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The Influence of Administrative Division Adjustment on Enterprise Earnings Management: A Quasi-Natural Experiment on City–County Consolidation

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Abstract: City–county consolidation is a common measure used by many cities to promote urbanization. This study develops the theoretical transmission mechanism, “city–county consolidation intensifies competition in the enterprise market improves the earnings management level of enterprises,” to analyze the influence of city–county consolidation on enterprises’ earnings management. An empirical analysis using the difference-in-differences (DID) method was conducted on data of industrial enterprises from 1999 to 2006. The results show that city–county consolidation promotes motivation for the use of enterprises’ earnings management. Second, city–county consolidation significantly intensifies enterprises’ downward earnings management behavior. Third, following city–county consolidation, non-state-owned enterprises are more strongly motivated to implement earnings management than state-owned enterprises. Fourth, city–county consolidation only significantly impacts the earnings management of enterprises affiliated with counties; it does not significantly impact the earnings management of those affiliated with central, provincial, or municipal governments. Therefore, this study provides empirical evidence from the perspective of market competition, which has important reference significance for urbanization development to improve national governance capacity by optimizing administrative divisions.

Keywords: city–county consolidation; market competition; earnings management; urbanization development



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1. Introduction

City–county consolidation is an administrative division adjustment method adopted by a city government to develop the regional economy, straighten out hierarchical relations, and exert government functions. To develop the regional economy, straighten out hierarchical relations, and fully exert government functions, the city government finds a way to adjust administrative divisions. In China, cities have direct jurisdiction over municipal districts, and only have partial jurisdiction over counties. Specifically, county governments have relatively independent decision-making powers in administrative management, fiscal revenue, and expenditure, while the authorities of municipal districts are subordinate, and subject, to the jurisdiction and control of the city. City–county consolidation is an important measure to optimize administrative division, promote the optimal development of the urban spatial layout [1], and drive the integration of regional markets [2]. It is also a common measure taken by many cities to promote urbanization [3]. Since China’s city–county consolidation and opening up, according to national statistics, the number of counties decreased steeply, from 2011 in 1978 to 1312 by the end of 2020, whereas the number of municipal districts increased annually, reaching 973 in 2020 (Chinese version: <https://data.stats.gov.cn/easyquery.htm?cn=C01> (accessed on 10 February 2022); English

version: <http://www.stats.gov.cn/english/Statisticaldata/AnnualData/> (accessed on 10 February 2022)). City–county consolidation directly resulted in an increase in municipal districts. Specifically, by directly integrating counties into central cities, city–county consolidation broke the administrative barriers between cities and counties, comprehensively promoting the integration of regional markets. Land, population, and other resources are concentrated in cities, intensifying market competition [4]. Therefore, city–county consolidation plays an important role in promoting regional economic growth, and improving the efficiency of resource allocation, industrial upgrading, and urbanization development [1,5].

However, with a continued expansion of the market scale, and an intensification of market competition, a market-screening mechanism will be triggered. Specifically, with increased competitive pressure on enterprises, some face the risk of being eliminated, thus, triggering their motivation to implement earnings management. Meanwhile, following the implementation of city–county consolidation, the merged counties’ fiscal earnings become semi-level fiscal, while their fiscal autonomy is significantly reduced, which leads to a reduction in fiscal subsidies, tax preferences, and other preferential policies [6,7]. As the government’s ability to distribute funds to enterprises and to help them save on operating costs decreases, the cost of enterprises may increase, thus, intensifying market competition among those within a city–county consolidation. Increased market competitive pressure may intensify earnings management behavior [8–10]. In addition, existing studies show that fierce product market competition creates a stricter external governance environment for enterprises, inhibiting their earnings management [11]. The research finds that the existing research about the relationship between city–county consolidation and earnings management is not clear. Therefore, there is a need for research on whether city–county consolidation promotes or inhibits enterprises’ earnings management. Meanwhile, the research also needs to further explore the mechanism of earnings management that affects enterprises.

The present study uses the difference-in-differences (DID) method on data from the industrial enterprise database from 1999 to 2006 to verify the impact of city–county consolidation on enterprises’ earnings management behavior. The innovation of the study lies in three aspects: first, it evaluates the impact of city–county consolidation on enterprises’ earnings management behavior, which provides empirical evidence from the perspective of market competition. Second, this study provides reverse evidence on the relationship between administrative division adjustment and enterprises earnings management in China, by using the quasi-natural experiment of city–county consolidation, which solves the endogenous problem effectively. Third, this study enriches the research on city–county consolidation, and provides further micro-evidence for understanding the economic consequences of city–county consolidation.

In summary, this study focuses on answering the following three questions: First, what impact does county and city consolidation have on enterprise earnings management? Second, how does county and city consolidation affect earnings management? Thirdly, is there any difference in the impact of county and city consolidation on earnings management behavior of enterprises with different ownership or affiliation?

