

Striving for Sustainable Development: Analysis of the Revenue and Operation Cost of Private Kindergartens in Chinese Society

Jing Gao¹, Hailan Wang¹, Yue Shao¹, Yaqin Duan¹, and Wei Wang²

¹Shanghai Early Childhood Education College

²Hubei University of Arts and Science

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Abstract

This study explores the revenue and operation cost structures of private kindergartens in China as profitability is key to their sustainable development. Altogether 233 private kindergartens were sampled and involved in the survey study, which provides a quantitative analysis of the researcher-designed Questionnaire on the Revenue and Cost of Private Kindergartens (QRCPK). And 23 of these participating kindergartens were involved in a semi-structured interview. Analyses of both survey and interview data jointly indicated that: (1) the majority of the revenue of private kindergartens depended on the tuition fees; (2) their labor cost and rent costs are massive high; (3) the low profitability has been proved by the high cost-revenue ratio; (4) the poor cost accounting and financial management strategies hindered the sustainable development of private kindergartens.

Abstract

This study explores the revenue and operation cost structures of private kindergartens in China as profitability is key to their sustainable development. Altogether 233 private kindergartens were sampled and involved in the survey study, which provides a quantitative analysis of the researcher-designed Questionnaire on the Revenue and Cost of Private Kindergartens (QRCPK). And 23 of these participating kindergartens were involved in a semi-structured interview. Analyses of both survey and interview data jointly indicated that: (1) the majority of the revenue of private kindergartens depended on the tuition fees; (2) their labor cost and rent costs are massive high; (3) the low profitability has been proved by the high cost-revenue ratio; (4) the poor cost accounting and financial management strategies hindered the sustainable development of private kindergartens.

Keywords: private kindergarten; revenue; operation cost; profitability

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Introduction

The last decade has seen growing importance placed on developing private kindergartens through China's "common development of public and private kindergarten" policy. Research on the earlier childhood education (ECE) curriculum, kindergarten teacher professional development (P.D.), and kindergarten-family cooperation have been mounting steadily (State Council, 2010). And the audit and evaluation of kindergartens emphasized the facility's external particularity by the government, qualification of the kindergarten teacher, campus security, and children's health. However, the neglected internal operation system drove the development of private kindergartens in Chinese society, such as the detailed revenue, cost, and profitability. Moreover, the tuition fees of private kindergartens indicated a tendency to increase compared to those of public kindergartens recently. Therefore, it is essential to point out the relationship between revenue and

operation costs for government authorities and parents. And findings of this study will have a significant contribution to government subsidies policy and practical implications for the sustainable development of private kindergartens on the cost accounting system.

A Historical Overview of China's Private Kindergarten

In 1978, China entered a time of reform and opening-up policy. It brought the economy's rapid development and led to the development of ECE, and private kindergartens began to rise. China's authority issued the "Outline of China's Education Reform and Development" in 1993, which included "actively encouraging, vigorously supporting, correctly guiding and strengthening management." (State Council, 2010). Then, in December 2010, The State Council in China promulgated "Several Opinions on the Current Development of Kindergarten Education" (hereinafter "Country Ten"), which pointed out the development policy of kindergarten education again. Country Ten adhered to "government-led, social organization participation, pay attention to simultaneous development both with public kindergartens and private kindergartens" (Pang, 2009). Since then, private kindergartens have rapidly developed (Wang, 2015). According to the "National Education Development Statistical Bulletin 2019" issued by the Ministry of Education (MOE), there were 281,200 kindergartens across the country by the end of 2019. Among them, more than 60 percent (the total number of 173,200) were private kindergartens. So private institutions have played a significant role in the kindergarten education system in China (MOE, 2020). And also, according to the "National Education Development Statistical Bulletin in 2021", there were 294,800 kindergartens nationwide, of which 166,700 were private kindergartens accounted for a certain proportion (MOE, 2022), which have made an outstanding contribution to the cause of public services for kindergarten in China (Wang, 2015; Dai, 2016).

The Challenge of Affordability for Private Kindergartens

The revenue from private kindergartens mainly included initial financial input, tuition fees, social donations, and government subsidies (Wu, 2015). However, since the system of private kindergartens was different from public kindergartens, neither the state allocates the funding source for running kindergartens nor the premises and teachers, and the primary source of revenue was the charges for education services, namely tuition fees (Gu, 2006; Lau & Li. 2019).

