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Shadow Education:
Quantitative and Qualitative analysis of the
impact of the educational reform
(implementation of centralized standardised
testing) on private tutoring in Ukraine

Nataliya Borodchuk

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Development Studies Institute

London School of Economics and Political Science

Houghton Street

London

WC2A 2AE UK

Tel: +44 (020) 7955 7425/6252

Fax: +44 (020) 7955-6844

Email: d.daley@lse.ac.uk

Web site: www.lse.ac.uk/depts/destin

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ABSTRACT

This paper examines a relatively neglected facet of the complex educational phenomenon of private tutoring. In particular by using recent educational reform in Ukraine it tests hypotheses presented in the literature on the impact of the Centralized Standardized Testing (CST) on private tutoring. Based on the primary QUAN and QUAL data analysis, this work provides some suggestive evidence that CST has indeed reshaped providers by adding school teachers to a pool of 'good private tutors', which is consistent with the theoretical hypothesis. However, contrary to expectations, the paper finds no evidence that implementation of CST in the context of decentralised admission system reduces demand for private tutoring: the results show 17 percentage points increase in tutoring. Moreover, it is found that the cost of tutoring increased after the reform. The paper argues that these changes could be attributed to CST and discusses the underlying assumptions.

Key words: private tutoring, Centralized Standardised Testing (CST), educational reform, Ukraine

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ABBREVIATIONS

CST Centralized Standardized Testing

HEI Higher Education Institution(s)

(This study examined HEIs of the III and IV level of accreditation, which include institutes, conservatories, academies and universities).

MCC Millennium Challenge Corporation

MESU Ministry of Education and Science of Ukraine

UCEQA Ukrainian Centre for Educational Quality Assessment

USETI Ukrainian Standardized External Testing Initiative

WB World Bank

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1. INTRODUCTION

Private tutoring has been rightly described as ‘a major component of the education sector in many developing countries’ (Dang and Rogers 2008, p.i). Yet the principal focus of scholars and educational policy makers has been devoted to a formal mainstream education system. A so called ‘shadow education’ system of private tutoring, which in many countries has arisen as a parallel education sector, has received much less attention, even though it has significant economic and social implications (Bray 2003). Although private tutoring is not a new idea, recent studies pointed out to the proliferation of the supplementary private tutoring in countries as diverse as India, Malaysia, Azerbaijan, Moldova, Mauritius, South Korea and Romania (EPS 2006; Foondun 2002; Kim 2004).

While recognizing that private tutoring could take various forms this study focuses on supplementary private tutoring, which is offered at the end of secondary education to help students pass entrance exams for higher education, as the most widespread - and often the most intense - form of private tutoring in many countries (see for example, Hallak and Poisson 2005, Bray 2003). The existence of high-stakes examinations, which could have major implications for examinees’ subsequent life chances and results of which could be improved by crumpling in general, tends to encourage private tutoring (Bray 2009).

For the purpose of this research *private tutoring* in the process of university admission is defined as tutoring in academic subjects, which is provided by tutors for financial gain and is additional to the provision by mainstream schooling (Bray 1999). Although in some cases private tutoring could be encouraged by the state or international donors, for instance, as remedial programs for low-achievers (Banerjee et al 2007), this study focuses on supplementary tutoring lessons for children paid by their households. The definition does not include extra curricular subjects that are not required for university admission, such as for example football, music lessons and additional learning of foreign languages. Moreover it does not include free tutoring offered by friends, parents, etc.

‘Private tutoring is not a good or bad thing in itself. A great deal depends on how it is provided and under which circumstances’ (Hallak and Poisson 2007, p. 266). Therefore various policy recommendations have been developed to encourage positive dimensions

and discourage negative ones, in order to ensure that, 'private tutoring indeed complements mainstream schooling and does not become its substitute'. (Hallak and Poisson 2005, p.12). Implementation of the Centralized Standardized Testing (CST) has been voiced as one of the prime recommendations to regulate a private tutoring market in Eastern Europe and Post-Soviet countries (Hrynevych et al 2006). The policy has been implemented over the last decade in many countries of the region including Georgia, Kyrgyzstan, Lithuania, Ukraine and others. However, up to date the impact of CST on private tutoring remains unclear and has not been tested on data. As Matiashvili and Kutaladze (2006, p.207) noted, 'it is impossible to predict the exact consequences of this policy and its specific impact on the scope of private tutoring'.