2. Literature Review

2.1. Reviews of City–County Consolidation

City–county consolidation is one of the most extensive forms of consolidation for local governments. The main purpose of city–county consolidation is to promote urban economic development, and improve public service efficiency, employment, and land use to solve problems in urbanization [12].

Most studies on city–county consolidation focus on three aspects: urban economic development, government revenue and expenditure, and enterprise development.

Based on the experience of the United States, from the urban economic development perspective, most studies are skeptical of the economic results of city–county consolidation, since the economic development of city–county consolidation in the United States has

not reached the expected level [1,2,13,14]. However, there are some successful cases of city–county consolidation. Hall et al. [12] use the synthetic control method, and find that Lafayette experiences an increase in per capita income, population, and employment after consolidation, which positively impacts economic growth. In addition to studies in the United States, Egger et al. [15], a German scholar who uses satellite data to study Germany's recent municipal mergers, applies the DID method to measure German cities' economic activities; the scholar finds increased economic activities for areas under consolidation. Moreover, based on China's experience with city–county consolidation, a city's economic growth can be accelerated; however, this is not true for its long-term growth, which shows an inverted "U" growth trajectory [4].

From the perspective of government revenue and expenditure, city–county consolidation expands government size and jurisdiction, affecting government revenue and expenditure to a certain extent [16–20]. However, the influence is mainly on public services [16] and government tax [18,20].

From the perspective of enterprise development, Lu and Chen [6,7] find that city–county consolidation negatively impacts the export performance of enterprises within the consolidated jurisdiction, and aggravates their degree of financial constraints.

2.2. Market Competition and Enterprise Earnings Management

Enterprise earnings management entails attempts by enterprises to maximize earnings by adjusting or controlling accounting income information in accordance with accounting standards. Researchers study the impact of market competition on enterprise earnings management. Grossman and Hart [8] believe that market competition increases an enterprise's earnings pressure by affecting its performance and increasing the risk of bankruptcy, which is not conducive to its profitability. Peteraf [21] argues that enterprises experience increasing difficulty in obtaining excess profits with more intense market competition, and that managers are under pressure to manipulate profit. Tinaikar and Xue [9] show that market intensity causes fluctuations in enterprises' future earnings. The fiercer the market competition, the more enterprises increase their earnings management behavior. Datta et al. [10] find that market competition significantly promotes accrued earnings management.

However, there are opposing views. For instance, corporate governance studies generally believe that market competition provides an external governance mechanism to alleviate conflicts of interest between managers and owners [11]. Moreover, Holmström [22] studies information asymmetry, and finds that market competition could reduce it, bind the interests of both managers and shareholders, and cause timely economic losses in a company's operation. Through a model, Schmidt [23] finds that the greater the number of enterprises in a specific industry, the stronger the comparability of performance among the enterprises. Although market fluctuation impacts every enterprise, relatively comparable performance can offset its impact to a certain extent, and intuitively show managers' business ability and effort level, thus, reducing the level of earnings management. From studying American enterprises, Marciukaityte and Park [24] find that the stronger the market competition a listed company faces, the lower the absolute value of discretionary accruals, indicating that market competition is negatively related to earnings management. Similarly, Krishnan and Cohen [25] find that the degree of market competition limits an enterprise's management behavior of misstating accounting information, to a certain extent.

Some other studies argue that the impact of market competition on earnings management depends on the characteristics of enterprises, such as strategy and performance. Markaria and Santalo [26] find that market competition not only promotes earnings management, but also find that this phenomenon occurs only in slightly underperforming firms, and that market competition does not seem to increase the propensity for earnings management in firms that perform at, or above, the level of competitors. Wu et al. [27] use the data of Chinese listed firms, and find that, from the perspective of corporate strategy, market competition further improves the earnings management of cost leaders, while the

earnings management level of enterprises following the differentiators is not affected by market competition.

2.3. Summary of the Literature

Through a review of the literature on city–county consolidation and market competition with enterprise earnings management, this study finds two gaps in previous research. Research on city–county consolidation remains insufficient in the micro-field of corporate governance. Furthermore, research on city–county consolidation is mainly focused on the exploration and analysis of the economic development of cities, government revenue, and expenditure, which belong to the macro fields, while micro research has not received much attention. Therefore, this study investigates the impact of city–county consolidation on enterprises' earnings management, provides further evidence on the economic consequences of city–county consolidation, and enriches the existing research literature in the field. Additionally, previous research conclusions on the impact of market competition on earnings management are inconsistent. This may be due to insufficient consideration of endogeneity in previous studies, which requires further exploration.

Therefore, this study chooses the exogenous policy of city–county consolidation to measure the degree of market competition, which can effectively resolve the endogeneity problem in previous studies, and is of great significance in the study of enterprises' earnings management.

