

Dynamic Capabilities and Leadership Evolution: A Systematic Review of Theoretical Development

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Abstract

This study aimed to develop a qualitative theoretical synthesis of how leadership evolves through the formation, activation, and institutionalization of dynamic capabilities in organizations operating under conditions of uncertainty, technological change, and strategic renewal. The study used a qualitative theory-development design based on semi-structured interviews with organizational leaders, senior managers, strategy consultants, and management scholars in Tehran. Participants were selected through purposive and snowball sampling because of their direct experience with strategic change, organizational transformation, and leadership development. A total of 24 participants were interviewed, and theoretical saturation was reached after the twenty-first interview and confirmed through three additional interviews. The interviews focused on the relationship between environmental sensing, adaptive decision-making, resource reconfiguration, learning routines, and the transformation of leadership roles. Interviews were audio-recorded, transcribed verbatim, and analyzed using thematic analysis supported by NVivo software. Coding involved open coding, axial categorization, constant comparison, memo writing, and iterative refinement of categories. The analysis produced five main categories: strategic sensing as a leadership capability, adaptive decision architecture, resource reconfiguration and renewal, distributed learning-oriented leadership, and institutionalization of dynamic capabilities. Participants emphasized that leadership evolution does not occur only through individual leader traits but through collective interpretive, relational, and organizational routines. The findings showed that dynamic capabilities become leadership capabilities when leaders transform environmental uncertainty into shared meaning, strategic priorities, experimental action, and organizational learning. The study concludes that leadership evolution is best understood as a dynamic capability process through which leaders sense emerging changes, seize strategic opportunities, reconfigure organizational resources, and institutionalize adaptive learning mechanisms. The findings extend dynamic capabilities theory by clarifying the leadership mechanisms that translate strategic adaptation into sustained organizational renewal.

Keywords: dynamic capabilities, leadership evolution, strategic leadership, organizational renewal, qualitative research, theoretical development.

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1. Introduction

Organizations increasingly operate in environments characterized by technological disruption, institutional volatility, geopolitical uncertainty, digital transformation, and intensified competitive pressure. In such conditions, the long-term effectiveness of leadership can no longer be explained only through stable traits, formal authority, or hierarchical decision-making. Leadership must be understood as a dynamic, adaptive, and evolving organizational capability. The theoretical foundation for this perspective is closely related to the dynamic capabilities view, which emerged as an extension of the resource-based view of the firm. Teece, Pisano, and Shuen (1997) conceptualized dynamic capabilities as the firm's ability to integrate, build, and reconfigure internal and external competences in response to rapidly changing environments {Teece et al., 1997}. This definition shifted strategic management theory away from a static focus on valuable, rare, inimitable, and non-substitutable



resources toward a more processual understanding of how organizations renew their resource base over time. The foundational 1997 article is widely recognized as the original statement of the dynamic capabilities framework.

The dynamic capabilities perspective has become one of the most influential theoretical streams in strategic management because it explains how organizations adapt, innovate, transform, and sustain competitiveness under changing conditions. Eisenhardt and Martin (2000) argued that dynamic capabilities consist of identifiable organizational and strategic processes, including product development, strategic decision-making, knowledge transfer, and alliance formation {Eisenhardt & Martin, 2000}. Their contribution clarified that dynamic capabilities are not abstract metaphors but patterned processes through which firms renew competences and reconfigure resources. While Teece et al. (1997) emphasized the evolutionary and path-dependent nature of capabilities, Eisenhardt and Martin (2000) highlighted the role of specific routines and managerial processes. Together, these perspectives established a theoretical foundation for examining how organizations move from resource possession to resource transformation. Eisenhardt and Martin's article specifically defines dynamic capabilities as identifiable processes such as strategic decision-making, product development, and alliancing.