As for financial support, private kindergartens in the United States, Japan, Thailand, France, Belgium, New Zealand, etc., obtained more government subsidies on top of tuition fees (Kostelnik et al., 2007). For example, France and New Zealand provided certain government subsidies for licensed private kindergartens. The Belgian federal government supported not only public kindergartens but also fully subsidized private kindergartens and provided several types of grants for them (Morrison, 2011; Cleveland & Krashinsky, 2003; Canadian Union of Public Employees, 2009). In addition, the Australian government provided financial assistance to families with children under five (Que, 2017; Wang et al., 2003). The United States provided direct government subsidies through "education vouchers" for children attending private kindergartens (Ludwig & Miller, 2006; Grace et al., 2002; Ludwig & Philip, 2007; Schweinhart, 2006).

However, China's government funding subsidies for private kindergartens were almost minimal, and the majority of private kindergartens (96.3%) did not receive any financial support from the government (Li et al., 2008). There were also a few other financial support channels from society. Overall, the private kindergarten's revenue structure was single, which came from tuition fees (accounting for 95.33% of total revenue) (Wu, 2015; Lau & Li. 2019). In addition, China's government did not make rigid regulations on private kindergarten tuition fees and market pricing mechanisms. That means the tuition fees can be set independently by private kindergartens according to the market and then go to the education bureau to record the tuition fees (Barnett & Leonard, 2007). Some high-end kindergartens with suitable software and hardware conditions for children from middle- and upper-income families in cities, to maintain the high running cost of kindergartens, often increase the revenue of kindergartens by raising their fees, make up for the running cost of kindergartens in order to chase more profit (Fang & Deng, 2014). Thus, according to the "3A2S" theoretical framework, which was proposed by Li et al. (2014) to evaluate all ECE policies (Li et al., 2014; Li et al., 2017), the tuition fees of private kindergartens were generally too high, exceeding the

affordability of ordinary families in China (Lin et al., 2018).

In general, tuition fees account for most of the revenue of private kindergartens in China, and the proportion of government financial input is tiny. Moreover, tuition fees were generally too high compared to the average income of Chinese families, and the "expensive admission" phenomenon is becoming more serious (Temple et al., 2007).

The Context of Running Costs in Private Kindergartens

The cost of kindergarten education is essential in measuring tuition fees (Timothy et al., 2012; Zhou et al., 2017). That means the tuition fees are determined by the educational cost of cultivating young children, which involves the running cost of kindergartens (Kamerman & Gatenio, 2007; Yu et al., 2022). Therefore, the running cost of private kindergartens is essential. For the government, the running cost was the primary basis for judging whether the tuition fees of private kindergartens were reasonable (Huang, 2018; Temple et al., 2015; Lau & Li. 2019). In addition, for the private kindergartens themselves, the running cost was also helpful in assessing the cost responsibility they should bear and provided direction for cost management (Dong, 2016) to improve the operation efficiency of the invested capital (Wang, 2015; Breyon, 2019).

However, there were few domestic and international studies on the running cost of private kindergartens (Hanes, 2010; Jin, 2001; Yuan, 2000). The current research on the running cost of kindergartens in China was mostly a comparative study on the amount and structure of cost between public kindergartens and private kindergartens. For example, Chen, Q.X. found that, as for the structure of running cost, the share of the public cost of private kindergartens (44%) was higher than that of public kindergartens (20%-40%) (Wang, 2013). The capital investment of public kindergartens in personnel cost was much higher than that of private kindergartens; private kindergartens spent much less on teachers' salaries, welfare benefits, teacher training, and teaching than public kindergartens. It shows that the funds of private kindergartens did not pay enough attention to the expenses of completing the teaching business, which impacted the quality of care and education and the level of kindergartens. The few available studies have indicated that the running cost of private kindergartens differs from public kindergartens, and there was a basic consensus on understanding the running cost of private kindergartens. Starting from the cost of economic concept, which refers to the sum of all natural resources consumed in an investment plan (Zhao & Lin, 2012; Zhang, 2011; Heckman et al., 2010), running cost is considered as the value of resources that private kindergartens need to consume in the process of providing kindergarten education services, which were directly related to the implementation of educational activities and services (Yuan et al., 2005). The value of these expended resources was aggregated to a particular target group and became the cost of educating kindergarten children in private kindergartens. The running cost of private kindergartens can be divided into total cost and average cost. For the purpose of accounting, it is generally measured by the actual average cost of cultivating a child, so it is also called the average cost per student, which is expressed as the annual financial in monetary form cost calculated by accounting methods (Shanghai Municipal Commission of Education, 2010).

