

Evolving Micro-level Processes of Demand for Private Supplementary Tutoring: Patterns and Implications at Primary and Lower Secondary Levels in China

Junyan Liu & Mark Bray
Comparative Education Research Centre, The University of Hong Kong
liujy0211@hotmail.com; mbray@hku.hk

Recent decades have brought global expansion of private supplementary tutoring, and China is among countries in which patterns have been especially dramatic. National survey data indicate that 29.8% of primary and lower secondary students had received private supplementary tutoring in 2014, with proportions rising at higher levels of the school system. However, such statistics present only a snapshot of demand and might suggest that decisions to invest in tutoring are one-off in nature. This paper draws on interviews to show changing patterns of demand by individual parents at different times. Factors influencing parental choices include not only cost and availability of time but also children's academic performance, children's different stages of schooling, and education system reforms. Over time parents may expand or reduce their demand, change balances between academic and non-academic tutoring, and switch between different types and providers of tutoring. This paper thus shows that analyses of demand need to be more nuanced than tends to be the case in analyses of large-scale survey data. The paper is grounded in the Chinese context, but has conceptual implications of wider relevance.

Keywords: Beijing; China; demand; private supplementary tutoring; shadow education

1. Introduction

Private tutoring has become a global phenomenon as a supplement to the formal education system (e.g. Aurini, Davies, & Dierkes, 2013; Bray, 2017; Park, Buchmann, Choi, & Merry, 2016). The expansion of private tutoring has wide and far-reaching implications for the lives of new generations, for the operation of formal education systems, for economic growth, and for cultural and social development. Existing studies include ones focusing on forces underlying demand (Bray & Kwok, 2003; Bray, Zhan, Lykins, Wang, & Kwo, 2014; Dang, 2007; Tansel & Bircan, 2006; Y. Zhang, 2013). This paper deepens understanding by elaborating on the dynamics of demand. Presenting findings from China, it shows how demand for private supplementary tutoring by individual parents

may change, often within a short timeframe. In China the development of private tutoring has been more recent than elsewhere, but it has greatly expanded since the turn of the century (e.g. Lei, 2005; Tsang, Ding, & Shen, 2010; Xue & Ding, 2009; Zhang & Bray, 2016). While some forces are particular to China, other dimensions have counterparts elsewhere and thus have broad relevance. Moreover, even the dimensions that are particular to China contribute to conceptual understanding by showing the dynamics of demand in a setting with specific types of variables.

Many studies, especially quantitative ones, have viewed the demand for private tutoring in terms of snapshots for particular moments. Some have constructed sets of snapshots over time to show macro-level evolutions, but these snapshots are generally for different cohorts of families and students rather than longitudinal for the same families and students. Further, some studies have addressed demand with only dichotomous yes/no variables to indicate participation in private tutoring (e.g. Song, Park, & Sang, 2013; Xue, 2015). The present paper investigates more deeply, building on literature that presents more nuanced information on types, subjects and durations of tutoring (e.g. Bray et al., 2014; Zhan, Bray, Wang, Lykins, & Kwo, 2013; Zhang, 2014; Zhang & Bray, 2017). It also considers more deeply the ways in which identities of tutors may shape demand. As Hatcher (1998, p. 22) noted, family choices in education are ‘not one-off events but a recursive process’. Hatcher’s remark was made in the context of progression through school systems, and such observations have not yet penetrated the literature on private supplementary tutoring. The present paper shows why it is important for such understanding to penetrate this literature.

Specifically, the paper focuses on demand for private tutoring among primary and lower secondary students. It commences with a nation-wide dataset and then proceeds to deeper analysis of a specific sample of families in Beijing. Since parents are the major decision-makers (and often the sole ones) for purchasing private tutoring for children at primary and lower secondary levels (Devi et al., 2011; Jokić, 2013), this paper focuses on the evolving choices made by parents in seeking private tutoring.

2. Definitions and Theoretical Framework

Much of the literature on private supplementary tutoring (Bray, 2009; Tan, 2009) defines the focus in terms of privateness, academic orientation, and supplementation. The present study similarly focuses on privateness since it is concerned with non-state actors who charge fees for their services. However, it is not concerned only with academic subjects since many parents also invest in other content to achieve broad goals such as creativity, self-discipline and rounded development. Some

tutoring addressed by this paper echoes the curriculum already provided in the schools, but other components go beyond the school curriculum. Much of this tutoring is received on a one-to-one basis, but some is received in groups or even full classes. Further, while most tutoring is conducted in person, some is provided over the internet.

Concerning demand, the study adopts the standard economic definition which refers to goods and/or services purchased during a designated period of time (Taylor & Weerapana, 2009, p. 53). The demand for tutoring is here measured by participation in tutoring with positive expenditure. The paper highlights different types as well as quantities of tutoring.