3. Theoretical Mechanism Analysis

This study proposes a theoretical transmission mechanism that can be divided into two levels: one is that city–county consolidation leads to greater market competition among enterprises, while the other is that greater market competition, in turn, has a large impact on enterprise earnings management. Therefore, it can be summarized as, “city–county consolidation intensified market competition among enterprises improved level of enterprises' earnings management.”

3.1. City–County Consolidation Intensified Market Competition among Enterprises

This theoretical transmission mechanism can be analyzed from two perspectives. From the perspective of market integration, academia reached the unanimous conclusion that city–county consolidation promotes regional market integration and intensifies market competition [2,4]. Specifically, under the Chinese system of decentralization, the nature of political promotion in economic competition results in a need for local governments to consider administrative regions as borders, by implementing local protectionism and dividing local markets. City–county consolidation breaks down rigid administrative barriers between cities and counties, which helps integrate regional markets. Furthermore, the spatial gathering of talent and technology can promote the expansion of market scale, resulting in a simultaneous increase in the intensity, and an expansion of the scope, of market competition. When the market screening mechanism is effective, the market competition among enterprises is further intensified [28,29].

From the perspective of financial management model transformation, city–county consolidation is not only a spatial reorganization of the transformation from a county economy to a city economy, but it is also an institutional reconstruction of the transformation from a relatively independent county management mode to a semi-governmental city management mode [3]. Generally, city–county consolidation is accompanied by a centralization of planning, financial, approval, and management rights to a city government, so that the city government can smoothly implement the top-down management of counties that have been removed and merged. However, the inertia of the system and social network may lead to some peculiar phenomena, such as the continuation of conflicts between the original city and county systems, and the phenomenon of “different treatment in the same city” [4]. A decline in the autonomy of dismantled counties reduces the policy tendency for fiscal subsidies, tax expenditures, and fund subsidies that can be obtained by enterprises in the

jurisdictions. It also reduces the ability of the government to distribute funds to businesses, or help them save on operating costs. This may lead to an increase in enterprise costs, leading enterprises in the area under the county jurisdiction to cease operations, or merge in the face of greater pressure from market competition.

3.2. Intensified Market Competition among Enterprises Improved Level of Enterprises' Earnings Management

Earnings management takes agency theory as the main theoretical framework [30]. Based on agency theory, the theoretical transmission mechanism can be analyzed from the following two perspectives. On the one hand, the separation of ownership and control leads to conflicts and information asymmetry between owners (principals) and management (agents). Agents tend to act in their own interests on behalf of principals [31]. Fierce market competition brings more operating pressure to enterprise managers, who are more inclined to protect their own interests and career development by implementing financial earnings management [32].

On the other hand, the agency conflict occurs between the government (principal) and the enterprise (agent). In the fierce market competition, the level of excess profit that enterprises can obtain is relatively low. This strengthens enterprises to improve earnings management and reduce tax costs by hiding, to maintain strong risk response ability in the competitive market, and avoid operating difficulties caused by capital shortage.

Specifically, intense market competition affects enterprises' earnings management behavior, and reduces the transparency of corporate earnings. The main purpose of earnings management is to limit the flow of enterprise information to potential competitors, in order to avoid competition.

4. Methods

4.1. Data

This study obtained data provided by the National Bureau of Statistics from the industrial enterprise database from 1999 to 2006. There are two main reasons for studying the data from 1999 to 2006: one relates to the historical development trend for city–county consolidation. Following 2000, city–county consolidation in China reached a peak, especially from 2000 to 2003; more than ten counties implemented city–county consolidation annually. Examining the economic effects of city–county consolidation during this special period provides an effective reference for current city–county consolidation, and promotes the development of central cities. The other reason is data availability and comparability. Although the industrial enterprise database was updated in 2015, the accounting system was reformed in 2007; thus, the data from 2006 onward may have a systematic impact on enterprises' accounting systems, which may result in different statistical data calibrations. The database contains important data on enterprises' basic information, input–output, financial status, and profit information.

The database was pre-processed before use. First, following Brandt et al. [33], this study combined eight year data into one panel. Second, the following three observation values were deleted: (1) missing indicators, such as sales volume, number of employees, and total assets; (2) if the sales volume was less than CNY 5 million, and the number of employees was less than eight; and (3) observation values that were inconsistent with accounting principles. Enterprises that operated within the jurisdiction of the four municipalities directly under the central government (Beijing, Shanghai, Tianjin, and Chongqing) were deleted. Finally, 202,276 enterprises were identified, with 653,636 observations. To reduce the effect of possible spurious outliers, all extreme values in the statistical data at 1% and 99% winsorization were adopted.

