

**Information Externalities of Corporate Earnings Disclosures: Evidence from SME
Procurement Decisions***

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Abstract

We examine whether and how small and medium-sized enterprises (SMEs) adjust their operational decisions in response to the earnings information disclosed by nearby public firms. Using highly granular transaction-level data from value-added tax (VAT) invoices issued by Chinese SMEs, we conduct a short-window event study around mandatory corporate earnings-forecast disclosure. We find that SMEs significantly increase procurement following positive earnings surprises, consistent with earnings news serving as a forward-looking demand signal. The effect is strongest when the news receives greater media or analyst attention, when SMEs operate in the same industry as the disclosing firm, and when SMEs are newly established, employ financial specialists or have younger CEOs—settings that enhance information acquisition and processing. Furthermore, the observed adjustments in SMEs procurement are concentrated in production-related core materials, underscoring the operational relevance of earnings signals. We also find that SMEs' procurement adjustments translate into subsequent sales growth, but that they fail to identify opportunistic earnings boosting, reacting even to inflated forecasts. Our evidence suggests that public firm disclosures generate economically meaningful information externalities that shape real decisions beyond capital markets, extending the scope of financial reporting's real effects to the millions of private firms that underpin local economies.

Keywords: Disclosure externalities; SMEs; Earnings forecasts; Procurement; Real effects; Information spillovers

JEL codes: D22, D80, G31, M41

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1. Introduction

Corporate disclosures by large public firms often reverberate beyond capital markets, shaping perceptions of industry conditions and influencing the behavior of other firms. Classic evidence from Foster (1981) shows that a firm’s earnings announcements can generate significant intra-industry information transfers to competitors’ stock prices. Subsequent studies demonstrate that such disclosures also create real economic externalities. For example, Badertscher, Shroff, and White (2013) find that private firms invest more efficiently when they operate in industries with greater public-firm presence, suggesting that corporate disclosures improve peers’ information environments and reduce uncertainty. Similarly, Shroff, Verdi, and Yost (2017) document that richer peer disclosure environments lower firms’ cost of capital by enhancing information comparability across firms. Collectively, this research highlights the potential for public-firm information to generate positive externalities that extend beyond investors. Yet, despite these advances, prior work largely focuses on publicly traded or financially sophisticated firms, leaving open the question of whether and how small and medium-sized enterprises (SMEs)—which form the backbone of most economies—respond to such disclosure-driven information.

Understanding whether SMEs react to corporate earnings information is important for at least two reasons. First, SMEs account for a large share of employment and output (Alekseev et al., 2023; Bonfim, Custódio, and Raposo, 2023) but operate under severe informational and financing frictions (Bruhn, Karlan, and Schoar, 2018; McKenzie and Woodruff, 2017). Second, their procurement and production decisions directly affect regional supply chains and local aggregate demand. Despite these macroeconomic roles, little is known about whether SMEs use public-firm disclosures to form expectations about future demand or to adjust real operations. The lack of evidence reflects data constraints: SMEs are not required to publish financial statements,

and conventional datasets rarely link public disclosure events to private firms' day-to-day decisions. As a result, it remains unclear whether smaller firms actively process and respond to information released by public companies—or whether such information dissipates before reaching them.

This paper addresses that question by examining whether SMEs adjust their expectations and procurement behavior in response to the earnings information disclosed by nearby public firms. We focus on corporate earnings-forecast announcements, which communicate management's expectations about firm performance and often serve as salient signals of business conditions and future demand (Baginski and Hassell, 1990; Hirst, Koonce, and Venkataraman, 2008). Public firms are frequently industry leaders whose forecasts convey information about local demand, input costs, and macroeconomic outlooks (Gipper et al., 2025; Choi, Choi, and Malik, 2023). For resource- and scale-constrained SMEs, such disclosures can provide valuable cues for decision-making (Galdon-Sanchez, Gil, and Uriz-Uharte, 2025). Unlike large corporations, SMEs lack analyst coverage and sophisticated forecasting systems, so information produced by public firms effectively serves as a public good (Leuz and Wysocki, 2016). From an economic standpoint, reducing uncertainty about future demand should enable firms to allocate resources more efficiently. When investment or procurement decisions are partly irreversible, high uncertainty leads firms to delay action—a pattern highlighted in the real-options literature (Dixit and Pindyck, 1994; Bloom, Bond, and Van Reenen, 2007). Credible earnings information from public firms can thus reduce uncertainty, increasing SMEs' responsiveness in adjusting spending, production, or input purchases.

Nevertheless, SMEs may not always benefit from or correctly interpret such information. Many small businesses lack in-house financial expertise and may struggle to process earnings

releases (Anderson and McKenzie, 2022; Blankespoor, deHaan, and Marinovic, 2020). Their procurement cycles often depend on long-term supplier relationships that limit short-term flexibility (Gilje and Taillard, 2016), and persistent financing constraints can prevent rapid adjustments even when managers anticipate demand changes (Bartlett and Morse, 2021). Whether SMEs can actually use earnings information to improve operational planning is therefore an empirical question with broad implications. If they do, corporate reporting could influence real economic activity through an unstudied channel; if not, disclosure externalities might be confined to better-informed or financially unconstrained firms.

We investigate this question in China, where listed companies are subject to a mandatory earnings-forecast regulation requiring them to pre-announce expected annual results when performance deviates from prior guidance thresholds (Huang et al., 2018; Lu, Shin, and Zhang, 2023).² This institutional feature creates a series of standardized disclosure events that reveal management expectations about firm performance. We measure earnings surprises as the deviation of the first forecast from analysts' consensus expectations (Kimbrough et al., 2024) and examine how local SMEs respond to this new information.^{3 4} Our analysis uses a proprietary dataset from a leading Chinese fintech company containing detailed value-added tax (VAT) invoice records for

² The Chinese earnings-forecast regulation offers several advantages. First, disclosures occur earlier than official earnings announcements, reducing concerns about information leakage. Second, the forecasts are mandatory and triggered by specific thresholds, mitigating the selective disclosure problems common in voluntary reporting. Third, each forecast includes explanatory notes that often reveal information about future investments, demand trends, and operating conditions, enhancing its overall informational value.

³ SMEs are critical to economic development, accounting for over 60% of GDP and 80% of employment in China.

⁴ Focusing on local SMEs offers several advantages. First, SMEs operate on smaller scales and within shorter supply chains, making their procurement decisions highly sensitive to regional demand fluctuations. Second, economic activity within the same city is closely interconnected, so local demand changes quickly influence SME operations. Third, SMEs are often embedded in the supply chains or business networks of nearby listed firms, increasing their responsiveness to these firms' information. Lastly, their local market knowledge enables them to interpret and act on regional signals more effectively than distant counterparts.

more than 100,000 SMEs nationwide. These data provide near-real-time measures of procurement activity and allow us to conduct a short-window event-study design centered on earnings-forecast release dates.

A key advantage of this empirical design is its ability to address the identification challenges that have constrained prior work. Earlier studies relying on annual or industry-level data—particularly those using U.S. or large-private-firm samples—face potential endogeneity due to the reflection problem described by Manski (1991): common unobserved shocks may simultaneously influence public and private firms, making it difficult to separate causal information transmission from correlated exposure. By exploiting high-frequency transaction data and observing SMEs’ responses within days of earnings-forecast announcements, our setting largely circumvents this issue. It is unlikely that local macroeconomic shocks could both alter public firms’ earnings forecasts and trigger immediate changes in SMEs’ daily procurement within such a short horizon, as genuine macro or industry trends typically evolve over longer periods. This timing precision allows us to more cleanly identify the causal effect of earnings disclosures on SMEs’ operational behavior.

Our results show that SMEs meaningfully adjust their procurement following corporate earnings disclosures. In the seven-day window surrounding the announcement, a one-standard-deviation increase in public firms’ earnings surprise leads to an average 0.6 percent increase in daily SME procurement relative to the pre-announcement period. Although modest at the firm level, this effect is economically significant in aggregate given the vast number of SMEs in the economy. The pattern is consistent with SMEs interpreting positive earnings news as a signal of stronger downstream demand. We find that the response is amplified when the forecast receives wider media coverage or greater analyst attention (Bushee et al., 2010), suggesting that visibility

enhances information diffusion. The effect is also stronger when SMEs operate in the same industry as the disclosing firm, indicating that they use earnings news to infer industry-specific conditions. These patterns support the interpretation that corporate earnings disclosures serve as information spillovers that guide SMEs' operational adjustments.

Cross-sectional analyses further illuminate the mechanisms behind this behavior. SMEs with professional financial personnel or younger CEOs respond more strongly to earnings surprises, consistent with the role of financial literacy and managerial attention in processing information (Anderson and McKenzie, 2022; Bruhn, Karlan, and Schoar, 2018). Firms with broader supplier networks also exhibit greater responsiveness, consistent with having greater flexibility to act on new information. Finally, SMEs that increase procurement following positive earnings news experience higher subsequent sales, suggesting that their adjustments are directionally appropriate and reflect forward-looking expectations rather than mechanical correlations.

Based on granular procurement invoice data, we further examine changes in SME purchasing behavior along two dimensions: the number of invoices and the average purchase amount per invoice. The results indicate that both measures respond significantly to earnings surprises, reflecting adjustments in both the frequency and scale of procurement. Further analysis reveals that these responses are particularly concentrated in core production-related materials, suggesting that earnings disclosures convey meaningful signals about future demand, to which SMEs actively adjust key operational inputs. These findings reinforce the view that corporate earnings releases serve as valuable information spillovers, guiding SMEs in reallocating resources toward core production activities in anticipation of shifting demand condition.

However, the informational benefits of earnings news are not without cost. SMEs appear unable to distinguish informative forecasts from those inflated by earnings management. When public firms engage in earnings boosting to meet benchmarks, local SMEs still respond positively, failing to recognize that the reported signals are partially misleading (Badertscher, Shanthikumar, and Teoh, 2019). This finding highlights a potential downside of disclosure externalities: low-sophistication market participants may propagate the effects of distorted information, magnifying inefficiencies rather than alleviating them.

Our study contributes to the literature on disclosure externalities and the real effects of financial reporting by showing that public firm disclosures shape the real decisions of non-reporting private firms. Prior research has documented that richer disclosure environments facilitate investment efficiency and capital allocation among public and private firms (Badertscher, Shroff, and White, 2013; Bernard, Blackburne, and Thornock, 2020) and that peer and industry disclosures improve information environments and lower costs of capital (Shroff, Verdi, and Yost, 2017). Chen, Ding, Du, Wang, and Tseng (2025) show that private-firm disclosures can generate real externalities for public firms' investment, yet Kim and Olbert (2022) find that transparency among private firms can reallocate global capital flows away from public firms. We complement and extend this line of work by shifting the focus from capital markets and firm valuation to real economic behavior—specifically, SMEs' procurement decisions that precede production and sales. In doing so, we link the literature on disclosure externalities with emerging evidence on the real-time economic impact of earnings news on households and local demand (Gipper et al., 2025).

We also investigate a mechanism that has been difficult to observe in prior work: how small, private enterprises interpret and act upon accounting-based information. Prior studies show that disclosure affects various aspects of real behavior, such as employee mobility and

consumption behaviors (deHaan, Li, and Zhou, 2023; Lourie et al., 2025), consumer spending and sentiment (Noh, So, and Zhu, 2025), and potential job seekers (Choi, Choi, and Malik, 2023). We show that SMEs adjust procurement in response to the direction of earnings news, rather than to contemporaneous stock-price movements, indicating that these firms react to fundamental information rather than transient market sentiment. This behavioral pattern reveals that accounting disclosures can transmit demand-relevant information to smaller firms with limited analytical capacity or market access—an effect that traditional capital-market studies cannot capture.

