A New Path of Digital Governance for Diversified Industrial Groups: Using Maturity Assessment to Advance Penetrative Supervision and Transformative Governance

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Abstract. Diversified conglomerates are facing increasing complexity in digital transformation governance due to diversified business, uneven digital capabilities, and fragmented strategic alignment. Traditional governance models—characterized by rigid control and fragmented oversight—are ill-suited to the data-driven, adaptive, and integrative nature of digital transformation. Drawing on the case of CITIC Group, this paper conceptualizes maturity assessment as a novel governance mechanism that transforms evaluation into a continuous learning and coordination process. The research employs a qualitative case study combined with document analysis and semi-structured interviews to examine how the Digital Transformation Maturity Assessment System (DTMAS) reshapes governance from three dimensions: visibility, precision, and motivation. The findings suggest that maturity assessment serves as an institutionalized tool of governance through enablement, facilitating strategic coherence, differentiated empowerment, and sustained innovation across heterogeneous subsidiaries. The study contributes to the theoretical understanding of digital governance maturity and offers actionable implications for conglomerates seeking to build intelligent, participatory governance frameworks in the era of digital transformation.

Keywords: Digital Governance; Maturity Assessment; Corporate Transformation; Diversified Conglomerates; Governance Innovation

1 Introduction

Digital transformation has become a defining strategic priority for diversified conglomerates, particularly those operating across industries with distinct technological and regulatory contexts such as finance, manufacturing, and services. Managing digital initiatives in such complex ecosystems requires governance mechanisms capable

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of coordinating heterogeneous entities while maintaining strategic alignment (Bharadwaj et al., 2013)[1]. However, traditional hierarchical governance systems—based on command, control, and audit—struggle to accommodate the agility, transparency, and collaboration demanded by digital transformation. Many conglomerates face persistent challenges: fragmented strategies across subsidiaries, inconsistent performance measures, and limited intrinsic motivation for transformation. The issue is not simply technological but institutional—how to govern digital transformation in organizations characterized by structural diversity and informational asymmetry.

Recent research emphasizes that digital transformation requires data-driven and adaptive governance models that replace static oversight with continuous feedback and learning. Within this context, digital maturity assessment has emerged as a promising governance tool. Maturity frameworks such as the Capability Maturity Model Integration (CMMI) and the Digital Transformation Maturity Model (DTMM) enable organizations to measure their readiness and benchmark progress systematically (Kane et al., 2015)[6]. Yet, most existing approaches treat maturity assessment as a diagnostic exercise rather than a dynamic governance mechanism. Little attention has been paid to how assessment can create shared understanding, drive capability differentiation, and stimulate motivation within diversified enterprises (Proença et al., 2021)[2]. For conglomerates, an institutionalized maturity assessment system could therefore serve as a bridge between evaluation and empowerment, transforming control-oriented governance into a process of strategic coordination and learning.

This study examines the case of CITIC Group, one of the largest Chinese state-owned conglomerates, which has developed a proprietary Digital Transformation Maturity Assessment System (DTMAS). By transforming maturity assessment from a one-time evaluation into a continuous governance mechanism, CITIC has integrated visibility, precision, and motivation into its digital governance architecture. Drawing on qualitative case study methods, this paper investigates how maturity assessment functions as a meta-governance tool—aligning strategic objectives, differentiating subsidiary pathways, and fostering endogenous motivation. The findings contribute to the broader literature by conceptualizing maturity assessment as a form of "governance through enablement," advancing theoretical understanding of digital governance in diversified enterprises and offering practical guidance for organizations seeking to institutionalize learning-based governance models.

2 Governance Dilemmas and the Search for a New Digital Path

2.1 Governance Challenges in Diversified Conglomerates

Diversified conglomerates such as CITIC Group operate across sectors with different digital maturity levels, business logics, and regulatory environments. These structural differences create governance asymmetries that traditional administrative mechanisms struggle to resolve. Three interrelated challenges characterize this dilemma.

Firstly, the challenge of strategic coherence. Each business unit interprets digital transformation differently—some equate it with automation, others with data analytics or customer digitization. The result is a fragmented landscape where strategic priorities diverge and implementation loses direction (Bharadwaj et al., 2013)[1]. Without a shared understanding of what digitalization means, headquarters cannot form an integrated transformation roadmap.