This paper starts from this point and aims to provide some empirical evidence on how changes in the mainstream education system affect 'shadow education'. It is important to note that this paper does not aim to analyze whether tutoring is a positive or negative phenomenon per se, but rather it analyses how government policies in educational sector influence and reshape supplementary private tutoring in the process of university admission. Although limited in scope, this paper provides what is believed by the author to be the first collection of data on changes in private tutoring market over time in Ukraine.

The overall aim of this research is two-fold. First, to contribute to the debate on private tutoring in general and its development in the context of Ukraine in particular, where private tutoring has grown to massive proportions during the transformation process after the collapse of Soviet Union (Hrynevych et al 2006). Second, and more specifically, to examine *how* introduction of CST has affected private tutoring in the process of university admission in Ukraine and to analyze the *reasons* of such impact.

This paper is an attempt to empirically test some of the theoretical hypothesis presented in the literature. I ask whether it is true that CST, by having transparent and unified requirements for all school graduates:

- *first*, makes tutoring less university exclusive, by reducing the 'power' of university tutors and increasing attractiveness of secondary school teachers. And in turn

increases supply of 'good private tutors', as tutoring is offered by school teachers as well as by university lecturers/professors (Hrynevych et al 2006);

- *second*, reduces the scale of private tutoring. CST transparent rules, combined with exams, which are aligned with an official national school curriculum may cause a lack of need for additional private tutoring among well performing school students (Matiashvili and Kutateladze 2006, p.207);
- *third* and *forth* hypotheses are related and conditioned on the first two, namely that if CST increases supply of private tutors and reduces demand, the price for tutoring is likely to fall. Moreover, reduction in price of private tutoring is likely to reshape the users: it could make tutoring 'more easily affordable for families with an average income' (Hrynevych et al 2006). In other words it is likely to increase the proportion of students from the lower socio-economic background out of all users of tutoring services.

In order to achieve its aim the study involved collecting primary QUAN and QUAL data in one admin region of Western Ukraine – Lviv oblast (see map in Appendix A). More than 350 first- and fourth-year university students have been surveyed. Quantitative data were supplemented by qualitative data from the document analysis and interviews with private tutors and educational officials. The quantitative data were used to examine *how* CST influenced private tutoring in the context of university admissions in Ukraine. Qualitative data were collected in order to analyze *why* such impact has occurred.

Methodologically this study contributes to the existing literature on private tutoring in the following way. While most literature focus on scope and nature of tutoring at one point of time, this paper aims to estimate the changes that took places on the tutoring market over time and argues that these changes could be attributed to the implementation of the standardized testing. Ukraine is a good case for analysis, because the recent educational reform – CST implementation into the university admission at the national level in 2007 - allows comparing two groups of students (4th-year and 1st-year students). These are students, who entered higher educational institutions in 2006 and 2009 (before and after the reform respectively). In other words, the research is conducted within one unit of

analysis over time, which eliminates region-specific time invariant characteristics, that could influence the results.

The study results suggest that while CST affects private tutoring market, its impact is not straightforward. The paper finds that CST in Ukraine indeed reshaped providers by making school teachers more desirable tutors and by reducing the power of university tutors. However, the paper finds that the demand for tutoring did not fall, contrary to many theoretical predictions. Moreover, the paper provides some suggestive evidence that the cost of tutoring increased after the reform. Lastly, implementation of the CST does not seem to have the predicted affect on consumers of tutoring, as least in the short run.

This paper proceeds as follows: Chapter 2 – briefly reviews the literature; Chapter 3 – describes the empirical setting: dynamics on the Ukraine tutoring market and the main features of the educational reform; Chapter 4 – describes the data and methodological limitations; Chapter 5 - presents empirical findings and analyses them with the reference to the literature; Chapter 6 - discusses the findings and concludes.

2. LITERATURE REVIEW

2.1. The metaphor of 'shadow'

'Shadow education' metaphor for private supplementary tutoring used in the title of the paper has been first put forward by Marimuthu, Singh et al (1991) and then elaborated by Stevenson and Baker (1992) and Bray (1999). Its application in relation to private tutoring is appropriate due to the following reasons. First, private tutoring exists only because of the existence of mainstream education system and, second, it is changing with the mainstream (Bray 1999).

