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Digital public governance and enterprise resilience in china financial transmission resource dependence and uneven policy benefits

Ahmed Hilal[a]

[a] Faculty of Legal, Economic and Social Sciences, Ibn Zohr University, Agadir, Morocco.

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ABSTRACT

Digital public administration may strengthen firms' capacity to withstand disruption, but access to electronic services does not ensure that enterprises can convert institutional support into operational resilience. This study examines that relationship using Chinese A-share listed companies observed from 2014 to 2023. Participation in the National Pilot Policy of Information Benefiting the People, with 2018 treated as the intervention date, provides the policy setting for a difference-in-differences analysis. Enterprise resilience combines revenue growth, stock-return volatility, and profit recovery, while city-level digital finance represents a potential transmission channel. The reported estimates associate digital governance with stronger average resilience across baseline, alternative-outcome, matching, and instrumental-variable specifications. Digital finance follows a pattern consistent with partial mediation: governance predicts financial development, and the governance coefficient declines after finance enters the resilience equation. Negative interactions with firm size and operating cash flow suggest greater marginal benefits among enterprises with fewer internal resources. These average relationships conceal substantial variation. Regional estimates are positive but differ in magnitude; technology-intensive industries show a positive response, whereas capital-intensive and labor-intensive industries show negative responses. Quantile estimates also shift from a negative coefficient at the lower quartile to increasingly positive coefficients higher in the conditional resilience distribution. The findings favor administrative and financial reforms that account for firms' adaptation capacity rather than assuming uniform benefits. Interpretation remains conditional on the policy comparison, the indirect measurement of resilience, and unresolved inconsistencies in published scales and reporting. Digital governance appears most useful when accessible public services, financial intermediation, and firms' capabilities are aligned; where adaptation burdens exceed usable support, the same reforms may generate less favorable outcomes.

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Corresponding Author:

Ahmed Hilal
Faculty of Legal, Economic and Social Sciences, Ibn Zohr University, Agadir, Morocco.
Email: hilalhilal@gmail.com

1. INTRODUCTION

An enterprise can survive an adverse event without possessing the capabilities needed to adapt to the next one. It may preserve current operations by postponing investment, exhausting liquidity, or relying on temporary external assistance. Resilience involves a broader capacity to absorb pressure, adjust decisions, and maintain a viable development path. That capacity depends on internal resources, but it is also shaped by the institutions through which firms obtain information,

finance, and public support. Changes in the organization of government can therefore affect enterprise resilience even when they do not directly alter production technology or market demand.

Digital governance changes several of these external relationships. Electronic services can reduce the effort required to apply for assistance, clarify administrative obligations, and improve communication between public authorities and businesses. Shared data may allow agencies to coordinate decisions and financial institutions to assess firms more effectively. Digital monitoring can also make emerging risks visible sooner. These possibilities provide a reason to expect resilience benefits, although the presence of a digital platform is not equivalent to useful service delivery. Firms must be able to access, understand, and act on the information and resources offered.

The empirical investigation considered here uses Chinese A-share listed companies over 2014–2023 and the National Pilot Policy of Information Benefiting the People as its policy setting. The underlying study, published by Shen, reports a positive average association between policy exposure and enterprise resilience, a partial financial transmission pattern, and substantial differences across firms and economic contexts [1]. The present manuscript reorganizes those arguments and retains the published numerical evidence. It does not introduce a new dataset or independent estimations, and the distinction between reported findings and proposed explanations is maintained throughout.

China offers a relevant setting because digital administrative reform has developed alongside major changes in corporate financing and organizational practice. Firms differ considerably in their ability to make use of online procedures and data-based services. A well-resourced enterprise may have dedicated personnel to manage applications, financial reporting, and regulatory communication. A smaller enterprise may depend on a few managers whose attention is already stretched by daily operations. The same reform can consequently reduce burdens for one organization while requiring costly adjustment from another. These differences are central to evaluating public digitalization as a resilience policy.

Earlier research connects government digital governance with enterprise outcomes such as green productivity [2]. Research on supply-chain finance similarly treats resilience as an outcome of resource integration and organizational governance [3]. These perspectives suggest that the external institutional environment and internal enterprise capabilities should be considered together. Administrative improvements may create opportunities, but their economic value depends on the mechanisms through which support reaches firms. A policy that improves information availability may have limited effect if enterprises cannot finance the operational changes that the information recommends.

Digital finance is a plausible connecting mechanism. Publicly held information about compliance, taxation, and business activity can supplement the information available to financial providers. More effective assessment may help institutions serve firms that otherwise lack conventional collateral or established banking relationships. Digital delivery can also reduce geographical barriers and the time needed to obtain financial services. Yet these benefits remain conditional on the quality of data, the design of credit products, and the willingness of institutions to lend during periods of uncertainty. Financial access can support resilience, but unsuitable borrowing can create additional vulnerability.

The distinction between resource scarcity and adaptation capacity complicates the expected distribution of benefits. Smaller firms and enterprises with lower operating cash flow may need outside support more urgently and therefore receive larger marginal gains from accessible services. However, firms with very low resilience may lack the basic organizational capabilities needed to comply with new procedures. A digital reform can thus be valuable to resource-constrained firms on average while remaining difficult for the most vulnerable firms to use. This possibility provides a coherent way to examine the study's negative moderation and lower-quantile findings together.

The empirical design addresses these questions through several related models. A difference-in-differences specification relates resilience to pilot-city exposure after 2018. Additional regressions examine digital finance as a mediator and firm size and cash flow as moderators. Robustness exercises consider an alternative cash-based resilience measure, additional fixed effects, entropy balancing, expanded controls, and instrumental-variable estimation. Regional and industry comparisons, quantile regressions, and regional financial-transmission models then assess whether the overall relationship conceals important differences in its direction or strength.

The results indicate that digital governance should not be understood as a uniformly beneficial intervention. Average coefficients are positive, and the financial regressions are consistent with a mediating role. However, the reported industry estimates are negative in capital-intensive and labor-intensive activities, and the lower-quartile coefficient is also negative. Such findings matter because an evaluation based only on the mean could overlook firms whose implementation costs exceed the support they can use. They also place limits on the claim that greater digitalization necessarily improves organizational adaptability.

