Future of Work and Digital Management Journal

Article type:
Original Research

Article history:
Received 01 April 2025
Revised 18 July 2025
Accepted 26 July 2025
Published online 30 September 2025

Designing an Ethical Leadership Model within the Framework of Cultural Excellence: A Qualitative Approach in the Petrochemical Industry

Hedayat allah. Derakhshandeh[1], Mohammad Reza. Karimi[2*], Abdolrahim. Rahimi[3]

1 Department of Cultural Management and Planning, ST.C., Islamic Azad University, Tehran, Iran
2 Department of Media Management, ST.C., Islamic Azad University, Tehran, Iran
3 Department of Cultural Management and Planning, ST.C., Islamic Azad University, Tehran, Iran

Corresponding author email address:
mr_karimi@azad.ac.ir

How to cite this article:
Derakhshandeh, H., Karimi Kundazi, M. R., & Rahimi, A. (2025). Designing an Ethical Leadership Model within the Framework of Cultural Excellence: A Qualitative Approach in the Petrochemical Industry. *Future of Work and Digital Management Journal, 3*(3), 1-13. https://doi.org/10.61838/fwdmj.65

ABSTRACT

This study aims to design a culturally grounded model of ethical leadership for the petrochemical industry, integrating ethical principles with the dimensions of cultural excellence to address organizational challenges and enhance performance. The study employed a qualitative research approach using the Grounded Theory method. Semi-structured interviews were conducted with 19 participants, including managers, experts, and academics from the petrochemical sector. Data collection continued until theoretical saturation was achieved. The interviews were recorded, transcribed, and analyzed using Strauss and Corbin's three-stage coding process: open coding to extract initial concepts, axial coding to identify relational patterns using the paradigm model (causal, contextual, intervening conditions, strategies, and consequences), and selective coding to integrate findings into a coherent theoretical model. Triangulation, expert validation, and participant diversity were used to ensure credibility and confirmability of the results. The analysis yielded 275 initial codes, which were refined into 63 concepts and organized into 30 subcategories across six major dimensions. The central phenomenon was defined as "ethical leadership based on cultural excellence." Causal conditions included decreased organizational citizenship behavior, need for personal growth, and environmental and market risks. Contextual and intervening conditions encompassed organizational culture, decision-making structure, socio-economic environment, and individual traits. Strategies such as codifying ethical values, participatory management, continuous training, and fostering social and environmental responsibility were identified. The consequences included enhanced employee motivation, improved organizational communication, reduced risks, ethical behavior development, and institutional trust. The study presents an empirically grounded and culturally responsive model of ethical leadership specific to the petrochemical industry. It highlights the interplay between ethical leadership and cultural alignment, offering a strategic framework for improving organizational integrity, adaptability, and sustainability.

Keywords: Ethical Leadership; Cultural Excellence; Grounded Theory; Petrochemical Industry; Organizational Ethics; Leadership Model.

Introduction

In recent years, ethical leadership has emerged as a critical imperative across various organizational settings, especially in complex and high-risk industries such as petrochemicals. This leadership style is no longer confined to moral advocacy but is increasingly viewed as a structural pillar capable of shaping organizational culture, influencing behavior, and promoting long-term sustainability. In environments marked by rapid industrial change, environmental accountability, and cultural complexity, ethical leadership models rooted in cultural excellence offer a strategic pathway for achieving not only regulatory compliance but also social legitimacy and internal cohesion [1, 2]. The petrochemical industry, given its strategic role in

national economies and its environmental sensitivities, presents a compelling context for examining the integration of ethical leadership into culturally responsive frameworks.

Ethical leadership can be broadly defined as the demonstration of normatively appropriate conduct through personal actions and interpersonal relationships, coupled with the promotion of such conduct through two-way communication, reinforcement, and decision-making [3]. Yet beyond individual behavior, ethical leadership has the capacity to shape institutional norms, create ethical climates, and establish value-driven systems of practice. This is particularly vital in industries such as petrochemicals, where the intersection of risk management, stakeholder accountability, and employee well-being necessitates a leadership model that transcends technical efficiency to incorporate moral and cultural sensibilities [4, 5].

The relationship between ethical leadership and organizational culture is especially significant. Culture in organizations operates as both a mirror and mechanism for leadership behaviors, serving to institutionalize values, facilitate shared meaning, and define acceptable practices [6]. Ethical leaders do not merely adhere to prescribed rules; rather, they act as cultural agents who define and reinforce ethical expectations and embed them into everyday organizational processes [7]. This aligns with the cultural excellence paradigm, wherein leadership is not only ethical in intent but also congruent with the deeper social, historical, and normative context of the organization. In this view, cultural excellence is not merely an aspirational ideal but a structural necessity that aligns ethical behavior with organizational identity and stakeholder expectations [2].

Empirical research strongly supports the positive outcomes associated with ethical leadership, particularly when coupled with strong organizational culture. Ghanbari and Abdolmaleki [8] showed that ethical leadership enhances organizational loyalty through increased work engagement, while Ullah et al. [9] identified ethical culture and intellectual capital as key mediators between CEO ethical behavior and corporate social responsibility. These studies underscore that ethical leadership is most effective when embedded within broader cultural and cognitive structures that support its enactment and sustainability. In the petrochemical industry—where operational risks, environmental consequences, and public scrutiny are heightened—such integration can provide a stable ethical foundation for leadership and decision-making.