2.2. Private tutoring: is there a problem?

'The scale of private tutoring is alarming' (Postlethwaite 2000, p.642) – that is how Neville Postlethwaite Emeritus professor of University of Hamburg summarized the situation in the shadow education sector. In some cases private tutoring market has reached the scale, when it not only complements, but arguably becomes parallel to formal public school system. For example in Korea in 1998 households have spent almost 3 % of GDP on private tutoring (Kim and Lee 2001). The other example of the expansion of private tutoring could be provided from Turkey, where spending on private tutoring has almost equalized with the government spending on public school system (Tansen and Bircan 2007). Indeed, in the words of Baker and LeTendre (2005, p.55) after-school teaching has become 'a world megatrend' over the last decades. The scale of private tutoring, therefore, makes it difficult to ignore the phenomenon.

Yet, until recently literature on the topic has concentrated mainly on the analysis of private tutoring in East Asian countries, particularly Japan and South Korea, where the phenomenon has long been deeply imbedded (Zeng 1999; Marimuthu et al 1991). As a result of proliferation of private tutoring over the last decade the situation started to change rapidly. A number of studies emerged aiming to evaluate the phenomenon, including studies on Uganda (Eilor 2007), Turkey (Tansen and Bircan 2007), Brazil (Mattos 2007), India (Sujatha 2007), Bangladesh (Nath 2008) etc. Less research, however, has been conducted on Eastern Europe and Post-Soviet Union countries where private tutoring blossomed after the collapse of Soviet Union (Bray 1999, Baker and LeTendre 2005).

The extent of private tutoring could be considered as one of the reasons for devoting more attention to private tutoring, another one is its potential far-reaching social, economic and educational implications. While acknowledging that private tutoring may be beneficial, some forms of private tutoring could have adverse effects.

Tutoring outside of schools may be very desirable in a number of ways, namely as a contribution to human capital development, more innovative and individual teaching for students with special needs, additional income to underpaid teachers (Silova, Budiene and Bray 2006). In Sri Lanka for example, good math teachers in 2007 could earn the equivalent of monthly salary, which was around 130 USD per month, in 3-4 days by giving private lessons (Samath 2007 cited in Bray 2009). Tutoring may also be welcomed by ministries of education, because the parents are helping to subsidize the system and improve the quality of education at no cost to a tax payer (Postlethwaite 2000). The other positive dimension of tutoring is that it could constructively engage students during after-school hours. However, as Bray rightly emphasized 'there is no easy black and white approach to private tutoring' (UNESCO 2009).

Private tutoring in the process of admission in some cases may have negative implications. The problematic side can include distortions of public school dynamics of teaching and learning, unhealthy pressure on young children, exacerbation of social inequalities and creation of corruption prone environment (Bray 2003; Silova and Bray 2006, p.96). Tutoring could become a substitute for the mainstream, for example, when students attend private tutoring lessons at the expense of mainstream school. Such cases are most common closer to external examinations, when parents and pupils are likely to perceive mainstream education as less able to reflect their specific needs, like admission to a university of certain type. In some cases, as noted in the study of Turkish admission process, students obtain false medical certificates, that enable them to be absent from school (Tansen and Bircan 2007). Additional negative aspect is that much tutoring is conducted informally, in what Bray refers to as a 'hidden market place' (ESP 2006), therefore is untaxed. Moreover several studies emphasized adverse effects of tutoring related to cases when private lessons are organized to students by their own school teachers (Biswal 1999; Hrynevych et al 2006). In such cases the latter may have incentives to teach less during mainstream classes, thus artificially creating demand for private lessons (Bray 2003, Foondun 2002).