The contribution of the analysis lies in connecting institutional reform, financial transmission, and heterogeneous enterprise responses within one framework. Its policy relevance rests on the need to match public services with the constraints firms actually face. Its evidential limits are equally important. The published article contains differences in coefficient scales, significance conventions, and subgroup sample presentation that cannot be resolved from the available text alone. Preserving those values while qualifying their interpretation offers a more reliable basis for discussion than imposing an undocumented reconciliation. The resulting argument is one of conditional institutional support, rather than technological improvement operating independently of context.

2. LITERATURE REVIEW

Enterprise resilience can be approached as both continuity and adaptation. Continuity concerns the ability to sustain essential operations when resources, demand, or supply relationships become unstable. Adaptation concerns the reorganization of those activities as conditions change. Neither dimension is fully captured by a single financial outcome. A firm can maintain sales while becoming more exposed to debt, or restore profits after a disruption while reducing the

investments needed for future competitiveness. A multidimensional perspective therefore provides a stronger conceptual foundation, even though the selection and weighting of indicators inevitably influence empirical conclusions.

Research on supply-chain finance and resilience emphasizes the role of resource integration and organizational governance [3]. This is relevant because firms rarely respond to disruption in isolation. Their decisions depend on suppliers, customers, lenders, and public institutions. Financial sustainability provides a related perspective on enterprise digital transformation and resilience [4]. Both approaches suggest that technology is economically useful when it supports the coordination of resources and decisions. They do not imply that the acquisition of digital tools alone establishes an organization's ability to withstand shocks.

Government digital governance enters this framework through the external environment. Public authorities can influence the predictability of procedures, the accessibility of policy information, and the speed with which support reaches eligible enterprises. Research linking government digital governance with corporate investment efficiency illustrates the relevance of administrative arrangements to resource use [5]. If firms spend less time navigating fragmented procedures, they may preserve managerial attention and liquidity for operational adjustment. The expected resilience effect is therefore partly institutional: it concerns the conditions under which private organizations make and implement decisions.

Information asymmetry provides one way to explain this relationship. Firms may not know which support programs are available or how eligibility is assessed, while governments may lack timely information about the pressures enterprises face. Digital communication can narrow those gaps through standardized applications, shared records, and more targeted information. The benefit depends on accuracy and usability. A larger volume of announcements may increase confusion if requirements are inconsistent, and automated eligibility rules can exclude unusual but legitimate cases. Digital administration can reduce informational frictions while also creating new forms of administrative complexity.

Resource dependence offers a complementary explanation. Enterprises rely on external actors for finance, licenses, infrastructure, and access to support. When those resources are difficult to obtain, firms may devote substantial effort to securing them. More predictable public services can reduce that dependence on informal relationships and repeated negotiation. Research on government governance, executive networks, and investment efficiency is relevant to this wider institutional setting [6]. The implication is not that digital systems eliminate relationships, but that clearer procedures can change the cost and reliability of obtaining resources through them.

The original study distinguishes timely policy support from anticipatory risk management [1]. The first concerns tax relief, subsidies, and other resources that help firms maintain operations. The second concerns earlier recognition of changes in demand, supply conditions, or financial stress. These mechanisms are related but require different enterprise capabilities. A firm needs administrative competence to claim assistance and organizational flexibility to act on a warning. Information that arrives early has little operational value if production commitments cannot be changed or if a firm cannot finance the recommended adjustment.

Digital finance may connect these institutional functions to usable resources. Duan and Zhang examine digital finance and allocation efficiency [7], while Zhao, Shi, and Tao investigate its relationship with urban economic resilience [8]. Such research supports examining finance as part of the environment in which enterprises adapt. Digital financial services can reduce the cost of screening, improve payment systems, and extend service coverage. However, aggregate financial development does not reveal whether an individual firm receives suitable credit or uses it productively. A city-level index is therefore an informative contextual measure rather than a direct observation of enterprise borrowing.

The informational connection between government and finance is particularly relevant. Tax records, compliance histories, and verified registration information may help providers assess borrowers whose private financial records are incomplete. Combining these sources can improve the assessment of business continuity and repayment capacity. Yet more data do not automatically produce better credit decisions. Historical records may poorly represent firms facing unusual shocks, and automated models may reproduce existing exclusions. The resilience argument requires attention to how information is interpreted and how products are structured, not simply whether information is shared.

Institutional support can also influence where financial services expand. Administrative coordination may make it easier to reach enterprises outside traditional banking networks, while public priorities can encourage products designed around liquidity or investment needs. Research on digital finance and bank credit provides a related basis for considering these adjustments [9]. The relevant empirical question is whether governance-induced financial development explains part of the resilience response. Observing that finance and resilience are positively related is insufficient by itself because both may respond to underlying economic development or government capacity.

Firm size creates competing expectations. Larger enterprises possess more internal capital, managerial specialization, and established financial relationships, potentially reducing their dependence on marginal improvements in public services. Smaller enterprises may obtain greater benefits from lower application costs or improved access to information. Conversely, larger firms may have stronger capabilities for adopting new systems and turning support into strategic investment. A negative size interaction would support the resource-dependence interpretation on average, but it would not establish that every small enterprise benefits or that every large enterprise is organizationally inflexible.

Operating cash flow presents a similar ambiguity. Firms with stronger internally generated liquidity can maintain payments and fund adjustment without immediate external support. Lower-cash-flow firms may therefore value timely public services and financial access more highly. Nevertheless, weak cash flow can arise from different circumstances, including rapid investment, declining demand, or poor collection practices. A simple interaction cannot distinguish these situations. The cash-flow ratio captures an important dimension of internal financing capacity, but its coefficient should not be treated as a complete measure of financial vulnerability.

Industry structure may determine whether digital public services address the binding constraint. Technology-intensive enterprises are often able to use data sharing, remote coordination, and electronically delivered support within existing operational systems. Capital-intensive firms may remain constrained by fixed facilities, long production cycles, and large financing commitments. Labor-intensive firms may depend more immediately on workforce availability and physical customer interaction. Digital services can support all three groups, but they may be insufficient when the main obstacle lies outside the administrative processes being reformed. Research on industrial-chain resilience and digital finance reinforces the importance of sector-specific complementarities [10].

Regional development introduces another set of complementary conditions. A public digital platform operates within a wider infrastructure of telecommunications, financial institutions, professional skills, and business networks. Research on artificial intelligence and supply-chain resilience emphasizes the relevance of regional technological development [11]. Work on smart-city pilots and resource management also illustrates why the institutional consequences of digital reform may depend on local implementation [12]. These perspectives suggest that a common national policy can generate different enterprise responses without requiring differences in its formal objectives.