A key element of ethical leadership is its influence on ethical climates—shared perceptions of what is ethically correct behavior and how ethical issues should be handled in an organization [4]. Ethical climates mediate the relationship between leadership behaviors and organizational outcomes, functioning as the cultural infrastructure that enables or constrains ethical conduct. In high-stakes industries, this infrastructure helps mitigate misconduct, encourage reporting of unethical behavior, and foster a culture of accountability [7]. Moreover, the impact of ethical leadership is enhanced when leaders model ethical behavior, use culturally appropriate communication, and design systems that reinforce ethical values [10].

Justice and fairness are additional critical dimensions in ethical leadership models. Employees' perceptions of fairness in performance evaluations, promotions, and resource allocations significantly shape their trust in leadership and commitment to the organization [11]. In a study of auditors, Royayi Ramazani et al. [11] found that trusted leadership and an ethical organizational culture significantly reduce low-quality audit practices. This is consistent with the findings of King et al. [3], who emphasized that ethical leadership enhances employee satisfaction and organizational culture by embedding values of justice, equity, and participation. These insights are particularly applicable in petrochemical organizations, where technical hierarchies and safety protocols can unintentionally create perceptions of favoritism or inequity if not ethically managed.

The role of ethics in leadership also intersects with broader social and environmental responsibilities, especially within the ESG (environmental, social, and governance) framework. Zahari et al. [2] highlight the role of ethical culture and leadership in advancing sustainability and governance in public sector organizations, a finding that is increasingly mirrored in private industrial settings. Petrochemical organizations face intense scrutiny regarding environmental compliance, community engagement, and workforce welfare. Embedding ethical leadership into their governance structures offers a proactive means to meet ESG criteria, manage reputational risk, and foster long-term stakeholder trust.

The cultural dimension is equally significant. As Huff et al. [12] argue, ethical leadership must be sensitive to cultural and historical contexts, particularly in organizations serving diverse populations or operating in regions with complex socio - cultural dynamics. Their study in public health illustrates how culturally responsive leadership not only enhances inclusivity but also strengthens ethical alignment across the organization. Similarly, Ouma [13] emphasized that the development of ethical organizational culture requires sustained effort, leadership modeling, and alignment between stated values and observed behaviors. These principles are critical in petrochemical settings, where multicultural workforces, environmental risks, and public accountability converge.

The long-term sustainability of ethical leadership also depends on training systems, evaluation processes, and leadership development strategies that institutionalize ethical values. As Schwartz [6] notes, building and sustaining an ethical culture involves a multi-level approach that includes ethical codes, leadership commitment, performance measurement, and stakeholder communication. Training initiatives must go beyond compliance and foster critical ethical reasoning, cultural competence, and emotional intelligence—traits that are vital for ethical decision-making in complex operational environments [14]. As Kim and Lee [1] argue, ethical leadership not only enhances organizational culture but also directly contributes to improved performance, innovation, and adaptability.

Leadership development in ethical domains should thus be seen as a strategic investment. Montakhab et al. [7] demonstrated that ethical leadership reduces deviant workplace behaviors by fostering affective commitment and ethical climate. Similarly, Ullah et al. [5] found that CEO ethical leadership enhances corporate social responsibility when mediated by ethical culture and intellectual capital. These findings highlight that ethical leadership operates not only at the individual level but also through organizational systems and cultural frameworks that reinforce ethical norms and expectations.

In conclusion, ethical leadership based on cultural excellence represents a powerful model for the petrochemical industry. It offers a framework that is both normatively grounded and operationally strategic, capable of navigating the unique challenges of this high-risk and high-impact sector. By aligning leadership practices with cultural values, embedding ethical norms in organizational systems, and fostering participatory, just, and transparent management structures, petrochemical organizations can achieve both ethical integrity and operational excellence. This study aims to design a culturally grounded model of ethical leadership for the petrochemical industry, integrating ethical principles with the dimensions of cultural excellence to address organizational challenges and enhance performance.

Methods and Materials

This study was conducted using a qualitative approach grounded in the principles of Grounded Theory. Grounded Theory methodology seeks to generate theory inductively from empirical data, where theoretical categories and concepts emerge through systematic interaction with the data rather than being imposed a priori. The aim was to explore and conceptualize

the phenomenon of ethical leadership embedded within cultural excellence, specifically within the organizational and cultural context of the petrochemical industry. The target population included senior managers, domain experts, university professors, and seasoned professionals with substantial experience in the petrochemical sector. Participants were selected through purposive and snowball sampling strategies, ensuring that information-rich individuals with relevant insight and practical engagement in the subject matter were involved. Theoretical saturation was achieved after conducting 19 in-depth interviews, where no new conceptual categories emerged, and a coherent theoretical framework could be formulated.

Data collection was carried out through semi-structured, interactive interviews, which allowed for both guided inquiry and the flexibility to probe emergent themes. The interview questions were designed based on an extensive review of the relevant theoretical literature as well as consultations with research methodology experts and subject-matter specialists in ethical leadership and organizational culture. Ethical protocols, such as informed consent and confidentiality, were strictly adhered to. All interviews were recorded with participants' permission, then transcribed verbatim. The transcripts were subsequently subjected to a rigorous coding process to identify underlying patterns, concepts, and relationships. The interactive nature of the interviews enabled deep exploration of participants' lived experiences, organizational perceptions, and cultural interpretations of ethical leadership practices.

