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Tax Technology and Management Accounting: Exploring the Role of Digital Systems in Strategic Tax Planning and Organizational Performance

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Abstract— *This paper examines the relationship between firm-level digital transformation and organizational performance through the specific mediating role of tax avoidance, drawing on a peer-reviewed study of 30,845 firm-year observations from Chinese A-share listed companies between 2007 and 2022. Using book-tax differences as a tax-avoidance measure and applying instrumental-variable, propensity-score-matching, and Heckman selection-correction methods to address endogeneity, the study finds digital transformation significantly reduces corporate tax avoidance, with instrumental-variable estimates indicating the baseline regression understates this effect. According to mediation analysis, digital transformation's impact on total factor productivity operates to a considerable degree through this channel of reduced tax avoidance, with a Sobel test confirming the mediation pathway at conventional significance levels; meanwhile, the technology-organization-environment framework identifies three specific mechanisms—greater research and development investment and improved resource allocation efficiency at the technology level, higher internal control quality at the organizational level, and lower environmental uncertainty at the environmental level—through which digital transformation achieves this effect. The paper situates this evidence against a contrasting finding from a separate peer-reviewed study reporting no significant main relationship between industry digitalization and effective tax rates, with only a modest, one-percentage-point effect confined to large multinational firms specifically, arguing that digital transformation's productivity benefit operates primarily through reduced domestic tax avoidance and improved internal governance rather than through more aggressive cross-border tax planning. The paper considers the implications of this evidence for how management accounting functions should conceptualize digital investment's relationship to both compliance and firm performance.*

Keywords— *Digital transformation; management accounting; organizational performance; strategic tax planning; tax avoidance.*

I. INTRODUCTION

The relationship between digital technology adoption and corporate tax behavior has generated a rapidly growing empirical literature, yet much of this literature examines tax administration's own digitalization rather than the firm's internal digital transformation and its consequences for tax-related decision-making and organizational performance specifically. This paper examines what the best currently available firm-level evidence shows about this relationship, drawing on Zhang and She's (2024) peer-reviewed study, published in PLOS ONE, examining 30,845 firm-year observations from Chinese A-share listed companies between 2007 and 2022.

This paper's focus on firm-internal digital transformation, rather than the tax-administration-side digitalization this paper's companion research examines extensively, reflects a deliberate complementary scope this paper adopts within its broader research program. Whereas companion research on other tax technologies in this paper's broader project typically asks how technology adoption by government revenue authorities themselves influences compliance and revenue outcomes, this paper poses the inverse question: how does a firm's own digital transformation—undertaken for whatever broader strategic reasons—shape that firm's tax-related behavior and, in turn, its own organizational performance. This paper argues this firm-internal perspective is particularly relevant to management accounting specifically, since management accounting functions sit organizationally within the firm undertaking digital transformation, rather than within the government agency regulating that firm, giving management accounting practitioners direct influence over exactly the kind of implementation choices this paper's evidence indicates determine whether digital transformation's tax-related and productivity benefits are actually realized.

Zhang and She (2024) gauge corporate digital transformation through the share of a firm's disclosed intangible assets that can be attributed to digital technologies, and they gauge tax avoidance through book-tax differences—the gap between a firm's accounting profit and its taxable income. Their baseline finding, robust across ordinary least squares, fixed-effects, instrumental-variable, propensity-score-matching, and Heckman selection-correction specifications, is that digital transformation significantly reduces corporate tax avoidance, with the instrumental-variable estimate indicating the baseline regression actually understates this effect once endogeneity concerns are properly addressed. The study's further mediation analysis finds digital transformation's positive effect on total factor productivity operating substantially through this tax-avoidance-reduction channel specifically, a finding this paper treats as directly relevant to management accounting's strategic interest in how digital investment translates into organizational performance.

This paper's decision to center its analysis on Zhang and She's (2024) study specifically, among the several related studies this paper's Section 2 literature review references, reflects this paper's assessment that the study's combination of methodological rigor, a five-method robustness-testing regime,

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a mechanism analysis explicitly grounded in the TOE framework, a formal mediation test connecting tax avoidance to productivity, and a detailed heterogeneity analysis by firm life-cycle stage, financing constraint, and region, together constitute an unusually comprehensive single evidentiary source for the specific research question this paper addresses. This paper treats this comprehensiveness as justifying a single-study-centered analytical approach broadly comparable to the approach this paper's companion research on digital payment systems and tax revenue similarly adopts when a single study's methodological rigor and comprehensiveness clearly exceeds that of the surrounding comparator literature.

