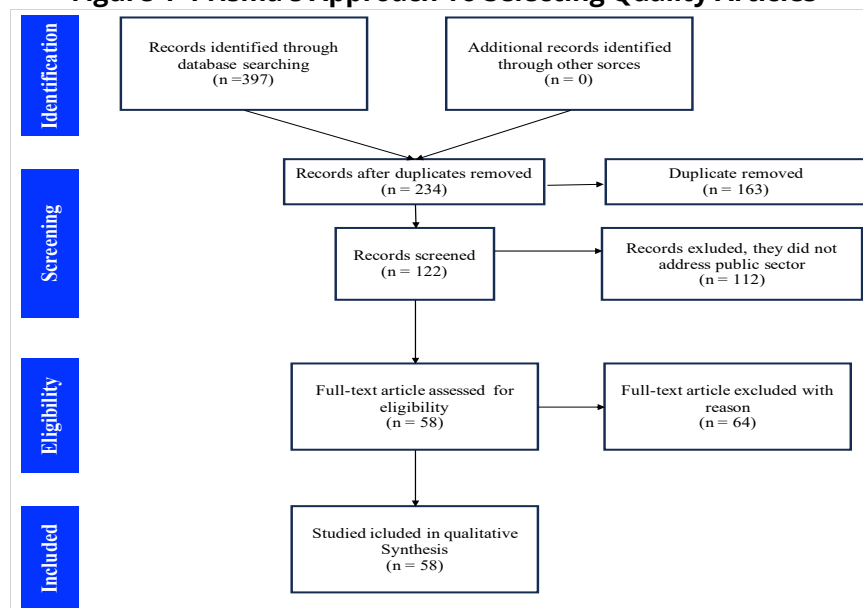
Critical Quality Appraisal The quality appraisal phase comprised critical examination of the methodological soundness and theoretical relevance of the studies through adapted quality criteria from previous SLR research (Snyder 2019). Studies with transparent research design, reliable data sources and logical analysis were selected in the syntheses. A structured extraction matrix was used for data extraction including publication year (2015–2025), theoretical frameworks, leadership constructs, indicators of food security, key contingency variables and any underlying causal pathways.

Lastly, synthesis and reporting utilised narrative and thematic synthesis to combine finding across studies to address RQ1–RQ4. Leadership mechanisms, performance outcomes

and contextual moderators were analysed systematically and reported following PRISMA (2020) standards to create a transparent record of the review process for theory-building on the nexus of transformational leadership and public sector food security governance (Page et al., 2021).

To add methodological rigour and transparency to the study selection process, a systematic literature review was conducted using the 2020 PRISMA checklist, encompassing publications from 2015–2025 (refer to Figure 1). Results Searches in Scopus, Web of Science and Google Scholar with predefined keywords pertaining to transformational leadership, public sector governance and performance with regard to food security produced 396 records. Following the removal of 163 duplicates, a total of 234 unique articles were subjected to title and abstract screening with 112 studies being excluded as not relative to public sector institutions, food security governance or transformational leadership. Selection criteria: Predefined inclusion and quality criteria were used for full-text screening of 122 articles. At this point, 64 studies were excluded for minimal conceptual or methodological fit. The 58 high-quality studies were used as the analytic foundation for answering RQ1–RQ4 and exploring leadership mechanisms, contextual moderators, and food security performance outcomes in public sector led food systems.

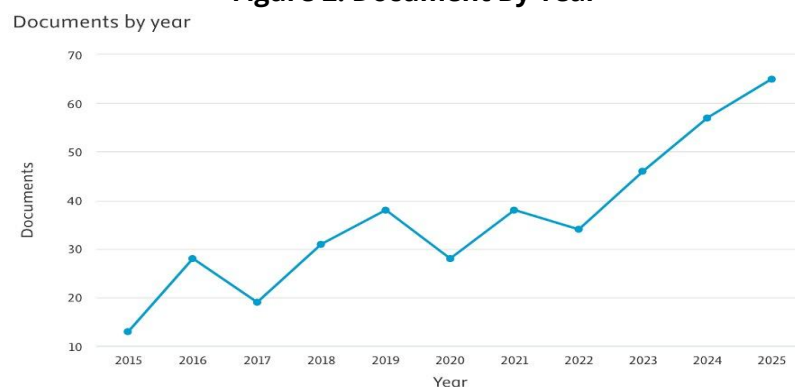
Figure 1 Prisma's Approach To Selecting Quality Articles