Yet, one of the most often mentioned arguments against private tutoring is that it widens social inequalities. Indeed common pattern is that private tutoring as any other form of private education is more easily affordable to the rich, more educated households in urban areas, who spent more on tutoring compare to other households in more remote areas (Kim and Lee 2001, Tansel and Bircan 2007). Thus when tutoring takes endemic forms its adverse impact on equality of opportunity in education becomes especially problematic (Bray 2003; Silova and Bray 2006, p. 96). In a more critical note, Hallak and Poisson (2005) argue that in many former soviet countries, where private tutoring was offered on a large scale to help students enter universities, it was a major area of corrupt practices. This was a result of ‘the direct interference of teacher/professor both in private tutoring and in selection committees for entrance to higher education and the lack of reliability of criteria of access to higher education’ (ibid, p.11). Likewise, Natia argues that ‘unlike private tutoring in Europe and North America, in Georgia the fees students pay [to private tutors] are, in fact, bribes passed on through the system to ensure admission to the department of their choice’ (Natia 2004). While statistical evidence is not available to support the suspicion, that instructors release some confidential exam information, there is abundance of anecdotal evidence that university-affiliated instructors by possessing knowledge about exam content sometimes pass it to their tutees. Overall, therefore, it is misleading to assume that PT is good or bad thing *per se*: much depends on the extent of tutoring, who are providers/consumers and under what circumstances the lessons are provided.

2.3. Policy responses

There is a wide spectrum of opinions on whether private tutoring in general should be encouraged or controlled. For example, Sen points to the ‘evil of private tutoring’ in India and argues that it should be ‘uncompromisingly overcome’ (Sen 2002, p.7). While these arguments have been contested by some (see Aiyer, 2002a, 2002b), most scholars agree that the *adverse* effects of private tutoring should be minimized (Hrynevych et al 2006; Dang and Rogers 2008; Bray 2006). As Dang and Rogers (2008, p.22) put it ‘since private tutoring is a widespread and growing phenomenon, we believe that it is time governments devote more attention to this issue’.

Government responses to the patterns mentioned above have been diverse, largely depending on local economic, political and social contexts (Bray 2003). In many cases, governments have decided to leave the market of private tutoring to market forces, in other cases various constraints prevented it from taking measures. And yet, some governments have taken direct policy actions (though with various degree of success) (ibid). For example, in some settings policies aimed to dampen demand for private tutoring by banning it. However, evidence from such countries as Korea (Bray 2009), Egypt (Hartmann 2008), Uganda (Eilor 2007) suggest that none of these efforts have been effective.

There is clearly a need for more data to be collected 'to allow researchers to tease out the impacts of government policies and interventions (including, for example, education subsidies, public expenditure on education, high-stakes testing systems) on creating demand for private tutoring' (Dang and Rogers 2008). A major recommendation of many scholars is that much greater attention need to be given to 'data collection in all types of settings' (Bray 2009, p.73) in order to analyse how government policies affect private tutoring.

2.4. Centralized standardized testing

It has been recognized that the form of examination system has a great influence on the size and nature of shadow education system (Dang and Rogers 2008). Moreover 'as the size and shape of the mainstream education system change, so do the shape and size of supplementary tutoring' (Bray 2007, p.17). Various studies emphasized that existence of high-stakes exams as one of the main factors that explain the scope of private tutoring (Dang and Rogers 2008). It is important to note, however, that this paper is not looking at how high-stakes exams *per se* affect private tutoring, but rather how changes in the nature of high-stakes exams (shift from decentralized to centralized and standardized form) influence the 'shadow education'.

Over the last 10 years CST for university admission has been implemented in many Eastern Europe and Post-Soviet Union countries, such as Ukraine, Poland, Russian Federation, Georgia, Kyrgyzstan. CST has been implemented with a broader aim to insure more equal access to higher education, including regulation of private tutoring. However, to the best of the authors knowledge to date there has been no study attempt to evaluate the impact of this educational policy on tutoring market.

Matiashvili and Kotaladze (2006, p.207) argue in favor of implementation of standardized testing in Georgia, and hypothesized that this policy is likely 'to reduce the scope of private tutoring', however, as the authors add 'it is impossible to predict the exact consequences of this policy and its specific impact on the scope of private tutoring'. Budiene and Zabulionis (2006) by collecting data before and after implementation of centralized state administered examinations in Lithuania find a slight decrease in the number of students taking private tutoring lessons. However, as the authors themselves admit these results should be interpreted with caution. The data have been collected by applying different methodology, thus could not be compared directly.

The study conducted by Hrynevych et al (2005, 2006), being to the best of our knowledge the only systematic research on private tutoring in Ukraine, explores reasons for scope of private tutoring in the process of university admission, context, economic and social impact of private tutoring and provides some policy recommendations. However, being a once-off study it *neither* evaluates private tutoring market in dynamic, *no* examines the impact of educational policies on private tutoring. The authors call for regulation of private tutoring in the process of higher education admission and suggest implementation of standardized testing as one of the policy recommendations.