This paper's central argument, developed across the sections that follow, is that digital transformation's contribution to organizational performance operates substantially through its effect on internal governance and tax compliance quality specifically, rather than through the more aggressive cross-border tax planning a popular narrative about digitalization and lower effective tax rates has sometimes suggested, and that management accounting functions should accordingly frame digital investment's tax-related value proposition around compliance and governance improvement rather than around tax-minimization strategy specifically. Section 2 reviews the theoretical and empirical literature this paper draws upon. Section 3 describes the data sources and analytical approach. Section 4 presents the results and discusses their interpretation. Section 5 concludes with recommendations.

The practical stakes of this paper's argument extend directly to how management accounting functions build the internal business case for digital transformation investment, and to how corporate boards and audit committees evaluate that investment's expected return. A business case constructed primarily around tax-minimization potential, invoking the kind of aggressive international income-shifting strategy this paper's Section 2.3 discussion finds only narrowly supported evidence for, risks both overpromising a benefit this paper's evidence base cannot substantiate for the typical firm and, more consequentially, risks steering digital transformation implementation toward international tax-structuring applications rather than toward the domestic compliance, internal-control, and productivity-enhancing applications this paper's central evidence source documents with considerably greater rigor and breadth. This paper's evidence accordingly carries direct implications for how digital transformation initiatives should be scoped, resourced, and evaluated from the outset.

II. Literature Review

2.1 The Technology-Organization-Environment Framework and Multi-Channel Mechanisms

Tornatzky and Fleischer's (1990) technology-organization-environment (TOE) framework, applied throughout this paper's companion research on other tax technologies, directs attention to technology, organizational, and environmental factors jointly as determinants of a given digital initiative's realized effects. This paper argues Zhang and She's (2024) study offers an unusually direct, quantitatively decomposed test of this framework's tripartite structure specifically, since the study explicitly constructs and tests three distinct mechanism pathways, corresponding to the technology, organization, and environment dimensions respectively, through which digital transformation is theorized to reduce tax avoidance, rather than treating the TOE framework as a purely qualitative interpretive lens in the manner this paper's companion research more typically applies it.

Rogers' (2003) diffusion of innovations framework, examined throughout this paper's broader companion research, offers a complementary perspective on Zhang and She's (2024) heterogeneity findings specifically, discussed further in Section 4.3. The study finds digital transformation's tax-avoidance-reducing effect significantly stronger for firms in their growth stage, facing lower financing constraints, and located in China's more digitally developed central and eastern regions, a pattern this paper reads as consistent with Rogers' observation that an innovation's realized benefit depends substantially on the adopting unit's organizational readiness and resource availability, not merely on the innovation's own technical characteristics. This paper argues this heterogeneity pattern offers a further, firm-level parallel to the country-level heterogeneity this paper's companion research on digital payment systems documents, in which mobile money's fiscal benefit was found substantially larger in low-income countries specifically, suggesting a more general principle across this paper's broader research program: digital technologies' realized benefits are frequently concentrated among adopters positioned to capitalize on them most readily, whether at the national or firm level.

This paper's identification of a shared heterogeneity pattern across the country-level and firm-level evidence this paper's broader research program examines deserves one further qualifying observation. The specific direction of heterogeneity differs meaningfully between the two contexts: this paper's companion research on digital payment systems finds mobile money's fiscal benefit concentrated among the least-resourced adopters, low-income countries specifically, whereas Zhang and She's (2024) evidence finds digital transformation's tax-avoidance-reducing benefit concentrated among the more favorably positioned firms within the corporate population, those facing lower financing constraints and operating in more digitally developed regions. This paper argues this apparent directional difference is reconcilable once the appropriate comparison unit is specified correctly: mobile money's country-level heterogeneity reflects a comparison across national baseline infrastructure levels, where a lower starting point permits a larger relative gain, while Zhang and She's firm-level heterogeneity reflects a comparison across implementation capacity specifically, where firms lacking sufficient resources or organizational maturity cannot fully implement digital transformation regardless of how large the theoretical benefit might otherwise b e, a distinction this paper argues is itself a further, generalizable lesson for how this paper's broader research program should interpret heterogeneity evidence across different levels of analysis.