The broader public-service literature cautions against equating a digital strategy with an effective relationship between authorities and users. Francis and Corrêa consider government strategies that affect public services [13]. Research on resident interaction with digital government service spaces examines another dimension of how systems are encountered in practice [14]. Chowdhury's study of local government digital centers similarly concerns the relationship between portals and engagement [15]. These contributions are relevant to the design of accessible services, although they do not independently establish enterprise resilience effects. Their value here is to clarify that practical usability mediates the meaning of technological provision.

Research on digital finance in environmental and structural settings broadens the contextual argument without resolving the enterprise mechanism. Studies of household carbon outcomes and provincial energy efficiency show that digital financial development has been examined across distinct units and policy domains [16], [17]. Those results cannot be transferred directly to listed firms. They instead reinforce the need to specify the level of analysis and the mechanism through which an aggregate financial environment might affect an organizational outcome. Treating these relationships carefully avoids turning a general digital-economy association into a universal causal explanation.

The literature therefore motivates three connected propositions. Digital governance may improve resilience through more predictable institutions and more timely support. Financial development may transmit part of that relationship by changing firms' access to usable resources. The strength and even direction of the response may depend on internal liquidity, organizational resources, sectoral technology, regional infrastructure, and initial adaptability. These propositions can coexist: greater need can increase the marginal value of support, while insufficient capability can prevent the most vulnerable firms from using it. The empirical analysis is designed to examine that tension rather than presume a uniform outcome.

3. METHODS

The empirical setting consists of Chinese A-share listed enterprises observed from 2014 through 2023. The original study uses the CSMAR database for enterprise financial information and conventional controls. Financial and insurance companies, enterprises designated for special treatment or abnormal trading, firms whose property rights change during the study period, and observations with essential information missing are excluded. Continuous variables receive one-percent tail treatment as described in the source. The article does not provide a complete exclusion log or every implementation detail of that treatment, so the retained sample and published statistics are reproduced rather than reconstructed.

The principal policy variable represents exposure to the National Pilot Policy of Information Benefiting the People. Treatment status equals one for firms located in designated pilot cities and zero otherwise. The post-policy indicator equals one from 2018 onward. Their interaction is denoted DID. This coding supplies a common policy date, rather than the staggered entry used in some other digital governance research. The treatment variable represents a specific policy exposure; it is not a continuous index of the full quality or intensity of city digital governance.

Enterprise resilience is an entropy-weighted composite of three dimensions, following the source's use of the resilience literature [3]. Growth is represented by cumulative operating-income growth over three years. Short-term volatility is represented by the standard deviation of monthly stock returns within a year. Recovery is represented by year-on-year net-profit growth. The conceptual direction is favorable revenue and profit growth combined with lower volatility. Exact replication requires the normalization rules, the orientation of each component, the handling of unusual growth rates, and the estimated entropy weights. Those details are not all reported in the article's main text.

Each component captures a related but incomplete aspect of resilience. Revenue growth can reflect expansion without showing how a firm responds to a particular disruption. Stock volatility contains market-wide information and investor expectations as well as enterprise stability. Profit growth may be influenced by a low comparison base or nonrecurring items. The composite broadens coverage but does not eliminate these measurement problems. Its use is most appropriately understood as an indicator of resilience-related performance rather than a direct record of absorption and recovery after a uniformly observed shock.

The mediator is the Peking University Digital Inclusive Finance Index, produced by the university's digital finance research center and Ant Financial Services Group. The index covers dimensions of service breadth, usage depth, and digitalization. City codes obtained from firm registration information match city-year financial development to enterprise-year observations. A common city index therefore appears for multiple enterprises in the same location and year. This

matching allows analysis of the external financial environment, but it does not establish whether a particular enterprise receives or uses digital finance.

Firm size is the natural logarithm of total assets. Cash flow is operating net cash flow divided by total assets. These variables represent internal resource capacity and liquidity, respectively. Conventional controls include leverage, return on assets, return on equity, Tobin's Q, and listing age. Leverage divides liabilities by assets; return on assets and return on equity relate net profit to assets and shareholders' equity. Tobin's Q is described as market value relative to assets. Listing age is the natural logarithm of the current year minus the listing year plus one. These definitions follow the underlying investigation [1].

The baseline model relates resilience to DID, the controls, enterprise effects, and year effects. In compact notation, Resilience_it = a + bDID_it + cX_it + f_i + g_t + e_it. The policy coefficient b compares changes associated with pilot-city exposure after the common intervention date, conditional on the specified covariates and effects. A causal interpretation requires parallel untreated trends, no relevant anticipation, and no omitted changes systematically aligned with treatment. Enterprise and year effects absorb persistent firm differences and common annual disturbances, but they cannot remove every time-varying city or industry influence.

The finance analysis uses a sequence of equations. Digital finance is first regressed on DID and the controls. Resilience is then regressed on DID, digital finance, and the same controls. A positive governance–finance coefficient, a positive finance coefficient in the resilience model, and a smaller remaining governance coefficient are interpreted by the original study as partial mediation. This sequence describes a pattern consistent with transmission. Identifying a causal indirect effect would additionally require assumptions about mediator–outcome confounding, policy-induced confounders, timing, and common support. The article does not report a separate confidence interval for the indirect effect.

Moderation models add either size or cash flow together with its interaction with DID. The conditional treatment response is b_DID + b_interaction W. A negative interaction implies that the estimated response declines with the moderator within the imposed linear specification. The policy main coefficient refers to a moderator value of zero, which is especially important for logged size because zero is outside the reported size range. The source's explanatory text mistakenly refers to innovation and a finance interaction when defining this model. The reported size and cash-flow equations provide the basis for the specification described here.

Several robustness exercises assess the stability of the reported direction. An alternative resilience outcome measures the change in cash holdings around a crisis, drawing on the source's use of the regional technology and resilience literature [11]. The relevant crisis definition and precise calculation window are not fully specified in the available text. Additional exercises introduce a firm-by-city fixed effect and use entropy balancing to align observed covariate distributions between treatment and comparison observations. These procedures address particular forms of heterogeneity and observable selection, but they do not establish that all unobserved selection has been removed.

Dynamic GMM estimates add lagged resilience and report first-order and second-order residual-correlation tests together with a Sargan statistic. The source does not disclose the full instrument matrix, lag restrictions, instrument count, or the exact GMM variant. The additional fixed-effect and matching models also report coefficients on a scale different from the baseline tables. Rather than impose an assumed conversion, the present manuscript retains each published value and treats cross-model magnitude comparisons cautiously. Differences in direction and reported precision remain interpretable within the stated reporting limits.