4.2. Model Design and Description

This study draws heavily from the measurement of earnings management by Dechow et al. [34] and Kothari et al. [35] for explained variables, and uses the absolute value

of discretionary accruals. The negative value is used to measure enterprises' level of earnings management; enterprises with lower values tend to adopt earnings management activities. The Jones model only considers the change of revenue and fixed assets to measure the total accrual profit, while the method of Dechow et al. [34] and Kothari et al. [35] modifies the Jones model, adding accounts receivable and return on asset, respectively, to further improve the Jones model, and is widely used. Kothari et al. [35] propose a modified Jones model for the calculation of discretionary accruals; the model requires three-digit industry codes, and deletes industries with observation values of less than ten to perform regression; the residual values are then used to measure the accruals. The specific model is as follows:

$$TA_{i,t} = \delta_0 + \delta_1(1/Assets_{i,t-1}) + \delta_2\Delta Sale_{i,t} + \delta_3PPE_{i,t} + \delta_4Roa_{i,t} + \zeta_{i,t} \quad (1)$$

$Assets_{i,t-1}$ represents enterprise i 's total assets in period $t - 1$. $\Delta Sale_{i,t}$ represents the difference between enterprise i 's sales in periods t and $t - 1$ divided by the total assets in period $t - 1$. $PPE_{i,t}$ represents enterprise i 's capital assets in period t divided by the total assets in period $t - 1$. $Roa_{i,t}$ represents enterprise i 's net profit in period t divided by the total assets in period $t - 1$. $TA_{i,t}$ represents the total accruals. Since there are no net cash flow data in the industrial enterprise database, this study follows the method of Kothari et al. [35] and Li and Jia [36], and measures net cash flow by subtracting the change in current liabilities ($\Delta Cl_{i,t}$) from the change in inventory and accounts receivable ($\Delta Inv_{i,t} + \Delta Rec_{i,t}$), and then subtracting the current year's depreciation ($Dep_{i,t}$). The model is expressed as follows:

$$TA_{i,t} = (\Delta Inv_{i,t} + \Delta Rec_{i,t} - \Delta Cl_{i,t} - Dep_{i,t}) / Assets_{i,t-1} \quad (2)$$

The core independent variable in the model is city-county consolidation, which can be obtained through a manual sorting by reference to the changes in county-level administrative divisions in past years, which are published by the administrative division network (See <http://www.xzqh.org/html/> (accessed on 10 February 2022)). If county j implements city-county consolidation in period t , it assumes a value of 1; otherwise, it assumes a value of 0. Considering the time lag involved in the city-county consolidation's actual completion, counties whose documents are approved by the Ministry of Civil Affairs after June are counted as starting the reform in the next year.

This study adopts a multi-stage DID model due to the different time points for implementing city-county consolidations in different regions. This model is widely applied to assess the impact of policy changes. It reflects the robustness of the experiment design, and also alleviates concerns that concurrent trends may confound the treatment effect of interest [37]. The model is expressed as follows:

$$EM_{i,j,t} = \beta_0 + \beta_1 CCC_{i,j,t} + \sum_n \beta_n \times Control_{i,j,t} + \gamma_i + \mu_t + \varepsilon_{i,j,t} \quad (3)$$

EM represents earnings management, while CCC represents city-county consolidation. $Control$ refers to other control variables, including the asset-liability ratio, return on assets, enterprise scale, sales growth rate, enterprise age, and industry average level of earnings management, as shown in Table 1. γ_i is the enterprise fixed effect, μ_t the year fixed effect, while β_1 reflects the impact of reforms on earnings management.

This study also uses the Herfindahl-Hirschman index (HHI) method to measure the market competition, and analyzes the impact of city-county consolidation on market competition. In addition, the parallel trend test is used to verify whether the premise hypothesis of the DID method is valid. Robustness tests were performed by clustering to county level, controlling for the cross-fixed terms of provinces and years, and replacing other measures of earnings management.

Table 1. Description of main variables and descriptive statistics.

Variable	Description of Variables	Mean	S. D	Observation
EM	Take the negative value of discretionary accruals' absolute value	−0.179	0.190	653,636
	Total liability/total assets	0.554	0.244	653,636
ROA	Net profit/total assets	0.061	0.118	653,636
Growth	(Current period sales—last period sales)/last period sales	0.372	3.221	653,636
Scale	The logarithm of assets	10.208	1.331	653,636
Age	Current year—year of establishment + 1 (in log)	2.176	0.807	653,636
IEM	Except the enterprise itself, the current year average earnings management level of other companies in the industry (3-digit code)	−0.179	0.027	653,636

5. Results

5.1. The Impact of City–County Consolidation on Enterprise Earnings Management

Table 2 reports the regression results. EM (1) show the regression results for the impact of city–county consolidation on earnings management. The results for EM (1) show that the regression coefficient for city–county consolidation is negative, at −0.053, indicating that city–county consolidation plays a promotional role in the earnings management of enterprises within the jurisdiction of a removed county. The value of 0.053 indicates that city–county consolidation improves the earnings management of enterprises within the jurisdiction of a removed county by 0.053 units. Moreover, the regression results are significant at the 1% level, indicating the validity of the above conclusions. In addition, the R^2 value in EM (1) is greater than 0.4, indicating a reasonably high goodness of fit of the model. Regarding the regression results for the control variables, ROA, age, and IEM, all have positive effects on enterprises' earnings management, and are significant at the 1% level, with regression coefficients of 0.008, 0.025, and 0.371, respectively. In addition, LEV, scale, and growth have negative effects on earnings management, and are significantly negative at the 1% level, with regression coefficients of −0.035, −0.062, and −0.002, respectively. This conclusion is consistent with those of Hanlon et al. [38] and Ali and Zhang [39].