Empirically, our paper is among the first to use high-frequency, transaction-level data to study how financial reporting affects real operations in near real time (Li and Venkatachalam, 2022; Kang, Kim, and Stice, 2021). Drawing on daily VAT invoice records for more than 100,000 SMEs, we observe procurement adjustments that occur within days of earnings-forecast releases. This fine-grained evidence allows us to isolate the information channel and identify short-horizon operational responses to disclosure events—an approach that overcomes the aggregation and endogeneity limitations of earlier studies. From a policy perspective, the results suggest that improving disclosure credibility and timeliness can enhance decision-making not only for investors but also for the vast number of small firms that collectively drive economic growth and employment (Alekseev et al., 2023; Bonfim, Custódio, and Raposo, 2023).

2. Background and Hypothesis Development

2.1 Institutional Background: The Evolution of the Earnings-Forecast System in China

We focus on corporate earnings forecasts as key disclosure events because they provide early, forward-looking information that precedes formal earnings announcements. Prior studies argue that by the time earnings are released, much of the relevant information has already been

conveyed through management guidance and analyst forecasts (Ball and Lakshmanan, 2008). Forecasts therefore represent the first public signals of firms' expected performance and offer a clean setting to study how such information propagates through the economy.

China provides a particularly rich context for this analysis. Since the early 1990s, when the Shanghai and Shenzhen Stock Exchanges were established, China's listed-firm landscape has evolved from a state-dominated system with limited voluntary disclosure to one emphasizing transparency and standardized reporting (Huang et al., 2018; Lu, Shin, and Zhang, 2023). The country's earnings-forecast regulation developed through several major reforms that gradually transformed voluntary profit warnings into a quasi-mandatory, rules-based system. In 1998, the China Securities Regulatory Commission (CSRC) advised firms expecting substantial losses to issue a timely profit warning, although it neither specified an exact deadline nor provided a quantitative definition for the term "substantial"⁵. In 2000, Shanghai and Shenzhen Stock Exchanges further refined this guidance by stipulating that listed companies anticipating losses should release pre-loss announcements within two months after the fiscal year-end⁶, which was the first time the timing of profit warning was specified. However, the regulation in its early stage exhibited notable shortcomings. First, disclosures were largely voluntary, limiting the effectiveness of regulatory enforcement. Second, the absence of clearly defined quantitative thresholds weakened implementation, thereby reducing firms' incentives for compliance.

⁵ <http://www.law-lib.com/lawhtm/1998/68449.htm>

⁶ <http://www.law-lib.com/lawhtm/2000/73051.htm> (Shanghai Stock Exchanges)
<http://www.law-lib.com/lawhtm/2000/73068.htm> (Shenzhen Stock Exchanges)

A pivotal change occurred in 2001, the year China joined the WTO, when the Shanghai and Shenzhen Stock Exchanges implemented a new mandate. Firms anticipating a profit change of over 50 percent from the prior year were required to issue an earnings warning within 30 working days after the fiscal year-end⁷. Specifically, this marked the first official definition of a "material change" in performance—a swing of 50 percent or more. Furthermore, it accelerated the reporting timeline, moving the deadline from two months to within one month after the fiscal year-end.

In 2006, the Shenzhen Stock Exchange issued further guidance on ongoing earnings forecasts, explicitly incorporating a shift from loss to profit into the category of mandatory preliminary announcements⁸. Since this update, the criteria for mandatory earnings forecasts have remained consistent, comprising three main conditions: (1) the occurrence of a net loss, (2) a shift from loss to profit, and (3) a year-on-year increase or decrease in profit exceeding 50 percent⁹.

By the mid-2000s, China had established one of the most comprehensive earnings-forecast regimes among emerging markets. Forecasts became standardized, time-bound, and publicly accessible, with clear penalties for non-compliance. These institutional features make the Chinese setting uniquely suited to study information spillovers: disclosure timing is exogenously regulated, the content is comparable across firms, and the frequency of announcements generates numerous

⁷ <https://finance.sina.com.cn/y/20011220/156946.html> (Shanghai Stock Exchanges)
<https://finance.sina.com.cn/y/20011220/156948.html> (Shenzhen Stock Exchanges)

⁸ https://www.szse.cn/disclosure/notice/general/t20060710_499625.html

⁹ We don't include the evolution of earnings forecast requirements for semi-annual or quarterly reports. Focusing solely on annual earnings forecasts for two primary reasons. First, annual earnings forecasts are more consequential and are more closely followed by SMEs. Second, analyst forecast data is more comprehensive for annual reports, which facilitates the calculation of a reliable earnings surprise measure.

quasi-exogenous information shocks. Together, these features enable us to observe how public firms' forward-looking disclosures affect the expectations and behavior of nearby SMEs in real time

2.2 Hypothesis Development

Public-firm earnings disclosures can shape the expectations and real decisions of smaller, non-reporting firms. Earnings forecasts are particularly salient in this regard because they contain management's forward-looking assessment of business conditions and future profitability. Unlike historical financial statements, forecasts convey timely information about the firm's operating environment, cost structure, and anticipated demand. For nearby SMEs, these disclosures can serve as credible external signals that help reduce uncertainty about market prospects and guide short-term operational decisions.

This mechanism builds on the notion of information spillovers, in which disclosures by one firm improve the information environment of others (Foster, 1981; Badertscher, Shroff, and White, 2013). Prior studies show that richer disclosure environments enhance investment efficiency and coordination among public and private firms (Shroff, Verdi, and Yost, 2017; Bernard, Blackburne, and Thornock, 2020). Relatedly, research on financial reporting comparability demonstrates that consistent disclosure across firms facilitates the diffusion of knowledge and learning (Tseng and Zhong, 2024), suggesting that the benefits of transparency extend beyond investors to the real economy. Our analysis focuses on smaller, non-reporting firms that operate without analyst coverage or sophisticated forecasting systems. Because SMEs face high uncertainty about demand and limited access to forward-looking information, public firms' earnings forecasts may provide valuable insights about near-term market conditions. When a listed company reports earnings above expectations, SMEs in related industries may interpret this as a

signal of expanding demand and increase procurement to prepare for future sales. Conversely, negative earnings surprises may trigger caution, leading SMEs to scale back purchases or delay production.

This informational channel operates through uncertainty reduction rather than through capital-market reactions. SMEs are unlikely to rely on short-term stock-price fluctuations, which often reflect sentiment or liquidity conditions, and instead respond to accounting-based disclosures that contain fundamental economic information. Prior research shows that disclosure-induced spillovers can reduce technological and innovation uncertainty by providing firms with reference points for investment and development decisions (Tseng, 2022). From a real-options perspective (Dixit and Pindyck, 1994; Bloom, Bond, and Van Reenen, 2007), a reduction in uncertainty lowers the option value of waiting and prompts firms to act more decisively. Public-firm earnings forecasts thus function as timely signals that convert uncertainty into actionable expectations, especially for small firms with thin margins and high exposure to local demand cycles. However, several frictions may attenuate these responses. SMEs often lack financial expertise and may find it difficult to interpret complex disclosures (Anderson and McKenzie, 2022; Blankespoor, deHaan, and Marinovic, 2020). Long-term supplier relationships and financing constraints may limit their ability to adjust purchases even when they perceive demand changes (Bartlett and Morse, 2021). Whether SMEs meaningfully respond to public-firm earnings disclosures therefore remains an empirical question that depends on the balance between informational benefits and operational constraints.

Hypothesis: *Local SMEs' procurement decisions exhibit a significant short-term response to public firms' earnings-forecast disclosures, increasing (decreasing) following positive (negative) earnings surprises.*

This hypothesis captures the central prediction that accounting-based information disseminated through corporate earnings forecasts influences SMEs' real activity through an information–expectation channel rather than through financial-market mechanisms.

3. Data, Variable Measurement, and Research Design

3.1 Data and Sample Construction

We use proprietary transaction-level value-added tax (VAT) invoice data provided by a leading Chinese fintech firm that supports small and medium-sized enterprises (SMEs) in obtaining bank financing and establishing creditworthiness. To assess credit risk, the firm collects complete VAT invoice records from its client SMEs, including product descriptions, quantities, tax amounts, total transaction values, and invoice dates. These data are complemented by SMEs' business registration information—covering operational addresses, industry classifications, and registration dates—and by quarterly tax adjustment and financial filings submitted to the tax authorities.

A key advantage of this dataset is its granularity and identification value. It includes over 100,000 SMEs across a wide range of industries and regions, capturing day-to-day operational activity that has been largely inaccessible in prior research. Existing studies of private-firm behavior typically rely on survey or annual report data, which lack continuity and suffer from coarse timing. In contrast, our transaction-level VAT data allow us to observe procurement and sales behavior at a daily frequency, enabling us to align firm-level activity precisely with the timing of public firms' earnings disclosures.

This high-frequency design also provides a unique identification advantage by addressing the classic reflection problem (Manski, 1991)—the difficulty of distinguishing whether correlated

behavior across public and private firms reflects causal influence or common shocks. Because macroeconomic or industry-wide conditions evolve slowly relative to our daily observation window, it is implausible that shared external shocks would drive both public firms' earnings forecasts and SMEs' procurement within the same few-day interval. Consequently, any systematic change in SMEs' activity immediately after an earnings disclosure can be interpreted as a direct response to newly released information, rather than a simultaneous reaction to unobserved aggregate factors.

3.2 Variable Measurement

Our primary dependent variable measures SMEs' daily procurement activity. For each SME i on day t during the event window surrounding earnings-forecast c , we calculate the total value of all input invoices issued on that day. We exclude invoices with negative values (offsets of prior transactions). The variable $\ln(Purchase)_{i,t}$ is defined as the natural logarithm of one plus this total purchase amount aggregated from input invoices for SME i on day t . The key identifying assumption is that the invoice issuance date closely approximates the timing of the underlying economic activity. This measure captures real procurement decisions in near real time. On average, SMEs in our sample purchase approximately RMB 5,013 (USD 716) per day, with substantial cross-firm variation, ensuring sufficient power for inference.

Our main explanatory variable measures unexpected earnings news from public firms' forecasts. We define Earnings Surprise as the difference between the firm's forecasted earnings and the analyst consensus forecast, scaled by the consensus forecast. Analyst data are drawn from CSMAR and WIND, using all analyst forecasts issued between 90 days and one day before the firm's disclosure. If the management forecast is given as a range, we take the midpoint. This measure captures the unanticipated component of earnings news—information not yet reflected in

market expectations. In robustness analyses, we confirm that results are unchanged when earnings surprises are benchmarked against prior-year realized earnings rather than analyst forecasts.

3.3 Research Design and Identification Strategy

We employ an event-study-based stacked difference-in-differences (DID) design to estimate how SMEs' procurement activity responds to public firms' earnings-forecast announcements. Specifically, we estimate the following model:

$$\ln(Purchase)_{i,t} = \alpha_1 Earnings\ Surprise_c \times Post_{c,t} + \alpha_2 Post_{c,t} + \beta_i + \mu_c + \gamma_t + \eta_{p,t} + \varepsilon_{i,t}$$

where $\ln(Purchase)_{i,t}$ measures the procurement activity of SME i on day t , and $Earnings\ Surprise_c$ captures the magnitude of unexpected earnings news from public firm c . $Post_{c,t}$ is a dummy equal to one for the seven days following the earnings-forecast announcement and 0 otherwise. The coefficient of interest, α_1 , measures the change in SMEs' procurement behavior after earnings disclosures, conditional on the direction and size of the earnings surprise.