The analytical procedure followed the classic three-stage model of Grounded Theory as articulated by Strauss and Corbin. In the first stage, open coding, the data were broken down into discrete units to extract initial concepts. These concepts were grouped into preliminary categories based on conceptual similarity. This phase involved close line-by-line analysis, allowing for the identification of recurring expressions and meaningful units of discourse that captured core elements of the phenomenon. In the second stage, axial coding, the relationships between categories were systematically explored. Causal conditions, contextual factors, intervening conditions, strategies, and consequences were identified and mapped around a central phenomenon to form a cohesive model. This helped in uncovering the dynamic interactions between various elements of ethical leadership and cultural excellence. Finally, in the third stage, selective coding, the core category—"Ethical Leadership Based on Cultural Excellence"—was identified. All other categories were integrated around this central theme to construct a unified theoretical framework. The storyline of the model was then written to describe the logic and internal coherence of the emerging theory and to articulate how ethical leadership can be understood as a culturally rooted and strategically enacted phenomenon in the petrochemical sector.

To ensure the validity and credibility of the study, multiple verification strategies were employed. These included face validity and content validity, achieved through expert reviews and feedback loops with academic and industry informants. Triangulation was also used to strengthen trustworthiness, involving the cross-validation of findings through multiple data sources and perspectives. Additional measures included the selection of participants with diverse professional backgrounds, organizational roles, and levels of experience to capture a broad spectrum of views. Interview data were continuously compared with existing theoretical frameworks to ensure conceptual alignment, and the coding processes were periodically reviewed by qualitative research experts to enhance interpretive consistency and analytical rigor.

Findings and Results

The qualitative data extracted from interviews with 19 experts and specialists in the petrochemical industry yielded a total of 275 initial codes during the open coding phase. These codes represented diverse ideas, perceptions, and lived experiences

related to the concept of ethical leadership within the framework of cultural excellence. Open coding served to break down the interview data into conceptual units, which were then grouped into preliminary categories. This phase was instrumental in developing an initial understanding of how individuals within the industry conceptualize, experience, and operationalize ethical leadership practices. However, while open coding disaggregates the data, axial coding is aimed at integrating and systematizing these categories based on their properties and dimensions. At this stage, the researcher employed the paradigm model introduced by Strauss and Corbin, which provides an analytical framework for connecting categories by identifying their causal, contextual, intervening, strategic, and consequential relationships. The use of the paradigm model was crucial in transitioning from mere description to theoretical explanation.

In this process, causal conditions were defined as the events or incidents that contribute to the emergence or development of the central phenomenon. These include organizational dysfunctions, moral voids in leadership behavior, and systemic ethical lapses that necessitate the emergence of a new leadership paradigm grounded in cultural values. The phenomenon itself—identified in this study as “ethical leadership based on cultural excellence”—was conceptualized as the core idea that structures the entire framework. It represents a holistic approach to leadership that transcends instrumental ethics and is deeply rooted in the cultural identity, values, and moral consciousness of the organization. Contextual conditions referred to the specific organizational and environmental characteristics that influence the form and function of the phenomenon. These included the structural features of petrochemical enterprises, the prevailing managerial paradigms, and localized organizational subcultures.

Intervening conditions, by contrast, consisted of broader and more general influences such as temporal factors, sociocultural norms, and regulatory environments that either facilitate or constrain strategic action. The identification of these conditions helped clarify why certain leadership strategies succeed or fail depending on the wider cultural and institutional context. The strategies themselves—defined as deliberate and goal-oriented actions taken to manage or respond to the central phenomenon—encompassed a range of behaviors such as culturally conscious decision-making, dialogic leadership, and ethics-based mentoring programs. These strategies reflect how leaders enact ethical principles not only in policy but also in practice, often through culturally relevant mechanisms of influence and engagement. Finally, consequences referred to the outcomes and implications of these strategies. Among the reported outcomes were enhanced organizational trust, improved employee engagement, institutionalization of moral practices, and the cultivation of an ethical organizational climate aligned with national cultural values.

During axial coding, the researcher applied analytical tools such as theoretical comparison and constant questioning to develop the relationships between core and subcategories. These tools allowed for a dynamic engagement with the data, enabling the researcher to alternate between inductive and deductive reasoning. For example, deductive propositions about the possible roles of cultural narratives in ethical leadership were examined against the empirical data. Conversely, inductive insights drawn from interviewees' statements helped reveal new aspects of how cultural beliefs and ethical practices are mutually constitutive. The aim was to ensure that relationships between categories were not based on single data points but were repeatedly observed across multiple interviews, thereby enhancing their analytical validity and generalizability within the theoretical framework.

As the relationships among categories and subcategories became clearer through axial coding, the emerging model began to take shape. At this point, selective coding was conducted to integrate and refine the model around the core category.

"Ethical Leadership Based on Cultural Excellence" was established as the central axis, with all other categories organized around it in a coherent theoretical structure. This final phase involved the construction of a "storyline" that explained the logic of the model and the internal consistency of its elements. The storyline illustrated how ethical leadership in the petrochemical industry is not merely an abstract ideal but a culturally embedded, strategically enacted, and outcome-oriented phenomenon that responds to specific organizational and cultural conditions.