Despite the extensive development of dynamic capabilities theory, the role of leadership in capability formation remains theoretically underdeveloped. The literature has acknowledged that managers and leaders influence organizational sensing, seizing, and transforming, yet leadership is often treated as an implicit background condition rather than an explicit mechanism of capability development. Teece (2007) later elaborated the microfoundations of dynamic capabilities through the three clusters of sensing opportunities and threats, seizing opportunities, and reconfiguring organizational assets {Teece, 2007}. This framework created a stronger bridge between strategic management and leadership studies because each cluster requires interpretation, judgment, commitment, coordination, and organizational mobilization. Sensing requires leaders to scan, interpret, and frame environmental change. Seizing requires leaders to allocate resources, make strategic commitments, and design business models. Reconfiguration requires leaders to overcome inertia, redesign structures, and sustain collective learning. Teece's 2007 article explicitly develops the microfoundations of dynamic capabilities and identifies sensing, seizing, and reconfiguring as core processes.

Leadership evolution refers to the transformation of leadership roles, practices, assumptions, and influence mechanisms as organizations confront new strategic conditions. Traditional leadership models often focused on leader traits, behaviors, styles, or dyadic influence. Although these perspectives remain important, they are insufficient for explaining leadership in dynamic environments where adaptation depends on distributed intelligence, organizational learning, experimentation, and system-level coordination. Strategic leadership theory expanded the focus from individual supervision to the role of top managers in shaping organizational direction, culture, learning, and strategic renewal {Boal & Hooijberg, 2000; Vera & Crossan, 2004}. Vera and Crossan (2004), for example, argued that strategic leaders influence organizational learning across multiple levels, thereby connecting leadership behavior with knowledge creation and institutional adaptation. This theoretical link is central to the present study because dynamic capabilities cannot develop without learning processes that connect individual cognition, group interaction, and organizational routines. Vera and Crossan's article develops a theoretical model of how CEO and top-management leadership styles and practices influence organizational learning.

The relationship between dynamic capabilities and leadership evolution is especially important because organizations rarely adapt automatically. Environmental change creates ambiguity, resistance, and competing

interpretations. Leaders therefore function as interpreters of uncertainty, architects of adaptive routines, and agents of strategic renewal. Adner and Helfat (2003) introduced the concept of dynamic managerial capabilities to explain how managers build, integrate, and reconfigure organizational resources through managerial cognition, social capital, and human capital {Adner & Helfat, 2003}. This concept is particularly relevant to leadership evolution because it locates capability development not only in organizational routines but also in the judgment, experience, networks, and interpretive frames of leaders. Later work by Helfat and Peteraf (2015) further emphasized managerial cognitive capabilities as microfoundations of strategic change, suggesting that leaders' abilities to perceive, attend, reason, communicate, and solve problems shape the organization's adaptive capacity {Helfat & Peteraf, 2015}.

Another important theoretical bridge is ambidexterity. Organizations must simultaneously exploit existing capabilities and explore new opportunities. This tension requires leadership systems capable of balancing efficiency and innovation, continuity and change, control and autonomy. O'Reilly and Tushman (2008) argued that organizational ambidexterity can be understood as a dynamic capability because it enables firms to reconfigure assets and manage contradictory strategic demands {O'Reilly & Tushman, 2008}. Their work also emphasized the role of senior leadership teams in creating alignment, differentiation, and integration across exploratory and exploitative units. This insight is important for the present study because leadership evolution often occurs when leaders move from command-based control to orchestration-based coordination. In turbulent environments, effective leaders do not merely issue decisions; they design contexts in which exploration, learning, and coordinated adaptation become possible. O'Reilly and Tushman's work specifically connects ambidexterity to dynamic capabilities and highlights senior teams' role in building them.

Complexity leadership theory provides another conceptual lens for understanding leadership evolution. Uhl-Bien, Marion, and McKelvey (2007) proposed that leadership in knowledge-era organizations should enable learning, creativity, emergence, and adaptive capacity in complex adaptive systems {Uhl-Bien et al., 2007}. This perspective challenges the assumption that leadership is located only in formal roles. Instead, leadership emerges through interactions among administrative, adaptive, and enabling functions. This view strongly complements dynamic capabilities theory because sensing, seizing, and reconfiguring require more than top-down direction; they require distributed problem-solving, relational coordination, experimentation, and adaptive learning. Complexity leadership theory therefore suggests that leadership evolution involves a movement from individual authority toward system enablement. The focus shifts from the leader as controller to the leader as designer of adaptive conditions. Uhl-Bien et al.'s article defines complexity leadership as a framework for enabling learning, creativity, and adaptive capacity in complex adaptive systems.

