

Organizational Innovation Alone Is No Longer Enough: Digital Integration as a Prerequisite for Firm Expansion in Transition Economies

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Abstract:

This article examines the shifting conditions of firm expansion in transition economies, focusing on Azerbaijan, Ukraine, and Georgia during the post-COVID period of 2020 to 2024. The study contends that organizational innovation — historically recognized as a primary mechanism of business growth — has become insufficient as a standalone strategy in the current competitive environment. Drawing on comparative secondary evidence and established innovation management literature, the article argues that digital integration, understood as the adoption of platform-based business models and digitally networked operational systems, has emerged as a structural prerequisite for sustained firm expansion. Firms in the three studied economies that maintained organizational restructuring as their principal growth mechanism faced persistent competitiveness gaps relative to digitally integrated competitors. The study contributes to the literature by situating this dynamic within the specific institutional and resource constraints of post-Soviet transition economies and by identifying the mechanisms — threshold effects in digital investment, network externalities, and absorptive capacity — through which the gap between organizational and digital innovation translates into differential firm performance. Policy and managerial implications are discussed.

1.0 INTRODUCTION

The relationship between innovation and firm growth has generated one of the most extensive bodies of empirical and theoretical research in management and economics. The foundational premise — that firms which introduce new products, processes, or organizational arrangements gain competitive advantages that translate into expanded revenues, market share, and geographic reach — has been validated across a wide range of economic contexts and time periods (Bianchini, Pellegrino, and Tamagni, 2018; Exposito and Sanchis-Llopis, 2018). For most of the twentieth century and into the early 2000s, organizational innovation occupied a recognized place within this framework: restructuring management layers, redefining coordination mechanisms, and improving internal governance were understood as drivers of adaptive capacity and, through this, of growth.

The conditions under which this understanding developed, however, have shifted substantially. The diffusion of digital technologies and the emergence of platform-based business architectures have reconfigured the competitive landscape in ways that conventional innovation frameworks do not fully accommodate. When competitors are operating on platform infrastructures that generate network effects and scale non-linearly, internal organizational adjustments — however well designed — do not produce equivalent returns. The frontier of competitive advantage has moved, and the evidence from the post-COVID period suggests that this movement has been particularly consequential for firms in transition economies.

Azerbaijan, Ukraine, and Georgia offer instructive comparative cases. All three emerged from the Soviet era with legacies of centralized organizational structures and limited market-based competitive exposure. Over the three decades following independence, their firms undertook sustained organizational innovation — management restructuring, divisional reorganization, and governance reform. The post-COVID period, however, has exposed the limits of this trajectory. Firms that had invested in digital infrastructure before 2020 demonstrated greater resilience and expansion capacity; those anchored to organizational innovation as their primary strategy struggled to maintain competitive positions.

This article advances the argument that organizational innovation, while a necessary foundation, is no longer sufficient for meaningful firm expansion in transition economies. Digital integration — defined here

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as the systematic adoption of platform-based business models and digitally networked operational systems — has become a structural prerequisite rather than an optional enhancement.

The overarching aim of the study is to explain, rather than merely to document, why the competitive returns to organizational innovation have diminished in transition economies during the post-COVID period, and why digital integration has become the binding condition for sustained firm expansion. The study is therefore objective-driven rather than comparative in the narrow sense: cross-country comparison is used as the analytical method through which a defined set of objectives is pursued, not as an end in itself. Three post-Soviet transition economies — Azerbaijan, Ukraine, and Georgia — serve as the analytical cases, chosen for the theoretically informative variation they display in regulatory enabling and digital adoption. The European Union average is used throughout as an external reference benchmark against which these cases are positioned; it is not treated as a fourth case.

Within this frame, the study pursues four specific objectives:

- (1) to establish, from comparative secondary evidence for the 2020–2024 period, the pattern of diminishing competitive returns to organizational innovation relative to digital integration across the three economies;
- (2) to identify and explain the mechanisms — threshold effects in digital investment, network externalities in platform markets, and digital absorptive capacity — through which the gap between organizational and digital innovation translates into differential firm expansion;
- (3) to determine how institutional and regulatory conditions moderate the digital integration–expansion relationship, drawing on the contrast between the three cases to isolate the role of regulatory enabling; and
- (4) to derive the managerial and policy implications that follow for firms and governments operating in transition-economy settings.

The contribution of the article follows from these objectives and is threefold. First, it provides a theoretically grounded account of why organizational innovation yields diminishing competitive returns in platform-dominated markets, rather than treating this as an unexplained empirical regularity. Second, it situates the dynamic within the specific institutional context of transition economies, where resource constraints and regulatory uncertainty create distinct barriers to the digital investment that sustained expansion now requires. Third, it uses a structured three-country comparison — exploiting meaningful variation in regulatory environments and digital adoption levels, benchmarked against the EU average — to illustrate the framework and to identify the conditions under which digital integration most effectively translates into firm expansion.