Secondly, the challenge of fair measurement. Differences in industry structures—financial services, manufacturing, and real estate—make it difficult to apply a single benchmark for digital progress. The digital readiness of the bank cannot be assessed with the same criteria as a steel industry. The absence of a consistent, credible yardstick undermines both internal benchmarking and cross-sectoral collaboration (Proença et al., 2021)[9].

Thirdly, the challenge of transformation motivation. Many subsidiaries lack intrinsic motivation for change. Digital initiatives are often viewed as compliance tasks mandated by headquarters rather than as value-creating opportunities (Li & Wang, 2022)[7]. This results in reactive participation, limited innovation, and low sustainability of transformation efforts.

2.2 Breaking the Deadlock: The Governance Rationale

CITIC raises an approach to resolving these governance dilemmas centers on a simple but powerful insight: effective digital governance requires a strategitc collaboration mechanism, scientific diagnostic tools, and interactive feedback mechanisms. Rather than relying solely on prescriptive management or ad hoc audits, the CITIC Group adopted maturity assessment as a systemic governance anchor.

This approach turns evaluation from a static snapshot into a dynamic, iterative process that builds consensus, identifies capability gaps, and guides differentiated development. As Weill and Ross (2019)[4] note, successful digital governance frameworks combine measurement, collaboration, and motivation—three functions that maturity assessment can uniquely integrate.

2.3 Theoretical Context: Governance Logic and Institutional Complexity

Digital transformation governance in diversified conglomerates takes place within a context of multiple and often conflicting governance logics. Each subsidiary operates under distinct industrial norms, management traditions, and performance expectations. When a group expands across finance, manufacturing, and service sectors, it inherits multiple institutional identities. The challenge is not only technical integration, but also reconciling these heterogeneous understandings of what counts as good governance.

In such a complex landscape, the key task is to find a higher-order mechanism that coordinates different governance modes without suppressing local initiative. For conglomerates, this coordination cannot rely solely on command or policy directives. It requires a flexible system that combines standards, incentives, and collaboration.

Within CITIC Group, the maturity assessment framework performs precisely this function. It establishes a shared cognitive framework for the entire organization, while allowing each subsidiary to interpret and apply it in its own context.

Through this structure, governance becomes both reflexive and adaptive. Headquarters gains an overview of the overall pattern of transformation, but it no longer dictates every detail. Subsidiaries maintain space for experimentation, but their progress is made visible and comparable. This balance between order and autonomy turns the maturity system into an internal "meta-governance" mechanism—an architecture that governs how governance itself is conducted. In essence, the framework provides a common rhythm through which a complex organization can coordinate continuous digital transformation.

3 Building the Foundation: Designing a Scalable Assessment System

3.1 Establishing a Measurement Yardstick

The DTMAS introduced a star-level maturity model with three universal dimensions—strategy, business, enablement, and technology—to define what good digital transformation looks like across the entire group. This yardstick provided a communicative bridge between headquarters and subsidiaries, replacing subjective judgments with standardized metrics.

By translating digital strategy into measurable indicators, CITIC Group created what Kane et al. (2015)[6] describe as a shared interpretive frame for transformation. Subsidiaries could now position themselves along a recognizable trajectory, and management discussions shifted from slogans to evidence-based dialogue.

3.2 Respecting Diversity through Custom Metrics

While standardization ensured comparability, differentiation ensured fairness. The DTMAS incorporated industry-specific indicators for financial, industrial, and service-oriented subsidiaries, recognizing distinct business logics. For example, financial subsidiaries were evaluated on data governance and cybersecurity, while manufacturing subsidiaries emphasized intelligent production and supply chain digitalization. By balancing unity and diversity, this dual structure of a common core and customized modules made the system precise and credible.

3.3 Benchmarking for Legitimacy and Credibility

To enhance authority, the DTMAS aligned its structure with multiple external standards, including the GB/T 45341–2025, GB/T 36073-2018, GB/T 43439-2023 and JR/T 0271-2023. This external benchmarking not only ensured methodological rigor but also reinforced legitimacy among subsidiaries. As Davis et al. (2012)[5] note, gov-

ernance systems that align internal indicators with recognized norms foster greater acceptance and compliance.

