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Shadow Education

Private Supplementary Tutoring
and Its Implications for Policy Makers in Asia

Mark Bray and Chad Lykins



ADB



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Asian Development Bank
6 ADB Avenue, Mandaluyong City
1550 Metro Manila, Philippines
Tel +63 2 632 4444
Fax +63 2 636 2444
www.adb.org

Comparative Education Research Centre (CERC)
Faculty of Education
The University of Hong Kong
Pokfulam Road
Hong Kong, China
cerc@hku.hk

For orders, please contact:
Department of External Relations
Fax +63 2 636 2648
adbpub@adb.org

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Preface

The impressive economic growth in Asia has been accompanied, unfortunately, by widening inequality. Education can play a vital role in reducing inequality and preparing citizens for inclusive economic growth, but does not always do so. Developing Asia must pursue education policies and systems that are inclusive and provide opportunities for individuals to achieve their full learning potential and acquire relevant knowledge and skills to effectively serve as members of the society and to contribute to inclusive economic growth. In addition, equitable and cost-efficient use of financing and other resources is critical when countries are expanding their education systems to serve growing student populations.

Governments and development partners in the region are intensifying policy dialogue on these issues. However, issues of shadow education must also be brought into the equation. Shadow education can seriously undermine the efforts to expand equitable access and strengthen inclusiveness in education systems. It can also undermine efforts to improve the quality, relevance, and cost efficiency of education.

Shadow education systems are expanding at an alarming rate in Asia. Households in certain countries spend staggering portions of their incomes on shadow education. There are various reasons for this; poor quality of education in schools is not the only one. In several countries in the region, including some with high-quality school systems, shadow education appears to have become a permanent feature. However, even in these countries it can be steered and regulated; and in other countries proactive measures can prevent or minimize some of the problems that have become evident elsewhere. Sharing lessons and knowledge about the trend and its implications will help such efforts and support dialogue on these issues among stakeholders of education.

This publication on shadow education is a product of partnership between the Asian Development Bank and the Comparative Education Research Centre of the University of Hong Kong. The publication presents a comprehensive study prepared by Mark Bray and Chad Lykins. It provides an overview of the shadow education phenomenon with detailed mapping of patterns in the Asian region, and discusses drivers of demand for, and determinants of the supply of, shadow education. It provides evidence of the serious financial and other consequences of the expanding shadow education systems in the region. Drawing

on the analysis, the study discusses implications for policy makers and presents concrete recommendations.

I would like to thank and commend the authors for preparing this high-quality and timely knowledge product. Many thanks also go to Dorothy Geronimo, for coordination of the publishing process; Steve Banta, for editorial advice; and Hazel Medrano, for administrative support.

Jouko Sarvi

Practice Leader (Education Sector)

Regional and Sustainable Development Department

Asian Development Bank

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Second are many colleagues in the academic world, in governments, and in international agencies. One body that brings together people from these three groups is the Asian Network of Training and Research Institutions in Educational Planning (ANTRIEP), which has a tradition of biennial policy seminars. The 2011 Policy Seminar was held in New Delhi, India on the theme “The Role of Private Actors in Education: An Opportunity for Innovation or a Barrier to Equity.” It brought together government officers and related personnel from Australia, Bangladesh, Bhutan, Cambodia, Fiji, India, Indonesia, Republic of Korea, Lao People’s Democratic Republic, Malaysia, Maldives, Nepal, Philippines, Sri Lanka, Thailand, and Viet Nam. Mark Bray presented a keynote address on shadow education, which stimulated extensive plenary and small group discussions. Several participants generously provided follow-up materials.

Additional materials were provided by colleagues in UNESCO and in a number of universities. Although it is not possible to name everyone, particular appreciation is expressed to William Brehm, Hai Anh Dang, Julian Dierkes, Husaina Banu Kenayathulla, Nutsa Kobakhidze, Ora Kwo, Li Wenjian, Sulata Maheshwari, Emily Mang, Samir Ranjan Nath, Wilfred Perera, Iveta Silova, Geoffrey Walford, Zhan Shengli, and Zhang Wei.

Abbreviations and Acronyms

ADB	Asian Development Bank
ASER	Annual Status of Education Report
ASP	After School Program
CEAT	College Entrance Achievement Test
CHLS	Cyber Home Learning System
CSAT	College Scholastic Ability Test
EBS	Educational Broadcasting System
IEA	International Association for the Evaluation of Educational Achievement
Mendaki	Council on Education for Malay/Muslim Children
OECD	Organisation for Economic Co-operation and Development
PISA	Programme for International Student Assessment
PRC	People's Republic of China
SINDA	Singapore Indian Development Association
SPHS	Special Purpose High School
SSK	Sishu Siksha Kendra
TIMSS	Trends in International Mathematics and Science Study
UNDP	United Nations Development Programme
UNESCO	United Nations Educational, Scientific and Cultural Organization
UNICEF	United Nations International Children's Fund
US	United States
USA	United States of America

Executive Summary

Policy makers have long recognized the importance of education for economic and social development in Asia. However, they have focused mostly on mainstream institutions, i.e., kindergartens, schools, and universities. They have neglected the role of private supplementary tutoring, which may have negative as well as positive dimensions.

Private supplementary tutoring is widely known as shadow education, since it mimics the mainstream. As the content of mainstream education changes, so does the content of the shadow. And as the mainstream grows, so does the shadow. This study shows that shadow education has a long history in parts of the region, but in recent decades it has greatly expanded. In the Republic of Korea nearly 90% of elementary students receive some sort of shadow education; and in Hong Kong, China, about 85% of senior secondary students do so. Figures are equally striking in less prosperous parts of the region. In West Bengal, India, nearly 60% of primary school students receive private supplementary tutoring; and in Kazakhstan a similar proportion of students do so at the senior secondary level. Proportions are lower in other countries, but throughout the region the shadow is spreading and intensifying.

Among the beneficial dimensions of private tutoring are the ways in which it can help slow learners to keep up with their peers, and can help high achievers reach new levels. The extra learning may contribute human capital for economic development, and many families consider extra lessons to be a constructive way to use the spare time of adolescents who might otherwise be at loose ends. On the negative side, private tutoring may dominate the lives of young people and their families, reducing the time available for sports and other activities, which are important for well-rounded development. Shadow education also maintains and exacerbates social inequalities. Rich families are clearly able to pay for better quality and greater quantities of tutoring than can middle-income and poor families, and disparities may threaten social cohesion. Moreover, tutoring can create inefficiencies in education systems. Particularly problematic are situations in which teachers deliberately reduce the effort that they devote to their regular classes in order to reserve energy for private tutoring.

This study commences by mapping the landscape of shadow education, presenting data on enrollment rates, intensity and demographic variations, and

subjects and modes. The initial chapter also notes the costs of tutoring. At the extreme is the Republic of Korea, where household expenditures on shadow education have been equivalent to about 80% of government expenditures on public education for primary and secondary students. Expenditures are lower in other countries, but they are headed in the same direction.

The question then arising concerns the impact of these investments. Research on the extent to which shadow education “works,” in the sense of delivering higher academic grades, presents mixed findings. Much depends not only on the motivations and abilities of the students but also on the motivations and abilities of the tutors. In many countries, individuals can become tutors without training, and the effectiveness of some forms of tutoring is doubtful.

From the review of patterns around the region, including the factors that drive demand, the study turns to the implications for policy makers. The first step, the study argues, is to recognize the existence of shadow education. It should be brought much more actively into the policy-making arena, with stronger elements of research-based evidence. Then policy makers may consider various ways to encourage desirable forms of shadow education and discourage undesirable forms. They may reform systems of assessment and selection, which are among the most immediate drivers of demand for tutoring. They can also change elements of the curriculum and harness technology.

Alongside these measures, policy makers would be wise to devise and implement regulations on the tutoring industry. In general, private tutoring is poorly supervised and inadequately regulated, especially in comparison with mainstream schooling. Much can be learned from comparative analysis of regulations to identify what might be desirable and workable in particular situations. Policy makers may find partners to assist in this task, starting with the schools but including community groups and the tutoring industry itself.

Finally, policy makers may learn from the shadow. They should ask why it exists in the first place, and what can be done in the mainstream to make supplementary tutoring less desirable and necessary. Such efforts are needed not only for reasons of social equity but also for the efficiency of education systems.

Introduction

The period since the turn of the century has seen considerable expansion of what is widely called the shadow education system of private supplementary tutoring. This phenomenon, which has spread globally (Bray 2009, Mori and Baker 2010), has historically been most visible in East Asia. Japan has long been known for its *juku*, which operate alongside and supplement the school system for young people of all ages (Harnisch 1994, Roesgaard 2006); and the Republic of Korea has similarly long been known for its counterpart *hagwons* (Zeng 1999, Seth 2002). Now the shadow sector is strongly visible throughout Asia as well as in other world regions.

Although the term shadow education is used widely, it is not always employed with consistent meaning. It is therefore necessary at the outset to identify the parameters of the present study. It is concerned with tutoring in academic subjects that is provided for a fee and that takes place outside standard school hours. The study is not concerned with tutoring in sports or music except insofar as they are assessed subjects for advancement in education systems. Also, the study is not concerned with tutoring provided free of charge by teachers, family members, community groups, or other bodies. Such tutoring may of course be very valuable, but it has different policy implications from the types of fee-paying tutoring on which this study focuses.

Concerning levels of education, the study focuses on primary and secondary schooling. Private supplementary tutoring certainly exists at the preprimary and postsecondary levels, and such tutoring raises important policy issues. However, the issues are rather different at those levels and as such are best treated separately.

The study uses the metaphor of the shadow because much private supplementary tutoring mimics the mainstream (Stevenson and Baker 1992, Bray 1999b, Lee et al. 2009). Thus, as the curriculum of the mainstream changes, so does the curriculum in the shadow. And as the mainstream expands, so does the shadow. Shadows may of course be both useful and problematic. The shadow cast by a sundial can tell observers about the time of day, and the shadow of an education system may tell observers about the features of mainstream school systems. By contrast, the term shadow economy has an implication of unauthorized practices of possibly doubtful morality, and some observers have similar perspectives on aspects of the shadow education system. An underlying

premise of this study is that shadow education can have both positive and negative dimensions. On the positive side it can promote personal academic development and contribute to human capital for wider economic advance. It may also offer educational resources with more flexibility and better timing than the mainstream sector. But on the negative side, shadow education may exacerbate social inequalities, cause stress for individuals and families, create inefficiencies in education systems, and contribute to forms of corruption. The challenge for policy makers and administrators is to find ways to encourage the positive dimensions and limit the negative ones.

A wide range of types of private tutoring exists. At one end of the scale is one-on-one tutoring, commonly delivered in the homes of either the tutors or their students. Alternatively, pupils may receive tutoring in small, medium-sized, or large groups. At the extreme, pupils may pack into large lecture theaters, with overflow rooms operating with video screens. Other tutoring may be provided by the internet, and indeed can be conducted across national and even continental borders. This range of types of tutoring requires a corresponding range of responses by policy makers.

Geographically, the study embraces a very diverse region, stretching from Mongolia in the north to Indonesia in the south, and from Georgia in the west to Japan in the east. Some countries (such as Japan and Republic of Korea) are prosperous, while others (such as Bangladesh and Tajikistan) are impoverished. Some (such as People's Republic of China [PRC] and India) have very large populations, while others (such as Brunei Darussalam and Maldives) have very small ones. The set of countries also displays diverse colonial legacies, including those of France, Netherlands, Portugal, the former Soviet Union, United Kingdom, and United States (US). This diversity is in some respects a challenge for analysis but is also an asset, because it permits identification of the influence of contextual factors and of features that are consistent across diverse societies.

Finally, some remarks are needed on the evidence base. The study draws mainly on published research literature supplemented by interviews with personnel in ministries of education, international agencies, and other bodies. These sources permit overall mapping, but many information gaps remain. Asian researchers, and particularly ones in East Asia, arguably lead the world in this area. Yet much more work is needed for policy makers and others to have a firm grasp of the dimensions and implications of shadow education in a full range of settings.

Mapping the Landscape

The statistical database on private supplementary tutoring is much less robust than that for school systems (and even for school systems, cross-national databases display many limitations). Nevertheless, the range of studies currently in existence provides enough detail to sketch an overall map that captures the major features of the landscape, even if omitting some of the fine-grained contours. This chapter commences with enrollment rates in shadow education before turning to intensity and demographic variations, subjects and modes, and finally the costs of shadow education.

Enrollment Rates

Box 1 presents data on shadow education in the majority of countries of the region. Not all countries are included, since as yet the topic has not been researched everywhere. In most locations, shadow education has come onto the research agenda only relatively recently. The chief exceptions to this statement are Japan and Republic of Korea, where private tutoring has been a major point of public controversy since the 1960s and where a significant body of quantitative and qualitative research has examined the phenomenon over the decades (Kim and Hunt 1968, Rohlen 1980, Horio 1986, Sawada and Kobayashi 1986, Han and Kim 1997, Seth 2002).

Another caution concerning Box 1 is that the studies cited have diverse foci and methodological approaches. Some address primary education, while others address secondary education. Some are drawn from large databases, while others rely on small samples. Some have clear definitions of private tutoring, while others have diffuse definitions. And some are based on household surveys, while others have been specifically designed for the education sector. As such, the set of studies cannot easily be placed on a single scale. Private tutoring is increasingly being included in cross-national studies that use standardized instruments across groups of countries. The most obvious are the Trends in International Mathematics and Science Study, conducted under the auspices of the International Association for the Evaluation of Educational Achievement (IEA), and the Programme for International Student Assessment (PISA), conducted under the auspices of the Organisation for Economic Co-operation and Development (OECD). The

studies did provide some relevant information (e.g., Nonoyama-Tarumi 2011, OECD 2011b); but the questions asked did not permit clear separation of fee-paying tutoring from fee-free tutoring or identification of the intensities of tutoring (Bray 2010:7–8).

Box 1 Cross-National Indicators of Private Tutoring

Location	Patterns
Armenia	The United Nations Development Programme (UNDP 2007:45) stated that 47% of secondary school students employ private tutors, often for two or more subjects and spending an average of 30–35 hours per week.
Azerbaijan	Silova and Kazimzade (2006) asked 913 first year university students about their experiences in the last year of secondary schooling. They found that 93.0% of students had received tutoring (private lessons, preparatory courses, or both).
Bangladesh	Nath (2011b) analyzed data from household surveys. He found that in 2008, 37.9% of primary students and 68.4% of secondary students were receiving tutoring. In Grade 10, over 80% received tutoring.
Brunei Darussalam	Wong et al. (2007:455) examined the ways that Primary 6 students learned mathematics. In their sample of 209 students, 69% had received extra lessons, of which most were assumed to be from private tutors.
Cambodia	Respondents in 31.2% of 77 primary schools surveyed in 1997/98 indicated that pupils received tutoring, which consumed 6.6% of the costs of primary education (Bray 1999a:57). A 2004 follow-up study showed that costs increased markedly at the secondary level (Bray and Bunly 2005:42). Dawson (2011:18), surveying eight primary schools in three locations, found that about half of the students had received tutoring. Brehm and Silova (2012) presented data echoing these findings.
China, People's Republic of	The 2004 Urban Household Education and Employment Survey of 4,772 households indicated that 73.8% of primary students were receiving supplementary lessons, including in non-academic subjects. Proportions in lower and upper secondary were 65.6% and 53.5% (Xue and Ding 2009). A 2010 survey of 6,474 students in Jinan found that 28.8% of lower secondary students were receiving tutoring in mathematics, and 29.3% in English (Zhang 2011).

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Box 1 *continued*

Location	Patterns
Georgia	Matiashvili and Kutateladze (2006) asked 839 first year university students about their experiences in the last year of secondary schooling. They found that 76.0% of the students had received tutoring (private lessons, preparatory courses, or both). A 2011 survey of 1,200 secondary school students and graduates in all regions showed that a quarter of secondary school students had received tutoring, with variations of 35% in the capital city and 19% in villages (EPPM 2011).
Hong Kong, China	A 2009 telephone survey of 521 students found that 72.5% of upper primary students had received tutoring (Ngai and Cheung 2010); and a survey of 898 secondary students found that 72.5% in lower secondary had received tutoring, while proportions in middle and senior secondary were 81.9% and 85.5%, respectively (Caritas 2010).
India	Sujatha and Rani (2011:113) reported on a survey of senior secondary students in four states: Andhra Pradesh, Kerala, Maharashtra, and Uttar Pradesh: in the sample, 58.8% of Grade 10 students were receiving tutoring. Sen (2010:315) stated that at the primary level in West Bengal, 57% of students were receiving private tutoring. Data from a nationwide rural survey showed rates in Grades 4–8 ranging from 2.8% in Chhattisgarh to 77.2% in Tripura (Pratham 2011:58).
Indonesia	Suryadama et al. (2006) noted the widespread existence of private tutoring at the primary level, but without specific numerical estimates. Informal evidence indicates that it is also widespread at the secondary level.
Japan	A 2007 survey found that <i>juku</i> served 15.9% of primary 1 children, that this proportion rose steadily in later grades, and that it reached 65.2% in junior secondary 3. In addition, 6.8% of junior secondary 3 pupils received tutoring at home, and 15.0% followed correspondence courses (Japan 2008:13).
Kazakhstan	Kalikova and Rakhimzhanova (2009) asked 1,004 first year university students about their experiences in the last year of secondary schooling. They found that 59.9% of students had received tutoring (private lessons, preparatory courses, or both).
Korea, Republic of	In 2008, 87.9% of elementary school pupils were estimated to be receiving tutoring. In middle school the proportion was 72.5%; and in general high school it was 60.5% (Kim 2010:302).
Kyrgyz Republic	Bagdasarova and Ivanov (2009) asked 1,100 first year university students about their experiences in the last year of secondary schooling. They found that 52.5% of students had received tutoring (private lessons, preparatory courses, or both).