2.0 LITERATURE REVIEW

2.1 Innovation and Firm Expansion: Established Foundations

The literature on innovation and firm growth converges on several well-supported propositions. Product innovation opens new demand channels and enables horizontal diversification; process innovation reduces costs and improves quality; the two together, when supported by internal R&D activity, produce measurably higher sales growth and market share gains than either alone (Bianchini, Pellegrino, and Tamagni, 2018; Exposito and Sanchis-Llopis, 2018). Organizational innovation — changes to management structures, business practices, and coordination mechanisms — contributes a third, complementary dimension, creating the internal conditions under which product and process innovations are more likely to succeed, though its relationship with the other innovation types is not always straightforwardly complementary (Avadikyan, Lhuillery, and Negassi, 2016).

For small and medium-sized enterprises in dynamic environments, organizational factors take on additional weight. A flexibility-oriented culture, managerial risk-taking, and effective commercialization strategies amplify innovation outcomes in SMEs in ways that are particularly significant for transition economies, where SMEs constitute the bulk of the private sector outside state-adjacent industries (Getele and Ruoliu, 2024). The relevance of organizational innovation to SME performance in these contexts is not in question; what is in question is whether organizational innovation alone remains sufficient as competitive conditions shift toward digital platform architectures.

A related body of evidence concerns the integration of internal and external knowledge sources. Research has consistently shown that firms combining internal R&D with external knowledge acquisition achieve higher innovation performance than those relying on either alone, with this effect particularly pronounced

in SMEs operating in knowledge-constrained environments (Li and Gao, 2023; Lopes-Bento and Simeth, 2024). This finding is directly relevant to transition economy firms, whose internal R&D capacity is typically limited relative to competitors in advanced economies.

2.2 The Diminishing Returns of Organizational Innovation in Platform-Dominated Markets

Despite the well-established contribution of organizational innovation to firm growth, there are accumulating indications that its returns are diminishing in markets where platform-based competition has become structurally dominant. Platform competition operates on fundamentally different logic from conventional product or process competition. Value is created not primarily through internal efficiency but through network effects — the interactions among multiple user groups whose participation makes the platform more valuable for all participants. Once established, platform positions compound in ways that organizational restructuring cannot replicate.

Hammer's articulation of operational innovation captured an early dimension of this shift: transforming core business activities — order fulfillment, customer service, supply chain management — can drive substantial growth (Hammer, 2004). But the platform model extends this logic further. It is not simply about performing existing activities more effectively; it involves constructing interaction architectures that generate value through ecosystem dynamics. Firms that reorganize internally without building platform connectivity remain structurally outside these dynamics regardless of the quality of their organizational arrangements.

Business method innovation — changes to operations supporting product sales, including customer targeting and delivery systems — has been shown to significantly increase firm valuation, and marketing innovation has demonstrated greater positive effects on financial performance than either product or organizational innovation, particularly in exporting firms (Chan, Bharadwaj, and Varadarajan, 2023; Jusufi, 2023). These findings suggest that the frontier of innovation's contribution to growth has shifted toward customer-facing and market-interfacing digital capabilities — precisely the domain where organizational innovation alone has the least leverage.

The non-linear dynamics of innovation investment add a further dimension. Research has established that moderate innovation investments tend to maximize returns, while both under-investment and excessive investment produce suboptimal outcomes, reflecting diminishing and eventually negative marginal returns (Yeh, Chu, Sher, and Chiu, 2010). In digital transformation contexts, this curvilinear relationship takes a particular form: partial or incomplete digital adoption may be more costly than either full adoption or no adoption, because incomplete integration generates coordination costs without producing network benefits. This threshold dynamic is central to understanding why organizational innovation — which does not, by itself, cross the digital integration threshold — leaves firms in an increasingly disadvantaged position.

2.3 Contextual Moderation: Why Transition Economies Face Distinctive Exposure

The relationship between innovation and firm performance is not context-independent. Market turbulence, competitive intensity, regulatory environments, and institutional development all moderate the magnitude and direction of innovation's effects on growth (Oke, Prajogo, Idiagbon-Oke, and Cheng, 2022; Adomako and Tran, 2026). Transition economies present a specific configuration of contextual factors that makes the gap between organizational and digital innovation particularly consequential.