We include a rich set of high-dimensional fixed effects to mitigate confounding factors. SME fixed effects β_i absorb time-invariant firm characteristics, such as size, industry, and managerial quality. Event fixed effects μ_c capture unobserved heterogeneity across disclosure events, including firm reputation and industry trends. Day fixed effects γ_t control for national shocks, holidays, and reporting cycles. City-month fixed effects $\eta_{p,t}$, account for time-varying local conditions such as regional demand, policy changes, or credit availability. Standard errors are clustered at the SME level. Our identification strategy rests on two features of the setting. First, the exogenous timing of earnings-forecast disclosures—determined by CSRC regulations and firms' internal thresholds—creates plausibly unanticipated information shocks. Because SMEs cannot predict exactly when forecasts will be issued, changes in their procurement immediately after the disclosure can be interpreted as responses to new information rather than endogenous

timing. Second, the high-frequency nature of the data allows us to measure responses within days of the announcement, thereby alleviating the reflection problem (Manski, 1991) that arises when public and private firms are jointly affected by common shocks. It is unlikely that macroeconomic or industry-wide events could simultaneously influence both public firms' forecasts and SMEs' daily procurement within such short windows. This temporal precision strengthens causal interpretation by isolating the information-transmission channel and identifying the causal impact of public disclosures on SME behavior.

In summary, this research design leverages the combination of exogenous disclosure timing, transaction-level SME data, and high-frequency observation windows to provide clean evidence on how public firms' earnings disclosures causally affect the real activity of nearby private firms.

4. Empirical Results: The Impact of Public-Firm Disclosures on SME Procurement

4.1 Baseline Estimates

To test whether local SMEs respond to corporate earnings information, we estimate equation (1), and the results are reported in Table 2. Consistent with our hypothesis, the coefficient on *Earnings Surprise* \times *Post* is positive and statistically significant, indicating that local SMEs increase procurement following positive earnings surprises after the release of earnings-forecast disclosures.

As for economic significance, the estimated coefficient of 0.009 implies that, relative to the pre-event period, a one-standard-deviation increase in earnings surprise (0.69) results in a 0.62

percent rise in local SMEs' daily purchases ($0.009 \times 0.69 = 0.0062$)¹⁰, suggesting that earnings disclosures by public firms generate real-economic spillovers of a similar order. In actual terms, the 0.62 percent effect corresponds to an increase of roughly RMB 217.7 per firm over the next seven days ($0.62 \% \times 5,013 \times 7$). Given that approximately 52 million SMEs operated in China by the end of 2022, the aggregate effect can be approximated as $52 \text{ million} \div 293 \times 0.62 \% \times 5,013 \approx \text{RMB } 5.51 \text{ million per day}$ ¹¹, highlighting the sizeable real-economic externalities of public-firm earnings disclosures.

Furthermore, SMEs pay closer attention to earnings disclosures of public firms operating in the same industry. These disclosures not only boost confidence through unexpected earnings but also convey information about industry prospects, input-cost dynamics, and regulatory environments—factors that are particularly valuable for SMEs with limited information access. As part of shared supply chains, SMEs can use these earnings expectations to revise procurement decisions based on anticipated demand changes. Column (2) of Table 2 reports the corresponding results. *Treat* is an indicator variable equal to 1 if the SME operates in the same industry as the listed company. The coefficient on *Earnings Surprise* \times *Treat* \times *Post* is positive and significant, showing that SMEs in the same industry are more strongly influenced by earnings-forecast disclosures of public firms. A one-standard-deviation increase in earnings surprise leads to a 3.1 percent rise in purchases for local SMEs within the same industry. Importantly, the coefficient on *Earnings Surprise* \times *Treat* is insignificant, suggesting that SMEs in the same industry do not exhibit pre-existing differences in procurement behavior. At the same time, the coefficient on

¹⁰ This magnitude is comparable to the 0.42 percent increase in consumption documented by Gipper et al. (2025) and the 0.69 percent increase in employee spending documented by Lourie et al. (2025) in response to earnings announcement news.

¹¹ As of the end of 2022, China has 293 prefecture-level cities.

Earnings Surprise × *Post* remains positive and significant, implying that SMEs in unrelated industries also respond to earnings surprises, albeit to a smaller extent. This pattern mainly reflects a confidence effect consistent with our hypothesis.

To examine whether the response varies with the magnitude of earnings surprises, we divide the sample into five quintiles based on the size of the surprise. The results, reported in Table 3, use the lowest 20 percent (the smallest surprises) as the baseline group. We find that as earnings surprises increase, the positive impact on SMEs' procurement decisions becomes stronger, indicating that SMEs react promptly to public-firm earnings information and that their response scales with the informational content of the surprise rather than arising mechanically.

Finally, we test for dynamic effects to verify that SMEs' procurement fluctuates only after, and not before, the disclosure of earnings information. Figure 1 shows that local SMEs' procurement activity exhibits no significant change in the seven days preceding the earnings-forecast event, satisfying the parallel-trends assumption. After the event, however, procurement rises in proportion to the earnings surprise, confirming that SMEs adjust behavior only once new information becomes public.

Together, these results provide strong baseline evidence that SMEs react causally and in real time to public-firm earnings-forecast disclosures through an information-expectation channel.

4.2 Cross-Sectional Heterogeneity

4.2.A. The Information Role of Social Media and Analysts

We next examine how the response of SMEs to public-firm earnings disclosures varies across information environments and firm characteristics. The results are summarized in Tables 4 and 5.

Panel A of Table 4 investigates the role of media attention, which acts as an information intermediary in capital markets and enables rapid dissemination of earnings news (Bushee et al. 2010). Because such content attracts readership and attention, SMEs are more likely to notice and respond when media coverage is extensive. We measure media attention as the number of news reports published within three days after each earnings-forecast disclosure and classify events as high- or low-attention based on the sample median. Column (1) of Table 4 shows that the coefficient on *Earnings Surprise* \times *Post* is positive and significant for high-attention events, whereas Column (2) shows no significant effect for low-attention events. This finding highlights the central role of the media as an information-transmission channel: broader coverage increases both the salience and perceived credibility of earnings forecasts, prompting stronger SME reactions.

Panel B of Table 4 examines the role of analyst coverage, another key information-intermediation channel. Analysts help investors interpret financial results and reduce information asymmetry, thereby enhancing the timeliness with which information diffuses beyond capital markets. When a public firm is followed by more analysts, its earnings disclosures are more visible and easily interpretable to local stakeholders. Consistent with this reasoning, we find that SMEs' procurement decisions are positively associated with earnings surprises only when the disclosing firm has above-median analyst coverage. Together, Panels A and B demonstrate that the responsiveness of SMEs depends critically on the intensity of information diffusion through external intermediaries.

4.2.B. Firm Age and Responsiveness to Public Information

We next test whether SMEs' responsiveness to public information depends on firm age. For newly established SMEs, survival and expansion are primary objectives. Lacking a stable

customer base or extensive operational history, these firms must actively monitor market signals to identify emerging opportunities. In contrast, long-established SMEs tend to maintain stable supplier and customer networks and therefore rely more on relational contracting than on short-term information shocks.

We classify SMEs registered after 2017 as *newly established* and those registered before 2017 as *long-established*. Results reported in Table 5, Panel A show that purchases by long-established SMEs do not respond significantly to earnings surprises, as the coefficient on *Earnings Surprise* \times *Post* is insignificant in Column (1). In contrast, newly established SMEs exhibit a significant positive relationship between purchases and earnings surprises following forecast disclosures. These findings indicate that younger firms are more attentive to public-firm earnings information and use it as a forward-looking signal to anticipate demand shifts and expansion opportunities.

4.2.C. Heterogeneity by Financial Expertise

We then examine whether SMEs with professional financial staff respond differently to public-firm disclosures. Professional financial personnel play a central role in interpreting accounting information and translating it into operational guidance—such as whether to increase procurement or adjust cash-flow planning. SMEs without dedicated financial officers often rely on intuition or retrospective observation, making them more prone to delayed or inefficient responses.

Using business-registration data, we identify whether an SME employs professional financial personnel. If the financial officer is concurrently the firm's legal representative, we classify the SME as lacking professional financial staff. The evidence, reported in Table 5, Panel B, shows that only SMEs with professional financial personnel exhibit a significant positive short-

term response of procurement to earnings surprises. This suggests that financial expertise enhances a firm's ability to interpret public information and to adjust operations promptly when new signals about demand become available.

4.2.D. Supplier Diversification and Procurement Adjustments

we next explore whether the flexibility of an SME's supplier network affects its responsiveness to earnings information. A broader supplier base enables firms to adjust procurement more rapidly and with lower switching costs. We classify SMEs into two groups based on whether their number of suppliers in the month prior to disclosure is above or below the sample median. As shown in Table 5, Panel C, Column (1), SMEs with a relatively larger supplier base exhibit a significant positive association between procurement and earnings surprises, whereas those with fewer suppliers display little evidence of timely adjustment. This result indicates that supplier diversification enhances the agility with which SMEs translate informational signals into procurement decisions.

4.2.E. CEO Age and Procurement Adjustments

Finally, we investigate whether the age of SME CEOs influences the responsiveness of procurement decisions to public firms' earnings information. In general, older CEOs tend to be more conservative and less likely to adjust decisions promptly in response to market signals (Yim, 2013). Here, CEO age is obtained from their ID card information, and the sample is divided into two groups based on whether the CEO was born before 1972. Table 5, Panel D reports the results. Column (1) shows that SMEs led by relatively younger CEOs adjust their procurement strategies more swiftly following earnings disclosures, as indicated by a positive and statistically significant coefficient on *Earnings Surprise* \times *Post*. In contrast, as shown in column (2), the coefficient for

firms with relatively older CEOs is statistically insignificant, suggesting that these SMEs do not respond meaningfully to earnings information.

Taken together, the results in Tables 4 and 5 reveal systematic heterogeneity in SMEs' responses to public-firm earnings disclosures. Firms are most responsive when information is widely disseminated (via media or analysts), when they are younger and more flexible, when they possess financial expertise, when they maintain diversified supplier networks and when they are led by relatively younger CEOs. These findings reinforce the view that financial disclosure functions as a localized information channel whose real effects depend on the relevance, accessibility, and interpretability of the signal.

4.3 Evidence from VAT Invoice Information

To further investigate how earnings surprises shape local SMEs' behavior, we turn to detailed VAT input-invoice information that captures firms' daily purchasing activities. These data allow us to decompose procurement responses into multiple dimensions—frequency, value, type of goods, and spending categories—providing a granular view of how SMEs adjust their operations after earnings disclosures.

4.3.A. Procurement responses through invoice counts and values

From the baseline analysis, we find that local SMEs adjust their procurement decisions in response to earnings surprises. We now explore two dimensions of this behavior: the number of invoices and the average value per invoice. Specifically, we define $\ln (\# \text{ Input Invoice})_{i,t}$ for SME i on day t as the natural logarithm of one plus the number of purchase invoices, and $\ln (\text{Average Invoice Value})_{i,t}$ as the natural logarithm of the total purchase amount divided by the number of invoices for SME i on day t .

Table 6, Panel A reports the results. Both measures are positively associated with earnings surprises following earnings-forecast disclosures. This finding indicates that SMEs not only issue more purchase invoices but also increase the average size of their transactions after positive earnings surprises, suggesting a broad-based intensification of procurement activity rather than a narrow adjustment in a single dimension.

4.3.B. Procurement adjustments in fixed-asset investment

We next examine whether SMEs alter their productive capacity through fixed-asset purchases following earnings disclosures. Fixed-asset investment—such as production lines, machinery, and instruments—reflects firms’ efforts to expand capacity in anticipation of future demand. We measure fixed-asset purchases using input invoices that specify such items, aggregating the total purchase amount at the SME i , day t level and applying a logarithmic transformation.