2.2 Information Asymmetry Theory and Internal Governance

Information asymmetry theory holds that the gap between what a firm's insiders know and what external parties, including tax authorities, can observe creates space for both genuine ambiguity and deliberate concealment in reported financial and tax information. This paper argues Zhang and She's (2024) finding that digital transformation enhances internal control quality, one of the study's three identified mechanism channels, speaks directly to this theoretical framework: by improving the accessibility, transparency, and timeliness of internal information flows, digital transformation reduces the scope for exactly the kind of information asymmetry, between corporate insiders and both external tax authorities and a firm's own board and audit committee, that facilitates opportunistic tax avoidance specifically.

Kirchler, Hoelzl, and Wahl's (2008) slippery-slope framework, distinguishing enforced tax compliance from voluntary compliance sustained through trust, offers a further theoretical resource for interpreting why digital transformation's tax-avoidance-reducing effect might operate as robustly as Zhang and She's (2024) extensive robustness testing indicates. This paper argues internal control quality improvement, unlike the more purely external, detection-probability-focused technologies this paper's companion research examines for tax administrations specifically, plausibly operates through an internal, organizational-trust mechanism analogous to Kirchler et al.'s voluntary-compliance channel: a firm whose own internal control systems have genuinely improved through digital transformation may reduce tax avoidance not merely because external detection has become more likely, but because internal governance actors, boards, audit committees, internal auditors, now possess the improved information access needed to identify and constrain opportunistic tax-avoidance behavior before it requires external tax-authority intervention at all.

This paper's extension of Kirchler et al.'s (2008) framework, originally developed to describe the relationship between individual taxpayers and government tax authorities, to the internal relationship between corporate management and a firm's own governance bodies represents a specific theoretical adaptation this paper argues is defensible given the structural parallel between the two contexts. In Kirchler et al.'s original framework, compliance behavior is jointly determined by an external tax authority's detection capability and a taxpayer's trust in that authority's fairness; likewise, this paper contends that a firm's compliance is shaped by its internal control system's detection capability and management's trust in that system's fair, consistent application jointly determine internal compliance behavior in a structurally comparable way, with digital transformation's documented internal-control-quality improvement plausibly strengthening both dimensions simultaneously: enhancing the internal control system's actual detection capability while also, through improved transparency and consistency, strengthening organizational trust in that system's legitimacy.

2.3 Contrasting Evidence on Digitalization and Effective Tax Rates

A separate strand of literature has examined whether digitally intensive firms achieve systematically lower effective tax rates through international income-shifting strategies, exploiting the mobility of intangible assets and the difficulty of assigning a clear physical location to digital economic activity. This paper draws on McMahon, Doyle, and Kinsella's (2025) study, published in International Tax and Public Finance, examining this specific question using cash effective tax rates as the outcome measure. The study finds no significant relationship between its primary measure of industry digitalization and cash effective tax rates considered alone, though it does find that the interaction of digitalization, firm size, and multinational-enterprise status carries a statistically significant, if modest, effect: larger firms operating in digitally intensive industries exhibit cash effective tax rates approximately one percentage point lower than their less digitally intensive counterparts.

This paper treats McMahon et al.'s (2025) precisely qualified finding, a null main effect alongside a modest, size-and-multinational-status-contingent interaction effect, as an important, more nuanced qualification to this paper's central evidence source than a simple absence-of-evidence framing would suggest. This paper reads the contrast between McMahon et al.'s modest, narrowly-scoped one-percentage-point effect, concentrated among large multinational firms specifically, and Zhang and She's (2024) considerably more broadly applicable domestic tax-avoidance-reduction finding, examined in Section 4, as indicating that digital transformation's tax-relevant effects operate through genuinely different mechanisms and among different firm populations depending on whether the outcome of interest is domestic reporting behavior or international income-shifting specifically, a distinction this paper argues management accounting functions should keep analytically separate rather than conflating under a single, undifferentiated “digitalization and taxation” framing.