Source: Authors (2026)

RESULTS

Figure 2. Document By Year



Source: Authors (2026)

Figure 2 It is evident from Figure 3 that there is a chronological pattern of rising academic attention on transformational leadership in public sector between 2015 and 2025. The level of publications increased from 13 in 2015 to 28 in 2016 and slid to 19 in 2017, rising again to evaluate the state-of-the-art with a total of the publication number reaching at cumulative counts of studies this year (31). This number kept escalating in 2019 with 38 publications and in a constant upward trend even 2020 with 28 studies, where there is still academia attention despite global disturbance as such due to the COVID-19 pandemic. Notably, research output in post- pandemic years is sharply accelerated, with 38 articles in 2021 and 34 in 2022, followed by a steep climb to 46 (2023), 57 (2024) and 65 (2025) publications in later years. This trend indicates that transformational leadership has become an important lens for the analysis of public sector reform, governance capacity and organizational resilience in complex environments. This finding to suggest the necessity for more integrated and context-specific lines of inquiry around transformational leadership related to public sector-led food systems governance as it pertains to food security.

Table 1. Article By Subject Area, Type, Countries, Keywords

Subject Area	Article Type and Countries	Keywords
Business, Management, and Accounting (n=205); Social Sciences (n=176); Economics, Econometrics, and Finance (n=62); Computer Science (n=35); Environmental Science (n=33); Decision Sciences (n=31); Psychology (n=26); Arts and Humanities (n=22)	Document Type: Journal articles (n=331); Conference papers (n=29) Countries: United States (n=46); Malaysia (n=39); China (n=31); Pakistan (n=26); Indonesia (n=24); India (n=23); Australia (n=21); Netherland (n=20); South Africa (n=17); Ghana (n=15)	Transformational Leadership (n=212); Leadership (n=123); Public Sector (n=78); Human (n=49); Transactional Leadership (n=36); Organizational Performance (n=14); Psychological Empowerment (n=12); Public Health (n=11); Sustainability (n=10); Food Securities (=4)

Source: Own elaborate (2026)

According to Table 1, the academics conversation on the subject of transformational leadership in public organization of food securities is distributed across a range of academic disciplines and more concentrated in Business, Management and Accounting (n=205), followed by Social Sciences (n=176), and Economics, Econometrics and Finance (n=62). From other related disciplines are also Computer Science (n=35), Environmental Science (n=33), Decision Sciences/(n=31) and Psychology (n=26). This shows an increased attention from interdisciplinary. The high number of journal articles (n=331) as opposed to conference papers (n=29) indicates a tendency toward peer reviewed, empirical sources. But the research output is geographically widely scattered and USA (n= 46), Malaysia (n=39), China (n=31), and Pakistan (n=26) are found main contributors. Indonesia, India, Australia, the Netherlands, South Africa and Ghana are among countries that show high degree of involvement which is evidence of worldwide interest in transformational leadership in various public sector of food securities settings.

The strongest supportive keyword used is transformational leadership (n=212), followed by leadership (n=123) and the public sector (n=78), suggesting a recurring thematic emphasis. Significant, is that the terms human (n=49), transactional leadership (n=36) and organisational performance (n=14) suggest an interest in comparative leadership styles and outcomes. New themes, such as psychological empowerment (n=12), public health (n=11) and sustainability are also indications of the growing diversity in topics. However, the relatively few incidences of “food securities” (n = 4) clearly underlines a large research gap by indicating the paucity of research that deals with transformational leadership’s role in food security governance despite agricultural and food systems agenda becoming increasingly important in policy discourses.

Mapping of Variables and Indicators**Transformational Leadership as Independent Variable****Table 2. TRANSFORMATIONAL LEADERSHIP INDICATORS**