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Box 1 *continued*

Location	Patterns
Lao People's Democratic Republic	Benveniste et al. (2008:76, 106) indicated that 14% of lower secondary teachers provided supplementary tutoring, which earned one-third of their total incomes. Another study of 2,082 primary school teachers in 449 schools indicated that 4.7% provided supplementary tutoring in exchange for a fee (Dang et al. 2010).
Malaysia	Kenayathulla (2012) examined data from the 2004/05 household expenditure survey and found that 20.1% of households indicated expenditures on private tutoring. Tan (2011: 105), having surveyed 1,600 students in eight schools in Selangor and Kuala Lumpur, found that 88.0% had received tutoring during their primary schooling.
Maldives	Nazeer (2006:159) remarked that private tutoring "is very common." All nine teachers in his qualitative research were providing additional private lessons for their own students.
Mongolia	Dong et al. (2006) asked 1,475 first year university students about their experiences in the last year of secondary schooling. They found that 66.0% of students had received tutoring (private lessons, preparatory courses, or both).
Myanmar	A 1992 report (Myanmar Education Research Bureau 1992:24) described private tutoring as "virtually indispensable to complete secondary education." Informal evidence indicated that two decades later the problem remained unabated. Much tutoring also existed at the primary level. An unpublished 2009 survey in 25 townships found that tutoring consumed 12.6% of household costs of Grade 1 schooling and 15.6% of Grade 5 schooling.
Nepal	Jayachandran (2008) examined data from 450 schools in 28 districts. She found that 38% of students in public schools were receiving additional private tutoring from their schools, while the figure for students in private schools was 32%. Additional students presumably received tutoring from tutors outside the schools. Thapa (2011) reported on data from 22,500 students in 452 schools. He found that 68% of Grade 10 students were receiving tutoring.
Pakistan	Private tutoring is very common in urban areas (Mulji 2003), and also widespread in rural areas (ASER-Pakistan 2011). Concerning the latter, a 2010 survey of 19,006 households found that only 80% of children attended school. Among those who did attend school, 14.3% received private tutoring (ASER-Pakistan 2011: 52).
Philippines	De Castro and de Guzman (2010) surveyed 1,235 students in 23 schools. They found that 40.7% of grade 6 students and 46.5% of grade 10 students received tutoring.

continued on next page

Box 1 *continued*

Location	Patterns
Singapore	Tan (2009) lamented the dearth of carefully collected empirical data on tutoring, but noted that the phenomenon had been very visible for some decades, citing the work of Kwan-Terry (1991) and George (1992). A 2008 newspaper report stated that 97% of students polled at the primary, middle, and senior secondary levels were receiving tutoring (Toh 2008).
Sri Lanka	Pallegedara (2011:9) examined 2006/07 survey data of 11,628 households with 21,438 students aged 6–21. Among these households, 63.7% had spent money on private tutoring. This compared with just 23.3% in a comparable survey in 1995/96. Suraweera (2011:20) reported that 92.4% of 2,578 students in a grade 10 survey and 98.0% of 884 grade 12 students were receiving tutoring.
Taipei, China	The education panel survey conducted in Taipei, China in 2001 covered 20,000 high school students and indicated that 72.9% of grade 7 students were receiving tutoring for an average of 6.5 hours per week (Liu 2012).
Tajikistan	Kodirov and Amonov (2009) asked 999 first year university students about their experiences in the last year of secondary schooling. They found that 64.8% of students had received tutoring (private lessons, preparatory courses, or both).
Thailand	The <i>Nation</i> , a national newspaper (Editorial 2011), noted the lack of official statistics but stated that cram schools had proliferated and were consuming fees of 7 billion baht (US\$233 million).
Turkmenistan	Clement (2006, quoted by Silova 2009a:59) indicated that, since the country's independence in 1991, an extensive shadow education system had emerged. It consisted of unregistered classes in teachers' homes and elsewhere, and involved the majority of teachers.
Uzbekistan	Silova (2009a) did not provide numerical estimates but indicated that levels of tutoring were comparable with those in other parts of Central Asia.
Viet Nam	Dang (2011b) reviewed 2006 survey data from 9,189 households. He found that 32.0% of primary students were receiving tutoring. In lower and upper secondary, respective proportions were 46.0% and 63.0%.

If Box 1 were presented in geographic clusters rather than alphabetically, some broad patterns would emerge. The principal ones are as follows:

- *East Asia*, including Japan, Republic of Korea, and Taipei,China, has long traditions of private tutoring and is the part of the world in which it has been most visible. This can be linked to Confucian traditions, which value educational achievement and see educational qualifications as a major route to personal and family advancement. In the PRC, for some decades the Confucian heritage did not lead to private tutoring, because the Communist government strictly prohibited private enterprise. However, with the advent of the market economy, supported by rising incomes and greater mobility of labor, which promotes competition, private tutoring has mushroomed (Kwok 2010, Zhang 2011).
- *South Asia*, including Bangladesh, India, Pakistan, and Sri Lanka, also has long traditions of private tutoring. Indeed, official remarks about the phenomenon in Sri Lanka go back to 1943 (Box 2). In these countries, tutoring is driven partly by social competition but also by

Box 2 A Longstanding Concern

The challenges of private tutoring were noted in what is now Sri Lanka (then Ceylon) as early as 1943. A Special Committee on Education was particularly critical of the examination-oriented coaching centers that operated alongside the schools. The committee felt that the emphasis of these centers on rote learning undermined the broad purposes of education. The report stated:

Parents frequently provide private coaches whose whole justification is that they will get their pupils through examinations. Coaching establishments which do not pretend to educate at all, flourish.

We strongly deprecate the practice too frequently adopted by many parents of supplementing the school work by private coaching. In the end it destroys its object by making the student incapable of originality and initiative.

Since that era, coaching centers and other forms of supplementary tutoring have greatly multiplied. The warning signals expressed in 1943 were not strong enough to change this emerging feature. On the contrary, coaching has now become deeply engrained in the culture.

Source: *Report of the Special Committee on Education* (1943), Sessional Paper XXIV, Colombo: Ceylon Government Press, quoted by Suraweera (2011: 9, 17).

teachers desiring to increase their salaries and seeing their pupils as a captive market (Nath 2008, Sujatha and Rani 2011, Suraweera 2011). Similar patterns are evident in parts of *Southeast Asia*, including Cambodia (Dawson 2009, Brehm and Silova 2012) and Viet Nam (Dang 2008, Ko and Xing 2009).

- In *Northern, Central, and Western Asia*, including Mongolia and the states that were part of the former Soviet Union, shadow education has expanded to become a vast enterprise (Silova 2009a:69). One major force was the collapse in purchasing power of teachers' salaries after the 1991 demise of the Soviet Union. People who remained in the teaching profession had to find supplementary earnings to feed their families, and tutoring was an obvious route. Society understood the pressures on teachers, and accepted the phenomenon. Although the purchasing power of teachers' salaries has since risen in many of these countries, the culture of tutoring has remained embedded.

Intensity and Demographic Variations

The figures in Box 1 indicate the proportions of school populations that receive private tutoring, but they do not indicate the intensity of their studies. Official statistics on school enrollment rates imply that pupils attend school for the bulk of the school year. In practice, that assumption may be erroneous; but it is more likely to be valid for school enrollments than for supplementary tutoring. Some students receive tutoring throughout the year, while others do so mainly in the period building up to examinations. For example, among the students in the Kyrgyz Republic surveyed by Bagdasarova and Ivanov (2009:132), 40.5% received private tutoring lessons regularly throughout the year, 20.0% received them occasionally throughout the year, 19.1% received them regularly in the final semester, 8.0% received them occasionally in the final semester, and 12.3% did so just before examinations. Variations in intensity were also evident in the number of hours per week. The majority of students (57.1%) spent 1–2 hours per week with a private tutor, while some spent less and others spent more.

Casual observers commonly assume that secondary school students receive tutoring more intensively than primary students. There is some validity in this statement as a generalization, as supported for example by data from the PRC (Xue and Ding 2009). However, much depends on the nature of the selection processes at various stages in the education system. In Singapore, the Primary School Leaving Examination is a major selection event, since it is the principal determinant of the secondary school streams that students will enter. For that

reason, the intensity of primary school tutoring in Singapore rivals that of secondary school (Tan 2009). Table 1 provides data from the Republic of Korea, showing that participation rates are higher in elementary schools than in middle and general high schools. This may reflect parental desires to secure a strong foundation, but may also reflect the functions of tutoring as a child-minding agent. Participation rates in vocational secondary schools were low, because students felt that they were already on a non-academic track.

Table 1 Shadow Education Participation by Region and Level of Education, Republic of Korea, 2008 (%)

Region	Elementary	Middle	General High	Vocational High
Seoul	89.4	75.9	73.6	21.7
Metro	90.3	74.9	60.1	35.3
City	88.7	73.1	60.7	27.3
Town	79.2	59.8	32.2	35.3

Source: Kim (2010:302).

One might expect pupils in private schools to receive less shadow education than their counterparts in public schools, on the grounds that the private schools are already more closely attuned to their clients and are already charging fees to permit them to meet those clients' needs. This is indeed the case in some countries. Nath (2011a) presented Bangladesh data indicating that 38% of pupils in government primary schools received private tutoring compared with 12% in nongovernment schools. However, in other settings students in private schools seem to receive more tutoring than their counterparts in public schools. One explanation is that parents already have disposable income for private schooling, and have already demonstrated their willingness to use the market to secure an educational edge for their children. Examples of the connection between private mainstream schooling and private supplementary tutoring include the following:

- *India.* In rural parts of Uttar Pradesh, 10.1% of grade 1 children in private schools in 2010 were receiving tutoring compared with 3.8% in government schools (Pratham 2011:214). This disparity was maintained in all reported grades, with respective proportions in grade 8 being 18.9% and 9.0%. In rural West Bengal, where overall levels of tutoring were much higher, private schools commenced with higher rates in grade 1 (60.7% compared with 50.6% in government schools), though in higher grades the balance was reversed, with proportions in

grade 8 being 72.9% of children in private schools receiving tutoring compared with 83.1% in government schools (Pratham 2011:222). These figures may be supplemented by nationwide survey data (India 2010:A-310; see also Box 3). In 2007/08, reporting students (both rural and urban) in private unaided schools were estimated to have paid an average of 2,349 rupees for private tutoring compared with 2,773 rupees for their counterparts in private aided schools and only 1,456 rupees for students in government schools.

Box 3 Alarm about the Expansion of Private Tutoring in India

The Pratchi Trust was established in India by Amartya Sen using resources from his 1998 Nobel Prize in Economic Sciences. The Trust prepared a survey of primary education in India's West Bengal in 2001/02, and repeated the survey 7 years later. The initial report showed many shortcomings in the education system. The later report showed significant progress in many domains, but also documented growing dependence on private tutoring. The study sampled both primary schools and Sishu Siksha Kendras (SSKs), which are rural and community-based alternatives to primary schools. Sen wrote (2009:13):

There has been a real regression, as opposed to progress, on the dependence on private tuition. The proportion of children relying on private tuition has gone up quite a bit (64% from 57% for the students of standard primary schools, and 58% from 24% for SSK children). Underlying this rise is not only some increase in incomes and the affordability of having private tuition, but also an intensification of the general conviction among the parents that private tuition is "unavoidable" if it can be at all afforded (78% of the parents now believe it is indeed "unavoidable" – up from 62%). For those who do not have arrangements for private tuition, 54% indicate that they do not go for it mainly—or only—because they cannot afford the costs.

Sen noted that most of the content in the private tutorial classes could and should have been taught in the regular classes of the primary schools. He added that private tutoring (pp.14–15):

divides the student population into haves and have-nots; it makes teachers less responsible and it diminishes their central role in education; it makes improvements in schooling arrangements more difficult since the more influential and better placed families have less at stake in the quality of what is done in the schools (thanks to the supplementation outside school hours); [and] it effectively negates the basic right of all children to receive elementary education.

- *Pakistan*. A 2010 survey of 19,006 rural households in 32 districts of five provinces found that 25.3% of students aged 6–16 in private schools received private supplementary tutoring compared with 9.7% in government schools (ASER-Pakistan 2011:52). A repeat survey the following year confirmed the general pattern (ASER-Pakistan 2012:1; Aslam 2012:24).

Another dimension concerns location. In general, shadow education participation rates are greater in urban areas than in rural areas, and greater in larger cities than in smaller ones. The Korean data in Table 1 showed relatively modest urban/rural differences at the elementary level but marked differences among students in general high schools. In the Kyrgyz Republic, 61.9% of surveyed students from urban areas reported that they had received tutoring, compared with 37.7% of students from rural areas (Silova 2009a:74).

A further source of variation may be gender. Some studies have indicated that when parents have to make decisions on whether to invest in the tutoring of boys or girls, they are more likely to choose the former on the grounds that boys are more likely to seek paid employment that will require educational qualifications. Such gender imbalances have been found at the primary school level in Bangladesh (Nath 2008) and at both the primary and secondary levels in India (Ghosh and Rana 2011:12; Sujatha and Rani 2011:119). Pro-male bias has also been reported in Japan (OECD 2011a:128); Pakistan (Aslam and Atherton 2011); and Taipei, China (Liu 2012). However, the pattern is not universal. The survey in the Kyrgyz Republic by Bagdasarova and Ivanov (2009:134–135) found that females comprised 65.4% of enrollments in one-on-one and small group tutoring and 67.9% in preparatory courses. Similarly, in the Republic of Korea, Kim and Lee (2010) found greater tutoring, expenditures for females than for males, while a Bangladesh study of tutoring at the secondary level (Hamid et al. 2009) did not find any significant differences. The study in Viet Nam by Dang (2007) also found no significant gender differences.

On another variable, some societies show significant racial or ethnic variations. Jelani and Tan (2012) looked at patterns of private tutoring received by primary school students in Penang, Malaysia. They found that students of Chinese ethnicity were more likely to receive tutoring, observing that such students formed 38% of the population but 46% of students in their sample. By contrast, Malays formed 51% of the population but only 44% of their sample. These findings echoed research two decades earlier by Marimuthu et al. (1991), when disparities were even more pronounced. Ethnic differences have also been reported in Viet Nam (Ha and Harpham 2005, Dang 2007, 2011b) and Sri Lanka

(Gunasekara 2009, Pallegedera 2011). However, variations by race and ethnicity may reflect economic factors as well as cultural ones.

Subjects and Modes

The subjects most in demand for private supplementary tutoring are those that are most necessary for advancement in the education systems. This usually includes mathematics, the national language, and an international language such as English. In Georgia, among students surveyed by the International Institute of Education Policy, Planning and Management who were receiving tutoring, 48% did so in mathematics, 23% in the national language, and 78% in foreign languages (EPPM 2011:26). Table 2 indicates the subjects taken by grade 10 students in Sri Lanka prior to the Ordinary Level examinations, after which the students select specializations for the Advanced Level. Similarly, Table 3 indicates the subjects received by senior secondary students in Kazakhstan, Kyrgyz Republic, and Tajikistan prior to their entrance to university.

Table 2 Subjects in which Grade 10 Students Received Private Tutoring, Sri Lanka, 2009

	Mathematics	Science	English	Sinhala	History	Aesthetics
% of Students Receiving Tutoring	91	73	68	18	13	11

Source: Suraweera (2011: 20).

Table 3 Subjects in which Senior Secondary Students Received Private Lessons, Kazakhstan, Kyrgyz Republic, and Tajikistan, 2005/06 (%)

Country	Mathematics	Physics	History	State Language	Russian Language	Foreign Language
Kazakhstan	33.5	17.9	18.0	8.9	6.1	7.9
Kyrgyz Republic	16.9	2.5	6.3	2.3	6.1	26.1
Tajikistan	12.4	2.5	5.1	8.5	11.1	24.1
Sample Mean (weighted)	20.9	7.7	9.8	6.5	7.8	19.4

Source: Silova (2009a: 73).

In addition to straightforward repetition of school subjects may be elaborations and supplements of various kinds. To attract clients, private tutors differentiate themselves from the school sector through their teaching approaches and content. They may offer personalized instruction and a tailored curriculum on a one-on-one basis. Since one-on-one tutoring is costly for the client, many tutors also provide for small groups at lower unit costs (but usually greater overall revenue per hour for the tutors). For remedial tutoring they are likely to stay within the confines of the school curriculum, but for enrichment tutoring they expand the curriculum with additional material. In Japan, more than 50% of grades 3–9 respondents in a 2008 Ministry of Education survey stated that they liked *juku* because they learned materials that were not taught in their schools (Dawson 2010:18).

Such tutoring may also alter the sequence of instruction. Thus, although the metaphor of the shadow implies that the private tutoring follows the regular system, some tutors offer “learning in advance.” This has become a significant phenomenon in the Republic of Korea, where some *hagwons* teach students for 2 months during the vacation before the beginning of the academic year, and during the school year also keep ahead of the school curriculum (Lee et al. 2004, Dawson 2010). This creates difficulties for the school teachers, who find that some students have already learned the material while others have not.

In some societies, alongside one-on-one and small-group tutoring are the very different formats provided by “star” tutors, who are able to pack lecture theaters and operate with overflow video screens. These are a major phenomenon in Hong Kong, China, where companies advertise personalities on television, in newspapers, and on the backs of buses, and attract significant proportions of middle school and senior secondary students (Kwo and Bray 2011). Some students just attend the lectures and/or video recordings of the lectures, while others purchase add-ons such as personalized interaction with the star tutor or a tutor’s aide via Facebook, e-mail, or other modes. In Sri Lanka, “hall tuition classes” may even serve 1,000 students at a time. Pallegedera (2011:7) notes that the classes are usually held on weekends but sometimes on weekdays, and, since they are offered only in large towns, some students from rural areas travel long distances to attend.

The internet is also increasingly used for other forms of tutoring at a distance. Such tutoring may be conducted live, using Skype and other software, or it may take the form of self-service lessons. At least one company in the PRC earns money by selling a password to sets of prerecorded lessons and exercises, some of which can be submitted for grading and personal feedback. Online tutoring is not restricted by geographic boundaries: The tutors and their clients may be in the same city or they may be in different countries or even continents.

Considerable publicity has been given to Indian companies that provide tutoring to pupils in England and the US (Blakely 2007, Ventura and Jang 2010). Such operations are likely to expand further. Tutor Vista Global, among the most visible of these companies, leverages the price differentials across international markets. As explained by Vora and Dewan (2009:140), typical tutoring rates in the US were around US\$100 per hour for face-to-face tutoring and US\$40 per hour for online tutoring. With Tutor Vista's offerings, a student opting for 2 hours a day and 5 days a week paid only US\$2.50 per hour of tutoring.

Costs

The costs of shadow education may usefully be considered at two levels—one is the individual or household level, and the other is the country level.

In any one area, the costs of tutoring vary considerably according to the quality, location, size of tutorial group, nature of premises, and other factors. Table 4 shows estimates of tutoring enrollment rates and per-child expenditures

Table 4 Proportions of Children Aged 3–16 Receiving Private Tutoring by Income Quintile, Rural India (2007/08) and Rural Pakistan (2010)

Income Quintile	Proportion of Children Receiving Tutoring	Expenditure on Tutoring per Child (Indian/Pakistani rupees per month)
India		
1 = poorest	18.1	68.9
2	20.0	70.4
3	21.1	72.8
4	25.2	75.5
5 = richest	31.8	90.2
Pakistan		
1 = poorest	5.5	287
2	9.6	233
3	14.0	241
4	19.9	292
5 = richest	27.6	352

Source: Aslam and Atherton (2011:7).

in rural India and rural Pakistan. As one might expect, the proportions of children receiving tutoring were greater in richer households than in poorer ones, and in addition the richer households paid more per child than did the poorer households. In Pakistan, expenditures on tutoring per child averaged the equivalent of US\$3.40 per month. This was a significant amount, given that 60% of Pakistan's population reportedly lived on less than US\$2 per day. In India, average spending was lower but still equated to about US\$2 per month (Aslam and Atherton 2011).

To complement these figures, nationwide survey data in India show expenditures on private tutoring by gender. Average expenditures are higher for boys than for girls at almost all levels of education and in both urban and rural locations. For example, estimated expenditures for boys in urban areas in 2007/08 were 328 rupees at the primary level compared with 286 rupees for girls (India 2010:A-281). At the middle-school level, respective figures were 730 and 547 rupees; and at the secondary and higher secondary levels, respective figures were 1,929 and 1,631 rupees. These figures seemed to reflect chiefly the tendency to send more boys than girls for tutoring rather than the unit costs for those who did receive tutoring. Data on students who reported some expenditure (excluding those who reported no expenditure) showed much smaller gaps (p.A-306).