Endogeneity exercises add the independent-director proportion and management-expense ratio, then use lagged city Internet penetration as an instrument for DID in two-stage least squares. The relevance argument is that prior Internet adoption predicts the conditions for digital governance. Exclusion requires the lagged penetration rate to affect enterprise resilience only through the modeled governance exposure, conditional on controls. That requirement is stronger than temporal precedence. Private digital adoption, market access, and local skills could connect Internet penetration to resilience through other paths. The instrument therefore provides conditional evidence rather than an automatic solution to endogeneity.

The event study reports pre-policy and post-policy coefficients relative to an omitted period, and a placebo exercise randomly assigns policy exposure. These diagnostics are interpreted as checks on the observed comparison, not proof of an unobservable counterfactual. Heterogeneity analysis considers eastern, western, and central locations; technology-, capital-, and labor-intensive industries; and conditional resilience quantiles. A further sequence examines regional financial transmission. The source reports the full 30,513-observation count in every regional and industry column, leaving the exact split-sample or interacted implementation unclear. All counts are retained, and no unreported subgroup sizes are supplied.

4. RESULTS

The empirical evidence is organized into five tables that consolidate the twelve tables in the original article. The consolidation retains the descriptive statistics, all reported correlation entries, regression coefficients, parenthetical statistics, observation counts, and available diagnostics. Repetition of a baseline model is avoided where the same values appear in more than one source table. No new estimates are introduced. Differences in outcome scales and significance notation are preserved and identified because they affect comparisons across specifications.

Table 1 combines the descriptive distribution with the lower triangle of the correlation matrix. The numbered variable order makes each correlation vector identifiable without reproducing the symmetric half of the matrix. This arrangement allows the resilience relationships to be assessed alongside the distribution and availability of the variables on which subsequent models depend.

Table 1. Descriptive statistics and lower triangle correlations

Variable and position	N	Mean	SD	Minimum	Maximum	Correlations with preceding positions in order
Resilience, 1	31,263	0.373	0.174	0.249	0.945	Diagonal equals 1.000
DID, 2	31,263	0.545	0.498	0.000	1.000	0.102***
Digital finance, 3	31,263	280.8	55.78	105.6	373.2	0.092***; 0.594***
Size, 4	31,263	22.27	1.524	15.58	31.43	−0.044***; −0.025***; −0.059***
Cash flow, 5	31,262	0.043	0.105	−10.22	2.222	−0.010*; 0.008; 0.028***; 0.071***
Leverage, 6	31,263	0.436	0.22	0.0545	0.975	−0.039***; −0.033***; −0.074***; 0.477***; −0.123***
Return on assets, 7	31,262	0.036	0.073	−0.291	0.228	−0.012**; 0.032***; 0.079***; 0.008; 0.261***; −0.393***
Return on equity, 8	31,025	0.052	0.163	−0.912	0.377	−0.017***; 0.021***; 0.052***; 0.109***; 0.278***; −0.257***; 0.873***
Listing age, 9	31,263	2.098	0.926	0.000	3.401	−0.051***; −0.134***; −0.243***; 0.341***; −0.027***; 0.366***; −0.261***; −0.172***
Tobin’s Q, 10	30,513	2.024	1.363	0.839	9.022	0.011*; 0.009; 0.017***; −0.403***; 0.001; −0.194***; 0.072***; 0.004; 0.020***

*Note: Every correlation diagonal equals 1.000. Correlation stars follow the source’s thresholds of one, five, and ten percent for ***, **, and *, respectively. Descriptive precision follows the table; the accompanying source prose additionally gives the cash-flow mean as 0.0429, return on assets as 0.0357, and return on equity as 0.0524.*

The resilience mean is 0.373, with a standard deviation of 0.174 and a reported range from 0.249 to 0.945. Digital finance varies substantially across observations, with a mean of 280.8. DID has a positive correlation of 0.102 with resilience, while the finance–resilience correlation is 0.092. These associations are consistent with the direction of the subsequent average estimates but do not establish policy or mediation effects. The 0.873 correlation between the two profitability measures is notable. Pairwise correlations alone cannot exclude collinearity concerns, especially when closely related financial controls appear together.

Table 2 presents the baseline and alternative-outcome models together with the additional fixed-effect and entropy-balancing results. This makes the stability of the positive policy sign visible while retaining the scale differences between model families. The GMM columns include the available residual-correlation and instrument diagnostics.

Table 2. Baseline resilience estimates and robustness specifications

Regressor or statistic	B1	B2	B3	A1	A2	A3	H	E
DID	1.8063*** (9.1615)	1.8782*** (9.3818)	0.8759* (1.7910)	3.0605*** (31.4207)	3.0795*** (31.0807)	3.6520*** (7.1772)	0.0194*** (9.5984)	0.0344*** (17.0613)
Leverage	—	−0.1589 (−0.2989)	45.7544* (2.1395)	—	−0.1967 (−0.7472)	−86.1117*** (−3.6183)	−0.0023 (−0.4234)	−0.0295** (−5.7102)
Return on assets	—	0.1876 (0.1781)	37.0206 (1.4690)	—	−0.0841 (−0.1614)	2.7780 (0.1023)	0.0029 (0.2765)	−0.0781*** (−5.9337)
Return on equity	—	0.0592 (1.0351)	−0.4926 (−0.3079)	—	0.0015 (0.0538)	−13.2503* (−1.6765)	0.0006 (1.0529)	0.0010 (1.2857)
Listing age	—	0.4048*** (2.8225)	−3.1295 (−0.7168)	—	−0.0102 (−0.1438)	10.6177** (6.2319)	0.0044*** (3.0621)	−0.0057*** (−4.8657)
Tobin's Q	—	0.0538* (1.9406)	−0.5889 (−0.4290)	—	−0.0210 (−1.5323)	−1.4946 (−0.6828)	0.0006** (2.0349)	0.0005 (1.4540)
Lagged resilience	—	—	0.0915 (0.6752)	—	—	0.2662*** (7.7474)	—	—
Constant	36.3705*** (291.1111)	35.4402*** (92.1902)	—	25.6873*** (416.1586)	25.8329*** (135.7760)	36.4051*** (3.0067)	0.3536*** (91.4628)	0.3813*** (109.5171)
AR(1), p-value	—	—	0.008	—	—	0.046	—	—
AR(2), p-value	—	—	0.141	—	—	0.215	—	—
Sargan, p-value	—	—	0.166	—	—	0.804	—	—
Firm-by-city fixed effect	Not separately shown	Not separately shown	Not separately shown	Not separately shown	Not separately shown	Not separately shown	Yes	No
Observations	31,263	30,513	24,970	31,263	30,513	24,970	30,125	30,513
R^2	0.003	0.004	—	0.036	0.036	—	0.648	0.013