In total, 63 final concepts and 30 subcategories were developed from the initial codes and were organized under six overarching dimensions: causal conditions, contextual conditions, intervening conditions, the phenomenon itself, strategies, and consequences. This categorization reflects the researcher's theoretical integration of the data and demonstrates how ethical leadership within the petrochemical industry can be conceptualized as a multidimensional construct informed by cultural logic, organizational dynamics, and strategic agency. Each of these dimensions is further elaborated in the following sections to illustrate how the various components of the model interact to produce the overarching phenomenon of culturally rooted ethical leadership.

Table 1.

Identified Concepts and Subcategories Related to Causal Conditions

Subcategory	Concept	Codes
Decline in Organizational Citizenship and Motivation	Reduced extra-role behaviors	Reduced knowledge sharing; less helping behavior
	Decline in employee commitment and motivation	Weakened organizational commitment; employee demotivation
Need for Personal and Professional Development	Necessity of skill growth	Employee expertise impacts productivity; need for training
	Attention to individual differences	Individual differences; varying employee expectations
Importance of Company Reputation and Relations	Reputation-oriented operations	Influence of employee behavior on reputation; ethical culture boosts credibility
	Internal and external relationship-building	Internal communication; customer/partner relationship improvement
Social and Environmental Risks	Social risks	Community-related challenges; need for public support of brand
	Environmental risks	Environmental pollution; local resistance to pollutants
Increased Market Risks	Rising competition	More competitors; decreased sales and income
	Market and economic volatility	Sanctions escalation; currency and inflation fluctuations

The findings related to causal conditions revealed six core subcategories encompassing a range of individual, organizational, and environmental factors that drive the emergence of ethical leadership in the petrochemical sector. These include a decline in employee commitment and organizational citizenship behaviors, as well as increasing demands for personal and professional growth among staff. Additionally, the growing importance of maintaining internal and external corporate reputation, as well as mitigating environmental and societal risks, emerged as key triggers. Market pressures and economic instabilities, such as heightened competition and currency volatility, also catalyze the need for ethical leadership rooted in cultural values.

Table 2.

Identified Concepts and Subcategories Related to Contextual Conditions

Subcategory	Concept	Codes
Organizational Culture and Values	Institutionalized ethical values	Presence of formal value statements; employee awareness
	Cultural and ethical programs	Emphasis on organizational culture; transparency of ethical principles
Policies, Communication, and Procedures	Clear policies and procedures	Defined organizational policies; procedural clarity
	Transparent communication	Teamwork encouragement; easy communication across levels
Training and Development Systems	Ongoing training programs	Onboarding and continuous training; organizational socialization
	Performance evaluation and feedback	Clear evaluations; performance improvement feedback
Managerial Structure	Organizational hierarchy	Minimal hierarchy; formalization balance
	Decision-making and participation	Centralization level; openness to staff input

Analysis of contextual conditions highlighted four major subcategories shaping the environment in which ethical leadership is practiced. A strong organizational culture characterized by formalized values and ethical transparency serves as a foundation. Clear communication structures and standardized policies were noted to promote trust and operational consistency. Training systems play a pivotal role in embedding ethical awareness and professional development, while participative and balanced management structures support ethical behavior through inclusive decision-making processes and minimized bureaucracy.

Table 3.

Identified Concepts and Subcategories Related to Intervening Conditions

Subcategory	Concept	Codes
Financial and Economic Conditions	Company financial status	Sales performance; employee compensation levels
	National economic situation	Inflation rate; government fiscal and monetary policies
Socio-Cultural and Ethical Conditions	Cultural and social dynamics	Dominant societal culture; level of social interaction
	Ethical atmosphere in society	Ethical norms in public perception; expansion of moral awareness
Nature of Work and Employee Expertise	Job type and conditions	Job difficulty; work environment
	Employee skill levels	Expectation differences by expertise; differentiated treatment
Individual Factors	Personal traits	Ethical perceptions; individual values
	Individual expectations	Satisfaction drivers; expectations from managerial behavior

Intervening conditions that influence the application of ethical leadership included both macro- and micro-level variables. On the macro level, the organization's financial health and the national economic context shaped operational priorities. Societal norms and the public's ethical expectations also played a crucial facilitative or constraining role. On the micro level, the nature of employees' work and their level of expertise introduced nuances in ethical expectations, while individual characteristics and personal values influenced how ethical leadership was perceived and received across the organization.

Table 4.

Identified Concepts and Subcategories Related to the Phenomenon

Subcategory	Concept	Codes
Growth of Ethical and Citizenship Behaviors	Enhanced organizational citizenship	Increased altruism; improved knowledge sharing
	Strengthened organizational ethics	Growth in ethical values; development of ethical workflows
Enhanced Organizational Credibility and Transparency	Improved credibility and transparency	Process clarity; internal and external reputation gains
	Broadened communication	Improved staff interaction; enhanced relations with stakeholders
Individual and Professional Development	Personal development of employees	Ethical value reinforcement; enhanced motivation and relationships
	Professional growth	Career path clarity; improved job learning
Growth of Social and Environmental Responsibility	Environmental responsibility	Environmental awareness; ethical responses to external events
	Social responsibility	Public engagement; concern for others
Improvement of Individual and Organizational Performance	Employee performance improvement	Increased motivation and commitment; enhanced learning and efficiency
	Organizational performance growth	Higher productivity; organizational advancement trajectory

The central phenomenon of "ethical leadership based on cultural excellence" was reflected in five overarching subcategories. These include the observable growth of ethical and citizenship behaviors among employees, improvement in transparency and institutional credibility, and expanded communication. Furthermore, the development of both personal and professional dimensions of staff was emphasized, along with a rise in environmental and social responsibility initiatives. These outcomes also translated into enhanced employee performance and broader organizational effectiveness, validating the transformative potential of ethical leadership when embedded within a culturally attuned model.