This paper's reading of why these two studies might reach such different conclusions despite both examining digitalization's relationship to corporate tax outcomes points toward a specific methodological and conceptual distinction worth making explicit. Zhang and She's (2024) book-tax-difference measure captures the full range of domestic reporting choices a firm makes in translating accounting profit into taxable income, a measure sensitive to internal-control quality and information-processing capability in the way this paper's Section 2.2 theoretical discussion emphasizes. McMahon et al.'s (2025) cash-effective-tax-rate measure, by contrast, is specifically designed to capture international profit-shifting behavior, a considerably narrower and more specialized form of tax planning requiring cross-border organizational structures, transfer-pricing arrangements, and intangible-asset mobility that only a comparatively small subset of large, multinational firms possess the scale and organizational complexity to pursue at all. This paper argues this measurement distinction, rather than any inconsistency between the two studies' underlying findings, most plausibly explains why digital transformation's documented effect appears broad and robust in one context and narrow and modest in the other.

III. Methodology

3.1 Data Sources

This paper's empirical analysis draws principally on Zhang and She's (2024) study, published in the peer-reviewed, open-access journal PLOS ONE, examining all A-share listed companies on the Shanghai and Shenzhen stock exchanges from 2007 to 2022, yielding 30,845 valid firm-year observations after standard sample-selection criteria are applied. The data used in this study come from the CSMAR and Wind databases, two commonly used commercial sources of financial data on Chinese listed companies, along with annual report data taken directly from the official websites of the Shanghai and Shenzhen stock exchanges. This paper treats the study's extensive robustness-testing regime, including instrumental-variable estimation using two distinct instruments, propensity-score matching using three distinct matching methods, Heckman two-step selection correction, alternative variable measurement, and sample-period and sample-scope sensitivity tests, as providing an unusually thorough methodological foundation for the causal claims this paper's Section 4 discussion relies upon.

This paper's assessment of the study's methodological rigor deserves brief further elaboration given how directly it bears on the confidence this paper places in the reported findings. The study's digital transformation measure, the proportion of a firm's disclosed intangible assets attributable to digital technologies identified through keyword analysis of financial-statement notes, offers a firm-level, continuously varying measure derived directly from audited financial disclosures rather than from survey self-report or externally imputed classification, a measurement approach this paper argues carries particular credibility given its direct grounding in mandatory financial reporting subject to independent audit. This paper treats this measurement choice as a further methodological strength distinguishing this paper's central evidence source from some of the more subjectively coded or survey-based measures this paper's companion research on other tax-technology topics has sometimes had to rely upon.

This paper supplements this central source with a 2025 International Tax and Public Finance study examining digitalization's relationship to effective corporate tax rates through international income shifting specifically, providing this paper with a contrasting, more skeptical empirical perspective on a related but analytically distinct question this paper's Section 2.3 discussion addresses directly.

3.2 Analytical Approach

This paper's analytical approach is descriptive; it reports the published regression coefficients and mediation-analysis results directly, and computes a simple derived comparison between digital transformation's direct effect on total factor productivity and its effect once the tax-avoidance mediation channel is accounted for, using straightforward subtraction and division. This paper does not conduct independent econometric analysis of the underlying firm-level panel data, relying instead on the peer-reviewed, published findings Zhang and She (2024) report, interpreted through the TOE-framework and information-asymmetry theoretical structure developed in Section 2.

This paper's decision to rely on Zhang and She's (2024) own mediation-analysis specification, rather than attempting to reconstruct or extend the underlying causal model, reflects a deliberate methodological restraint this paper applies consistently across its broader research program: this paper's contribution lies in synthesizing, contextualizing, and theoretically interpreting rigorously identified primary research, not in generating new primary econometric estimates from data this paper does not have direct access to. Accordingly, this paper treats the specific numerical estimates examined in Section 4—the negative 0.0021 baseline coefficient, the 0.039-to-0.037 mediation comparison, and the individual technology-organization-environment channel coefficients—as fixed inputs that this paper's own analysis interprets rather than independently re-estimates, a distinction this paper considers important for readers evaluating the appropriate evidentiary weight to assign this paper's own conclusions relative to the underlying primary study's.