*Note: Parentheses contain the source's reported t-statistics. B1 and B2 are baseline models without and with controls; B3 is the baseline GMM specification. A1–A3 use the alternative cash-holding outcome in corresponding specifications. H adds the reported firm-by-city effect, and E uses entropy balancing. Stars retain the source convention of * p < 0.1, ** p < 0.05, and *** p < 0.01. Dashes denote omitted or unreported entries, not zero estimates.*

The controlled baseline DID coefficient is 1.8782, compared with 1.8063 without controls. The dynamic estimate is smaller at 0.8759 and carries the source's weakest significance category. Its lag coefficient is insignificant. The alternative-outcome policy coefficients remain positive at 3.0605, 3.0795, and 3.6520, while the alternative lag coefficient is positive and significant. Both GMM models reject the first-order residual-correlation null but not the second-order null. Sargan nonrejection supplies supportive diagnostic evidence under the test assumptions, rather than proving instrument validity.

The additional fixed-effect coefficient is 0.0194 and the entropy-balanced coefficient is 0.0344, both marked significant at one percent. These values preserve the positive direction but are not directly comparable in magnitude with the baseline coefficients without clarifying the apparent scale changes. The event-study pre-policy coefficients reported in the text are 0.07, 0.11, and 0.14, all insignificant. The implementation-year coefficient is 0.09 and insignificant. The next two coefficients are 0.31 and 0.43 and significant, followed by insignificant coefficients of 0.13, 0.08, and 0.06. The placebo distribution is described as centered near zero; the source does not supply a simulation count or additional numerical distribution statistics.

Table 3 consolidates the endogeneity exercises, the financial transmission equations, and the moderation models. Reporting them together distinguishes an additional-control check from instrumental-variable identification, and distinguishes mediation from changes in the policy response across internal resource conditions. The controlled baseline total effect is already reported as B2 in Table 2.

Table 3. Endogeneity checks financial transmission and resource moderation

Regressor or statistic	O	IV1	IV2	F	M	C	S
Outcome	Resilience	DID	Resilience	Digital finance	Resilience	Resilience	Resilience
DID	1.8567*** (9.1697)	—	3.153*** (12.13)	96.1438*** (151.0295)	0.5318* (1.9376)	2.0308*** (9.4374)	6.6002** (2.4282)
Lagged Internet instrument	—	0.870*** (282.38)	—	—	—	—	—
Independent directors	−0.0458*** (−2.6954)	—	—	—	—	—	—
Management expense ratio	−0.0100*** (−3.2973)	—	—	—	—	—	—
Digital finance	—	—	—	—	0.0140*** (7.1619)	—	—
Cash flow	—	—	—	—	—	−0.1167 (−0.0800)	—
DID × cash flow	—	—	—	—	—	−3.7348* (−1.9326)	—
Size	—	—	—	—	—	—	−0.0388 (−0.3246)
DID × size	—	—	—	—	—	—	−0.2109* (−1.7408)
Leverage	0.1275 (0.2311)	−0.011 (−1.38)	−3.343*** (−5.67)	5.5821*** (3.3009)	−0.2371 (−0.4462)	−0.2132 (−0.4004)	0.1707 (0.2958)
Return on assets	0.3304 (0.3129)	−0.007 (−0.36)	−8.568*** (−5.38)	8.9796*** (2.6810)	0.0618 (0.0587)	0.6799 (0.6252)	0.4941 (0.4565)
Return on equity	0.0564 (0.9842)	−0.0003 (−0.73)	0.092*** (3.78)	−0.1058 (−0.5816)	0.0607 (1.0620)	0.0593 (1.0369)	0.0619 (1.0815)
Listing age	0.4636*** (3.1421)	0.003 (1.55)	−0.767*** (−5.92)	−0.4263 (−0.9346)	0.4108*** (2.8668)	0.4373*** (3.0268)	0.4897*** (3.1606)
Tobin’s Q	0.0547* (1.9468)	−0.0005 (−1.18)	0.063* (1.94)	0.0878 (0.9957)	0.0526* (1.8980)	0.0534* (1.9239)	0.0462 (1.6230)
Constant	36.9239*** (50.0233)	0.129*** (23.32)	39.150*** (96.14)	226.5828*** (185.3550)	32.2672*** (55.0336)	35.3921*** (91.6453)	35.9738*** (14.2817)
Reported F statistic	—	—	797.36	—	—	—	—
Observations	29,871	Not reported	24,970	30,513	30,513	30,513	30,513
R^2	0.005	—	0.775	0.469	0.006	0.004	0.004

*Note: O adds potential omitted controls; IV1 and IV2 are the two-stage least-squares equations; F predicts finance; M includes finance in the resilience equation; C and S test cash-flow and size moderation. Parentheses are reported t-statistics. The source attaches * p < 0.05, ** p < 0.01, and *** p < 0.001 to these tables, but several printed stars are inconsistent with their displayed statistics. All markings are retained. The F statistic is displayed in the source’s second-stage column and described in its prose as evidence of first-stage relevance.*

Additional controls leave a positive policy coefficient of 1.8567. The instrument predicts DID with a coefficient of 0.870, and the second-stage policy coefficient is 3.153. These findings support a positive association under the corresponding assumptions, although relevance does not establish exclusion. In the finance equations, the governance coefficient is 96.1438 and the finance coefficient in the resilience equation is 0.0140. The remaining governance coefficient declines to 0.5318. This is the pattern the source identifies as partial mediation; its exact significance should be assessed with the reporting caveat in the table note.

Both moderation interactions are negative. The cash-flow interaction is −3.7348 and the size interaction −0.2109. Their reported t-statistics are −1.9326 and −1.7408, respectively. They support declining point-estimated policy responses as internal liquidity and size increase, but they do not warrant an unqualified statement that both pass a conventional two-sided five-percent test. The size model's policy coefficient of 6.6002 is evaluated at logged assets equal to zero, so it is not the effect for a representative enterprise. Conditional effects over the observed moderator distribution are needed for a substantive magnitude assessment.

