

The Gic-E Theory of Organizational Execution Under Technological Disruption: A Theoretical Framework for The Interaction of Governance, Innovation, Culture, And Execution Within Organizations

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ABSTRACT	ARTICLE DETAILS
The contemporary firm operates in a world where technological discontinuities arrive with greater frequency than at any previous moment in industrial history, yet the literature on organizational adaptation continues to treat governance, innovation, culture, and execution as analytically distinct domains rather than as the interlocking gears of a single adaptive mechanism. This article advances the GIC-E Theory of Organizational Execution Under Technological Disruption, a framework that reconceives strategy execution as the integrative variable through which an organization's governance architecture, its innovation capability, and its cultural fabric are converted into observable performance under conditions of accelerating change. Drawing on the dynamic capabilities tradition, behavioral theories of the firm, organizational culture scholarship, and the corporate governance literature, the paper develops six propositions that specify the interactional dynamics among the four constructs, identifies the executional multiplier as the central theoretical insight of the framework, and articulates a set of boundary conditions tied to industry context, firm size, national institutional environment, and the temporal stage of the disruption to which the organization is exposed. The theory argues that governance without innovation drifts into the stewardship of obsolescence, that innovation without culture remains an unfunded ambition, that culture without execution is merely symbolic theater, and that execution without governance collapses into improvised activity disconnected from strategic intent. The paper concludes by drawing implications for theory and practice, acknowledging the framework's limitations as a conceptual rather than empirically tested construct, and sketching a research agenda capable of converting GIC-E into a testable and predictive model of organizational survival within the digital economy.	Published On: 15 August 2026
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INTRODUCTION

The central puzzle that animates this article is not why organizations fail to see technological change coming, since the historical record suggests that most of the firms displaced by digital competition were perfectly capable of describing the threat that eventually consumed them, but rather why organizations that see clearly, that fund generously, and that speak confidently about transformation nonetheless arrive at the far side of a technological transition in a materially weaker position than the one from which they departed. The gap between comprehension and consequence is the practical problem to which this paper is addressed, and the conceptual gap that mirrors it in the scholarly literature is the tendency to study the components of adaptive capacity in isolation from one another, so that governance scholars examine boards, innovation scholars examine research pipelines and absorptive capacity, culture scholars examine values and assumptions, and the execution literature, insofar as it exists as a coherent body of work at all, examines alignment and follow through without asking how the other three domains constrain what any executive team can realistically deliver.

The Gic-E Theory of Organizational Execution Under Technological Disruption: A Theoretical Framework for The Interaction of Governance, Innovation, Culture, And Execution Within Organizations

Technological discontinuity has always been a feature of industrial life, and the observation that new technical regimes destroy the competences on which incumbent advantage rests is by now a settled proposition within organization theory (Tushman & Anderson, 1986). What has changed within the present period is the compression of the interval between successive discontinuities, so that a firm which once possessed a generation in which to absorb a single architectural shift may now confront two or three overlapping transitions within a single strategic planning cycle, and the sequential logic of sense, decide, and then implement begins to break down because the environment reconfigures itself before implementation is complete (Brynjolfsson & McAfee, 2014; Vial, 2019; Verhoef et al., 2021). The empirical work on digital transformation has converged on the conclusion that the decisive variable is organizational rather than technical, since the technologies themselves are broadly available to all competitors while the capacity to reorganize around them is not (Westerman et al., 2014; Kane et al., 2015; Warner & Wager, 2019). The consequence is that adaptive advantage migrates from the quality of an organization's analysis toward the reliability with which it converts analysis into changed behaviour at scale, and it is precisely this conversion process that the existing literature has left theoretically underspecified.

This article develops the GIC-E Theory of Organizational Execution Under Technological Disruption, which holds that governance, innovation, and culture do not produce performance directly but rather produce a latent adaptive potential that becomes economically meaningful only through the mediating operation of execution, and that the relationship among the four constructs is multiplicative rather than additive, such that severe deficiency in any one of them suppresses the contribution of the others rather than merely subtracting from a running total. The framework is offered as a conceptual contribution in the sense described by Whetten (1989), which is to say that it seeks to specify which constructs matter, how they relate to one another, why the proposed relations should hold, and under what conditions the theory can be expected to apply, without claiming the empirical validation that only subsequent research can supply.

Three contributions are intended. The first is integrative, in that the paper brings four literatures that have developed largely in parallel into a single explanatory structure and specifies the mechanisms by which each one conditions the others. The second is mechanistic, in that the framework identifies the executorial multiplier as the specific functional form of the interaction and thereby generates predictions that differ sharply from those implied by additive models of organizational capability. The third is contextual, in that the boundary conditions developed in the latter portion of the paper give explicit attention to institutional environments outside the North Atlantic economies where the bulk of the strategy literature has been produced, and in particular to the conditions faced by firms operating in African markets where institutional voids, regulatory volatility, and infrastructural constraint alter the costs and returns of every element of the framework (Acquaah, 2007; Khanna & Palepu, 2010).

The argument proceeds in seven movements. The paper first establishes the analytical fragmentation that motivates the theory by reviewing what each of the four constituent literatures has established and what each has been unable to explain on its own terms. It then sets out the theoretical foundations on which GIC-E rests, before defining each of the four constructs with sufficient precision to permit eventual measurement. The fourth section develops six propositions specifying the interactional dynamics of the framework, and the fifth elaborates the executorial multiplier as the theoretical core of the model. The sixth section articulates boundary conditions across industry, firm size, national institutional environment, and disruption stage, and the seventh draws implications for theory and practice, acknowledges limitations, and specifies a research agenda through which the framework might be rendered testable.

The Fragmentation Problem in The Literature on Organizational Adaptation

Each of the four literatures on which GIC-E draws has produced findings of considerable durability, and the difficulty addressed here is not that any of them is wrong but that each is incomplete in a manner that becomes visible only when the others are held in view. The sections that follow examine the contribution and the characteristic blind spot of each tradition in turn.

Governance as the Literature of Restraint

The dominant strand of governance scholarship inherits its problem definition from agency theory, which frames the corporation as a nexus of contracts within which self-interested managers must be monitored, incentivised, and constrained on behalf of dispersed owners who cannot observe managerial effort directly (Jensen & Meckling, 1976; Fama & Jensen, 1983). The resulting research programme has been remarkably productive in explaining the architecture of boards, the design of executive compensation, the market for corporate control, and the comparative institutional arrangements through which different national systems solve the problem of separated ownership and control (Eisenhardt, 1989; Shleifer & Vishny, 1997; Aguilera et al., 2008). Its orientation, however, is fundamentally protective, since the questions it asks concern the prevention of value destruction rather than the creation of adaptive capacity, and a board that discharges its monitoring obligations with exemplary diligence may nonetheless preside over the orderly liquidation of a business model that it never thought to interrogate.