Privatisation and marketisation tendencies under neoliberalism have shifted education from being viewed as a public good for the whole community to becoming at least partly a private good serving the interests of immediate consumers (Ball & Youdell, 2008, p. 15; Lubienski, 2003, p. 495; 2005, p. 467). These consumers can then choose the education services they prefer, either public or private. As a form of marketised education service, private tutoring is sought by parents to foster their children's educational development (Davies, 2004; DeWiele & Edgerton, 2016; Entrich, 2018). Consumer theory, a branch of microeconomics focusing on market mechanisms, can assist understanding of parental decision-making dynamics in their demand for private tutoring. Focusing on how people decide on what to spend their money, the basic principle of consumer theory is that people rationally choose the best things they can afford (Varian, 2010, p. 33). The concept 'consumer preference' indicates 'the best things', and 'budget constraint' is about the meaning of 'can afford'. Consumers choose the most preferred consumption bundles from their budget sets (Mankiw, 2007, p. 457; Rittenberg & Tregarthen, 2009, p. 2; Varian, 2010, p. 74).

In the domain of private supplementary tutoring, consumer preferences indicate how parents rank different possibilities based on the perceived utilities of those possibilities to support their children's education. In addition to income, the time of children (and parents) also can be a constraint, since private tutoring requires availability. Parents consider whether or not to purchase tutoring, and if they do decide to do so then determine the subject(s) according to their preferences and both financial and time constraints. Figure 1 presents an example in which a parent chooses to purchase both academic and non-academic tutoring.

[Figure 1 near here]

Factors causing parental preferences about private tutoring to change over time may include children's academic performance, children's different stages of schooling, and education system

reforms. Budget constraints, both financial and time, may also change. For example, students usually have more free time for tutoring during vacations than during school terms. The changes in parental preference and budget constraints may lead to changes in parents' demand for private tutoring.

3. Social and Educational Context

Deeply rooted in Confucianism, Chinese people generally value education highly (Chao, 1994; Chen, Lee, & Stevenson, 1996; Lim & Lim, 2004). In recent decades, this longstanding cultural influence has been accompanied by growing household incomes from economic development and smaller families due to the government's one-child policy (Vickers & Zeng, 2017). As a result, parents have gained more resources to invest in the education of a smaller number of children. These forces have raised both ambitions and expectations.

Most parts of China have a 6+3+3+4 system, i.e. six years of primary, three years of lower secondary, three years of upper secondary, and four years for a university degree. Since promulgation of the 1986 Compulsory Education Law, all children and youths have been required to complete primary and lower secondary education. Post-compulsory schooling has expanded significantly, and respective gross enrolment rates for upper secondary and higher education reached 87.5% and 42.7% in 2016 (China Ministry of Education, 2017).

The education system has three key transition points. Pressures at the first, from primary to lower secondary, were reduced by removal in 1998 of entrance examinations and by automatic allocation of children to neighbourhood schools. However, even this transition point has stresses since many parents use social capital to negotiate access to lower secondary schools beyond their immediate neighbourhoods. The second transition point is the end of lower secondary schooling, when students sit the High School Entrance Examination (HSEE, or *zhongkao*) to compete for admission to high schools. This period is stressful because the upper secondary schools are even more visibly stratified and with far-reaching implications for later careers. The third transition point is at the end of upper secondary schooling when the National College Entrance Examination (NCEE, or *gaokao*) serves as the main tool for selecting qualified graduates from upper secondary education into universities. The NCEE is renowned as a high-stakes examination creating great pressure for millions of families (Y. Zhang, 2013).

In previous eras, some elite institutions were labelled 'key schools'. In 2006 this labelling was abolished at primary and lower secondary levels (China Standing Committee of the National

People's Congress, 2006), but the vocabulary persists in common parlance and public perception (Li, 2012; Zhao, 2014, p. 2). At the upper secondary level, even in official parlance elite institutions have special labels and are highly desired by students and their parents. Universities are diversified in terms of their education quality and reputation. Parental desires for children to be enrolled in key schools leads to much family strategizing, including the utilization of private supplementary tutoring. Coterminous with increasing numbers of parents perceiving capacities and responsibilities to facilitate their children's careers, other forces highlight inadequacies in formal schooling. The 1999 'Quality Education' (*suzhi jiaoyu*) reform and its successors promoted rounded development by lessening the study burden, revising the curriculum content, and reducing the test frequency, but the high-stakes HSEE and NCEE did not change significantly and many parents felt the need for private tutoring to compensate for the losses in mainstream schooling (Wen, 2013, p. 98; W. Zhang, 2013, p. 212).

4. Methodology

The present study utilized a mixed-methods design that began with a quantitative component based on the 2014 iteration of the China Family Panel Studies (CFPS). The CFPS is a biennial longitudinal nationwide survey of communities, families and individuals, conducted by the Institute of Social Science Survey of Peking University (Xie, 2012). The 2014 iteration employed three-stage probability-proportional-to-size sampling to collect data from 37,114 adults and 8,594 children in 13,946 households from 622 communities (Dai, 2016, p. 4). From this dataset was extracted a sample of 4,259 parents of children at primary and lower secondary levels (Table 1). A descriptive statistical approach helped to investigate the demand for private tutoring in different regions and among different socio-economic groups.