A further issue in the literature is that dynamic capabilities have often been analyzed at the firm level, while leadership studies have frequently been analyzed at individual, dyadic, or team levels. This creates a theoretical gap between macro-level strategic adaptation and micro-level leadership processes. Schilke, Hu, and Helfat (2018), in a major content-analytic review, argued that the dynamic capabilities literature has developed substantially but still requires clearer specification of antecedents, mechanisms, moderators, and outcomes {Schilke et al., 2018}. This observation supports the need to examine leadership as a mechanism that connects environmental turbulence with organizational adaptation. Leadership may be understood as both an antecedent and a carrier of dynamic capabilities: it shapes the conditions under which capabilities emerge, and it is itself

transformed through repeated engagement with change. Schilke et al.'s review synthesizes the current state of dynamic capabilities research and proposes directions for future work.

The theoretical development of dynamic capabilities also suggests that leadership evolution is path-dependent. Organizations do not develop adaptive leadership systems instantly. Leadership practices are shaped by prior routines, organizational memory, cultural assumptions, power structures, and previous strategic experiences. Winter (2003) distinguished between ordinary capabilities and dynamic capabilities, arguing that dynamic capabilities involve patterned activities directed toward change rather than routine operational performance {Winter, 2003}. This distinction is essential for leadership studies because many leadership practices sustain existing operations, whereas evolutionary leadership practices enable transformation. Leaders who maintain operational efficiency may not necessarily possess the capability to sense discontinuities, challenge dominant logics, mobilize collective experimentation, or institutionalize renewal. Therefore, leadership evolution requires a shift from operational leadership to dynamic leadership, in which the central task is not only maintaining performance but also continuously renewing the organization's capacity to perform.

The present study addresses this theoretical gap by examining how dynamic capabilities and leadership evolution are connected in the lived interpretations of organizational leaders, senior managers, consultants, and management scholars. Although the title emphasizes systematic theoretical development, the empirical design is qualitative and interview-based. The study uses semi-structured interviews to synthesize expert interpretations of how leadership evolves through sensing, seizing, reconfiguration, learning, and institutionalization. This design is appropriate because the relationship between dynamic capabilities and leadership evolution is complex, interpretive, and processual. Rather than testing predefined variables, the study seeks to develop a conceptual understanding of leadership as an adaptive capability embedded in organizational routines, strategic cognition, and collective learning. Accordingly, the aim of this study was to develop a qualitative theoretical synthesis of how leadership evolves through the formation, activation, and institutionalization of dynamic capabilities in organizations facing environmental uncertainty and strategic transformation.

2. Methods and Materials

This study employed a qualitative theory-development design to explore the relationship between dynamic capabilities and leadership evolution. The qualitative approach was selected because the study sought to understand how experienced organizational actors interpret the evolution of leadership in relation to strategic sensing, opportunity seizing, resource reconfiguration, organizational learning, and capability institutionalization. The study was conducted in Tehran because the city contains a dense concentration of corporate headquarters, public and private organizations, consulting firms, universities, technology-based companies, and strategic management professionals. Participants were selected through purposive sampling, followed by limited snowball sampling, to ensure the inclusion of individuals with direct knowledge of leadership transformation and organizational adaptation. The inclusion criteria were at least seven years of professional or academic experience in management, leadership, organizational development, strategic planning, or consulting; direct involvement in organizational change or transformation projects; and willingness to participate in an in-depth interview. The final sample consisted of 24 participants. Theoretical saturation was reached after 21 interviews, and three additional interviews were conducted to confirm the stability, adequacy, and conceptual density of the categories.