The resource dependence tradition offers a partial corrective by treating directors as providers of counsel, legitimacy, and access to external resources rather than merely as monitors of managerial conduct, and the integration of these two perspectives suggests that board capital and board incentives jointly determine the value that directors contribute (Hillman & Dalziel, 2003). Even within this broader conception, the governance literature has been slow to address the question of technological competence at board level,

The Gic-E Theory of Organizational Execution Under Technological Disruption: A Theoretical Framework for The Interaction of Governance, Innovation, Culture, And Execution Within Organizations

which is to say the capacity of a supervisory body to evaluate claims about technical trajectories it does not itself understand, to distinguish between a genuine strategic option and an expensive gesture toward modernity, and to allocate capital toward initiatives whose payoff structure is deliberately asymmetric and long dated. Where such capacity is absent, governance defaults to what it knows how to do, which is to demand forecast accuracy, cost discipline, and quarterly consistency from ventures whose entire logic depends on the tolerance of forecast error.

Innovation as the Literature of Possibility

The innovation literature has furnished the most persuasive available accounts of why capable incumbents lose position to technically inferior entrants. Architectural innovation destroys the value of knowledge embedded in an organization's structure and communication channels even when component knowledge remains intact, which explains why firms can understand every element of a new design and still fail to reproduce it (Henderson & Clark, 1990). Disruptive dynamics explain how resource allocation processes tuned to the demands of the most profitable existing customers systematically starve initiatives aimed at lower-margin segments where new technologies typically incubate (Bower & Christensen, 1995; Christensen, 1997; Christensen et al., 2015). Core capabilities harden into core rigidities as the very competences that produced past advantage acquire normative and cognitive protection that renders them difficult to abandon (Leonard-Barton, 1992). Managerial cognition constrains adaptation independently of resource endowment, since executives interpret novel signals through representations formed in an earlier competitive era (Tripsas & Gavetti, 2000; Helfat & Peteraf, 2015). The learning tradition contributes the twin observations that exploration and exploitation compete for the same finite attention and capital (March, 1991), and that organizations acquire external knowledge only to the extent that prior related knowledge permits them to recognise its value (Cohen & Levinthal, 1990; Zahra & George, 2002).

What this literature has been less successful in explaining is the fate of innovation capability that has already been built. A firm may possess a research function of genuine distinction, an absorptive capacity comfortably above its industry median, and a portfolio of options on emerging technologies, and may still fail to convert any of this into commercial position, as the history of Xerox and of Nokia between 2004 and 2010 illustrates with uncomfortable clarity (Vuori & Huy, 2016). Ambidexterity research approaches the problem by asking how firms host exploration and exploitation simultaneously through structural separation supported by senior leadership integration (O'Reilly & Tushman, 2008, 2013; Benner & Tushman, 2003), yet the ambidexterity solution presupposes exactly the executive integration capacity whose determinants remain outside the model, so that the answer restates the question in more precise terms rather than resolving it.

Culture as the Literature of Meaning

Organizational culture scholarship supplies the interpretive layer that neither governance nor innovation research can generate from its own resources. Culture in the sense elaborated by Schein (2010) consists of the pattern of shared basic assumptions that a group has learned as it solved its problems of external adaptation and internal integration, assumptions that operate beneath conscious articulation and that therefore shape perception before deliberation begins. The competing values framework demonstrates that cultural orientations differ systematically in their tolerance for flexibility, control, internal focus, and external positioning, and that these orientations correlate with distinct performance profiles (Cameron & Quinn, 2011). Barney (1986) established the conditions under which culture might constitute a source of sustained advantage, and Ouchi (1980) showed that clan mechanisms coordinate behaviour where prices and hierarchies both fail, which is precisely the condition that obtains under high ambiguity. Psychological safety research has demonstrated that the willingness of team members to voice concerns, report errors, and admit ignorance is a measurable determinant of learning behaviour and therefore of the speed at which an organization corrects itself (Edmondson, 1999). The limitation of the culture literature for present purposes is its uncertain causal directionality and its uneasy relationship with intentional change. Culture is simultaneously portrayed as the most powerful determinant of organizational behaviour and as the element least susceptible to deliberate managerial reconstruction, and the practitioner literature that promises cultural transformation on a defined timetable has generally failed to demonstrate that the transformations reported were anything more than changes in espoused values unaccompanied by changes in the theories in use that actually govern conduct (Argyris & Schön, 1978). For a theory of adaptation under time pressure, this is a serious difficulty, because a variable that matters enormously but cannot be moved within the relevant horizon functions analytically as a constraint rather than as a lever.

Execution as the Literature of Delivery

Execution has been studied least systematically of the four, in part because it has been claimed more energetically by consultants than by scholars, and in part because the academic strategy field long treated implementation as a residual category encompassing whatever remained after formulation was complete. The practitioner literature nonetheless contains observations of real analytical value. Kaplan and Norton (2001) documented the translation problem by which strategic intent expressed at board level dissolves into unrelated operational activity at the point of delivery. Bossidy and Charan (2002) and Hrebiniak (2013) argued that execution constitutes a distinct discipline with its own architecture of people, strategy, and operating processes rather than a matter of managerial energy. Neilson et al. (2008) found that decision rights and information flow explained substantially more variance in

The Gic-E Theory of Organizational Execution Under Technological Disruption: A Theoretical Framework for The Interaction of Governance, Innovation, Culture, And Execution Within Organizations

execution effectiveness than structural reorganization, which is the intervention most frequently chosen by firms that believe themselves to have an execution problem. Sull et al. (2015) documented that failures of execution arise more often from breakdowns in lateral coordination and from an inability to reallocate resources away from commitments that no longer serve the strategy than from any deficit of vertical alignment.

Within the academic literature, the closest analogues are the work on strategy as an emergent and realized pattern rather than an intended plan (Mintzberg & Waters, 1985), the internal ecology perspective on autonomous strategic initiative (Burgelman, 1991), and the resource orchestration tradition which insists that possessing resources and deploying them are separable achievements requiring different managerial capacities (Sirmon et al., 2007). Teece (2007) locates the same idea within the dynamic capabilities' architecture through the transforming or reconfiguring cluster, and Helfat and Winter (2011) clarify the relationship between capabilities that change the firm and capabilities that run it. The gap that remains is theoretical rather than descriptive, since none of this work specifies the functional form by which execution combines with the other determinants of adaptive performance, and the absence of that specification is what permits the persistent practical error of treating execution as a residual to be managed after the important strategic choices have been made.

THE COST OF ANALYTICAL SEPARATION

Holding the four traditions side by side reveals a pattern of mutual dependence that none of them models. Governance determines the resource envelope, the risk tolerance, and the time horizon within which innovation is permitted to operate. Innovation determines the substantive content of the strategic options that governance is asked to evaluate. Culture determines whether the behaviours that innovation requires, including the disclosure of failure and the surrender of resources by successful units to unproven ones, are socially possible within the organization. Execution determines whether any of the preceding produces observable change in what the organization actually does for customers, and the failure to model these dependencies jointly has produced a research literature in which each tradition explains organizational failure by reference to a deficiency in its own primary variable, with the result that the same firm can be diagnosed as a governance failure, an innovation failure, a culture failure, and an execution failure by four different scholarly communities examining the same evidence. The congruence tradition in organizational diagnosis came closest to modelling this interdependence by insisting that performance depends on the fit among strategy, work, people, and formal and informal structure rather than on the quality of any element considered alone (Nadler & Tushman, 1980), and the framework developed here can be understood as an attempt to specify that insight for the particular conditions of technological disruption.

THEORETICAL FOUNDATIONS OF THE GIC-E FRAMEWORK

The framework advanced here rests on four theoretical commitments drawn from established traditions, and stating them explicitly clarifies both what the theory assumes and what it would take to falsify it.

