



## Article

# Application of Industrial Sociology Techniques: Panacea for Enhancing Employee Productivity in Nigerian Industrial Sector

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**Abstract:** This paper examines how effective communication systems, democratic leadership style, incentive and reward systems, and training and development programmes serve as mechanisms for enhancing employee productivity in the Nigerian industrial sector through a systematic literature review methodology. A total of 214 records were initially identified across four major academic databases, including Google Scholar, Scopus, Web of Science, and JSTOR, covering literature published between 1933 and 2025. Following rigorous screening against structured inclusion and exclusion criteria, thirty-seven peer-reviewed studies, institutional reports, and theoretical frameworks were retained for substantive analysis. Anchored in Mayo's Human Relations Theory, the study argues that productivity is fundamentally a socially organised phenomenon whose enhancement demands deliberate investment in relational, motivational, and developmental workplace conditions. Findings in this paper reveal that, Nigerian industrial organisations perpetuate productivity-suppressing environments through authoritarian leadership, dysfunctional communication, inadequate rewards, and chronic underinvestment in workforce development. The paper concludes that, industrial sociology techniques, specifically effective communication systems, democratic leadership, incentive and reward systems, and training and development programmes, constitute indispensable and evidentially validated mechanisms for addressing the chronic employee productivity deficits that continue to constrain the Nigerian industrial sector's developmental potential. The paper recommends among others that, Nigerian industrial organisations should institutionalise structured, multi-directional communication frameworks that formally integrate upward, downward, and horizontal channels, ensuring informational transparency, worker voice, and the cooperative coordination essential to sustained industrial productivity.

**Keywords:** Industrial Sociology Techniques, Employee Productivity, Human Relations Theory, Industrial Sector, Nigeria.

## Introduction

Industrial sociology, as a discipline concerned with the systematic analysis of social relations, power structures, and human behaviour within the world of work, occupies a position of enduring and expanding significance in contemporary debates about organisational productivity and workforce management. The techniques that industrial sociology contributes to organisational management, encompassing communication systems, leadership styles, incentive frameworks, and human development practices, are not peripheral managerial tools but foundational mechanisms through which the

relationship between workers and organisations is structured and sustained [1], [2]. Mayo's [3] pioneering Hawthorne Studies established beyond reasonable scholarly doubt that employee productivity is profoundly shaped by social relationships, managerial attention, and interpersonal workplace dynamics, fundamentally reorienting the global conversation about productivity from mechanistic efficiency models toward humanistic and sociological frameworks. Huczynski and Buchanan [4] argued that organisational behaviour, when understood through a sociological lens, reveals the complex interplay of individual motivation, group dynamics, and structural conditions that collectively determine productive engagement. Mullins [5] further observed that managing people demands sociological understanding that transcends purely economic logics, while Jones et al. [6] documented that globally competitive organisations consistently invest deliberately in communication systems, participatory leadership, equitable rewards, and continuous employee development. The OECD [7] confirmed through longitudinal productivity data that organisations whose management practices align with human relations principles consistently outperform command-and-control counterparts. Manresa et al. [8] further demonstrated that organisational flexibility and quality-enhancing practices rooted in sociological understandings of workforce dynamics critically mediate the relationship between organisational investment and productivity performance, affirming the enduring practical relevance of industrial sociology techniques in the contemporary global economy [9], [10].

The industrial sociology discourse within the African context demands critical re-engagement with frameworks largely developed in Western, industrialised settings whose uncritical application to African organisational realities risks obscuring the continent's distinctive socio-cultural, economic, and institutional conditions that fundamentally shape how productivity is produced or undermined in its industrial workplaces. Africa's industrial landscape is characterised by a complex convergence of communal values, colonial institutional legacies, infrastructural deficits, and a predominantly youthful workforce whose productive potential remains substantially unrealised due to widespread organisational failure to apply industrial sociology insights in contextually meaningful ways [11], [12]. Ketu and Ningaye [13] demonstrated empirically that sectoral employment shares significantly shape economic complexity across African countries, establishing that the structural organisation of labour and worker productivity in industrial sectors carry direct macroeconomic consequences for national development. Maxhobandile and Yusuf [14], examining Fourth Industrial Revolution applications in South African municipalities, found that employee performance enhancement in African institutional settings requires contextually sensitive strategies accounting for existing organisational cultures, capacity constraints, and social dynamics. Mabaso et al. [15], studying talent retention strategies in South Africa, confirmed that organisations operating within African contexts must navigate complex social expectations that Western-derived management models inadequately address, including communal solidarity norms and deeply embedded authority structures. Sikira et al. [16], examining manufacturing industries in Tanzania, confirmed that recognition and reward systems significantly impact employee performance in African manufacturing, yet their design must remain sensitive to local social norms. Samuel and Justina [17] further found that productivity enhancement in African industrial settings is fundamentally contingent on the quality of organisational social systems, including communication networks and leadership orientations, affirming the continent-wide relevance of industrial sociology techniques [18].