Data were collected through semi-structured interviews. The interview protocol was developed based on the theoretical literature on dynamic capabilities, strategic leadership, organizational learning, ambidexterity, and complexity leadership. The interview questions focused on how leaders identify environmental changes, how strategic opportunities are interpreted and prioritized, how organizations reconfigure resources, how leadership practices change during transformation, and how adaptive routines become institutionalized. Examples of guiding questions included: “How do leaders in your organization recognize strategic changes before they become urgent?”, “What leadership practices help organizations convert uncertainty into action?”, “How do leaders manage resistance during resource reconfiguration?”, and “How does leadership change when organizations move from stable operations to continuous transformation?” Interviews lasted between 45 and 80 minutes. All interviews were conducted in Persian, audio-recorded with participants’ consent, and transcribed verbatim. To enhance data quality, the researcher wrote field notes after each interview, including observations about emphasis, hesitation, recurring metaphors, and emerging analytical insights.

The interview data were analyzed using thematic analysis supported by NVivo software. The analysis followed an iterative and inductive procedure. First, all transcripts were read several times to develop familiarity with the data. Second, open coding was used to identify meaningful units related to leadership evolution, environmental interpretation, strategic decision-making, resource renewal, learning, and institutionalization. Third, similar codes were grouped into subcategories through constant comparison. Fourth, axial coding was used to identify relationships among subcategories and to construct higher-order categories. Fifth, analytical memos were written throughout the coding process to document conceptual decisions, category boundaries, and emerging theoretical relationships. NVivo was used to organize transcripts, retrieve coded segments, compare participants’ statements, and refine the coding structure. Trustworthiness was enhanced through member checking with selected participants, peer review of coding decisions, thick description of categories, and maintaining an audit trail of analytical decisions. The final coding structure included five main categories: strategic sensing as a leadership capability, adaptive decision architecture, resource reconfiguration and renewal, distributed learning-oriented leadership, and institutionalization of dynamic capabilities.

3. Findings and Results

The demographic characteristics of the participants showed considerable diversity in professional background, organizational position, and academic qualification. Of the 24 participants, 15 were men and 9 were women. In terms of age, 5 participants were between 30 and 39 years old, 11 were between 40 and 49 years old, and 8 were 50 years old or older. Regarding education, 10 participants held master’s degrees and 14 held doctoral degrees. In terms of professional role, 8 participants were senior organizational managers, 6 were middle or functional managers involved in transformation projects, 5 were management consultants, and 5 were university faculty members or researchers in management and organizational studies. Participants represented several sectors, including technology and digital services, banking and finance, manufacturing, higher education, consulting, and public-sector organizations. Their professional experience ranged from 8 to 28 years, with most participants having direct experience in strategic change, restructuring, innovation programs, or leadership development initiatives.

The first main category was **strategic sensing as a leadership capability**. Participants consistently described leadership evolution as beginning with the ability to perceive weak signals, interpret emerging patterns, and create shared awareness before environmental change becomes a crisis. In their view, dynamic capabilities do not begin with resource reallocation but with interpretive sensitivity. Leaders who rely only on formal reports, historical performance indicators, or routine planning cycles often fail to recognize discontinuities. By contrast, adaptive leaders develop sensing routines through environmental scanning, customer interaction, competitor analysis, technological monitoring, and dialogue with frontline employees. One participant stated, “The first difference between a traditional manager and an adaptive leader is that the adaptive leader sees change while it is still unclear. Others wait until the numbers collapse.” Another participant explained, “Sensing is not only market research. It is the leader’s ability to listen to scattered signals and turn them into a strategic conversation.” This category indicates that leadership evolution requires the transformation of perception from reactive monitoring to proactive interpretation. Leaders become capability builders when they convert ambiguous environmental information into collective strategic attention.