Elsewhere, household surveys have also shown differences by ethnicity. The 2004/05 national survey in Malaysia showed that Chinese and Indian households spent more on tutoring than did Malay and indigenous households or other groups (Table 5). The data show only households with positive expenditures, i.e., they omit ones with no expenditures on private tutoring. Since higher proportions of Chinese and Indian households had positive expenditures, in absolute terms the gap was even wider than is portrayed in the table.

Ethnicity may of course overlap with social class. Returning to the issue of socioeconomic groups, Table 6 presents statistics from the Republic of Korea. Again, families in higher income groups consumed more private tutoring, which translated into greater expenditures. In proportional terms, even students in vocational high schools received more tutoring and greater expenditures when they were from higher income families. Gaps between high-income and low-income families appeared to have increased over the decade (Byun 2011).

Research elsewhere has shed further light on the balance between household costs of tutoring and costs of other items related to education. Table 7 presents figures on secondary schooling in Bangladesh. For students in government schools, an average of 41.9% of the total household cost of education was consumed by private tutoring; for students in subsidized nongovernment schools, the proportion was 29.2%.

Table 5 Household Expenditures on Tutoring by Ethnic Group, Malaysia, 2004/05

Private Tutoring Expenditures as a Percentage of Total Monthly Expenditures	Malay		Chinese		Indian		Indigenous		Others		Total	
	n	%	n	%	n	%	n	%	n	%	n	%
1-5	608	80.1	328	63.0	55	51.9	32	58.2	8	57.1	1,031	70.9
5-10	125	16.5	137	26.3	39	36.8	17	30.9	6	42.9	324	22.3
10-15	19	2.5	44	8.4	7	6.6	4	7.3	0	0.0	74	5.1
15-20	6	0.8	10	1.9	3	2.8	2	3.6	0	0.0	21	1.4
20-30	1	0.1	2	0.4	1	0.9	0	0	0	0.0	4	0.3
30-40	0	0.0	0	0.0	1	0.9	0	0	0	0.0	1	0.1
Total	759	100	521	100	106	100	55	100	14	100	1,455	100

n = number.

Source: Kenayathulla (2012: 201-202).

Table 6 Shadow Education Participation and Expenditure by Income Group and Level of Education, Republic of Korea, 2008

Item	Income Group	Elementary	Middle	General High	Vocational High
Participation Rate (%)	Less than 1,000,000 won	48.3	31.7	24.1	15.4
	1,000,000–2,000,000 won	72.9	52.5	38.6	22.0
	2,000,000–3,000,000 won	89.0	70.2	53.1	31.4
	3,000,000–4,000,000 won	92.8	81.6	64.3	42.5
	5,000,000–6,000,000 won	95.3	87.1	73.3	48.0
	6,000,000–7,000,000 won	96.3	90.1	77.6	50.9
	7,000,000–8,000,000 won	96.4	90.4	80.0	56.7
	More than 8,000,000 won	96.4	93.2	82.5	59.8
	Less than 1,000,000 won	6.4	6.0	5.0	2.0
Expenditure Amount (10,000 won)	1,000,000–2,000,000 won	12.5	11.7	10.0	3.6
	2,000,000–3,000,000 won	19.3	18.4	16.2	6.4
	3,000,000–4,000,000 won	25.0	26.2	23.9	10.6
	5,000,000–6,000,000 won	30.3	32.1	32.1	13.2
	6,000,000–7,000,000 won	34.2	37.7	38.8	16.5
	7,000,000–8,000,000 won	37.9	43.1	44.3	22.6
	More than 8,000,000 won	42.7	51.0	55.9	24.4

Source: Kim (2010:303–304).

Table 7 Household Costs for Secondary Schooling, Bangladesh, 2005

Expenditure Item	Government Schools		Nongovernment Schools	
	Taka	%	Taka	%
Private Tutoring	4,700	41.9	2,210	29.2
Books	796	7.1	686	9.0
Stationery	1,099	9.8	992	13.1
Electricity and Kerosene	461	4.1	709	9.4
Snacks	804	7.2	751	9.9
Health Service	591	5.3	471	6.2
Uniforms	515	4.6	410	5.4
Transport	833	7.4	315	4.2
Others	1,405	12.5	1,030	13.6
Total	11,204	100.0	7,574	100.0

Note: Government secondary schools are fully funded by the government. Nongovernment schools, as classified here, are not private schools, because they are substantially funded by the government in the form of teachers' salaries and school infrastructure.

Source: Campaign for Popular Education (2007:51).

Pallegedara (2011:24) has shown expenditures in Sri Lanka rising over time. Referring to national household surveys, Pallegedara noted that in 1995/96, 23.3% of households with school-aged children spent money on private tutoring, and 14.8% of households allocated 1%–5% of total household expenditure for tutoring. In 2006/07, 64.0% of households spent money on private tutoring, and 24.0% allocated 1%–5% of total household expenditure for tutoring. Moreover, some households spent even more. In 2006/07, 2.7% of households allocated between 5% and 10% of their total expenditures for private tutoring, and 0.9% allocated more than 10%.

To supplement these numbers, Table 8 shows yearly costs of private tutoring in three countries of Central Asia. The costs of tutoring on a one-on-one or small-group basis are naturally higher than the costs of tutoring in courses with larger class sizes. Nevertheless, even the latter figures were substantial. In Tajikistan, for example, the mean for tutoring classes in just one subject (and thus proportionately more for additional subjects) was equivalent to 1.98% of per capita gross domestic product.

From such household figures, one may compute national expenditure figures. Again, the figures for the Republic of Korea are especially notable. Expenditures are also significant in many other societies:

Table 8 Yearly Costs per Person for Private Tutoring, Kazakhstan, Kyrgyz Republic, and Tajikistan

Country	Median			Mean		
	Costs of One-on-One or Small-Group Lessons in One Subject (US\$)	Costs of Tutoring Classes in One Subject (US\$)	Costs of Tutoring Classes as % of GDP per Capita (PPP US\$)	Costs of One-on-One or Small-Group Lessons in One Subject (US\$)	Costs of Tutoring Classes in One Subject (US\$)	Costs of Tutoring Classes as % of GDP per Capita (PPP US\$)
Kazakhstan	100.0	30.0	0.38	212.6	72.9	0.94
Kyrgyz Republic	36.3	24.2	1.21	63.8	35.9	1.80
Tajikistan	31.3	6.3	0.44	76.4	28.1	1.98

GDP = gross domestic product, PPP = purchasing power parity.

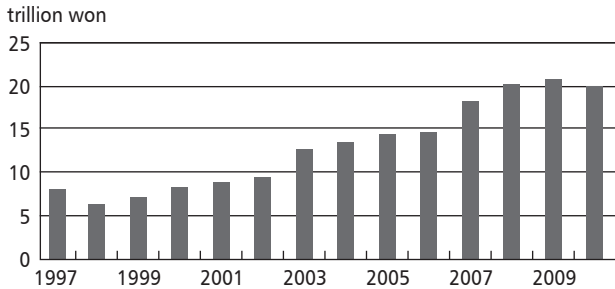
Note: Private tutoring costs were converted from local currencies into US\$ using the exchange rate at the time of data collection (2006). Because of the wide spread of data and the existence of significant anomalous outliers, median calculations are used in addition to means to compare expenditures in the countries.

Source: Calculated from Silova (2009a:76–77).

- *Georgia*: Household expenditures on tutoring at the secondary level consumed 120 million lari (US\$48 million) in 2011, which was equivalent to 34.2% of public expenditure on secondary education (EPPM 2011: 29).
- *Hong Kong, China*: A 2010 survey of businesses serving secondary students following the local curriculum, i.e., excluding primary students, one-on-one private tutoring services, and businesses serving students in international schools (Synovate Limited 2011), indicated that the market size was approximately HK\$1,984 million (US\$255 million).
- *India*. Rana et al. (2005:1552) estimated the costs of private tutoring in government primary schools in West Bengal at 21.5% of the total costs of educating a child. Nationally, a 2008 market survey of companies offering coaching estimated the size of the sector at US\$6.4 billion and predicted annual growth of 15% over the subsequent 4 years (Vora and Dewan 2009:60). The survey, concerned mainly with large companies, highlighted 14 “key players.” To the operations of these companies should be added a huge number of informal and semiformal providers of tutoring.

- *Japan.* Households in Japan were reported in 2010 to be spending about 924 billion yen (US\$12 billion) (Dawson 2010:16) on private tutoring.
- *Republic of Korea.* In 2006, expenditure on private tutoring was equivalent to about 80% of government expenditure on public education for primary and secondary students (Kim and Lee 2010:261). Shadow education expenditures rose every year from 1998 to 2009, beginning to reduce slightly only in 2010 (Figure 1). In that year, expenditures reached 20.8 trillion won (US\$17.3 billion).
- *Singapore:* Households spent about S\$820 million (US\$680 million) on center and home-based private tutoring in 2008. This was an increase from S\$470 million a decade earlier (Basu 2010:D2).

Figure 1 Average Monthly Household Expenditures on Shadow Education, Republic of Korea, 1997–2010



Sources: Jang (2011:2), Korea National Statistical Office (2011: 2).

**Box 4 Dazzling Work Ethic, Gritty Faith, and Financial Realities
in Viet Nam**

Dao Ngoc Phung is a 14-year-old girl in a remote part of Viet Nam. She is tiny, standing just 4 feet 11 inches; yet Phung is also breathtakingly strong. Phung is so obsessed with schoolwork that she sets her alarm for 3 am each day. She rises quietly so as not to wake her younger brother and sister, who both share her bed, and she then cooks rice for breakfast while reviewing her books.

The children's mother died a year ago, leaving the family with the equivalent of US\$1,500 in debts. Their father, a carpenter named Dao Van Hiep, loves his children and is desperate for them to get an education, but he has taken city jobs so that he can reduce the debt. Therefore, during the week Phung is like a single mother who happens to be in the ninth grade.

Phung wakes her brother and sister, and then after breakfast they all go off to school. For Phung, that means a 90-minute bicycle ride each way. She arrives at school 20 minutes early to be sure she's not late.

After school, the three children go fishing to get something to eat. Phung reserves unpleasant chores, like cleaning the toilet, for herself, but she does not hesitate to discipline her younger brother, Tien, 9, or sister, Huong, 12. When Tien disobeyed her by hanging out with some bad boys, she thrashed him with a stick.

Most of the time, though, she's gentle, especially when Tien misses his mother. "I try to comfort him," she says, "but then all three of us end up crying."

Phung yearns to attend university and become an accountant. It's an almost impossible dream for a village girl, but across East Asia the poor often compensate for lack of money with a dazzling work ethic and gritty faith that education can change destinies. The obsession with schooling is a legacy of Confucianism—a 2,500-year-old tradition of respect for teachers, scholarship, and meritocratic exams. That's one reason Confucian countries like People's Republic of China, Republic of Korea, and Viet Nam are among the world's star performers in the war on poverty.

Phung pleads with her father to pay for extra tutoring in math and English. He explains softly that the cost—\$40 a year—is unaffordable. Phung continues undaunted. But lack of money for tutoring when almost everyone else seems to receive it is one more obstacle to her long-term dream.

Source: Adapted from Kristof (2011).

Demand and Supply

This chapter commences by reviewing major drivers of demand for tutoring. It gives particular attention to transition points in education systems, cultural traits, various factors related to the internal operation of schools, and the combination of smaller families and increased wealth. The chapter then turns to the supply of tutoring, again noting that providers of tutoring may range from informal operations involving single individuals to large multinational companies.

Drivers of Demand

The main driver of demand for supplementary tutoring is awareness that investment in education can generate strong returns from good performance in key examinations and entrance to high-status secondary schools and universities. Few parents have read the empirical literature on rates of return to education (Barro and Lee 2010, Kara 2010, Son 2010); but most have a strong—and to some extent valid—impression that the longer a person can stay in the education system, and the better the quality of that education, the greater the prospects for enhanced lifetime earnings and standard of living. By corollary, families know that poor performance in school and on examinations is related to weaker employment opportunities and lower standards of living.

Transition points in education systems

Although all education systems in Asia have greatly expanded in recent decades, not all have universal lower secondary education, and even fewer have universal upper secondary education. At the transition points between levels, decisions must be made by schools and higher level administrators about who will be permitted to proceed in the education system and who will be pushed out. Families that do not wish their children to be pushed out may invest in private supplementary tutoring to secure an edge in the competition.

Competition may also be strong in systems that do have universal lower and upper secondary education. Singapore, for example, has a highly stratified system of secondary schooling (Singapore 2011). After the basic 6 years of primary schooling, students are streamed into

- an *integrated* program of 4–6 years, which combines secondary and junior college education without an intermediate examination;
- a *secondary express* program of 4 years;
- a *secondary normal* program (academic) of 5 years;
- a *secondary normal* program (technical) of 4 years; or
- a *prevocational* program of 1–4 years.

The implications of each track for future careers are very significant, and since the Primary School Leaving Examination is a major determinant of the tracks in which students will find themselves, many parents invest in supplementary tutoring at the primary level.

In other systems, the major push-out stage is at the end of senior secondary education. Some systems have great pressure at that stage, because few postsecondary places are available, and the gate is therefore narrow. Observers commonly assume that if the gate is widened through expansion of postsecondary intakes, then pressures for private supplementary tutoring will ease. This does indeed happen in some systems, but it is not a universal pattern. Instead, the question for families changes from “postsecondary place or no postsecondary place?” to “*which* postsecondary place?” If postsecondary institutions and programs remain highly stratified, with some offering much greater rewards than others, then demand for private supplementary tutoring during the years of secondary schooling is likely to remain intense. Indeed, the case of Hong Kong, China shows that expansion of postsecondary education can even increase demand for supplementary tutoring. In the 1980s, when local postsecondary places were available for only about 4% of an age cohort, most families assumed that postsecondary education was out of reach. Twenty years later, postsecondary education had expanded to serve 60% of a cohort, and families therefore not only saw it as within reach but also sought the more desirable parts of the system, which could be obtained with the help of supplementary tutoring.

Similar patterns have been observed elsewhere in East Asia. In Japan, the falling birth rate has made tertiary education accessible to virtually all secondary graduates who wish to attend; yet the proportion of middle school students attending *juku* rose from 44% in 1985 to 53% in 2007 (OECD 2011a:112). And in Taipei, China the number of universities and colleges expanded from 105 in 1999 to 162 in 2008, but the number of registered *wen-li buxiban* (literature and science cram schools) expanded from 1,844 to 9,344 (Kuan 2011:343). Government reforms in Taipei, China aimed to discourage narrow and passive learning habits by opening new pathways and diversifying the education system. However, rather than decreasing demand for cram schools, these reforms simply

diversified it—to increase their chances of admission, students now seek cram schools in both academic subjects and non-academic subjects (Liu 2012:47).

In other locations, moreover, families note that investment in tutoring at the secondary level can pay dividends in the form of a scholarship at the postsecondary level (Silova 2009c:68). It is thus a case of “pay now to save later”—or, for those who do not invest in tutoring but who do gain a postsecondary place without a scholarship, “save now but pay later.”

Culture

Broad cultural factors are often brought into discussions to explain why private tutoring has been stronger in some parts of the world than in others. The influence of Confucianism is often cited in East and Southeast Asia (Kwok 2001, Huang 2004, Lei 2005, Dang 2008, Kuan 2011), and may be extended to Chinese immigrant communities in the US and elsewhere (Box 5). Such commentaries no doubt have some validity, though cultures have always been mediated by other factors and are now increasingly shaped by the forces of globalization.

Other parts of Asia have cultures shaped by post-Soviet legacies. Private tutoring existed in the former Soviet Union (Hrynevych et al. 2006:305; UNDP

Box 5 Culture and the Tiger Mothers

Amy Chua, a Chinese American, became an international celebrity after the publication of her 2011 book *Battle Hymn of the Tiger Mother*. Her revealing narrative attributed the educational success of her two daughters to the strict, demanding expectations of “Chinese” parenting. It also chronicled, if only partly, the emotional and physical demands of the high hopes and expectations that tiger parents have for their children.

In the months following the book’s publication, stories poured in from other tiger mothers, including Rosalind Corlin in Hong Kong, China, who woke her twin 10-year-olds at 5:30 am every day for a regimen of academic and non-academic private tutoring: mathematics lessons from an Oxford-trained mathematics genius; swimming lessons with the former Singaporean national swimming team coach; chess lessons with the Finnish national chess coach; and language lessons in French, English, and Chinese (*South China Morning Post*, 21 January 2011).

This intense parenting reflects the competitive nature of the educational process and the deep-seated anxiety parents have over their children’s education. Private tutors are one of the beneficiaries of this anxiety, turning the ambitions of tiger parents into a steady stream of revenue.

2007:64; Kalikova and Rakhimzhanova 2009:93) but was downplayed by the authorities, who wished to preserve the image of a fee-free and egalitarian education system in line with the socialist ideal. As noted by Silova (2009b:35), the post-Soviet era brought “new socio-cultural realities of new democracies and market economies,” which required increasing reliance on private tutoring. It became acceptable for teachers to treat their human capital as personal knowledge that could be purchased in the way that other knowledge and skills could be purchased.

The cultures of South Asia display further differences. Sri Lanka, for example, has deeply engrained traditions of private tutoring that have been passed down for several generations. Detailed research dates from the 1980s (Pararajasinghham 1980, cited in de Silva 1994; Hemachandra 1982; Manchanayake and Nanayakkara 1986, cited in Nanayakkara and Ranaweera 1994; de Silva et al. 1991), but public commentary dates at least from the 1940s (Suraweera 2011; see Box 2). As such, it can be argued that private tutoring has entered the general culture insofar as it is seen as a normal part of daily life not only for contemporary children but also for their parents and perhaps even grandparents. Pallegedara (2011:16), using empirical data from national household surveys to calculate the elasticity of demand, showed that in 1995/96 private tutoring was generally viewed as a luxury, but by 2006/07 it was generally viewed as a necessity.

School Quality

Perceptions of inadequacies in mainstream schooling are another major driver of private tutoring. Table 9 reports the responses by 2,378 grade 10 students in Sri Lanka when asked why they sought private tutoring. More than half (53%) stated that they had not received sufficient exercises in school, and that the full syllabus content had not been covered; 50% indicated that they had difficulty in understanding what was taught in school.

Similar perspectives are also evident elsewhere in South Asia. In Bangladesh the point was made forcefully by one student reported by Hamid et al. (2009:298): “Private tutoring is needed because of the failure of school in English teaching. If English was taught properly at school, there would not be any need to take private lessons.” In some cases, this is not so much because of poor quality teaching but because of no teaching at all. In India’s West Bengal, Sen (2010) noted that teachers often fail to come to school, since they do not perceive a likelihood of sanction for such behavior (see also Chakraborty 2003). Such teachers are more likely to attend their tutoring classes, however, because there is a direct correlation between effort and income. When mainstream schools are

Table 9 Reasons for Receiving Private Tutoring, Sri Lanka, 2009

Rank	Reasons	%
1.	Discuss examination questions and answers in tutoring classes	68
2.	Sufficient exercises not given in school	53
3.	Full syllabus subject content not covered in school	53
4.	Difficult to understand what is taught in school	50
5.	Instructions given in tutoring class on how to answer questions	29
6.	To cover the lost work in school as a result of engaging in extracurricular activities	23
7.	To comply with the wish of the parents	10
8.	To enjoy fun in tutoring class	7
9.	To avoid losing the favor of the school teacher when he or she takes the tutoring class	6
10.	Because other classmates attend tutoring	3

Source: Suraweera (2011: 20–21).

unprepared to give even hard-working and talented students the opportunity of learning the relevant materials, families invest in private tutoring not just to gain an extra edge but to cover basic skills and concepts.