Nigeria's industrial sector, encompassing manufacturing, construction, energy, and related subsectors, represents both a critical engine of national economic aspiration and a deeply troubled productive landscape whose persistent underperformance constitutes one of the most consequential and under-addressed challenges of Nigerian economic governance. The National Bureau of Statistics [19] documented that the industrial sector contributes significantly to formal employment and GDP, yet chronic productivity deficits

continue to undermine the sector's capacity to drive the economic transformation that Nigeria's developmental ambitions demand. Akhigbe [20], in a contemporary sociological analysis of manufacturing firms in Edo State, demonstrated that precarious employment practices significantly erode workplace productivity by undermining employee commitment, psychological security, and organisational identification, conditions that industrial sociology identifies as prerequisites for sustained productive engagement. Fajana [21] and Fajana et al. [22] observed that industrial relations in Nigeria are characterised by frequently adversarial management-labour dynamics shaped by colonial legacies and the persistent failure to adopt participatory management practices. Akinwale [23] documented that labour reform efforts have been repeatedly undermined by the gap between legislative intent and organisational practice, with many industrial employers relying on authoritarian management styles and inadequate reward structures. Oladipo and Abdulkadir [24] critically observed that strategic human resource management remains underdeveloped in Nigerian manufacturing, with firms lacking coherent frameworks to align employee capability with productivity goals. Nwachukwu et al. [25] confirmed that human resource practices in Nigerian manufacturing are associated with performance outcomes, yet implementation remains inconsistent and poorly resourced. Idowu [26] found that flexible and supportive management practices significantly enhance Nigerian employee performance and retention. The gap between management practice and productivity outcomes in Nigerian organisations is, as Ubeku [27] foundationally argued, a failure to understand and apply the social dimensions of productive work, a failure that industrial sociology is uniquely equipped to address [28], [29].

Drawing from the critical analysis presented across the global, African, and Nigerian perspectives, it is evident that a rigorous, contextually grounded, and practically oriented examination of how industrial sociology techniques can enhance employee productivity in the Nigerian industrial sector is both academically necessary and developmentally imperative. The existing literature, while instructive at global and continental levels, has insufficiently interrogated the specific mechanisms through which industrial sociology techniques can meaningfully and sustainably enhance productivity within Nigeria's distinctive organisational and institutional environment. Fapohunda [30] argued that effective workplace management requires the deliberate application of sociological principles to communication, leadership, and incentive design, a position carrying particular urgency for Nigerian industrial organisations whose productivity deficits are substantially rooted in the neglect of these dimensions. Accordingly, this paper is guided by four specific objectives: to ascertain how effective communication systems serve as a panacea for enhancing employee productivity in the Nigerian industrial sector; to determine how democratic leadership style serves as a panacea for enhancing employee productivity in the Nigerian industrial sector; to analyse how incentives and reward systems serve as a panacea for enhancing employee productivity in the Nigerian industrial sector; and to examine how training and development programmes serve as a panacea for enhancing employee productivity in the Nigerian industrial sector.

## **Conceptual Clarifications**

### **a. Industrial Sociology Techniques**

Industrial sociology, as a sub-discipline of sociology concerned with the systematic examination of social structures, human relations, and power dynamics within productive organisations, has generated a rich repertoire of analytical and practical techniques that collectively constitute its contribution to organisational and workforce management. Katz and Kahn [1] defined the scope of industrial sociology as encompassing the study of organisations as open social systems in which human behaviour, communication patterns, authority relations, and group dynamics interact to produce or constrain productive outcomes, a framing that positions sociological techniques as fundamental to

understanding why some organisations thrive while others chronically underperform. Blau and Scott [2] further argued that formal organisations are fundamentally social constructs whose efficiency is determined not merely by their technical design but by the quality of social relations and institutional norms operating within them. The key techniques derived from industrial sociology include participatory communication systems, democratic and inclusive leadership styles, motivation-aligned incentive and reward frameworks, and systematic human capital development through training and development programmes, all of which are grounded in the recognition that workers are social beings whose productive engagement is shaped by relational, cultural, and psychological conditions rather than purely economic stimuli [3], [4]. Armstrong and Taylor [10] argued persuasively that the relevance of industrial sociology techniques to contemporary workforce management has intensified rather than diminished in the face of technological change, organisational complexity, and workforce diversification, as the social dimensions of productive work become more, not less, determinative of organisational effectiveness. Mullins [5] similarly affirmed that managers who apply sociological understanding to their practice consistently achieve superior outcomes in employee engagement, retention, and productivity compared to those who rely exclusively on technical or administrative management approaches [31], [32].

### **b. Employee Productivity**

Employee productivity, understood as the measurable output that an individual worker generates relative to the inputs of time, effort, skill, and organisational resource invested in their work, is a construct of central significance to organisational management, economic development, and the sociological study of work, yet one whose deceptive simplicity conceals considerable definitional and measurement complexity. Armstrong [12] defined employee productivity in terms of the efficient and effective deployment of human capability toward organisational objectives, emphasising that productivity is not merely a quantitative measure of output but a qualitative assessment of the value generated by employee effort in relation to organisational goals. Jones et al. [6] extended this understanding by identifying multiple dimensions of employee productivity, including task performance, contextual performance, adaptive performance, and organisational citizenship behaviour, arguing that a comprehensive account of productivity must capture the full range of ways in which employee contributions generate organisational value. Greenberg and Baron [31] documented that the factors influencing productivity in industrial and organisational settings are multidimensional, encompassing individual variables such as motivation, skill, and psychological well-being; interpersonal variables such as team cohesion, communication quality, and leadership effectiveness; and structural variables such as reward systems, training investment, and organisational culture. Fapohunda [33] specifically observed that the work environment, including its physical, social, and managerial dimensions, exerts a profound and frequently underestimated influence on employee productivity in Nigerian organisations, while Ugoani [34] confirmed that motivation, as a psychosocial process shaped by organisational conditions, is among the strongest determinants of productive behaviour in Nigerian industrial settings. Iheriohanma [35] further argued that organisational knowledge management, as a dimension of human capital stewardship, constitutes a critical driver of productive performance, reinforcing the argument that productivity is fundamentally a socially organised and managerially shaped phenomenon rather than an innate individual attribute [36], [37].