The second main category was **adaptive decision architecture**. Participants emphasized that sensing alone does not create dynamic capability unless it is connected to decision-making structures that allow timely and flexible action. Many participants criticized centralized and bureaucratic decision systems that delay organizational response. They argued that leadership evolution involves creating decision architectures that balance direction with flexibility. Such architectures include cross-functional committees, rapid experimentation mechanisms, scenario-based planning, delegated authority, and structured strategic dialogue. One senior manager noted, “In unstable conditions, the leader cannot approve every small decision. The leader must design a decision system where the right people can act quickly without losing strategic coherence.” Another participant stated, “Leadership has evolved from making decisions to designing the conditions under which better decisions are made.” This finding suggests that leadership is increasingly expressed through the design of adaptive governance processes rather than through personal command. Dynamic capabilities are strengthened when leaders create decision systems that connect strategic priorities with local knowledge and rapid feedback.

The third main category was **resource reconfiguration and renewal**. Participants described reconfiguration as the most difficult stage of dynamic capability because it involves changing structures, roles, budgets, technologies, routines, and sometimes identities. They argued that many organizations can identify change but cannot reconfigure because existing power relations, legacy systems, and cultural attachments protect the status quo. Leadership evolution therefore requires the capacity to mobilize people around difficult transitions. One participant explained, “Reconfiguration is where leadership becomes real. Everyone supports change in meetings, but when budgets, positions, and routines change, resistance appears.” Another participant stated, “The leader must connect renewal with meaning. People do not accept reconfiguration only because a strategy document says so.” This category shows that leadership evolution is deeply relational and political. Leaders must negotiate resistance, align stakeholders, redesign resource flows, and maintain legitimacy while disrupting established routines. Dynamic capabilities therefore depend not only on technical resource redeployment but also on the leader’s ability to manage emotions, interests, and meanings during change.

The fourth main category was **distributed learning-oriented leadership**. Participants repeatedly argued that dynamic capabilities cannot be sustained if leadership remains concentrated in a small executive group. They viewed contemporary leadership as increasingly distributed across teams, experts, project networks, and

communities of practice. In this category, leadership evolution was associated with creating learning systems in which employees can experiment, share knowledge, and reflect on outcomes. One consultant stated, “The organization becomes dynamic when learning is not limited to training courses. Learning must enter meetings, projects, mistakes, and performance reviews.” A university participant explained, “The leader’s role is not to know everything. The leader’s role is to make the organization capable of learning faster than the environment changes.” Participants emphasized psychological safety, feedback loops, knowledge sharing, and tolerance for controlled failure as necessary conditions for dynamic leadership. This finding indicates that leadership evolution involves a transition from expertise-based authority to learning-based enablement. Leaders build dynamic capabilities by increasing the organization’s collective capacity to learn, unlearn, and relearn.

The fifth main category was **institutionalization of dynamic capabilities**. Participants emphasized that adaptive actions must become embedded in organizational routines, structures, and cultural norms. Temporary change initiatives may produce short-term improvement, but they do not create dynamic capabilities unless they are institutionalized. Institutionalization was described as the process through which sensing, decision-making, experimentation, reconfiguration, and learning become repeated and legitimate organizational practices. One participant stated, “A capability exists when adaptation does not depend on one heroic leader. It becomes part of how the organization works.” Another participant observed, “Many organizations change only when a strong CEO pushes them. But when that person leaves, the old system returns. That is not a dynamic capability.” This category shows that leadership evolution reaches maturity when leaders reduce organizational dependence on themselves and embed adaptive capacity into systems. Dynamic leadership is therefore paradoxical: leaders must exercise influence in order to create an organization that is less dependent on individual influence. The institutionalization of dynamic capabilities requires formal routines, cultural reinforcement, measurement systems, leadership development programs, and governance mechanisms that sustain adaptation across time.

