Entrepreneurial Leadership and Strategic Agility for Digital Innovation and Sustainable Competitive Advantage: A Contingent-Capabilities Framework

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Abstract

Purpose—This article provides an explanation of how entrepreneurial leadership can create long-lasting value from digital innovation, and not just short-term. Design/methodology—Theory-driven conceptual synthesis is developed by synthesizing entrepreneurial leadership, strategic agility, dynamic capabilities, digital innovation and the natural-resource based view of the firm. Findings/propositions—The suggested sequence of the proposed mechanism is from opportunity oriented leadership to strategic agility, digitally enabled innovation and sustainable competitive advantage. It requires resource complementarity, governance, and ecosystem conditions and can be effective if used too rapidly, or if it is not well governed or is left to experimentation without wise stewardship, it may kill value. Originality/value: The paper distinguishes novelty in digital creation from appropriation and persistence, formulates eight propositions that are falsifiable and identifies a multi-wave empirical design. It provides a structure for research of firm innovation processes involving entrepreneurial exploration and disciplined adaptation and legitimacy dynamics with stakeholders. This is a concept paper and does not contain any primary data or estimated relationships.

Keywords: Entrepreneurial leadership; Strategic agility; Digital innovation; Sustainable competitive advantage; Dynamic capabilities; Value appropriation; Responsible governance.

1. Introduction

The foundation of competition is continuously changing under the influence of digital technologies. Data-rich products, platform interfaces, analytics and digitally connected value chains enable companies to re-combine existing resources and to get into adjacent fields, and ease the hurdles of competitors to copy the visible parts. So digital innovation opens up more opportunities and means the advantages can be lost even quicker. Retention of value created through a technology acquisition is not simply a matter of technology; strategic direction, organizational response capacity, and value retention mechanisms are also critical (Bharadwaj et al., 2013; Nambisan, 2017; Yoo et al., 2010).

One of the organizing forces in this process could be entrepreneurially led. Such leaders promote new possibilities, allow for experimentation, are tolerant of rolling risks, and rally people to a future that is not fully predictable. But inspirational opportunity framing is not the same as being able to steer resources at the firm level or to translate experiments to scalable offerings. The missing organizational mechanism is strategic agility, i.e., sensitivity to weak signals, a collective commitment and a flexible deployment of resources (Doz & Kosonen, 2010; Renko et al., 2015). The question isn't whether enterprising leaders prefer innovation, it's when their innovations are repeatable, economically salvageable, and valid means of gain.

There's a reason this question is important since digital innovation can be useful but not protectable. The competitors can buy the same software, duplicate platform capabilities, or use the same digital infrastructure. Furthermore, deployment can create cyber exposure, employee resistance, scaling or energy intensive, algorithmic bias. We use the term sustainable competitive advantage in two interrelated ways: a relative advantage that endures over the competitive cycle and value generation which is sustainable to material environmental and social commitments. These dimensions cross yet are not synonymous (Barney, 1991; Hart, 1995).

Three questions are used to analyze this: (RQ1) How can entrepreneurial leadership contribute to digital innovation through the use of agility mechanisms? (RQ2) How does digital innovation become advantage that cannot be imitated and in times of market turbulence? and (RQ3) When do responsible governance, complementarity and ecosystem dependence buttress or thwart these avenues? This article begins by defining constructs and finds evidence that is adjacent to these constructs, then it creates a causal framework and eight propositions, and finally it proposes an empirical strategy that can distinguish between claims and evidence.

2. Review Logic, Construct Boundaries and Research Gap

The article is a theory building review and not a systematic search/meta-analysis. It brings together key conceptual pieces of work in entrepreneurial leadership, the resource based view and the dynamic capabilities of the firm

with seminal and directly relevant peer reviewed literature on strategic agility, digital innovation and sustainability. The selection is not intended to be exhaustive; thus, there is no claim for pooled effect sizes or full coverage. This boundary is relevant for reporting responsibly and to determine what needs to be defined empirically in the proposed framework.