### **c. Nigerian Industrial Sector**

The Nigerian industrial sector, encompassing manufacturing, construction, oil and gas, agro-processing, and related subsectors, constitutes a strategically significant yet

chronically underperforming component of the national economy whose productivity challenges reflect deep structural, institutional, and managerial failures that demand urgent and sociologically informed redress. The National Bureau of Statistics [19] documented that despite its substantial contribution to formal employment generation and GDP, the industrial sector continues to operate significantly below its productive potential, constrained by infrastructural deficits, inadequate investment in human capital, weak institutional frameworks, and management practices that fail to mobilise the full productive capacity of the Nigerian workforce. Akhigbe [20] demonstrated through a contemporary sociological analysis of manufacturing firms in Edo State that casualisation and precarious employment practices prevalent in the Nigerian industrial sector systematically undermine employee commitment, organisational identification, and productive engagement, confirming that the sector's productivity crisis is substantially a crisis of labour management rather than merely a technical or infrastructural problem. Fajana [21] and Ubeku [27] collectively established that the Nigerian industrial sector has historically been shaped by adversarial labour relations, authoritarian management cultures, and a pervasive neglect of the social and psychological dimensions of worker productivity, legacies whose consequences continue to manifest in the chronic productivity gaps that contemporary scholars document with depressing consistency. Oladipo and Abdulkadir [24] confirmed that strategic human resource management, which incorporates the sociological techniques of communication, leadership, incentivisation, and development, is significantly associated with organisational performance in Nigerian manufacturing, yet remains underdeveloped and inconsistently implemented across the sector. The relevance of industrial sociology to the Nigerian industrial context is therefore not merely theoretical but practically imperative, as the sector's productive transformation demands precisely the kind of humanistic, relationally grounded organisational interventions that industrial sociology techniques are designed to deliver [28], [38], [23].

### **Linkage Between the Variables**

#### **a. Effective Communication Systems and Employee Productivity**

The relationship between effective communication systems and employee productivity is among the most robustly theorised and empirically substantiated connections in the industrial sociology and organisational behaviour literature, reflecting the foundational insight that communication is not merely an administrative function but the connective tissue through which organisational purpose, worker motivation, and productive coordination are sustained. Katz and Kahn [1] argued that communication constitutes the lifeblood of organisational systems, providing the informational and relational flows through which individual effort is directed, coordinated, and motivated toward collective productive goals. Armstrong and Taylor [10] distinguished between downward communication, through which management transmits directives, feedback, and organisational vision to employees; upward communication, through which employees convey concerns, ideas, and performance information to management; and horizontal communication, through which colleagues coordinate tasks, share knowledge, and build the collaborative relationships that sustain team productivity. Greenberg and Baron [31] demonstrated that organisations with well-functioning multi-directional communication systems consistently report higher levels of employee satisfaction, organisational commitment, and productive performance, while communication breakdowns are associated with role ambiguity, interpersonal conflict, and productivity losses. Huczynski and Buchanan [4] further argued that the quality of downward communication directly influences employee motivation by shaping workers' understanding of organisational expectations and their sense of being valued by management, an insight traceable directly to Mayo's [3] Hawthorne finding that

managerial attention and communication are among the most powerful drivers of worker morale and output. Akinyemi and Abiddin [39] confirmed empirically that organisational communication significantly influences employee productivity in Nigerian organisations, while Mullins [5] and Kreitner and Kinicki [32] collectively affirmed that investment in structured, transparent, and inclusive communication systems represents one of the highest-return productivity interventions available to organisational management [2], [6].

When the empirical and theoretical evidence on communication and productivity is applied to the Nigerian industrial context, it reveals a situation of considerable concern that demands critical organisational and policy attention. Ojo [40] documented that communication deficits in Nigerian organisations significantly suppress worker productivity by creating environments of informational ambiguity, managerial disconnection, and interpersonal misalignment, conditions that are particularly prevalent in industrial settings where task interdependence makes communication failures acutely costly. Akinyemi and Abiddin [39] further confirmed that the quality of organisational communication in Nigerian firms directly predicts employee productive behaviour, with workers in organisations characterised by open, multi-directional communication demonstrating significantly higher levels of task performance, initiative, and organisational citizenship. Fajana et al. [22] critically observed that Nigerian industrial organisations are frequently characterised by top-down communication cultures that marginalise upward and horizontal channels, creating informational hierarchies that stifle employee voice, suppress innovation, and undermine the cooperative dynamics on which manufacturing productivity depends. Nwachukwu [28] argued that the communication failures endemic to Nigerian industrial management are not merely technical deficiencies but reflect deeper cultural and power-related assumptions about the appropriate relationship between management and labour, assumptions that industrial sociology is uniquely equipped to interrogate and challenge. Ayodele and Ojo [41] similarly observed that managerial communication practices in the Nigerian manufacturing sector frequently fail to provide workers with the feedback, recognition, and informational clarity that Human Relations Theory identifies as essential prerequisites for sustained productive engagement, producing a cycle of motivational deficit and underperformance that structured communication interventions could meaningfully disrupt [42], [17], [38].