Table 2. The regression results.

Dependent Variable	(1) EM	(2) Upward	(3) Downward	(4) Market Competition
CCC	−0.053 *** (0.017)	0.031 (0.025)	−0.071 ** (0.029)	−0.006 ** (0.003)
ROA	0.008 *** (0.005)	0.010 (0.006)	−0.004 (0.008)	−0.006 * (0.003)
LEV	−0.035 *** (0.003)	−0.221 *** (0.003)	−0.351 *** (0.005)	0.001 (0.001)
Age	0.025 *** (0.001)	−0.018 *** (0.001)	0.028 *** (0.001)	−0.001 ** (0.001)
IEM	0.371 *** (0.022)	−0.439 *** (0.027)	0.300 *** (0.042)	0.188 *** (0.038)
Scale	−0.062 *** (0.001)	0.021 *** (0.001)	−0.087 *** (0.002)	−0.002 ** (0.001)
Growth	−0.002 *** (0.001)	0.002 (0.001)	−0.003 ** (0.001)	0.000 (0.000)
Constant	0.484 *** (0.011)	−0.018 (0.014)	0.894 *** (0.020)	0.152 *** (0.000)
Enterprise fixed effect	Yes	Yes	Yes	Yes
Year fixed effect	Yes	Yes	Yes	Yes
Observations	653,636	366,751	286,885	609,140
R^2	0.470	0.610	0.655	0.849

Note: ***, **, and * denote significance at the 1%, 5%, and 10% levels, respectively. Standard errors are reported in parentheses and are clustered by enterprise. All regressions control for enterprise and year fixed effects.

Furthermore, grouping regression was performed for upward and downward earnings management. Upward earnings management refers to enterprises' behavior in regard to whitewashing financial information, while downward earnings management refers to their behavior in hiding corporate profits by manipulating financial information. Upward (2) and downward (3) show the regression results for city–county consolidation on downward and upward earnings management, respectively. The observed values are 366,751 and 286,885, with R^2 values of 0.610 and 0.655, respectively. Thus, the model exhibits a reasonably high goodness of fit. Upward (2) shows that the impact of city–county consolidation reform on downward earnings management is positive, at 0.031, indicating that city–county consolidation into districts inhibits enterprises' upward earnings management; however, the regression result is not significant. Downward (3) shows that the regression coefficient for the reform of withdrawing counties into districts is significant at the 5% level, while the regression coefficient of -0.071 indicates that city–county consolidation reform promotes downward earnings management. In other words, enterprises in the jurisdiction of a removed county tend to practice downward earnings management to cope with the intensified market competition caused by city–county consolidation. Although consolidation has an inhibitory effect on upward earnings management behavior, the effect is not obvious.

5.2. Transmission Mechanism Test for Market Competition

It was necessary to further test whether the reform of city–county consolidation intensifies market competition, to determine whether city–county consolidation has the above-mentioned mechanism of influence on enterprises' earnings management. The Herfindahl–Hirschman index (HHI) was used to measure market competition [40]; specifically, the smaller the Herfindahl–Hirschman index, the stronger the market competition. The calculation of the Herfindahl–Hirschman index excludes industry data from samples with less than five enterprises. In addition, this study only examines market competition in cities after the consolidation reform; thus, the Herfindahl–Hirschman index was calculated only in cities.

The results are presented in Table 2. The results for market competition (4) show that the regression coefficient for city–county consolidation is -0.006 , which is significant at the 5% level, indicating that city–county consolidation significantly improves the degree of market competition. The results show that city–county consolidation has a stronger promotional effect on market competition when control variables are included. The R^2 value is 0.849, indicating a reasonable goodness of fit for the model.

Therefore, this study argues that city–county consolidation intensifies enterprises' earnings management behavior. The main influencing mechanism is that the weakening of market barriers, and the continuous agglomeration of enterprises, brings about more intense market competition, driving enterprises to adopt earnings management behavior in the face of higher competitive pressure.

5.3. Robustness Checks

5.3.1. Parallel Trend Test

This study tests the parallel trend hypothesis by analyzing the changes in earnings management in the treatment and control groups, before and after city–county consolidation. Following Fan and Zhao [20], the 2002 observations, when the most reforms occurred during the period 1999–2006, were selected as the treatment group.