4. Discussion and Conclusion

The findings of this study show that leadership evolution is closely connected to the formation and activation of dynamic capabilities. The first finding, strategic sensing as a leadership capability, indicates that leadership evolution begins with interpretive capacity. Participants emphasized that leaders must identify weak signals, interpret environmental ambiguity, and translate dispersed information into shared strategic awareness. This finding is consistent with Teece’s (2007) argument that sensing opportunities and threats is a core microfoundation of dynamic capabilities. It also supports the broader dynamic capabilities framework of Teece et al. (1997), in which strategic advantage depends on the ability to integrate and reconfigure competences in response to changing environments. However, the present findings extend this literature by showing that sensing is not merely an organizational scanning routine; it is also a leadership practice involving attention, framing, dialogue, and meaning-making. Leaders shape what the organization notices, how environmental information is interpreted, and which signals become strategically relevant. This interpretation aligns with Helfat and Peteraf’s (2015) emphasis on managerial cognitive capabilities and with Adner and Helfat’s (2003) concept of dynamic managerial capabilities. In this sense, leadership evolution can be understood as the development of superior interpretive routines that enable organizations to recognize change earlier and respond more coherently.

The second finding, adaptive decision architecture, reveals that dynamic capabilities depend on the way leaders design decision processes. Participants argued that leadership has evolved from personal decision-making toward the creation of adaptive decision systems. This finding supports Eisenhardt and Martin's (2000) view that dynamic capabilities are identifiable processes, including strategic decision-making routines. It also connects with the ambidexterity literature, particularly O'Reilly and Tushman (2008), who emphasized the role of senior leadership teams in designing organizational arrangements that support both exploration and exploitation. The present study adds that decision architecture is a critical leadership mechanism because it determines whether sensed opportunities can be converted into timely strategic action. In many organizations, the problem is not lack of information but lack of decision flexibility. Hierarchical approval systems, functional silos, and risk-averse cultures slow adaptation. Therefore, leadership evolution involves designing decision processes that combine strategic coherence with distributed authority. This finding suggests that dynamic leadership is less about the leader as a single decision-maker and more about the leader as an architect of decision conditions.

The third finding, resource reconfiguration and renewal, confirms that leadership plays a central role in transforming organizational resource structures. Participants described reconfiguration as the most difficult component of dynamic capabilities because it threatens established routines, interests, identities, and power relations. This finding aligns with Teece's (2007) emphasis on transforming and reconfiguring assets as a core dimension of dynamic capabilities. It also reflects Winter's (2003) distinction between ordinary capabilities, which support current operations, and dynamic capabilities, which enable patterned change. The present findings show that reconfiguration is not only a technical process of reallocating resources; it is also a social and political process requiring legitimacy, communication, negotiation, and emotional management. Leaders must explain why change is necessary, build coalitions, reduce resistance, and maintain trust while disrupting familiar arrangements. This finding is also consistent with strategic leadership theory, which emphasizes the role of top managers in shaping organizational direction, culture, and resource commitments {Boal & Hooijberg, 2000; Vera & Crossan, 2004}. The contribution of this study is to show that leadership evolution becomes visible most clearly during resource reconfiguration, where leaders must convert strategic intent into organizational movement.

The fourth finding, distributed learning-oriented leadership, suggests that leadership evolution requires movement beyond individual authority toward collective learning systems. Participants emphasized that organizations become dynamic when learning is embedded in projects, teams, feedback routines, and experimentation processes. This finding strongly supports Vera and Crossan's (2004) argument that strategic leaders influence organizational learning across multiple levels. It also aligns with complexity leadership theory, which views leadership as a mechanism for enabling learning, creativity, and adaptive capacity in complex adaptive systems {Uhl-Bien et al., 2007}. In dynamic environments, no individual leader can possess all necessary knowledge. Therefore, the leader's task is to create conditions under which knowledge flows, experimentation is legitimate, and teams can adapt locally while remaining connected to strategic direction. This finding extends the dynamic capabilities literature by clarifying that learning-oriented leadership is not only a supportive cultural factor but a central mechanism of capability development. Dynamic capabilities are sustained when leaders institutionalize learning loops that connect experience, reflection, knowledge sharing, and strategic adjustment.