Implement standardized external examinations with results to be accepted by both secondary schools and higher educational institutions. Examinations should be administered by an institution external to schools and universities and have unified requirements for all secondary school graduates who want to enter higher educational institutions. (Hrynevych et al 2006, p.323)

The authors hypothesize that in Ukrainian context:

It can be foreseen that this will not eliminate the need for private tutoring in order to prepare for the exam with consideration of individual needs of a student. However, as examinations requirements will be unified regardless which University student enters, private tutoring services will no longer be exclusive and thus expensive. They will be offered by school teachers and University lecturers/professors, and will become more easily affordable for families with average income (Hrynevych et al 2005, p.31-32).

3. EMPIRICAL SETTING

3.1. Private tutoring in Ukraine - from independence until CST implementation f CST (1991 – 2007)

Before presenting empirical findings it is important to examine the development of tutoring market in Ukraine prior to the implementation of CST and the reasons for such dynamics. Private supplementary tutoring is not a new phenomenon in Ukraine. It existed during Soviet times, however was significantly smaller in scale and different in nature. This type of supplementary education was mainly limited to learning of foreign languages (Hrynevych et al 2006). After the independence in 1991 and emergence of new market place, complex social-economic conditions created environment favorable to rapid growth of private tutoring. Moreover, the study of Silova and Kazimzade (2006) noted the change in public perceptions of tutoring, in particular that 'private tutoring moved from being associated with a student's academic inaptitude during the Soviet period to symbolizing a student's intellectual sophistication and economic status in the post-Soviet context' (ibid, p.113).

Several factors could perhaps shed light on the dynamics of private tutoring in Ukraine during the period from independence until the implementation of CST. First, increasing correlation between education and labor market opportunities, turned private tutoring into one of the best investment that parents could make for their children's future (Silova and Kazimzade 2006). While admission to higher educational intuitions have become less of a problem per se, due to the proliferation of private universities, main competition took place around state funded places, which guaranteed free education and even modest monthly stipend. Besides 'diploma disease'¹ higher education was appealing to Ukrainian youth as a way of avoiding military recruitment for male students.

Second, as educational spending decreased, teachers' salaries while increasing in absolute terms, were lagging behind increase in an average salary and teachers living conditions worsened. The average teacher salary in Ukraine in the academic year 2004-2005 was about UAH 550 a month (USD 212), which was lower than the average salary UAH 600 a month

¹ Concept that was put forward by Dore (1976), who describes a phenomenon, when employers rely heavily on a university degree as a starting screening method, in the belief that the degree signals competences that contribute to productivity, but are difficult to measure.

(USD 231). Minimum subsistence level was UAH 423 a month (USD 163) (Hrynevych et al 2006). Therefore, teachers were seeking ways to supplement their income. Apart from income generating activity, tutoring in some cases became a way for teachers to realize their teaching potential: they were able to select students and work with those really motivated.

Third, incompatibility between school curriculum and university admission requirements in Ukraine made private tutoring not only an advantage, but often a necessity for successful entrance (ibid). While general guidelines were approved by the Ministry of Education and Science, in practice each university designed its own admission policy. 'These examinations often [went] beyond the school curriculum, leaving school graduates no choice but to take private tutoring lessons to pass university entrance examinations' (ibid, 307). Moreover, this gap between school curriculum and university entrance requirements was complemented by declining educational quality in public schools, namely high student-teacher ratios and overloaded curriculum (ibid).

Most of the supplementary private tutoring in Ukraine took place in the process of admission from secondary to higher education. As findings from Hrynevych et al (2006) indicate, about 80 % out of all students attending private tutoring lessons in 2005 stated that they took private lesson to better prepare for university entrance exams and more than half of them reported having university professors and lecturers as their instructors. Therefore university affiliated tutors by acting as monopoly suppliers not only made tutoring expensive, but also created environment prone to unethical behavior (ibid). Besides direct cost, private tutoring delivered primarily by university professors/lecturers added additional burden for rural students, who often had to get to cities in order to receive tutoring.

Although private tutoring for university admission took endemic form, the government has not taken any measures to address the issue until 2007.