Table 6, Panel B presents the results. In column (1), where missing values are replaced with zero, the coefficient of interest is statistically insignificant, likely because fixed-asset purchases occur infrequently among SMEs, yielding limited day-to-day variation. In column (2), after excluding missing observations, the coefficient on *Earnings Surprise* \times *Post* becomes positive and significant, implying that earnings surprises are associated with higher fixed-asset investment. This result suggests that SMEs experiencing positive demand signals expand capacity in preparation for future sales growth.

4.3.C. Procurement adjustments in core business inputs

We further test whether SMEs’ increased procurement is concentrated in their core production inputs—the raw materials most directly tied to revenue generation. Earnings forecasts primarily convey expectations about future demand, which should affect these inputs more

strongly than ancillary materials. For each SME, we identify its three most frequently purchased raw materials as core inputs and define $\ln(Purchase_top3)_{i,t}$ as the natural logarithm of one plus the total purchase amount of these three items for SME i on day t .

Table 7, Panel A reports the results. In column (1), where missing values of $\ln(Purchase_top3)_{i,t}$ are replaced with zero, the coefficient on $Earnings\ Surprise \times Post$ is positive and significant, indicating that SMEs primarily respond to earnings surprises through adjustments in core-input procurement. In column (2), after excluding observations with missing values, the results remain robust. When we construct a dummy variable indicating whether an SME procured any of its top-three core inputs on a given day, we again find a positive and significant association with earnings surprises. These results confirm that the procurement response is concentrated in the materials most essential to production.

4.3.D. Employee activities

Finally, we examine whether non-production-related expenditures, such as employee activities, are affected by earnings information. We classify invoices related to entertainment, dining, and accommodation as employee-activity expenses. Table 7, Panel B presents the results, showing no significant changes in these expenditures following earnings disclosures. This finding reinforces the interpretation that SMEs react to earnings information primarily by adjusting production-related activities—procurement frequency, transaction value, core-input purchases, and fixed-asset investment—rather than discretionary or non-operational spending.

Overall, the evidence from invoice-level analyses demonstrates that corporate earnings disclosures influence SMEs' real operations through targeted, production-oriented adjustments. Earnings forecasts provide credible signals of future demand that prompt SMEs to increase

procurement and capacity in the short term, underscoring the pivotal role of financial disclosure in coordinating business expectations across the public and private sectors.

5. Extensions, Real Effects, and Robustness

5.1 Evidence from Earnings Boosting

We next examine whether local SMEs can distinguish between genuine and inflated earnings forecasts by public firms. Managers often have incentives to overstate projected earnings, either to boost short-term stock prices and lower financing costs or to enhance career prospects and reputation, both of which are tied to stock performance. Prior research shows that local households are generally unable to detect such manipulations (Gipper et al., 2025). Compared with households, SMEs could plausibly have an informational advantage through supply-chain connections or trade relationships with public firms. Because their business performance depends directly on real demand, they should be more motivated to assess the credibility of earnings signals.

To test this, we construct a measure of earnings boosting, defined as forecasted earnings minus realized earnings, scaled by realized earnings. If forecasted earnings exceed realized earnings by more than 10 percent, the forecast is classified as boosted. Table 8 reports the results. The coefficient on *Earnings Surprise* \times *Earnings Boost* \times *Post* is positive and significant, indicating that SMEs actually increase procurement more strongly when the disclosed earnings are inflated. This finding suggests that SMEs do not differentiate between genuine earnings surprises and exaggerated forecasts; instead, they react mechanically to the magnitude of the earnings surprise within the seven-day post-disclosure window.

One explanation is that most SMEs in our sample have limited direct interactions with listed firms, which reduces their ability to detect misreporting. Moreover, consistent with this interpretation, Beatty et al. (2013) document that even peer public firms tend to increase

investment during periods of earnings manipulation by their counterparts. Our evidence thus extends these insights to the SME sector, showing that the real-economy spillovers of financial reporting are not conditioned on the credibility of the underlying information.

5.2 Real Effects on SMEs' Financial Performance

We then examine whether earnings surprises translate into measurable improvements in local SMEs' financial outcomes. Using output-invoice data, we measure weekly sales performance and focus on changes in the four weeks before and after earnings forecasts. Specifically, $Ln(Weekly\ Sales)_{i,t}$ is defined as the natural logarithm of aggregated sales for SME i in week t .

Table 9 presents the results. The coefficient on $Earnings\ Surprise \times Post$ is positive and statistically significant, indicating that SMEs exposed to higher earnings surprises experience greater subsequent sales growth. This pattern supports the interpretation that earnings disclosures by publicly listed firms convey meaningful information about future demand conditions, which SMEs incorporate into their operational and sales planning. The finding underscores that public-firm disclosures not only affect short-term procurement behavior but also have tangible real effects on SMEs' downstream performance.

5.3 Robustness Tests

Finally, we conduct a series of robustness checks to verify that the observed results are not driven by alternative explanations.

First, we test whether SMEs' procurement decisions respond to stock market reactions rather than to earnings surprises themselves. Because stock price movements may more directly capture market expectations, this test distinguishes between financial-market effects and real-information effects. We calculate the cumulative abnormal return (CAR) for each earnings forecast event during the $[0, 2]$ window and include it as an independent variable in the regression. Table

10, Panel A, Column (1) shows that the coefficient on $CAR [0, 2] \times Post$ is statistically insignificant, indicating that SMEs' procurement behavior does not respond to short-term stock-price fluctuations. In Column (2), we include both $Earnings Surprise \times Post$ and $CAR [0, 2] \times Post$ simultaneously. Only the former remains significant and positive, while the latter is not, confirming that SMEs respond to the informational content of earnings forecasts rather than to contemporaneous stock market movements. This is consistent with the notion that earnings surprises more directly signal future demand, whereas CARs may be affected by sentiment or macroeconomic noise.

Second, we re-estimate our main specification using an alternative benchmark for earnings expectations based on the prior year's realized earnings rather than analysts' forecasts. The alternative measure, *Earnings Surprise Prior Year*, is defined as forecasted earnings minus last year's earnings, divided by the absolute value of last year's earnings. The results, shown in Table 10, Panel B, confirm that the coefficient on $Earnings Surprise Prior Year \times Post$ remains positive and significant, demonstrating that our findings are robust to alternative benchmark definitions.

Finally, we consider the possibility that SMEs react differently to the optimism embedded in various types of earnings forecasts. We assign distinct values to forecast types based on their relative optimism and re-estimate the model accordingly. The results indicate that SME procurement decisions are positively correlated with the level of optimism in earnings forecasts. This pattern suggests that SMEs view more optimistic earnings disclosures as stronger signals of future demand growth and adjust procurement more aggressively in anticipation.

Collectively, the robustness analyses confirm that our main findings are not driven by stock market reactions, benchmark definitions, or forecast types. Instead, SMEs' procurement decisions are systematically driven by the unexpected component of earnings information, reinforcing the

interpretation that public-firm disclosures function as real-economy information signals that shape the behavior of private firms.

6 Conclusion

This study provides new evidence that corporate earnings disclosures by public firms generate real information externalities that reach deeply into the small-firm sector. Using a unique high-frequency dataset of transaction-level VAT invoices from over 100,000 Chinese SMEs, we show that local SMEs promptly adjust procurement following nearby public firms' earnings forecasts. These adjustments are economically meaningful, scale with the magnitude of earnings surprises, and are concentrated in production-related purchases rather than discretionary spending. Our findings suggest that accounting-based information, long studied for its capital-market relevance, also shapes real decisions among non-reporting private firms that anchor regional economic activity.

Our empirical design exploits the fine temporal resolution of daily transaction data to capture short-run adjustments in SMEs' behavior around disclosure events. This approach mitigates the reflection problem that has constrained earlier studies: within such a narrow event window, it is unlikely that common local shocks simultaneously drive both public-firm disclosures and SME procurement. By focusing on these immediate responses, we identify how information transmits through local product-market channels rather than through macroeconomic or financing effects.

We also highlight how the strength of these information spillovers depends on visibility and absorptive capacity. SMEs respond more strongly when disclosures receive greater media or analyst attention, when they operate in the same industry, and when they possess professional

financial expertise or a more diversified supplier network. However, SMEs fail to distinguish between genuine and inflated earnings forecasts, indicating that information externalities can transmit both credible and distorted signals. Together, these results expand the scope of research on the real effects of financial reporting, showing that public-firm disclosures influence not only investors and large firms but also the operational decisions of smaller enterprises.

More broadly, this paper contributes to an emerging literature connecting financial reporting with real-time economic activity. Advances in digitalization and access to granular administrative data now enable researchers to observe how accounting information diffuses across economic networks at high frequency. Our analysis illustrates how such data can uncover the micro-dynamics of disclosure spillovers and offers a foundation for future research on how credibility, network structure, and regulatory design shape the transmission of financial information. Understanding these mechanisms is crucial for both accounting scholarship and policy aimed at strengthening transparency and productivity in the SME sector.

Reference

- Alekseev, G., Amer, S., Gopal, M., Kuchler, T., Schneider, J. W., Stroebel, J., & Wernerfelt, N. (2023). The effects of COVID-19 on US small businesses: Evidence from owners, managers, and employees. *Management Science*, 69(1), 7-24.
- Anderson, S. J., & McKenzie, D. (2022). Improving business practices and the boundary of the entrepreneur: A randomized experiment comparing training, consulting, insourcing, and outsourcing. *Journal of Political Economy*, 130(1), 157-209.
- Badertscher, B., Shroff, N., & White, H. D. (2013). Externalities of public firm presence: Evidence from private firms' investment decisions. *Journal of Financial Economics*, 109(3), 682-706.
- Badertscher, B. A., Shanthikumar, D. M., & Teoh, S. H. (2019). Private firm investment and public peer misvaluation. *The Accounting Review*, 94(6), 31-60.
- Baginski, S. P., and J. M. Hassell. 1990. The market interpretation of management earnings forecasts as a predictor of subsequent financial analyst forecast revision. *The Accounting Review* 65 1: 175–190.
- Bajgar, M., & Srholec, M. (2025). Crowding in or crowding out? Evidence from discontinuity in the assignment of business R&D subsidies. *Journal of Public Economics*, 245, 105357.
- Ball, R., & Shivakumar, L. (2008). How much new information is there in earnings? *Journal of Accounting Research*, 46(5), 975-1016.
- Bartlett III, R. P., & Morse, A. (2021). Small-business survival capabilities and fiscal programs: Evidence from Oakland. *Journal of Financial and Quantitative Analysis*, 56(7), 2500-2544.
- Beatty, A., Liao, S., & Yu, J. J. (2013). The spillover effect of fraudulent financial reporting on peer firms' investments. *Journal of Accounting and Economics*, 55(2-3), 183-205.
- Bernard, D., Blackburne, T., & Thornock, J. (2020). Information flows among rivals and corporate investment. *Journal of Financial Economics*, 136(3), 760-779.
- Blankespoor, E., deHaan, E., & Marinovic, I. (2020). Disclosure processing costs, investors' information choice, and equity market outcomes: A review. *Journal of Accounting and Economics*, 70(2-3), 101344.
- Bloom, N., Bond, S., & Van Reenen, J. (2007). Uncertainty and investment dynamics. *The Review of Economic Studies*, 74(2), 391-415.
- Bonfim, D., Custódio, C., & Raposo, C. (2023). Supporting small firms through recessions and recoveries. *Journal of Financial Economics*, 147(3), 658-688.
- Bruhn, M., Karlan, D., & Schoar, A. (2018). The impact of consulting services on small and medium enterprises: Evidence from a randomized trial in Mexico. *Journal of Political Economy*, 126(2), 635-687.
- Bushee, B. J., Core, J. E., Guay, W., & Hamm, S. J. (2010). The role of the business press as an information intermediary. *Journal of Accounting Research*, 48(1), 1-19.
- Chen, F., Ding, Y., Du, X., Tseng, K., & Wang, X. (2025). Are There Externalities of Private Firm News Disclosure? Evidence from Public Firms' Investment. *The Accounting Review*, 100(5), 103-130.
- Chen, A. Y., Even-Tov, O., Kang, J. K., & Wittenberg-Moerman, R. (2025). Digital lending and financial well-being: through the lens of mobile phone data. *The Accounting Review*, 100(4), 135-159.