[Table 1 near here].

After securing a general picture from these statistics and from the wider literature (e.g. Xue & Ding, 2009; Zhang & Bray, 2017; Y. Zhang, 2013; Zhou, 2010), a follow-up qualitative study was undertaken with in-depth semi-structured interviews to explore parental choices and evolutions in demand. With time and resource constraints in mind, the qualitative study focused on Beijing, the capital city. The main qualitative data collection lasted from November 2015 to January 2016, but with some subsequent follow-up interviews.

The qualitative study targeted parents, using maximal variation sampling on four criteria: whether the parents sought private tutoring, the parents' socio-economic status (SES), their children's grades (covering all grades of compulsory education), and school types (rural ordinary schools, urban ordinary schools, and urban key schools). Unlike students, who are relatively easy to access because they attend schools, parents are scattered and more difficult to reach. Fifty-one parents were approached through personal contacts and the networks of those parents, and through referrals by class teachers and principals (Table 2). The interviewees were asked about the scale, nature and reasons underlying their current and previous demand for private tutoring.

[Table 2 near here].

In addition to the parents, 15 class teachers and six tutorial managers were interviewed. The teachers were responsible for different grades across a range of school types; and the tutorial managers were in charge of five different tutorial centres for academic or non-academic tutoring. These interviews of teachers and tutorial managers provided useful elaboration and triangulation of perspectives, but for reasons of space the specific findings are not presented here. The average duration of all 72 interviews was 50 minutes, with a range from 20 minutes to two hours. The first author transcribed all the audio-recordings by herself, totalling 425,000 words in Chinese. Following the guidelines of Benaquisto (2008), transcripts were analysed with open coding, axial coding and selective coding. The coding and analysis were assisted by the software NVivo 11.

5. National Demand for Private Tutoring

According to the 2014 CFPS iteration, 29.8% of Chinese primary and lower secondary students had received private tutoring in the previous year. The 2012 iteration had recorded a participation rate of 24.6%, so this appeared to be an increase (Xue, 2015, p. 53). The survey data indicated no gender differences in demand, but did show significant differences according to place of registered residence (*hukou*): greater proportions of students with urban registration received tutoring compared with their rural counterparts (Table 3). Demand also varied by school location: students in provincial capitals had the highest participation rates, students in ordinary cities were in the middle, and students in towns and villages had the lowest rates. In terms of school type, greater demand was found among students in key schools than in ordinary schools. Lower secondary students were more likely than primary students to receive private tutoring.

[Table 3 near here].

Variations were also found among different groups of parents. Parents with more education and higher incomes had greater tendencies to purchase private tutoring than parents with less education and lower incomes, in line with many studies elsewhere (e.g. Bray et al., 2014; Dang, 2007; Długosz, 2016; Kenayathulla, 2013; Kim & Lee, 2010; Nath, 2008; Tansel & Bircan, 2006).

6. Evolving Processes of Demand

The above commentary might imply that demand reflected one-off decisions to invest in private tutoring and clear-cut group variations. However, the interview data showed nuances that could not be revealed by the national surveys. Among the 51 parent interviewees, 39 had invested in academic tutoring for their 40 school-age children. Figure 2 depicts their demand in detail from the first time they sought academic tutoring to the time of interview, showing how long each block of tutoring lasted. Among the same 51 interviewees, 45 invested in non-academic tutoring. Table 4 shows both their demand at the time of interview and their previous demand. From Figure 2 and Table 4, it is clear that demand for private tutoring was an evolving process that changed over time as parents' preferences, budgets and other factors changed. Some parents expanded their demand, some replaced one type of tutoring with another, and some terminated their consumption. The following analysis examines the evolving processes in a qualitative way.

[Figure 2 near here].

[Table 4 near here].

6.1. *Expanding the demand*

Figure 2 and Table 4 show that many parents expanded their demand as their children advanced through the education system. The most common reason was that the children faced new or growing needs for academic support. On the non-academic side were expanding personal interests as the children grew older. When parents perceived new needs for tutoring in specific subject(s), the budget of money and time would be adjusted. The tutoring time was commonly expanded by reducing the children's leisure time.

6.2. *Replacing the demand*

As children proceeded in the education system, parents perceived different needs in terms of supporting children's educational development. Their preferred lists of private tutoring were adjusted, with some tutoring replacing others. In general, non-academic tutoring to develop good learning habits and to cultivate interest was desired by parents when their children were in the early primary stage. Then both academic and non-academic tutoring for the primary-to-secondary transition were desired when children moved to the later primary stage; and academic and sports tutoring were sought intensively in the lower secondary stage.