3.2. Educational reform - introduction of Centralized Standardized testing (CST) in Ukraine

The Law of Ukraine “On Higher Education” and decree of the Ministry of Education and Science “On approval of conditions of enrolment into higher education establishments of Ukraine” № 1172 of 25.12.2007 officially started the process of implementation of CST for university admission in Ukraine – process that has been referred by one of the main national papers *Кореспондент* (Correspondent) as the biggest and the most effective reform in Ukraine since independence (Кореспондент July 4, 2008)². The goal of the reform was to ‘create conditions for equal access to higher education and for monitoring of the quality of education in Ukraine’.³ In 2007 CST in three subjects have been administered nation-wide and students had the option of submitting their scores on the tests to the chosen universities or to sit the entrance examinations administered by the institutions themselves. Since 2008, the MES mandated that every person, wishing to enter tertiary education, had to take CST, regardless of institution, place of residence and year of graduation from secondary school. Applicants could choose 3 out of 11 subjects based on the required list of subjects at chosen universities. Moreover, students could use their CST results applying to the unlimited number of universities. The other main features of the new admission system were: first, tests were standardized, in other words - equal to all students and in all regions within a country, second, tests were aligned with official national school curriculum third, they were administered by UCEQA independently from universities. Implementation of CST has been financially supported by World Bank, Open Society Institute, other international organizations especially at the early stages. In 2007 Millennium Challenge Corporation has signed a Threshold Plan with the Ukrainian government granting assistance of 45 million USD, a portion of which was allocated for related work on implementation of CST.

In trying to evaluate the effectiveness of the reform, one of the most systematic studies, conducted by USAID, revealed that citizen perception of corruption associated with admission decreased over the first three years after the CST has been implemented in Ukraine. However, no study to the best of our knowledge has been conducted to estimate the impact of CST on private tutoring. In other words whether the reform has indeed achieved the outcomes hypothesized by the literature.

² <http://ua.korrespondent.net/ukraine/512485>

³ Зовнішнє тестування: Аналітичний звіт. 2003 рік.

Available online at <http://www.ukrtest.org/test/infa/zvit2003/zvit2003.doc>.

4. METHODOLOGY, DATA COLLECTION AND LIMITATIONS

To reach the goals and objectives of the study, both QUAN and QUAL data have been collected. Quantitative data were collected during the field work in April 2010. A survey targeted university students in the three universities of Lviv oblast (Western Ukraine), which are among the top five largest universities in the region. The author focused on Lviv oblast due to her previous study and work experience in the region, which thus provided her with significant connections in the area. In each university a sample of the 4th-year students (those who entered prior to reform) and the 1st-year students (those who entered after the reform has been implemented) have been taken. The questionnaire asked about students experience with tutoring during admission process (in 2006 and 2009 respectively). Random sampling was performed at the level of lecture groups within each university. In total 352 university students have been surveyed (see Table 1).

Table 1. Study sample at a glance

	4 grade (year of admission – 2006)		1 grade (year of admission – 2009)		Total
	High demand	Low demand	High demand	Low demand	
Lviv National Polytechnic University	30	23	48	26	127
National Lviv University	42	25	43	24	134
National University 'Ukrayinka Academiya Drukarsva'	0	36	29	26	91
Total	72	84	120	76	352

In addition, within each university study programs were stratified by the level of demand (high demand and low demand programs). The level of demand was identified on the basis of last year competition. The reason for this stratification is that characteristics of private tutoring, such as nature, scope, intensity of private tutoring, are likely to be different for students applying to programs of different competition level and therefore the impact of the reform may differ as well.

The survey was based on a modified version of a questionnaire designed by the Educational Support Program of the Open Society Institute, which had analysed private tutoring in the nine countries of East Europe and former Soviet Union (ESP 2006). The questionnaire was

translated from English into Ukrainian language (see Appendix B). On average completion of the survey took 10-15 minutes. After data collection the survey results have been processed with the Statistical Package for Social Sciences (SPSS) (the original data base is available on request).

It is important to note that in order to estimate the changes in the *cost* of tutoring over time different data collection methods have been employed. As Ireson (2007 in Bray 2009) pointed out the accuracy of respondents memories about the cost of tutoring is a factor that survey questions typically rely on. However questioning students about the cost of tutoring may be problematic way of obtaining reliable information, because students may be unaware of the details of payments (amount, frequency) made by their parents (Bray 2009). Therefore this study, in order to estimate how the cost of private tutoring changed before and after CST utilized several research methods, namely interviews with tutors as well as review of media sources.