Nevertheless, the current studies' opinions on cost structure were different. Li et al. proposed that the running cost of private kindergartens is not the same as that of public kindergartens (Li et al., 2014), and Wang proposed that it can be divided into three main categories: the personnel cost, the public cost, and the fixed cost (Wang, 2013). To account for the expenses using on teaching and management, the documents "Financial Management Measures for Private Primary and Secondary Schools in Shanghai and Accounting Measures for Private Primary and Secondary Schools in Shanghai," which were issued in 2010, divided the structure of cost into business operating expenses, administration expenses, funding expenses, and other expenses. Business operating expenses were the most critical cost item relating to the direct provision of teaching and learning services to children, which incurred in carrying out the teaching and learning activities and ancillary activities of private kindergartens (Ho et al., 2013; Hustedt, 2011); administration expenses incurred by the decision-making bodies for management and by the logistical support departments of for the provision of logistical services, and funding expenses incurred by private kindergartens to raise funds for their operating activities (Hong et al., 2020). Under the two primary accounts, business operating and administration expenses, three secondary accounts were personnel, public, and fixed cost. For accounting

purposes, the secondary accounts continue to be subdivided into several tertiary accounts (Yu et al., 2022). For example, the personnel cost can be subdivided into basic salaries, bonuses, allowances, welfare payments, and social security payments for teachers and logistics managers; the public cost can be subdivided into the purchase of books and teaching aids, training costs, conference fees, maintenance cost, materials, printing cost, etc. Fixed costs included rental costs, depreciation of fixed assets, etc. (Shanghai Municipal Commission of Education, 2010).

Some specific characteristics of private kindergartens have been found in previous studies, such as the proportion of personnel expenditure being much higher than other expenditures (Wang, 2015). At the same time, some extremely irrational phenomena in the cost structure have also been found, such as the public cost accounting for less than the share of 7% in cost expenditures. Furthermore, in addition to the personnel cost, the investment in teaching aids and playing toys, library materials, and teacher training was extremely limited, which inevitably directly impacted the quality of education and the level of private kindergartens (Temple et al., 2010). Furthermore, some studies have suggested the need for government intervention to help cost management for private kindergartens to solve the problem of "expensive admission" and improve the return on cost through scientific accounting and management of the running cost (Commission of Education, 2010). Cost management of private kindergartens included analyzing the allocation structure of education costs and guiding the kindergartens to spend education funds on core teaching services to ensure the quality of teaching and learning, reducing unnecessary expenses, and avoiding luxury and extravagant construction. In addition, cost management needs the supervision of the education department, which should increase cost supervision, and strict control of the cost items and expenses to avoid sharp increases in the cost of kindergarten (Yu et al., 2022).

However, few empirical studies have been done on the revenue and cost structure, profitability, and financial management entirely in private kindergartens in Chinese society. Accordingly, this study proposed two following research questions:

1. What are the revenue and cost structures of Chinese private kindergartens?
2. What are the profitability and financial management of Chinese private kindergartens?

Methods

A two-phase study was conducted to explore selected private kindergartens' detailed revenue, operating cost, and administration expenses in the Financial Year 2019 (FY2019). Thus, the research design was a mixed method design utilizing both surveys in phase one and interviews in phase two.