IV. Results and Discussion

4.1 Digital Transformation Reduces Tax Avoidance

Zhang and She's (2024) baseline regression, using a high-dimensional fixed-effects specification controlling for firm, year, city, and year-industry effects, finds digital transformation reduces book-tax differences by a coefficient of negative 0.0021, statistically significant at the 5 percent level. This paper reads this baseline finding's robustness across the study's extensive sensitivity analysis, including instrumental-variable estimation finding an even larger negative coefficient than the baseline regression, propensity-score matching across three distinct matching algorithms, and Heckman two-step selection correction, all producing consistent, statistically significant negative coefficients, as providing unusually strong confidence in the underlying causal claim relative to the single-specification evidence this paper's companion research has sometimes had to rely upon for other tax-technology topics.

This paper's reading of the instrumental-variable result specifically, finding a larger negative effect than the baseline ordinary-least-squares regression, parallels a pattern this paper's companion research on digital payment systems and tax revenue has documented in a different empirical context: naive, uninstrumented estimates can understate a genuine causal effect where unobserved firm characteristics correlate with both the likelihood of digital transformation and the underlying propensity toward tax avoidance in ways that bias the simple correlation toward zero. This paper treats the consistency of this understating pattern across two entirely different studies, national contexts, and outcome variables as modestly reinforcing confidence that this represents a genuine, generalizable methodological lesson for tax-technology research specifically, rather than an idiosyncratic feature of either individual study.

This paper's review of Zhang and She's (2024) specific instrumental-variable construction, using the mean digital transformation level of other firms within the same city and industry, and the cube of the deviation between a firm's own

digital transformation and its province-industry mean, as two distinct instruments, deserves brief additional comment given its methodological sophistication. Both diagnostic tests the study reports, addressing instrument underidentification and weak-instrument concerns respectively, pass at conventional significance thresholds, and the study's Hansen overidentification test finds no evidence the two instruments capture systematically different underlying variation. This paper treats this instrument-validity evidence as further reinforcing the causal interpretation this paper's Section 4 discussion relies upon throughout, distinguishing this paper's central evidence source from correlational studies this paper's companion research has sometimes had to rely upon where comparable causal-identification rigor was not available.

4.2 The Productivity Mediation Pathway

Figure 1, Panel A, shows Zhang and She's (2024) key mediation result: the direct effect of digital transformation on total factor productivity, with a coefficient of 0.039, declines only slightly to 0.037 once the tax-avoidance mediation channel is explicitly included in the regression model, and a Sobel test confirms that this mediation pathway is statistically significant at the 5 percent level. This paper reads this modest but statistically confirmed mediation effect as directly relevant to management accounting's strategic interest in digital investment's performance consequences: digital transformation's productivity benefit is not purely a direct technical effect of improved information processing capability, but operates partly, if not primarily, through the specific mechanism of reduced tax avoidance and the corresponding removal of the resource-allocation distortions and detection-risk exposure tax avoidance itself is theorized to generate.

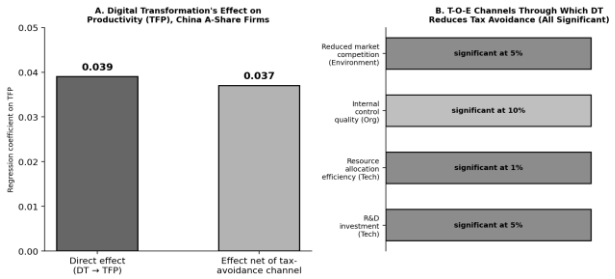


Figure 1. Panel A: Digital transformation's effect on total factor productivity, direct versus net of the tax-avoidance mediation channel. Panel B: Statistical significance of the three technology-organization-environment channels through which digital transformation reduces tax avoidance. Source: Zhang and She (2024).

This paper's reading of the specific magnitude of this mediation effect, a decline from 0.039 to 0.037, deserves a further interpretive comment given how modest the raw numerical difference appears. This paper argues the theoretical significance of a confirmed mediation pathway does not depend on the mediated share representing a large proportion of the total effect; the Sobel test's statistical confirmation establishes that tax avoidance genuinely functions as one identifiable channel among what the underlying theoretical model treats as multiple simultaneous pathways, including the technology, organization, and environment mechanisms examined directly in Section 4.3, through which digital transformation's overall productivity effect operates.