Table 5.

Identified Concepts and Subcategories Related to Strategies

Subcategory	Concept	Codes
Developing and Disseminating Values and Culture	Formulating organizational values	Documenting values; clarity of organizational values
	Promoting culture and ethical behaviors	Organizational awareness of cultural dimensions; emphasis on ethical behavior
Enhancing Communication and Transparency	Strengthening internal and external communication	Stakeholder engagement; internal communication development
	Promoting transparency	Encouraging knowledge sharing; open information flow
Participatory Management and Decision-Making	Cultivating participatory processes	Encouraging teamwork; institutionalizing participatory culture
	Enhancing decision-making capacity	Managerial decision-making skills; enabling collaborative decisions
Continuous Training, Evaluation, and Feedback	Promoting learning through training	Ongoing training programs; fostering organizational learning
	Providing feedback and evaluations	Performance evaluation systems; individual feedback provision
Encouraging Social and Environmental Responsibility	Engaging in social activities	Valuing social issues; contributing to social improvement
	Promoting environmental responsibility	Environmentally ethical leadership; ecological well-being
Ensuring Justice and Meritocracy	Promoting merit-based culture	Advancement based on merit; rewarding growth and development
	Establishing improvement systems	Feedback and suggestion systems; attention to staff challenges
Fair Compensation Systems	Ensuring fair pay	Efficiency-based salaries; appropriate financial compensation
	Providing additional benefits	Non-monetary benefits; welfare and support services

The strategic responses identified in this study were organized into eight overarching subcategories that highlight how ethical leadership is enacted through culturally anchored practices. These included the formulation and transparent dissemination of organizational values, development of ethical and cultural awareness across all organizational levels, and the institutionalization of communication channels that emphasize transparency and stakeholder involvement. Strategies also focused on participatory decision-making, continuous training and performance feedback, and the encouragement of environmental and social responsibility. Emphasis was placed on ensuring justice and merit-based advancement through fair evaluation systems and constructive feedback channels. Finally, the implementation of equitable compensation systems—including both monetary and non-monetary incentives—was highlighted as a key mechanism to reinforce ethical leadership behaviors and organizational integrity.

Table 6.

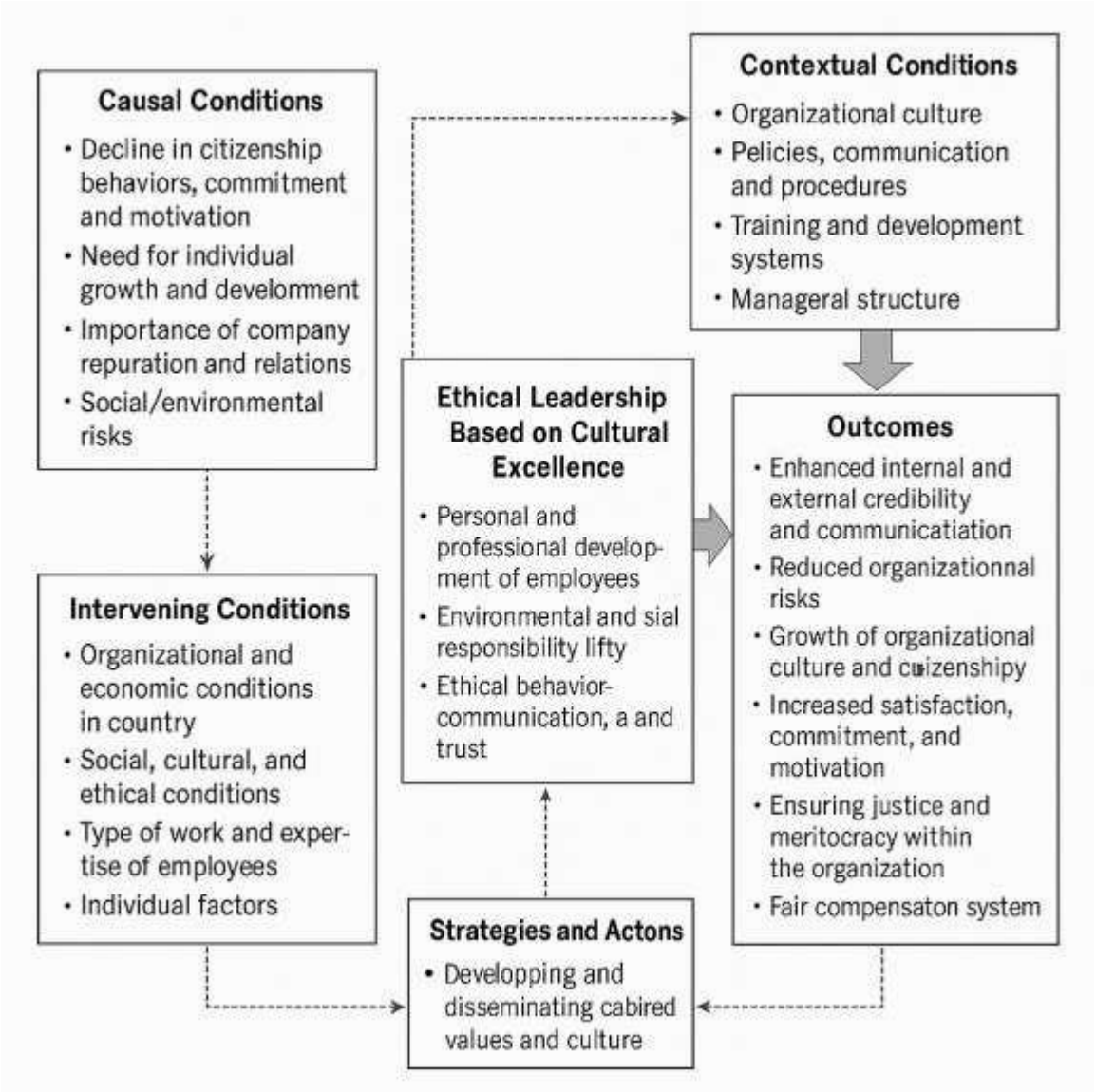
Identified Concepts and Subcategories Related to Consequences