The fifth finding, institutionalization of dynamic capabilities, shows that leadership evolution reaches maturity when adaptive practices become embedded in organizational systems. Participants distinguished between temporary change driven by heroic leadership and durable adaptive capacity embedded in routines. This finding

is consistent with Helfat et al. (2007), who argued that dynamic capabilities involve the capacity of organizations to purposefully create, extend, or modify their resource base. It also supports Schilke et al. (2018), who called for clearer understanding of the mechanisms through which dynamic capabilities emerge and generate outcomes. The present study suggests that institutionalization is one such mechanism. When sensing, decision-making, experimentation, reconfiguration, and learning are repeated, legitimized, and supported by structures, they become organizational capabilities rather than isolated leadership actions. This finding also clarifies an important paradox: effective dynamic leaders must build systems that reduce excessive dependence on their personal authority. Leadership evolution therefore involves moving from personal influence to organizationalized adaptability.

Overall, the findings suggest that dynamic capabilities and leadership evolution are mutually constitutive. Dynamic capabilities require leadership because sensing, seizing, reconfiguring, and institutionalizing adaptation all depend on interpretation, judgment, coordination, and legitimacy. At the same time, leadership evolves through engagement with dynamic capability processes. Leaders become more adaptive as they repeatedly confront environmental ambiguity, design flexible decision systems, mobilize reconfiguration, enable learning, and embed adaptive routines. This reciprocal relationship advances the literature by positioning leadership not merely as an antecedent of dynamic capabilities but as an evolving capability system. The findings therefore contribute to strategic management theory by specifying leadership mechanisms that connect environmental turbulence with organizational renewal. They also contribute to leadership studies by shifting attention from static leadership styles to dynamic leadership processes embedded in organizational adaptation.

From a theoretical standpoint, the study proposes that leadership evolution can be conceptualized through five interrelated mechanisms: interpretive sensing, adaptive decision design, resource reconfiguration, distributed learning, and institutionalization. These mechanisms correspond broadly to the sensing, seizing, and transforming logic of dynamic capabilities, but they add leadership-specific content. Interpretive sensing explains how leaders create shared attention. Adaptive decision design explains how leaders convert awareness into action. Resource reconfiguration explains how leaders mobilize structural and relational change. Distributed learning explains how leaders expand adaptive intelligence across the organization. Institutionalization explains how leaders convert temporary adaptation into durable capability. This theoretical synthesis suggests that leadership evolution is not a linear movement from one leadership style to another; rather, it is a recursive process through which leaders and organizations co-evolve in response to changing strategic conditions.

The practical implication of these findings is that organizations should not treat leadership development as a separate human resource activity disconnected from strategy. Leadership development should be integrated with dynamic capability building. Training leaders only in communication, motivation, or performance supervision is insufficient when organizations face discontinuous change. Leaders must also be developed in environmental scanning, scenario thinking, strategic experimentation, resource orchestration, organizational learning, and institutional design. This requires leadership development programs that combine reflection, action learning, cross-functional projects, strategic simulations, and real transformation assignments. Organizations should also evaluate leaders not only by short-term performance outcomes but by their contribution to sensing capacity, decision flexibility, learning culture, and renewal capability.

The findings also have implications for organizations in Tehran and similar emerging-market contexts. Such organizations often operate under conditions of economic uncertainty, regulatory fluctuation, technological pressure, and institutional complexity. In these environments, dynamic capabilities are especially important

because stable planning assumptions may quickly lose validity. The participants' experiences suggest that leadership evolution is constrained when organizations remain dependent on centralized decision-making, formal hierarchy, and short-term operational control. Conversely, leadership evolution is supported when organizations create participatory sensing systems, empower cross-functional teams, tolerate controlled experimentation, and institutionalize learning.

Ethical Considerations

All procedures performed in this study were under the ethical standards.

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Conflict of Interest

The authors report no conflict of interest.