Turning to a different region, comparable dissatisfaction has been demonstrated in several parts of the former Soviet Union. In Azerbaijan, Silova and Kazimzade (2006) surveyed 1,019 secondary students and 913 first year university students and found that 52.7% and 59.5%, respectively, believed that private tutoring was “the only way to get a high-quality education” (p. 127). A parallel study in Georgia by Matiashvili and Kutateladze (2006) surveyed 500 secondary students, among whom 48% agreed that “low quality of teaching in schools is the main reason for deciding to take private tutoring,” and 41% agreed that “students use private tutoring because teachers do not explain subject matter thoroughly” (pp. 202–203). These responses were echoed by a 2011 study in Georgia (EPPM 2011:28). Along the same lines, in Armenia only 11.9% of secondary school graduates surveyed felt that “school knowledge is sufficient” for admission to a higher education institution (UNDP 2007:45).

In some settings, class size is also an issue. Even in wealthy parts of Asia, classes commonly have 40 students, and in poorer parts many classes are much larger. While the educational consequences of class size are subject to some controversy (see, e.g., Wössmann and West 2006, Blatchford et al. 2011), parents usually perceive smaller classes as better. Small classes may allow teachers to

engage in more interactive pedagogy, giving students more opportunity to ask questions and gain clarifications. If mainstream classes remain large, families may decide that tutoring is the only way to secure individualized instruction. However, large classes are also found in private tutoring centers: The classes taught by master tutors in Sri Lanka and by star tutors in Hong Kong, China commonly have more than 100 students. Much therefore depends on perceptions by the clients of what they will be able to gain from whom and in what circumstances.

Related to class size in some settings are double-shift schools in which one group of pupils attends in the morning and another group in the afternoon. Double-shift schools are common in Bangladesh, Cambodia, and India. Even diligent teachers encounter difficulties in covering the full curriculum in half-day schools, and parents may feel the need for private tutoring to bridge the gap (Bray 2008:48). In Viet Nam, this is implicitly recognized by the government, which officially prohibits teachers from giving extra private tutoring to students with a full-day curriculum (Dang 2011a) but in effect condones it for students in double-shift schools. Ko and Xing (2009:23) indicated that children in Viet Nam with lower self-reported school quality were more likely to attend extra classes, and Ha and Harpham (2005) explicitly highlighted the challenges arising from a combination of half-day schooling and a more demanding curriculum. In the Maldives, a government decision in 2009 to phase out double-shift schooling was motivated partly by a desire to reduce the scale of private tutoring (Sheryn 2011:79–80).

Smaller Families and Increased Wealth

In most parts of Asia, family size is decreasing. De Castro and de Guzman (2010:49) indicated that in the Philippines the amount of shadow education was inversely correlated with family size, i.e., that children with fewer siblings received more tutoring than children with more siblings. In a related vein, Table 10 presents findings from a survey of 40,883 parents that investigated reasons for the “heating up” of *juku* attendance in Japan. More than one-third (38.6%) of parents indicated that the increasing number of one-child families was a factor. Parents concentrate their resources on the only child and may feel that, with only one child, they cannot afford to make errors. Dang and Rogers (2009) found that decreasing family size was also a factor in increasing demand for tutoring in Viet Nam. Their observation was echoed by Liu (2012:47) with reference to Taipei, China.

Kohli et al. (2011:36) pointed out that the middle class in both the PRC and India is “about to take off” (see also Yuan et al. 2011). The size of families in the PRC has been restricted by regulation, while the size of families in India

Table 10 Factors that Contributed to “Heating up” of *Juku* Attendance, Japan (Parents’ Response Rates)

Factor	%
Insecurity only sending children to school to study	66.5
A society that places emphasis on academic credentials	59.9
Increases in educational investment per child due to the decreasing birth rate	38.6
Diversification of services in the private education sector	14.5

Source: Japan (2008) cited in Dawson (2010:17).

has fallen as the middle class has expanded. At the end of the first decade of the 21st century, India still had a tiny middle class by global standards; but, reported Kohli et al. (p.36), “if the economy continues its growth, 70% of the population will be middle class within 15 years.” When it becomes so, household resources will combine with aspirations for a smaller number of children and anxiety about ways to stay ahead in a global economy. This could offer all the ingredients for a dramatic expansion of shadow education.

Diversity of Supply

Private tutoring is supplied by a diverse range of providers, from neighbors, older students, and family members to classroom teachers, global franchises, and web-based firms. Due partly to its low barriers to entry, the private tutoring industry has emerged as a major provider of employment. In the Republic of Korea, the number of private tutors expanded roughly 7.1% annually on average from 2001 to 2006, and by 2009 the sector was the largest employer of graduates from the humanities and social sciences (Kim and Park 2012).

In many countries, the pattern of classroom teachers supplementing their incomes by tutoring students after school hours is more a necessity than a choice—at least as perceived by the teachers themselves—since teachers’ salaries hover close to the poverty line. This has been observed in Cambodia (Dawson 2009:64), Georgia (EPPM 2011:27), Kazakhstan (Kalikova and Rakhimzhanova 2009:112), Lao PDR (Benveniste et al. 2008:105), and Tajikistan (Kodirov and Amonov 2009:159). In Sri Lanka, the monthly wage of a graduate government teacher in 2007 ranged from 12,000 to 15,000 rupees (US\$108–135), but a teacher could earn up to 1,100 rupees an hour from tutoring. One teacher observed, “What I get a month from my government job can be earned in 3 or 4 days of tuition”

(Samath 2007). The need to take on outside work reduces the time available for student mentoring, lesson planning, and professional development activities.

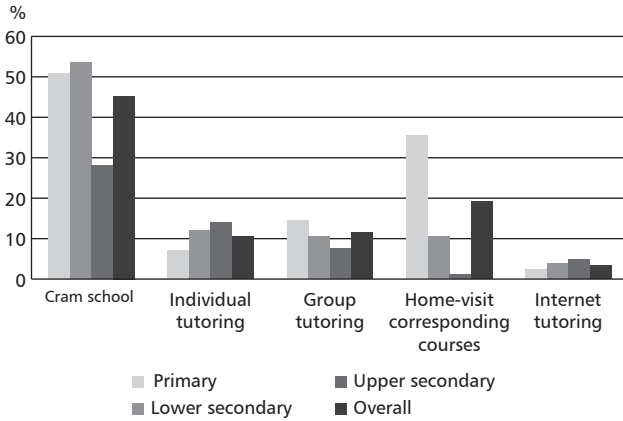
Concerning commercial approaches, the franchise model of tutoring has taken hold in several countries. Kumon, for example, which describes itself as “the world’s largest after-school math and reading enrichment program” (Kumon 2012), is headquartered in Japan and operates in 46 countries including the PRC, India, Indonesia, Republic of Korea, Malaysia, Philippines, Singapore, Sri Lanka, Thailand, and Viet Nam. Kip McGrath, which is headquartered in Australia, had franchises in 20 countries in 2012 including Indonesia and Singapore (Kip McGrath 2012).

Other companies may be mainly domestic in focus but still operate as chain stores with multiple locations. In Hong Kong, China, from 2005/06 to 2009/10, the number of such chain outlets grew from 38 to 106 (Modern Education Group 2011:93). These outlets claimed 54% of total secondary tutoring capacity, with over half of this capacity provided by six companies, one of which became publicly listed on the Hong Kong Stock Exchange in 2011. In India, Everonn is listed on the Bombay Stock Exchange, and in 2011 served eight million students through 10,100 learning centers (Everonn 2012). In the PRC, Xueda, established in 2004, became a listed company on the New York Stock Exchange in 2010. In 2011, the company operated 273 learning centers, which employed 11,300 teachers in 28 of the PRC’s 34 provinces and municipalities (Xueda 2012).

Some of these companies run schools and other enterprises in addition to providing private tutoring. For example, Beacon College in Hong Kong, China provides tutoring mainly for secondary students but also runs a full-time institution. In India, Educomp operates 800 preschools and 56 primary and secondary schools in addition to providing tutoring in academic subjects and training in information technology.

Figure 2 portrays the different types of shadow education in the Republic of Korea, indicating variations at the primary, lower secondary, and upper secondary levels. Teachers in this country are prohibited from tutoring their own students, and commercial operations dominate. Overall, nearly half of Korean students attended cram schools focused mainly on rote learning and preparation for examinations, 10% received individual tutoring, 12% received group tutoring, 19% took correspondence courses, and 4% studied by internet (Byun 2011:6–7). One celebrity tutor, Woo Hyeong-cheol, reportedly earned US\$3.9 million per year on average as a mathematics tutor offering web-based classes to 50,000 paying students; and Rose Lee, “The Queen of English,” reported an income averaging US\$6.8 million per year based on earnings through online classes (Herskovitz and Kim 2009).

Figure 2 Different Forms of Shadow Education in the Republic of Korea, 2010



Source: Korea National Statistical Office, cited in Byun (2011:26).

To some extent, supply is not just a response to demand—supply creates demand. As more providers emerge and more students enroll, it can become increasingly difficult to keep up with the examination tips and tricks learned by one's classmates. Students who would not have otherwise sought tutoring may now do so in order not to be at a competitive disadvantage. In the PRC, Republic of Korea, and Thailand, companies stoke student and parent anxiety through aggressive advertising in newspapers and on buses and billboards. Similar pressures exist when smaller operations offer their services and when teachers provide extra tutoring for their students.

Impact of Shadow Education

Shadow education has many types of impact. The most obvious, with which this chapter commences, is in academic achievement. In addition, shadow education may shape broader skills and the values of both recipients and wider societies. It may have an impact on the efficiency of education systems; and it has considerable implications for inequalities and perhaps also for social cohesion. Each of these dimensions is considered in turn.

Academic Achievement

Many people assume that shadow education delivers positive results in academic achievement, reasoning that otherwise families would not invest in it. However, that assumption may not always be sound. Much depends on both the quality of the tutoring and the abilities and motivation of the learners. Some tutors have excellent skills but work with students who are unmotivated or not academically capable. By corollary, some students are motivated and capable, but their tutors lack content knowledge and pedagogical skills. Families may continue to invest in tutoring even when learning gains are elusive. When students do not make progress, tutors commonly blame the students rather than themselves, and families may accept this diagnosis and continue to invest. Alternatively, students may continue to seek tutoring chiefly because most of their classmates seem to be doing so.

Research on this theme encounters difficulties arising from the many types of tutoring and the wide range of overlapping variables that also shape learning achievement. Nevertheless, some studies are available and can usefully be summarized. First is a pair of studies in Bangladesh: Nath (2008:65), using data from a 1998 national survey, indicated that 49.6% of pupils aged 11–12 who had received private tutoring met the benchmark criteria of having a basic education, while only 27.5% of students without tutoring met the benchmark; and Hamid et al. (2009:293), reporting on a survey of 228 grade 10 students in eight rural schools, found that students who had received private lessons had double the chance of attaining higher grades than their counterparts who had not received private lessons. However, these studies showed correlations rather than causations. Thus, it was not clear that students achieved at higher levels *because of*

the tutoring. Rather, they may have been self-selected high achievers who would have done well anyway.

With this consideration in mind, the study of mathematics achievement of 10,013 grade 9 students in Taipei, China by Kuan (2011) seems more useful. Kuan accessed a pair of data sets that allowed him to control for students' socioeconomic status, ability, and attitude. He found that students who had received tutoring were on average more studious, higher achieving, and from higher social classes. As one might expect, Kuan found that gains were greater among students who were motivated, but in both groups the gains were small (p.362). Yet a major weakness of Kuan's study was that all types of tutoring, i.e., both one-on-one and large classes, were merged into a single variable. His data were also limited to a single semester of grade 9, preventing inferences concerning long-term effects or effects for other grade levels (p.353). Further, his paper made no distinctions among levels of intensity of tutoring.

A related study by Liu (2012) used part of the same database in Taipei, China. Liu analyzed a sample of 13,978 grade 7 students, and did include data on the number of hours of tutoring per week. After controlling for other variables, Liu found significant positive effects of tutoring on analytical ability and mathematics performance, but noted that the positive effects decreased when tutoring hours were lengthened. Again, however, Liu lacked information on the impact of different types of tutoring.

Other data are available from the Republic of Korea: Sohn et al. (2010: 26–27) summarized 11 studies using a number of variables. Among six studies that examined relationships between expenditures and academic performance, five showed positive correlations. However, in at least one case, the relationship disappeared once controls were added for student background. The collection of studies also showed variations in different subjects and in different grades. Sohn et al. then reported on their own study, which included data on the duration of tutoring for each student. They did find a positive correlation, though cautioned that all types of tutoring had been aggregated.

A similar study was conducted by Byun (2011) in the Republic of Korea. Byun used propensity score matching to compare the effect of tutoring on academic achievement in mathematics for a nationally representative sample of lower secondary students. He found that cram schooling, which focuses primarily on test preparation, made a small difference in achievement gains. However, other forms of tutoring (such as one-to-one, internet, and correspondence) made little difference. To some extent, this echoed the findings of Kang (2009), who also found positive but small effects from investment in tutoring as measured by the experience of 1,752 students tracked by a Korean Education and Employment

Panel longitudinal study. Nevertheless, Byun recognized (p.21) that his study focused only on the quantities of the different types of tutoring received and had no measures of quality.

Other studies on this theme include the following:

- *PRC.* Zhang (2011) examined the relationship between private tutoring and performance in the High School Entrance Examination in 25 schools in Jinan, Shandong Province. She found a positive correlation between tutoring and achievement for low-performing urban students but a negative correlation for rural students who were not at the top.
- *Georgia.* The National Examinations Centre examined the impact of private tutoring on the scores in the ability test of the national examinations. During control testing in 2008, grade 12 students who took the standardized ability test were asked whether they were receiving (Group I), would receive (Group II), or would not receive (Group III) private tutoring classes in the ability domain. The same students were identified after the main testing during the 2009 national examinations. The researchers found that Group III showed more progress in main testing than Groups II and I. This suggested an insignificant correlation between private tutoring and progress in achievement score in the ability test (Bakhutashvili 2011). The findings could be explained by the nature of the domain assessed by the ability test, which required many years of training in different subjects, depended on diverse life experiences, and could not be improved in a short period of time.
- *India.* Aslam and Atherton (2011) analyzed data from the 2007/08 SchoolTells survey in Uttar Pradesh and Bihar. The survey focused on 4,000 students in grades 2 and 4 in 160 rural primary schools. Children who had received tutoring achieved gains in both mathematics and reading, with gains being greater in government than in private schools.
- *Japan.* OECD (2011a:129) noted a positive correlation between test scores and expenditures on after-school lessons as indicated by the 2009 PISA assessment. The share of correct answers rose by 25 percentage points as spending increased from below 2,000 yen per month to 9,000–10,000 yen.
- *Malaysia.* Tan (2011) asked 1,600 year 7 students in eight schools in Selangor and Kuala Lumpur about their tutoring experiences during their primary school years and correlated their responses with

academic achievement. The study indicated (p.80) that tutoring in the 3 years prior to grade 6 had a positive impact, but that earlier tutoring was associated with poorer results.

- *Nepal.* Examining correlations between receipt of tutoring and scores of 22,500 students on the grade 10 School Leaving Certificate examination, Thapa (2011:111) found that students in public schools who had received tutoring had higher scores by 1.74 percentage points. However, no significant difference was found for students in private schools.
- *Pakistan.* Data from the Annual Status of Education Report (ASER-Pakistan 2011), which surveyed children of primary school age in 19,006 rural households, were analyzed by Aslam and Atherton (2011). Both poor and rich children were shown to benefit from private tutoring. Findings were especially marked in reading scores, but less dramatic in mathematics.
- *Singapore.* Cheo and Quah (2005) investigated the learning achievements of 429 grade 8 “express” students in three premier secondary schools. They found that, although private tutoring can have a positive influence on the subject in which that tutoring is received, time taken away from other subjects may lead to a decline in overall academic performance. They concluded (pp.280–281) that the conventional wisdom of “the more the better” in terms of tutoring does not match reality, and that diminishing returns set in rapidly when “over-investment in the child” takes place.
- *Sri Lanka.* At the end of senior secondary education, students commonly abandon their schools in order to focus on cramming for examinations in tutoring centers. Gunasekara (2009) examined some implications of this phenomenon, and remarked (p.56) that “private tuition contributes more to the achievement of creditable success in examinations than school education,” and consequently that confidence in school education had been eroded.
- *Viet Nam.* Dang (2007) analyzed 1997/98 national household survey data. He found positive correlations between tutoring and achievement but noted (p.696) that “the impact is much stronger at the lower secondary level compared to the primary level, except for the poor performance category.” Ha and Harpham (2005:631) analyzed data from 1,000 eight-year-old children randomly selected from 4,716 households in 2002. They found that, after controlling for region, household wealth, ethnicity, and other factors, receipt of extra

classes was not significantly associated with writing and numeracy, but that children who had received extra classes were more than twice as likely to read correctly than children who had not had extra classes. A related study by Le and Baulch (2011) focusing on children aged 8 and 15 did not find significant correlations between tutoring and achievement.

In summary, the research literature shows mixed findings on the impact of private tutoring on academic achievement. Much depends on the grade levels and on the specific national and local circumstances. The large numerical data sets allow for statistical modeling, though they do not always permit inferences of the implications of different types and durations of provision. Tutoring delivered by teachers in large classes to the children for whom they are already responsible, and perhaps even in the same classrooms, is clearly different from one-on-one tutoring delivered by highly paid professionals in specially equipped learning centers. Further variations arise with the large classes taught by “star” tutors, and with internet tutoring; and the experiences of lower primary students may be very different from those of upper secondary ones.

Whatever the research evidence, however, most families believe that tutoring does make a difference—and that even when learning gains are disappointing, the solutions may be either to try harder with the existing tutors or to seek a different tutor. For many families, the question is not so much whether they should purchase tutoring, but how to purchase tutoring that best fits the learning needs and temperaments of their children (Box 6). Certainly there is enough evidence to indicate that tutoring *can* make a significant difference in learning achievement, even if it does not always do so.

Broader Skills and Values

Education, of course, is about more than just academic achievement. It includes physical development through sports; aesthetic development through music and arts; and social development through relationships with peers and other members of society at local, national, and even global levels.

The definition of shadow education adopted in this study excludes the non-academic domains, though a growing industry provides tutoring in sports, music, and even interpersonal relationships. The nature and implications of this industry deserve a separate study, especially given the evolving nature of university admissions, in which examination scores form just one component of

Box 6 Finding the Right Tutor in Singapore

The difficulties that parents face in judging quality may be exemplified by patterns in Singapore. The first problem is lack of information. Parents have to rely on word of mouth or advertising when choosing providers for their children.