#### **b. Democratic Leadership Style and Employee Productivity**

Democratic leadership, characterised by participatory decision-making, consultative management practice, shared authority, and the deliberate incorporation of employee voice into organisational governance, has been extensively theorised and empirically validated as a powerful driver of employee productivity, organisational commitment, and workplace morale across diverse industrial and organisational settings. Huczynski and Buchanan [4] argued that democratic leadership generates productivity gains through multiple mutually reinforcing mechanisms, including enhanced employee motivation through participation, improved decision quality through the incorporation of frontline knowledge, and strengthened organisational commitment through the experience of being valued and heard by management. Greenberg and Baron [31] demonstrated empirically that employees working under democratic leaders report significantly higher levels of job satisfaction, intrinsic motivation, and productive engagement compared to those managed autocratically, findings consistent with Mayo's [3] Hawthorne insight that sympathetic and participatory supervision is among the most potent stimulants of worker productivity. Mullins [5] further argued that democratic leadership creates the psychological safety conditions under which employees are willing to invest discretionary effort, share knowledge, take productive initiative, and engage in the cooperative behaviours that sustain high-performance work environments. Kreitner and Kinicki [32] confirmed that leadership style is among the strongest organisational determinants of employee

motivation and productivity, with democratic approaches consistently generating superior outcomes in environments characterised by complex tasks, interdependent workflows, and knowledgeable workforces. Armstrong and Taylor [10] further established that organisations investing in democratic and transformational leadership development programmes generate measurable and sustained improvements in workforce productivity, affirming the practical significance of leadership style as an industrial sociology technique with direct productivity implications [29], [6], [2].

The Nigerian industrial context presents a particularly compelling and troubling case study of how the persistent dominance of authoritarian and non-participatory leadership styles suppresses the productive potential of the workforce with measurable and compounding organisational consequences. Ayodele and Ojo [41] provided direct empirical evidence from the Nigerian manufacturing sector that leadership style significantly determines employee productivity, with democratic leadership approaches generating substantially superior productive outcomes compared to autocratic alternatives, a finding whose implications for Nigerian industrial management are unambiguous and urgently actionable. Fajana [21] and Ubeku [27] collectively documented that Nigerian industrial organisations have been historically characterised by authoritarian leadership cultures rooted in colonial management legacies and post-independence power structures, producing workplace environments in which employee voice is systematically marginalised and the participatory conditions for high productivity are structurally absent. Amah [42] demonstrated that employee engagement, which democratic leadership is uniquely positioned to generate, exerts a significant positive effect on organisational performance in Nigerian manufacturing firms, establishing a clear productivity pathway from leadership style through engagement to organisational outcomes. Oladipo and Abdulkadir [24] critically argued that the failure to develop democratic and participatory leadership capabilities within Nigerian industrial management represents one of the sector's most consequential human resource management deficits, one whose costs are borne disproportionately by workers whose productive potential is constrained by the authoritarian dynamics of their workplaces. Nwachukwu et al. [25] similarly confirmed that management practices in Nigerian manufacturing firms, including leadership orientation, significantly predict organisational performance, reinforcing the urgency of systematic democratic leadership development as a productivity enhancement strategy [43], [30], [32].

### c. Incentives and Reward Systems and Employee Productivity

The relationship between incentives, reward systems, and employee productivity is one of the most extensively theorised and empirically examined connections in the industrial sociology and human resource management literature, reflecting the fundamental tension between purely economic models of worker motivation and the more socially and psychologically nuanced accounts that Human Relations Theory and its successors have advanced. Armstrong [12] defined reward systems as the totality of financial and non-financial mechanisms through which organisations recognise, reinforce, and incentivise employee contributions, arguing that their design and implementation carry profound consequences for worker motivation, organisational commitment, and productive behaviour. Greenberg and Baron [31] demonstrated that reward systems function as powerful behavioural levers, shaping the effort, direction, and persistence of employee productive behaviour through mechanisms of reinforcement, expectancy, and equity, while Kreitner and Kinicki [32] confirmed that employees who perceive their rewards as equitable, transparent, and meaningfully linked to their contributions consistently demonstrate higher levels of productive engagement and organisational commitment. Mullins [5] argued that effective reward systems must integrate both extrinsic incentives, including competitive remuneration, performance bonuses, and

benefits, and intrinsic incentives, including recognition, meaningful work, and developmental opportunity, to produce the motivational conditions necessary for sustained productivity. Sikira et al. [16], examining manufacturing industries in Tanzania, confirmed that recognition as a component of the reward system significantly impacts employee performance, establishing the continent-level relevance of incentive design to industrial productivity. Eze and Nwankwo [44] demonstrated empirically that reward management significantly affects employee performance in Nigerian manufacturing organisations, while Ugoani [34] confirmed that motivation, as the psychological mechanism through which rewards generate productive behaviour, is a critical and manageable determinant of Nigerian employee output [6], [10], [29].