- Chen, S., & Lee, D. (2023). Small and vulnerable: SME productivity in the great productivity slowdown. *Journal of Financial Economics*, 147(1), 49-74.
- Choi, B. G., Choi, J. H., & Malik, S. (2023). Not just for investors: The role of earnings announcements in guiding job seekers. *Journal of Accounting and Economics*, 76(1), 101588.
- Christoffersen, J., Minnis, M., Muhn, M., Plenborg, T., & Seitz, M. N. B. (2025). Peer Financial Benchmarking and Firm Learning: Evidence from a Field Experiment. *Chicago Booth Accounting Research Center Research Paper Series*.
- Coller, M., and T. L. Yohn. 1997. Management forecasts and information asymmetry: An examination of bid-ask spreads. *Journal of Accounting Research* 35 2: 181–191.
- deHaan, E., Li, N., & Zhou, F. S. (2023). Financial reporting and employee job search. *Journal of Accounting Research*, 61(2), 571-617.
- Dixit, A. K., & Pindyck, R. S. (1994). *Investment under uncertainty*. Princeton university press.
- Friedman, H. L., Huang, K. K., Wu, K., & Zeng, Z. (2024). How Does Management Guidance Affect Investors' Responses to Earnings Announcements? Available at SSRN.
- Foster, G. (1981). Intra-industry information transfers associated with earnings releases. *Journal of Accounting and Economics*, 3(3), 201-232.
- Galdon-Sanchez, J. E., Gil, R., & Uriz-Uharte, G. (2025). The Value of Information in Competitive Markets: Evidence from Small and Medium-Sized Enterprises. *Journal of Political Economy*, 133(1), 252-305.
- Garmaise, M. J., Levi, Y., & Lustig, H. (2024). Spending less after (seemingly) bad news. *The Journal of Finance*, 79(4), 2429-2471.
- Gilje, E. P., & Taillard, J. P. (2016). Do private firms invest differently than public firms? Taking cues from the natural gas industry. *The Journal of Finance*, 71(4), 1733-1778.
- Gipper, B., Gu, L., Kim, J., & Noh, S. (2025). Earnings news and local household spending. Available at SSRN. *JAR R&R*
- Heinle, M. S., Kim, C., Taylor, D. J., & Zhou, F. S. (2025). Signaling long-term information using short-term forecasts. *Journal of Accounting and Economics*, 101768.
- Hirst, D. E., L. Koonce, and S. Venkataraman (2008), 'Management Earnings Forecasts: A Review and Framework', *Accounting Horizons*, Vol. 22, No. 3, pp. 315–38.
- Huang, X., Li, X., Tse, S., & Tucker, J. W. (2018). The effects of a mixed approach toward management earnings forecasts: Evidence from China. *Journal of Business Finance & Accounting*, 45(3-4), 319-351.
- Kang, J. K., Stice-Lawrence, L., & Wong, Y. T. F. (2021). The firm next door: Using satellite images to study local information advantage. *Journal of Accounting Research*, 59(2), 713-750.
- Kim, O. S., Parker, J. A., & Schoar, A. (2025). Revenue collapses and the consumption of small business owners in the COVID-19 pandemic. *Journal of Financial Economics*, 104079.
- Kim, O., & Verrecchia, R. E. (1997). Pre-announcement and event-period private information. *Journal of Accounting and Economics*, 24(3), 395-419.
- Kim, J., & Olbert, M. (2022). How does private firm disclosure affect demand for public firm equity? Evidence from the global equity market. *Journal of Accounting and Economics*, 74(2-3), 101545.

- Kimbrough, M. D., Paharia, N., Wang, X., & Wei, S. (2024). The brand value of earnings: An event study of consumer responses to earnings announcements. *The Accounting Review*, 99(3), 259-285.
- Leuz, C. and P. D. Wysocki (2016), 'The Economics of Disclosure and Financial Reporting Regulation: Evidence and Suggestions for Future Research', *Journal of Accounting Research*, Vol. 54, No. 2, pp. 525–622.
- Li, B., & Wang, A. Y. (2024). On the EPA's Radar: The Role of Financial Reports in Environmental Regulatory Oversight. *Journal of Accounting Research*, 62(5), 1849-1900.
- Li, B., & Venkatachalam, M. (2022). Leveraging big data to study information dissemination of material firm events. *Journal of Accounting Research*, 60(2), 565-606.
- Li, X. and H. I. Yang (2015), 'Mandatory Financial Reporting and Voluntary Disclosure: The Effect of Mandatory IFRS Adoption on Management Forecasts', *The Accounting Review*, Vol. 91, No. 3, pp. 933–53.
- Liu, J., Shi, W., Zeng, C., & Zhang, G. (2023). Does public firms' mandatory IFRS reporting crowd out private firms' capital investment? *Journal of Accounting Research*, 61(4), 1263-1312.
- Lourie, B., Nekrasov, A., Truong, P., & Zhu, C. (2025). Do Earnings Announcements Affect Employee Spending? Evidence from Transaction Data. *Journal of Accounting Research* *Forthcoming*.
- Lu, H., Shin, J. E., & Zhang, M. (2023). Financial reporting and disclosure practices in China. *Journal of Accounting and Economics*, 76(1), 101598.
- Manski, C. F. (1991). Regression. *Journal of Economic Literature*, 29(1), 34-50.
- Moschella, J., Boulianne, E., & Magnan, M. (2023). Risk management in small-and medium-sized businesses and how accountants contribute. *Contemporary Accounting Research*, 40(1), 668-703.
- McKenzie, D., & Woodruff, C. (2017). Business practices in small firms in developing countries. *Management Science*, 63(9), 2967-2981.
- Noh, S., So, E. C., & Zhu, C. (2025). Financial reporting and consumer behavior. *The Accounting Review*, 100(1), 407-435.
- Pownall, G., C. Wasley, and G. Waymire. 1993. The stock price effects of alternative types of management earnings forecasts. *The Accounting Review* 68 4: 896–912.
- Phillips, G. M., & Sertsios, G. (2017). Financing and new product decisions of private and publicly traded firms. *The Review of Financial Studies*, 30(5), 1744-1789.
- Sheen, A. (2020). Do public and private firms behave differently? An examination of investment in the chemical industry. *Journal of Financial and Quantitative Analysis*, 55(8), 2530-2554.
- Shroff, N., Verdi, R. S., & Yost, B. P. (2017). When does the peer information environment matter?. *Journal of Accounting and Economics*, 64(2-3), 183-214.
- Tseng, K. (2022). Learning from the Joneses: Technology spillover, innovation externality, and stock returns. *Journal of Accounting and Economics*, 73(2-3), 101478.
- Tseng, K., & Zhong, R. I. (2024). Standing on the shoulders of giants: Financial reporting comparability and knowledge accumulation. *Journal of Accounting and Economics*, 78(1), 101685.
- Yim, S. (2013). The acquisitiveness of youth: CEO age and acquisition behavior. *Journal of Financial Economics*, 108(1), 250-273.

Figure 1: Dynamic Effects

This figure shows the dynamic effects of the earnings surprise on SMEs' procurement decisions over a [-7, +7] calendar-day window centered around each earnings forecast event. The dependent variable $\ln(Purchase)_{i,t}$ is the natural logarithm of purchase aggregated by input invoices for SME i on day t . The figure plots the estimated coefficients of α_j from the following specification: $\ln(Purchase)_{i,t} = \sum_{j \neq -7} \alpha_j Earnings Surprise_c \times Post_{c,t=j} + \beta Post_{c,t=j} + \beta_i + \mu_c + \gamma_t + \eta_{p,t} + \varepsilon_{i,t}$. The shaded region between the two gray lines represents the 90% confidence interval.

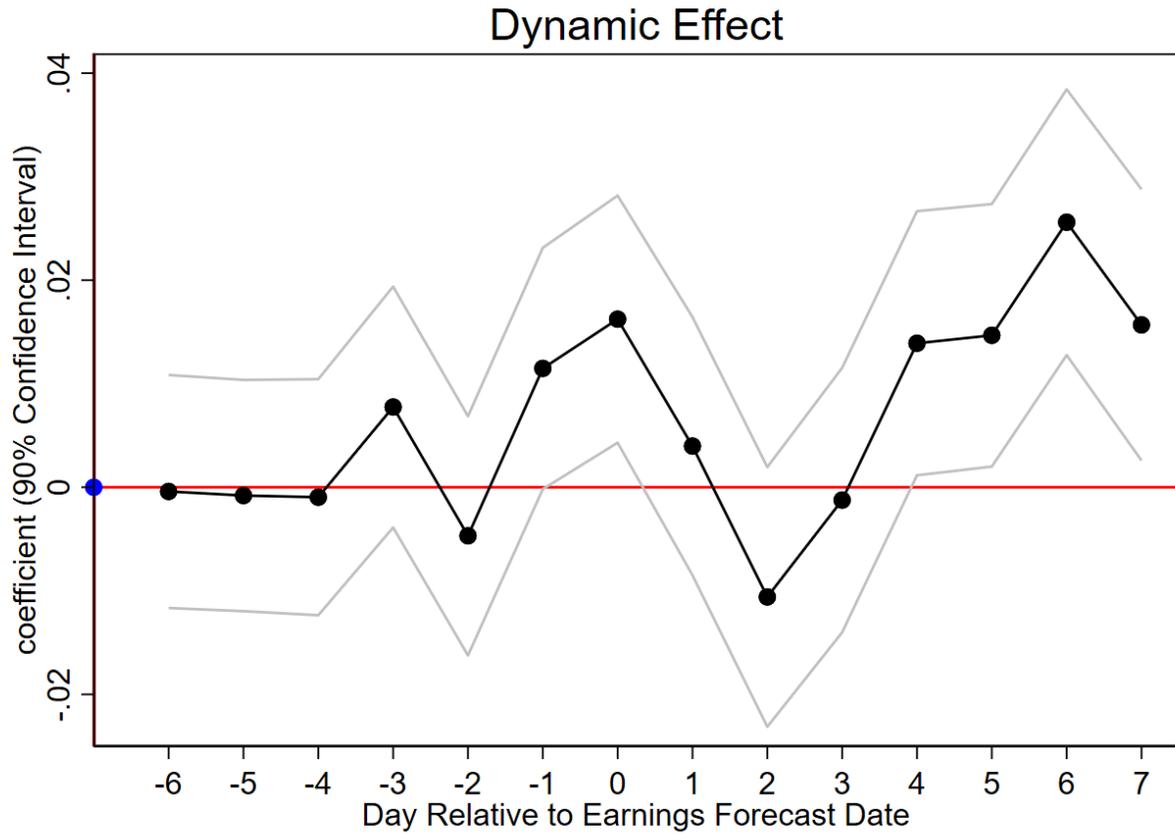


Table1:Summary Statistics

This table reports the summary statistics of the main variables used in our empirical tests. The sample period is 01/01/2019-31/12/2022.