But the choice can be an expensive gamble. Secondary 3 student Tan Sing Wai, for instance, says he has experienced the “ineffectiveness” of private tuition. During his last 2 years at primary school, he received mathematics tutoring in a neighborhood mall. The center, which has half a dozen outlets in Singapore, had advertised impressive scores for around 20 of its students on posters prominently displayed in the mall.

“The ads made my mum think they were really good,” says Sing Wai. Yet for 2 years, his marks stubbornly refused to budge beyond the B grade he had when he first started. His teacher was a fresh graduate passing time tutoring students while looking for a full-time job. All the while, the S\$200 (US\$150) bills his parents received each month for the tutoring steadily mounted. “By the time we realized the tuition was not helping, the PSLE [Primary School Leaving Examination] was around the corner and I just could not leave,” he says.

Understandably, Sing Wai is keen to see tutoring centers publicize improvement rates for all their students, in addition to the achievements of the individual top scorers. The teenager now attends another center, and in less than a year his mathematics grades have shot up from B3 to A1.

Source: Basu (2010).

the overall application. Meanwhile, though, it may be observed that the expansion of academic supplementary tutoring is commonly at the expense of these other domains. One commentator in Hong Kong, China (Liu 2010) has expressed the view that:

In the past, the aim of education was to impart knowledge to students so that they could develop their talents and their own unique personalities. It was hoped they would grow up to be morally upstanding, responsible and respectful. Yet the goals seem to have changed, and now it is about getting good exam results while ignoring whole person development. I think this change is due to the growing trend of tutorial classes.... They have successfully turned education into a commodity. Society now appears to equate success with good results. Students seek the skills to do well in exams rather than engage in the genuine pursuit of knowledge.

Especially at the level of senior secondary education, students commonly drop sports, music, and arts altogether, and have little time for focused attention to interpersonal matters. Public concern in Sri Lanka, which has echoes elsewhere, has also focused on the neglect of spiritual domains. As a result, in 2010 some provincial authorities in Sri Lanka prohibited private tutoring of children between the ages of 5 and 16 between 8:00 am and 2:00 pm on Sundays and on the monthly Buddhist days of religious observance known as Poya Days (Jayamanne 2010).

More positively, private tutoring can help to develop children's self-esteem and sense of achievement. Slow learners may be enabled to keep up with their peers, and fast learners can stretch their learning further. Certain types of tutoring may provide a more rounded education; and tutoring may promote study habits that stress the importance of learning and self-discipline. Japan's *juku* have been part of a social fabric that has stressed diligence and learning, and in turn has been a major ingredient in the country's economic success (Dierkes 2011). Similar remarks might be made about tutorial institutions in the Republic of Korea (*The Economist* 2011), and perhaps Singapore and Taipei, China.

On the other side are concerns in some countries about corruption. One report in Viet Nam (Vu et al. 2011:20) noted that teachers who provide extra private classes for the school pupils for whom they are already responsible commonly disclose examination questions in advance during those classes. The report pointed out (p.20) that private extra classes "clearly corrupt the fair and true appraisal of students' performance." In the PRC, teachers are prohibited from providing private tutoring for their existing pupils, but instead commonly engage in systems of referrals through which one teacher sends students to a colleague in exchange for that teacher sending students in return. The students may know that this happens, and thus learn at an early stage in life from their teachers—who are perhaps second only to their parents in acting as powerful role models—about connections and bending of rules (Zhang 2012).

Other parts of Asia have stronger ethical standards, and such types of corruption are rarely witnessed in Hong Kong, China; Japan; Republic of Korea; and Singapore. However, even in these societies parents and others worry about some of the values promoted by tutoring. For example, in Hong Kong, China, one way through which the "star" tutors attract clients is by using vocabulary in the classroom that appeals to teenagers but that would not be considered appropriate in schools. The star tutors also have very flashy lifestyles. Hong Kong's major English-language newspaper, the *South China Morning Post* (2010:A10) pointed out that the tutors "boast about their millionaire status, and perpetuate a youth culture that prides high exam scores over genuine knowledge." The newspaper added:

Unfortunately, many youngsters look up to them as role models, or at least admire their earning power. What should clearly be unacceptable has become an accepted or even necessary part of schooling in Hong Kong.

Such sentiments are echoed in Bangkok, Colombo, Taipei City, and other parts of the region where the phenomenon of “star tutors” has taken hold.

Efficiencies and Inefficiencies

A fundamental principle for many people, especially economists, is that resources should be used with maximum efficiency to achieve designated goals. The question then arising is whether the expansion of shadow education promotes or diminishes efficiency in the use of resources.

In general, it must be admitted, mainstream school systems are themselves somewhat inefficient machines for achieving their goals. School systems are often shaped more by historical circumstances, economic conditions, and social norms than by deliberate planning. These norms dictate, for example, that periods of activity should be divided into terms and vacations, that individual subjects should be separated from each other, and that children should commence schooling around the age of six (though increasingly earlier with preschooling) and progress through a set of grades on a yearly basis. Over the decades and centuries, many policymakers have sought to change various components of these models (Rich 1975, Bishop 1989, Delors 1996, Hershock et al. 2007). They have had some success, though in general school systems have demonstrated strong resilience (Psacharopoulos 1989, Benavot et al. 2006).

At first sight, it might be assumed that private tutoring would be more efficient than public schooling. Operating in a marketplace, tutors run businesses that would seem to demand careful use of resources and that serve clients who presumably want value for money. If the managers do not attend to these matters, then their businesses are likely to close down. Some large tutoring companies even have research departments to identify cost-effective approaches to teaching and learning through computer software and other means. Smaller companies cannot undertake such research, but they must still heed the efficiency of operation; and even self-employed tutors working on an individual basis have to budget their time and other inputs carefully.

However, even if internal efficiency in a business sense may be assumed, wider efficiency might be less easily demonstrated. The first problem, as

indicated above, is that it cannot be assumed that private tutoring always results in learning gains. Much depends on the motivation, attitudes, and learning styles of the learners as well as on the motivation, attitudes, and teaching styles of the tutors. The empirical evidence does not indicate a consistent, positive correlation between time spent on tutoring and increased academic achievement. For several reasons, the absence of a consistent correlation does not always reduce demand for tutoring. First, few clients have investigated the empirical evidence and therefore have to operate on the basis of assumptions and advertisements rather than clear evidence; second, clients are pressed to achieve higher grades and believe that success is possible; and third, tutoring establishments, like schools, may be adept at taking credit for academic success while avoiding accountability for academic failure. In this respect, many educational institutions continue to operate despite unsatisfactory performance from a simple input-output perspective.

The second issue, as noted, is that shadow education tends to focus on narrow domains of achievement. While some individual tutors and tutoring centers may stress study skills and well-rounded development, cram schools in Japan; Republic of Korea; Taipei, China; and elsewhere focus mainly on examination skills (Roesgaard 2006, Kim and Chang 2010, Liu 2012). Table 11 reports the views of a sample of 44 elementary teachers of mathematics in Taipei City. While 82% of the teachers felt that cram schools assisted students with mathematics computational skills, and 70% felt that cram schools assisted with homework completion, 52% felt that cram schools had a negative impact on children's understanding of mathematical concepts. As explained by one teacher (Huang 2004:296):

Some children [who] attended cram schools pre-learned the lessons, giving them a false impression about their mathematical competence; thus they tended to be less attentive or were frequently distracted. Consequently they were unable to perform well in class eventually.

Huang further explained (pp.296–297):

Cram schools place emphasis on “short-cut” and “effectiveness,” and focus solely on producing the correct answers to problems rather than exploring the systematic structure of mathematical concepts. Children frequently fail to solve problems that look novel to them. They just learn to mechanically apply a formula when solving problems through drill and practice. Such rote practice may enhance their homework performance or term tests that cover only content retention, but may weaken their meaningful construction of mathematical knowledge.

Table 11 Teachers' Views of the Influence of Cram Schools on Children's Mathematics Learning, Taipei, China (%)

Learning Outcome	Positive Influence	Negative Influence	No Influence	No Comments
Computational Skills	82	7	2	9
Mathematics Homework Completion	70	5	–	25
Understanding Mathematical Concepts	16	52	9	23
Self-Confidence in Mathematics Learning	64	4	7	25

Source: Huang (2004: 295).

Many teachers in Taipei, China and elsewhere also lament the fact that the pressures on children from cram schooling take them away from wider forms of personal and social development—i.e., that even if gains are achieved in one domain, they may contribute to losses in other domains.

Nevertheless, Table 11 does indicate some positive views in all categories. Among these positive dimensions (Huang 2004:297–298) are that:

Teachers benefit from homework supervision provided by cram schools. This can save time in checking assignments and help to keep them on schedule. Furthermore some low-achieving children can catch up with other students through extra programs in cram schools. This tends to narrow the gap of individual differences among students with mixed achievement levels, thus enabling a smoother teaching schedule.

In a rather different setting, complementarities between the mainstream and the shadow were also noted by Nazeer (2006) in a qualitative study of the learning styles of nine students in the Maldives. All the students received tutoring, and Nazeer noted that teachers in schools generally used direct explanation methods, while tutors in tutorial centers gave students opportunities to discuss concepts. When Nazeer asked students what happened when they did not understand something during lessons at school, five of the students indicated that they sought help from their tutors rather than their teachers. Their comments (p.159) included:

- Almost all students in my class go to private tuition. So if we don't understand something in the school we ask our tutor at night.

- I tell Miss [the classroom teacher] if I don't understand anything but not in the class. I go to the staff room sometimes during the interval or after school. If I can't find Miss then I ask my tuition teacher in the evening.

In such instances, it can be argued that the tutoring complements the schooling by increasing the overall effectiveness of learning. The teachers asserted that they had no time for individual attention during 35-minute periods and during the crowded school day, and no doubt would have argued that the overall efficiency of the system was increased through the complementary nature of roles. However, the existence of private tutoring to some extent permitted the teachers to abdicate from domains that were arguably part of their responsibility within the normal school day, and required an overall increase in time for teaching and learning, which is not the hallmark of an efficiently operating education system.

Moreover, in some settings inefficiencies are expanded further when students pay more attention to tutors for whom they or their parents are directly paying money than to school teachers, who seem to be free of charge and who may be taken for granted. This is part of the hidden curriculum of tutoring, which can lead to an undervaluing of school systems. Furthermore, students who work long hours at tutoring centers may be short of energy for daytime schooling. Kim (2007:7–8) chronicled the daily lives of a number of young people in the Republic of Korea. Several of them attended tutoring centers until late each evening. The only way to secure energy for their evening classes was to sleep during lessons at school.

From the perspective of inefficiencies, even more problematic may be circumstances in which regular teachers also provide private tutoring. Such teachers may be tired, and may reserve their energies for the private classes after school. Particular problems may arise when the teachers tutor their existing students. In some societies, both teachers and parents might argue in favor of such arrangements on the ground that teachers already know the pupils and the curricular domains that the pupils have and have not covered. As expressed by one teacher in Brunei Darussalam, for example (Waleed 2009):

We, as teachers, cannot simply put a limit to how much we can teach.... This is especially so when we, as teachers, are approached by the parents themselves, asking us to contribute our spare time and energy to help improve their children, our own students.

In other settings, however, teachers may not be fully professional and dedicated. In Nepal, Jayachandran (2008:2) observed that:

...teachers sometimes refrain from teaching some of the curriculum during school in order to generate demand for their fee-generating tutoring classes. Teachers say, in not so many words or sometimes even explicitly, “You need to know X, Y, and Z to pass the exam. We’ll cover X and Y in class. If you want to learn Z, come to tutoring.

With reference to Cambodia, Dawson (2009) described such practices as among the “the tricks of the teacher.” In such cases, the shadow education system leads to inefficiencies in the school system. This is not only a matter of teachers operating in less than optimal ways; it is also a matter of the children’s time being used inefficiently. In such circumstances, children may be deprived of other constructive opportunities to use their time, including for leisure and rest.

While in some countries students who are receiving much tutoring are tired and therefore sleep in school classrooms, in other countries they may stop going to school altogether. With reference to Azerbaijan, Silova and Kazimzade (2006:128) reported that:

...numerous interviews with school directors, teachers, and students reveal that school nonattendance increases shortly before the end of the school year (especially in the last grade of secondary school), when students begin skipping classes to attend private tutoring lessons during school hours. Some students pay bribes to their teachers or school administrators to be excused from school and instead attend private tutoring lessons. Many interviewed teachers and education officials reported instances of empty classes in secondary schools, when students would leave schools en mass to attend private tutoring lessons instead.

Similar observations have been made about senior secondary education in Armenia (UNDP 2007:45), Georgia (Matiashvili and Kutateladze 2006:206), and Sri Lanka (Gunasekara 2009:85; Suraweera 2011:22). Box 7 indicates with reference to India that the phenomenon may also appear at the primary level—in this case with negative consequences for the children’s learning.

Finally, the shadow education system may undermine the mainstream school system by removing talent. For example, in Hong Kong, China, some

Box 7 More Tutoring, Less Learning

Bhattacharjea et al. (2011) tracked the learning of 30,000 children in rural government primary schools in five Indian states. They collected data not only on school achievement but also on related variables including tutoring, and they visited the schools three times over the year of the research.

The researchers noted (p.71) that 15.9% of grade 2 children and 18.1% of grade 4 children had received private tutoring. However, there was a strong negative relationship between tutoring and attendance at school. Children in both grades were far less likely to have been found present in school on all three visits. A possible explanation was that parents expected their children to learn more in paid classes than in school, and therefore insisted less on regular school attendance.

However, such parental assumptions appeared to have been misplaced. Grade 2 students who had received tutoring did perform slightly better on the baseline test, but exactly the same on the endline test as their classmates who had not received tutoring. And in grade 4, students receiving private tutoring performed *worse* on average than their counterparts who did not, on both baseline and endline tests, presumably because they attended school less often.

of the excellent tutors are former school teachers who have chosen to leave the schools in search of greater incomes and possibly greater autonomy. Other tutors have never been school teachers but perhaps would have been had the avenue of tutoring not been available. Thus, from the perspective of the education sector as a whole, it is far from certain that the operation of a shadow system is an efficient use of the overall resources of society.

Inequalities and Social Cohesion

A recurrent theme of this study is that shadow education maintains and exacerbates social inequalities. It is self-evident that more prosperous families are able to purchase greater quantities and better qualities of supplementary tutoring than can less prosperous families. Diversification within the industry has made forms of tutoring available at lower cost, e.g., through large classes provided by companies and delivered by star tutors. However, some families cannot afford even the less expensive forms of tutoring or cannot access them because they live in remote locations.

These patterns may be viewed in the context of official policies on fee-free education that are espoused in several international conventions and in the

constitutions of such countries as Azerbaijan, Cambodia, Georgia, Japan, and Pakistan. Almost all Asian governments were signatories to the 1989 Convention on the Rights of the Child, which indicated (United Nations High Commissioner for Human Rights 1989: Article 28) that the signatory states would

- make primary education compulsory and available free to all; and
- encourage the development of different forms of secondary education, ... make them available and accessible to every child, and take appropriate measures such as the introduction of free education and offering financial assistance in case of need.

Likewise the declaration of the World Education Forum (WEF 2000:43), endorsed by 164 governments including the majority of those in Asia, contains the objective of “ensuring that by 2015 all children ... have access to and complete, free and compulsory primary education of good quality.”

It might be argued that shadow education is not covered by such statements because it exists in the private sector rather than the public sector. However, families in contexts as diverse as Armenia, India, Japan, Sri Lanka, and Viet Nam (UNDP 2007:50; Dang 2008:82; Sen 2009:13; OECD 2011a:111; Pallegedara 2011:16) have increasingly felt that supplementary tutoring has become essential. A study by Chugh (2011) of school dropouts in the slums of Delhi, India, found that 25.9% of respondents expressed inability to bear the costs of private tutoring (p.23):

In the opinion of parents as well as students, attending school without simultaneously availing [of] private tuition does not yield any positive results.... [When] students felt their family could not afford private tuition, they simply withdrew from school.

This remark applied to students at the secondary level, but in other locations would also apply to students at the primary level. In effect, private tutoring has become a factor excluding students from access even to officially fee-free public education.

In turn, these observations may be linked to matters of social cohesion. The remarks above about the correlations between tutoring and academic achievement raise doubts about the effectiveness of some forms of tutoring; but the research evidence is mixed, and in any case even the evidence that is relatively clear is not widely understood. From the perspective of social cohesion, therefore, perceptions of inequalities in access are more important than realities of inequalities measured by the extent to which the services purchased actually do lead to improved learning outcomes.

In some societies, perceptions of social inequalities have led to major unrest, which has had economic as well as political consequences. The decades of civil war in Sri Lanka may come immediately to mind, as might various incidents in the PRC, India, Tajikistan, and many other locations.

Beginning with Sri Lanka, Pallegedara's (2011) review of household expenditure data showed that Sinhalese students, who comprise 70% of the total population, were much more likely to invest in private tutoring than Tamil students, who comprise 20%. Beginning with the 1995/96 data, Pallegedara reported that only 16.7% of Tamil households spent money on private tutoring compared with 24.3% of Sinhalese households. By 2006/07 the proportions in both groups had greatly increased and the gaps had reduced, but differences remained (Table 12). Comparable figures were reported by Gunasekara (2009:86). Referring to his sample of grade 13 students, Gunasekara indicated that 100% of students in Sinhala-medium schools received private tutoring, while only 67% of students in Tamil-medium schools did so.

Table 12 Proportions of Households with Positive Expenditures on Tutoring, Sri Lanka (%)

School Year	Ethnicity			Location		
	Sinhala	Tamil	Other	Rural	Urban	Estate
1995/96	24.3	16.7	25.0	19.2	40.5	14.8
2006/07	64.8	59.4	63.5	64.4	62.9	58.2

Source: Pallegedara (2011:24).

A related picture has been presented for Viet Nam by Dang (2008). Viet Nam has many minorities in contrast to the more bifurcated pattern in Sri Lanka, and no doubt patterns vary considerably among the minorities. Nevertheless, Table 13 shows wide disparities between the majority Kinh and the minorities as a group. The gap is greatest at the primary level and is much reduced at the upper secondary level. However, the reduction in disparities in upper secondary may simply indicate that many minority students have dropped out before that stage rather than reflecting greater equality in the education system.

In contrast to Sri Lanka and Viet Nam, where the ethnic majorities receive more tutoring than the minorities, in Malaysia higher rates of tutoring are received by minorities. This has already been indicated by the expenditure data in Table 5. Complementing those statistics, Jelani and Tan (2012) found that students of Chinese ethnicity in Penang formed 38% of the population but

Table 13 Proportions of Students Receiving Private Tutoring, Viet Nam, 1997/98 (%)

Level	Ethnicity		Location		
	Majority	Minority	Rural	Urban	All Viet Nam
Primary	37.0	7.1	27.4	54.7	31.1
Lower Secondary	60.7	19.0	50.6	76.1	55.9
Upper Secondary	78.0	55.9	73.7	82.3	76.7

Source: Dang (2008:91).

46% of students in their sample, and that Malays formed 51% of the population but only 44% of their sample. Similarly, Tan (2011:105) found that in his sample of schools in Kuala Lumpur and Selangor, 65.8% of Chinese students in grades 1–3 had received tutoring compared with 45.6% of Indian students and 28.4% of Malay students.