In more specific categories, some parents replaced demand for tutoring in particular subjects. For example, many parents demanded English tutoring in kindergarten or at the beginning of primary education to practice oral skills, and later they assisted their children's reading and writing of English. Some moved their children from one English tutoring centre to another to match the progression, as exemplified by Dan, Yin and Yan.

Concerning non-academic tutoring, parents replaced their demand as children's interests changed. For example, Lin invested in tutoring for fencing when her son was in Grade 3, but replaced it with football two years later to match the boy's evolving interests. When her son moved to Grade 7, she replaced the football tutoring with basketball tutoring to develop his latest interest.

6.3. *Terminating the demand*

As a kind of consumer choice in the market, demand for private tutoring could be terminated (or suspended) freely. One common reason was time constraint. Usually, parents whose children had advanced to lower secondary education faced more schooling demands and reduced or terminated the non-academic tutoring, as exemplified by Lv and Xie.

Another factor was the perceived impact of tutoring. As consumers, parents expected the tutoring to achieve certain effects and some terminated their demand when not perceiving those effects. For example, Dey stopped her daughter's English tutoring in Grade 4 since she was not satisfied with its impact on the girl's proficiency.

7. Choices in Private Tutoring

Before reaching decisions about whether to purchase private tutoring and/or to adjust their demand, parents had to consider many choices. Figure 3 shows the six main types of choices made by the sample of Beijing parents, indicating the importance of each type as reflected in the interviews. The types of choices are elaborated upon in the following sections.

[Figure 3 near here]

7.1. *Choices about the seasons for tutoring*

The seasons for taking tutoring might be affected its utility as perceived by parents. A form of tutoring considered as having no utility might later be preferred by parents at a different season. Most parents considered the seasons when seeking private tutoring.

Some parents, especially the medium-SES ones, paid close attention to the long-term seasons for private tutoring. For example, some parents let their children enjoy and develop their interests during pre-school and the early stage of primary education, later facilitating children's primary-to-secondary transition for a better lower secondary school, and then helping the children to prepare for the HSEE and NCEE. Accordingly, for these parents the pre-school time and first three or four years of primary education were seasons for non-academic tutoring. Then increased proportions of academic tutoring were demanded in the later primary grades, and tutoring to improve test performance was demanded intensively in the secondary grades.

Some parents determined the seasons based on their understanding about the learning in each subject. For example, many children began English tutoring around the age of three since their parents felt that children would be able to learn languages more easily when they were young. A few parents even adjusted the season for tutoring according to components of the curriculum. For example, Rong sent her daughter to English tutoring class when the girl was five years old, mainly to practice oral English, and she found another tutoring class for English grammar when her daughter moved to Grade 6. Rong explained:

I think the period from Grade 6 to the first semester of Grade 7 was good timing for English grammar learning because [my daughter] had learned English for several years and already had some knowledge and experience in how to speak and write English. What she needed then was learning the grammar in a systematic way to improve her English learning and practice. That was

what the tutoring class could offer. It might have been a waste of energy to study grammar at the very beginning.

Some parents researched alternatives before deciding on such matters. Hou, mother of a Grade 1 girl, indicated that she visited several tutoring institutions and knew some children in kindergarten or Grade 1 who received tutoring in painting:

I noticed that their minds were constrained by the painting methods inculcated by the tutor: they only knew how to imitate without their own imagination. Therefore, we first let my daughter paint freely according to her imagination and creativity, and then in Grade 3 registered for a tutoring class to train her painting skills. I think this arrangement is better.

7.2. *Choices among tutoring subjects*

The specific subjects were also an important component of choice. For example, Ke, father of a Grade 7 boy, had a preference list: English tutoring was top priority, mathematics was second, and other subjects were dispensable. Parental preferences depended on their expectations and plans. Ke's preference for English tutoring was grounded in his plan to send his son abroad for higher education:

I told [my son]: 'You can decide whether to take tutoring in other subjects or not, but you must take English.' English education in school is nothing like enough in terms of preparing for future study abroad.

Parental choices also reflected educational policies. Since some key secondary schools were allowed to recruit a few students with special talents, cultivating such talents could reap rewards. Dan asked her daughter to resume calligraphy tutoring when the girl moved to Grade 5, even though she had stopped for two years:

In order to develop [my daughter's] interests, I sent her to tutoring classes in piano, dancing, calligraphy, painting and volleyball when she was young. It is a pity that most of them have ceased. I just asked her to take calligraphy tutoring again, since we feel much pressure from the transition and want to try getting admitted as a student of special talents in calligraphy.

Alternatively, some parents chose non-academic subjects because of their aspirations for more-rounded development. Stimulated by the ideology of quality-oriented education, many parents wished to broaden their children's focus from examination scores to all-round quality. Kai, mother of a Grade 7 boy explained her choice of basketball tutoring:

As the only child, [my son] grows up with no brothers or sisters at home. He has to learn how to cooperate with others, among which playing with peers is a good strategy. Therefore, I prefer to let him take part in the athletic activities calling for teamwork rather than those played individually, like swimming. I purchased two tutoring classes for him to play basketball.