Transformational Leadership Dimensions	Indicators	Conceptualize
Idealized Influence (Charisma)	- Acts As A Role Model. - Demonstrates Integrity. - Inspires Trust And Respect.	Leaders Display Ethical Behavior And Build Trust, Becoming Role Models For Their Followers. In The Context Of Food Security, This Involves Demonstrating Consistent Commitment To Public Service And Gaining Legitimacy Through Credibility.
Inspirational Motivation	- Provides A Clear Vision And Mission. - Inspires Enthusiasm And Optimism. - Encourages Collective Commitment.	Leaders Articulate A Compelling Vision And Motivate Teams With High Expectations. In The Public Sector, This Involves Energizing Employees To Work Towards Achieving National Food Security Goals.
Intellectual Stimulation	- Encourages Innovation And Critical Thinking. - Challenges The Status Quo. - Supports Creative Decision-Making.	Leaders Promote New Ideas And Foster Innovation. In Food Security Governance, This Means Enabling Novel Approaches To Food Production, Distribution, And Policy Design.
Individualized Consideration	- Provides Personal Attention. - Acts As Mentor Or Coach. - Recognizes Individual Needs.	Leaders Attend To Individual Differences And Support Team Members Accordingly. In The Public Sector, This Entails Building Staff Capacity Based On Personalized Development Needs In Food System Management.

Source: Authors (2026)

Transformational leadership has become a prevailing theoretical foundation in public sector governance, including fighting complex problems such as food security (Bass & Riggio, 2015). Operationalization of Transformational Leadership Model This model of leadership is operationalized through four main dimensions, as idealized influence, inspirational motivation, intellectual stimulation and individual consideration. Each dimension explains actual performance, resilience, and policy effectiveness on its own, in public service contexts (Sienkiewicz-Małyjurek, 2022). Idealized influence captures the leader as a moral role model who creates trust, admiration, and respect among followers. Leaders with this characteristic consistently act with integrity, there is ethical conduct that is vital in a public food system where legitimacy and the public's trust are fundamental (Khan et al., 2025). In the landscape of food security, idealized leaders communicate a commitment to enactment and transparency of sustainable policy implementation that in turn motivates adherence to national long-term goals.

Inspirational motivation refers to the expression of an attractive vision that is laced with optimism and collective sense-making. This dimension is particularly important for inspiring public sector actors to come together around a common cause – ending hunger and improving

access to healthy food. Leaders who use this strong form not only empower their staff by linking organizational goals with cultural values that reflect those of the broader society, and henceforth encourage motivation and performance (Saad Alessa, 2021). Intellectual stimulation involves encouraging creativity, raising questions, and problem solving by followers. In food and security governance, where adaptability is critical, transformational leaders inspire innovative response to systemic wastages and policy lapses. This involves the use of digital technologies, participatory planning and cross-sectoral coordination (Thuan, 2020). Finally, individualized consideration refers to the value of personal attention and mentorship. Transformational leaders are seen as coaches who develop members by building their strengths and weaknesses. In terms of food system management, that leadership works to develop inclusive organisational cultures and build institutional capacity to address local food security challenges (Anderson & Sun, 2015).

Together, these four dimensions constitute an integrative model to enhance effectiveness in the public sector while increasing accountability and sustainability of food security interventions. Although its importance has been empirically demonstrated, transformational leadership has rarely been studied in relation to food security consequences that is a missing link and a potential new area for future academia study (Elmasry & Bakri, 2019).

Food Security Performance as Dependent Variable

Table 3. FOOD SECURITY PERFORMANCE INDICATORS

Food Security Performance Dimensions	Indicators	Conceptualize
Effectiveness	- Achievement of food security goals. - Timely and accurate implementation of programs. - Alignment with national development priorities.	This dimension refers to the extent to which public sector institutions successfully meet their objectives. In food security governance, effectiveness is measured by how well policies and programs reduce hunger, ensure food availability, and support sustainable agricultural systems.
Efficiency	- Optimal use of resources. - Minimization of waste. - Timely delivery of services.	Efficiency evaluates the ability of institutions to deliver services with minimal resource expenditure. In the food security context, this includes reducing bureaucracy in distribution chains and ensuring cost-effective allocation of agricultural inputs and subsidies.
Responsiveness	- Timely reaction to food crises. - Adaptive policy interventions. - Stakeholder engagement.	Responsiveness reflects how quickly and appropriately the public sector reacts to emerging challenges, such as food price volatility or supply chain disruptions. It also includes engagement with communities and other stakeholders to tailor solutions to local contexts.
Accountability	- Transparent reporting. - Monitoring and evaluation	Accountability ensures that public institutions are answerable for their

Food Security Performance Dimensions	Indicators	Conceptualize
	systems. - Public oversight and audits.	actions and use of public resources. In food systems, this involves clear reporting on program outcomes, budget use, and public participation in oversight mechanisms.
Equity	- Inclusive service delivery. - Targeting of vulnerable populations. - Elimination of disparities.	Equity ensures fair and just distribution of resources and services. In food security, this dimension is critical in ensuring that marginalized and food-insecure populations receive adequate support through public programs.
Sustainability	- Long-term program impact. - Environmental integration. - Institutional continuity.	This dimension captures the ability of public institutions to maintain food security outcomes over time while preserving ecological and institutional systems. It includes integrating environmental sustainability into food policies and ensuring institutional resilience.