The first commitment is to the dynamic capabilities' perspective, which holds that advantage under conditions of environmental change derives not from any particular resource position but from the higher-order capacity to sense opportunities and threats, to seize them through timely and well-shaped investment, and to transform the organization's asset base and structure as circumstances require (Teece et al., 1997; Teece, 2007). The tradition has been refined by the argument that dynamic capabilities in high-velocity markets take the form of simple experiential rules rather than elaborate analytical routines, which matters for the present framework because it implies that adaptive capacity is less a property of planning sophistication than of the speed and discipline with which an organization acts on partial information (Eisenhardt & Martin, 2000). GIC-E accepts this architecture and locates its four constructs within it, treating governance as the institutional apparatus that authorizes and disciplines sensing and seizing, innovation as the substantive capability that populates the sensing and seizing functions with technical content, culture as the behavioural substrate that determines whether transformation is socially achievable, and execution as the operational machinery through which transforming actually occurs. The framework departs from the standard treatment by insisting that transformation is not simply the third element of a sequence but the constraint that governs the value of the first two, since a firm that senses accurately and seizes decisively while remaining incapable of transformation has merely purchased an expensive record of its own foresight.

The second commitment is to the behavioural theory of the firm and its evolutionary successor, which describe organizations as coalitions operating under bounded rationality, governed by routines that encode past learning, allocating attention according to problematic search rather than comprehensive optimization, and adjusting aspiration levels in response to performance feedback (Cyert & March, 1963; Nelson & Winter, 1982). This commitment matters because it rules out the assumption that an organization which recognizes a superior course of action will adopt it, and thereby makes the conversion problem theoretically respectable rather than a mere failure of managerial will. It also supplies the mechanism of learning myopia, by which organizations systematically overweight the near, the recent, and the successful, which explains why the resource allocation processes that governance supervises tend to favour incremental refinement of existing positions even when the strategic narrative endorses radical departure (Levinthal & March, 1993).

The Gic-E Theory of Organizational Execution Under Technological Disruption: A Theoretical Framework for The Interaction of Governance, Innovation, Culture, And Execution Within Organizations

The third commitment is to the micro foundations position, which holds that organizational-level constructs must ultimately be explicable in terms of individuals, their interactions, and the structures that channel those interactions, rather than being treated as irreducible collective properties (Felin et al., 2015). GIC-E therefore treats culture not as an atmospheric condition but as a distribution of expectations about consequence, and treats execution not as an organizational trait but as the aggregate of coordinated action produced by identifiable decision rights, information flows, and interrelating practices (Weick & Roberts, 1993; Neilson et al., 2008). This commitment carries a methodological implication that the research agenda later develops, namely that the framework must eventually be tested with multilevel data rather than with firm-level survey aggregates alone.

The fourth commitment is to the theory of complementarities, which supplies the formal justification for the multiplicative claim at the centre of the framework. Milgrom and Roberts (1995) demonstrated that when the marginal return to one organizational practice increases in the presence of another, the practices form a complementary system in which piecemeal adoption may yield no improvement or may even reduce performance relative to the unmodified configuration. This result is the analytical foundation of the executorial multiplier, because it explains why organizations that invest heavily in one element of adaptive capacity while neglecting the others frequently record no measurable return on the investment and conclude, incorrectly, that the element itself was worthless.

Construct Definitions

Theoretical precision requires that each construct be defined in terms that distinguish it from its neighbours, that specify its domain, and that indicate the observable manifestations by which it might eventually be measured (Bacharach, 1989; Dubin, 1978). The definitions offered here deliberately narrow each construct from its broadest usage in the parent literature so that the four do not overlap.

Governance as Adaptive Authorization Capacity

Governance within GIC-E refers to the structures, processes, and norms through which authority over strategic direction and resource commitment is allocated, exercised, and held to account, considered specifically in terms of the capacity of that apparatus to authorize adaptation under uncertainty. The construct includes the composition and technological literacy of the board, the design of executive incentives with respect to horizon and risk, the formal and real allocation of decision rights over discretionary investment, the information architecture that determines what the supervisory body actually sees, and the accountability mechanisms through which failed initiatives are evaluated. It excludes the compliance function considered as such, and it excludes the ethical dimension of stewardship except insofar as it bears on the willingness of the governing body to bear reputational risk on behalf of an unproven strategy.

Three dimensions carry the analytical weight. Governance horizon refers to the effective time period over which the governing body evaluates return, which may differ substantially from the horizon it formally espouses. Governance literacy refers to the aggregate capacity of the supervisory body to interrogate technical claims independently rather than through the mediation of the executives whose proposals are under review. Governance permissiveness refers to the tolerated variance in outcomes from authorized discretionary investment, which determines whether managers who pursue uncertain initiatives are protected when those initiatives fail for reasons other than negligence.

Innovation as Recombinant Capability

Innovation within GIC-E refers to the organization's capacity to generate, acquire, assimilate, and recombine technical and commercial knowledge into propositions of value that differ materially from those it currently offers. The construct is deliberately capability-oriented rather than output-oriented, since patent counts and research expenditure measure inputs and intermediate artefacts rather than the underlying capacity, and it incorporates absorptive capacity as a component rather than as a parallel construct (Cohen & Levinthal, 1990; Zahra & George, 2002). Its dimensions include the breadth of the organization's technological search, the depth of its assimilative capacity in domains adjacent to its current position, its architectural flexibility in the sense of the ease with which it can reconfigure the relationships among its components, and the diversity of the cognitive representations held by its senior technical and commercial leadership.

Culture as Executorial Disposition

Culture within GIC-E refers to the shared assumptions and enacted norms that determine which behaviours are socially possible within the organization, examined specifically with respect to the behaviours on which adaptation depends. This is a narrower construct than culture in the Scheinian sense, and the narrowing is deliberate, since the framework requires not a complete account of organizational meaning but an account of those cultural properties that facilitate or obstruct the conversion of intent into action. Four dimensions are specified. Voice safety refers to the extent to which members can raise concerns, disclose errors, and challenge senior judgment without anticipating penalty (Edmondson, 1999). Accountability symmetry refers to the consistency with which consequence attaches to conduct across hierarchical levels, which determines whether commitments made in meetings are understood to be real. Reallocation legitimacy refers to the extent to which the transfer of resources, talent, and attention away from

The Gic-E Theory of Organizational Execution Under Technological Disruption: A Theoretical Framework for The Interaction of Governance, Innovation, Culture, And Execution Within Organizations

successful established units toward unproven initiatives is regarded as fair rather than as expropriation, and it is in my judgment the most neglected cultural variable in the entire adaptation literature. Interpretive openness refers to the willingness of the organization to entertain accounts of its environment that contradict the account on which its current success is founded.

Execution as the Integrative Variable

Execution within GIC-E refers to the organization's demonstrated capacity to convert strategic intent into coordinated action of sufficient scale, speed, and fidelity to produce a change in the value actually delivered to customers. Three properties of this definition require emphasis. Scale distinguishes execution from pilot activity, since a change confined to a protected experimental unit has not been executed in the relevant sense, however successful it may be within its own boundary. Speed matters because under disruption the value of a correct decision decays with the interval before its implementation, so that execution capacity is measured in elapsed time as well as in eventual completion. Fidelity refers to the correspondence between the intent that was authorized and the behaviour that was produced, and it captures the common failure in which an organization implements something with great energy while implementing something other than what was decided.