Subcategory	Concept	Codes
Enhanced Internal and External Credibility and Communication	Strengthened organizational reputation	Increased internal and external credibility
	Improved communication	Enhanced employee interaction; broadened stakeholder engagement
Reduced Organizational Risk	Mitigated internal risks	Decreased staff conflicts; reduced negligence or sabotage
	Mitigated external risks	Lower customer loss risk; improved public acceptance
Growth of Organizational Culture and Citizenship	Cultural and ethical advancement	Evolving culture; spreading ethical behavior
	Increased citizenship behavior	Rise in extra-role behavior; heightened mutual responsibility
Increased Satisfaction, Commitment, and Motivation	Enhanced employee satisfaction	Fulfillment of employee expectations; organizational contentment
	Boosted commitment and motivation	Stronger work ethic; greater drive for excellence
Improved Organizational Performance and Effectiveness	Individual performance gains	Improved personal efficiency; task responsibility
	Organizational performance improvement	Enhanced productivity; growth trajectory
Emergence of Sustainable Managerial Thinking and Culture	Collaborative leadership	Flattened decision hierarchies; staff engagement
	Sustainable leadership culture	Leading with people; people-centered management
Growth and Development of Employees	Skill development	Increased learning; pursuit of career advancement
	Personal growth	Elevated responsibility; enhanced ethical awareness

The consequences of adopting ethical leadership within a framework of cultural excellence were categorized into seven distinct subcategories. These included a notable enhancement in the organization's internal and external credibility, resulting in more transparent and effective communication. Risk levels—both internal (e.g., staff disengagement) and external (e.g., reputation loss)—were significantly reduced. The institutional culture experienced ethical and civic enrichment, with increases in altruistic behaviors and organizational citizenship. Employee outcomes such as satisfaction, motivation, and commitment improved markedly, contributing to overall organizational effectiveness. This was further supported by individual and institutional performance improvements. Additionally, a shift toward sustainable, participatory leadership models emerged, characterized by reduced hierarchical barriers and increased emphasis on collective governance. Lastly, employees experienced meaningful personal and professional development, underscoring the transformative power of culturally aligned ethical leadership.

Figure 1.

Final Model of the Study



Discussion and Conclusion

The findings of this study culminated in the development of a grounded model of ethical leadership based on cultural excellence tailored to the unique structural and contextual features of the petrochemical industry. Through open, axial, and selective coding of qualitative interviews, six major dimensions were extracted: causal conditions, contextual conditions, intervening conditions, central phenomenon, strategies, and consequences. At the heart of the model lies the concept of "ethical leadership grounded in cultural excellence," a multifaceted construct shaped by institutional, individual, and environmental dynamics. This central phenomenon was found to be driven by factors such as declining organizational citizenship behavior, motivational deficits, social and environmental risks, and market volatility, while simultaneously facilitated or constrained by contextual and intervening conditions such as organizational culture, policy structure, ethical awareness, macroeconomic forces, and individual-level variables.

One of the most significant insights emerging from this model is the role of ethical leadership as a stabilizing and developmental force within volatile and risk-sensitive environments. The causal conditions, including declining commitment and increased environmental and market risks, reflect the empirical reality reported in prior research where ethical leadership acts as a remedy for organizational fragility and moral disengagement. For instance, ethical leadership has been shown to foster work engagement and organizational loyalty through mechanisms of emotional bonding and trust-building [8]. In the present study, ethical leadership emerges not only as a response to external instability but also as a proactive force that reconfigures organizational culture in line with ethical and cultural priorities. This aligns with earlier findings that suggest ethical leadership plays a central role in restoring moral order and cohesion in ethically compromised environments [7].

The contextual conditions identified in the model, such as the clarity of organizational values, participatory management structures, and well-defined communication systems, reaffirm the literature asserting that ethical leadership flourishes in institutions where ethical norms are structurally embedded and operationally supported. Ethical leadership does not function in isolation but requires cultural scaffolding, including transparent evaluation systems, inclusive communication, and merit-based decision-making processes [3, 6]. Furthermore, the importance of context-specific value alignment is emphasized by the findings of Huff et al., who argued that ethical leadership must adapt to the historical and cultural particularities of its environment to be effective [12]. This is consistent with the empirical insights of this study, where respondents highlighted the need for leadership behaviors that resonate with the socio-cultural identity of the workforce and broader societal expectations.