As shown in Figure 1, the fluctuation in earnings management in the control group is relatively stable, while the fluctuation in the treatment group decreases after 2002. This indicates that there are significant differences in the earnings management trends between enterprises that undergo city–county consolidation and those that do not. In other words, city–county consolidation affects enterprises' earnings management behavior; therefore, the DID method used in this study is effective.



Figure 1. Parallel trend test.

5.3.2. Clustering by County

EM (1) in Table 2 shows the regression result after clustering to the enterprise level, and analyzes the autocorrelation problems of the control enterprises in different years. Businesses within the same county jurisdiction are likely to be affected by the same policy; that is, they have autocorrelation problems. Based on this, further analysis was performed after clustering at the county level. Of the results in Table 3, EM (1) shows that after clustering to the county level, the regression coefficient for city–county consolidation on earnings management is -0.053 , and is significant at the 1% level. The result shows that the conclusion that city–county consolidation in Table 2, EM (1) significantly promotes enterprises' earnings management behavior, remains valid.

Table 3. The results of robustness checks.

Dependent Variable	(1)	(2)	(3)
	EM	EM	EM
CCC	-0.053^{***} (0.014)	-0.047^{***} (0.017)	-0.051^{***} (0.017)
ROA	0.008 (0.006)	0.012 ^{**} (0.005)	-0.009^{*} (0.005)
LEV	-0.035^{***} (0.004)	-0.036^{***} (0.003)	-0.034^{***} (0.003)
Age	0.025 ^{**} (0.001)	0.023 ^{**} (0.001)	0.025 ^{**} (0.001)
IEM	0.371 ^{**} (0.024)	0.324 ^{**} (0.022)	0.351 ^{**} (0.021)
Scale	-0.062^{***} (0.001)	-0.062^{***} (0.001)	-0.063^{***} (0.001)
Growth	-0.002^{*} (0.001)	-0.002^{*} (0.001)	-0.002^{*} (0.001)
Constant	0.484 ^{**} (0.019)	0.482 ^{**} (0.011)	0.494 ^{**} (0.011)
Clustered by enterprise	Yes	Yes	Yes
Clustered by county	Yes	No	No
Cross-fixed effects of provinces and years	No	Yes	No
Enterprise fixed effect	Yes	Yes	Yes
Year fixed effect	Yes	Yes	Yes
Replace other measures	No	No	Yes
Observations	653,636	653,636	653,636
R ²	0.470	0.471	0.471

Note: *** and * denote significance at the 1%, 5%, and 10% levels, respectively. The standard errors are reported in parentheses.

5.3.3. Endogeneity Problems

Counties that implement city–county consolidation are not random. Consolidation is related to the characteristics of the counties, the degree of economic development, and population, as well as the games between provinces and cities against the background of fiscal decentralization in China. Specifically, consolidation seeks to reduce municipal government intervention in county-level fiscal affairs, that is, to promote the development of counties' economies by guaranteeing the independence of their county-level financial affairs. Therefore, the provincial government will not approve of city–county consolidation in some economically strong counties. Based on this, this study controls for the differences in games between provincial and municipal governments in different provinces, by controlling for the cross-fixed terms of provinces and years, which can avoid the endogeneity problems that may be caused by omitted variables.

The regression result is presented in Table 3, EM (2). The regression coefficient for city–county consolidation is -0.047 , and is significant at the 1% level. These results confirm that the conclusion in Table 2, EM (1), that city–county consolidation significantly promotes enterprises' earnings management behavior, remains robust.

5.3.4. Replace Other Measures of Earnings Management

This study follows Dechow et al. (1995), and uses the modified Jones model for regression estimation of earnings management. This model improves the Jones model by adding accounts receivable. The estimation model is as follows:

$$TA_{i,t} = \varphi_0 + \varphi_1(\Delta Sale_{i,t} - \Delta Rec_{i,t}) + \varphi_2 PPE_{i,t} + \epsilon_{i,t} \quad (4)$$

The calculation methods for $TA_{i,t}$, $\Delta Sale_{i,t}$, $\Delta Rec_{i,t}$, and $PPE_{i,t}$ are the same as above. The regression result is shown in Table 3 for EM (3). The regression coefficient for city–county consolidation reform is -0.051 , and is significant at the 1% level. This further shows that the impact of city–county consolidation in Table 2's EM (1) on enterprises' earnings management remains robust. In addition, the R^2 value in the robustness result is 0.471, indicating a reasonable goodness of fit for the model setting.

5.4. Research on Heterogeneity

This study finds that the impact of reform on earnings management may be influenced by enterprise ownership; therefore, state-owned enterprises are identified by determining whether the ratio of the capital to the paid-in capital of an enterprise is more than 50%. The regression results, which show the impact of city–county consolidation on state-owned enterprises' earnings management, are shown in Table 4's state-owned enterprises (1). The regression coefficient is -0.52 , and not significant. The regression coefficient for Table 4's non-state-owned enterprises (2) is -0.054 , which is significant at the 1% level, indicating that city–county consolidation plays a significant role in promoting non-state-owned enterprises' earnings management. In addition, the R^2 is 0.475, which is a reasonable goodness of fit for the model.