3.4 Methodological Rationale and Data Sources

The development of CITIC Group digital maturity assessment system followed a process that emphasized both rigor and usability. The team began by clarifying what digital transformation means for a diversified enterprise, identifying the common elements shared by different industries and the unique factors specific to each. Based on this understanding, an indicator framework was designed around four universal dimensions—strategic alignment, business transformation, organizational enablement, and technical capability—supported by sector-specific modules.

To ensure that the assessment was not merely theoretical, its indicators were repeatedly tested and refined through pilot applications. Each subsidiary conducted self-assessments, followed by verification and feedback sessions led by trained evaluators. This combination of quantitative scoring and qualitative dialogue helped ensure that results reflected both measurable performance and contextual realities.

Data collection covered dozens of subsidiaries from different industries, producing a comprehensive picture of the digital landscape of the group. Quantitative data were used to identify maturity tiers, while qualitative insights were used to interpret causes and improvement paths. The outcome was a balanced methodology—systematic yet flexible, data-informed yet grounded in organizational experience. The process itself became a form of capacity building, as participants deepened their understanding of digital governance through active involvement.

4 From Static Assessment to Dynamic Governance: Three Governance Transitions

The transformation of maturity assessment from a one-time evaluation tool to a dynamic governance mechanism represents a major innovation in how large enterprises manage complexity. The system no longer serves merely as a diagnostic instrument, it functions as a continuously operating platform that enables feedback, learning, and adaptation. The assessment process supports three progressive transitions: seeing clearly, governing precisely, and motivating proactively.

4.1 Transition One: From Visibility Gaps to Organizational Transparency

The first transition addresses the foundational problem of seeing clearly. In a diversified conglomerate, information about digital progress is often fragmented across departments and subsidiaries, making it difficult for headquarters to obtain a coherent overview. CITIC resolved this by combining online self-assessment and on-site verification, creating a unified digital dashboard that visualizes the maturity level of each subsidiary in real time.

The mechanism behind this transition lies in the dual verification loop. Subsidiaries conduct structured self-evaluations through the digital platform, while professional assessors cross-check critical data points through interviews and documentation. These dual inputs generate a comprehensive digital portrait of the enterprise.

The governance value of this mechanism is that it transforms invisibility into transparency. Headquarters can now monitor progress at a glance, identify outliers, and compare performance across industries. More importantly, visibility creates accountability without coercion: when subsidiaries see their own positions on the group-wide map, awareness itself becomes a driver for improvement. Transparency thus functions both as a diagnostic and motivational force, replacing guesswork with evidence and intuition with data-informed insight.

4.2 Transition Two: From Uniform Control to Differentiated Guidance

Once visibility is achieved, the next challenge is precision—how to govern effectively without enforcing uniformity. CITIC addressed this through tiered classification and personalized guidance. Based on assessment scores, subsidiaries are grouped into maturity tiers: developing (1-2 star), integrating (3-4 stars), and leading (5 stars above). Each tier receives differentiated governance responses.

For developing units, headquarters provides structured improvement roadmaps and training resources; for leading ones, it promotes internal benchmarking and cross-mentorship programs. The assessment questions themselves are designed as progressive ladders, where higher-level options represent more sophisticated practices. This transforms the assessment tool into an implicit learning model—each question becomes a guidepost showing what the next level of improvement looks like.

This shift represents a redefinition of the governance role of headquarters. Instead of issuing top-down directives, headquarters acts as a strategic coach: diagnosing, prescribing, and enabling progress. The result is a more balanced power dynamic—subsidiaries gain clarity on how to advance, while headquarters focuses resources where they have the greatest leverage. Precision governance thus replaces command-and-control with insight-and-influence, reducing resistance and enhancing collaboration.

4.3 Transition Three: From External Pressure to Internal Motivation

The final transition completes the cycle by turning governance into a self-sustaining process of motivation and learning. CITIC established a multi-channel feedback and incentive mechanism linking assessment outcomes with recognition, development, and limited resource incentives. Outstanding subsidiaries are awarded higher star ratings publicly recognized internally, and invited to share best practices across the group.

Beyond formal incentives, the deeper innovation lies in cultivating a peer-learning ecosystem. Internal assessors are trained and rotated among subsidiaries, promoting mutual understanding and knowledge exchange. The evaluation process itself be-

comes an opportunity for dialogue: when subsidiaries participate in cross-evaluation, they not only measure others but also reflect on their own practices.