Source: Authors (2026)

Table 3 show that performance in the public sector is a core concern among governance scholars, especially in critical policy domains, such as food security. Performance in this sense is multidimensional, comprising effectiveness, efficiency, responsiveness, accountability, equity and sustainability (Ahmad et al., 2023). Efficiency is the fact of success against intended goals by public institutions – such as ensuring food availability and fostering better nutrition, or bringing in line programmes with national development priorities. Transformational leadership can further foster this by creating a shared vision and energizing the delivery of impactful results (Chitiga, 2018). Efficiency is, in the meantime, about doing the most we can with public resources. Innovation driven leadership and enabler of decision making can bring down the costs and serve the food programs on time (Mousa et al., 2018).

Another important dimension is capacity of responsiveness, which refers to the ability of public institutions to respond rapidly and adequately to new food security issues. It also reaches to respond to abrupt shocks such as climate events, pandemics, or price instability. Finally, leaders who include other stakeholders in the policy process and are willing to adjust it effectively also leads to higher levels of responsiveness (Candel et al. 2016). Accountability reinforces responsiveness with transparency of decision making and reporting on performance. This would aid in the creation of monitoring and evaluation system, as well as a civil society oversight. In a culture of accountability, transformational leaders embody ethical conduct and integrity which increases trust in public institutions (Alam et al., 2019).

Equity and sustainability are finally integrated more into frameworks of performance assessment, not the least in terms of food security governance. Fair access to food programs by groups, as differentiated by vulnerability and marginalisation, concerns equity. Transformational leaders who engage in individualized consideration and hold inclusive values are ideally suited to tackle social inequities (Fernandez & Rainey, 2017). Food security is concerned with the sustainable provision of food services, including long-term commitment to food services by institutions. This ranges from environmental issues to strategic consistency. Leaders who foster

mental stimulation is vital to the incorporation of sustainability and long-term planning (Ansell & Gash, 2017) Together, these six-dimensional five-range assessment scales contribute to a holistic lens in which performance of the public sector can be measured and improved upon, most notably in an increasingly complex, fluid policy domain like food security.

Thematics

Conceptualisation and Operationalisation of Food Security Performance in Public Sector-Led Food Systems

Performance of food system led by public sector in achieving food security is increasingly understood as a multidimensional and governance-oriented concept that captures the ability of public institutions to guarantee sustainable, fair, and resilient access to sufficient, safe and healthy diet for all. Early conceptualisations centred on food availability and caloric inadequacy, but modern literature casts a broader systems perspective including access to food, its use, stability and resilience (Pinstrup-Andersen, 2009; Simelane & Worth, 2020). In public sector contexts, food security performance is not only expressed in outcome-based indicators like health and food affordability or the stability of supply, but also manifests its dimensions of institutions and governance such as policy coherence, inter-agency coordination, accountability and stakeholder participation (Candel, 2014; Candel et al., 2016).

Recent food systems literature draws attention to the fact that public sector performance in food security is increasingly measured by composite and multidimensional indicators incorporating a range of the social, economic and environmental measurements (Manikas et al., 2023). These frameworks acknowledge that food security is the result of intricate dynamics of agricultural production, social protection systems, market functioning and public governance systems (Béné et al., 2019; Leeuwis, Boogaard & Haitjema- Krah, 2021). On the other hand, resilience has been recognized as an important operational dimension, especially in light of systemic shocks like climate change, pandemics and geopolitical unrest. Public food systems are therefore judged on the basis of their resilience, learning mechanisms and capacity to secure access to food in emergencies (Béné, 2020; Hynes et al., 2020).

As a result, food security performance in public sector-led systems is best considered as a dynamic and process-based concept that includes outcome indicators (nutrition, access, stability), governance indicators (policy coherence, cooperation, accountability) and adaptive indicators (resilience, institutional learning). This summative conceptualisation places food security performance as a central governance objective that necessitates collaborative public leadership and capacitation rather than single, technical, or sectoral measures (Moragues-Faus et al., 2017; Trein et al., 2021).