Entrepreneurial leadership is not just about the innovativeness of the founder, but also social influence that is directed towards the recognition and exploitation of opportunities using people. Gupta et al. (2004) theorize the construct across cultures, and Renko et al. (2015) create a behaviorally-based measurement. Strategic agility is an organizational competency that can be defined as the ability to redirect and allocate activities of an organization rapidly and coherently. Coordinated renewal is a distinction made by strategic sensitivity, leadership unity, and resource fluidity, attributes that Doz and Kosonen (2010) pinpoint.

Digital innovation is the invention or significant re-innovation of products, services, processes and business models with the help of digital resources and re-combination. It goes beyond mere digitization, but not as far as a comprehensive enterprise software package (Vial, 2019; Verhoef et al., 2021). Whether the advantage is sustainable is influenced by resources and capabilities that are valuable and hard to be imitated or substituted, and by stakeholder legitimacy and ecological constraints (Barney, 1991; Hart, 1995). The sustainability score of a firm is thus, not a replacement for assessing a firm's competitive position.

Significant pieces of this argument have already been linked by recent studies. Sahibzada et al (2025) establish correlations between entrepreneurial leadership and digital orientation, digital capabilities, and innovation and sustainable performance in the context of IT in China. Rawashdeh et al. (2024) relate strategic agility, digital transformation and environmental sustainability. These contributions leave the classical relationship between innovation, simple leadership and performance as a novelty claim. The more specific unresolved issue is: how is strategic agility becoming a bridging capability? How do firms turn benefits of digital novelty into their own? What makes digital novelty benefits durable and responsible beyond a single survey period?

Table 1. Construct separation and theoretical role

Construct	Analytical meaning	Distinct observable emphasis
Entrepreneurial leadership	Opportunity-focused influence and mobilization	Leader behaviors; support for initiative and experimentation
Strategic agility	Rapid, coordinated sensing and redeployment	Decision latency; cross-unit alignment; resource mobility
Digital innovation	Digitally enabled new value propositions or processes	Implemented product, service, process and model changes
Sustainable competitive advantage	Persistent relative advantage with stakeholder viability	Multi-year relative outcomes; imitation resistance; verified ESG impacts

Note. Constructs are intentionally non-interchangeable to avoid measuring the antecedent and the outcome with the same items.

3. Theoretical Integration: Leadership, Capabilities and Appropriation

Opportunity-seeking and advantage-seeking (Ireland et al., 2003; Hitt et al., 2011) are the two components of strategic entrepreneurship. Entrepreneurial leadership provides the opportunity search and collective motivation, but the outcomes of competition involve organizational capabilities that structure, bundle and leverage complementary resources (Sirmon et al., 2007). The dynamic-capabilities framework then provides an explanation of how a firm identifies opportunities, grabs them and transforms resources and activities as the environment evolves (Teece, 2007). These perspectives are not overlapping; the leadership is an antecedent to agility, agility is a repeatable capability, advantage is a consequence of agility, not a defining strength of agility.

This separation comes in response to a typical theoretical circularity. If a firm is described as agile in some sense because it performs well, then there is no way to test if agility leads to performance. Instead capabilities should be tracked through processes and decisions separately from success, as Zahra et al. (2006) suggest. For example, at the small scale level, the ability to go back to a previous budget for changes, to deploy experiments across different business units, to test ideas in multiple iterations before they have performance implications, etc., can be measured before the performance impacts of innovation are felt.

A second link comes from the resource-based and natural-resource-based views. Digital code, or generic cloud access, often is not scarce – it may be the firm-specific data, the trust of the customer, distribution relationships, proprietary workflows, the talents and governance capacity (Barney, 1991; Hart, 1995). Ecosystem scholarship also warns about the dependence of suppliers, complements and interdependent actors for the value of focal innovation (Adner & Kapoor, 2010). An agile company can be creating value for ecosystem partners and taking

only a fraction of the value. The classification of output into innovation and appropriation/persistence is therefore not the same.