Execution in this framework is not one variable among four but the variable through which the other three become observable, and this is the structural claim that distinguishes GIC-E from additive models of organizational capability. Governance, innovation, and culture are not directly visible in performance data. What is visible is what the organization did, and execution is the name for the process by which the latent adaptive potential generated by the other three is converted into that observable record.

Table 1: Constructs, Definitions, and Illustrative Observable Indicators

Construct	Working definition	Illustrative indicators
Governance	The capacity of the authority structure to authorize and discipline adaptation under uncertainty	Board technological literacy; effective evaluation horizon; tolerated variance on discretionary investment; independence of information flow to the board
Innovation	The capacity to generate, absorb, and recombine knowledge into materially different value propositions	Search breadth; assimilation depth; architectural flexibility; cognitive diversity of senior technical leadership
Culture	The shared assumptions determining which adaptation-relevant behaviours are socially possible	Voice safety; accountability symmetry; reallocation legitimacy; interpretive openness
Execution	The demonstrated conversion of strategic intent into coordinated action at scale, speed, and fidelity	Elapsed time from decision to deployment; proportion of authorized initiatives reaching full deployment; resource reallocation rate; intent to outcome correspondence

THE ARCHITECTURE OF THE THEORY: SIX PROPOSITIONS

The propositions that follow specify the relations among the constructs and state the reasoning on which each relation rests. They are ordered so that the pairwise dependencies are established before the systemic claim that depends on them.

Proposition One: Governance Conditions the Productive Range of Innovation Capability

The first proposition holds that the effect of innovation capability on adaptive performance is conditional on governance quality, such that innovation capability in excess of what the governance architecture can authorize, fund, and protect produces no incremental adaptive performance and may reduce it through the demoralization of technical personnel and the accumulation of options that are never exercised.

The reasoning follows from the resource allocation literature. Christensen (1997) demonstrated that the decisive constraint on incumbent response to disruptive technology is not technical capacity but the operation of processes that direct capital toward the highest margin opportunities visible at the moment of decision, and those processes are themselves creatures of governance, since they encode the horizon, the risk tolerance, and the accountability structure that the governing body has established. A board that evaluates every discretionary investment against a three-year payback requirement has, without ever discussing technology, foreclosed the entire class of initiatives whose payoff distribution is long-tailed. A board that lacks the technical literacy to interrogate an executive claim about a technological trajectory will predictably substitute the criteria it does understand, which are financial, and will thereby import into the evaluation of novel proposals a set of tests calibrated for the extension of existing ones. The proposition generates a distinctive empirical prediction. If it holds, then firms in the upper quartile of research intensity but the lower quartile of governance adaptive capacity should display systematically lower conversion of research investment into new

The Gic-E Theory of Organizational Execution Under Technological Disruption: A Theoretical Framework for The Interaction of Governance, Innovation, Culture, And Execution Within Organizations

revenue than firms of moderate research intensity and high governance capacity, and this prediction is testable with the archival data on research expenditure, board composition, and revenue composition that is already available for listed firms in several jurisdictions.

Proposition 1: *The contribution of innovation capability to adaptive performance is bounded by governance adaptive capacity, such that innovation capability beyond the level that governance can authorize and protect yields diminishing and eventually negative marginal returns.*

Proposition Two: Culture Determines the Conversion Rate of Innovation Capability into Executional Commitment

The second proposition holds that organizational culture, specifically in the dimensions of voice safety, reallocation legitimacy, and interpretive openness, moderates the rate at which innovation capability is converted into executional commitment, and that where these cultural conditions are absent, the conversion rate approaches zero regardless of the level of capability present.

The reasoning rests on the informational and distributive requirements of adaptation. Adaptation requires that unwelcome information travel upward, and voice safety determines whether it does (Edmondson, 1999). The Nokia case documents with unusual precision how fear operating at multiple hierarchical levels produced systematically distorted information flow, so that senior managers received optimistic assessments of technical readiness while middle managers who knew better calculated that candour would be punished (Vuori & Huy, 2016). Adaptation also requires redistribution, since new initiatives are funded from the resources of established ones and staffed by transferring the people whose departure the established units can least afford, and reallocation legitimacy determines whether this redistribution is experienced as strategy or as raid. Where it is experienced as raid, the established units employ the full repertoire of organizational resistance, which includes formal compliance combined with the withdrawal of the informal cooperation on which every cross-unit initiative depends. Interpretive openness determines whether the organization can hold an account of its future that contradicts the account on which its incumbent success rests, and its absence produces the pattern in which firms respond to disruption by intensifying the activities that produced their previous advantage (Leonard-Barton, 1992; Gilbert, 2005).

Proposition 2: *Organizational culture moderates the conversion of innovation capability into executional commitment, such that low voice safety, low reallocation legitimacy, and low interpretive openness collapse the conversion rate toward zero irrespective of the level of innovation capability.*

Proposition Three: Execution Mediates the Relationship Between Adaptive Potential and Performance

The third proposition holds that execution fully mediates the relationship between the composite adaptive potential generated by governance, innovation, and culture on the one hand and observable adaptive performance on the other, so that no direct path from any of the three antecedent constructs to performance exists once execution is properly specified and measured.

This is the strongest structural claim in the framework, and it is stated in strong form precisely because its falsification would be informative. The reasoning is that governance, innovation, and culture are all latent properties whose economic consequences are realized only through changed organizational behaviour, and that changed organizational behaviour at scale is the definition of execution adopted here. A superior governance arrangement produces no cash flow until a different decision is taken and implemented. An innovation capability produces no revenue until a product reaches a customer. A culture of voice produces no advantage until the information that voice makes available alters what the organization does. If a direct path from any antecedent to performance were to survive proper specification of the mediator, the most plausible interpretation would be that the execution construct had been measured too narrowly, most likely by capturing project delivery while omitting the reallocation and coordination dimensions.

Proposition 3: *Execution fully mediates the relationship between governance, innovation, and culture and observable adaptive performance under technological disruption.*

Proposition Four: Execution Generates Governance Learning Through Informational Return

The fourth proposition holds that execution is not merely an output of the system but an input to it, since the act of implementation generates information about the environment, about the organization's own capabilities, and about the validity of the assumptions on which the authorizing decision rested, and that the quality of governance in subsequent cycles is a function of the fidelity with which this information returns to the governing body.

The reasoning draws on deliberate learning and on the double loop distinction. Zollo and Winter (2002) established that dynamic capabilities evolve through the articulation and codification of experiential knowledge rather than through experience alone, which implies that the returns to execution include a learning component that is realized only if the experience is examined. Argyris and Schön (1978) established that organizations characteristically learn in single loop fashion, correcting deviation from established objectives without interrogating the objectives themselves, and that the transition to double loop learning requires precisely the confrontation with disconfirming evidence that most organizational routines are designed to avoid. Governance is the natural locus of double loop learning because it is the only body with the standing to revise the premises of strategy, yet it is also the body most

The Gic-E Theory of Organizational Execution Under Technological Disruption: A Theoretical Framework for The Interaction of Governance, Innovation, Culture, And Execution Within Organizations

distant from the implementation experience in which disconfirming evidence is generated. The proposition therefore predicts that the informational architecture connecting implementation experience to board deliberation is a stronger predictor of adaptive performance in the second and subsequent cycles of disruption than any static feature of board composition.