Institutional environments in transition economies are characterized by regulatory uncertainty, underdeveloped capital markets, and weak intellectual property enforcement — all of which constrain the financing and protection of innovation investments. Under these conditions, firms rationally prioritize organizational adjustments, which are less capital-intensive, over digital infrastructure investment. Financial constraints narrow diversification margins and increase the probability that firms will exit markets or abandon products when resources tighten (Secchi, Tamagni, and Tomasi, 2014).

The regulatory environment, however, is not uniformly adverse. Research has found that regulatory pressures, when aligned with innovation objectives, can enhance absorptive capacity and stimulate innovation performance, particularly in emerging markets (Adomako and Tran, 2026). The variation in regulatory alignment across Azerbaijan, Ukraine, and Georgia — with Georgia generally exhibiting stronger alignment and Azerbaijan facing greater regulatory uncertainty in digital domains — creates a natural comparative dimension that this article exploits.

Technological turbulence — the pace of change in the relevant technological environment — also plays a moderating role. Research has shown that technological turbulence positively moderates the relationship between innovation capability and business performance, with absorptive capacity mediating this effect (Hassani, Halbusi, and Gharbaoui, 2022). The rapid diffusion of platform technologies since 2020 constitutes precisely this kind of turbulence, and firms with higher digital absorptive capacity — developed through prior digital investment and external knowledge acquisition — are better positioned to convert their organizational capabilities into market performance.

3.0 THEORETICAL FRAMEWORK AND ORIGINAL CONTRIBUTION

This article constructs its analytical framework at the intersection of the resource-based view of the firm and platform ecosystem theory, extending both to accommodate the specific conditions of transition economies in the post-COVID period. The extension proposed here constitutes the theoretical contribution of the article: while the resource-based view and platform theory have each been applied to innovation and firm growth independently, their synthesis has not been systematically developed in the context of transition economy firms navigating the organizational-to-digital innovation transition.

From the resource-based perspective, the conditions for sustained competitive advantage are that resources and capabilities be valuable, rare, imperfectly imitable, and organizationally embedded — conditions articulated in the foundational work of Barney (1991) and subsequently applied extensively in the innovation management literature (Dogru, Gong, Peyrefitte, and Lai, 2025). Organizational innovation builds internal capabilities of this kind — management competence, coordination efficiency, adaptive capacity — but in platform-dominated markets, these capabilities are increasingly insufficient because they do not meet the imitability condition in the relevant competitive dimension. Management structures can be observed and replicated; data networks, platform ecosystems, and digital customer relationships accumulate in ways that are substantially more difficult to recreate once competitors have established them.

Platform ecosystem theory adds a network dimension that the resource-based view does not capture. Platforms generate value through interactions among multiple user groups — buyers, sellers, developers, service providers — and this value increases non-linearly as the network grows through positive feedback loops. First-mover advantages in platform markets are substantially stronger than in conventional product markets, because the accumulation of users, data, and complementary services creates structural barriers to competitive entry that do not depend on cost advantages or product differentiation alone.

The synthesis of these two frameworks generates the central theoretical proposition of this article: in markets where platform competition is structurally dominant, organizational innovation produces diminishing competitive returns because it builds capabilities that do not scale through network effects. Digital integration, by contrast, positions firms to participate in platform ecosystems and capture the compounding advantages they generate. For transition economy firms, this proposition has a specific institutional dimension: the resource and regulatory constraints that make organizational innovation relatively attractive also create structural barriers to the digital integration that would enable sustained expansion.

This framework also incorporates the ambidexterity perspective, which has identified the ability to simultaneously manage exploration and exploitation as a determinant of sustained firm performance (Alizadeh and Jetter, 2019; Martini, Neirotti, and Aloini, 2015). Applied to the transition economy digital transformation context, ambidexterity implies that the most successful firms will be those that use organizational innovation instrumentally — to build the management capacity and absorptive capacity needed to adopt and deploy digital technologies — rather than as a terminal growth strategy. Organizational restructuring is a means; digital integration is the current end.

The framework's original contribution relative to prior work is its identification of the threshold mechanism as the critical dynamic in transition economies. The threshold refers to the minimum level of digital integration below which network effects do not materialize and above which they compound. Firms that undertake organizational innovation without crossing the digital integration threshold remain structurally outside the network-effect dynamics that drive growth in platform markets. This threshold mechanism explains why organizational innovation and digital integration are not simply substitutable strategies that firms can choose between on the basis of resource availability: below the threshold, organizational innovation cannot compensate for absent digital integration.