4. Entrepreneurial Leadership as a Generator of Strategic Agility

4.1 Opportunity framing and strategic sensitivity

Entrepreneurial leaders expand the number of possibilities that employees consider to be worthy of their investigation. By challenging routines, they can validate boundary spanning search and incorporate weak market signals into their strategic inputs in order to improve strategic sensitivity. When Opportunity framing is operationalized into scanning routines, experiment portfolios and practices of customer learning, it matters. It must not be confused with 'novelty fever' as disciplined leaders also need to shut down less promising projects to preserve the unity and focus of the organisation (Gupta et al., 2004; Renko et al., 2015).

4.2 Collective commitment, resource fluidity

Getting quick reaction from one executive is not agile enough. Leadership alignment facilitates timely decision making throughout the marketing, operations, finance and technology functions; resource agility enables the flow of people and resources towards new digital priorities. When a CEO is open to experimentation but strict with the rules, he can actually stifle exactly the flexibility he's looking for. Doz and Kosonen (2010) consider these capabilities as complementary and Warner and Wäger (2019) demonstrate that digital renewal changes collaboration, culture and business models over time.

Proposition 1 (P1). Later strategic agility, particularly opportunity sensing and cross-functional commitment and discretionary resource redeployment, is positively linked with entrepreneurial leadership.

5. Strategic Agility, Digital Innovation and Advantage Formation

5.1 Sensing in the digital realm

Agility transforms perceived opportunities to deployable options. The sensing dimension helps it detect changing customer issues; the fluidity of resources allows for quick prototyping; and the unity of leadership helps to reduce the expense of transitioning successful prototypes into integrated core operations. Digital technologies are not only efficiency tools but also sources of generative options in information systems research (Sambamurthy et al., 2003). Similarly, the digitalization of offerings has a multi-layered, modular structure that allows for recombination between otherwise different actors and products (Yoo et al., 2010). Thus agility would be a good indicator not just of the number of digital projects, but of the novelties that have been implemented, learning speed and scalability.

Proposition 2 (P2). In addition to the effect of entrepreneurial leadership, strategic agility is positively linked to digital innovation implemented.

Proposition 3 (P3). The relationship between entrepreneurial leadership and digital innovation that is implemented is moderated by strategic agility.

5.2. Exploration–exploitation balance and the discipline of scaling

Innovation is not always a suite of profitable business. Exploitation turns into a sort of standardization, commercialization, and/or testing of the options created through exploration. The literature on the concept of organizational ambidexterity views these goals as conflicting and potentially problematic (O'Reilly & Tushman, 2013). Strategic agility will enhance the flow of learning from exploratory teams to established functions, and one way flexibility can be useful is that it can endlessly repeat experiments without incorporating any of them. The outcome of relevance is an innovation system which learns quickly and accumulates knowledge.

They can help by laying out clear decision gates: prototypes move forward when there is proven demand, operating economics, technical resilience and stakeholder impacts, but not just because they have been sponsored by a strong executive. Without such gates, decisions may be rushed and result in project churn and loss of complementary investments. Digital innovation then only links the leadership to advantage pathway where firms establish the operational routines required for customer delivery and the consistent creation of value (Foss & Saebi, 2017; Teece, 2018).

Proposition 4 (P4). Strategic agility and digital innovation are more interconnected when exploratory efforts complement disciplined scaling and knowledge-integration practices.

5.3. Digitalizing cultural heritage for the future

Although digital innovation offers promising opportunities for new revenue streams, efficiency and user experience, advantage only comes when the firm captures an economically significant share of the value generated and sustains it in the face of imitation. Proprietary learning data, complementary capabilities, network relationships, switching costs, service quality and trusted brands can all be used to support appropriation. A

platform dependent business can simultaneously cut costs of launch if it relies on external infrastructure, and shift bargaining power to the platform owner. This results in an endogenous tension in that the very ecosystems that can be foundational to innovation can also undermine the firm's capacity to capture the rents it generates (Adner & Kapoor, 2010; Teece, 2018).