Variable	N	Mean	SD	p10	p50	p90
<i>Earnings Surprise</i>	6,419,156	-0.180	0.690	-0.500	-0.0400	0.140
<i>Ln (Purchase)</i>	6,419,156	8.520	2.770	5.300	8.310	12.33
<i>Post</i>	6,419,156	0.490	0.500	0	0	1
<i>High News Coverage</i>	6,419,156	0.227	0.419	0	0	1
<i>High Analyst Coverage</i>	6,419,156	0.493	0.500	0	0	1
<i>Long-Established SME</i>	5,368,365	0.683	0.465	0	1	1
<i>Financial Expert</i>	6,035,933	0.736	0.441	0	1	1
<i>High Supplier Number</i>	6,419,156	0.655	0.475	0	1	1
<i>High Earnings Forecast Count</i>	6,419,156	0.356	0.479	0	0	1
<i>CEO Age</i>	6,397,645	0.266	0.442	0	0	1
<i>Ln (Purchase_top3)</i>	2,112,390	7.631	3.077	4.494	6.641	12.29
<i>Ln (#Input Invoices)</i>	6,400,780	1.227	0.665	0.693	1.099	2.197
<i>Ln (Average Invoice Value)</i>	6,400,780	7.845	2.336	5.170	7.678	11.16
<i>Ln (Fixed Assets Investment)</i>	6,419,156	0.924	2.738	0	0	5
<i>Ln (Employee-Activity Expenditures)</i>	1,510,172	6.424	1.204	5.017	6.288	8.064
<i>Earnings Boost</i>	6,419,156	0.124	0.329	0	0	1
<i>Earnings Surprise_prior_year</i>	5,896,007	0.822	2.671	-0.679	0.485	2.072
<i>CAR [0, 2]</i>	6,221,789	0.008	0.072	-0.076	0.004	0.099
<i>Forecast Type</i>	6,419,156	2.024	2.384	-2	2	4
<i>Ln (Weekly Sales)</i>	6,067,867	11.900	1.900	9.406	12.017	14.23

Table 2: Corporate Earnings Disclosure and Local SME Procurement

This table reports the estimates from the following SME-event-day level regression using a [-7, +7] calendar-day window centered around each earnings forecast event: $\ln(Purchase)_{i,t} = \alpha_1 Earnings\ Surprise_c \times Post_{c,t} + \alpha_2 Post_{c,t} + \beta_i + \mu_c + \gamma_t + \eta_{p,t} + \varepsilon_{i,t}$. The key dependent variable, $\ln(Purchase)_{i,t}$, is defined as the logarithm of one plus the total purchase aggregated from input invoices for SME i at day t centered around the earnings disclosure events. The key independent variable, $Earnings\ Surprise_c$, is calculated as the difference between the forecasted earnings and the analyst consensus forecast, scaled by the absolute value of the consensus forecast earnings. Fixed effects are controlled at firm, events, year×month×day and city×year×month level. Standard errors are clustered at the SME level. All continuous variables are winsorized at 1% and 99% levels. *, ** and *** indicate statistical significance at 10%, 5% and 1%, respectively.

	(1)	(2)
	<i>Ln (Purchase)</i>	<i>Ln (Purchase)</i>
<i>Earnings Surprise*Post</i>	0.009*** (3.015)	0.008** (1.989)
<i>Post</i>	0.001 (0.274)	0.020*** (3.906)
<i>Earnings Surprise*Treat*Post</i>		0.045*** (3.434)
<i>Treat*Post</i>		-0.101*** (-13.664)
<i>Earnings Surprise*Treat</i>		0.006 (0.585)
<i>Treat</i>		0.053*** (6.368)
<i>Firm</i>	Yes	Yes
<i>Cohort</i>	Yes	Yes
<i>Year*Month*Day</i>	Yes	Yes
<i>City*Year*Month</i>	Yes	Yes
<i>N</i>	6,419,156	4,278,329
<i>F</i>	4.552	40.830
<i>r2_adj</i>	0.293	0.294

Table 3: Role of Earnings Surprise

This table reports the estimates from the following SME-event-day level regression using a [-7, +7] calendar-day window centered around each earnings forecast event: $\ln(Purchase)_{i,t} = \sum_{k=2}^5 \alpha_k Kth\ Quintile\ of\ Earnings\ Surprise_c \times Post_{c,t} + \alpha_2 Post_{c,t} + \beta_i + \mu_c + \gamma_t + \eta_{p,t} + \varepsilon_{i,t}$. The key independent variable, *Kth Quintile of Earnings Surprise_c*, classifies earnings surprises into quintiles, with the first quintile (lowest surprises) serving as the baseline category and the fifth quintile (highest surprises) capturing the most positive earnings news. The dependent variable, *Ln (Purchase)_{i,t}*, is defined as the logarithm of one plus the total purchase aggregated from input invoices for SME *i* at day *t* centered around the earnings disclosure events. Fixed effects are controlled at firm, events, year×month×day and city×year×month level. Standard errors are clustered at the SME level. All continuous variables are winsorized at 1% and 99% levels. *, ** and *** indicate statistical significance at 10%, 5% and 1%, respectively.

	(1)
	<i>Ln (Purchase)</i>
<i>2st Earnings Surprise*Post</i>	0.003 (0.396)
<i>3st Earnings Surprise*Post</i>	0.027*** (4.018)
<i>4st Earnings Surprise*Post</i>	0.051*** (7.755)
<i>5st Earnings Surprise*Post</i>	0.015** (2.229)
<i>Post</i>	-0.020*** (-3.391)
<i>Firm</i>	Yes
<i>Cohort</i>	Yes
<i>Year*Month*Day</i>	Yes
<i>City*Year*Month</i>	Yes
<i>N</i>	6,419,156
<i>F</i>	16.350
<i>r2_adj</i>	0.293

Table 4: Heterogeneity: Information Environments

This table reports the heterogeneity analyses of the main estimates from the perspective of the information environment. The baseline regression model is specified as: $Ln(Purchase)_{i,t} = \alpha_1 Earnings Surprise_c \times Post_{c,t} + \alpha_2 Post_{c,t} + \beta_i + \mu_c + \gamma_t + \eta_{p,t} + \varepsilon_{i,t}$. Panel A examines heterogeneity by media coverage, where columns (1) and (2) divide the sample based on the median level of media coverage. Panel B explores heterogeneity by analyst following, where columns (1) and (2) split the sample according to the median number of analyst followers. The main independent variable, $Ln(Purchase)_{i,t}$, is defined as the logarithm of one plus the total purchase aggregated from input invoices for SME i at day t centered around the earnings disclosure events. And the dependent variable, $Earnings Surprise_c$, is calculated as the difference between the forecasted earnings and the analyst consensus forecast, scaled by the absolute value of the consensus forecast earnings. Fixed effects are controlled at firm, events, year×month×day and city×year×month level. Standard errors are clustered at the SME level. All continuous variables are winsorized at 1% and 99% levels. *, ** and *** indicate statistical significance at 10%, 5% and 1%, respectively.

Panel A: Media coverage

	(1) <i>Higher coverage</i> <i>Ln (Purchase)</i>	(2) <i>Lower coverage</i> <i>Ln (Purchase)</i>
<i>Earnings Surprise*Post</i>	0.029*** (4.754)	0.001 (0.315)
<i>Post</i>	0.016* (1.855)	-0.002 (-0.369)
<i>Firm</i>	Yes	Yes
<i>Cohort</i>	Yes	Yes
<i>Year*Month*Day</i>	Yes	Yes
<i>City*Year*Month</i>	Yes	Yes
<i>N</i>	1,456,520	4,958,720
<i>F</i>	11.712	0.134
<i>r2_adj</i>	0.300	0.296

Panel B: Analyst Following

	(1) <i>Higher following</i> <i>Ln (Purchase)</i>	(2) <i>Lower following</i> <i>Ln (Purchase)</i>
<i>Earnings Surprise*Post</i>	0.045*** (6.521)	-0.003 (-0.742)
<i>Post</i>	-0.008 (-1.428)	0.010* (1.756)
<i>Firm</i>	Yes	Yes
<i>Cohort</i>	Yes	Yes
<i>Year*Month*Day</i>	Yes	Yes
<i>City*Year*Month</i>	Yes	Yes
<i>N</i>	3,163,527	3,251,821
<i>F</i>	23.870	2.100
<i>r2_adj</i>	0.293	0.293

Table 5 Heterogeneity: SME characteristics

This table reports the heterogeneity analyses of the main estimates from the perspective of SME characteristics. The baseline regression model is specified as: $Ln(Purchase)_{i,t} = \alpha_1 Earnings Surprise_c \times Post_{c,t} + \alpha_2 Post_{c,t} + \beta_i + \mu_c + \gamma_t + \eta_{p,t} + \varepsilon_{i,t}$. Panel A examines heterogeneity by firm age, where columns (1) and (2) divide the sample according to the median value of firm establishment year. Panel B focuses on financial expertise, distinguishing SMEs with and without financial professionals. Panel C explores supplier diversification, splitting the sample by the median number of suppliers. Panel D investigates heterogeneity by CEO age, where columns (1) and (2) classify firms based on whether the CEO was born before 1972. The main dependent variable, $Ln(Purchase)_{i,t}$, is defined as the logarithm of one plus the total purchase aggregated from input invoices for SME i at day t centered around the earnings disclosure events. And the independent variable, $Earnings Surprise_c$, is calculated as the difference between the forecasted earnings and the analyst consensus forecast, scaled by the absolute value of the consensus forecast earnings. Fixed effects are controlled at firm, events, year×month×day and city×year×month level. Standard errors are clustered at the SME level. All continuous variables are winsorized at 1% and 99% levels. *, ** and *** indicate statistical significance at 10%, 5% and 1%, respectively.

Panel A: Firm Age

	(1) Long-Established SME <i>Ln (Purchase)</i>	(2) Newly-Established SME <i>Ln (Purchase)</i>
<i>Earnings Surprise*Post</i>	0.002 (0.554)	0.015*** (2.728)
<i>Post</i>	-0.001 (-0.125)	0.003 (0.375)
<i>Firm</i>	Yes	Yes
<i>Cohort</i>	Yes	Yes
<i>Year*Month*Day</i>	Yes	Yes
<i>City*Year*Month</i>	Yes	Yes
<i>N</i>	3,666,203	1,702,119
<i>F</i>	0.173	3.724
<i>r2_adj</i>	0.287	0.290

Panel B: Financial Expertise

	(1) No Financial Expert <i>Ln (Purchase)</i>	(2) With Financial Expert <i>Ln (Purchase)</i>
<i>Earnings Surprise*Post</i>	-0.002 (-0.365)	0.012*** (3.396)
<i>Post</i>	0.001 (0.126)	0.002 (0.356)
<i>Firm</i>	Yes	Yes
<i>Cohort</i>	Yes	Yes
<i>Year*Month*Day</i>	Yes	Yes
<i>City*Year*Month</i>	Yes	Yes

<i>N</i>	1,591,162	4,444,743
<i>F</i>	0.080	5.772
<i>r2_adj</i>	0.286	0.293

Panel C: Supplier Diversification

	(1) Fewer Suppliers <i>Ln (Purchase)</i>	(2) More Suppliers <i>Ln (Purchase)</i>
<i>Earnings Surprise*Post</i>	-0.008 (-1.418)	0.016*** (4.536)
<i>Post</i>	0.006 (0.871)	-0.002 (-0.322)
<i>Firm</i>	Yes	Yes
<i>Cohort</i>	Yes	Yes
<i>Year*Month*Day</i>	Yes	Yes
<i>City*Year*Month</i>	Yes	Yes
<i>N</i>	2,216,082	4,201,523
<i>F</i>	1.628	10.645
<i>r2_adj</i>	0.328	0.300