Proposition 4: *Execution generates informational returns that condition governance quality in subsequent adaptive cycles, such that organizations with high fidelity feedback from implementation to governance display increasing adaptive performance across successive disruptions.*

Proposition Five: The Executional Multiplier

The fifth proposition holds that the relationship among the four constructs is multiplicative rather than additive, such that adaptive performance is proportional to the product of governance capacity, innovation capability, and cultural disposition, all operated upon by execution capacity, and that the system is therefore governed by its weakest element rather than by its average.

The formal support for this proposition comes from the theory of complementarities, which establishes that when practices are mutually reinforcing, the return to any one of them depends on the level of the others, and that partial adoption of a complementary system can leave performance unchanged or worse (Milgrom & Roberts, 1995). The substantive support comes from the observation that each of the four constructs is a necessary condition for the productive operation of the others under disruption. Innovation capability without governance authorization yields options that are never exercised. Governance authorization without innovation capability yields funded initiatives without technical substance. Both without cultural support yield formal programmes that the organization declines to cooperate with. All three without execution yield an impressive strategic narrative and an unchanged operating reality.

Expressed in the terms of the abstract that opens this article, governance without innovation becomes the stewardship of obsolescence, in which a diligent board supervises the orderly decline of a business model it never thought to question. Innovation without culture becomes unfunded ambition, in which capability exists but cannot be mobilized because the behaviours it requires are socially prohibited. Culture without execution becomes symbolic theatre, in which the organization speaks fluently about values that its operating processes contradict. Execution without governance becomes improvised activity, in which considerable energy is expended on initiatives whose relationship to strategic intent nobody has examined.

Proposition 5: *Adaptive performance under technological disruption is a multiplicative rather than an additive function of governance capacity, innovation capability, and cultural disposition operating through execution capacity, such that severe deficiency in any single construct suppresses the contribution of the remainder.*

Proposition Six: Disruption Velocity Amplifies the Penalty for Misalignment

The sixth proposition holds that the performance penalty associated with misalignment among the four constructs increases with the velocity of the technological disruption to which the organization is exposed, so that configurations that produce tolerable outcomes under slow change produce catastrophic outcomes under fast change.

The reasoning is that misalignment imposes a time cost rather than a fixed cost. An organization whose governance horizon is misaligned with its innovation portfolio does not fail to adapt; it adapts late, after the evidence has accumulated to a level sufficient to satisfy criteria calibrated for a different class of decision. Where the environment reconfigures over a decade, late adaptation may be merely expensive. Where it reconfigures over eighteen months, late adaptation is equivalent to no adaptation, because the position the organization eventually reaches has by then been occupied by competitors who arrived while it was accumulating evidence. This proposition explains why firms with apparently identical capability profiles produce divergent outcomes across different disruptions, and it predicts that the variance in performance outcomes attributable to GIC-E alignment should be substantially greater in high-velocity industries than in low-velocity ones.

Proposition 6: *The performance penalty for misalignment among governance, innovation, culture, and execution increases with disruption velocity, such that the explanatory power of the GIC-E configuration rises as the interval between successive technological discontinuities contracts.*

The Executional Multiplier as The Theoretical Core

The propositions above converge on a single analytical claim that deserves separate elaboration because it carries most of the framework's distinctive content and most of its practical consequence. The claim is that execution operates on the composite adaptive potential of the organization as a multiplier rather than as an addend, and that the resulting functional form has properties which additive models of organizational capability cannot reproduce.

Consider two firms of equal aggregate capability as an additive model would compute it. The first possesses governance capacity, innovation capability, and cultural disposition each at a high level, together with execution capacity at a low level. The second possesses moderate levels of all four. Under an additive specification, the two firms are equivalent and should perform equivalently. Under the multiplicative specification proposed here, the second firm substantially outperforms the first, because the low execution term in the first firm suppresses the contribution of every other element, and the practical experience of firms that have invested

The Gic-E Theory of Organizational Execution Under Technological Disruption: A Theoretical Framework for The Interaction of Governance, Innovation, Culture, And Execution Within Organizations

heavily in strategy, research, and cultural programmes while remaining unable to deploy anything at scale suggests strongly that the multiplicative specification is the more accurate description of the world.

Three consequences follow from the multiplicative form, and each of them contradicts a widely held assumption in the practitioner literature.

The first consequence concerns diagnosis. Under a multiplicative specification, the return to marginal investment is greatest at the weakest element, which means that an organization seeking to improve adaptive performance should identify and remedy its binding constraint rather than pursuing improvement across the board or, as is more common, pursuing further improvement in the element at which it is already strong. Organizations exhibit a marked tendency to invest in their competences rather than their deficiencies, since the competent domain is where the leadership possesses expertise, credibility, and appetite, and the multiplicative form implies that this tendency is systematically value-destroying under disruption.

The second consequence concerns sequencing. If the constructs are complementary in the technical sense, then the order in which improvements are introduced affects the total return, because raising one term while another remains near zero produces no measurable improvement and thereby discredits the intervention in the eyes of those who authorized it. The familiar organizational pattern in which a transformation programme is abandoned as ineffective, and its failure attributed to the specific method employed, is often better explained as the consequence of raising a single term within a complementary system whose binding constraint lay elsewhere.

The third consequence concerns measurement. Because performance under the multiplicative form is dominated by the weakest term, cross-sectional studies that regress performance on any single construct will recover unstable and context-dependent coefficients, which is a reasonably accurate description of the empirical literature on the relationship between board characteristics and firm performance, between research intensity and firm performance, and between culture measures and firm performance. The framework therefore explains the persistent inconsistency of these literatures that does not require any of them to have been methodologically defective, since inconsistent coefficients are exactly what a complementary system produces when its components are studied one at a time.

Table 2: Configurational Outcomes of the GIC-E Framework

Configuration	Description	Characteristic organizational pattern
High G, low I	Governance without innovation	Stewardship of obsolescence: disciplined supervision of a declining model
High I, low C	Innovation without culture	Unfunded ambition: capability that cannot be mobilized across unit boundaries
High C, low E	Culture without execution	Symbolic theatre: fluent values language contradicted by operating routines
High E, low G	Execution without governance	Improvised activity: energetic delivery disconnected from strategic intent
Balanced moderate	Adequate levels across all four	Reliable incremental adaptation; vulnerable only to high velocity discontinuity
High across all four	Aligned adaptive system	Compounding advantage through informational return to governance

Boundary Conditions

A theory that claims universal application is generally a theory that has not been examined carefully, and the specification of boundary conditions is therefore a requirement of theoretical adequacy rather than a concession of weakness (Whetten, 1989; Bacharach, 1989). Four boundary conditions are proposed.