Quantitative study is complemented by qualitative research, which has been conducted over the period January – July 2010. While the questionnaire allowed to survey relatively large number of students, and by increasing the sample size made results more reliable, data collected from phone interviews with private tutors and educational officials as well as review of publications in press were used to provide more in-depth analysis (see Appendix C for a detailed list of interviewees). In other words, the former provided some suggestive evidence to answer the question *how* standardized testing affected private tutoring in Ukraine (in particular its nature, intensity, scope, frequency as well as changes among providers and consumers), whereas the latter allowed to shed light on *why* such impact had occurred.

Limitations

Any research on private tutoring commonly encounters various obstacles (Bray and Kwok 2003). This is partly because 'most supplementary tutoring is unofficial and does not welcome attention' (Bray 2006, p.30). Difficulty in accessing reliable information has been suggested by Silova and Bray as one of the main reasons for a lack of studies on private tutoring (Silova and Bray 2006). Therefore data for this study have been mainly collected by surveying university students, who contrary to private tutors, were assumed to be more

open about their tutoring experience during the admission process as they were no longer part of the 'system' (Silova, Bray and Zabulionis 2006).

Given the dissertation short time frame and financial constrains that limited the possibility for extensive field work, this paper concentrated on one administrative region in Ukraine – Lviv oblast. Non-random sample of universities also do not allow claiming with confidence that the sample surveyed is representative of the whole population of the university students in the Lviv region or Ukraine as a whole. Moreover, the final decision on the choice of universities depended on the permission from university authorities to proceed with data collection. Nevertheless the convenience sample of the three state, large universities, that offer a wide range of programs and have state funded as well as private funded places for each of the programs provides a good basis for analysis. Moreover they are all having the status of national universities meaning they are of a good reputation and enjoy a tradition of offering high quality education.

The study encountered, in addition, other methodological issues. Survey has been conducted in retrospective. Thus, it is likely that because for the first year students the experience of taking tutoring lessons for university admission is more recent (than for the fourth year students), their answers are more accurate. This limitation has been taken into consideration in the process of designing the questionnaire, thus avoiding questions that required recalling some peculiar details of students' tutoring experience (e.g. cost of tutoring, lessons per week).

Moreover, while focusing on university students has its merit, the exclusive focus on this sample may be problematic. The sample is limited to those students who have been admitted, excluding those who applied and took exams, but for whatever reason, did not enter HEIs. While this sampling technique allows estimating the impact of the educational policy on private tutoring, *conditional on acceptance* to higher educational institutions, this sampling limitation does not permit estimation of the effect of CST on private tutoring market as a whole.

Several steps have been taken to mitigate this problem. First, it is important to note that in Ukraine in general the percentage of students, who intended to enter universities, but were

not successful is relatively small⁴. As has been noted above, main competition is not for university places *per se*, but rather for budget funded prestigious programs. Second, the questionnaire asked the students to estimate the scope of private tutoring among their classmates⁵. Third, a number of interviews with private tutors and educational officials have been conducted to cross examine the evidence.

Despite these limitations the study is unique in that it presents the first attempt to estimate the effect of the educational policy – implementation of CST – on the scope, nature, cost, providers and consumers of private tutoring. By combining various methods of data collection the author was aiming to increase reliability of the study, which hopefully could provide some insights as to the effectiveness of CST as a private tutoring regulation method.

⁴ Average acceptance rates in 2008 – 82%; in 2009 – 80%. Calculation is based on the number of applicant who registered for compulsory CST in Ukrainian language and literature and number of newly admitted students (<http://testportal.gov.ua/>, <http://ukrstat.gov.ua/>)

⁵ Following the strategy of Hrynevych et al 2006

5. EMPIRICAL RESEARCH FINDINGS: DESCRIPTION, ANALYSIS AND SYNTHESIS.

This chapter reveals the results of surveys and interviews and analyses empirical data against hypothesis presented in the literature.

5.1. General characteristics of private tutoring

The data obtained from quantitative surveys are used to estimate the general characteristics of private tutoring (scope, intensity, frequency) before the reform and whether any changes have occurred after CST has been implemented.