Sample

This study employed a convenient sampling strategy. The researchers asked for consent from participants with detailed explanations of research purposes to all potential private kindergartens in their close contacts. A total of 246 private kindergartens were selected as the study subjects in four Shanghai regions in phase one. As shown in Table 1 that 233 kindergartens filled out the qualified QRCPK after the data verification finally. Namely, 10 (4.29%) of them are located in Hongkou district, 92 (39.48%) of them are located in Pudong new district, 65 (27.90%) of them are located in Minhang District, and 66 (28.33%) of them located in Songjiang district. Meanwhile, 7.73% and 63.09% have more than 20 years of experience and ten years of experience in running a private kindergarten. The ownership of those kindergartens covered state-owned enterprises (3.43%), the domestic joint venture (10.30%), mixed ownership enterprises (0.86%), Sino foreign joint ventures (1.29%), sole proprietorship (65.67%), and other social institutions (18.45%). Their class size ranged from 1 to 24 classes. Additionally, the enrolment age has been divided into two groups 2-6 years old (63.52%) and 3-6 years old (36.48%). Half of those kindergartens' tuition charges are under 3,000 yuan per month per kid. Most kindergartens (59.23%) are classified at the second-class level, and 27.04% are ranked at the third-class level. Additionally, the principals and accountants of 23 kindergartens that completed the phase one survey have been invited to conduct a semi-structured interview in phase two.

Insert Table 1 about here

Measure

The prime data collection instrument used for this study is the researcher-designed Questionnaire of Revenue and Cost of Private Kindergartens (QRCPK), which consists of four main sections. The first was intended to elicit demographic information on the selected private kindergartens, including time of establishment, age group of enrolment, regions, ownership, kindergarten level, and kindergarten size. The second section focuses on the respondents' total revenue and the revenue's main content. The detailed cost and expenses information is an essential component of private kindergartens' daily operation, which have been asked in section three via such questions as the total operating cost and administration expenses, difference level account in cost, cost breakdown, and cost per student. Finally, the fourth section was designed to assess cost management details, such as the attitudes regarding the current cost level, revenue-to-cost ratio, supervision and training on cost management, and the challenge of cost management.

Meanwhile, the research team designed a semi-structured interview question list composed of six questions referring to the understanding of operating cost, cost accounting, the associated factor of operating cost, the relationship between revenue and cost, the challenge of cost accounting, and cost management strategy.

Procedure

The researchers designed the QRCPK according to the current revenue and cost structure of private kindergartens from July to August 2020. And Delphi method was used to improve the QRCPK by financial experts in Education Bureau, experienced principals, and accountants in Shanghai. The research team approved the final version of the QRCPK after the pilot study was conducted on five private kindergartens in September 2020, removing five misunderstanding questionnaire items.

The main study of data collection took place between September and November 2021. A total of 246 potential kindergartens received the invitation and consent form with a detailed explanation of this study (A total of 233 kindergartens returned the valid questionnaires). Then the link to the QRCPK was sent to the principals via Wenjuanxing.com (the leading online survey platform in China) upon receiving their consent in phase one. All participants were free to withdraw from the study at any point. And all data of QRCPK have been stored on the first author's computer, and only the first author and the data analyst had the right to access the original database.

Altogether 23 kindergartens with different enrollment ages, class sizes, ownership, and revenue and expenditure relationships were invited to join the semi-structured interview in phase two. Finally, 23 principals or accountants were interviewed for approximately two hours individually. And all interviews were conducted in respondents' offices and audio-recorded, transcribed, and translated into English by the researcher. Meanwhile, all interviewees have been coded from K01 to K23.

Data Analysis

Four types of statistical analyses were used to address the research questions by IBM SPSS (version 23) statistical software package. Descriptive analysis, correlation analyses, Kruskal-Wallis one-way analysis of variance by ranks, and one-way nonparametric Mann-Whitney U test were conducted to reveal the detailed revenue and cost and the group differences for all selected kindergartens to answer the first and second research questions. Furthermore, transcripts have been analyzed by NVivo11 with themes of revenue, tuition fee, government subsidies, operating cost, administration expenses, labor costs, common costs, fixed costs, cost accounting, and cost management.

Results

Comparison of Revenue in Tuition Fees and Government Subsidies

The average revenue of 233 private kindergartens was 6,629 thousand in FY 2019. Table 2 presents the average revenue for each group of kindergartens by enrolment age and kindergartens ranking. Moreover, the revenue has been broken down into tuition fees, government subsidies, and other revenues. The portions of tuition fees in total revenue were between 87.68% to 99.34%, and the government subsidies shared between .61% to 11.01% of total revenue for each private kindergarten.