7.3. *Choices among tutorial centres*

Parents, especially urban ones, had much choice of tutorial centres. On the supply side, tutorial centres had to compete for customers (i.e. parents), and advertised their textbooks and schedules. Feng was attracted by this strategy when seeking English tutoring for her son:

I chose this centre for [my son] to learn English because it introduced the whole set of English textbooks used in American primary schools, and it offered whole-day tutoring for young children. I registered for this tutoring class for my son not only to learn English but also to experience the English-medium child-caring service. I felt that this arrangement would better help young children to study and practice English.

Later, Feng moved her son to another centre where all classes were delivered by foreign tutors. The locations of tutorial centres were also important, particularly insofar as they may have required transportation. Wyin and Su chose a tutorial centre in their small town to avoid travel, even though they felt that the centres in the cities were better. The tutorial centre from which their children received private tutoring might affect not only the perceived utility of certain types of tutoring but also its cost in money and time. Therefore, considerations about choices of tutorial centres would impact on the demand for tutoring.

7.4. *Choices among tutors*

Several parents indicated that the tutors' qualifications and pedagogical approaches were among their major concerns. Parents cannot easily choose the teachers of their children in schools, but can choose the tutors in the tutorial centres. Many parents were actively concerned about the identities of specific tutors since, in Rong's words, 'how much the child can learn mainly depends on the tutor'. Some centres offered free pilot lessons by specific tutors. Yan noted that 'serious parents attend pilot lessons one by one, and then choose a tutor who has excellent teaching abilities and pedagogical skills fitting their children's learning habits'. Chen, mother of a Grade 5 boy, recalled the experience of choosing a tutor for mathematics:

I found a tutorial centre offering one-to-one tutoring and took a pilot lesson. I expected the tutor to find the strengths and weaknesses in my son's mathematics learning, but he found nothing during the two-hours lesson. I also expected the tutor to provide a specific scheme on how to improve my son's mathematics, but he did not. Therefore, I did not employ him.

Chen then tried pilot lessons in other centres and finally found a tutor who met her criteria.

7.5. *Choices among types of tutoring*

For tutoring services received by primary and lower secondary students, the major types were one-to-one and group tutoring. Although more expensive, one-to-one tutoring was tailored to students' specific needs and therefore preferred by some parents. Gao moved her Grade 3 daughter from group English tutoring to one-to-one lessons when she found that the girl was not learning well in the group.

In addition, technology advance made internet tutoring possible. Some parents chose internet tutoring for the relatively low cost, convenience, and flexibility of learning schedule. Internet tutoring was more common for English than for other subjects. Kai chose an internet class for her Grade 7 boy to practice oral English with a native speaker on a one-to-one basis:

The major task of this tutoring class is to communicate in English, no matter online or in person. The internet tutoring is cheaper. And we can save the travelling time between home and tutoring centre.... We can also decide when to take class and how long it lasts according to his spare time.

7.6. *Choices in schedule of tutoring classes*

A few parents paid special attention to the schedule of tutoring classes. Some parents, especially ones of medium- and high-SES, arranged packages of activities for their children's spare time. Fan explained that:

My family usually travels in the summer and winter vacations, which is helpful for broadening [my son's] horizons. So, I don't like the tutoring classes which last from term-time to vacations. I usually purchase a tutoring class which is scheduled on a termly basis and will finish before the vacation.

Some parents sought tutoring in several subjects for their children and had to fit them together. Yin registered for four tutoring classes in English, calligraphy, Go, and Taekwondo for her Grade 3 boy. She intentionally chose the classes scheduled at specific times:

[My son's] English tutoring has two lessons each week, one on Tuesday night and the other on Friday afternoon. The calligraphy tutoring is on Friday night. The tutoring classes of Go and Taekwondo are scheduled on Sunday. Saturday is intentionally kept for him to play freely.

Parents also felt that the schedule of tutoring class might influence the effects of tutoring and chose classes of specific schedule. Yuan chose the mathematics tutoring class for her Grade 8 daughter for this reason:

The mathematics tutoring class offers two hours of instruction each week. I prefer it to be scheduled as two lessons on weekdays, one hour each time. [My daughter] has mathematics lessons every day in school, and then she can consolidate the knowledge she got from school class by tutoring if she gets tutoring twice a week on weekdays. But if the tutoring class is scheduled at weekends for two hours, she may have already forgotten part of the content learned in school class, and then the effect of tutoring may be less.