Persistence is also temporal. A digital product that gets off to a great start can move towards competition in a matter of months, whereas a constant reshaping of customer knowledge, relational capital and hard-to-replicate processes can aid subsequent renewal periods. A strong study will therefore evaluate the competitive results over many periods, compared to the standards of the industry (Barney, 1991; Sirmon et al., 2007).

Proposition 5 (P5). Implemented digital innovation is associated with more persistent competitive advantage when the firm possesses complementary assets and mechanisms for capturing value than when it relies mainly on easily imitated digital tools.

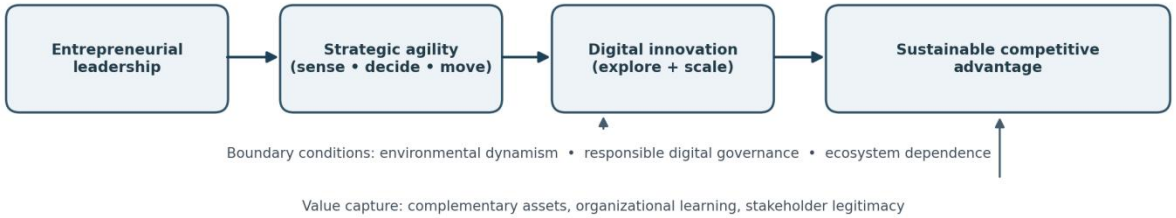


Figure 1. Proposed sequential and contingent framework

Note. Arrows represent theoretical predictions rather than estimated empirical effects. Governance and ecosystem conditions may strengthen or weaken these relationships.

6. Boundary Conditions, Responsible Innovation and Failure Modes

6.1 Environmental dynamism and the limits of speed

In the case of environmental turbulence, the value of adaptable processes rises because the value of a plan diminishes in a shorter time. However, if pivots happen too often they can be counterproductive of employee attention, supplier coordination and expertise building. The relationship between agility and value, therefore, is not necessarily a positive one: agility is useful when the firm can "read" signals and adjust to change without sacrificing integration. There are cautions to be heeded regarding the reconfiguration as a path toward better performance results, and these reminders are based on research on dynamic capabilities (Teece, 2007; Zahra et al., 2006).

Proposition 6 (P6). The relationship between strategic agility and digital innovation is stronger when environmental dynamism is moderate, but when environmental dynamism is strong and the integration is weak, the impact of further speed is small.

6.2. Good governance and stakeholder legitimacy

Data protection, cyber resilience, transparent decision rights, direct and indirect resource consumption evaluation, and workforce participation and the testing of algorithmic harms are part of the responsible digital governance. The natural-resource-based view implies that the pollution prevention, product stewardship and sustainable development competencies may have strategic significance (Hart, 1995). There are also examples of sustainable business-model work; these require not only economic improvement, but also the maintenance or enhancement of the social or environmental value proposition (Bocken et al., 2014). Governance doesn't have to stifle entrepreneurship but, when incorporated into the design of the innovation, it can avoid costly reversals and maintain customer and regulator trust.

Responsible innovation is particularly useful in the case of a digitally enabled product that captures sensitive data and/or has material rebound effects on vulnerable users. The ultimate environmental effect of digitalization needs to be based on measures rather than on assuming a reduction in paperwork. Algorithmic Impact reviews, Minimum viable controls, lifecycle assessment and escalation pathways can be deployed at the same pace as experiments by manager. These practices can be more expensive upfront, but can aid in building trustworthy scaling and long-term differentiation (Vial, 2019).

Proposition 7 (P7). Responsible digital governance tends to have a positive effect on the relationship between digital innovation and sustainable competitive advantage, by lowering the legitimacy, security and operational risk in the process and potentially slowing down initial launch speed due to compliance cost.

6.2 Asymmetric bargaining power and ecosystem dependence

Innovation is made possible through APIs, marketplaces and digital infrastructure, but it's not access, it's access. As a focal organization becomes overly reliant on a single intermediary, adverse pricing or adjustments to visibility rules or limitations on customer information may hurt value capture even as volume increases. On the other hand, relationships that generate special co-specialized assets can result in difficulties in replicating the offering. This interdependence should thus be studied as it can be both an enabler for the innovation and a constraint for appropriation (Adner & Kapoor, 2010; Bharadwaj et al., 2013).