Insert Table 2 about here

A one-way nonparametric Mann-Whitney U test indicated the significant difference in average revenue ($Z = -7.51^{***}, p < .001\%$), tuition fee ($Z = -7.05^{***}, p < .001\%$), and government subsidies ($Z = -2.76^{**}, p < .01\%$) by a distinct group of enrolment age. However, there was no significant difference in other revenue ($Z = -.13, p > .05\%$) by each group.

Similar results have been found in the group of kindergarten ranking by Kruskal-Wallis one-way analysis. The revenue of district model, first-class, and non-ranked kindergartens is significantly higher than other kindergartens ($\chi^2 = 114.34^{***}, p < .001$). Also, the results illuminate the different revenue in tuition fees ($\chi^2 = 103.96^{***}, p < .001$) and government subsidies ($\chi^2 = 37.16^{***}, p < .001$).

Comparison of Cost Structure of Private Kindergarten

Three account levels have been summarized in Table 3. The total cost contained the operating and administrative expenses in the level one account. And the average cost of 233 kindergartens was 6,520 thousand per year, demonstrating the low profitability since the high cost-revenue ratio (98.26%). In addition, Table 2 and Table 3 illustrated further profitability levels by the cost-revenue ratio in the group of district model kindergarten (95.00%), the first-class kindergarten (91.14%), and the non-ranked kindergarten (90.09%). In contrast, the loss-making operation occurred in the second-and third-class kindergartens with a cost-revenue ratio of 100.87% and 100.60%, respectively. Similar results have been confirmed in different groups for enrolment age. The cost-revenue ratio was 97.26% for enrolment ages two to six and 102.07% for three to six years old. The other unclassified administration cost appeared to be high, sharing 15.40% of the total cost. On the other hand, the training expenses (1.02% of total cost) were quite a lot less than other cost items, even lower than printing supplies (1.63% of total cost) and water and electricity expenses (1.28% of total cost).

Insert Table 3 about here

The highest cost in the level 2 account was labor (59.27% of all costs), which contained 2,916 thousand direct teacher staff and another 947 thousand indirect logistics staff. Regarding the level 3 account, the top five cost items were salary and bonus (47.45% of total cost), other administration expenses (15.40% of total cost), social insurance and housing fund (9.89% of total cost), Rental (7.85% of total cost), and maintenance cost (6.71% of total cost). Finally, the research team found a significant correlation between revenue and cost per student ($r = 0.88^{***}, p < .001$).

Between-Group Differences in Total Operating Cost and Cost per Student

Table 4 shows that the highest total cost was 13,677.96 thousand yuan per year for kindergarten size in 17-24 classes, and the lowest total cost was 2,216.85 thousand yuan per year for kindergarten level in the third class. However, the highest cost per student (53.70 thousand per year) has been found in non-ranked kindergartens.

The labor cost shared 59.27% of the total cost for all kindergartens, and the highest portion of labor cost was 2,657.56 (63.15 of total cost) thousands yuan per year in kindergartens of enrolment aged between 3 and 6 years old. Meanwhile, the highest common cost was 5,417.45 thousand yuan per year in non-ranked kindergartens.

The result of Kruskal-Wallis one-way analysis of variance by ranks showed a significant difference between groups of regions in total cost ($\chi^2 = 24.34^{***}$, $p < .001$), cost per student ($\chi^2 = 10.29^*$, $p < .05$), labor cost ($\chi^2 = 39.12^{***}$, $p < .001$), common cost ($\chi^2 = 22.85^{***}$, $p < .001$), and fixed cost ($\chi^2 = 50.28^{***}$, $p < .001$). Homoplastically, the results indicated the differences in groups of kindergarten level in total cost ($\chi^2 = 118.83^{***}$, $p < .001$), cost per student ($\chi^2 = 125.86^{***}$, $p < .001$), labor cost ($\chi^2 = 112.77^{***}$, $p < .001$), common cost ($\chi^2 = 108.66^{***}$, $p < .001$), and fixed cost ($\chi^2 = 13.61^{**}$, $p < .01$).