The design and implementation of incentive and reward systems within Nigerian industrial organisations constitutes a dimension of workforce management whose chronic inadequacy is both well-documented and deeply consequential for the sector's persistent productivity underperformance. Eze and Nwankwo [44] critically observed that many Nigerian manufacturing organisations operate reward systems that are inequitable, opaque, and poorly aligned with actual employee performance, producing motivational deficits that suppress productive engagement and erode organisational commitment among workers who perceive themselves as undervalued and unfairly compensated. Oyerinde [45] specifically examined motivation and employee productivity in the Nigerian manufacturing industry, finding that inadequate incentive systems are among the primary drivers of low workforce productivity, with workers in organisations offering competitive and transparent reward structures demonstrating significantly superior productive performance. Fajana et al. [22] argued that the reward management failures prevalent in Nigerian industrial organisations reflect broader human resource management deficiencies, including the absence of coherent performance management frameworks and the cultural tendency to rely on arbitrary rather than merit-based compensation decisions, both of which undermine the motivational logic on which effective incentive systems depend. Ugoani [34] further confirmed that the motivational effects of reward systems in Nigerian organisations are significantly moderated by worker perceptions of fairness and organisational justice, establishing that the productivity impact of incentives is inseparable from the broader social and relational context of the workplace. Ibidunni et al. [46] demonstrated that talent retention, which is directly linked to the adequacy of reward systems, significantly affects organisational performance in Nigerian contexts, while Amah [42] confirmed that employee engagement, stimulated partly through meaningful recognition and reward, generates measurable productivity gains in Nigerian manufacturing [45], [28], [18].

#### **d. Training and Development Programmes and Employee Productivity**

Training and development programmes represent one of the most direct and evidentially supported industrial sociology techniques for enhancing employee productivity, operating through multiple mechanisms that simultaneously build worker capability, strengthen organisational commitment, and communicate managerial investment in employee growth and well-being. Armstrong and Taylor [10] defined training as the systematic process through which employees acquire the knowledge, skills, and competencies required for effective job performance, while development encompasses the broader nurturing of employee potential for future organisational contribution, both of which are foundational responsibilities of organisations committed to sustained productive performance. Beardwell and Thompson [29] argued that investment in employee training and development generates productivity gains through three mutually reinforcing pathways: the direct enhancement of task performance capability through skills acquisition; the motivational effect of employees feeling valued and invested in by their organisation; and the organisational learning effects produced when trained

employees share knowledge and best practices with colleagues. Huczynski and Buchanan [4] confirmed that organisations with robust training and development cultures consistently demonstrate superior productivity outcomes compared to those that treat employee development as a discretionary expenditure, while Jones et al. [6] documented that the most globally competitive industrial organisations regard continuous workforce development as a strategic productivity imperative rather than a peripheral HR activity. Adelegan [47] demonstrated empirically that training and development significantly enhances employee productivity in Nigerian manufacturing firms, while Falola et al. [48] confirmed that the effectiveness of training investments is directly reflected in measurable improvements in employee task performance, adaptability, and organisational commitment [49], [36], [37].

The state of training and development provision within the Nigerian industrial sector represents a critical dimension of the sector's productivity crisis, one characterised by chronic underinvestment, strategic incoherence, and a persistent organisational tendency to treat employee development as a cost rather than a productivity-generating investment. Obisi [49] critically documented that employee training and development in Nigerian organisations is frequently ad hoc, inadequately resourced, and disconnected from strategic organisational objectives, producing training interventions whose productivity impact is limited by their poor design and inconsistent implementation. Adelegan [47] specifically confirmed that training and development significantly enhances employee productivity in Nigerian manufacturing firms, yet the frequency and quality of training provision across the sector remains far below what the competitive and technological demands of contemporary industrial production require. Falola et al. [48] further demonstrated that the effectiveness of training and development in Nigerian organisations is directly mediated by the quality of managerial support and organisational culture surrounding the training process, establishing that training investment alone is insufficient without the sociological conditions of managerial encouragement and knowledge-sharing that Human Relations Theory identifies as prerequisites for human capital development. Okoye and Ezejiolor [36] argued that human resource development constitutes one of the most powerful levers of organisational productivity available to Nigerian industrial managers, yet its systematic underdevelopment represents a collective failure of managerial vision and strategic commitment. Samuel and Justina [17] reinforced this by demonstrating that knowledge management and development practices are critical determinants of productivity in Nigerian industrial SMEs, while Adeniji et al. [50] confirmed that organisational development interventions, including structured training programmes, significantly enhance human resource management effectiveness and organisational performance in Nigerian contexts [38], [46], [8].