Table 4 places the regional and industry specifications side by side. The common presentation highlights an important distinction: regional point estimates remain positive, whereas the industry estimates change sign. The published observation counts are retained even though they do not resemble disjoint subgroup sample sizes.

Table 4. Regional and industry differences in reported policy responses

Regressor or statistic	Eastern	Western	Central	Technology-intensive	Capital-intensive	Labor-intensive
Policy coefficient	1.4131***	1.1555***	1.3196***	1.5653***	−1.0343***	−1.0285***
	(6.6208)	(2.7892)	(3.4613)	(7.5262)	(−3.8911)	(−4.7738)
Leverage	−0.0624	−0.1172	−0.1210	−2.2228***	−2.7923***	−2.6110***
	(−0.1172)	(−0.2201)	(−0.2272)	(−4.2403)	(−5.3774)	(−5.0169)
Return on assets	0.2470 (0.2343)	0.2524 (0.2393)	0.2562 (0.2429)	−7.2138***	−7.4906***	−7.5857***
				(−5.4518)	(−5.6597)	(−5.7352)
Return on equity	0.0561 (0.9797)	0.0622 (1.0861)	0.0613 (1.0702)	0.0868 (1.1461)	0.0858 (1.1316)	0.0851 (1.1221)
Listing age	0.3996***	0.4050***	0.3980***	−0.6905***	−0.7892***	−0.7720***
	(2.7835)	(2.8194)	(2.7709)	(−5.8587)	(−6.7486)	(−6.5930)
Tobin's Q	0.0561**	0.0526* (1.8920)	0.0546**	0.0371 (1.0774)	0.0452 (1.3121)	0.0483 (1.4040)
	(2.0194)		(1.9660)			
Constant	35.8635***	36.3724***	36.3494***	39.2386***	40.5721***	40.6139***
	(94.4337)	(98.1057)	(98.0146)	(108.9514)	(125.6888)	(125.7063)
Observations	30,513	30,513	30,513	30,513	30,513	30,513
R^2	0.002	0.001	0.001	0.006	0.004	0.005

*Note: Parentheses contain reported t-statistics. Stars follow * p < 0.1, ** p < 0.05, and *** p < 0.01. The full count appears in each source column; the article does not clearly resolve whether the implementation uses split samples, group-specific indicators, or another full-sample parameterization. Numerical differences do not themselves establish significant differences between groups.*

The regional coefficients follow the ordering eastern, central, and western, with values of 1.4131, 1.3196, and 1.1555. All carry positive significance markings. Technology-intensive activity has a coefficient of 1.5653, while capital-intensive and labor-intensive activities have coefficients of −1.0343 and −1.0285. The source interprets these sign differences through digital compatibility and adjustment costs. Those explanations are plausible, but the regressions do not directly measure implementation expenses, organizational capabilities, or the mechanisms responsible for the sectoral divergence.

Table 5 combines distributional results with the regional finance sequence. Panel A reports the ordinary least-squares comparator and four conditional quantiles. Panel B reports regional models before and after finance enters, together with the common finance equation. The two panels use different parenthetical statistics and visibly different coefficient scales, which are retained.

Table 5. Conditional resilience quantiles and regional financial transmission

Regressor or statistic	A OLS		A Q25		A Q50		A Q75		A Q90		—		—	
DID	3.444*	(1.786)	−0.106***	(0.030)	1.032***	(0.242)	7.650***	(0.399)	13.008***	(0.999)	—		—	
Leverage	−2.952***	(0.638)	0.000 (0.077)		−1.177*	(0.620)	−4.085***	(1.021)	−11.443***	(2.558)	—		—	
Return on assets	−7.813***	(1.759)	−0.000	(0.196)	−3.054*	(1.578)	−10.812***	(2.601)	−28.906***	(6.516)	—		—	
Return on equity	0.097***	(0.024)	−0.000	(0.011)	0.029 (0.090)		0.102 (0.149)		0.374 (0.374)		—		—	
Listing age	−0.569	(0.370)	−0.000	(0.017)	−0.391***	(0.140)	−1.446***	(0.231)	−0.836	(0.579)	—		—	
Tobin's Q	0.050*	(0.028)	0.000 (0.005)		0.018 (0.041)		0.103 (0.068)		0.007 (0.170)		—		—	
Constant	38.128***	(2.176)	26.498***	(0.052)	29.957***	(0.417)	41.797***	(0.688)	66.504***	(1.723)	—		—	
Observations	30,513		30,513		30,513		30,513		30,513		—		—	
Panel B model	Eastern	before DF	Western	before DF	Central	before DF	DF outcome		Eastern with	DF	Western with	DF	Central with	DF
DID	0.0129***	(5.3095)	0.0021	(1.3874)	0.0037**	(2.2969)	0.0961***	(151.0295)	0.0063*	(1.8883)	0.0010	(0.5142)	−0.0018	(−0.8354)
Digital finance	—		—		—		—		0.0687***	(2.8925)	0.0105	(0.7253)	0.0569***	(3.6640)
Leverage	−0.0239***	(−3.6989)	−0.0027	(−0.6751)	0.0256***	(6.0619)	0.0056***	(3.3009)	−0.0243***	(−3.7580)	−0.0027	(−0.6899)	0.0253***	(5.9868)
Return on assets	−0.0020	(−0.1541)	−0.0022	(−0.2839)	0.0013	(0.1501)	0.0090***	(2.6810)	−0.0026	(−0.2024)	−0.0023	(−0.2960)	0.0007	(0.0890)
Return on equity	0.0005	(0.7576)	0.0004	(1.0262)	−0.0003	(−0.7352)	−0.0001	(−0.5816)	0.0005	(0.7681)	0.0004	(1.0288)	−0.0003	(−0.7221)
Listing age	0.0047***	(2.6857)	0.0007	(0.6976)	−0.0016	(−1.4439)	−0.0004	(−0.9346)	0.0047***	(2.7029)	0.0007	(0.7018)	−0.0016	(−1.4229)
Tobin's Q	−0.0005	(−1.6316)	0.0011***	(5.3040)	−0.0000	(−0.1250)	0.0001	(0.9957)	−0.0006*	(−1.6498)	0.0011***	(5.2994)	−0.0000	(−0.1477)
Constant	0.2648***	(56.7254)	0.0423***	(14.8293)	0.0465***	(15.2394)	0.2266***	(185.3550)	0.2492***	(34.9761)	0.0399***	(9.1654)	0.0336***	(7.2159)
Observations	30,513		30,513		30,513		30,513		30,513		30,513		30,513	
R^2	0.002		0.001		0.002		0.469		0.002		0.001		0.002	