Industry Context and Clockspeed

The framework applies with greatest force in industries characterized by high technological clockspeed, contested dominant designs, and low regulatory barriers to entry, because these are the conditions under which the time cost of misalignment is highest. In industries with slow technical change, high regulatory entry barriers, or strong network effects protecting incumbent position, the penalty for executorial deficiency is deferred and may be absorbed indefinitely, so that firms with poor GIC-E alignment persist for extended periods without visible consequence. Regulated financial services, pharmaceuticals, and utilities occupy an intermediate

The Gic-E Theory of Organizational Execution Under Technological Disruption: A Theoretical Framework for The Interaction of Governance, Innovation, Culture, And Execution Within Organizations

position, since their regulatory architecture simultaneously slows the entry of competitors and constrains the speed at which incumbents may themselves adapt, which alters both terms of the calculation rather than only one.

A related qualification concerns ecosystem dependence. Where value delivery depends on the coordinated activity of partners outside the firm's authority, execution capacity as defined here is necessary but insufficient, since the firm must additionally solve the alignment problem across organizational boundaries where it possesses no decision rights at all (Adner, 2017). The framework should therefore be understood as a theory of what an organization can achieve within its own boundary, and its predictions weaken in proportion to the share of the value proposition that lies outside that boundary.

Firm Size and Organizational Age

The relative salience of the four constructs varies with organizational scale. In small and young organizations, governance is frequently indistinct from management, culture is transmitted directly through founder behaviour rather than through codified norms, and execution capacity is limited by resource scarcity rather than by coordination failure. In such firms, the binding constraint is typically innovation capability considered as absorptive depth, or execution considered as capacity, and the governance term is close to irrelevant because the authorization problem that governance solves does not yet exist in a form requiring institutional treatment.

In large and mature organizations, the ordering reverses. Innovation capability is frequently abundant and dispersed, execution capacity is limited by coordination rather than by resource, culture has hardened into structures that persist independently of current leadership, and governance has become the decisive variable because the authorization and reallocation problems dominate. The framework should therefore be expected to display different binding constraints across the size distribution, and empirical tests that pool firms across widely different scales without modelling this variation will recover averaged relationships that describe no actual firm.

The National Institutional Environment

The institutional environment within which a firm operates alters the cost and the effectiveness of every element of the framework, and this boundary condition deserves particular attention because the strategy literature has been developed overwhelmingly within a small set of institutional settings whose features are frequently mistaken for universal conditions (North, 1990; Khanna & Palepu, 2010).

Where capital markets are thin, the governance term acquires a different character, since ownership tends toward concentration in families, founders, or the state, and the agency problem that dominates the Anglo-American literature is displaced by the problem of expropriation risk between controlling and minority owners. Concentrated ownership can lengthen the governance horizon, which the framework predicts should assist adaptation, while simultaneously reducing the independence of information reaching the governing body, which the framework predicts should impair it, and the net effect is therefore an empirical question rather than a matter to be assumed.

Where formal institutions are weak or inconsistently enforced, informal relational mechanisms substitute for contractual ones, and managerial social capital acquires a measurable performance value that it does not carry in institutionally dense environments, as Acquaah (2007) demonstrated using data from Ghanaian firms. This has a direct implication for the culture construct, since reallocation legitimacy in relationally governed organizations depends more heavily on the personal standing of the executives directing the reallocation than on the procedural justice of the process through which it is decided.

Regulatory volatility constitutes a third institutional variable of consequence. In several African jurisdictions the governance environment has been reconstructed substantially within a single decade, as with the enactment of the Companies Act, 2019 (Act 992) in Ghana and the issuance by the Bank of Ghana of the Corporate Governance Directive in 2018 following a period of severe distress in the banking sector, and the King IV framework has similarly reshaped board practice across southern Africa (Institute of Directors in Southern Africa, 2016). Regulatory reconstruction of this kind raises the formal quality of governance architecture more rapidly than it raises governance literacy, and the framework predicts a transitional period in which boards possess improved procedural discipline without a corresponding improvement in their capacity to evaluate technological strategy, with the consequence that the compliance function absorbs the attention that the adaptive function requires.

Infrastructural constraint constitutes a fourth institutional variable that bears directly on the execution term. Where electrical supply, logistics, payment infrastructure, or connectivity is unreliable, the fidelity and speed dimensions of execution are degraded by factors outside managerial control, and the appropriate comparison for a firm operating under such conditions is not the execution performance of firms in dense infrastructural environments but the performance of comparably situated peers. The framework nonetheless retains its diagnostic value in these settings, and arguably gains it, since the premium attached to executional reliability rises as the environment makes reliability harder to achieve. The rapid diffusion of mobile financial services across sub-Saharan Africa provides an instructive illustration, since the firms that captured position were not in every case those with the strongest technical capability but those able to build agent networks, settlement arrangements, and regulatory relationships at speed, which is an execution achievement rather than an innovation achievement.

The Gic-E Theory of Organizational Execution Under Technological Disruption: A Theoretical Framework for The Interaction of Governance, Innovation, Culture, And Execution Within Organizations

The Temporal Stage of Disruption

The final boundary condition concerns the stage of the disruption to which the organization is exposed, since the framework's constructs carry different weights at different points in the trajectory of a technological transition.

During the emergence stage, when the technology is technically immature and its commercial trajectory is unresolved, the binding constraint is typically governance permissiveness, because the decision to invest cannot be justified on the evidence available and can be authorized only by a body willing to accept an unfavourable expected value calculation in exchange for an option on a favourable tail. During the inflection stage, when the trajectory has become discernible and competitive positions are being established, the binding constraint shifts to execution, because every capable competitor now understands the direction of travel and advantage accrues to whoever arrives first with sufficient scale. During the consolidation stage, when dominant designs have stabilized, and the returns to further architectural change have declined, the binding constraint shifts again toward operational efficiency and the framework's predictive power correspondingly diminishes until the next discontinuity begins.

This staging implies that a firm may possess exactly the wrong configuration for its moment while possessing an admirable configuration in the abstract, and it implies further that the organizations most likely to survive successive disruptions are those capable of shifting their internal emphasis as the stage changes, which is itself a governance capacity of a high order.

IMPLICATIONS FOR THEORY

The framework carries four implications for organizational scholarship. The first concerns the treatment of execution, which has been positioned within the strategy literature as a downstream managerial matter rather than as a theoretically consequential construct, and which the framework repositions as the mediating variable through which every other determinant of adaptive performance operates. If the mediation claim of Proposition 3 survives testing, then a substantial portion of the existing literature on the antecedents of adaptive performance has been estimating reduced-form relationships whose structural interpretation depends on a variable it did not measure.

The second implication concerns the specification of interaction effects. The multiplicative claim implies that the appropriate analytical strategy for studying organizational adaptation is configurational rather than variable-centred, and that methods designed to identify necessary conditions and combinations of sufficient conditions are better matched to the underlying causal structure than are linear additive models. This has consequences for how the field should interpret the accumulated evidence on the relationship between individual organizational characteristics and performance, since inconsistent findings across studies are precisely what complementary systems generate when studied through methods that assume additivity.

The third implication concerns the integration of governance scholarship with the strategy and innovation literatures. Governance research has developed substantially in isolation from the study of technological change, with the result that the field possesses a sophisticated account of how boards prevent value destruction and a thin account of how boards enable value creation under uncertainty. GIC-E suggests that board technological literacy, evaluation horizon, and tolerated variance are strategy-relevant governance variables whose measurement should be developed with the same care that has been devoted to independence, duality, and compensation structure.