In summary, parents considered different types of choices about private tutoring before making decisions to commence and change the tutoring. In general, parents might get an idea about the seasons for their children to take academic or non-academic tutoring, and then they had to choose the specific subjects for tutoring. Later they went a step further to identify appropriate tutorial centres and choose the types of tutoring within availabilities which best matched their needs for supporting their children's educational development. Then they chose the tutors meeting their criteria, together with the tutoring classes with the appropriate schedules, and finally reached the decision to purchase specific tutoring services. In the process of receiving private tutoring, changes in any one of these six elements could lead to changes in other elements and then to changes in the demand for private tutoring. Thus for most parents the demand for tutoring evolved over time, and was not a one-off decision. Figure 4 presents patterns in diagrammatic form.

[Figure 4 near here].

8. Conclusions

The nationwide representative data from the CFPS and other research shows that private tutoring has become widely demanded in China among primary and lower secondary students. The demand varies by children's hukou-status, school locations, school types, parental incomes, and parental education levels. The qualitative analysis in this paper has unpacked the demand for private tutoring, and has shown that it was an evolving process rather than one-off behaviour. Some parents intentionally changed their demand over time, seeking more tutoring, choosing new tutoring to replace the existing provision, or terminating some or all tutoring. During this process, parents made many choices, such as choosing the seasons for tutoring, subjects, tutors, tutorial centres, types of tutoring, and schedules for lessons.

Although China has distinctive features including rapid economic growth and the one-child policy, it shares commonalities with many other parts of the world in the development of the market economy, strong social competition, and changing parental mindsets under the influence of neoliberalism. This study therefore has pertinence in other countries as well as in China. Unpacking the processes of demand for private tutoring improves understanding of the global expansion and changing shapes of the phenomenon.

The paper also sheds more light on the tendency for private supplementary tutoring to maintain and exacerbate social inequalities (e.g. Bray, 2017; Bray & Kwo, 2014; Dang & Rogers, 2008). Children without private tutoring may be disadvantaged compared with children with private tutoring, and may be especially disadvantaged compared with children whose parents not only seek private tutoring but also adjust the demand over time. Parents' strategic adjustment of private tutoring according to needs at different stages might greatly facilitate their children's educational development. Therefore, with the expansion of private tutoring, children's education may be increasingly contingent on the resources and wishes of parents rather than on their own ability and efforts, as the discourse of parentocracy has observed (e.g. Blackmore & Hutchison, 2010; Brown, 1990; DeWiele & Edgerton, 2016; van Zanten & Darchy-Koechlin, 2005).

The consumer theory employed in the present paper assisted understanding of parents' decision-making dynamics. However, the premise of parent's perfect rationality may be challenged. Rationality may be bounded by uncertainties and incomplete information about alternatives, and parents may sometimes just follow peers rather than making active independent choices (Simon,

1972). The bounded rationality theory might deepen understanding of parents' choices regarding private tutoring. It may be a direction for future research.

Disclosure statement

No potential conflict of interest was reported by the authors.

Data availability statement

The data that support the quantitative findings of this study are available from the Institute of Social Science Survey (ISSS) at Peking University. Restrictions apply to the availability of these data, which were used under licence for this study. Data are available from <http://www.issss.pku.edu.cn/cfps/> with the permission of ISSS.

References:

- Aurini, J., Davies, S., & Dierkes, J. (2013). Out of the shadows? An introduction to worldwide supplementary education. In J. Aurini, J. Dierkes, & S. Davies (Eds.), *Out of the shadows: The global intensification of supplementary education* (pp. xv-xxiv). Bingley: Emerald Group Publishing.
- Ball, S. J., & Youdell, D. (2008). *Hidden privatisation in public education*: Education International Brussels.
- Benaquisto, L. (2008). Codes and coding. In L. M. Given (Ed.), *The SAGE encyclopedia of qualitative research methods*. Los Angeles: SAGE.
- Blackmore, J., & Hutchison, K. (2010). Ambivalent relations: The 'tricky footwork' of parental involvement in school communities. *International Journal of Inclusive Education*, 14(5), 499-515.
- Bray, M. (2009). *Confronting the shadow education system: What government policies for what private tutoring?* Paris: UNESCO International Institute for Educational Planning (IIEP).
- Bray, M. (2017). Schooling and its supplements: Changing global patterns and implications for comparative education. *Comparative Education Review*, 62(3), 469-491.
- Bray, M., & Kwo, O. (2014). *Regulating Private Tutoring for Public Good: policy options for supplementary education in Asia*: Hong Kong: Comparative Education Research Centre (CERC), The University of Hong Kong, and Bangkok: UNESCO.