Proposition 8 (P8). With increased dependence on the ecosystem that is not easily substituted, there is less of a relationship between digital innovation and sustainable competitive advantage, unless the focal firm has complementary assets or is protected by a relational arrangement.

Table 3. Proposition-to-mechanism mapping (conceptual, not empirical)

Proposition	Theoretical relationship	Suggested test
P1	Entrepreneurial leadership → strategic agility	Lagged positive path
P2	Strategic agility → implemented digital innovation	Lagged positive path
P3	Agility bridges leadership and innovation	Indirect effect / mediation
P4	Scaling discipline conditions agility–innovation	Interaction with integration routines
P5	Complementary assets enable durable value capture	Innovation × complementary assets
P6	High turbulence and weak integration limit speed benefits	Nonlinear/conditional interaction
P7	Governance supports legitimacy and durable advantage	Governance moderation
P8	Platform dependence constrains value appropriation	Dependence × complementary assets

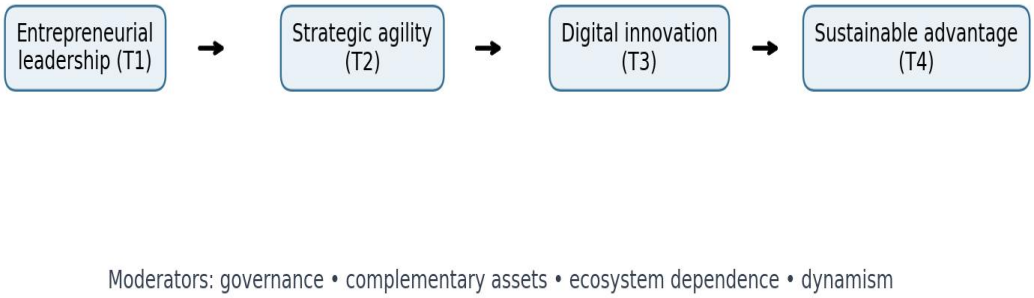


Figure 2. Four-wave conceptual causal sequence and contextual moderators (proposed; no coefficients estimated).

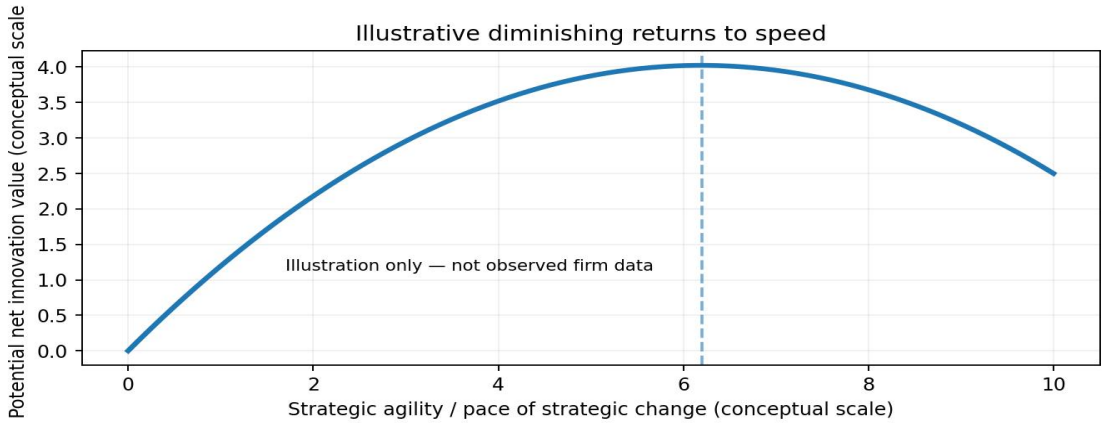


Figure 3. Hypothesized non-linear agility–value relationship under weak integration; axes are illustrative and not empirical measurements (P6).