4.0 RESEARCH DESIGN AND METHODOLOGY

This study adopts a structured comparative case analysis, in which the systematic contrast between three transition economies serves as the method for pursuing the four research objectives set out in Section 1. The design combines a structured review of the innovation and firm-growth literature with country-level secondary evidence for Azerbaijan, Ukraine, and Georgia over the 2020–2024 period, interpreted through the theoretical framework developed in Section 3. The unit of analysis is the firm situated within its national institutional environment: the three countries supply the institutional contexts within which firm-level digital integration and expansion are examined, while the analysis itself concerns firm behaviour rather than aggregate national performance.

What the design is intended to achieve, and what it is not, bears directly on how its evidence should be read. The study is objective-driven rather than comparative in the narrow sense: its purpose is not to rank the three economies against one another or to determine which has performed best, but to use the contrast between them — together with their common position relative to an advanced-economy benchmark — to establish and explain a structural relationship between digital integration and firm expansion. In this sense the comparison is an analytical instrument, not the object of the study.

The design is appropriate to both the objectives and the available evidence. The objectives are explanatory and mechanism-oriented: they ask why a pattern holds and through what channels it operates, rather than seeking to estimate the magnitude of a causal parameter. The secondary data available for the three economies — cross-country composite indices and firm-survey aggregates — are informative about levels and patterns but do not support the firm-level econometric identification that a causal-estimation strategy would require. A comparative case analysis, disciplined by an explicit theoretical framework and by consistent secondary indicators, is therefore the design that matches the questions asked to the evidence available. The analysis is correspondingly illustrative and theory-building rather than confirmatory: it identifies patterns consistent with the framework and specifies the mechanisms that link them, without claiming to test hypotheses in the statistical sense.

4.1 Literature Selection and Review Protocol

The theoretical and empirical literature underpinning the analysis was drawn primarily from Scopus-indexed publications on innovation management, firm growth, digital transformation, and transition economy competitiveness. Search terms included combinations of "organizational innovation," "digital transformation," "firm expansion," "platform business models," "transition economies," and "absorptive capacity." Priority was given to peer-reviewed articles published between 2010 and 2026, with earlier foundational works included where their theoretical significance warranted. Studies focusing specifically on SMEs in emerging and transition market contexts were given particular attention, given their relevance to the firm populations under analysis.

4.2 Secondary Data Sources

Country-level data on digital adoption, ICT investment, and firm-level platform usage were drawn from the following sources: the World Bank Enterprise Surveys (2020–2023), the International Telecommunication Union (ITU) Digital Development Reports, the European Bank for Reconstruction and Development (EBRD) Transition Reports, and the United Nations Conference on Trade and Development (UNCTAD) Digital Economy Reports. Where available, national statistical agency data from Azerbaijan's State Statistics Committee, Ukraine's State Statistics Service, and Georgia's National Statistics Office were used to supplement and cross-validate international estimates.

The ICT Development Index (IDI) scores presented in the final column of Table 1 are drawn directly from the ITU's Measuring Digital Development: Facts and Figures reports (ITU, 2022; ITU, 2023), which provide standardized composite scores for 193 countries using a consistent methodology covering ICT access, use, and skills sub-indices. The EU average is computed from Eurostat Digital Economy and Society Index (DESI) aggregate scores for the same reference years. All figures are reported on a 0–100 scale to enable direct comparison. Readers should note that the EU DESI and ITU IDI, while closely correlated at the country level, use partially different indicator weights; the comparison presented here is therefore indicative rather than strictly cardinal.

4.3 Case Selection and the Role of the Reference Benchmark

The three economies were selected purposively, on theoretical grounds, rather than as a random sample. Azerbaijan, Ukraine, and Georgia share a common post-Soviet institutional heritage — centralized organizational legacies, comparatively late exposure to market-based competition, and private sectors dominated by SMEs outside state-adjacent industries — which holds a set of background conditions broadly constant across the comparison. Against this shared heritage, the three cases display the variation the study requires: they differ substantially in digital adoption and, critically, in the extent to which their regulatory environments enable digital investment, with Georgia exhibiting the strongest regulatory alignment, Azerbaijan the weakest, and Ukraine an intermediate pre-conflict position. This combination of common background and contrasting digital and regulatory conditions is what allows the comparison to isolate the mechanisms identified in the theoretical framework.

The European Union average reported in Table 1 is a reference benchmark, not a fourth case. It is used solely to position the three transition economies against an advanced-economy standard and to convey the scale of the digital integration gap; EU firms are not themselves analysed, and no claim about them is advanced. The study therefore examines three analytical cases benchmarked against one external reference, rather than four economies under symmetric comparison.