### **Theoretical Framework: Human Relations Theory**

The theoretical foundation of this paper is anchored in Elton Mayo's [3] Human Relations Theory, which emerged from the celebrated Hawthorne Studies conducted at the Western Electric Company in Chicago between 1924 and 1932, and which constitutes arguably the most consequential theoretical intervention in the history of industrial sociology by demonstrating that social and psychological factors are more powerful determinants of employee productivity than physical working conditions or economic incentives alone. Mayo's [3] core proposition, developed through a series of experimental investigations examining the effects of lighting, rest periods, and supervisory styles on worker output, was that employees are fundamentally social beings whose productive behaviour is shaped by their need for belonging, recognition, meaningful communication, and sympathetic supervision, needs that orthodox scientific management theory had systematically ignored in its exclusive preoccupation with task efficiency and wage incentives. The Hawthorne Studies produced three foundational insights with lasting

implications for workplace productivity management: first, that workers respond positively to managerial attention and social recognition, a phenomenon subsequently termed the Hawthorne Effect; second, that informal group norms and social dynamics among workers significantly influence individual productive behaviour; and third, that communication between management and workers, when conducted in a spirit of genuine interest and democratic participation, generates measurable improvements in morale, cooperation, and output [3], [4].

In the context of the Nigerian industrial sector, Mayo's Human Relations Theory acquires particular explanatory and prescriptive power, given that the persistent productivity deficits documented across the sector are substantially rooted in the very managerial failures that the theory identified as productivity-suppressing: poor communication, authoritarian leadership, inadequate recognition, and the neglect of workers' social and psychological needs. Amah [42] demonstrated empirically that employee engagement, a construct directly traceable to Mayo's insights about the importance of social belonging and managerial recognition, exerts a significant positive effect on organisational performance in Nigerian manufacturing firms, confirming the contemporary applicability of Human Relations Theory to the Nigerian industrial context. Leadership style, one of the central variables examined in Mayo's Hawthorne investigations, significantly determines employee productivity in the Nigerian industrial sector, with participatory and democratic approaches consistently outperforming authoritarian alternatives. The theory directly underpins each of the four objectives of this paper: it provides the conceptual basis for understanding why effective communication systems enhance productivity by satisfying workers' social and informational needs; why democratic leadership generates superior productive outcomes by creating conditions of psychological safety and engagement; why incentive and reward systems, when aligned with social recognition rather than purely economic logic, produce sustained motivational effects; and why training and development programmes enhance productivity by communicating organisational investment in workers' growth and belonging.

## **Methodology**

### **a. Research Design**

This study adopts a Systematic Literature Review (SLR) design, selected for its capacity to synthesise existing scholarly evidence on a defined research problem with transparency and rigour. A qualitative, desk-based approach is justified by the conceptual and exploratory nature of the inquiry, which seeks to interrogate how industrial sociology techniques enhance employee productivity in the Nigerian industrial sector through critical engagement with existing theoretical and empirical contributions rather than primary data collection [10], [5].

### **b. Search Strategy**

The literature search was conducted across four major academic databases: Google Scholar, Scopus, Web of Science, and JSTOR. Search terms employed Boolean logic combinations including "industrial sociology AND employee productivity," "communication systems AND Nigerian organisations," "democratic leadership AND productivity," "incentives AND workforce performance," "training and development AND Nigeria," and "industrial sector AND Africa." Additional searches targeted "human relations theory," "reward systems AND manufacturing," and "organisational behaviour AND Nigeria." Literature coverage spans 1933 to 2025, incorporating foundational theoretical works alongside contemporary empirical contributions [1], [20].

### **c. Inclusion and Exclusion Criteria**

Studies were included if published in peer-reviewed academic journals, scholarly books, or credible institutional reports; addressed industrial sociology techniques, employee productivity, or organisational management as central constructs; and focused on industrial, African, or Nigerian organisational contexts. Theoretical frameworks with direct applicability were similarly included. Studies were excluded if non-peer-reviewed, methodologically unsound, or focused exclusively on sectors or outcomes with no relevance to industrial sociology techniques or productivity in industrial settings [18], [19].

#### d. Quality Assessment

All identified studies underwent a two-stage quality assessment. The first stage screened titles and abstracts against inclusion and exclusion criteria, eliminating evidently irrelevant sources. The second stage involved full-text review evaluating theoretical depth, empirical rigour, and direct relevance to at least one of the four study objectives. Preference was given to indexed journals and widely cited scholarly works. Following this process, a total of thirty-seven sources were retained for substantive inclusion, as detailed in Table 1 below.

**Table 1.** PRISMA Flow Diagram of Literature Search and Selection Process.

Stage	Description	Number of Records
<b>Identification</b>	Records identified through database searches (Google Scholar, Scopus, Web of Science, JSTOR)	198
	Additional records identified through reference list scanning and citation tracking	16
<b>Total Identified</b>	Combined records before duplicate removal	214
<b>Screening</b>	Records removed as duplicates	28
	Records screened by title and abstract	186
	Records excluded at title/abstract stage (irrelevant topic or sector)	103
<b>Eligibility</b>	Full-text articles assessed for eligibility	83
	Full-text articles excluded (non-peer-reviewed, no productivity focus, no industrial/Nigerian relevance)	46
<b>Included</b>	Studies included in the final systematic review	37

*Source: Authors' Compilation (2025), adapted from PRISMA guidelines (Moher et al., 2009)*

As presented in Table 1, a total of 214 records were initially identified across all search sources and reference tracking. Following duplicate removal and sequential screening by title, abstract, and full text, 37 studies were ultimately retained for substantive inclusion in the review, collectively informing the thematic synthesis aligned with each of the four study objectives.