In addition to the data on ethnicity, Tables 12 and 13 present data on the locations of students receiving tutoring. The categories for Sri Lanka are rural, urban, and estate. The estate sector, referring mainly to regions in which tea, rubber, and coconut are grown, embraced about 5% of the population and was characterized mainly by particularly low incomes. For Viet Nam, the table simply presents the categories of rural and urban. Although in both countries major differences exist within rural and urban locations, the main point, which is echoed in most other countries, is that rural families are likely to receive less tutoring, both because their incomes are lower and because they do not have access to the types of tutoring offered in urban areas.

Considering the challenges for social cohesion that arise from private tutoring, Heyneman (2011) added the dimensions of corruption that are associated with the sector in many countries. This can be at the local level, when teachers themselves offer private lessons and exert undue pressure on students to take those lessons (Bray 2003, Dong et al. 2006, Dawson 2009), or it may be at a system level, when large companies claim to have inside knowledge of examination systems, make questionable statements in advertisements, and/or exert pressure on governments to waive regulations (Dhall 2011a). Such practices raise resentment among groups that feel disadvantaged by the practices.

Implications for Policy Makers

This study has indicated that shadow education is already very prominent in some parts of Asia, and is growing fast in others. Even in the regions where shadow education has a significant history, it is changing in size and shape. In the past, many policy makers chose to ignore the phenomenon. In contemporary times, few policy makers can afford to do so. In many countries the shadow education system is already too large to be ignored; and in others it is small but growing. Perhaps, indeed, the latter situations are ones for which policy attention is particularly urgent, because the authorities have opportunities to steer the shadow education system before it assumes too many undesirable features and encourages vested interests, which later become obstacles to reform.

For all policy makers, a starting point should be the data. Very few countries have good data on this topic, and much better information of both a quantitative and qualitative nature is desirable. This can assist policy makers elsewhere in the region as well as their counterparts in the countries in which the information is collected.

A second domain demanding particular attention concerns systems of assessment and selection. Insofar as examinations at different levels are major drivers of the scale and shape of shadow education, reform of those systems of assessment and selection is likely to impact the form and role of private tutoring.

Allied to assessment and selection are other components of curricula. Some policy makers have achieved fundamental curriculum reforms that have had significant consequences for private tutoring. However, reforms sometimes have unexpected consequences. Again, policy makers can learn from experiences in which well-intended reforms have led to expansion rather than contraction of shadow education.

A further domain deserving particular focus is technology. Recent technological advances, such as adaptive on-line software, may reach learners with a wider range of needs and in diverse locations. As always, the claims of enthusiasts need to be evaluated carefully, but indeed the technological advances are likely to bring some radical shifts in both mainstream schools and the shadow education sector.

Moving beyond technical matters, the question turns to management and particularly to regulations. A summary of existing regulations on such matters as

the licensing of tutors and tutorial centers, and the permissibility of mainstream teachers collecting fees for private tutoring of their existing students, shows diversity. Perhaps even greater diversity arises in the extent to which regulations are implemented and are successful in achieving their objectives.

Finally, it is important to consider partnerships. Governments cannot effectively tackle these issues alone. The major categories of partnership include mainstream schools, civil society, teachers' unions, and the tutoring industry itself. In some countries, associations of tutoring providers have emerged that engage in self-regulation and are keen to work with governments for broader social welfare.

Securing Data and Monitoring Trends

Much of what has been presented in this study has been gathered by individuals and small teams of researchers working on limited budgets. Many of these researchers gathered basic information on the scale, scope, and intensity of tutoring. Some of the studies have small samples, so are illustrative but not statistically robust. Stronger data on basic indicators may be more effectively and economically coordinated at the national level.

The market for shadow education cuts across sectors. As an emerging industry and important source of employment, it falls under the responsibility of ministries of commerce and related bodies. In many countries, government agencies in charge of monitoring both education and the economy routinely conduct a number of surveys, each with many items vying for space in the list of questions. These surveys can be modified to include data on private tutoring without adding significantly to their length. The following paragraphs outline strategies for gathering basic indicators on the production, consumption, and effectiveness of private tutoring.

Indicators on the production of private tutoring can be gathered by amending questions on population census forms. For instance, most censuses ask respondents to indicate their main occupation. These forms could include a category for "private tutor." This would not add to the length of the survey, but would provide a way to assess growth in the supply of private tutoring over time. Since censuses are nationwide and representative, policy makers could get a better idea of what kinds of people are providing private tutoring. This might include their educational levels, household incomes, and rural or urban place of residence.

Indicators on the consumption of tutoring can be compiled by including a category for private tutoring in national surveys of household expenditures. Some governments already do this by listing private tutoring as a subcategory under educational expenses. Household surveys that do not track private tutoring are missing an important opportunity. Household expenditure surveys can be used to examine the links between tutoring and household incomes, ethnicities, linguistic groups, and other sources of social stratification. The data can also be used to monitor the relationships between public and private expenditures on education.

Indicators on the effectiveness of private tutoring can be gathered by adding an item about private tutoring to tests of educational achievement. For instance, students sitting for college entrance examinations can be asked whether they have received tutoring in the previous year for any of the subjects for which they are being tested. The precise phrasing of such questions is very important. For example, they must distinguish between fee-free tutoring, offered perhaps by family members, and fee-based tutoring. They should also differentiate between types of tutoring, such as face-to-face or via the internet, individual or group, and so forth.

The importance of this information may justify the additional demand placed on students to provide such details. In most Asian countries, examinations are the primary mechanism for determining academic achievement and admission into higher levels of education. If certain groups are being systematically disadvantaged in the admissions process because they cannot afford private tutoring, the legitimacy of these examinations as indicators of ability may be called into question.

These solutions can be implemented by every country covered in this report. They cost relatively little to do while providing a wealth of useful data. Some authorities may wish to go further. Governments that intend to implement policies that may have an effect on private tutoring—such as providing vouchers for low-income students, increasing teacher pay, or reforming examinations—may want to conduct studies designed to provide more relevant and timely information. In all cases, it is better to have such information *before* choosing a policy direction. For instance, some governments have hoped that salary increases for teachers might curb the practice of teachers giving fee-based tutoring to their own students. Surveys and interviews of teachers given *before* implementing such policies may help determine whether salary increases would be effective, and if so, whether there is a certain threshold that would need to be met.

In addition, governments can benefit from the work of academics and students. Many such studies are driven by the incentive structures in

universities and by individual career paths, but governments can provide their own incentives through research grants and commissioned studies. Research on shadow education encounters methodological challenges arising from the facts that much of it is informal or semiformal and that tutors may not wish to expose their incomes and pedagogical practices to external scrutiny (Bray 2010). Nevertheless, as the volume of research on shadow education expands, many of the methodological challenges are being resolved. Policy makers thus have increasing access to robust studies with both quantitative and qualitative orientations. And even if the specific research base in individual districts, provinces, and countries is not yet robust, much can be learned from studies in other locations that produce informative findings.

Reforming Assessment and Selection Systems

Insofar as much supplementary tutoring is driven by systems of assessment and selection, changes in the nature of those systems will lead to changes in the tutoring. All education systems have major watershed assessments at the end of secondary schooling, and some also have them at earlier stages. Some governments have decided that assessments at the end of primary schooling do not need to be of the high-stakes type, particularly if their countries have universal junior secondary education. These governments hope that when they reduce the high-stakes nature of assessment, they can also reduce the pressures for private tutoring.

In this connection, experiences in the Republic of Korea are particularly noteworthy. Among the most dramatic educational reforms in Korean history was the replacement of grade 6 examinations by a random lottery as part of a middle-school equalization policy introduced in Seoul in 1969, in other major cities in 1970, and in the rest of the country in 1971 (Kim and Lee 2001:8). The reform aimed to permit the normal development of children by reducing stress, to prevent elementary schools from focusing excessively on preparation for the middle school examination, to discourage private tutoring, to narrow the gaps between different middle schools, and to reduce the financial and psychological burden on households.

The reform had some success, at least in the short term. However, schools found that they had greater variations in learning levels among their intakes; and abolition of the middle school examination and expansion of enrollments meant that the watershed was simply transferred to the next level. Ambitious families

who were dissatisfied with the mixed-ability classes of middle schools invested in private tutoring to prepare for the high school entrance examination.

The next step, therefore, was the High School Equalization Policy, launched in Seoul and Pusan in 1974 and gradually expanded to several major cities. By 2003, 72% of students in the country were subject to the policy (Kim 2004:10). Like the middle-school policy, this initiative abolished entrance examinations and introduced random school assignment. Again it had some effect, at least in the short run (Lee et al. 2010:100), but again the policy moved the competition up to a higher level; and the college entrance examinations still had a backwash on the middle schools and primary schools.

The year 1980 brought a military government, which was determined to tackle the issue. In that year, an estimated 12.9% of elementary school pupils, 15.3% of middle school pupils, and 26.2% of high school pupils were receiving private tutoring (Kim 2007:1). The government transferred control of the college entrance examinations from individual institutions to a new state-controlled body operating the College Entrance Achievement Test (CEAT). In the most radical measure to date, the authorities prohibited both extra high school classes and private tutoring in academic subjects. Again, however, the prohibition proved very difficult to enforce and as a result was gradually relaxed. Parents continued to seek tutoring, and the prohibition was challenged in the courts. In 2000, the prohibition was declared unconstitutional and abandoned.

Another measure during the 1980s was the introduction of special purpose high schools (SPHSs). These institutions were a response to criticisms of mediocrity in the mainstream high schools to which students were allocated by lottery. The SPHSs served gifted students and focused on science, foreign languages, athletics, or other domains. By 2007, the SPHSs served 4.2% of all secondary pupils (Kim 2007:3); and of course the fierce competition for entry had a backwash on private tutoring.

A further reform of the college entry system was introduced in 1994. The CEAT had been an achievement test based on specific subject matter rather than an academic aptitude test based on more general knowledge. The new College Scholastic Ability Test (CSAT) was designed to measure whether applicants had the general academic aptitudes required for higher education, and aimed to encourage high-level thinking rather than fragmented short-term memorization. Kim (2004:13) states that the CSAT did improve some of the teaching and learning methods in high schools, and that teachers and students realized that cramming fragmented information into instruction was no longer a viable method of study. However, Kim added (p.13):

the CSAT encourages a different kind of memorization because it is made up of multiple-choice questions that offer five answer options. Consequently, students are intent on learning test-taking skills that will ensure their ability to solve these multiple-choice questions in a limited amount of time. One of the best tactics to do so is to memorize the CSAT question types and solution methods. To learn these tactics and test-taking skills, many students take courses at private tutoring institutions and/or hire their own personal private tutors.

During the 2000s, tutoring expanded to heights that considerably exceeded those in the 1970s, when the initial measures to dampen demand were introduced. The Korean experience thus illustrates bold efforts that ultimately seem not to have had much effect.

Yet policy makers should not conclude from this analysis that all is hopeless and that they might as well give up. Moving to a different region, it is useful to note Silova's (2009b) analysis of patterns in 12 countries of Eastern/Central Europe and Central/Northern Asia. Silova observed (p.89) that "the scale of private tutoring is the lowest in countries that do not have high-stakes examinations, where public satisfaction with mainstream education is reportedly high, and where teachers are paid comparatively well." These characteristics were present in Bosnia and Herzegovina, Croatia, and Slovakia, which were the three countries with the lowest amounts of private tutoring according to the surveys on which Silova reported. At the other end of the scale, Azerbaijan, Georgia, Kazakhstan, Kyrgyz Republic, and Lithuania were countries with high-stakes secondary school examinations and large amounts of private tutoring. Tutoring was also extensive in Mongolia and Ukraine, which did not have high-stakes examinations; but in those countries public satisfaction and teachers' salaries were low and thus provided alternative explanations.

Similar remarks have been made in Malaysia by Jelani and Tan (2012), who found that 49.4% of the households responding to their survey reported "preparation for national examination" to be the strongest reason for seeking private tutoring. The researchers remarked (p.13) that

A greater focus on knowledge acquisition via fun and creative learning would relieve students from being too exam-oriented. Recent announcements by the Malaysian educational authorities to revamp two national examinations, the Lower Secondary Assessment to a school-based assessment examination beginning in 2016 and

streamlining the syllabus of the Primary School Evaluation Test, augurs well in reducing the anxiety of Malaysian school children.

Nevertheless, such matters are not always straightforward. On a technical level, even sophisticated systems encounter difficulties in benchmarking school-based assessments so that they can be seen to be comparable across schools. And systems that are already threatened by corruption are likely to be even more exposed if significant decision-making power is placed in the hands of teachers without adequate systems for monitoring and for enforcement of accountability. When the Cambodian government eliminated the grade 6 examination, teachers introduced their own examinations and, in Dawson's words (2010:17), "carried on business as usual" without the quality-control measures that the common examination had provided.

Changing the Curriculum

Assessment and selection mechanisms are of course related to curricula. In addition, some other dimensions of curricula may be considered. Several accounts of unintended consequences from curriculum reform may sound warnings to policy makers; but positive experiences may also be noted.

The first example of unintended consequences is from West Bengal, which is among the Indian states with the highest rates of private tutoring (India 2010:A-276; Pratham 2012:235). Two government policies that have unintentionally stimulated these high rates are related to languages and homework.

In 1983, the government of West Bengal abolished the teaching of English at the primary level in public schools, narrowing the curriculum to the other subjects then taught. The move sought to make primary education more accessible to rural and poor children, who had low enrollment and high drop-out rates. Roy's (2010) evaluation found a positive and significant effect on educational attainment, particularly among children from poor families. However, Roy also found large increases in expenditure on private tutoring. Families who could afford it wished their children still to have English language skills, and sought them through the private sector, since they were no longer taught in schools. In 1999, the government reintroduced English in grade 3, and in 2004 reintroduced it in grade 1. However, by that time the supply of tutoring had greatly expanded, and most households had become used to consuming it.

The second policy assigned home tasks to primary students in order to extend the scope and impact of schooling (Sen 2010:318). Yet many parents were

unable to help their children with these home tasks. Even in schools with good teaching and with children who could complete their studies without help, many parents insisted on tutoring on the grounds that “the child would do even better.” And illiterate parents felt that tutoring was unavoidable, since they could not themselves help their children with the tasks. Many teachers also considered tutoring essential, especially for the “first-generation learners.” A report of the Pratiche Education Trust added (Rana 2009:23) that the term “first-generation learner” had done more harm than good:

It might have been coined with good intentions but its fallout has been quite different. “Home task” and the inability of the non-literate parents to help their children became so intertwined that it gave teachers an argument that such children could not acquire quality education at school. They needed extra support. In other words, first generation learners needed tuition.

Instructively, the demands of homework may also be felt in high-income and well-educated societies. Tan (2009:97) reported that many parents in Singapore feel disempowered by the numerous curriculum revisions that “have made the school tests and examinations incomprehensible.” Private tutors offer to come to the rescue.

Another example of unintended consequences from curriculum reform has been in Georgia. The National Curriculum changed many times between 2005 and 2011. One change was the introduction of integrated classes in science subjects: in the basic and secondary school, students would take chemistry during the first term, biology in the second term, and physics in the third term. Soon after introducing the new initiative several problems arose related to the learning and teaching of science subjects, and in 2009 the Ministry of Education and Science abolished the scheme. In 2011, when the Ministry introduced school leaving examinations in eight school subjects including chemistry, biology, and physics, students affected by the curriculum reform felt very challenged. The majority sought private tutoring classes in science subjects in order to pass a threshold and get a school diploma. A 2011 study found that 40% of respondents named inconsistency between school curricula and the demands of the examinations as one of the main reasons for receiving private tutoring (EPPM 2011:28).

A further policy initiative with unintended consequences was initiated in Hong Kong, China. Curriculum developers were highly critical of what they perceived to be excessive dependence on rote memorization and formulaic thinking in schooling, some of which was promoted by the tutoring industry. In 2009, liberal studies became a mandatory subject for all senior secondary

school students, with the first public examination in the subject to be held in 2012. Liberal studies was designed to help students develop critical thinking about complex issues through the exploration of broad, interdisciplinary areas, such as “self and personal development” and “science, technology, and the environment.” Yet, rather than being greeted as a welcome humanization of the curriculum, liberal studies was met with great anxiety. The education system had long trained students to produce clear and definitive answers to narrow questions. Unsurprisingly, the tutoring industry, which thrives on parent and student anxiety, responded by offering courses in liberal studies that proved very popular (Chan 2011, Yeung 2011). Many of the tutors promised clear procedures and formulae for constructing answers to the public examinations, even detailing how many credits students could expect to earn for each argumentative point they made.

A final example of unintended consequences from curriculum reform may be taken from Cambodia, where the Ministry of Education, Youth and Sport has encouraged teachers to rely less on lectures and to use more “child-friendly” pedagogies (Cambodia and UNICEF 2005, Cambodia 2010). With a double-shift school day that lasts only 4 hours, teachers have complained that the time-consuming child-friendly techniques make it impossible for them to cover the full curriculum (Dawson 2010:20). This has created additional justification for teachers to offer extra private lessons for whatever is not covered during the school day.

More positively, it is useful to note the After School Program (ASP) in the Republic of Korea. This initiative was launched in 2004 to alleviate household expenditures on private tutoring and to reduce social inequalities (Bae et al. 2010, Lee 2011). By 2010, every school offered the program, and student participation rates were 43.1% at the elementary level, 50.0% in middle schools, and 79.0% in high schools (KNSO 2011:9). The program was financed mostly by the government, though there were small fees in order to promote “buy-in” in a literal sense. In addition to the overall subsidies, the government provided 390,000 vouchers for needy students in 2010, worth 140 billion won (US\$14.8 million) and constituting an increase of 40,000 beneficiaries compared with 2009 (Jang 2011:37). ASP curricula were determined at the school level, and instructors were recruited either from within the education system or from outside. In the elementary schools, about two-thirds of the courses in 2010 were extracurricular, while one-third were in academic subjects. This balance shifted in the middle schools, with respective proportions being 17.4% and 82.6%; and in high schools the proportion shifted further still to 7.9% and 92.1% (Jang 2011:38).

Evaluations of the ASP have indicated positive outcomes. Bae et al. (2009) observed that it particularly served girls, rural students, and low-income families. It was a significant factor in the reduced overall expenditures on shadow education in 2010 compared with 2009 (Figure 1; KNSO 2011). Jang (2011) analyzed the participation rates of a cohort of grade 9 students who had joined the program in 2004 and completed the CSAT in 2007, controlling for family background, school location and a number of other variables. Like Bae et al. (2009), she concluded that the ASP had succeeded in particularly serving students in rural areas and from lower-income groups, and in this respect had reduced disparities. In addition, she found that students who participated in the ASP gained an increase of 0.23 of a grade in the CSAT compared with students who did not participate in the ASP; and ASP participation reduced average household shadow education expenditures by 20.9% compared with what it would otherwise have been.

Harnessing Technology

The government of the Republic of Korea has harnessed technology in two major initiatives to address the issues of tutoring (Song and Kim 2009): the Educational Broadcasting System (EBS) and the Cyber Home Learning System (CHLS).