Another key contribution of this study is the elaboration of intervening conditions that mediate the relationship between ethical leadership and organizational outcomes. Variables such as national economic conditions, social values, employee characteristics, and job complexity play a critical role in shaping how ethical leadership is perceived and enacted. The influence of economic constraints on leadership behavior is supported by Zahari et al., who showed that ethical governance structures within the ESG framework are heavily influenced by the availability of financial and policy resources [2]. Similarly, the present study found that financial instability, inflation, and inconsistent policy environments can diminish the effectiveness of ethical leadership unless accompanied by robust institutional support.

The strategies extracted from the data—such as codifying ethical values, promoting open communication, engaging in participatory decision-making, and offering continuous ethical training—illustrate how ethical leadership is operationalized in everyday organizational life. These findings resonate strongly with the study by Carakos, which demonstrated that the

ethical climate mediates the impact of ethical leadership on organizational behavior [4]. Furthermore, training and evaluation mechanisms that encourage ethical behavior and learning were emphasized by Schwartz, who underscored the role of systems-level interventions in sustaining an ethical organizational culture [6]. This is especially crucial in industries like petrochemicals, where high technical complexity and safety demands require ethical reflexivity to be embedded within procedural systems.

The consequences observed in this model—such as improved communication, enhanced organizational reputation, increased motivation, and improved performance—support the hypothesis that ethical leadership contributes directly to institutional resilience and effectiveness. These outcomes parallel findings by Kim and Lee, who reported that ethical leadership leads to improved performance and stronger organizational culture through increased transparency and ethical consistency [1]. Similarly, King et al. demonstrated the impact of ethical leadership on employee satisfaction and organizational citizenship behaviors, both of which were echoed in this study's findings [3]. The reported rise in responsibility-taking, cultural loyalty, and citizenship behavior among employees reinforces the growing consensus that ethical leadership, when culturally grounded, catalyzes transformative organizational outcomes.

This study also reaffirms the notion that ethical leadership is a collective and systemic practice rather than an individual attribute. The emphasis placed by participants on participatory decision-making, distributed responsibility, and inclusive feedback mechanisms highlights a shift from heroic leadership models to more collaborative and culturally embedded forms of leadership. This finding aligns with the work of Ullah et al., who emphasized the mediating role of ethical culture and intellectual capital in transforming ethical leadership into tangible organizational change [9]. Furthermore, Tamer's research in the healthcare sector illustrated that ethical leadership, when aligned with cultural frameworks, results in improved morale, ethical behavior, and coordinated decision-making—all outcomes observed in the petrochemical sector as well [10].

What distinguishes this study is the explicit integration of cultural excellence into the leadership framework. While many existing studies discuss ethical leadership and organizational culture separately, the current research positions cultural excellence not as a background condition but as a constitutive element of ethical leadership. This is in line with Ouma's theoretical model, which framed culture as both an input and an output of ethical leadership [13]. By embedding leadership ethics within the broader cultural expectations of employees, organizations enhance the relevance, legitimacy, and sustainability of ethical initiatives. This also reinforces the view advanced by Royayi Ramazani et al., who found that leadership credibility and cultural trust reduce deviant behaviors and increase audit integrity, underscoring the ethical multiplier effect of culturally resonant leadership [11].

The grounded theory approach used in this study proved essential in capturing the lived realities and nuanced perceptions of participants, enabling the emergence of a model that is both conceptually rich and practically grounded. It resonates with the methodology used by Mohammadi Komroudi et al., who also applied grounded theory to construct ethical leadership frameworks within the education sector [15]. This methodological consistency strengthens the credibility and applicability of the model and offers a replicable framework for similar explorations in other high-risk, high-accountability industries.

Despite its contributions, this study is not without limitations. First, the sample size, while adequate for grounded theory saturation, was limited to a specific subset of the petrochemical industry, which may affect the transferability of findings to other sectors or even other regions within the industry. Second, the reliance on qualitative interviews, although rich in depth, carries the inherent limitation of subjectivity in interpretation and potential bias in self-reporting by participants. Finally, the

cross-sectional nature of the study limits the capacity to observe long-term changes or the dynamic evolution of ethical leadership practices over time.

Future research could extend the current model by conducting comparative studies across different industrial sectors, such as energy, mining, or pharmaceuticals, to assess the applicability and adaptability of the cultural excellence framework. Longitudinal designs would also help trace the evolution of ethical leadership practices and their impact over time, providing insights into sustainability and institutionalization. Moreover, integrating quantitative methods to test the model's predictive validity could enhance its generalizability and support the development of measurable indicators for ethical leadership and cultural alignment.

From a practical standpoint, petrochemical organizations are encouraged to codify their ethical values and communicate them clearly across all hierarchical levels. Leadership development programs should focus on ethical reasoning, cultural competence, and participatory governance. Moreover, embedding ethical expectations into performance evaluation systems and feedback mechanisms can help sustain a culture of accountability and learning. Finally, aligning organizational policies with cultural values and ensuring that leadership practices resonate with employees' social and ethical expectations will significantly enhance trust, motivation, and long-term organizational excellence.