The comparison across the three cases is organized along four analytical dimensions, each linked to the research objectives. The first is the level of organizational innovation activity before and during the study period, which establishes the baseline against which the sufficiency of organizational innovation is assessed (Objective 1). The second is the level of digital integration, proxied by e-commerce adoption, digital platform usage among SMEs, and ICT investment as a share of GDP (Objectives 1 and 2). The third is the regulatory and institutional context for digital investment, which underpins the analysis of contextual moderation (Objective 3). The fourth is the observable pattern of firm expansion outcomes, drawn from EBRD and World Bank firm-survey evidence, which connects digital integration to the outcome of interest (Objectives 1 and 2). These are analytical categories that structure the interpretation; they are distinct from the four indicators reported in Table 1, which are the specific measures used within the digital-integration dimension.

One feature of the case set calls for explicit methodological acknowledgment. Ukraine’s digital indicators are reported at a pre-2022 baseline, because the armed conflict that began in February 2022 fundamentally altered its operating environment; the Ukrainian case is therefore read for what it reveals about digital resilience under extreme disruption rather than as a continuously comparable series over the full period. This asymmetry is treated as informative rather than as a flaw, but it conditions the interpretation of the comparison and is revisited in the discussion of limitations (Section 6.5).

5.0 Comparative Analysis: Azerbaijan, Ukraine, and Georgia (2020–2024)

5.1 Comparative Digital Integration Indicators

Table 1 presents key comparative indicators of digital integration for the three study countries alongside the EU average as a reference benchmark. The data illustrate the substantial gap between the digital integration levels of these transition economies and the advanced economy standard, and reveal meaningful variation among the three countries themselves.

Table 1. Comparative Digital Integration Indicators, 2022–2023

Country	E-commerce adoption (% of firms, 2023)	Digital platform usage (% of SMEs)	ICT investment (% of GDP, 2022)	ITU IDI score (0–100)
Azerbaijan	18%	21%	2.1%	38/100
Ukraine (pre-2022)	34%	41%	3.4%	52/100
Georgia	29%	35%	2.9%	48/100

Country	E-commerce adoption (% of firms, 2023)	Digital platform usage (% of SMEs)	ICT investment (% of GDP, 2022)	ITU IDI score (0–100)
EU average (reference benchmark)	58%	64%	5.1%	72/100

Sources: World Bank Enterprise Surveys (2023); ITU Measuring Digital Development: Facts and Figures (2022, 2023); EBRD Transition Report (2023). ITU IDI = International Telecommunication Union ICT Development Index, composite score on 0–100 scale covering access, use, and skills sub-indices. EU average reflects DESI 2023 aggregate score, reported on equivalent scale for comparability.

The data in Table 1 reveal three distinct positions. Azerbaijan exhibits the lowest digital integration across all four indicators, with e-commerce adoption at 18 percent of firms and ICT investment at 2.1 percent of GDP — substantially below both its comparators and the EU average. Ukraine, measured at the pre-2022 baseline, occupied a notably more advanced position, with e-commerce adoption at 34 percent and an ITU IDI score of 52 out of 100. Georgia occupies an intermediate position, with stronger regulatory enabling than Azerbaijan and a more developed services sector with platform exposure than its Azerbaijani counterpart.

5.2 The Post-COVID Context

The COVID-19 pandemic created conditions under which the competitive consequences of differential digital integration became rapidly visible. The enforced shift to remote operations, digital commerce, and online service delivery in 2020 and 2021 imposed immediate costs on firms without digital infrastructure and provided immediate advantages to those with it. What the subsequent 2022–2024 period reveals is not simply a temporary disruption effect but a structural reorientation: firms that built digital capabilities during or before the pandemic did not revert to pre-pandemic organizational patterns; they consolidated digital positions that continued to generate competitive returns.

For transition economies, the pandemic thus served as an accelerator of a divergence that was already emerging. The EBRD's Transition Report for 2022–23, examining post-pandemic recovery patterns across the region, observed that firms with established digital capabilities demonstrated substantially greater operational resilience during the 2020–2021 period than those relying on conventional physical and organizational infrastructures (EBRD, 2022, pp. 60–78). This pattern is consistent with the threshold effect identified in the theoretical framework: firms below the digital integration threshold did not capture the network benefits of the pandemic-induced digital acceleration; those above it consolidated positions that continued to generate competitive returns in the subsequent recovery period.

5.3 Azerbaijan: Organizational Capacity Without Digital Infrastructure

Azerbaijan entered the post-COVID period with a well-documented track record of organizational reform in the public sector, exemplified by the ASAN service centres — a model of service delivery reorganization that attracted international attention. In the private sector, however, organizational innovation had not been accompanied by equivalent digital infrastructure investment. Large enterprises in the energy sector — the dominant sector of the Azerbaijani economy by output — had organizational structures optimized for capital-intensive extractive operations, not for platform-based service competition.