Regarding groups of kindergarten size, only total cost differences have been investigated ($\chi^2 = 61.09^{***}$, $p < .001$) significantly, and there are no differences in cost per student, labor cost, common cost, and fixed cost.

A one-way nonparametric Mann-Whitney U test showed the group difference in enrolment ages in total cost ($Z = -7.61^{***}$, $p < .001$), cost per student ($Z = -8.89^{***}$, $p < .001$), labor cost ($Z = -7.61^{***}$, $p < .001$), common cost ($\chi^2 = -7.32^{***}$, $p < .001$), and fixed cost ($\chi^2 = -2.41^{**}$, $p < .01$).

Insert Table 4 about here

Cost Accounting and Management of Private Kindergarten

There were 102 kindergartens (43.78%) that believed that the operating costs were running at a high level, and only 19 kindergartens thought that their kindergartens were running at a low-cost level. The overall attitude towards cost is at a high level ($M = 3.45$), wherein kindergartens located in Hongkou ($M = 3.80$) and Songjiang ($M = 3.68$) districts claimed a higher cost level than those kindergartens located in Pudong new ($M = 3.29$) and Minhang ($M = 3.40$) district. Regarding the relationship between revenue and operating cost, half of the selected kindergartens (50.21%) thought their operations were at the break-even point in FY 2019. Meanwhile, a third of kindergartens (33.91%) believed their revenues were higher than their cost.

The cost structures have been challenged by 44 kindergartens (18.89%) that assumed unreasonable cost structures in their daily operation. Most kindergartens (94.42%) stressed that the local government and education bureau provided professional supervision and training services to improve their cost management strategies. However, 13 kindergartens (5.58%) still did not receive such services. The top five confusions in cost accounting and management were: lack of professional accounting guidance ($M = 4.40$, $SD = 3.92$), cost allocation ($M = 4.21$, $SD = 3.58$), misunderstanding of cost items ($M = 3.35$, $SD = 3.93$), accounting principles and methods ($M = 3.33$, $SD = 3.50$), and mismatched accounting software ($M = 3.26$, $SD = 3.78$).

Most principals and accountants (98.28%) supported that cost accounting and management are necessary for their kindergartens. Similarly, the top three demands of cost accounting and management were: more professional cost management training, professional in-process supervision instead of yearly audits, and a unique cost management system for private kindergartens. Finally, the principals and accountants described the idealized cost accounting and management system with the following functions for kindergarten particularly: precise cost item (84.12%), normative cost allocation regulations (49.36%), common cost management strategy (33.05%), practicable cost management objectives (27.04%), cost control in human resources (12.88%).

Discussion

The Revenue Structures Between Groups of Enrolment Ages and Kindergarten Ranking

The results of this study indicated that the revenue of the kindergarten which served the age group between two to six years old was much higher than whose kindergarten that provided the service to the age group

between three to six years old. This can be explained using the relationship between market supply and demand that a huge potential market raised the higher tuition fee in the group of enrolment age between two to three years old, even though 63.52% of total private kindergartens offered such service already. Heckman interpreted that the younger children resulted in a lower Student-Teacher Ratio (STR), then caused the higher labor cost and tuition fees (Heckman, 2011). K08 illustrated that the cost of classes between two to three years old required more investment in security, safety, food processing, and nursing. Thus, the kindergarten proposed a higher pricing strategy for this group. Another finding of government subsidies also backs the revenue differences. And the government was more inclined to subsidize the kindergarten, which provided the service to the group enrolment age between two to six years old, than the others.

On the other hand, this study enunciated that the revenues of the district model and the first-class kindergartens are much higher than the second- and third-class kindergartens'. Another finding might explain that the district model and the first-class kindergarten obtained more government subsidies. Nevertheless, the highest revenue has been found in non-ranked kindergartens. This is in complete agreement with Bartik et al.'s results that most non-ranked kindergartens are high-end with higher tuition fees than others (Bartik et al., 2012).