Table 4. Proposed longitudinal research and data collection schedule

Wave	Main construct	Indicative evidence	Validity safeguard
T1	Entrepreneurial leadership	ENTRELEAD and employee ratings	Separate leadership source
T2	Strategic agility	Decision latency, resource redeployment	Recorded decisions plus survey
T3	Digital innovation	Implemented releases, process redesign	Innovation logs and independent novelty review
T4	Competitive advantage and responsible outcomes	Peer-adjusted margins, retention, incidents, emissions	Lagged records and auditable indicators



Figure 4. Suggested responsible digital-innovation stage-gate workflow (managerial framework).

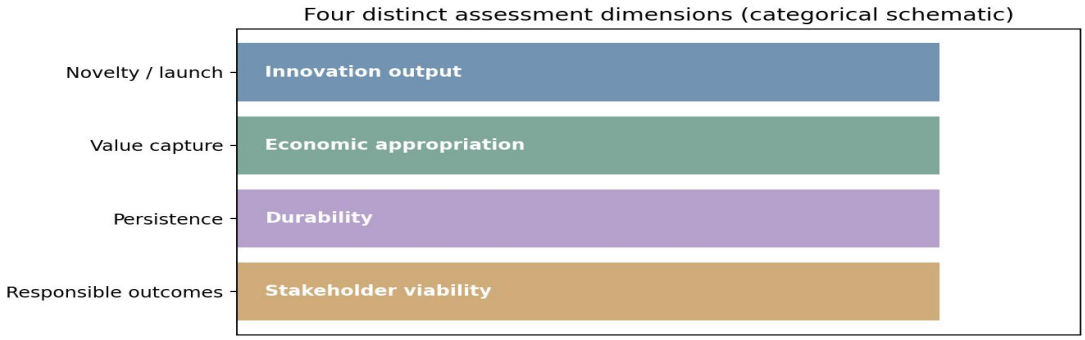


Figure 5. Four non-interchangeable dimensions for evaluating digital innovation and sustainable advantage; bars denote categories, not quantities.

The following tables and figures operationalize the eight propositions and visualize proposed relationships. All curves and schematic bars are conceptual illustrations, not estimated findings or sample statistics.

7. The conceptual framework and proposed empirical validation

The framework suggests a direct, indirect pathway of entrepreneurial leadership at time 1, strategic agility at time 2, digital innovation at time 3, and sustainable competitive advantage at time 4. This does not rule out parallel or reciprocal effects; firms that are already doing well are able to provide better leadership, more experimentation, and better technologies. This suggests that a credible empirical design should prioritize temporal ordering, pre-treatment controls and competing models tests over a cross-sectional mediation analysis. The framework is suggested as a series of statements that can be contested, rather than as final data.

The primary study should include a representative sample of digital intensive companies and traditional companies, including well-known SMEs and larger incumbent companies, across a range of industries, including a stratified sample. Respondents should be a senior strategic decision maker for leadership and resource allocation, a digital or innovation manager for evidence of implementation and a finance/sustainability informant for verifying outcomes. Leadership and capability measures temporally distant from innovation and performance would be made via four measurement waves over a span of about six months. A reasonable starting point for a feasible initial design target would be 300-400 matched firms (subject to an a priori power and attrition analysis; not performed for this article).

The ENTRELEAD scale represents a solid starting point for entrepreneurial leadership, which needs to be culturally adapted and discriminant validated (Renko et al., 2015). Strategic agility needs to be translated into strategic sensitivity, unity and fluidness, with the help of survey questions supplemented by recorded decision cycle times and redeployment ratios. A straightforward IT spending ratio is not enough – digital innovation can be a blend of count and meaning of commercialised digital offerings plus external judgment of novelty. The competitive advantage should be measured against peers by adjusting market share and should be measured with productivity and margin trends over multiple periods; legitimacy and environmental sustainability should be measured by indicators that need to be separately auditable by employees, customers and resources. Do not average these dimensions as a single, "performance" average.