SMEs outside the energy sector, which account for a substantial portion of non-oil employment, faced the institutional constraints described in Section 2.3 in their most acute form. Access to financing for digital investment was limited, regulatory uncertainty around digital commerce and data governance reduced the incentive for platform investment, and the domestic market — while growing — was not large enough to generate the network effects that make platform investment self-sustaining at scale. The result, documented in World Bank Enterprise Survey data for 2023, was that Azerbaijani SMEs ranked among the lowest in the South Caucasus region on all four digital integration indicators shown in Table 1.

Research on innovation capacity and human capital in Azerbaijan has noted that the digital capability gap is inseparable from broader questions of knowledge transfer and institutional capacity building (Abdulhasanova, 2024). This observation is consistent with the framework developed in this article: without

the absorptive capacity that digital knowledge investment builds, Azerbaijani firms cannot effectively evaluate or deploy digital platform technologies even when they become financially accessible.

5.4 Ukraine: Digital Resilience and Its Limits

Ukraine's digital trajectory over the 2020–2024 period is the most complex of the three cases and requires careful treatment. Prior to February 2022, Ukraine had developed a significant technology sector — the IT services export sector alone contributed approximately 4.5 percent of GDP by 2021, according to the IT Ukraine Association — and had implemented the Diia digital government platform, which integrated over fifty public services into a mobile application and was recognized internationally as an example of effective digital government design.

The armed conflict that began in February 2022 imposed severe disruption on all sectors of the Ukrainian economy, with GDP contracting by approximately 30 percent in 2022 according to World Bank estimates. Within this context of extraordinary disruption, firms that had established digital infrastructure and cloud-based operations demonstrated meaningfully greater operational continuity than those dependent on physical assets and location-specific organizational arrangements. This is not presented here as evidence that conflict accelerates innovation in a positive sense — the human and economic consequences of the war are catastrophic and this article does not minimize them. Rather, the pattern illustrates a point about digital resilience: digital integration provides a form of operational continuity that conventional organizational structures, however well designed, cannot replicate when physical infrastructure is disrupted.

The Ukrainian experience also illustrates the role of international networks and platform partnerships in enabling firms to overcome resource and scale constraints (Freeman, Edwards, and Schroder, 2006). Technology firms that had established international client relationships and integrated into global digital platforms before 2022 maintained revenue streams and attracted additional international business during the conflict period, while firms whose competitive advantages were primarily based on physical presence and domestic organizational networks faced more severe disruption.

5.5 Georgia: Regulatory Enabling and Digital Platform Uptake

Georgia's post-COVID trajectory reflects the moderating role of regulatory environment most clearly. The country's sustained commitment to business-friendly regulatory reform — including streamlined business registration, reduced compliance burdens, and relatively transparent legal frameworks for digital commerce — has created enabling conditions in which digital investment translates more readily into firm performance than in neighboring economies with less predictable regulatory contexts. The World Bank's Doing Business assessments consistently ranked Georgia among the top-performing reformers in the region across the 2010–2020 decade.

Georgian firms in services and trade sectors show higher platform adoption rates than their Azerbaijani counterparts and, in sectors unaffected by the conflict, comparable to Ukrainian levels (Table 1). The financial services, tourism, and retail sectors in Georgia saw meaningful platform integration during the 2020–2024 period, driven partly by pandemic-era necessity and partly by the regulatory environment that reduced the institutional risks of digital investment. Research has established that regulatory forces, when aligned with innovation objectives, enhance absorptive capacity and improve innovation performance in emerging markets (Adomako and Tran, 2026) — a relationship that Georgia's trajectory illustrates empirically.

The role of ESG-aligned financing in supporting digital investment also warrants attention in the Georgian case. Georgian firms in internationally exposed sectors have shown greater alignment with environmental, social, and governance standards than their regional counterparts, partly because international market access has required it. Research has established that ESG commitment alleviates financing constraints and enhances human capital in ways that support continuous innovation (Ren and Cheng, 2024). In Georgia's case, ESG alignment has facilitated access to international development finance — including from the EBRD and IFC — that has supported digital infrastructure investment in ways that domestic capital markets alone could not have provided. This mechanism is specific to the Georgian institutional context and should not be generalized uncritically to Azerbaijan or Ukraine without accounting for the differences in international financial exposure and ESG reporting capacity.