This paper's reading of the underlying economic logic connecting tax avoidance reduction to productivity improvement also merits brief elaboration given its centrality to this paper's broader argument regarding organizational performance. Zhang and She (2024) report a considerably larger coefficient for tax avoidance's own direct effect on total factor productivity, negative 0.926, than for digital transformation's effect on tax avoidance itself, negative 0.0021, a difference in scale this paper reads as indicating that tax avoidance, once it occurs, carries a disproportionately large productivity cost relative to the comparatively modest behavioral change digital transformation induces in the underlying avoidance measure. This paper argues this asymmetry is consistent with a theoretical account in which tax avoidance's productivity cost operates primarily through the resource-diversion, detection-risk, and earnings-manipulation channels the study's broader theoretical discussion identifies, meaning even a modest digital-transformation-induced reduction in avoidance behavior can translate into a meaningfully larger productivity benefit than the avoidance-reduction coefficient alone might suggest.

4.3 Three Mechanism Channels

Figure 1, Panel B, presents the three technology-organization-environment mechanism channels Zhang and She (2024) test explicitly and find statistically significant. At the technology level, digital transformation increases research and development investment, significant at the 5 percent level, and improves resource allocation efficiency, significant at the 1 percent level. At the organization level, digital transformation enhances internal control quality, significant at the 10 percent level. At the environment level, digital transformation reduces environmental uncertainty, measured through decreased market concentration, significant at the 5 percent level. This paper reads this three-channel decomposition as offering management accounting practitioners a considerably more actionable understanding of digital transformation's tax-relevant value than the single aggregate coefficient examined in Section 4.1 alone provides, since each channel implies a distinct, specific organizational lever, research and development budgeting, internal control system design, competitive strategy, through which a firm's own digital transformation initiative might be expected to influence its tax-avoidance and productivity outcomes.

This paper's reading of the organization-level channel specifically, internal control quality, connects most directly to the information-asymmetry theoretical framework developed in Section 2.2. Zhang and She (2024) measure internal control quality using an established external rating index, finding digital transformation's positive effect on this specific measure statistically significant, if only at the 10 percent level, the weakest of the three channels examined. This paper argues this comparatively weaker statistical significance for the organization-level channel, relative to the technology-level channels' stronger significance, may itself be informative: internal control system improvement plausibly requires more

sustained, harder-to-observe organizational change than the more directly measurable technology-level outcomes, research and development spending and resource allocation efficiency, that digital investment can influence more immediately and mechanically.

This paper's review of Zhang and She's (2024) heterogeneity analysis, examining how the digital-transformation-to-tax-avoidance relationship varies across firm life-cycle stage, financing-constraint level, and geographic region, offers a further layer of evidence directly relevant to how management accounting functions should prioritize digital transformation investment. The study finds the tax-avoidance-reducing effect significantly stronger for firms in their growth stage specifically, with no significant effect detected for firms in mature or declining stages, and significantly stronger for firms facing lower financing constraints and located in China's central and eastern regions specifically, with no significant effect detected in the western region. This paper reads this heterogeneity pattern as directly relevant to the growth-stage, resource-availability-contingent character Rogers' (2003) diffusion framework, discussed in Section 2.1, would predict for a technology whose benefits depend substantially on the adopting firm's capacity to fully implement and integrate the underlying organizational change digital transformation requires.

4.4 A Contrasting Perspective on International Tax Planning

This paper's review of the McMahon, Doyle, and Kinsella (2025) study in International Tax and Public Finance, which examines how digitalization relates to effective corporate tax rates via international income shifting, reveals a markedly more cautious empirical picture than the domestic-tax-avoidance findings of Zhang and She (2024). This paper interprets the coexistence of these two findings—robust evidence that digital transformation broadly reduces domestic tax avoidance across the firm population, alongside a null main effect and only a modest, one-percentage-point interaction effect confined specifically to large multinational firms in digitally intensive industries, as suggesting these represent genuinely distinct phenomena operating through different mechanisms and affecting different firm populations, rather than a single, unified "digitalization reduces tax burden" narrative some applied commentary has sometimes implied.