#### e. Data Extraction and Synthesis

Data extraction was conducted thematically, with each retained study reviewed for theoretical contributions, empirical findings, and relevance to the four study objectives. A thematic synthesis approach organised recurring patterns into four themes: communication systems and productivity; democratic leadership and productivity; incentives and reward systems and productivity; and training and development and productivity. Both convergent and divergent scholarly perspectives were interrogated, ensuring analytical depth and balance throughout the review [3], [4], [31].

## Findings and Discussion

### a. Effective Communication Systems and Employee Productivity in the Nigerian Industrial Sector

The literature presents a compelling and convergent body of evidence confirming that effective communication systems, operating across upward, downward, and horizontal channels, constitute one of the most powerful and empirically validated drivers of employee productivity in industrial and organisational settings, with findings that carry direct and urgent implications for the Nigerian industrial context. Katz and Kahn [1] established foundationally that communication functions as the organisational nervous system through which productive behaviour is directed and sustained, while Greenberg and Baron [31] demonstrated that organisations with transparent, multi-directional communication consistently report superior employee productivity and stronger organisational commitment. Huczynski and Buchanan [4] confirmed that downward communication shapes employee understanding of expectations, upward communication enhances managerial decision quality, and horizontal communication sustains the cooperative interdependencies on which manufacturing productivity depends, a tripartite framework whose systematic neglect in Nigerian industrial organisations. Ojo [40] and Fajana et al. [22] documented as a primary driver of chronic productivity underperformance. Akinyemi and Abiddin [39] empirically confirmed that communication quality significantly predicts employee productive behaviour in Nigerian organisations, while Nwachukwu [28] argued that the communication failures endemic to Nigerian industrial management reflect deeper cultural assumptions about authority that industrial sociology must challenge. Akhigbe [20] further demonstrated that precarious employment environments suppress authentic upward communication, reinforcing productivity-limiting cycles of managerial ignorance and worker disengagement, while Amah [42] confirmed that employee engagement stimulated through meaningful communication generates measurable productivity gains. Armstrong and Taylor [10], Mullins [5], and Blau and Scott [2] collectively affirmed that structured, inclusive communication frameworks represent among the highest-return productivity interventions available to industrial management, a conclusion whose practical urgency for Nigerian industrial employers cannot be overstated [38], [17], [3].

### b. Democratic Leadership Style and Employee Productivity in the Nigerian Industrial Sector

The relationship between democratic leadership style and employee productivity is among the most robustly evidenced connections in the industrial sociology literature, with consistent findings across diverse organisational settings confirming that participatory, consultative, and inclusive leadership approaches generate substantially superior productive outcomes compared to authoritarian alternatives, a conclusion with profound implications for the Nigerian industrial sector where autocratic management cultures remain deeply entrenched. Greenberg and Baron [31] demonstrated empirically that employees working under democratic leaders report significantly higher job satisfaction, intrinsic motivation, and productive engagement, while Huczynski and Buchanan [4] argued that democratic leadership generates productivity gains through enhanced worker participation, improved decision quality, and strengthened organisational commitment produced by the experience of being genuinely valued. Mullins [5] confirmed that democratic leadership creates the psychological safety conditions under which employees invest discretionary effort and engage in the cooperative behaviours that sustain high-performance work environments, while Kreitner and Kinicki [32] identified leadership style as among the strongest organisational determinants of employee motivation and productivity. Ayodele and Ojo [41] provided direct empirical evidence from the Nigerian

manufacturing sector that democratic leadership generates substantially superior productive outcomes, while Fajana [21] and Ubeku [27] documented that Nigerian industrial organisations have historically been characterised by authoritarian leadership cultures rooted in colonial legacies that systematically suppress the participatory conditions for high productivity. Amah [42] demonstrated that employee engagement, which democratic leadership uniquely generates, significantly enhances organisational performance in Nigerian manufacturing firms, while Oladipo and Abdulkadir [24] critically argued that the failure to develop democratic leadership capabilities represents one of the sector's most consequential management deficits. Beardwell and Thompson [29], Armstrong and Taylor [10], and Jones et al. [6] collectively affirmed that organisations investing in democratic leadership development programmes generate measurable and sustained workforce productivity improvements [25], [30], [3]. Ogunyomi and Bruning [51] confirmed that human resource management practices, including leadership orientation, significantly determine organisational performance of SMEs in Nigeria, reinforcing the urgency of democratic leadership adoption.

#### **c. Incentives and Reward Systems and Employee Productivity in the Nigerian Industrial Sector**

The literature establishes with considerable empirical force that the design and implementation of incentive and reward systems constitute a critical determinant of employee productivity in industrial organisations, with findings that expose the chronic inadequacy of reward management practices in the Nigerian industrial sector as a primary driver of persistent workforce underperformance. Armstrong [12] defined reward systems as the totality of financial and non-financial mechanisms through which organisations recognise and incentivise employee contributions, arguing that their design carries profound consequences for worker motivation and productive behaviour, while Greenberg and Baron [31] confirmed that employees who perceive their rewards as equitable and meaningfully linked to contributions consistently demonstrate higher productive engagement. Kreitner and Kinicki [32] established that both extrinsic incentives, including competitive remuneration and performance bonuses, and intrinsic incentives, including recognition and meaningful work, must be integrated within effective reward systems to produce sustained motivational effects, a position affirmed by Mullins [5] and Armstrong and Taylor [10]. Sikira et al. [16] confirmed from a Tanzanian manufacturing context that recognition significantly impacts employee performance in African industrial settings, while Mabaso et al. [15] demonstrated that talent retention strategies incorporating meaningful reward systems produce superior organisational outcomes. Eze and Nwankwo [44] empirically confirmed that reward management significantly affects employee performance in Nigerian manufacturing organisations, while Oyerinde [45] found that inadequate incentive systems are primary drivers of low workforce productivity in the Nigerian manufacturing industry. Ugoani [34] further confirmed that motivational effects of reward systems are significantly moderated by worker perceptions of fairness, while Ibidunni et al. [46] demonstrated that talent retention linked to adequate reward systems significantly affects Nigerian organisational performance. Fajana et al. [22] critically argued that reward management failures in Nigerian industrial organisations reflect broader HRM deficiencies, including reliance on arbitrary compensation decisions that undermine the motivational logic on which effective productivity depends [18], [28], [6].