Table 2. Proposed constructs, measurement sources and validity safeguards

Variable / role	Indicative measurement	Evidence / safeguard
Leadership (T1)	Adapted ENTRELEAD; opportunity support and mobilization	Senior leader and employee ratings; avoid self-only reports
Agility (T2)	Strategic sensitivity, unity, resource fluidity	Multi-informant scores; decision latency; budget transfers
Digital innovation (T3)	Implemented launches, process redesign, digital revenue	Innovation records and independent ratings of novelty
Advantage (T4)	Peer-adjusted margins, growth persistence, switching costs	Lagged financials and competitor benchmarks
Responsible outcomes	Cyber incidents, trust indicators, emissions intensity	Auditable data; report economic and non-economic results separately

Note. T1–T4 denote proposed survey periods. Suggested indicators are illustrative and require pretesting; no numerical results are reported.

Confirmatory factor analysis and tests of factor separation, as appropriate (Henseler et al., 2015), should be performed first when analyzing. Temporally sequenced pathways can be estimated using multiple levels or panel structural-equation methods, while controlling for clustering in industries and industry-specific financial performance and firm age. A competing model should include: reverse ordering, direct leadership effects, and a non-linear agility term. Bootstrapped indirect effects, robustness to alternative performance operationalizations and sensitivity to missing data should be reported in conjunction with confidence intervals and not just significance stars.

Common-source inflation and selection bias are content concerns. It is better to have more than one respondent, waves, administrative measures, anonymity and separated measurement contexts than relying on a single statistical correction (Podsakoff et al., 2003). Future research could take advantage of the staggered implementation of decentralized funding rights or cross-unit governance changes for more robust inferences, if a credible identification strategy is detailed. Qualitative process tracing of contrasting firms might uncover whether leadership did indeed start the redeployment or whether it was just an act of celebration for a change that already had occurred.

7.1 Rival explanations and transparent evaluation

Positive path coefficients should be interpreted as an entrepreneurial-leadership effect, but alternative explanations must be added prior to this. Technological literacy in the past can foster agility and innovation; financial slack can allow leaders to offload strategic decision-making and pursue digital experimentation; and a positive industry shock can at the same time increase demand and the way managers value leadership. The following factors should therefore be measured in a baseline model: IT capability, innovation intensity prior to the period, slack resources, firm size, market concentration and industry exposure. Matched within-firm comparisons can mitigate unobserved differences in corporate reputation and financing access in cases where firms have multiple divisions. These remedies do not establish causation, but they render the proposed sequence more difficult, and more testable (Teece, 2007; Podsakoff et al., 2003).

Not only should significant indirect paths be reported, so should disconfirming cases. A company may be led well by its entrepreneurs but continue to have poor resource fluidity due to the lack of decentralization of budget authority. Another may launch digital products quickly, but not gain a margin advantage, due to imitative competition. A third might generate appealing margins but come at the cost of poor working conditions or greater use of resources. These patterns can be classified for further refinement of boundary conditions, as well as for separating out gains that are more enduring than those that are more fleeting and favorable. A credible article should include the measure used, the sample that was used, the attrition flow, decisions made about missing data, the model specification, and the reproducible analysis plan, and should not selectively suppress null effects.

8. The development of a theory of the firm requires a variety of empirical studies

Construct discipline – entrepreneurial leadership, strategic agility, digital innovation and durable advantage are regarded as separable, measurable concepts. This clarifies the findings and what they leave open for future research. The proposed model suggests a temporally ordered mechanism that may fail at certain points as opposed to a direct correlation from leadership to performance. A leader can cause the opportunity to be discovered without resource fluidity; a flexible firm can innovate without capture; a profitable innovator can lose legitimacy through irresponsible deployment.

Second, the framework does not measure innovation success based on manager's general instances of performance as it does value appropriation and persistence after innovation.Second, the framework does not measure innovation success through the performance perception of managers, but places value on appropriation and persistence after innovation. Adaptability has already been identified as key in existing literature on digital transformation and strategic renewal (e.g., Warner & Wäger, 2019; Verhoef et al., 2021) and interdependence has been identified as key in literature on ecosystem thinking (e.g., Adner & Kapoor, 2010). Collecting these together would suggest that the question of strategic importance is not only if digital innovation takes place, but who will get the benefit from it, for how long and what will be the social or ecological price.