Conceptualisation and Application of Transformational Leadership in Public Sector Institutions Addressing Food Security

Transformative leadership lit within public sector contexts concerned with addressing food security as a challenge to development is primarily imagined around value laden automated and change oriented but it also marshalls the apparatus of the state towards collective goals beyond individual/organisational self pursuit. Building on the seminal contributions of Bass and Riggio (2006, 2015), transformational leadership is conceptualised along four primary dimensions—idealised influence, inspirational motivation, intellectual stimulation, and individualised consideration—that are commonly used among studies in public administration and governance. Transformational leadership is framed, within the context of food security in this paper, as an essential driver for institution building, policy development and collaborative governance in complex and multi-actor food systems that are subject to uncertainty and with interdependent relationships (Backhaus & Vogel, 2022; Sun & Henderson, 2017).

Empirical evidence from the public sector context indicates that transformational leadership is critical and instrumental in translating the organization-wide national food security

purpose into actual practice by promoting a common cause, stimulating cross-sector partnerships and endorsing adaptive problem-solving strategies among public officials (Pandey et al., 2016; Elmasry & Bakri, 2019). Transformational leadership is often used to strengthen governance instruments for combating food security problems (which are cross-cutting between agriculture, social, health and environmental policies) such as inter-agency coordination or stakeholder involvement or the accountability systems (Ansell & Gash, 2018; Candel, 2014). Additionally, leadership behaviours based on intellectual stimulation and individualised consideration are found to promote organisational learning, innovation capability, and resilience in public organizations operating food systems (Mayes & Gethers, 2018; Sienkiewicz-Małyjurek, 2022).

In application, transformational leadership is implemented on the ground in public food security organizations via participatory decision-making, front-line bureaucrat empowerment and fostering joint mechanisms that include governmental agencies, civil-society and all levels of private sector. Such uses of leadership are especially prominent in systemically shocked contexts, e.g., climate change and pandemics, which require adaptive capacity and institutional learning in order to sustain food security outcomes (Béné, 2020; Fernandez & Rainey, 2017). Overall, transformational leadership is used as a strategic governance tool that improves and has the potential to improve performance, flexibility, and legitimacy of food security-related public sector interventions -placing leadership at the heart (rather than in periphery) of sustainable food system governance rather than peripheral management function.

Mechanisms Linking Transformational Leadership to Food Security Performance in the Public Sector

The links between transformational leadership and food security performance in the public sector are mediated by a cluster of intertwined organisational, governance and behavioural mechanisms that allow the public organisations to cope with complex, cross-sectoral challenges inherent in the food systems. First, transformational leadership improves food security performance by promoting a shared public value orientation and collective mission among public workers. By articulating a compelling vision and by re-asserting normative public values, transformational leaders link individual aspirations with greater societal purposes such as equity, resilience, and sustainability in food systems (Pandey et al., 2016; Bass & Riggio, 2015). This alignment, when done in a value-based manner, creates commitment and accountability to implement food security policies at various levels of governance.

Second, organisational learning and innovation operate as principal intermediary processes. Rather, it is transformational leadership, notably via intellectual stimulation, that promotes experimentation risk taking and knowledge sharing along with adaptive problem solving in services sectors involving public institutions responsible for food governance (Mayes & Gethers, 2018; Moussa et al., 2018). These learning practices build the ability of public organizations to address real-time food security risks, such as climate shocks, volatility in markets and public health crises, thereby strengthening system resilience and performance (Béné, 2020; Hynes et al., 2020).

Third, consensus governance and networking function as important mediating pathways from leadership to food security. Change-oriented leaders enable trust, stakeholder involvement and cross-sector partnership between public sector, civil society and private developments in food systems (Ansell & Gash, 2018; Sienkiewicz-Małyjurek, 2022). This type of collaboration adds to policy coherence and resources mobilization, an effective response for systemic “wicked” and inter-related food security issues (Candel, 2014; Candel et al., 2016). Transformational leadership is positively associated with institutional resilience, both in terms of adaptive capacity and crisis response.

Empowerment, personalised consideration and decentralised decision-making is necessary for leaders providing authority to operate techniques allow frontline bureaucrats reacting to shocks and sustaining food access and nutritional results (Fernandez & Rainey, 2017; Leeuwis et al., 2021). These mechanisms point to the fact that transformational leadership is not exercised as direct command but reinforces governance, organisational capabilities and adaptive systems within the public sector.