- Bray, M., & Kwok, P. (2003). Demand for private supplementary tutoring: conceptual considerations, and socio-economic patterns in Hong Kong. *Economics of Education Review*, 22(6), 611-620.
- Bray, M., Zhan, S., Lykins, C., Wang, D., & Kwo, O. (2014). Differentiated demand for private supplementary tutoring: Patterns and implications in Hong Kong secondary education. *Economics of Education Review*, 38, 24-37.
- Brown, P. (1990). The 'third wave': Education and the ideology of parentocracy. *British journal of sociology of education*, 11(1), 65-86.
- Chao, R. K. (1994). Beyond parental control and authoritarian parenting style: Understanding Chinese parenting through the cultural notion of training. *Child development*, 65(4), 1111-1119.
- Chen, C., Lee, S., & Stevenson, H. W. (1996). Academic achievement and motivation of Chinese students: A cross-national perspective. In S. Lau (Ed.), *Growing up the Chinese way: Chinese child and adolescent development* (pp. 69-92).
- China Ministry of Education. (2017). Statistical Bulletin of National Education Development in 2016. Retrieved from http://www.moe.edu.cn/jyb_sjzl/sjzl_fztjgb/201707/t20170710_309042.html [in Chinese].
- China Standing Committee of the National People's Congress. (2006). Compulsory Education Law of the People's Republic of China (2006 Revision). Retrieved from http://www.moe.edu.cn/publicfiles/business/htmlfiles/moe/moe_619/200606/15687.html [in Chinese].
- Dai, L. (2016). Update about the China Family Panel Studies. Retrieved from <http://www.iss.edu.cn/cfps/d/file/xinwen/News/2014/d2d3d90ca83c4b09ef55d841cd75cd67.pdf> [in Chinese]
- Dang, H.-A. (2007). The determinants and impact of private tutoring classes in Vietnam. *Economics of Education Review*, 26(6), 683-698.
- Dang, H.-A., & Rogers, F. H. (2008). The growing phenomenon of private tutoring: does it deepen human capital, widen inequalities, or waste resources? *World Bank Research Observer*, 23(2), 161-200. doi:10.1093/wbro/lkn004
- Davies, S. (2004). School choice by default? Understanding the demand for private tutoring in Canada. *American Journal of Education*, 110(3), 233-255.
- Devi, R., Singh, H., Pal, K., Dhodiya, J. M., Hanson, R., Amedeker, M. K., . . . Hazarika, D. (2011). A study of perception of parents, students and teachers towards private tuitions: A case study of Kathua Town. *International Journal of Educational Administration*, 3(1), 1-8.

- DeWiele, C. E. B., & Edgerton, J. D. (2016). Parentocracy revisited: Still a relevant concept for understanding middle class educational advantage? *Interchange*, 47(2), 189-210.
- Długosz, P. (2016). Private lessons as an instrument for middle class status struggle in post-socialist societies: Poland and Ukraine case studies. *Economics and Sociology*, 9(1), 173-191.
- Entrich, S. R. (2018). *Shadow Education and Social Inequalities in Japan: Evolving Patterns and Conceptual Implications*. Dordrecht: Springer.
- Hatcher, R. (1998). Class differentiation in education: Rational choices? *British Journal of Sociology of Education*, 19(1), 5-24.
- Jokić, B. (2013). *Emerging from the shadow: A comparative qualitative exploration of private tutoring in Eurasia*. Zagreb: Network of Education Policy Centres.
- Kenayathulla, H. B. (2013). Household expenditures on private tutoring: emerging evidence from Malaysia. *Asia Pacific Education Review*, 14(4), 629-644.
- Kim, S., & Lee, J. H. (2010). Private tutoring and demand for education in South Korea. *Economic Development and Cultural Change*, 58(2), 259-296.
- Lei, W. (2005). Expenditure on private tutoring for upper secondary students: Determinants and policy implications. *Education and Economy*, 1, 39-42 [in Chinese].
- Li, X. (2012). Why the officially banned key schools still exist. *China Education Newspaper*. Retrieved from <http://edu.people.com.cn/GB/1053/18091286.html> [in Chinese]
- Lim, S.-L., & Lim, B. K. (2004). Parenting style and child outcomes in Chinese and immigrant Chinese families-current findings and cross-cultural considerations in conceptualization and research. *Marriage & Family Review*, 35(3-4), 21-43.
- Lubienski, C. (2003). Instrumentalist perspectives on the 'public' in public education: Incentives and purposes. *Educational Policy*, 17(4), 478-502.
- Lubienski, C. (2005). Public schools in marketised environments: Shifting incentives and unintended consequences of competition-based educational reforms. *American Journal of Education*, 111(4), 464-486.
- Mankiw, N. G. (2007). *Principles of microeconomics*. Fourth edition. Mason: Thomson South-Western.
- Nath, S. R. (2008). Private supplementary tutoring among primary students in Bangladesh. *Educational Studies*, 34(1), 55-72.
- Park, H., Buchmann, C., Choi, J., & Merry, J. J. (2016). Learning beyond the school walls: Trends and implications. *Annual Review of Sociology* (42), 231-252.
- Rittenberg, L., & Tregarthen, T. D. (2009). *Principles of microeconomics*. Boston: Flat World Knowledge.