Moreover, the study represented that the majority of the revenue of private kindergartens depended on the tuition fee, which shared 87.68% to 99.34% of total revenue. The results were consistent with those reported for the resource of kindergarten revenue in the previous studies that more than 96.3% of kindergartens lack an additional source of revenue, and more than 95% of the revenue came directly from the tuition fee (Brandon et al., 2010). Part of the explanation lay in the fact that the kindergarten did not obtain enough subsidies from the government, which has been proved in our study. Moreover, another possible reason may be that the tuition fee was too expensive due to the private kindergarten market was price inelasticity, and the kindergarten plays the role of decision-making to control the unnegotiable pricing strategy always. More seriously, the other revenues were very low for all private kindergartens. And K12 and K03 illustrated that social donations are meager.

Comparatively, low government subsidies have been found in this study. The government authorities issued some policies on financial support for developing private kindergartens. Nevertheless, few specific action plans have been launched (Bartik et al., 2012). Furthermore, the preferential ECE budget policy prompted significant mass government funds to invest in public kindergartens (Brandon et al. 2010). Meanwhile, unbalanced government subsidies are also presented in this study. K21 stated that the main government subsidies came from the "Appraisal of Shanghai Quality Private Kindergarten" project by Shanghai Education Committee every three years. However, only the district model, the first-class, and some second-class kindergartens had the opportunity to obtain such a financial reward. The results align with Brandon et al.'s study that the government always focuses on financial support for top-level private kindergarten (Hong et al., 2020; Lau & Li. 2019). This Matthew effect polarized the market by making the rich kindergartens richer and the poor poorer. Finally, the one-time subsidies are hard to support sustainable development for those private kindergartens. For instance, K03 and K05 mentioned that the Minhang district education committee provided one-time subsidies from 50 to 100 thousand per kindergarten to the district model kindergartens without any no follow-up support at all.

The Comparison of Cost Structures of Private Kindergarten

The high labor cost has been investigated in the level two account in this study. And most of the labor costs were salary and bonus, social insurance, and housing fund. The results confirm the previous research's findings by providing a much more detailed examination that the labor cost far outweighs other cost items in private kindergartens (Zhou et al., 2020). The more likely explanation rests in the nature of private kindergartens that most kindergartens underline their unique curricula, such as the feature in art feature, sports, bilingual education, and sinology. K10 claimed that the labor cost of unique curriculums was much higher than those of traditional curriculums'. This result also corroborates with other findings in this study that the non-ranked private kindergarten did not put more money into labor costs than others since most of them focused on the traditional curriculum. The second reason for the high labor cost is the competitive

market of kindergarten teachers in Shanghai, especially in private kindergartens that have unstable job positions rather than public kindergartens. Thus, the private kindergarten had to attract more kindergarten teachers with higher salaries (Zhou et al., 2020). Additionally, the more classes, the higher the labor cost; this might be caused by the fact that more classes caused a more complex administration system with less efficient operation.

This study highlighted that the Rental also shared a high cost in level three. K13 stated that the kindergartens are located in the center of the district and individual communities with convenient transportation, which causes the higher rental cost. Moreover, K15 and K22 indicated that the Rental was raised by the local Consumer Price Index (CPI) yearly. Results were remarkably consistent among those studies of rental allocation of private kindergartens that rent was a big part of the operation cost in private kindergartens (Brandon, 2004). Contrarily, the training expenses were meager in all private kindergartens. K14 demonstrated that the kindergartens tended to hire experienced kindergarten teachers compared to training them from the views of time and cost. Brandon unraveled that ignoring in-service kindergarten teachers' professional development was probably a major cause of the shortage of training costs (Brandon, 2004).

Regarding cost per student, the district model, first-class, and second-class kindergartens remained the similar cost per student level. However, the third-class kindergarten presented a much lower cost per student level. K17 stated that the third-class kindergartens were not easy to prompt to the higher ranking in the short term. So, the priority of the third-class kindergartens was profitability, and the head of these kindergartens slashed the budget on curriculum design and environment improvement. The non-ranked kindergarten showed a huge high cost per student partly because of the poor cost accounting management, which aligned with the previous study that chaotic cost accounting led to unreal costs in the book (Child Care Aware of America, 2016). On the other hand, the Economic of Scale Effect has been proved in this study by the lower cost per student in a class size group of 17 to 24 classes because the more classes shared the fixed cost. The cost per student in the enrolment age group of two to six years old was much higher than that of other groups consequently. Because the enrolment age group between two to six years old needs more investment in unique facilities and healthy nursing, as mentioned above.