Panel D: CEO Age

	(1) Born after 1972 <i>Ln (Purchase)</i>	(2) Born before 1972 <i>Ln (Purchase)</i>
<i>Earnings Surprise*Post</i>	0.011*** (3.062)	0.005 (0.781)
<i>Post</i>	-0.000 (-0.029)	0.006 (0.773)
<i>Firm</i>	Yes	Yes
<i>Cohort</i>	Yes	Yes
<i>Year*Month*Day</i>	Yes	Yes
<i>City*Year*Month</i>	Yes	Yes
<i>N</i>	4,693,507	1,704,124
<i>F</i>	4.773	0.532
<i>r2_adj</i>	0.288	0.302

Table 6: Evidence from VAT Invoice Information

This table reports estimates by utilizing detailed invoice information. The regression model of panel A is $Ln(\#Input\ Invoices)_{i,t} / Ln(Average\ Invoice\ Value)_{i,t} = \alpha_1 Earnings\ Surprise_c \times Post_{c,t} + \alpha_2 Post_{c,t} + \beta_i + \mu_c + \gamma_t + \eta_{p,t} + \varepsilon_{i,t}$. The key dependent variable of column (1), $Ln(\#Input\ Invoices)_{i,t}$, is defined as one plus the logarithm of the number of input invoices for SME i on day t . The key dependent variable of column (2), $Ln(Average\ Invoice\ Value)_{i,t}$, is defined as 1 plus the average value of each input invoice for SME i on day t . The regression model of panel B is $Ln(Fixed\ Asset\ Investment)_{i,t} = \alpha_1 Earnings\ Surprise_c \times Post_{c,t} + \alpha_2 Post_{c,t} + \beta_i + \mu_c + \gamma_t + \eta_{p,t} + \varepsilon_{i,t}$. The dependent variable, $Ln(Fixed\ Asset\ Investment)_{i,t}$, is defined as 1 plus fixed asset investment for SME i on day t . And the main dependent variable, $Earnings\ Surprise_c$, is calculated as the difference between the forecasted earnings and the analyst consensus forecast, scaled by the absolute value of the consensus forecast earnings. Fixed effects are controlled at firm, events, year×month×day and city×year×month level. Standard errors are clustered at the SME level. All continuous variables are winsorized at 1% and 99% levels. *, ** and *** indicate statistical significance at 10%, 5% and 1%, respectively.

Panel A: Invoice Counts and Values

	(1) <i>Ln (#Input Invoices)</i>	(2) <i>Ln (Average Invoice Value)</i>
<i>Earnings Surprise*Post</i>	0.001** (2.178)	0.006** (2.303)
<i>Post</i>	0.000 (0.362)	0.001 (0.347)
<i>Firm</i>	Yes	Yes
<i>Cohort</i>	Yes	Yes
<i>Year*Month*Day</i>	Yes	Yes
<i>City*Year*Month</i>	Yes	Yes
<i>N</i>	6,400,760	6,400,760
<i>F</i>	2.374	2.654
<i>r2_adj</i>	0.358	0.308

Panel B: Fixed Assets Investment

	(1) <i>Ln (Fixed Assets Investment)</i>	(2) <i>Ln (Fixed Assets Investment)</i>
<i>Earnings Surprise*Post</i>	0.001 (0.184)	0.015** (2.067)
<i>Post</i>	-0.010** (-2.499)	-0.001 (-0.076)
<i>Firm</i>	Yes	Yes
<i>Cohort</i>	Yes	Yes
<i>Year*Month*Day</i>	Yes	Yes
<i>City*Year*Month</i>	Yes	Yes
<i>N</i>	6,419,156	701,420
<i>F</i>	3.288	2.177
<i>r2_adj</i>	0.186	0.376

Table 7: Evidence from Core Production Inputs

This table reports regression estimates based on detailed invoice-level data. Panel A estimates the following model: $\ln(\text{Purchase_top3})_{i,t} = \alpha_1 \text{Earnings Surprise}_c \times \text{Post}_{c,t} + \alpha_2 \text{Post}_{c,t} + \beta_i + \mu_c + \gamma_t + \eta_{p,t} + \varepsilon_{i,t}$. The key dependent variable, $\ln(\text{Purchase_top3})_{i,t}$, is defined as the natural logarithm of one plus the total purchase amount of the three most frequently procured materials, aggregated from input invoices for SME i on day t . The regression model of panel B is $\ln(\text{Employee-Activity Expenditures})_{i,t} = \alpha_1 \text{Earnings Surprise}_c \times \text{Post}_{c,t} + \alpha_2 \text{Post}_{c,t} + \beta_i + \mu_c + \gamma_t + \eta_{p,t} + \varepsilon_{i,t}$. The dependent variable, $\ln(\text{Employee-Activity Expenditures})_{i,t}$, is defined as the natural logarithm of one plus total employee-activity expenditures aggregated from three categories of input invoices—entertainment, dining, and accommodation—for SME i on day t . And the main dependent variable, $\text{Earnings Surprise}_c$, is calculated as the difference between the forecasted earnings and the analyst consensus forecast, scaled by the absolute value of the consensus forecast earnings. Fixed effects are controlled at firm, events, year×month×day and city×year×month level. Standard errors are clustered at the SME level. All continuous variables are winsorized at 1% and 99% levels. *, ** and *** indicate statistical significance at 10%, 5% and 1%, respectively.

Panel A: Procurement Adjustments in Core Business Inputs

	(1)	(2)	(3)
	<u>$\ln(\text{Purchase_top3})$</u>	<u>$\ln(\text{Purchase_top3})$</u>	<u>$\ln(\text{Purchase_top3})$</u>
<i>Earnings Surprise*Post</i>	0.017*** (3.691)	0.008** (2.003)	0.002*** (4.013)
<i>Post</i>	-0.008 (-1.265)	0.002 (0.346)	-0.001 (-1.288)
<i>Firm</i>	Yes	Yes	Yes
<i>Cohort</i>	Yes	Yes	Yes
<i>Year*Month*Day</i>	Yes	Yes	Yes
<i>City*Year*Month</i>	Yes	Yes	Yes
<i>N</i>	6,419,156	2,108,216	6,419,156
<i>F</i>	8.384	2.010	9.736
<i>r2_adj</i>	0.175	0.616	0.175

Panel B: Non-Production Related Inputs--Employee Activities

	(1)
	<u>$\ln(\text{Employee-Activity Expenditures})$</u>
<i>Earnings Surprise*Post</i>	-0.001 (-0.327)
<i>Post</i>	0.001 (0.393)
<i>Firm</i>	Yes
<i>Cohort</i>	Yes
<i>Year*Month*Day</i>	Yes
<i>City*Year*Month</i>	Yes
<i>N</i>	1,504,952
<i>F</i>	0.148
<i>r2_adj</i>	0.227

Table 8: Evidence from Earnings Boosting

This table reports the estimates from SME-event-day level regression of the following form: $Ln(Purchase)_{i,t} = \alpha_1 Earnings Surprise_c \times Post_{c,t} + \alpha_2 Post_{c,t} + \beta_i + \mu_c + \gamma_t + \eta_{p,t} + \varepsilon_{i,t}$. Column (1) and column (2) are classified based on whether public firms issue earnings forecasts that boost reported earnings. Earnings boosting is defined under two scenarios: (1) when actual net profit is negative but forecasted net profit is positive, and (2) when forecasted net profit exceeds actual net profit by more than 10%. The main dependent variable, $Ln(Purchase)_{i,t}$, is defined as the logarithm of one plus the total purchase aggregated from input invoices for SME i at day t centered around the earnings disclosure events. And the main independent variable, $Earnings Surprise_c$, is calculated as the difference between the forecasted earnings and the analyst consensus forecast, scaled by the absolute value of the consensus forecast earnings. Fixed effects are controlled at firm, events, year×month×day and city×year×month level. Standard errors are clustered at the SME level. All continuous variables are winsorized at 1% and 99% levels. *, ** and *** indicate statistical significance at 10%, 5% and 1%, respectively.

	(1) <i>Without boost earnings</i> <i>Ln (Purchase)</i>	(2) <i>With boost earnings</i> <i>Ln (Purchase)</i>
<i>Earnings Surprise*Post</i>	-0.001 (-0.175)	0.017** (2.482)
<i>Post</i>	-0.004 (-1.022)	0.046*** (3.579)
<i>Firm</i>	Yes	Yes
<i>Cohort</i>	Yes	Yes
<i>Year*Month*Day</i>	Yes	Yes
<i>City*Year*Month</i>	Yes	Yes
<i>N</i>	5,623,879	791,624
<i>F</i>	0.524	7.479
<i>r2_a</i>	0.294	0.295

Table 9: Real Effects on SMEs' Financial Performance

This table reports the estimates from SME-event-week level regression using an event window of [-4, +4] weeks centered around the earnings forecast events: $Ln(Weekly\ Sales)_{i,t} = \alpha_1 Earnings\ Surprise_c \times Post_{c,t} + \alpha_2 Post_{c,t} + \beta_i + \mu_c + \gamma_t + \eta_{p,t} + \varepsilon_{i,t}$. The dependent variable, $Ln(Weekly\ Sales)_{i,t}$, is defined as the logarithm of one plus the total sales aggregated from output invoices for SME i at week t centered around the earnings disclosure events. The key independent variable, $Earnings\ Surprise_c$, is calculated as the difference between the forecasted earnings and the analyst consensus forecast, scaled by the absolute value of the consensus forecast earnings. Fixed effects are controlled at firm, events, year×month×day and city×year×month level. Standard errors are clustered at the SME level. All continuous variables are winsorized at 1% and 99% levels. *, ** and *** indicate statistical significance at 10%, 5% and 1%, respectively.

	(1) <i>Ln (Weekly Sales)</i>
<i>Earnings Surprise*Post</i>	0.004** (2.275)
<i>Post</i>	0.008*** (3.891)
<i>Firm</i>	Yes
<i>Cohort</i>	Yes
<i>Week</i>	Yes
<i>N</i>	6,066,201
<i>F</i>	9.590
<i>r2_a</i>	0.472

Table 10: Robustness Tests

This table reports the estimates from SME-event-day level regression using an event window [-7, +7] days centered around the earnings forecast events. Panel A estimates the following model: $Ln(Purchase)_{i,t} = \alpha_1 Earnings Surprise_c \times Post_{c,t} + \alpha_2 CAR [0, 2]_c * Post_{c,t} + \alpha_3 Post_{c,t} + \beta_i + \mu_c + \gamma_t + \eta_{p,t} + \varepsilon_{i,t}$. $CAR [0, 2]_c$ denotes the cumulative abnormal stock return over the first three trading days following the earnings forecast event c . Panel B estimates: $Ln(Purchase)_{i,t} = \alpha_1 Earnings Surprise prior year_c \times Post_{c,t} + \alpha_2 Post_{c,t} + \beta_i + \mu_c + \gamma_t + \eta_{p,t} + \varepsilon_{i,t}$, where $Earnings Surprise prior year_c$ is defined as the difference between the forecasted earnings and last year's actual earnings, scaled by the absolute value of last year's earnings. Panel C estimates: $Ln(Purchase)_{i,t} = \alpha_1 Forecast Type_c \times Post_{c,t} + \alpha_2 Post_{c,t} + \beta_i + \mu_c + \gamma_t + \eta_{p,t} + \varepsilon_{i,t}$, where $Forecast Type_c$ is a continuous variable representing the optimism level of the earnings forecast, with higher values indicating more optimistic forecasts. The main dependent variable, $Ln(Purchase)_{i,t}$, is defined as the logarithm of one plus the total purchase aggregated from input invoices for SME i at day t centered around the earnings disclosure events. Fixed effects are controlled at firm, events, year×month×day and city×year×month level. Standard errors are clustered at the SME level. All continuous variables are winsorized at 1% and 99% levels. *, ** and *** indicate statistical significance at 10%, 5% and 1%, respectively.