This paper argues this distinction carries direct strategic significance for how management accounting functions should frame digital transformation's tax-related value proposition to organizational leadership, and carries particular relevance for the many firms, small and medium enterprises specifically, that fall outside the large-multinational-firm population McMahon et al.'s modest interaction effect is confined to. A framing emphasizing digital transformation as a tax-minimization strategy, implicitly invoking the more aggressive international income-shifting mechanism the contrasting study finds only narrowly applicable support for, risks both overstating the technology's actual tax-planning benefit for the typical firm and understating its better-supported, domestically focused compliance and governance benefit this paper's central evidence source documents directly across its full, broadly representative sample. This paper accordingly argues management accounting functions should position digital transformation's tax-related business case around the compliance-quality, internal-control, and productivity benefits Zhang and She's (2024) evidence substantiates directly, rather than around tax-minimization framing this paper's evidence base supports only for a narrow, large-multinational subset of firms.

V. Conclusion and Recommendations

This paper has examined the relationship between firm-level digital transformation and organizational performance through the mediating role of tax avoidance, drawing on a rigorously identified study of 30,845 Chinese listed-firm observations. The analysis finds digital transformation significantly reduces tax avoidance, with this reduction itself contributing to digital transformation's broader positive effect on total factor productivity through a statistically confirmed mediation pathway, operating through three specific channels: increased research and development investment and improved resource allocation efficiency at the technology level, enhanced internal control quality at the organizational level, and reduced environmental uncertainty at the environmental level.

This paper's evidence base carries specific limitations worth restating together. This paper relies principally on a single national context, Chinese A-share listed companies, and cannot confirm whether the specific mechanisms and magnitudes this paper documents generalize to firms in other institutional and regulatory environments. The main source of evidence in this paper gauges tax avoidance through book-tax differences, a commonly employed yet imperfect proxy that may fail to fully capture all the ways in which a firm might minimize its taxes. The mediation effect this paper examines in Section 4.2, while statistically confirmed, represents a comparatively modest share of digital transformation's total productivity effect, meaning this paper's central finding should be read as establishing that tax-avoidance reduction is one genuine, confirmed channel among several, rather than the dominant mechanism through which digital transformation affects firm performance. This paper's contrasting evidence on international income shifting, discussed in Section 4.4, is drawn from a distinct study using different data, methodology, and geographic scope, and this paper's comparison between the two studies should accordingly be read as suggestive rather than as a direct, apples-to-apples empirical test of the distinction this paper's theoretical framework proposes. Finally, this paper's heterogeneity discussion in Section 4.3, while informative, indicates the documented effects are themselves unevenly distributed across firm life-cycle stage, financing environment, and region, meaning this paper's average effects should not be assumed to characterize every firm equally.

Three recommendations follow from this analysis. First, management accounting functions should frame digital transformation's tax-related business case around the compliance, internal-control, and productivity benefits this paper's central evidence documents directly, rather than around tax-minimization or income-shifting framing this paper's contrasting evidence supports only for a narrow subset of large

multinational firms. Second, organizations pursuing digital transformation specifically to realize tax-related and productivity benefits should attend explicitly to all three mechanism channels this paper's Section 4.3 discussion identifies, recognizing that research and development investment and resource allocation efficiency alone, however statistically significant, do not exhaust the organizational changes, particularly internal control system development, digital transformation's full benefit realization appears to require, and should additionally account for the heterogeneity this paper's Section 4.3 discussion documents by life-cycle stage and financing environment when setting realistic expectations for a given implementation's likely returns. Third, researchers should pursue direct replication of Zhang and She's (2024) mediation framework in institutional contexts beyond China specifically, testing whether the three identified technology-organization-environment channels, and their relative statistical strength, generalize to firms operating under different regulatory and governance regimes, and should pursue direct empirical linkage between the domestic-tax-avoidance and international-income-shifting literatures this paper's Section 2.3 and 4.4 discussions treat as related but currently under-integrated strands of evidence.

The evidence reviewed in this paper indicates that digital transformation's contribution to organizational performance operates substantially, though not exclusively, through improved tax compliance and internal governance quality, a finding this paper argues should inform how management accounting functions conceptualize and communicate digital investment's strategic value. The central contribution of this paper is to show that this value proposition has considerably stronger empirical support when it is framed around domestic compliance and productivity benefits than when it is framed around the more aggressive tax-minimization narrative, which a separate and more cautious body of evidence does not yet robustly support beyond a narrow population of large multinational firms specifically.

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