As a result, governance evolves from an external imposition into an internalized culture of improvement. The once-passive assessment participants become active learners and advocates of digital transformation. This process generates a healthy sense of competition—subsidiaries aim not merely to comply, but to excel. The mechanism channels external pressure into internal drive, transforming the assessment cycle into a source of continuous vitality. (Sabel & Zeitlin, 2012)[10].

5 Empirical Verification: Early Outcomes of the CITIC Practice

5.1 Implementation Process

The DTMAS went through three phases: conceptual design, pilot testing, and refinement. During pilots, subsidiaries participated actively in workshops to validate indicators and refine definitions. The participatory design enhanced both accuracy and legitimacy.

5.2 Observed Impacts

The early implementation of the DTMAS generated several significant outcomes that extended far beyond diagnostic measurement.

First, subsidiaries developed a clearer and more structured understanding of what a coherent digital transformation blueprint should entail. Through standardized indicators and maturity pathways, business units could visualize the key components of digital transformation—strategic alignment, technical architecture, and organizational enablement—thus forming a concrete reference model for their own planning.

Second, subsidiaries began to accurately recognize their own digital development levels and gaps. The assessment results prompted deeper reflection on how digitalization could strengthen their core business processes and improve cross-departmental collaboration. Many units initiated internal discussions about redesigning workflows, improving data integration, and exploring new use cases that could drive operational synergy.

Third, the headquarters gained a more comprehensive and data-driven understanding of digital progress of the subsidiaries. The assessment outputs provided a panoramic view of maturity tiers across industries, enabling the headquarters to identify common challenges, prioritize strategic interventions, and allocate digital resources more effectively. This evidence-based visibility significantly enhanced the ability of the group to coordinate digital strategies and guide differentiated development.

Collectively, these outcomes illustrate that the DTMAS not only reveals current capabilities but also serves as a governance mechanism that strengthens strategic clarity, enhances organizational reflection, and supports informed decision-making at the group level.

6 Discussion: Implications for Governance and Organizational Learning

The practical experience of CITIC Group shows that maturity assessment can evolve into a living governance system. It not only measures transformation but also shapes the way the organization learns, communicates, and adjusts. The regular assessment cycles generate a rhythm of reflection—each round providing new feedback, each feedback loop prompting new action. Over time, this repetition forms an internal culture of continuous improvement.

At the same time, the process transforms the relationship between headquarters and subsidiaries. Headquarters no longer acts as a controller demanding compliance, but as a facilitator providing tools and insights. Subsidiaries become active agents of change, using the framework to benchmark themselves and to plan development trajectories. This redefinition of roles turns governance from "supervision" into "empowerment."

Another important implication is the diffusion of learning. As results are compared and shared, subsidiaries begin to learn from one another. Good practices are identified, discussed, and replicated. Through this peer-learning mechanism, the group achieves horizontal coordination without excessive centralization. The maturity assessment thus becomes an invisible infrastructure that sustains knowledge flow and collective progress.

Looking ahead, this model suggests a new paradigm of digital governance: one that emphasizes transparency, dialogue, and shared responsibility. Governance becomes less about issuing directives and more about building systems that enable every part of the organization to see, think, and act together. In this sense, maturity assessment is not an end in itself but a bridge toward an intelligent and evolving governance ecosystem.

7 Conclusion and Future Directions

CITIC Group's experience illustrates that a well-designed maturity assessment system can resolve the three fundamental governance dilemmas of diversified conglomerates: lack of strategic coherence, inconsistent measurement, and weak transformation motivation. By embedding assessment within governance routines, CITIC shifted from control-based governance to enablement-based governance, achieving a dynamic equilibrium between standardization and flexibility.

The theoretical implication is that maturity assessment functions as an institutional infrastructure that combines metrics, dialogue, and motivation. This finding extends current understandings of digital governance by highlighting how data-driven evaluation can generate learning loops and motivational alignment across heterogeneous entities.

In the future, the Group plans to integrate the DTMAS more deeply into its strategic management cycle by: (1) building a digital case library to accumulate best practices; (2) linking maturity outcomes with investment and resource allocation deci-

sions; (3) developing the DTMAS into a digital asset that continuously evolves with emerging technologies.

Ultimately, this approach points toward a model of intelligent and reflexive governance—a governance culture in which evaluation, learning, and innovation co-evolve to support sustainable digital transformation.

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