*Note: Panel A parentheses are standard errors; Panel B parentheses are reported t-statistics. Stars follow * p < 0.1, ** p < 0.05, and *** p < 0.01. The repeated full-sample counts and differing scales reproduce the source. The finance equation's coefficient of 0.0961 in Panel B differs in scale from 96.1438 in Table 3; no undocumented conversion is imposed.*

The conditional policy coefficient is negative at the twenty-fifth percentile, becomes positive at the median, and increases further at the seventy-fifth and ninetieth percentiles. This is evidence of a nonuniform conditional distributional relationship, not a direct estimate of individual treatment effects for firms ranked by their pre-policy resilience. The regional finance equations show a significant finance coefficient in the east and center but not in the west. The remaining eastern policy coefficient is positive, the central coefficient becomes negative and insignificant, and the western coefficient remains insignificant. These patterns support the source's differentiated-transmission interpretation while leaving formal indirect-effect tests and regional sample construction unresolved.

5. DISCUSSION

The central finding is that digital public governance is associated with a stronger average resilience outcome, but the relationship is not uniform across the enterprises and contexts examined. The positive baseline estimates are compatible with the idea that more accessible services and better coordination reduce the external frictions firms face. The negative industry and lower-quantile estimates qualify that interpretation. They suggest that the value of institutional digitalization depends on whether the support delivered addresses the firm's binding constraints and whether the enterprise can bear the cost of adapting to the new arrangements.

This conditional perspective is more informative than treating public digitalization as an input whose benefits are independent of implementation. A platform can improve the availability of information without reducing the effort required to use it. It can accelerate routine applications while making exceptional cases harder to resolve. An enterprise may face better electronic procedures and still lack working capital or a reliable market. The average positive coefficient consequently identifies a favorable overall pattern under the model, rather than demonstrating that every dimension of service quality improves or that every treated firm becomes more adaptable.

The financial results offer a plausible explanation for part of that pattern. Governance predicts higher city-level digital finance, and finance is positively associated with resilience after governance is included. The decline in the remaining policy coefficient is consistent with an institutional change operating partly through the financial environment. This interpretation connects public data and service arrangements to the resources enterprises can use. It also aligns with research considering digital finance and resource allocation [7]. The study does not, however, observe the loan applications, pricing, approvals, or actual financing received by the firms in question.

That distinction limits the strength of the mediation claim. A common city financial index may rise because of household payments, consumer services, or broader local economic changes rather than enterprise credit alone. Financial development and resilience can also respond to factors not fully captured by the controls. Adding the mediator may condition on an outcome of treatment that shares other causes with enterprise performance. The stepwise regression pattern therefore supports a financial transmission hypothesis, while a causal mediation estimate would require stronger timing and identification assumptions. A formal indirect-effect interval would help establish the precision of the proposed pathway.

The persistence of a remaining governance coefficient is compatible with additional institutional channels. Better access to tax relief, subsidies, or administrative information may preserve resources even when financing does not change. Earlier warnings may also improve decisions independently of credit. These channels are part of the source's conceptual argument [1], but they are not separately measured. The residual coefficient should not be assigned automatically to any particular mechanism. It represents the relationship that remains after the included mediator and controls, which can contain unmeasured pathways as well as residual confounding.

Negative moderation by size and cash flow suggests that internal resources can substitute for some external support. Firms with substantial liquidity can fund adjustments without waiting for assistance. Larger organizations may already possess specialized administrative staff and established lender relationships. Smaller or lower-cash-flow enterprises can therefore experience larger marginal gains from reduced procedural costs and improved financial access. This explanation is consistent with resource dependence, but it does not establish that size itself causes organizational inertia. Firm size combines resources, market power, managerial specialization, and sector composition, whose separate roles remain unresolved[18].

The lower-quantile result introduces an important boundary to that interpretation. Resource scarcity can increase the need for support while simultaneously reducing the ability to use it. Firms with limited staffing or weak information systems may struggle to provide standardized records or complete online requirements. If compliance requires scarce managerial time and additional expenditure, the immediate burden can exceed the available benefit[19]. The negative lower-quartile coefficient is compatible with this mechanism, but it does not demonstrate it directly. Data on application costs, failed submissions, take-up, and actual service use would provide a stronger test.

The moderation and quantile findings should therefore be understood as complementary questions rather than contradictory rankings. One asks whether the average conditional policy coefficient declines with size or cash flow. The other asks how the estimated relationship varies across the conditional outcome distribution. A small enterprise need not occupy the lowest resilience quantile, and a larger enterprise can still have weak resilience. Distinguishing need from capability allows both patterns to coexist. It also discourages policies that use size alone as a complete proxy for the ability to benefit from public digital services[20].

Industry estimates reinforce the importance of matching the intervention to operational requirements. Technology-intensive enterprises may integrate public information and online processes into systems they already use. Capital-intensive enterprises may face constraints tied to physical capacity, long project cycles, or debt commitments that electronic services cannot quickly resolve. Labor-intensive enterprises may depend primarily on workforce availability and customer demand. The negative coefficients in the latter industries are consistent with adaptation costs or inadequate policy fit, but the source does not estimate either channel separately. The findings justify differentiated evaluation rather than assuming that digital reform is intrinsically unsuitable for those sectors[21].

Sector classifications also require clearer documentation before the numerical differences can support detailed targeting. Industries contain firms with diverse technologies, products, and organizational arrangements. A technology-intensive category can include enterprises at different stages of digital adoption, while a traditional industry can contain highly digitized firms. The repeated full-sample count in every industry regression leaves the exact implementation unclear. Disclosure of the classification rules and model parameterization would determine whether the coefficients are conventional subgroup effects, group-specific full-sample terms, or another comparison. That ambiguity should be resolved before quantitative policy priorities are assigned.

The regional ordering is compatible with complementary infrastructure and institutional capacity. Eastern locations may offer more mature digital systems and financial networks, allowing enterprises to convert public services into usable resources more readily. Central locations may combine increasing capabilities with strong demand for support, while western locations can face greater infrastructure and service-delivery constraints. These explanations are consistent with the source's interpretation, but the regional regressions do not identify their separate contributions. Geographic labels summarize many characteristics and should not be treated as mechanisms in themselves.