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References

- Adner, R., & Helfat, C. E. (2003). Corporate effects and dynamic managerial capabilities. *Strategic Management Journal*, 24(10), 1011–1025. <https://doi.org/10.1002/smj.331>
- Barreto, I. (2010). Dynamic capabilities: A review of past research and an agenda for the future. *Journal of Management*, 36(1), 256–280. <https://doi.org/10.1177/0149206309350776>
- Bass, B. M., & Riggio, R. E. (2006). *Transformational leadership* (2nd ed.). Psychology Press.
- Boal, K. B., & Hooijberg, R. (2000). Strategic leadership research: Moving on. *The Leadership Quarterly*, 11(4), 515–549. [https://doi.org/10.1016/S1048-9843\(00\)00057-6](https://doi.org/10.1016/S1048-9843(00)00057-6)
- Eisenhardt, K. M., & Martin, J. A. (2000). Dynamic capabilities: What are they? *Strategic Management Journal*, 21(10–11), 1105–1121. [https://doi.org/10.1002/1097-0266\(200010/11\)21:10/11<1105::AID-SMJ133>3.0.CO;2-E](https://doi.org/10.1002/1097-0266(200010/11)21:10/11<1105::AID-SMJ133>3.0.CO;2-E)
- Helfat, C. E., Finkelstein, S., Mitchell, W., Peteraf, M. A., Singh, H., Teece, D. J., & Winter, S. G. (2007). *Dynamic capabilities: Understanding strategic change in organizations*. Blackwell.
- Helfat, C. E., & Peteraf, M. A. (2015). Managerial cognitive capabilities and the microfoundations of dynamic capabilities. *Strategic Management Journal*, 36(6), 831–850. <https://doi.org/10.1002/smj.2247>
- O'Reilly, C. A., III, & Tushman, M. L. (2008). Ambidexterity as a dynamic capability: Resolving the innovator's dilemma. *Research in Organizational Behavior*, 28, 185–206. <https://doi.org/10.1016/j.riob.2008.06.002>
- Page, M. J., McKenzie, J. E., Bossuyt, P. M., Boutron, I., Hoffmann, T. C., Mulrow, C. D., Shamseer, L., Tetzlaff, J. M., Akl, E. A., Brennan, S. E., Chou, R., Glanville, J., Grimshaw, J. M., Hróbjartsson, A., Lalu, M. M., Li, T., Loder, E. W., Mayo-Wilson, E., McDonald, S., ... Moher, D. (2021). The PRISMA 2020 statement: An updated guideline for reporting systematic reviews. *BMJ*, 372, Article n71. <https://doi.org/10.1136/bmj.n71>
- Schilke, O., Hu, S., & Helfat, C. E. (2018). Quo vadis, dynamic capabilities? A content-analytic review of the current state of knowledge and recommendations for future research. *Academy of Management Annals*, 12(1), 390–439. <https://doi.org/10.5465/annals.2016.0014>
- Teece, D. J. (2007). Explicating dynamic capabilities: The nature and microfoundations of sustainable enterprise performance. *Strategic Management Journal*, 28(13), 1319–1350. <https://doi.org/10.1002/smj.640>
- Teece, D. J. (2014). The foundations of enterprise performance: Dynamic and ordinary capabilities in an economic theory of firms. *Academy of Management Perspectives*, 28(4), 328–352. <https://doi.org/10.5465/amp.2013.0116>
- Teece, D. J., Pisano, G., & Shuen, A. (1997). Dynamic capabilities and strategic management. *Strategic Management Journal*, 18(7), 509–533. [https://doi.org/10.1002/\(SICI\)1097-0266\(199708\)18:7<509::AID-SMJ882>3.0.CO;2-Z](https://doi.org/10.1002/(SICI)1097-0266(199708)18:7<509::AID-SMJ882>3.0.CO;2-Z)
- Uhl-Bien, M., Marion, R., & McKelvey, B. (2007). Complexity leadership theory: Shifting leadership from the industrial age to the knowledge era. *The Leadership Quarterly*, 18(4), 298–318. <https://doi.org/10.1016/j.leaqua.2007.04.002>
- Vera, D., & Crossan, M. (2004). Strategic leadership and organizational learning. *Academy of Management Review*, 29(2), 222–240. <https://doi.org/10.5465/amr.2004.12736080>
- Winter, S. G. (2003). Understanding dynamic capabilities. *Strategic Management Journal*, 24(10), 991–995. <https://doi.org/10.1002/smj.318>