The fourth implication concerns the contextual scope of organizational theory. By specifying institutional environment as a boundary condition rather than as an afterthought, the framework invites the systematic examination of how adaptation operates in settings characterized by concentrated ownership, relational governance, regulatory volatility, and infrastructural constraint, and it treats these settings as theoretically informative rather than as deviations from a normal case defined by the largest capital markets.

IMPLICATIONS FOR PRACTICE

For boards, the framework implies that the supervisory obligation under conditions of technological change extends beyond the verification of managerial diligence to the interrogation of strategic premises, and that a board incapable of evaluating technical claims independently has a governance deficiency of the same order as one incapable of reading financial statements. It further implies that the horizon and variance tolerance encoded in the board's evaluation practices constitute strategic decisions of the first importance, whether or not they are ever discussed as such.

For executives, the framework implies that the most common diagnostic error in transformation programmes is the assumption that the organization's weakest element is the one that is easiest to talk about, and that the discipline of identifying the actual binding constraint requires evidence that most organizations do not routinely gather. The measures that matter, including the elapsed interval between authorization and full deployment, the proportion of authorized initiatives that reach scale rather than terminating as pilots, and the volume of resource actually reallocated across unit boundaries within a period, are unglamorous and are rarely reported to boards with the regularity accorded to financial measures.

For policymakers and regulators, particularly in jurisdictions engaged in the reconstruction of corporate governance frameworks, the framework implies that procedural governance reform improves the architecture of authority more rapidly than it improves the

The Gic-E Theory of Organizational Execution Under Technological Disruption: A Theoretical Framework for The Interaction of Governance, Innovation, Culture, And Execution Within Organizations

competence exercised within that architecture, and that director development addressed to technological and strategic evaluation is a necessary complement to structural reform if the intended benefits are to be realized (OECD, 2023).

LIMITATIONS

Three limitations require acknowledgement. The first and most consequential is that GIC-E is a conceptual framework that has not been subjected to empirical test, and the propositions advanced here therefore possess the status of reasoned conjectures rather than findings. The multiplicative claim in particular is the element most exposed to disconfirmation, since it is entirely possible that the true functional form is additive within the ordinary operating range and becomes multiplicative only at the extremes of the distribution, which would preserve the framework's diagnostic value while substantially weakening its theoretical distinctiveness.

The second limitation concerns measurement. Three of the four constructs, and particularly culture and execution, are difficult to observe directly and are ordinarily measured through perceptual instruments administered to the very managers whose performance is under evaluation, which introduces both common method variance and a systematic optimism bias. The development of behaviourally anchored and archivally verifiable indicators is a precondition of serious testing rather than a refinement to be pursued afterwards.

The third limitation concerns endogeneity in the relationships proposed. Culture and execution are plausibly reciprocally determined over time, since organizations that execute successfully develop cultures that support execution, and the framework's presentation of culture as antecedent and execution as consequent is a simplification adopted for expositional clarity rather than a claim about temporal priority. Untangling this reciprocity requires longitudinal designs of a kind that the field has produced only rarely.

A RESEARCH AGENDA

Converting the framework into a testable model requires progress on four fronts.

Measurement development comes first. The governance construct requires indicators of technological literacy at board level, which might be constructed from director biographical data combined with the content of board agendas and minutes where access permits. The execution construct requires archival indicators of elapsed time from authorization to deployment and of resource reallocation across units, which can in principle be extracted from internal project and budget systems within firms willing to participate. The culture construct requires instruments capable of distinguishing espoused values from enacted norms, which suggests behavioural measures such as the observed rate at which negative information reaches senior levels rather than survey items asking whether people feel able to speak.

Configurational testing comes second. Because the framework predicts that specific combinations rather than levels of individual variables determine outcomes, methods designed for the analysis of necessity and sufficiency in combinations, including qualitative comparative analysis, are better matched to the theory than are regression models premised on additive independent effects. A study design comparing configurations across firms within be

REFERENCES

- 1) Acquaah, M. (2007). Managerial social capital, strategic orientation, and organizational performance in an emerging economy. *Strategic Management Journal*, 28(12), 1235-1255.
- 2) Adner, R. (2017). Ecosystem as structure: An actionable construct for strategy. *Journal of Management*, 43(1), 39-58.
- 3) Aguilera, R. V., Filatotchev, I., Gospel, H., & Jackson, G. (2008). An organizational approach to comparative corporate governance: Costs, contingencies, and complementarities. *Organization Science*, 19(3), 475-492.
- 4) Argyris, C., & Schon, D. A. (1978). *Organizational learning: A theory of action perspective*. Addison-Wesley.
- 5) Bacharach, S. B. (1989). Organizational theories: Some criteria for evaluation. *Academy of Management Review*, 14(4), 496-515.
- 6) Bank of Ghana. (2018). *Corporate governance directive for banks, savings and loans companies, finance houses and financial holding companies*. Bank of Ghana.
- 7) Barney, J. B. (1986). Organizational culture: Can it be a source of sustained competitive advantage? *Academy of Management Review*, 11(3), 656-665.
- 8) Benner, M. J., & Tushman, M. L. (2003). Exploitation, exploration, and process management: The productivity dilemma revisited. *Academy of Management Review*, 28(2), 238-256.
- 9) Bossidy, L., & Charan, R. (2002). *Execution: The discipline of getting things done*. Crown Business.
- 10) Bower, J. L., & Christensen, C. M. (1995). Disruptive technologies: Catching the wave. *Harvard Business Review*, 73(1), 43-53.
- 11) Brynjolfsson, E., & McAfee, A. (2014). *The second machine age: Work, progress, and prosperity in a time of brilliant technologies*. W. W. Norton.