Contextual Factors Moderating the Impact of Transformational Leadership on Food Security Performance

The relationship between a transformational orientation to leadership and food security performance in the public sector is highly contextualised, depending on the wider set of factors that help shape practices associated with such leadership into those that are translated into governance outputs. The level of institutional capability, availability of resources, administrative capacity and bureaucratic flexibility is a significant moderating factor. In other words, in settings with stiff hierarchies, weak fiscal capacity or fragmented mandates, transforming leadership could have a limited effectiveness of improving food security outcomes although the strength of visionary or motivational leadership is strong (Backhaus & Vogel, 2022; Fernandez & Rainey, 2017). In contrast, organizations with higher presence, adaptive capacity and learning culture are more equipped to exploit transformational leadership for public policy innovation and coordinated responses that address the food system (Mayes & Gethers, 2018).

The leadership effectiveness is partially mediated through the policy coherence and governance integrated influence. The challenges to ensuring food security typically cut across different policy areas including agriculture, health, social protection and climate adaptation—yet necessitate a significant level of coordination among various agencies. A facilitative leadership is most likely to - 15-improve the performance for food security in those contexts where governance structures are in place that facilitate collaboration, policy integration, and shared accountability (Candel, 2014; Trein et al., 2021). By contrast, policy silos and weak coordinating processes can water down leadership power and undermine collective action.

The leadership-performance relationship is further malleable given external environmental circumstances. Furthermore, with increasing exposure to systemic shocks such as climate change, pandemics, market volatility the role of adaptive and resilient governance are further enhanced leading to an increased relevance of transformational leadership behaviours like intellectual stimulation and empowerment (Béné, 2020; Hynes et al., 2020). Furthermore, socio-political contexts such as trust level in stakeholders, social capital and civic engagement condition adoption and maintenance of leadership initiatives in food systems (Sienkiewicz-Małjurek, 2022). Taken together, these contextual considerations may suggest that TL is best placed to have the greatest influence on food security performance when it exists in concert with supportive institutional, governance and environmental conditions rather than operating alone.

DISCUSSION

Theoretical Implications of the nexus of transformational leadership, food security, and public organizational performance may be examined through a combined governance-organizational capacity perspective. Transformational leadership theory highlights the importance of visionary, value-based, and empowering leadership in engaging collective action by empowering individual behaviour for the public good (Bass & Riggio, 2015; Pandey et al., 2016). In public sector food systems, such leadership is especially relevant in the face of multidimensional 'wicked' challenges of food security that require alignment across policy domains, institutional silos, and stakeholder groups (Candel, 2014; Candel et al., 2016).

Theory of food security conceptualizes performance as not just the availability of food, but a multifaceted outcome hinging on access, utilisation, stability and resilience informed by governance quality and institutional effectiveness (Pinstrup-Andersen, 2009; Simelane & Worth, 2020). Taken collectively, transformational leadership serves as an important governance mechanism for improving public organisational performance by enhancing policy coherence, organization learning and adaptive capacity within food security institutions (Sun & Henderson, 2017; Mayes & Gethers, 2018).

The relationship between these theories implies that public organisational performance is a medial field through which transformational leadership affects (food) security results. Leadership-led practices: intellectual stimulation, participative decision-making and individualized consideration contribute in encouraging the public sector to be innovative, collaborative and flexible to manage systemic shocks for enhanced food system resilience and service delivery (Béné, 2020; Fernandez & Rainey, 2017). This theoretical synthesis has also revealed that results in food security performance are not just a technical or agricultural matter, but constitute a governance output, depending on leadership-enabled organisational capacities and institutional robustness. As a result, the theory of transformational leadership fills in gaps in food security and public performance etiologies by describing how much-needed leadership processes are applied to convert strategic public goals into sustainable and equitable food system outcomes.

Future Research Agenda

Future research on transformational leadership in public sector food security should move beyond descriptive analyses and explore deeper causal relationships, particularly through mixed-method and longitudinal designs. There is a critical need to examine how transformational leadership interacts with institutional structures, governance mechanisms, and stakeholder networks in shaping food security outcomes. Future studies should also focus on underrepresented regions, especially in low- and middle-income countries, to capture diverse contextual dynamics. Additionally, integrating leadership theory with systems thinking, policy implementation models, and food systems governance frameworks could provide a more holistic understanding of leadership effectiveness. Research should also explore the mediating and moderating roles of factors such as organizational culture, political commitment, decentralization, and citizen engagement. Finally, empirical studies that assess the long-term sustainability and scalability of leadership-driven interventions would be valuable in informing policy and practice in complex and evolving food security environments.