5.6 Cross-Country Synthesis: The Digital Integration Gap as a Structural Feature

Taken together, the three cases reveal a consistent structural pattern. In all three economies, firms that relied primarily on organizational innovation as their growth strategy found themselves at an increasing competitive disadvantage relative to digitally integrated competitors during the 2020–2024 period. This disadvantage was not primarily a matter of managerial quality or organizational sophistication — the reform decade of the 2010s had produced genuine improvements on these dimensions across all three economies. The gap was structural and digital.

The cross-country variation — with Ukraine most digitally advanced, Georgia intermediate, and Azerbaijan least advanced — is systematically associated with variation in regulatory enabling environments and with variation in firm expansion outcomes documented in EBRD survey data. This association is consistent with the theoretical framework developed in Section 3, which identifies regulatory alignment, absorptive capacity, and digital threshold crossing as the key mechanisms linking digital integration to firm expansion in transition economy contexts.

6.0 DISCUSSION

6.1 Digital Transformation as Instrumental Redirection of Organizational Innovation

The comparative evidence from Azerbaijan, Ukraine, and Georgia supports the central argument of this article while also revealing the institutional complexity of the digital integration challenge in transition economies. Digital transformation is not a single investment decision or a discrete organizational event; it is an ongoing reorientation of firm capabilities, market strategies, and organizational structures toward platform-based architectures. This reorientation requires not the abandonment of organizational innovation but its instrumental redirection.

The ambidexterity literature provides a useful analytical lens here. Sustained firm performance is associated not with the choice between exploration and exploitation but with managing both simultaneously through differentiated organizational structures (Martini, Neirotti, and Aloini, 2015; Alizadeh and Jetter, 2019). In the digital transformation context, this implies that organizational innovation retains strategic value — but as an enabler of digital adoption rather than as a terminal growth strategy. Firms that restructure management to build digital absorptive capacity, rather than restructuring as an end in itself, are better positioned to cross the digital integration threshold and capture the network-effect dynamics that drive expansion in platform markets.

6.2 Threshold Effects and Resource Allocation Implications

The threshold mechanism identified in the theoretical framework has practical implications for resource allocation in resource-constrained environments. The evidence on non-linear returns to innovation investment (Yeh et al., 2010) suggests that partial digital adoption — spreading limited resources across multiple innovation types without reaching the integration threshold in any of them — is likely to produce worse outcomes than concentrated investment in digital integration even if this means temporarily reducing resources allocated to organizational innovation. This is a counterintuitive implication that runs against the conventional wisdom of balanced innovation portfolios, and it deserves explicit attention in both managerial and policy discussions.

6.3 Digital Platforms as Open Innovation Mechanisms

The findings also have implications for the understanding of open innovation in transition economy contexts. Research has established that firms combining internal development with external knowledge acquisition achieve superior innovation performance (Li and Gao, 2023; Lopes-Bento and Simeth, 2024). Digital platforms are, among other things, mechanisms for external knowledge acquisition — they provide access to market intelligence, customer feedback, complementary services, and technology partners that would otherwise be inaccessible. For transition economy firms with limited internal R&D capacity, engaging with platform ecosystems is a form of open innovation that is financially accessible in ways that conventional R&D partnerships may not be.

6.4 Regulatory Moderation and the Non-Uniformity of the Digital Imperative

The moderating role of the regulatory environment — most clearly illustrated by the Georgian case — suggests that the digital integration imperative operates differently across the three economies and should not be treated as a uniform prescription. Policy interventions that reduce regulatory uncertainty around digital commerce, data governance, and digital payment infrastructure create enabling conditions that multiply the returns to firm-level digital investment. Conversely, regulatory environments that increase the

institutional risks of digital investment — through unpredictable enforcement, opaque data governance frameworks, or underdeveloped digital dispute resolution mechanisms — effectively raise the cost of crossing the digital integration threshold and leave firms in organizational innovation strategies longer than competitive dynamics warrant.

6.5 Limitations of the Study

This study carries several limitations that must be acknowledged explicitly. First, the comparative conceptual design, while appropriate for the purpose of establishing and explaining a cross-country pattern, does not permit causal identification of the digital integration–firm expansion relationship. The evidence presented is consistent with the theoretical framework but cannot rule out alternative explanations — including the possibility that firms with better pre-existing growth prospects are more likely to invest in digital integration, generating a reverse causality problem that only firm-level panel data with appropriate instrumentation could address.

Second, the secondary data used in Table 1 carry their own measurement limitations. World Bank Enterprise Survey figures are self-reported and subject to response bias; ITU IDI scores, while methodologically consistent, aggregate heterogeneous country-level indicators into composite scores that may obscure sector-level variation. The firm-level heterogeneity within each country is substantial — digitally advanced firms coexist with conventionally organized firms in all three economies — and country-level averages do not capture this dispersion.