- 12) Burgelman, R. A. (1991). Intraorganizational ecology of strategy making and organizational adaptation: Theory and field research. *Organization Science*, 2(3), 239-262.
- 13) Cameron, K. S., & Quinn, R. E. (2011). *Diagnosing and changing organizational culture: Based on the competing values framework* (3rd ed.). Jossey-Bass.
- 14) Christensen, C. M. (1997). *The innovator's dilemma: When new technologies cause great firms to fail*. Harvard Business School Press.
- 15) Christensen, C. M., Raynor, M. E., & McDonald, R. (2015). What is disruptive innovation? *Harvard Business Review*, 93(12), 44-53.
- 16) Cohen, W. M., & Levinthal, D. A. (1990). Absorptive capacity: A new perspective on learning and innovation. *Administrative Science Quarterly*, 35(1), 128-152.
- 17) Cyert, R. M., & March, J. G. (1963). *A behavioral theory of the firm*. Prentice Hall.
- 18) Dubin, R. (1978). *Theory building* (Rev. ed.). Free Press.
- 19) Edmondson, A. C. (1999). Psychological safety and learning behavior in work teams. *Administrative Science Quarterly*, 44(2), 350-383.
- 20) Eisenhardt, K. M. (1989). Agency theory: An assessment and review. *Academy of Management Review*, 14(1), 57-74.
- 21) Eisenhardt, K. M., & Martin, J. A. (2000). Dynamic capabilities: What are they? *Strategic Management Journal*, 21(10-11), 1105-1121.
- 22) Fama, E. F., & Jensen, M. C. (1983). Separation of ownership and control. *Journal of Law and Economics*, 26(2), 301-325.
- 23) Felin, T., Foss, N. J., & Ployhart, R. E. (2015). The microfoundations movement in strategy and organization theory. *Academy of Management Annals*, 9(1), 575-632.
- 24) Gilbert, C. G. (2005). Unbundling the structure of inertia: Resource versus routine rigidity. *Academy of Management Journal*, 48(5), 741-763.
- 25) Hambrick, D. C., & Mason, P. A. (1984). Upper echelons: The organization as a reflection of its top managers. *Academy of Management Review*, 9(2), 193-206.
- 26) Helfat, C. E., & Peteraf, M. A. (2015). Managerial cognitive capabilities and the microfoundations of dynamic capabilities. *Strategic Management Journal*, 36(6), 831-850.
- 27) Helfat, C. E., & Winter, S. G. (2011). Untangling dynamic and operational capabilities: Strategy for the (n)ever-changing world. *Strategic Management Journal*, 32(11), 1243-1250.
- 28) Henderson, R. M., & Clark, K. B. (1990). Architectural innovation: The reconfiguration of existing product technologies and the failure of established firms. *Administrative Science Quarterly*, 35(1), 9-30.
- 29) Hillman, A. J., & Dalziel, T. (2003). Boards of directors and firm performance: Integrating agency and resource dependence perspectives. *Academy of Management Review*, 28(3), 383-396.
- 30) Hrebiniak, L. G. (2013). *Making strategy work: Leading effective execution and change* (2nd ed.). FT Press.
- 31) Institute of Directors in Southern Africa. (2016). *King IV report on corporate governance for South Africa 2016*. IoDSA.
- 32) Jensen, M. C., & Meckling, W. H. (1976). Theory of the firm: Managerial behavior, agency costs and ownership structure. *Journal of Financial Economics*, 3(4), 305-360.
- 33) Kane, G. C., Palmer, D., Phillips, A. N., Kiron, D., & Buckley, N. (2015). *Strategy, not technology, drives digital transformation*. MIT Sloan Management Review and Deloitte University Press.
- 34) Kaplan, R. S., & Norton, D. P. (2001). *The strategy-focused organization: How balanced scorecard companies thrive in the new business environment*. Harvard Business School Press.
- 35) Khanna, T., & Palepu, K. G. (2010). *Winning in emerging markets: A road map for strategy and execution*. Harvard Business Press.
- 36) Leonard-Barton, D. (1992). Core capabilities and core rigidities: A paradox in managing new product development. *Strategic Management Journal*, 13(S1), 111-125.
- 37) Levinthal, D. A., & March, J. G. (1993). The myopia of learning. *Strategic Management Journal*, 14(S2), 95-112.
- 38) March, J. G. (1991). Exploration and exploitation in organizational learning. *Organization Science*, 2(1), 71-87.
- 39) Milgrom, P., & Roberts, J. (1995). Complementarities and fit: Strategy, structure, and organizational change in manufacturing. *Journal of Accounting and Economics*, 19(2-3), 179-208.
- 40) Mintzberg, H., & Waters, J. A. (1985). Of strategies, deliberate and emergent. *Strategic Management Journal*, 6(3), 257-272.
- 41) Nadler, D. A., & Tushman, M. L. (1980). A model for diagnosing organizational behavior. *Organizational Dynamics*, 9(2), 35-51.
- 42) Neilson, G. L., Martin, K. L., & Powers, E. (2008). The secrets to successful strategy execution. *Harvard Business Review*, 86(6), 60-70.

- 43) Nelson, R. R., & Winter, S. G. (1982). *An evolutionary theory of economic change*. Harvard University Press.
- 44) North, D. C. (1990). *Institutions, institutional change and economic performance*. Cambridge University Press.
- 45) OECD. (2023). *G20/OECD principles of corporate governance*. OECD Publishing.
- 46) O'Reilly, C. A., & Tushman, M. L. (2008). Ambidexterity as a dynamic capability: Resolving the innovator's dilemma. *Research in Organizational Behavior*, 28, 185-206.
- 47) O'Reilly, C. A., & Tushman, M. L. (2013). Organizational ambidexterity: Past, present, and future. *Academy of Management Perspectives*, 27(4), 324-338.
- 48) Ouchi, W. G. (1980). Markets, bureaucracies, and clans. *Administrative Science Quarterly*, 25(1), 129-141.
- 49) Schein, E. H. (2010). *Organizational culture and leadership* (4th ed.). Jossey-Bass.
- 50) Shleifer, A., & Vishny, R. W. (1997). A survey of corporate governance. *Journal of Finance*, 52(2), 737-783.
- 51) Sirmon, D. G., Hitt, M. A., & Ireland, R. D. (2007). Managing firm resources in dynamic environments to create value: Looking inside the black box. *Academy of Management Review*, 32(1), 273-292.
- 52) Sull, D., Homkes, R., & Sull, C. (2015). Why strategy execution unravels and what to do about it. *Harvard Business Review*, 93(3), 57-66.
- 53) Teece, D. J. (2007). Explicating dynamic capabilities: The nature and microfoundations of (sustainable) enterprise performance. *Strategic Management Journal*, 28(13), 1319-1350.
- 54) Teece, D. J., Pisano, G., & Shuen, A. (1997). Dynamic capabilities and strategic management. *Strategic Management Journal*, 18(7), 509-533.
- 55) Tripsas, M., & Gavetti, G. (2000). Capabilities, cognition, and inertia: Evidence from digital imaging. *Strategic Management Journal*, 21(10-11), 1147-1161.
- 56) Tushman, M. L., & Anderson, P. (1986). Technological discontinuities and organizational environments. *Administrative Science Quarterly*, 31(3), 439-465.
- 57) Verhoef, P. C., Broekhuizen, T., Bart, Y., Bhattacharya, A., Qi Dong, J., Fabian, N., & Haenlein, M. (2021). Digital transformation: A multidisciplinary reflection and research agenda. *Journal of Business Research*, 122, 889-901.
- 58) Vial, G. (2019). Understanding digital transformation: A review and a research agenda. *Journal of Strategic Information Systems*, 28(2), 118-144.
- 59) Vuori, T. O., & Huy, Q. N. (2016). Distributed attention and shared emotions in the innovation process: How Nokia lost the smartphone battle. *Administrative Science Quarterly*, 61(1), 9-51.
- 60) Warner, K. S. R., & Wager, M. (2019). Building dynamic capabilities for digital transformation: An ongoing process of strategic renewal. *Long Range Planning*, 52(3), 326-349.
- 61) Weick, K. E., & Roberts, K. H. (1993). Collective mind in organizations: Heedful interrelating on flight decks. *Administrative Science Quarterly*, 38(3), 357-381.
- 62) Westerman, G., Bonnet, D., & McAfee, A. (2014). *Leading digital: Turning technology into business transformation*. Harvard Business Review Press.
- 63) Whetten, D. A. (1989). What constitutes a theoretical contribution? *Academy of Management Review*, 14(4), 490-495.
- 64) Zahra, S. A., & George, G. (2002). Absorptive capacity: A review, reconceptualization, and extension. *Academy of Management Review*, 27(2), 185-203.
- 65) Zollo, M., & Winter, S. G. (2002). Deliberate learning and the evolution of dynamic capabilities. *Organization Science*, 13(3), 339-351.