The Profitability of Private Kindergarten

The huge high cost-revenue ratios explained the low profitability in this study in district mode, the first-class, non-ranked kindergartens, and the kindergartens with the enrolment age group of two to three years old. But also, loss-making has been found in this study in some kindergartens. The above findings do not contradict those of the empirical studies (Bartik et al., 2012).

There are three possible explanations for this. Firstly, K15 confirmed that owners of kindergartens spent too much on well-furnished and equipping rather than curriculum development and staff training in the short term because such symbolism could attract more new students' parents straightforwardly. Secondly, the chain and franchised kindergarten courted high administration costs, cost of capital, and franchise fees (The State Council, 2018). Because some owners of private kindergartens had no experience in earlier childcare education and kindergarten management, the franchisee was an effective way of running the kindergarten promptly. That is the main reason that the State Council (2018) restricted the development of the franchisee and Initial Public Offering (IPO) for kindergartens (The State Council, 2018). Finally, the uncontrolled accounting regulations did not mirror the specific transactions accurately. Such as, K08 stated that their kindergarten spent more than 500 thousand yuan on facility maintenance. However, all cost was recorded as occurring in the current period rather than depreciation and amortization.

The Financial Management of Private Kindergarten

Half of the private kindergartens operated on the break-even point in this study, and some believed their cost structures were unreasonable, even though most of them had already received professional training and supervision from the local government. Such a surprising finding may be due to the invalid financial management mechanism. However, according to the survey and interviews, this study yielded little evidence of the current worthless financial management system for the following reasons.

Firstly, the yearly audit and supervision by the local government and education bureau did not improve the cost management since the cost took place daily specifically, and the kindergartens are more likely to gloss over the supervision and inspections. Secondly, the absence of a unique cost management system has been mentioned by interviewees due to the current cost accounting and financing regulations serving commercial and manufacturing enterprises more without specific transactions for kindergarten. Take the example of a high common cost that some kindergarten-specific expenses should be allocated to other accounts. Nevertheless, the current practice is summing those unclear accounting items to other administration expenses roughly (Burstein & Layzer). Moreover, there was no accounting software suitable for private kindergartens. Finally, some kindergartens outsourced the accounting service part-time since few accountants are familiar with kindergartens' daily transactions. As a result, the accountant just kept the journal records which lost the function of financial management in cost analysis and decision-making.

Conclusion, Limitations, and Implications

To conclude, the present study is preliminary research on the exploration of private kindergartens' revenue and cost structure from the views of enrolment age, class size, and kindergarten level, but its relevance to financial management strategies can also be seen. A major finding is that the main revenue of private kindergarten was tuition fees, and the government subsidies did not work well. The comparison between groups of enrolment age and kindergarten level has been summarized. Afterward, the study breakdown the cost structures with three-level accounts, and the low profitability was verified. Meanwhile, the finding explored the cost classification of labor cost, common cost, and fixed cost minutely by different groups of kindergarten level, class size, and enrolment age. Lastly, the results indicated failures of the current financial management system of private kindergartens.

Despite this study being the first empirical research of private kindergartens, and the findings comprise several valuable insights into the Chinese private kindergartens in revenue, cost, and profitability, it has limitations. First, the study did not involve a long-term tracking investigation, and all results represented the actual data in FY 2019. Further work should stress a longer period of investigation. Second, the unbalanced sample in the group kindergarten level, there are five non-ranked kindergartens only. Third, the current research stresses private kindergartens only, and perhaps future studies could examine the financial situation of public kindergartens.

The present findings contribute to the field's understanding of private kindergarten on revenue, cost, profitability, and financial management. This study has several practical implementations from the aspect of government and education departments. The updated government subsidies system should be built up in order to encourage the development of private kindergartens, and standardized accounting regulations should be designed. Also, the local government could lead the training program of a specific accountant with local Higher Education Institutions (HEIs). Regarding the kindergartens, more revenue sources could be considered, such as donations. Moreover, the study provides conclusive evidence on pricing strategy for private kindergartens according to the cost structure. Finally, profitability results warn private kindergarten managers to understand the importance of cost accounting.

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