The EBS was established in 1990, and gained a reputation for its high-quality radio and television programs. In 2004, the government started broadcasting lessons for high school students preparing for the CSAT examination. One major objective was to provide an alternative to private tutoring. The lessons were presented by teachers and other professionals, including some famous tutors. In this respect, the government brought the famous tutors from the private space to the public space. Among the indicators of uptake are sales of supporting EBS textbooks. In 2010, 20.8% of students purchased books, with females purchasing in slightly great proportions than males (22.9% compared with 18.9%). Purchases of books were fairly modest at the elementary level, viz., 7.2% of students; but in general high schools 54.8% of students purchased books (KNSO 2011:10). Evaluations of the EBS have shown that it has been particularly effective in serving rural areas.

A parallel initiative, also launched in 2004, was the CHLS, which also aimed to reduce the need for fee-paying tutoring. Within 5 years it provided a personalized learning environment for 1.6 million students, who were supported by 6,147 cyber-teachers and 2,692 parent-tutors. An evaluation reported by Kim (2009), based on a survey of 55,272 students, 3,842 teachers, and 12,783 parents, presented positive findings. One third of the students indicated that their interest

in the subject content had grown considerably, and 25.3% indicated that they had developed self-directed learning habits. Many of these were academically weak students who had relatively little home financial support for their studies. At the same time, the evaluators concluded that many students had been saved the expense of investing in private tutoring and therefore that overall tutoring expenditures had been reduced by the initiative.

In other parts of Asia, on-line platforms with comparable objectives have been developed by the private sector. Among the largest is Mathguru in India (www.mathguru.com). It provides age-appropriate instructional videos for each module, and includes on-line exercises that increase in difficulty as students progress. These platforms can record student activity, which is a key both to improving the quality of the service and to monitoring student progress.

Also significant is the nonprofit Khan Academy (www.khanacademy.org), based in the US and managed by a team of committed individuals with generous philanthropic support. With a library of more than 2,700 videos in 2011, the Khan Academy provides basic introductions to a diverse range of fields, such as Singapore Math, biology, art history, finance, and teacher education. Students are encouraged through a number of game-like mechanics, which take the place of traditional grades. By December 2011, the Khan Academy had delivered over 82 million lessons. The company offers sophisticated tracking software, allowing parents, teachers, or administrators to track which concepts students have mastered. The developers also use these data to refine the algorithms used to determine which problems individual students should attempt next. The website also has a variety of ways in which students can interact with social networking tools and seek coaching from people. One can also foresee arrangements in which students help each other through various on-line forums.

While on-line tutoring may not serve as a replacement for face-to-face, individualized instruction for every child, it may indeed displace other forms of fee-based tutoring, especially those that have minimal interaction between tutor and student. Though on-line tutoring may not provide a perfect learning experience, it may make an imperfect learning experience more accessible. Nevertheless, on-line tutoring is still in its infancy. Much progress remains to be made in finding the best ways to target individual students at their current levels of proficiency and to offer the support needed to reach the next stage. Such progress, moreover, may be better driven by private entrepreneurs than by civil servants, especially since few countries can match the combination of financial and professional resources found in the Republic of Korea. Governments that wish to encourage development of on-line tutoring platforms might be better advised to offer incentive funds to seed a number of competing teams

rather than to try to undertake the work themselves. Governments could state the criteria that the platforms would have to meet, such as being linked with classrooms and teachers, and covering certain curricular subjects. As such, governments could still have some control over the developments through a form of public-private partnership.

Devising and Implementing Regulations

Historically, school systems throughout the world have evolved from very little government regulation to extensive regulation. Society generally considers this important

- to protect the students and their families from various forms of abuse, and
- to steer the managers of institutions in desirable directions for the public good.

Even private schools are commonly governed by regulations on minimum qualifications for teachers, physical facilities, and core elements of curriculum; and in some jurisdictions the operators of private schools must heed regulations on class size, admissions procedures, and financial management.

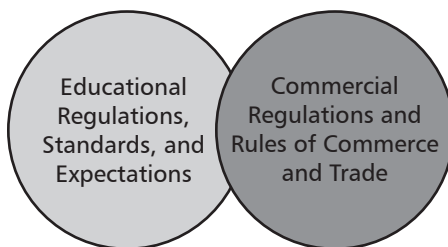
Two decades ago, few jurisdictions in Asia or anywhere else had significant regulations on private tutoring. Some government regulations did mention private tutoring, but in most such documents the relevant sections were restricted to one or two clauses that were added on to detailed requirements about schooling. These clauses were not the result of careful analysis and consultation, and were rarely given much attention either by government officers or by private tutors.

The contemporary era has brought some shift in these patterns, chiefly because the shadow education sector has greatly expanded and has come more strongly to the awareness of governments and society in general. However, the regulatory framework for the shadow education sector remains very loose in most countries. It has yet to “catch up” with the regulatory framework for regular schooling.

Content of Regulations

A comparative survey shows a range of balances between regulations derived from educational and commercial considerations. Dhall (2011a:1) has depicted the situation as in Figure 3. In the jurisdictions that he investigated, the regulations

Figure 3 **Overlap of Commercial and Educational Law in Regulation of Private Tutoring**



Source: Dhall (2011a:1).

on tutoring were more strongly influenced by the commercial and trade sector than by education. Thus, they were dominated by such matters as transparency in financial transactions, contractual relationships, and management of premises to ensure that fire escapes existed and were accessible. They paid less attention to pedagogy, class size, content of curriculum, and teachers' qualifications. However, Dhall added that, although commercial law dominated, educational law and expectations shaped commercial behaviors.

The Appendix to this publication elaborates, with a summary of regulations in a range of countries. Most authorities require tutorial centers to register their existence, but they are less emphatic about registration of tutors who operate as individuals. Some governments have regulations against teachers providing paid tutoring for their existing pupils in regular schools, but many governments are silent on the matter. In Sri Lanka, some provincial authorities have prohibited tutoring at particular times on certain days of the week, and in the Republic of Korea tutoring centers have been forbidden to operate after 10:00 pm (Kim and Chang 2010:4; Box 8). The authorities in Hong Kong, China set a maximum class size, and their counterparts in Viet Nam prohibit tutoring for children who are in full-day (as opposed to half-day) schools.

Another domain of regulation in some jurisdictions concerns advertising. Some jurisdictions have consumer complaints councils, which receive grievances from members of the public, and again these are operated within commercial rather than educational law. Dhall's (2011a:12) remarks about Australia may have wider relevance. He noted several domains in which tutoring advertisements have caused concern, including the following:

Box 8 Limiting the Duration of Shadow Education in the Republic of Korea

On a wet Wednesday evening in Seoul, six government employees gather at the office to prepare for a late-night patrol. The mission is as simple as it is counter-intuitive: to find children who are studying after 10 p.m. And stop them.

Thus began an article by Ripley (2011:41) on the measures adopted by the Korean government in 2009 to limit the hours spent by children in supplementary tutorial centers (*hagwons*). Ripley explained (p.42) that the crackdown was “part of a larger quest to tame the country’s culture of educational masochism.” She added that the problem was not so much that Korean children were not learning enough or working hard enough, but rather that they were not working smart:

When I visited some schools, I saw classrooms in which a third of the students slept while the teacher continued lecturing, seemingly unfazed. Gift stores sell special pillows that fit over your forearm to make desktop napping more comfortable. This way, goes the backward logic, you can sleep in class – and stay up late studying.

The government is endeavoring to treat the core of the problem by changing cultures. Ripley remarked (p.42) that if it gets its reforms right, it could be a model for other societies. But the authorities have tried many measures over the decades, and deep-rooted cultures are not easily changed.

- *Use of statistics.* Claims such as “95% of our students” get into particular schools or universities, or “98% improvement guaranteed in 6 weeks” are extremely difficult to verify or even to understand.
- *Use and publication of student results in external examinations.* The tutor or company publishes students’ names, photographs, and marks, claiming implied ownership. Sometimes this is done without the knowledge or consent of the students and their families; and in any case, the claims cannot be verified by the general public.
- *Tutors’ claims of experience with government, examination boards, or other authorities.* This may include ambiguous names like “Institute,” “Higher Education,” and other official-sounding titles with a coat of arms intended to look like a government-approved authority.
- *Tutors’ qualifications and skills.* Claims such as “fully qualified” sound reassuring but do not explain anything about skills or actual credentials.

Moreover, some tutoring centers even use the regulations to their own advantage. In Hong Kong, China, it is not uncommon for tutorial centers to place prominent notices in their advertising and on the premises that they are “registered with the Education Bureau” with the implication that the government has somehow approved the content of their operations rather than just recording their existence and compliance with building regulations, etc. Similar problems have been noted in Singapore (Basu 2010:D3).

One domain that does not appear in the set of regulations reported in the Appendix but that does appear in other parts of the world reflects concerns about the danger of child abuse when adults work with children on a one-on-one basis in either the tutors’ or the children’s homes. For example, in Queensland, Australia, people working with young children need to hold a Blue Card, which is issued by a specialist body that first conducts criminal history checks (Druett 2010). Similar regulations are applicable in parts of Europe (Bray 2011:58). This is a domain that some Asian governments might consider.

Enforcement of Regulations

Even when regulations exist, they are not always enforced. In some cases this is because the governments have other priorities, but in other cases it is because the regulations have not been designed well. Also, some types of private tutoring are much more difficult to regulate than others. Commercial establishments with fixed premises serving clients in the neighborhood are relatively easy to regulate, because both the operators and the clients are visible and operate openly. Tutors working on a one-on-one basis in their own homes or in the students’ homes are more difficult to regulate, since contractual arrangements are commonly informal, and payments are often made in cash and perhaps without receipts.

Tutoring over the internet may be even more difficult to regulate, particularly if the providers and clients are in different countries. When international operations are concerned, governments in the country of the provider may have different expectations from governments in the country of the client—and neither government is likely to find enforcement of regulations easy. Dhall (2011a:11) noted that some companies using the internet allow only text-based conversations, which are recorded so that a parent can at any time ask for a transcript of all sessions between tutor and student. Other companies use Skype and other voice-based media, and may be more lax in their approach. Such on-line tutoring does not entail the dangers of physical abuse of children that may arise when tutoring is conducted in the premises of the tutor or pupil,

but dangers still arise of emotional abuse through inappropriate behavior by tutors.

Governments wishing to regulate the tutoring sector should work from their own side to make processes user friendly. With reference to Kazakhstan and Tajikistan, Silova (2010:337) noted that individuals wishing to offer private tutoring should register as private entrepreneurs, obtain licenses, and pay taxes on income from tutoring. However, she added, the procedures “are rather complex and do not justify related costs,” especially because most tutoring is irregular and seasonal. In any case, in both countries enforcement of regulations “has been stalled by the major rift between the legislative vision and school realities” (p.339). The legislation allows supplementary tutoring but without sufficient attention to mechanisms for the legal delivery of payments. For example, regulations stipulate that parents or guardians whose children receive extra tutoring from teachers in their schools should transfer payments to the bank accounts of those schools. Yet few public schools in Kazakhstan and no public schools in Tajikistan have their own bank accounts. Further, Silova added (p.340), the tutors have very little incentive to register. The authorities did not offer taxation allowances, and tutors in Tajikistan have to pay tax on all earnings, even if those earnings are entirely spent on reimbursement of costs.

Other jurisdictions have greater sensitivity to the respective viewpoints of the authorities and the tutoring providers. Governments recognize that their demands create costs, since the tutoring providers have to keep good records and devote time to completing forms. The authorities may therefore make allowance for such demands when calculating tax requirements. They may also provide guidance on how to secure compliance with building regulations and other demands, and they can offer some forms of protection against unjustified consumer complaints. Such protection may be especially valued by tutors who see themselves as educators rather than entrepreneurs. As noted by Dhall (2011a:13): “Nothing in teacher training courses prepares teachers for commercial complaints of the nature found in business.”

As in any domain, however, governments must be prepared for tutoring providers to seek loopholes that subvert the spirit even if not the letter of regulations. In Hong Kong, China, star tutors have found ways to circumvent the stipulation of maximum class size of 45 students by constructing lecture theaters with glass partitions. The star tutor teaches in one segment, and the parallel segments are served by video screens with attendants who serve as dummy teachers. Students can look through the glass partitions to see the live performance or, more conveniently, look at the video screen in that segment of the lecture theater.

Finding Partners

Governments cannot achieve everything by themselves. As in so many other domains, effective steering of the shadow education system can be greatly facilitated by various kinds of partnership.

A starting point for partnership is likely to be the school system itself. Insofar as the shadow system exists only because the school system exists, it is natural for governments to partner with schools for regulating and shaping the shadow. Schools can devise codes of conduct for the behavior of their own teachers, whether or not those teachers are also tutors. An increasing number of governments also devise codes of conduct at the national level. Most of these codes refer only to school teachers and their standard duties, but they can be enlarged to include tutors and tutoring. The Vietnamese code states that teachers should “not organize extra teaching and learning that violates the regulations” (Viet Nam 2008: Article 6) and identifies schools, universities, and teacher training institutions as partners for disseminating and encouraging adherence to the code.

Community bodies may also be important partners. Shadow education exists only because parents and students feel a need for it. Community bodies can help monitor the work of tutors and call attention to abuses. More positively, community bodies may collaborate with governments to encourage certain types of tutoring for children who need it. Among the bodies with which the Singapore government collaborates are the Council on Education for Malay/Muslim Children (Mendaki) and the Singapore Indian Development Association (SINDA). This collaboration began in the 1980s, when the government was concerned about racial imbalances in educational achievement, and particularly the poor performance of ethnic Malays compared with Chinese (Tan 2009). The authorities provided financial support to enable Mendaki and SINDA to provide tutoring and to train tutors, who worked voluntarily or for low fees. Tutorial schemes set up by these bodies have remained vigorous (Yayasan Mendaki 2010: 9; SINDA 2011:12).

Other partners may be within the tutoring industry itself. In some countries, associations of tutors have been formed for self-regulation. Examples are the Japan Juku Association (www.jja.or.jp), the [People’s Republic of] China Education Training Union (www.cetu.net.cn), and the Great Taichung Supplementary Education Association (www.tcschool.org.tw) in Taipei, China. Outside the region, bodies such as the National Tutoring Association (www.natututor.com) in the US and the Australian Tutoring Association (www.ata.edu).

au) provide further models that might be encouraged. These bodies exist chiefly to protect their own interests; but collaboration with governments to show that tutoring is a respectable occupation with high standards could indeed be seen as a worthwhile goal.

Learning from the Shadow

Rather than just reacting defensively to the expansion of shadow education, policy makers should ask why it exists in the first place and what they can usefully learn from it. As noted in the first chapter of this study, just as the shadow cast by a sundial can tell observers about the time of day, so the shadow of an education system can tell observers about features of mainstream education systems. Some types of shadow education indicate shortcomings in mainstream school systems that policy makers may be able to remedy. Other types of shadow education are shaped by wider socioeconomic forces that may be beyond the control of policy makers but that should at least be understood.

The questions that policy makers may ask themselves include the following:

- What does the shadow system offer to parents and students that the regular schools do not offer, and how can regular schools expand and improve their services?
- How do tutoring companies attract clients, and should schools also be more client-oriented?
- How do tutoring companies attract staff, in some cases even from regular schools, and what implications does this have for mainstream education systems?
- When teachers and governments claim that effective teaching and learning cannot take place in classes of 40 or more, how is it that at least some families and students are willing to pay for huge lecture-style classes of star tutors in such cities as Bangkok, Colombo, and Hong Kong, China?
- When education authorities insist that teachers must have training to enter classrooms, how is it that many families and students are willing to pay for the services of untrained tutors, some of whom are themselves only university students or even secondary students?
- Why are at least some tutoring companies much more clearly at the cutting edge of technology and curriculum development for effective learning and teaching than schools, even in well-resourced education systems?

- What are the implications for fee-free education policies of the fact that many parents across the region are clearly able and willing to pay for shadow education?
- To what extent could mainstream schools provide the same sort of flexibility in timing and content of teaching and learning that is provided in the shadow?
- What do tutors emphasize in their advertising, and what does that tell about parents' state of mind and reasons for hiring tutors?
- Should policy makers actively seek to manage perceptions of mainstream schools?

Such questions may be useful prods to improvement in mainstream schooling—and thus avenues for public education systems to serve the public more efficiently and effectively.

This study has also shown the value of comparative analysis. Policy makers should not only compare the nature of shadow education and regular education in their own jurisdictions but should also look across boundaries to consider the factors underlying similarities and differences among countries. Sometimes it is useful to take pairs of countries, such as Japan and Republic of Korea, Bangladesh, and India, Malaysia and Singapore, or Kazakhstan and Kyrgyz Republic. In addition, policy makers can look across the region as a whole to see the mosaic of patterns; and indeed they can look beyond the region to identify similarities and differences with other regions of the world. Space here does not permit detailed comparison of world regions, but it is worth noting that Europe, like Asia, contains both former socialist countries and long-standing capitalist countries. It also has some societies in which shadow education is very extensive next to other societies in which it is modest in scale (Bray 2011). Africa also has conditions that resemble parts of Asia, with a diversity of economic circumstances and some parallel colonial legacies that have shaped forms of shadow education (Bray and Suso 2008). And North America has examples of franchised companies, innovative use of technologies, and diverse forms of public-private partnership (Davies and Aurini 2004, Burch 2009).

Conclusions

Shadow education has a long history in parts of Asia. Box 2 at the beginning of this study noted an official comment on the phenomenon in Ceylon (now Sri Lanka) in 1943. In the Republic of Korea, the decades of active government concern and action have been even more prominent. However, in most parts of the region private tutoring has been ignored by policy makers. Even in Japan, where *juku* have long been known to play a major role in the lives of young people, the authorities have historically preferred a *laissez-faire* stance.

Shadow education can no longer be ignored. The chief reason is that it has grown significantly throughout the region and shows every sign of further growth. While some dimensions of this growth might be welcomed as ways to extend the provision of education and build human capital, shadow education brings threats to government goals of social equality. Shadow education is much less about remedial help for students to keep up with their peers, and much more about competition and creation of differentials. It may also contribute to inefficiencies in education systems, and even to elements of corruption.

Driving Forces

In remarks about the demand for tutoring, this study has highlighted the roles of selection mechanisms at transition points in education systems, cultural factors, parental perceptions of qualitative shortcomings in regular schools, and the combination of increased wealth and smaller families. These determinants of demand have operated within a context of overall expansion of education systems. The goals of Education for All were endorsed by the global community in Jomtien, Thailand, in 1990 and reaffirmed in Dakar, Senegal, in 2000 (World Conference on Education for All 1990, World Education Forum 2000); and universal primary education is one of the Millennium Development Goals adopted by the United Nations (2000). As countries have progressed toward, and achieved, universal primary education, they have experienced pressure to expand lower secondary education. And as they have achieved expansion of lower secondary education, they have experienced pressure to expand upper secondary education and higher education. Thus, enrollment rates at all levels have greatly risen in Asia during

the last two decades. With expansion of the mainstream has come expansion of the shadow.

Another broad trend has been the increased acceptability of marketization in the education sector. Many countries have socialist legacies, whether as part of the former Soviet Union or as independent nations such as the PRC, Lao PDR, Mongolia, and Viet Nam. Before the 1990s, in these countries the operation of free markets in any sector—and perhaps especially in education—was very limited. Economic and political reforms have permitted and encouraged the delivery of education through private channels alongside public ones. Marketization has also become increasingly evident in such countries as Bangladesh, Malaysia, and Singapore, which have always had capitalist systems but in which education has been seen mostly as primarily a government responsibility. Thus the expansion of shadow education reflects wider changes in the role of the state.