CONCLUSION

This systematic literature review provides a comprehensive synthesis of how transformational leadership contributes to public sector performance in food security governance. The findings demonstrate that food security performance should be understood as a multidimensional public sector outcome shaped by governance quality, institutional capacity, and leadership effectiveness, rather than merely as an agricultural or economic result. Transformational leadership emerges as a critical enabler in public food systems by fostering shared vision, ethical commitment, and collective action across complex and fragmented policy environments. The review highlights that leadership influences food security performance primarily through indirect pathways, including organisational learning, policy innovation, inter-agency coordination, and enhanced public service motivation, which together strengthen the capacity of public institutions to deliver equitable, resilient, and sustainable food outcomes.

The review also underscores the importance of contextual conditions in shaping the effectiveness of transformational leadership. Institutional readiness, governance structures, decentralisation arrangements, political support, and socio-cultural environments significantly

moderate leadership outcomes in public sector food systems. In contexts characterised by strong administrative capacity and collaborative governance, transformational leadership is more likely to translate into improved food security performance. Conversely, in settings marked by rigid bureaucratic structures, limited resources, or fragmented accountability, leadership impact tends to be constrained. These findings reinforce the view that transformational leadership should not be conceptualised as a universal solution, but rather as a context-sensitive governance capability whose effectiveness depends on alignment with institutional and environmental conditions.

This study advances the literature by bridging public leadership theory and food system governance, offering an integrative framework that explains how and under what conditions transformational leadership shapes food security performance in the public sector. By consolidating fragmented evidence across disciplines, the review clarifies key mechanisms and contextual moderators that underpin leadership-driven performance outcomes. From a practical perspective, the findings suggest that strengthening leadership capacity must be accompanied by broader institutional reforms to enhance governance coherence, accountability, and adaptability. As food security challenges become increasingly complex and uncertain, transformational leadership, embedded within supportive governance systems, represents a strategic asset for public institutions seeking to achieve sustainable and inclusive food security outcomes.

LIMITATION

Notwithstanding the fact that this systematic literature review offered an in-depth synthesis of works on transformational leadership and food security performance within public sector environments, several limitations need to be recognized. The review is limited to peer-reviewed journal articles in major academic databases which can lead to the exclusion of relevant grey literature, policy reports and practitioner-focused articles. Because food security interventions are governance-centered and practice-oriented, not all of the useful evidence identified in international organizations and government agencies documents can be found within academic publications (Candel, 2014; Snyder, 2019).

Second, the variation in conceptualisation of both transformational leadership and food security make synthesis limiting. The reviewed analysis comprising various theoretical orientations, measurement methodologies, and definitions of all, specifically multidimensional food security measures and leadership constructs in the public sector. This variation constrains the potential for strong causal inferences to be made or for results to be directly compared across institutional and national context (Backhaus & Vogel, 2022; Manikas et al., 2023).

Third, the empirical base is uneven and largely focuses on organizational outcomes of leadership (e.g. commitment, innovation or governance quality) rather than specifically addressing leadership practices and their contribution to concrete food security performance indicators. This discrepancy mirrors wider methodological difficulties in measuring complex food system outcomes and emphasizes the scarcity of longitudinal and multi-level studies in this field (Béné, 2020; Leeuwis et al., 2021).

A final issue that can limit the external validity of these results is that the studies are often located in a small number of regions or institutions. Such governance structures, administrative capabilities and socio-political environments may serve as a moderating factor in the translation of leadership effects to different public sector realms (Fernandez & Rainey, 2017; Trein et al., 2021), thereby challenging transferability of (measurement) conclusions among public administrations.

RESEARCH TRANSPARENCY AND ETHICS STATEMENTS

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YP: Conceptualization, Methodology, Data Collection, Data Analysis, Writing – Original Draft, Visualization, Review and Editing

SR: Conceptualization, Methodology, Data Collection, Data Analysis, Writing – Original Draft, Visualization.

DN: Conceptualization, Methodology, Data Collection, Data Analysis, Writing – Original Draft, Visualization

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The study did not involve any intervention, biological specimens, vulnerable groups, or sensitive personal data. Participation was voluntary, and the confidentiality of the respondents was maintained

5. **Use of Artificial Intelligence (AI):**

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