From the above regression results, the impacts of city–county consolidation on state-owned and non-state-owned enterprises' earnings management are different. One possible reason is that state-owned enterprises' managers do not take great political risks in manipulating profits, while non-state-owned enterprises are not exposed to such political risks. Conversely, state-owned enterprises generally have a strong monopoly on resources, and their products remain competitive in the market after city–county consolidation. Therefore, compared to non-state-owned enterprises with greater competitive pressure, state-owned enterprises are less motivated to manipulate profit. However, non-state-owned enterprises' products are influenced by the expansion of market scale, and the strengthening of the market competition effect brought about by city–county consolidation, to adopt earnings management to cope with market competition.

Table 4. Regression results of heterogeneity test.

Dependent Variable	(1)	(2)	(3)	(4)
	State-Owned Enterprises	Non-State-Owned Enterprises	Belonging to the Central, Provincial, and City Governments	Belonging to the Central, Provincial, and City Governments
CCC	−0.052 (0.049)	−0.054 *** (0.020)	−0.031 (0.024)	−0.065 ** (0.025)
ROA	−0.017 (0.021)	0.010 ** (0.005)	−0.071 *** (0.015)	0.018 *** (0.005)
LEV	0.005 (0.010)	−0.038 *** (0.003)	−0.038 *** (0.007)	−0.034 *** (0.003)
Age	0.009 *** (0.002)	0.022 *** (0.001)	0.017 *** (0.002)	0.023 *** (0.001)
IEM	0.251 *** (0.050)	0.351 *** (0.024)	0.264 *** (0.040)	0.357 *** (0.025)
Scale	−0.032 *** (0.004)	−0.068 *** (0.001)	−0.027 *** (0.003)	−0.068 *** (0.001)
Growth	−0.000 *** (0.000)	−0.005 *** (0.001)	−0.001 ** (0.000)	−0.007 ** (0.002)
Constant	0.248 *** (0.047)	0.539 *** (0.012)	0.199 *** (0.033)	0.528 *** (0.012)
Enterprise fixed effect	Yes	Yes	Yes	Yes
Year fixed effect	Yes	Yes	Yes	Yes
Observations	58,797	594,839	85,936	567,700
R ²	0.525	0.475	0.479	0.476

Note: *** and ** denote significance at the 1%, 5%, and 10% levels, respectively. The standard errors are reported in parentheses.

In addition, this study conducts group tests based on of enterprises' affiliations. The results are shown in "Belonging to the central, provincial, and city governments" (3) and "From the central, provincial, and city governments" (4) in Table 4. Of the results, (3) shows the impact of city–county consolidation on the earnings management of enterprises that are affiliated with central, provincial, and municipal governments, with a regression coefficient of −0.031, which is not significant. The regression coefficient in (4) is −0.065, which is significant at the 5% level, indicating that city–county consolidation has a significant promotional effect on the earnings management of enterprises that are affiliated with county-level government. In addition, the R² is 0.476, with a reasonable goodness of fit for the model.

A possible reason is that, after city–county consolidation, the governments of the withdrawing counties have decreased autonomy in their financial affairs, and their policy support in terms of financial subsidies, tax expenditures, and fund subsidies to enterprises within their jurisdictions is weakened. Moreover, with market expansion and a rise in competitive pressure, enterprises face greater pressure to increase costs, which aggravates their earnings management behavior.

5.5. Discussion

There are three obvious findings between this study and the existing literature:

First, this study is similar to Fan and Zhao (2020) [20]. They both study the impact of city–county consolidation on enterprise business behavior, but the transmission mechanism and analysis perspective of this study are different from those of Fan and Zhao. They analyze it from the perspective of tax collection and management, and believe that the enterprise tax avoidance caused by city–county consolidation is affected by the weakened tax collection and management of county governments. However, this study argues that city–county consolidation strengthens market competition, which leads to the increased operating pressure on enterprises, and then promotes the downward earnings management of enterprises to hide profits and avoid taxes.

Second, Xue and Tinaikar (2009) [9] and Markarian and Santalo (2014) [26] also study the relationship between market competition and earnings management. They find that intense market competition promotes earnings management, which is the same as the conclusion of this study. However, they all use the OLS method to verify their research, which may not solve the problem of endogeneity well. Compared with them, this study introduces the strict exogenous natural experiment of city–county consolidation, and uses the DID method to solve the endogenous problems existing in previous studies on market competition and earnings management.