The expansion of shadow education may also be linked to the forces of globalization and increasing competition. Families have always invested in education in order to maintain or advance their social and economic positions (Box 9). But whereas in earlier decades social and economic positioning was mainly in the context of local and national conditions, now it is shaped by the forces of globalization, which are accompanied by mobility of capital and of labor. Education is widely seen as a core instrument to “win” in the competitive

Box 9 Shadow Education as a Positional Good

Educational qualifications may be valued by individuals as a positional good. The chief determinant of whether people consider themselves to have secured enough qualifications is whether the amount is adequate relative to the amounts held by peers and competitors. In former eras a senior secondary qualification distinguished an individual from the crowd; later it had to be a university degree; and now in many societies it needs to be a postgraduate degree (Hollis 1982).

To explain how shadow education may be viewed as a positional good, it is useful to consider a sports stadium. When all spectators in a sports stadium are sitting down, then everybody can see the game easily. But if a row of people at the front stand up, then the people behind them also have to stand up if they still want to see the game. And when that happens, the people behind them have to stand up, too. Eventually almost everybody is standing up. The only exceptions are the ones who cannot stand up – and for them the consequence is that they can only hear and not see the game. Likewise, when private tutoring is received by one group, other groups feel that they must follow until almost everybody is receiving it – and those who do not are disadvantaged.

environment; and, by corollary, lack of education is widely seen as a factor that limits career and other opportunities.

Diversity in Patterns

Within this broad picture, different emphases must be recognized in different locations. In almost all countries, urban areas are better served than rural areas; and in some countries the shadow system has penetrated more deeply than others. Around Asia it is useful to note three separate groups of countries:

- *East Asia* has the longest history of prominent shadow education, but is exhibiting further growth of the shadow, particularly in the PRC.
- *South Asia* has common features arising from British colonial legacies, cultural traits, and economic structures. Incomes are relatively low, though growing dynamically in some areas, for instance, parts of India. Parts of *Southeast Asia* (such as Cambodia) may also be grouped with South Asia, while other parts (such as Singapore) may be grouped with East Asia.
- The countries of *Northern, Central, and Western Asia* are still addressing the legacies of the former Soviet Union and the abrupt arrival of the market economy in the 1990s. This led to great expansion of the shadow education sector, which cannot now easily be forced to contract.

Of course within these subregions is further diversity. For example, the features of shadow education in Japan are different from those in the Republic of Korea; and the features in Malaysia are different from those in Singapore. Also, within countries different amounts of shadow education may be consumed by girls compared with boys, and by different ethnic and racial groups.

Organizational diversity is also evident in the providers and curricula of shadow education. In Cambodia, most tutoring is provided by teachers, whereas in Hong Kong, China, it is provided by individuals, small companies, or large companies. In Mongolia, most tutoring is labor intensive, while entrepreneurs in Japan make use of computers and other forms of technology. Whereas most shadow education follows the teaching of the school system, some precedes it with lessons in advance. And while the dominant content of tutoring closely mimics school curricula, some content goes beyond it and seeks ways to complement and expand on what the school system offers.

Likewise, considerable diversity exists in the forms, intensities, and seasons of tutoring. The forms include one-on-one instruction, small group work, large classes, huge lecture theaters, and internet tutoring. The intensities may range from just 1 or 2 hours a semester to 10 or more hours per week. Concerning seasons, tutoring may be received only in the period just before major examinations, especially towards the end of senior secondary schooling; or it may be received throughout a child's school career, commencing in grade 1 (or even before). All these factors require policy makers to assess local circumstances as well as broad international patterns.

Inequalities and Inefficiencies

It is self-evident that more prosperous families are able to purchase greater quantities and better qualities of supplementary tutoring than can low-income families. The expansion of shadow education thus has major implications for social stratification. It undermines the official statements about fee-free education and creates threats to social cohesion.

In some settings it may be argued that tutoring operates as a safety valve that allows elites to maintain certain advantages in the face of government policies that otherwise promote equality. With reference to Japan, for example, Harnisch observed two decades ago (1994:330) that *juku* “close a sensitive gap in the ... education system between the teaching at public schools and the demands of the entrance exams”; and Dawson (2010:17) has made a similar point with reference to the ways that *juku* may permit families to navigate their way in the face of official egalitarian rhetoric. Yet resentment of social inequalities perpetuated through shadow education could be a serious threat to social cohesion in many parts of the region. Bari (2012) highlighted the challenge with reference to Pakistan, which he described as “a very unequal, fragmented and almost bitterly divided society” in which the differential access to private tutoring “is only exacerbating the situation.” Other commentators would echo this observation in multiple contexts. As noted by Ali and Zhuang (2007:4–5):

...increases in the absolute gaps between the rich and poor and very visible changes in the consumption patterns and lifestyles of the rich are leading to a perceptible increase in social and political tensions, undermining social cohesiveness.... Persistent and growing inequalities in access to social services such as education and health, exacerbated by income inequalities, are ... a significant concern.

The emphasis on “inclusive growth” by the Asian Development Bank (2010) recognizes the importance of including equity in economic agendas; and writers such as Wilkinson and Pickett (2010) have argued that “equality is better for everyone.”

Concerning inefficiencies, Calero et al. (2011:17) remarked that many families “overinvest in certain kinds of private tutoring because of a lack of information about the actual benefits of such investment.” Regular schooling is difficult to evaluate, especially by parents, who have neither the tools nor the data to make such evaluations. Supplementary tutoring may be even more difficult to evaluate, because much of it is semiformal. In addition, tutoring companies in many countries deliberately misrepresent the effectiveness of their work in order to attract clients.

Other inefficiencies arise from the interactions of the shadow and the mainstream. Teachers may reduce their efforts if they feel that compensatory provision for pupils is available in the private sector; and teachers who are also tutors may choose to reserve their energies for their private work rather than their public work. In the most problematic cases, teachers who provide extra tutoring for their own students may deliberately reduce the content during regular lessons in order to ensure ongoing demand for the private lessons. Some tutoring companies recruit the best teachers from the school system, thereby taking them away from the mainstream. Although shadow education is usually described as a form of private *supplementary* education, from the perspective of the mainstream it may subtract as well as add.

The Way Ahead

The diversity of circumstances has been constantly stressed throughout this publication, because it exposes the complexity of the work of policy makers. Nevertheless, some broad lines of action are clear. The first is to recognize the existence, nature, and implications of shadow education. In most parts of Asia enough is known about the broad outlines, even though detailed research would reveal the features more clearly. The question then is about the actions that policy makers should take to encourage the positive dimensions of shadow education and limit the negative ones.

Within this publication, particular emphasis has been given to the experiences of the Republic of Korea. This is partly because the best data come from that country. Korean policy makers have been actively concerned about issues of shadow education for longer than their counterparts elsewhere, and

the country has a university sector with strong research capacity. The Korean experience sounds a major warning to other parts of the region. It shows that, once shadow education structures and habits become entrenched, they are very difficult to change. The Korean authorities have tried in many ways, and with considerable effort, to reduce what they see as the undesirable financial burdens of shadow education and its concomitant pressures on young people. Around 2010, there was some sign that their efforts might be delivering some results. A combination of regulation to limit the operating hours of *hagwons*, social awareness campaigns to highlight the harmful dimensions of shadow education, reform of assessment systems, and alternative channels for learning through the EBS and CHLS did seem to be having some effect.

Other governments might take the view that “prevention is better than cure.” In 2011, the government of Bhutan, having looked at the experiences of other countries, decided to maintain a prohibition on the operation of tutoring companies in that country (Choden 2011). Elsewhere the shadow education system has already emerged but can still be shaped. The authorities in the PRC, for example, could usefully look at the Korean experience and take action to steer the development of the shadow education system before structures, habits, and social expectations become entrenched.

In other parts of the region, shadow education has become firmly rooted, and the question for policy makers is how to live with it and seek symbiosis rather than how to eradicate it. In these countries, much can be learned from comparative analysis of different modes of regulation and of the dangers of unintended consequences of well-meaning policies. Much also can be learned about ways to form partnerships between the public and private sectors.

Thus, the overall message of this study is that shadow education needs to be addressed much more actively by policy makers in most parts of the region. This is desirable even in locations where shadow education is not currently very visible, on the grounds that prevention of undesirable dimensions is better than cure. The domain is complex, but appropriate ways forward will be found much more easily if the sector is actively discussed rather than ignored.

Appendix

Regulations on Private Tutoring

Location	Regulations
Bangladesh	According to the Non-government Secondary School Teachers Service Rules 1979, no full-time teacher may provide private tutoring or other employment without prior permission of the employing authority (Article 9). In 2010 and 2011, various public comments demanded tightening of the regulations. The High Court became involved, raising the pressure on the Ministry of Education and on various schools from which teachers were said also to be working in coaching centers (<i>The Daily Star</i> , 5 January 2012).
Bhutan	Private tutoring both by regular teachers and by commercial operators is prohibited. In 2011, the Ministry of Education noted that, despite this prohibition, increasing numbers of parents were sending their children to tutoring after school hours and during weekends. The Ministry had received several applications by entrepreneurs to establish private tutorial centers, and considered allowing them to do so. However, a consultation paper received a negative response from the education community, and the Ministry decided to maintain its prohibition.
Brunei Darussalam	The Education Order and Registration of Teachers Regulations require tutors and their institutions to be registered (Negara Brunei Darussalam 2003, 2004). A 2009 circular heralded a crackdown on teachers in both public and private schools who were providing extra classes without permission (Waleed 2009). It particularly targeted the practice of private tutoring in private residences and rented accommodations.
Cambodia	In the mid-1990s, the Cambodian government attempted to ban private supplementary tutoring. However, the measure was ineffective. The subdecree on teacher ethics approved in 2008 prohibits teachers from collecting money, charging informal fees, or running businesses in classrooms (Article 13). It also states that teachers must avoid running a business in state schools.

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Regulations on Private Tutoring *continued*

Location	Regulations
China, People's Republic of	Private, or nonpublic, institutions are known as <i>minban</i> enterprises. The Minban Education Enhancement Law (China, People's Republic of 2002) covered tutoring centers alongside other institutions. It stated that they may enjoy tax allowances and earn a reasonable economic return. Subsequent regulations (China, People's Republic of 2004) stated that tutors in tutorial centers should have the same minimum qualifications as teachers in schools. Paid private tutoring by public school teachers is strongly discouraged. The national Rules of Professional Ethics of Teachers indicate that teachers "should reject paid tutoring with consciousness, and should not gain personal profit from their positions as teachers" (China, People's Republic of, Ministry of Education 2008: Item 5). Initiatives in Shanghai provide an example of subnational approaches. The government has introduced merit-pay salary reforms to reduce the economic incentives for teachers to undertake tutoring (Shanghai Education Commission 2009).
Georgia	Private tutoring has never been prohibited. The Revised National Curriculum (2011–2016) permits schools to provide additional fee-charging educational services if (a) the service is not provided by the teachers of the school, (b) the service is not provided as a regular lesson, and/or (c) the service is not provided to a student while regular lessons are conducted (Article 12.I, II). The 2010 Teachers' Code of Ethics issued by the Ministry of Education and Sciences (Article 4.III) guides teachers "not to tutor their own students for profit-making purposes except in those cases covered by the law."
Hong Kong, China	Chapter 279F of the Laws of Hong Kong, as modified in 2004, permits tutorial centers to be classified as private schools offering nonformal curriculum. Tutorial centers must register if they provide for 20 or more persons during any one day or eight or more persons at any one time. To register, they must demonstrate that their premises comply with the regulations of the Fire Services Department; and class size is restricted to a maximum of 45 students.

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Regulations on Private Tutoring *continued*

Location	Regulations
India	Regulations are set at the state and local levels. In Uttar Pradesh, coaching centers should register under Coaching Regulation Ordinance 2002, though not all do so (Sujatha and Rani 2011:143). In Maharashtra, coaching centers are registered under the Shop Act of the State Revenue Department, while bureaus that provide tutors for home tutoring are registered under the Charity Commission Act. Registered coaching centers pay 1% tax to the Revenue Department, while tuition bureaus pay 8% service charge to the Charity Commission (Sujatha and Rani 2011:152). The West Bengal government prohibits teachers from providing tutoring, though it has had difficulty implementing the prohibition (<i>Times of India</i> 2010). A similar situation is evident in Tripura (<i>The Telegraph</i> 2011). During 2011, the authorities in northern India attracted media attention with a blanket ban on private tutoring by college teachers (Malla 2011). The authorities added that government teachers were allowed to provide private tutoring only after school hours. In effect, this amounted to approval of government teachers providing tutoring on their own time.
Japan	Dierkes (2010:25) stated that "shadow education institutions are entirely unregulated as educational institutions and only have a legal role as a small (and sometimes very large) business." In 1988, regulations were established for regulation of <i>juku</i> by the then Ministry of International Trade and Industry (Mori and Baker 2010:44).
Kazakhstan	The delivery of supplementary educational services is regulated by Decree 1438 of 1999 (Kalikova and Rakhimzhanova 2009:94). Private tutoring is defined as the provision of additional classes in school subjects to students on an individual basis in addition to the academic hours prescribed by the state curricula. Schools are also permitted to offer supplementary programs.
Korea, Republic of	In 1980, the Korean authorities issued a blanket prohibition of tutoring. This, however, was ineffective. It was relaxed by stages, and in 2000 was declared unconstitutional (Lee and Jang 2010). Since that time, the emphasis has been on standards in tutoring centers (<i>hagwons</i>) including both the physical facilities and the qualifications of instructors. Inspections are conducted to ensure compliance. In 2009, the national government enacted a bill requiring tutoring sessions to end by 10:00 pm (Kim and Chang 2010). This built on the regulations of various provincial authorities that had been introduced during the previous 5 years (Kim and Park 2010:415).

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Regulations on Private Tutoring *continued*

Location	Regulations
Malaysia	A Ministry of Education circular (Malaysia 2006) indicated that teachers may provide tutoring outside school hours for up to 4 hours per week if granted a renewable permit valid for 1 year. Application should be made at least 2 months in advance, and applicants should be confirmed in their jobs and have scored at least 80% in the previous year's performance appraisal. Teachers are not permitted to use school premises or equipment for tutoring, or to promote their tutoring services to students in school either orally or through pamphlets and other means. Teachers who have been granted the permit must offer their services through tuition centers registered with the state department of education and not owned by their family members or relatives.
Mongolia	Teachers are prohibited by a 2006 amendment to the Laws on Education and by the 2007 code of ethics from tutoring their own students in mainstream schools (Silova 2010:338). Section 2 of the Code states that teachers "shall not force students to purchase books, educational materials, and other items... and offer private tutoring instigated by teachers." Offenders are liable for fines or revocation of their teaching certificates.
Myanmar	A 1984 law prohibited government teachers from providing supplementary private tutoring, though the law was widely ignored. A 2006 crackdown led to some prosecutions (Yeni 2006), though again the prohibition proved unworkable.
Singapore	Under the private education regulations (Singapore 2009), tutoring centers are required to register with the Council for Private Education via a business arm of the Singapore Government. Enterprises are exempted if their courses last less than 1 month or 50 hours. The regulations require at least one fully enclosed classroom and a designated area for administration. Tutors must meet a minimum educational level.
Sri Lanka	Responsibility for administration of education is shared between the national government and nine provincial councils. In 2010, some provincial councils expressed disquiet about private tutoring. The Sabaragamuwa Provincial Council banned private tutoring of children between the ages of 5 and 16 between 8:00 am and 2:00 pm on Sundays and on the monthly Buddhist days of religious observance known as Poya Days. According to Jayamanne (2010), offenders who violated the law more than once "would have to pay a fine of not less than 5,000 rupees [US\$45] and undergo 6 months rigorous imprisonment."

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Regulations on Private Tutoring *continued*

Location	Regulations
Taipei, China	Regulations are determined at the local level. The Supplementary and Continuing Education Law (Taipei, China Ministry of Education 2004) states that short-term learning centers may operate with “the approval of the competent educational authority in the appropriate special municipality, county, or county-level city.” The relevant authority decides on conditions and procedures for the establishment and accreditation of centers, facilities and management, teachers, method of collecting fees, number of students per class, inspections, awards, conditions for cancellation and revocation of accreditation, and administrative regulations. This level of decentralization leads to much diversity.
Tajikistan	The 2004 Law on Education defines a private tutor as “a teacher who offers tutoring to students on an individual basis or in groups, beyond the [official] working hours at school or university” (Kodirov and Amonov 2009:145). Article 24 permits parents or other custodians to request state secondary schools to arrange supplementary classes for a fee. Supplementary tutoring may be carried out in (a) program and subjects that are not covered by the state education curriculum, (b) in-depth study of topics that are not covered by educational institutions, and (c) other types of educational services that exceed state education standards.
Thailand	Tutoring centers may register as nonformal schools under the Private School Act (Thailand, Kingdom of 2007). According to Dhall (2011b), if they do so, they are permitted to use the word “school” in their name and to earn a maximum profit of 20%. They are exempt from business taxes.
Viet Nam	A regulation issued by the Ministry of Education and Training in 2007 permitted organizations and individuals to provide tutoring only if granted a permit by the local authority. They were forbidden to offer private tutoring to students who had already studied two sessions (in a country where many schools operated a double-shift system) of formal schooling per day (Dang 2011a).

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Notes on the Authors

Mark Bray is Chair Professor of Comparative Education and Director of the Comparative Education Research Centre at the University of Hong Kong. He has worked at the University of Hong Kong since 1986, prior to which he taught in secondary schools in Kenya and Nigeria and at the universities of Edinburgh, Papua New Guinea, and London. Between 2006 and 2010 he took leave from the University of Hong Kong to work as Director of UNESCO's International Institute for Educational Planning (IIEP) in Paris. He has undertaken consultancy assignments for other international organizations including the Asian Development Bank, Commonwealth Secretariat, UNDP, UNICEF, and World Bank. His research interests include focus on the administration and financing of education, and his work on shadow education has helped both to shape a global research agenda and to provide tools for policy makers around the world. *Address:* Comparative Education Research Centre, Faculty of Education, University of Hong Kong, Pokfulam Road, Hong Kong, China. E-mail: mbray@hku.hk.

Chad Lykins is Assistant Professor in the Faculty of Education at the University of Hong Kong. His research focuses on comparative and international education policy. This includes examination of the politics of education research across different national contexts; empirical research on inequality, poverty, and development; and philosophical scholarship on education, public policy, and the social sciences. *Address:* Comparative Education Research Centre, Faculty of Education, University of Hong Kong, Pokfulam Road, Hong Kong, China. E-mail: lykins@hku.hk.

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Shadow Education

Private Supplementary Tutoring and Its Implications for Policy Makers in Asia

In all parts of Asia, households devote considerable expenditures to private supplementary tutoring. This tutoring may contribute to students' achievement, but it also maintains and exacerbates social inequalities, diverts resources from other uses, and can contribute to inefficiencies in education systems.

Such tutoring is widely called shadow education, because it mimics school systems. As the curriculum in the school system changes, so does the shadow.

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