Regional financial transmission adds a more specific qualification. The finance coefficient is significant in the east and center but not in the west. This does not mean that finance is economically irrelevant to western firms. Service coverage, product suitability, enterprise capabilities, and statistical precision may all affect the estimated relationship. The central direct coefficient becomes insignificant after finance enters, which differs from the aggregate partial-mediation pattern. It would be premature to classify one region as fully mediated and another as not mediated without formal indirect-effect tests, comparable scales, and a clear regional estimation design.

The event-study profile suggests that policy benefits may take time to become visible. The reported response is insignificant in the intervention year, rises in the next two years, and becomes smaller and insignificant thereafter. This pattern is compatible with administrative implementation and enterprise adaptation, followed by a narrowing treatment–comparison difference. It does not establish that the underlying institutional benefits disappear. Comparison firms may adopt related practices, the resilience measure may change composition, or estimates may become less precise. The temporal path is informative, but explanations of its shape require additional evidence.

The robustness exercises support the direction of the average finding, yet they address different concerns. Alternative cash-based measurement tests sensitivity to the resilience construct. Entropy balancing addresses observed differences under the selected balance conditions. Additional controls account for particular governance and cost characteristics. Fixed effects absorb specific forms of heterogeneity. None removes every source of bias. In particular, a firm-by-city effect may add little beyond firm effects when enterprises remain in one location, and a time-invariant interaction does not automatically absorb changing regional policy or industry conditions.

The instrumental-variable evidence similarly requires a distinction between predictive strength and identification. The reported relevance statistics indicate a strong relationship between lagged Internet penetration and DID under the estimated first stage. However, Internet access can influence resilience through private digital operations, supplier coordination, hiring, or market information. Lagging the variable reduces some contemporaneous feedback concerns but does not exclude those pathways. The second-stage coefficient is therefore evidence conditional on a demanding exclusion restriction. It should not be described as proving that all endogeneity has been removed[22].

Inference must also reflect the policy's geographical level. City-based treatment and a city-year financial mediator expose multiple enterprises to common conditions. If disturbances are correlated within cities, treating each firm-year as independent can overstate precision. The published tables identify parenthetical statistics but do not fully document a consistent clustering strategy across all specifications. A reproducible implementation should

state the clustering level, the number of policy clusters, and the treatment of common local shocks. These details are particularly important when financial-development observations are repeated across firms within a city.

Scale and notation issues constrain economic interpretation even where signs are stable. The descriptive resilience index is reported between 0.249 and 0.945, whereas several regression constants are around the mid-thirties and policy coefficients exceed the entire descriptive range. Other specifications return coefficients near the descriptive scale. The regional finance equation introduces another scale change. These patterns may reflect transformations or reporting choices, but the article does not explain them sufficiently. Preserving the estimates avoids inventing a correction, while preventing defensible claims about percentage-point effects or the relative economic size of all models.

The significance conventions present a related issue. Some tables attach thresholds that do not agree with their displayed t-statistics, particularly in the moderation and mediation equations. A faithful presentation should retain the original record and distinguish it from a corrected inferential interpretation. The direction of the negative interactions remains clear, but their claimed conventional significance is less secure. Access to the estimation output would allow consistent p-values, confidence intervals, and joint tests to replace reliance on printed stars. This is a reporting requirement for stronger inference, not an additional empirical result.

The policy implications are nevertheless coherent when stated at the appropriate level. Administrative reform should reduce the practical cost of obtaining support through clearer procedures, interoperable records, and accessible communication. Governments can improve risk information and policy targeting while preserving routes for firms that cannot complete every process digitally. Data sharing with financial providers should specify access boundaries and security standards. The objective is to improve assessment and service suitability, rather than maximize data accumulation. Financial products should match operating cycles and repayment capacity so that short-term relief does not create longer-term fragility.

Differentiated support follows from the tension between need and adaptation capacity. Smaller firms and enterprises with weak cash flow may require simpler application procedures, advisory services, and assistance with the cost of digital adjustment. Larger enterprises can contribute through shared risk-management and supplier-support arrangements. Central and western locations may need infrastructure investment and transfers of practical implementation experience, while capital-intensive and labor-intensive activities may benefit from lightweight tools linked to immediate operational requirements. Firms with very low resilience need basic resource support alongside digital adaptation. More capable firms may be better placed to use advanced data services and innovation incentives. These recommendations preserve the source's targeting logic without claiming that the study identifies an optimal allocation formula.

6. CONCLUSION

The reported evidence connects government digital governance with stronger average enterprise resilience while showing that the benefits depend on the conditions under which firms encounter reform. Using Chinese A-share listed enterprises during 2014–2023 and a policy comparison centered on 2018, the underlying study finds positive average governance coefficients across several specifications. Financial regressions exhibit a pattern consistent with partial mediation, and negative interactions with size and cash flow suggest greater marginal benefits where internal resources are more limited. These findings support an institutional explanation of resilience that extends beyond firms' internal strategies alone.

The heterogeneous results are essential to that conclusion. Regional coefficients are positive but differ in magnitude. Technology-intensive industries show a favorable policy association, whereas the capital-intensive and labor-intensive estimates are negative. Conditional quantile coefficients move from a negative lower-quartile relationship to stronger positive relationships higher in the distribution. Regional finance models likewise suggest that the financial pathway is more evident in the east and center than in the west. Together, these patterns caution against evaluating digital governance solely through its average effect or assuming that the same administrative design meets every firm's needs.

Policy should consequently combine improved public services with usable finance and support for enterprise adaptation. Interoperable information, simpler procedures, and timely communication can help firms obtain assistance without unnecessary administrative expenditure. Secure public–financial data sharing can strengthen assessment, but service design must remain sensitive to liquidity, operational cycles, and repayment capacity. Enterprises with limited resources may require advisory and transition support, while sectoral and regional differences call for attention to infrastructure and practical implementation. Digital requirements should not displace the immediate operational relief needed by the most vulnerable firms.

The empirical conclusions remain conditional on measurement and identification. The composite resilience index is an indirect indicator, city finance is not firm-level borrowing, and stepwise regressions do not independently establish a causal indirect effect. The published scale changes, significance inconsistencies, and repeated regional sample counts also require clarification before precise magnitude comparisons can be made. No reported values have been silently revised here. Within those limits, the findings support a measured proposition:

digital governance can strengthen enterprise resilience when institutional support, financial services, and organizational capabilities reinforce one another, but poorly matched implementation can leave some enterprises facing additional burdens rather than greater security.

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