Third, the paper identifies managerial trade-offs with direct managerial implications. Executives need to design small, reversible experiments, and establish clear scale up criteria; set up cross-unit decision forums with true decision making authority to allocate resources; develop unique data, service and relationship assets based on broadly available technologies; and include privacy, cybersecurity and environmental measurement in project gates. Boards should consider indicators that reveal hidden fragility – platform concentration, multiple failed pivots, increasing digital energy usage and decreasing customer trust – instead of just measuring the number of product launches.

There are limitations in the analysis, as well. It is also a selective review, it is proposed rather than estimated, and nonlinear effects were found and need to be investigated depending on the context. Future research should compare the founder-led business to the professionally managed incumbent businesses and emerging businesses with the developed market and high dependence on platform vs low dependence on platform. Ecosystem bargaining arrangements or regulatory shifts should be studied to see if they alter the return to agility; and if short-term digital revenue increases are more short-lived than resilience and stakeholder trust.

These recommendations suggest lightweight but clear governance principles for smaller businesses, with a minimum number of data, security and partner dependency controls, and short experimentation cycles with documented learning. The other problem is faced by incumbents: redeployment could be delayed if budgets are not centralized or if the functional incentives are not. Even if sufficient technological expertise is available. A helpful diagnostic is to look at the amount of time it takes to identify a strategic shift, approve a cross-unit reaction, create a commercially viable digital innovation and assess if it made the innovation more advantageous. The biggest delay is where an intervention is likely to be most effective. This diagnosis is based on strategic sensitivity, leadership unity and resource fluidity instead of being a binary inverse of the purchase of digital tools (Doz & Kosonen, 2010; Warner & Wäger, 2019).

8.1. Implications for classroom practice

The model provides multiple rejection opportunities and not just plausible positive ones. If P1 were set to null, then a new P1 orientation to the enterprise would have to be sufficient to alter the way the group allocates their resources. A supported P2 and a null P5 would suggest that experimentation provides a positive impact on innovation, without creating appropriation barriers. A negative P7 would indicate that controls are not likely to be legitimate, or that their benefits with regard to resilience are not commensurate with their costs, in a specific context, and would require a more specific governance intervention. Patterns that contradict should be explored, not averaged out, as boundary evidence. The fact that all of these are reported instead of just a blanket statement that there is a positive association between leadership, technology, and sustainability provides more value to the model than an unrestricted claim.

The use of paired cases, one fast innovator, high margin one, and another frequent innovator, low margin one, can yield qualitative research that will identify the actual management practices that give rise to different results for the two cases. In each instance, they were able to chart the path of approval of digital investments, partner contract adjustments, scaling choices, incidents that impacted the user trust and the time line of competitors' reaction. To separate the leaders' narratives of success in the past from the actual sequence, it would be helpful to have independent documentary evidence. It would then be possible to see if variations in data regulation, access to finance, and labor-market institutions change the relationships in a multi-country comparison. The proposed framework is more convincing when these contextual factors are clearly identified, as sustainable advantage can only be determined in the context of internal factors of renewal, and external factors of constraints (Hart, 1995; Adner & Kapoor, 2010).

9. Conclusion

Digital opportunity search can be started by entrepreneurial leadership, but only an organizational structure that brings ideas into coordinated action and keeps them economically and socially valuable can provide lasting advantage. When combined with a combination of strategic sensitivity, leadership unity and resource fluidity, strategic agility can presumably play this bridging role. Digital innovation only comes to fruition and fosters sustainable competitive advantage as much as complementary assets enable appropriation, responsible governance ensures legitimacy, and ecosystem relationships do not shift the gains to stronger intermediaries. These are hypotheses which can be tested, not proven facts in the present manuscript. The next step in how to measure the defensible innovation and strategic churn of agility involves a longitudinal, multi-informant evaluation of the issue.

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