Acknowledgments

We would like to express our appreciation and gratitude to all those who cooperated in carrying out this study.

Authors' Contributions

All authors equally contributed to this study.

Declaration of Interest

The authors of this article declared no conflict of interest.

Ethical Considerations

The study protocol adhered to the principles outlined in the Helsinki Declaration, which provides guidelines for ethical research involving human participants. Written consent was obtained from all participants in the study.

Transparency of Data

In accordance with the principles of transparency and open research, we declare that all data and materials used in this study are available upon request.

Funding

This research was carried out independently with personal funding and without the financial support of any governmental or private institution or organization.

References

[1] D. Kim and M.-J. Lee, "The role of ethical leadership in enhancing organizational culture and performance," *International Journal of Management, Business, and Economics*, vol. 1, no. 2, 2024.

[2] A. I. Zahari, J. Said, N. Muhamad, and S. M. Ramly, "Ethical culture and leadership for sustainability and governance in public sector organisations within the ESG framework," *Journal of Open Innovation: Technology, Market, and Complexity*, vol. 10, no. 1, pp. 1-11, 2024, doi: 10.1016/j.joitmc.2024.100219.

[3] S. King, M. Marks, and K. Roberts, "The Impact of Ethical Leadership on Organizational Culture and Satisfaction," *Public Administration Review*, vol. 80, no. 4, pp. 620-632, 2020, doi: 10.1111/puar.13103.

[4] F. Carakos, "Mediating role of ethical climate in the relationship between ethical leadership and organizational culture," *Journal of Leadership in Organizations*, vol. 7, p. 77, 2018.

[5] I. Ullah, R. M. Hameed, N. Z. Kayani, and Y. Fazal, "CEO Ethical Leadership and Corporate Social Responsibility: Examining the Mediating Role of Organizational Ethical Culture and Intellectual Capital," *Journal of Management & Organization*, vol. 28, no. 1, pp. 99-119, 2019, doi: 10.1017/jmo.2019.48.

[6] M. S. Schwartz, "Developing and sustaining an ethical corporate culture: The core elements," *Business Horizons*, vol. 56, no. 1, pp. 39-50, 2013/01/01/ 2013. [Online]. Available: https://www.sciencedirect.com/science/article/pii/S0007681312001218.

[7] M. Montakhab, K. Beshlide, M. Shamsi, and S. Hazarian, "Investigate of the Relationship between Ethical Leadership and Workplace Deviance Behaviors: Mediating Role of Affective Commitment and Ethical Climate," (in Persian), *Organizational Culture Management*, vol. 14, no. 1, pp. 137-153, 2016. [Online]. Available: https://scholar.google.no/citations?user=9lJeU04AAAAJ&hl=en.

[8] S. Ghanbari and Abdolmaleki, Jamal, "The Role of Ethical Leadership in Organizational Loyalty with the Mediation of Work Engagement," *Strategic Research on Social Problems*, vol. 8, no. 4, pp. 17-36, 2019, doi: 10.22108/srspi.2020.121122.1494.

[9] I. Ullah, R. M. Hameed, N. Z. Kayani, and Y. Fazal, "CEO ethical leadership and corporate social responsibility: Examining the mediating role of organizational ethical culture and intellectual capital," *Journal of Management & Organization*, vol. 28, no. 1, pp. 99-119, 2022, doi: 10.1017/jmo.2019.48.

[10] R. Tamer, "Ethical Leadership and Cultural Outcomes in Healthcare Organizations," *Journal of Organizational Ethics*, vol. 2, p. 97, 2021.

[11] T. Royayi Ramazani, G. A. Talebnia, Y. Hassas Yeganeh, and J. Saber, "Auditors' perception of trusted leadership and ethical culture on quality-reducing audit behaviors," *Iranian Journal of Management Sciences*, vol. 7, no. 25, pp. 1-22, 2012.

[12] A. J. Huff, D. N. Burrell, E. J. Lewis, A. M. Ingle, K. E. Vestal, and K. Richardson, "Ethical, Cultural, and Historical Leadership Implications of Conducting Public Health Research on Minority Populations," *International Journal of Public and Private Perspectives on Healthcare Culture and the Environment*, vol. 7, no. 1, pp. 1-18, 2023, doi: 10.4018/ijppphce.325473.

[13] C. A. Ouma, "Ethical Leadership and Organizational Culture: Literature Perspective," *International Journal of Innovative Research and Development*, vol. 6, no. 8, 2017, doi: 10.24940/ijird/2017/v6/i8/aug17099.

[14] Z. Karimi, A. Yaghoob Nejhad, S. Largani, and M. Poorali, "The Impact of Auditors Perception of Authentic Leadership and Ethical Organizational Culture on Reduced Audit Quality Practices," *Iranian journal of management sciences*, vol. 7, no. 25, pp. 1-20, 2013. [Online]. Available: http://journal.iams.ir/article_116_cc70d746a055a5c0a469a7627cec1d1a.pdf.

[15] M. J. Mohammadi Komroudi, M. Ahmadi, and A. Farhadi Mahalli, "Designing an Ethically-Oriented Management Model for Employee Education Development in Higher Education Using Grounded Theory (Case Study: Free Universities of Mazandaran Province)," (in eng), *Iranian Journal of Educational Sociology*, Research Article vol. 7, no. 2, pp. 114-123, 2024, doi: 10.61838/kman.ijes.7.2.14.