Panel A: Excluding Alternative Explanation—Stock Market Reaction

	(1)	(2)
	<i>Ln (Purchase)</i>	<i>Ln (Purchase)</i>
<i>Earnings Surprise*Post</i>		0.009*** (2.752)
<i>CAR [0, 2] * Post</i>	0.045 (1.576)	0.033 (1.124)
<i>Post</i>	-0.001 (-0.215)	0.001 (0.164)
<i>Firm</i>	Yes	Yes
<i>Cohort</i>	Yes	Yes
<i>Year*Month*Day</i>	Yes	Yes
<i>City*Year*Month</i>	Yes	Yes
<i>N</i>	6,221,687	6,221,687
<i>F</i>	1.258	3.737
<i>r2_adj</i>	0.291	0.291

Panel B: Using Prior Year Earnings as Benchmark

	(1)
	<i>Ln (Purchase)</i>
<i>Earnings Surprise_prior_year *Post</i>	0.004*** (4.748)
<i>Post</i>	-0.002 (-0.438)
<i>Firm</i>	Yes
<i>Cohort</i>	Yes
<i>Year*Month*Day</i>	Yes
<i>City*Year*Month</i>	Yes

<i>N</i>	5,895,726
<i>F</i>	11.417
<i>r2_adj</i>	0.292

Panel C: Different Earnings Forecast Types

	(1)
	<i>Ln (Purchase)</i>
<i>Forecast Type* Post</i>	0.005*** (5.396)
<i>Post</i>	-0.011** (-2.497)
<i>Firm</i>	Yes
<i>Cohort</i>	Yes
<i>Year*Month*Day</i>	Yes
<i>City*Year*Month</i>	Yes
<i>N</i>	6,419,156
<i>F</i>	14.570
<i>r2_adj</i>	0.293

Appendix A. Variable Definition

Variable	Description
<i>Ln (Purchase)</i>	The primary dependent variable. The natural logarithm of one plus the total purchase amount for SME <i>i</i> on day <i>t</i> , aggregated from all input invoices.
<i>Earnings Surprise</i>	The difference between corporate forecasted earnings and the analyst consensus forecast earnings (median value), divided by the absolute value of the analyst consensus forecast earnings. Analyst forecasts are drawn from the period between 90 days and 1 day prior to the corporate earnings forecast. For each corporate earnings forecast, at least one analyst forecast is required.
<i>Post</i>	An indicator variable equals 1 if the purchase for SME <i>i</i> on day <i>t</i> in city <i>c</i> occurs within 7 days following the corporate earnings forecast date in city <i>c</i> , and 0 if it occurs within 7 days prior to the corporate earnings forecast date.
<i>High News Coverage</i>	An indicator variable equals 1 if the number of corporate news articles within the [0, 2] three-day window following the corporate earnings forecast exceeds the median, and 0 otherwise.
<i>High Analyst Coverage</i>	An indicator variable equals 1 if the number of analyst forecasts within the [-180, -1] window prior to the fiscal year-end exceeds the median, and 0 otherwise.
<i>Long-Established SME</i>	An indicator variable equals 1 if SME <i>i</i> was registered before 2017, and 0 otherwise.
<i>Financial Expert</i>	An indicator variable equals 1 if SME <i>i</i> has an independent financial officer, and 0 if the financial officer is concurrently the legal representative of the SME.
<i>High Supplier Number</i>	An indicator variable equals 1 if the number of unique suppliers of SME <i>i</i> one month before the corporate earnings forecast date is above the median, and 0 otherwise.
<i>High Earnings Forecast Count</i>	An indicator variable equals 1 if there is more than one corporate earnings forecast for city <i>c</i> on day <i>t</i> , and 0 otherwise.
<i>CEO Age</i>	An indicator variable equals 1 if the CEO of SME <i>i</i> was born before 1972, and 0 otherwise.
<i>Ln (#Input Invoices)</i>	The natural logarithm of 1 plus the count of input invoices for SME <i>i</i> at day <i>t</i> .
<i>Ln (Average Invoice Value)</i>	The natural logarithm of 1 plus the average invoice amount for SME <i>i</i> at day <i>t</i> .
<i>Ln (Fixed Assets Investment)</i>	The natural logarithm of 1 plus the total fixed-asset expenditure for SME <i>i</i> at day <i>t</i> , identified from VAT input invoices whose item descriptions indicate purchases of equipment or production lines, etc.

<i>Ln (Purchase_top3)</i>	The natural logarithm of 1 plus the value of production-related raw-material purchases for SME <i>i</i> at day <i>t</i> . Production-related raw materials are defined, for each SME, as the three products that appear most frequently on its input invoices.
<i>Ln (Employee-Activity Expenditures)</i>	The natural logarithm of 1 plus the value of employee-activity expenditures. Employee-activity expenditures are identified by input invoice item descriptions indicating entertainment, accommodation, or catering.
<i>Earnings Boost</i>	An indicator variable equal to 1 if the difference between pre-audit forecast earnings and post-audit announced earnings, scaled by the absolute value of post-audit announced earnings, exceeds 10%, or if forecast earnings are positive but actual earnings are negative; 0 otherwise.
<i>Earnings Surprise Prior Year</i>	The difference between corporate forecasted earnings and prior-year post-audit announced earnings, scaled by the absolute value of the prior-year post-audit announced earnings.
<i>CAR [0, 2]</i>	The three-day cumulative market-adjusted stock return centered on the earnings-forecast date.
<i>Ln (Weekly Sales)</i>	The natural logarithm of 1 plus the total purchase amount for SME <i>i</i> in week <i>t</i> , aggregated from all input invoices.

Appendix B. An Example of Corporate Earnings Forecast Document

This is an example of a mandatory earnings forecast, with the company reporting a turnaround from loss to profit. As shown, the company discloses its projected earnings for the current year, along with a comparison to the same period last year. Furthermore, the company provides an explanation for the earnings growth, identifying the sources of business expansion. These disclosures typically include information on firm-specific demand shifts, as well as broader industry and regional demand conditions.

Stock Code: 688766 **Stock Abbreviation:** Puran Co., Ltd. **Announcement No.:** 2025-010

Puran Semiconductor (Shanghai) Co., Ltd.

2024 Annual Earnings Forecast

1. Earnings Forecast for the Current Period

(1) Earnings Forecast Period

From January 1, 2024, to December 31, 2024 (hereinafter referred to as the "reporting period").

(2) Earnings Forecast

1. According to the preliminary calculations by the company's finance department, the net profit attributable to the parent company's shareholders for the year 2024 is expected to be approximately CNY 270 million, representing an increase of approximately CNY 318.27 million compared to the same period last year (based on statutory disclosure data), resulting in a turnaround from loss to profit.
2. The company expects the net profit attributable to the parent company's shareholders, excluding non-recurring gains and losses, to be approximately CNY 246 million for the year 2024, an increase of approximately CNY 310.88 million compared to the same period last year (based on statutory disclosure data).
3. The company expects its operating revenue for the year 2024 to be approximately CNY 1,780 million, an increase of approximately CNY 652.96 million compared to the same period last year (based on statutory disclosure data), reflecting an approximate year-on-year growth of 57.94%.

(3) The earnings forecast has not been audited by a certified public accountant.

2. Performance for the Same Period Last Year

For the year 2023, the company reported a net loss attributable to the parent company's shareholders of CNY -48.27 million, a net loss attributable to the parent company, excluding non-recurring gains and losses, of CNY -64.88 million, and operating revenue of CNY 1,127.04 million.

3. Key Factors Contributing to the Change in Performance

(1) Impact of Core Business Operations

In 2024, the semiconductor design industry experienced a recovery, driven by increased demand from downstream markets such as consumer electronics. The company seized this opportunity to continuously expand and optimize its product portfolio, while exploring new market segments and customer bases. The company also responded to customer demands through timely technological and product innovations. As a result of significant investments in research and development in recent years, the company successfully captured opportunities in emerging markets, increasing market penetration of new products. Moreover, the company continued to improve operational efficiency, achieving notable results in both operational and financial performance. For 2024, the company achieved a record high in annual revenue, with total revenue reaching approximately CNY 1.78 billion, a year-on-year increase of about 57.94%.

Regarding product lines, the company continued to enhance its "Storage" and "Storage+" strategy. The existing storage product line expanded its full product range and maintained a leading position in terms of technology and performance. The company also focused on expanding opportunities in the mid-to-high-end industrial control and automotive sectors, as well as in emerging markets, thereby laying a solid foundation for market share growth. Under the "Storage+" product line, the MCU and VCM Driver products rapidly gained brand recognition and achieved continuous, rapid growth.

(2) Impact of Operating Expenses

The company has adopted multiple measures to maintain a high level of R&D investment, emphasizing product innovation and process improvements. In the existing storage chip sector, the company continued to expand its product categories, accelerate product iterations, and optimize product performance and costs, while increasing investments in the industrial and automotive sectors. By leveraging its specialized process advantages, the company extended its "Storage+" strategy, further strengthening its R&D capabilities, promoting new product technologies, and enhancing application development. In 2024, the company increased its workforce compared to the previous year, with R&D expenses and other operating expenses rising by more than 30% year-on-year.

(3) Impact of Asset Impairment Provision

In 2024, with the improvement in downstream market conditions, the supply-demand dynamics in the industry became more favorable. As a result, the provision for asset impairment losses saw a significant decrease compared to the previous year.

(4) Other Impacts

During the reporting period, the company experienced a substantial year-on-year increase in government subsidies received, as well as other income generated due to the implementation of the VAT credit policy, compared to 2023. These changes were largely due to differences in the government subsidy policies applied each year.

4. Risk Warning

The earnings forecast provided is based on the preliminary calculations made by the company's finance department using professional judgment and has not yet been audited by a certified public accountant. The company does not anticipate any significant uncertainties that could affect the accuracy of this earnings forecast.

5. Other Explanatory Matters

The data presented above is based on preliminary calculations and has not been audited by a certified public accountant. The final, accurate financial data will be disclosed in the company's

official audited 2024 annual report. Investors are advised to be aware of the potential investment risks.

This announcement is made by the Board of Directors of Puran Semiconductor (Shanghai) Co., Ltd.

January 27, 2025

Appendix C. Stacked Sample Construction

Here, we clearly outline how the stacked sample is constructed. First, since public firms are required to issue earnings forecasts within one month after the fiscal year-end, this results in many concurrent earnings forecasts. Specifically, if two earnings forecasts are issued within 7 days of each other in the same city but from different industries, we retain both and set a 15-day event window for each (from the issue date, 7 days before and 7 days after). However, if two earnings forecasts are issued within 7 days in the same city but from the same industry, we drop the event with the later issue date. We then stack these earnings forecast events together as the earnings forecast event sample.

And if there are multiple earnings forecast events for firms in the same industry in a specific city, we calculate the earnings surprise using the market capitalization-weighted average in that day, treating these multiple forecasts as a single earnings forecast.

The next step is to merge SME data based on whether SMEs' operation city is the same or not. We then match the corresponding operational data by date. Specifically, if a public firm from the construction industry issues an earnings forecast, and another public firm from the accommodation and food services industry issues another earnings forecast within 7 days in the same city, we merge all SMEs in the city except for those in the accommodation and food services industry during the corresponding period to form a cohort. Finally, we stack all the cohorts to create the final sample.