Third, it can be seen from the previous literature that, whether in China or other countries, the studies on city–county consolidation pay more attention to the macro level. Egger et al. (2018) [15] and Hall et al. (2020) [11] study the influence of city–county consolidation on economic development, and Taylor et al. (2016) [19] study the influence of city–county consolidation on government revenue and expenditure. However, this study pays more attention to the micro level, and studies the influence of city–county consolidation on enterprise development.

6. Conclusions and Implications

6.1. Conclusions

China is currently in the second half of rapid urbanization. While the urbanization speed is slowing down, there remains considerable room for improvement in urbanization. It is particularly important to prudently and selectively promote city–county consolidation in order to improve central cities' driving capacities. However, existing studies mainly focus on the impact of city–county consolidation on economic growth, finance, taxation, and so on, while research on the impact of micro-enterprises remains weak and has gaps.

This study introduces the theoretical mechanism of “city–county consolidation intensifies market competition among enterprises improved level of enterprises' earnings management.” Based on data on industrial enterprises from 1999 to 2006, this study provides empirical evidence on how city–county consolidation affects enterprise earnings management using the DID method. In addition, through empirical research, the study verifies the theoretical mechanism. There are four main findings from this study.

First, the regression results that city–county consolidation impacts enterprises' earnings management is significant, indicating that city–county consolidation promotes the motivation for enterprises' earnings management. The main reason is that city–county consolidation breaks the rigid administrative barriers between cities and neighboring counties, promotes the integration of regional markets, intensifies product market competition, and aggravates enterprises' earnings management behavior under the pressure of competition, which also reflects the significant drawback of the policy.

Second, from the perspective of earnings management, the regression results show that city–county consolidation has a significant promotional impact on downward earnings management, while it has an opposite, but insignificant, effect on upward earnings management. This finding indicates that enterprises are more inclined to adopt downward earnings management to hide their profits when faced with competitive pressure.

Third, from the perspective of enterprise ownership, the regression results show that the impact of city–county consolidation on state-owned enterprises' earnings management is not significant, while the impact on non-state-owned enterprises' earnings management is significant.

Fourth, from the perspective of enterprise membership, compared with the insignificant results for enterprises belonging to central provinces and cities, the results for those belonging to counties are more significant. Specifically, county enterprises face greater competitive pressure after city–county consolidation, which leads them to practice earnings management.

In summary, this study finds that city–county consolidation intensifies product market competition and, thus, promotes enterprises' earnings management behavior. Furthermore, the study enriches the literature on the impact of administrative division adjustment on en-

terprise earnings management by using city–county consolidation as a natural experiment. Moreover, it provides empirical evidence from the perspective of market competition, and has important reference significance for optimizing the setting of administrative divisions to enhance national governance capacity.

6.2. Implications

This study enriches the research on the development of enterprises by withdrawing counties and establishing districts. Specifically, the research also has important practical significance in prompting the government to create a fair, competitive institutional environment, and strengthen enterprise governance capacity, namely:

First, the study, for the first time, evaluates the impact of city–county consolidation on earnings management behavior of enterprises from the perspective of market competition as a transmission mechanism, and verifies the effectiveness of the transmission mechanism of market competition, which is of great significance in enriching the existing literature. Meanwhile, the study also introduces the exogenous policy of city–county consolidation, which well-solved the endogenous problems of previous research on earnings management affected by market competition, which is an important supplement to the existing literature.

Second, the study finds that city–county consolidation leads enterprises to implement downward earnings management behavior, which is unfavorable to optimizing the regional accounting information environment. Therefore, the study puts forward relevant policy suggestions from two aspects of institutional environmental governance and enterprise internal governance, to provide useful references for further improving urban governance capacity. From the perspective of institutional environment construction, the government should pay attention to the establishment of market supervision mechanisms, with clear reward and punishment, and take specific management measures based on the market competition situation, so that the expected loss of the enterprise subject carrying out earnings management and other violations is greater than the gains obtained from the violation. From the perspective of corporate governance, compared with state-owned enterprises, private enterprises need to further improve their corporate governance ability, standardize accounting information, avoid “crossing the red line” to seek profits, and rationally choose between short-term interests and long-term survival, in order to establish unique competitive advantages. In addition, enterprises under the jurisdiction of the original county should optimize and adjust their corporate strategies to adapt to the new market competition.

Although this study has effectively verified city–county consolidation on earnings management, there are still some limitations.

First, this study uses the database of Chinese industrial enterprises, which mean only analysis of enterprises in the industrial field are adopted, but does not include service enterprises in the research scope, which has certain limitations. In the future, the database of listed companies can be used for further research to comprehensively consider the earnings management behavior of listed companies in different industries after city–county consolidation.

Second, this study focuses on China, but whether it is also applicable to the practice of city–county consolidation in other parts of the world needs further research. In the future, data from other countries can be used for verification, and it can be extended to enterprise innovation, investment, and other fields. These are important decisions for enterprise development, and in-depth research is very necessary.

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