- Simon, H. A. (1972). Theories of bounded rationality. *Decision and organization*, 1(1), 161-176.
- Song, K.-O., Park, H.-J., & Sang, K.-A. (2013). A cross-national analysis of the student- and school-level factors affecting the demand for private tutoring. *Asia Pacific Education Review*, 14(2), 125-139. doi:10.1007/s12564-012-9236-7
- Tan, J. (2009). Private tutoring in Singapore: Bursting out of the shadows. *Journal of Youth Studies*, 12(1), 93-103.
- Tansel, A., & Bircan, F. (2006). Demand for education in Turkey: A Tobit analysis of private tutoring expenditures. *Economics of Education Review*, 25(3), 303-313.
- Taylor, J. B., & Weerapana, A. (2009). *Principles of Microeconomics* (sixth ed.). New York: Houghton Mifflin Company.
- Tsang, M. C., Ding, X., & Shen, H. (2010). Urban-rural disparities in private tutoring of lower-secondary students. *Education and Economics*, 2, 7-11 [in Chinese].
- van Zanten, A., & Darchy-Koechlin, B. (2005). Parentocratie et marché contre méritocratie. *Le Monde de l'éducation*, 340, 18-19 [in French].
- Varian, H. R. (2010). *Intermediate microeconomics: a modern approach* (8th edition): W.W. Norton & Company.
- Vickers, E., & Zeng, X. (2017). *Education and Society in Post-Mao China*. London: Routledge.
- Wen, Y. (2013). Study on the demand for private tutoring among primary and secondary students under the "Education for Quality" reform. (Master's dissertation), South-central University for Nationalities [in Chinese].
- Xie, Y. (2012). China Family Panel Studies (2010) User's Manual Retrieved from <http://www.issu.edu.cn/cfps/wd/jsbg/2010jsbg/2013-03-11/167.html>
- Xue, H. (2015). From school education to shadow education: Education competition and social reproduction. *Peking University Education Review*, 13(3), 47-69 [in Chinese].
- Xue, H., & Ding, X. (2009). An empirical study on private tutoring for students in urban China. *Educational Research*, (1), 39-46 [in Chinese].
- Zhan, S., Bray, M., Wang, D., Lykins, C., & Kwo, O. (2013). The effectiveness of private tutoring: students' perceptions in comparison with mainstream schooling in Hong Kong. *Asia Pacific Education Review*, 14(4), 495-509.
- Zhang, W. (2013). Private supplementary tutoring received by grade 9 students in Chongqing, China: determinants of demand, and policy implications. (Doctoral dissertation), The University of Hong Kong.
- Zhang, W. (2014). The demand for shadow education in China: mainstream teachers and power relations. *Asia Pacific Journal of Education*, 34(4), 436-454.

- Zhang, W., & Bray, M. (2016). Shadow education: The rise and implications of private supplementary tutoring. In S. Guo & Y. Guo (Eds.), *Spotlight on China: Changes in education under China's market economy* (pp. 85-99). Rotterdam: Sense Publishers.
- Zhang, W., & Bray, M. (2017). Micro-neoliberalism in China: public-private interactions at the confluence of mainstream and shadow education. *Journal of Education Policy*, 32(1), 63-81.
- Zhang, Y. (2013). Does private tutoring improve students' National College Entrance Exam performance? -- A case study from Jinan, China. *Economics of Education Review*, 32(1), 1-28.
- Zhao, Y. (2014). China's determination to end school choice and testing: new development. Retrieved from <http://zhaolearning.com/>
- Zhou, L. (2010). A research on extra-curricular training consumption of compulsory education students: Based on the survey in four schools of urban-rural areas in Wucheng district, Jinhua. (Master's dissertation), Zhejiang Normal University [in Chinese].

Junyan Liu is a part-time postdoctoral fellow of the Comparative Education Research Centre at the University of Hong Kong with a special interest in private supplementary tutoring. She graduated with a Bachelor's and Master's degree from Peking University. She obtained a doctoral degree in Comparative Education from the University of Hong Kong in 2017. Between 2007 and 2013 she worked in the Beijing Academy of Educational Sciences, focusing on studies of education policy and planning in Beijing. *Correspondence:* Comparative Education Research Centre, Faculty of Education, The University of Hong Kong, Pokfulam, Hong Kong, China. E-mail: liujy0211@hotmail.com.

Mark Bray is UNESCO Chair Professor in Comparative Education and Director of the Comparative Education Research Centre at the University of Hong Kong. He has taught at that University since 1986. Between 2006 and 2010 he took leave to work in Paris as Director of UNESCO's International Institute for Educational Planning (IIEP). He previously taught in secondary schools in Kenya and Nigeria, and at the Universities of Edinburgh, Papua New Guinea and London. *Correspondence:* Comparative Education Research Centre, Faculty of Education, The University of Hong Kong, Pokfulam, Hong Kong, China. E-mail: mbray@hku.hk.