#### **d. Training and Development Programmes and Employee Productivity in the Nigerian Industrial Sector**

The evidence accumulated across the industrial sociology and human resource management literature establishes training and development programmes as one of the

most direct, evidentially supported, and practically indispensable techniques for enhancing employee productivity in industrial organisations, with findings that simultaneously indict the chronic underinvestment in workforce development within the Nigerian industrial sector as a major and largely self-inflicted productivity liability. Armstrong and Taylor [10] defined training as the systematic process through which employees acquire the knowledge and skills required for effective job performance, arguing that development investment generates productivity gains through capability enhancement, motivational reinforcement, and organisational learning effects, while Beardwell and Thompson [29] and Huczynski and Buchanan [4] confirmed that organisations with robust training cultures consistently demonstrate superior productivity outcomes. Adelegan [47] demonstrated empirically that training and development significantly enhances employee productivity in Nigerian manufacturing firms, while Falola et al. [48] confirmed that training effectiveness is directly reflected in measurable improvements in employee task performance and organisational commitment. Obisi [49] critically documented that training provision in Nigerian organisations is frequently ad hoc, inadequately resourced, and disconnected from strategic objectives, while Okoye and Ezejiofor [36] argued that human resource development represents one of the most powerful yet systematically underdeveloped productivity levers available to Nigerian industrial management. Adeniji et al. [50] confirmed that organisational development interventions significantly enhance HRM effectiveness in Nigerian contexts, while Aminu and Mahmood [37] demonstrated that dynamic capabilities developed through training mediate the relationship between HRM practices and organisational performance. Samuel and Justina [17] reinforced that knowledge management and development practices critically determine productivity in Nigerian industrial SMEs, while Manresa et al. [8] established that flexibility and quality-enhancing organisational practices rooted in workforce development significantly improve industrial performance. Idowu [26] further confirmed that supportive developmental management practices enhance employee performance and retention in Nigerian manufacturing, while Iheriohanma [35] argued that knowledge management, anchored in systematic development investment, constitutes a critical driver of productive performance that Nigerian industrial employers can no longer responsibly neglect [11], [13], [9]. The WHO [52] healthy workplaces framework further affirms that organisational investment in employee development and supportive management practices constitutes a non-negotiable component of any credible approach to sustained workforce productivity.

### Conclusion

This systematic review has demonstrated, with consistent and converging scholarly support, that industrial sociology techniques, specifically effective communication systems, democratic leadership, incentive and reward systems, and training and development programmes, constitute indispensable and evidentially validated mechanisms for addressing the chronic employee productivity deficits that continue to constrain the Nigerian industrial sector's developmental potential. Anchored in Mayo's [3] Human Relations Theory, the review established that productivity is fundamentally a socially organised and managerially shaped phenomenon whose enhancement demands deliberate investment in the relational, motivational, and developmental conditions of work rather than purely technical or economic interventions. The findings collectively indict Nigerian industrial organisations for perpetuating productivity-suppressing environments through authoritarian leadership, dysfunctional communication cultures, inadequate reward systems, and chronic underinvestment in workforce development, failures whose consequences extend beyond individual organisations to national economic performance. This paper contributes a contextually grounded, sociologically informed analytical framework that advances both scholarly understanding and the urgent practical case for transformative management reform within Nigeria's industrial sector.

### Recommendations

The following policy recommendations are advanced on the basis of the evidence synthesised in this review, directed at industrial employers, human resource practitioners, and national regulatory authorities, to address the productivity deficits identified across all four thematic dimensions examined in this study.

- i. Nigerian industrial organisations should institutionalise structured, multi-directional communication frameworks that formally integrate upward, downward, and horizontal channels, ensuring informational transparency, worker voice, and the cooperative coordination essential to sustained industrial productivity.
- ii. Industrial management structures in Nigeria must systematically replace authoritarian leadership cultures with democratic, participatory approaches through mandatory leadership development programmes that build consultative management capabilities and create psychologically safe, productivity-enhancing workplace environments.
- iii. Nigerian industrial employers should design and implement equitable, transparent, and performance-aligned incentive and reward systems that integrate both financial and non-financial recognition mechanisms, directly addressing the motivational deficits currently suppressing workforce productive engagement and retention.

The Nigerian government and industrial employers must strategically invest in structured, needs-aligned training and development programmes, establishing workforce development as a non-negotiable productivity imperative rather than a discretionary expenditure within industrial organisations.

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