Third, the three-country selection, while theoretically motivated, is not a random sample of transition economies. Azerbaijan, Ukraine, and Georgia share a post-Soviet institutional heritage but differ in important respects — geographic position, energy endowment, conflict exposure, and integration into European regulatory frameworks — that may limit the generalizability of the findings to other transition economy contexts, including Central Asian economies or the Western Balkans.

Fourth, the study period of 2020–2024 includes the extraordinary disruption of the COVID-19 pandemic and, in Ukraine's case, armed conflict. Both events accelerated digital adoption in ways that may not persist in the medium term, and the observed patterns should be interpreted with this temporal specificity in mind. The structural argument advanced in this article — that digital integration has become a prerequisite for firm expansion — is intended as a durable claim about the competitive landscape rather than a claim specific to crisis conditions, but establishing this durability empirically requires longitudinal evidence beyond the current study period.

7.0 CONCLUSION AND POLICY RECOMMENDATIONS

This article has argued that organizational innovation, while a necessary foundation for firm competitiveness, has become insufficient as a standalone expansion strategy in transition economies navigating the post-COVID competitive environment. The comparative evidence from Azerbaijan, Ukraine, and Georgia over the 2020–2024 period consistently identifies digital integration — the adoption of platform-based business models and digitally networked operational systems — as a structural prerequisite for sustained firm expansion. The mechanisms through which this dynamic operates — threshold effects in digital investment, network externalities in platform markets, and the absorptive capacity developed through prior digital exposure — have been identified and situated within a theoretical framework that synthesizes the resource-based view and platform ecosystem theory.

The article's contribution to the existing literature is threefold. First, it provides a theoretically grounded account of why organizational innovation produces diminishing competitive returns in platform-dominated markets — not simply as an empirical observation but as a consequence of the structural difference between organizational capabilities and platform network effects. Second, it situates this dynamic within the specific institutional context of transition economies, where resource constraints, regulatory uncertainty, and limited digital absorptive capacity interact to make the digital integration threshold both more consequential and more difficult to cross. Third, it uses a three-country comparison — exploiting meaningful variation in regulatory environments and digital adoption levels — to illustrate the framework and identify the contextual conditions under which digital integration most effectively translates into firm expansion.

7.1 Managerial and Policy Implications

For firms operating in transition economies, several strategic implications follow from the analysis. Investment allocation decisions should prioritize digital infrastructure and platform connectivity over

additional rounds of organizational restructuring where organizational capacity is already adequate. The threshold dynamics identified in the framework suggest that concentrated digital investment is likely to produce better returns than resources spread thinly across multiple innovation types that do not individually reach integration thresholds. Firms should actively engage with platform ecosystems as mechanisms for external knowledge acquisition — treating digital integration as a form of open innovation that supplements limited internal R&D capacity rather than as a purely operational upgrade.

For policymakers in Azerbaijan, Ukraine, and Georgia, the findings identify several priority areas. Regulatory frameworks that reduce institutional uncertainty around digital commerce, data governance, and digital payment systems create enabling conditions that multiply the returns to firm-level digital investment — the Georgian case illustrates this mechanism most clearly. Support programs for SME digitalization — including access to shared platform infrastructure, structured digital literacy investment, and financing instruments specifically designed for digital transformation — address the most significant structural gap in private sector competitiveness. International cooperation mechanisms that facilitate knowledge transfer and platform integration support the external knowledge acquisition that transition economy firms cannot reliably generate from domestic markets alone.

7.2 Directions for Future Research

Future research should pursue several directions opened by the limitations of this study. Firm-level panel data from the three economies, covering the 2015–2024 period with appropriate control variables and instrumental variables for digital investment, would enable causal identification of the digital integration–expansion relationship and estimation of the threshold level at which digital investment begins to produce network-effect returns. Sector-level disaggregation — comparing digitally intensive service sectors with capital-intensive manufacturing and extractive sectors — would clarify the scope conditions of the framework and establish whether the threshold mechanism operates uniformly across industries or varies with sector-specific technological characteristics.

The role of top management characteristics, including CEO age, prior digital experience, and board composition, in moderating digital adoption decisions in transition economy firms warrants systematic empirical attention (Al-Dubai, 2025; Yue, 2024). Research has established that human capital and top management traits are significant moderators of R&D and innovation outcomes; extending this line of inquiry to the digital transformation context in transition economies would yield practically valuable insights for both firm governance and policy design. Finally, the interaction between ESG practices and digital investment capacity merits closer examination in this regional context, given the potential for sustainability-linked international financing instruments to support digital transformation in economies where domestic capital markets remain underdeveloped.

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