Scope

The data reveal that private tutoring is wide spread in Ukraine and, conditional on acceptance, percentage of students, who were using private lessons in order to prepare for university admission increased after implementation of standardized testing. 83,2 percent of surveyed students admitted in 2009 reported using some kind of tutoring (up from 65,4 percent in 2006). This indicates (conditional on acceptance) 17,8 percentage point increase in tutoring after the reform (see Diagram 1). Moreover, the increase in private tutoring usage is roughly similar among students admitted to high demand as well as low demand programs (see Table 2)

Diagram 1. Percentage of students taking private tutoring in 2006 and 2009

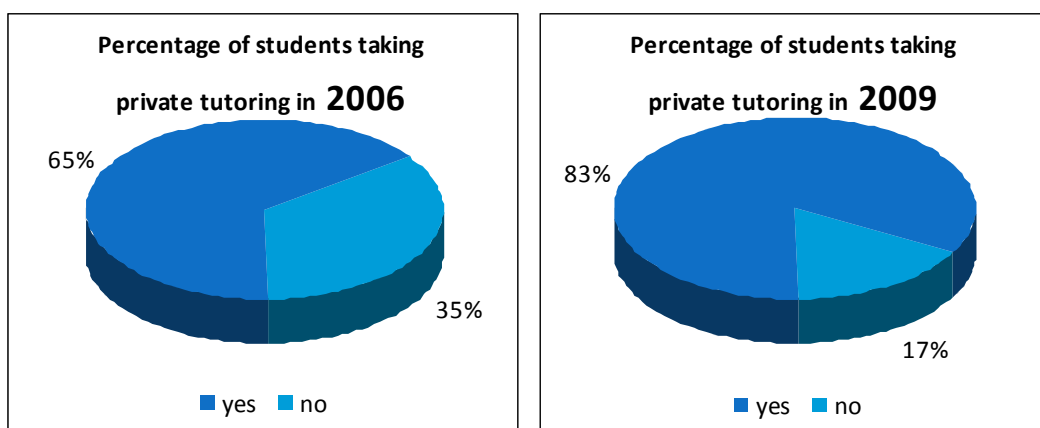


Table 2. The scale of private tutoring in Ukraine by level of demand (percentage of students)

Year of admission	High demand		Low demand	
	Used tutoring for admission	Did not use tutoring for admission	Used tutoring for admission	Did not use tutoring for admission
2006	75,0%	25,0%	57,1%	42,9%
2009	89,2%	10,8%	73,7%	26,3%

As should be expected (if indeed the scope of private tutoring increased), when asked to estimate the percentage of classmates who used private tutoring, 54,3 percent of respondents admitted to HEI in 2009 answered 'almost all' (up from 21,3 percent in 2006) (see Table 3).

Table 3. Usage of tutoring by classmates (percentage of students)

Year of admission	How many of your school classmates have used private tutoring lessons?			Total
	Almost all	More than a half	Less than a half	
2006	21,6	46,0	32,4	100
2009	54,3	35,3	10,4	100

Furthermore, interviews with private tutors and educational officials support the findings from quantitative surveys. When asked how they think the demand for supplementary lessons changed after the implementation of standardized testing in Ukraine, none of surveyed private tutors and educational officials noted the decline in tutoring.

Intensity

According to the quantitative data private tutoring not only appears to have remained widespread after the implementation of CST, but also students seem to have started studying with private tutors on a regular basis earlier before their examinations. Table 4 reports that the majority of surveyed students admitted in 2009 (64,6 percent) indicated that they have been using tutoring 'regularly through the year' (up from 42 percent in 2006).

Table 4. The intensity of private tutoring lessons (percentage of students)

	2006	2009
Regularly through the year	42,0	64,6
Occasionally through the year	8,0	7,5
Regularly in the last semester	36,0	21,1
Occasionally in the last semester	14,0	6,8
Total	100	100

Taken together, the above mentioned evidence suggest, that the changes in the high-stakes admission system, namely implementation of standardized testing, in the context of decentralized admission in Ukraine, has not led to decrease in scope and intensity of private tutoring (contrary to some theoretical predictions).

How could these results be interpreted? Qualitative study (semi-structured interviews with private tutors, educational officials, informal conversations, review of national media sources) was conducted trying to shed light on the above mentioned dynamics. Four main reasons could perhaps explain the rise of private tutoring as a result of implementation of standardized testing.

First, intensified competition among students. While students had to take high-stakes exams (although in different forms) prior as well as after the reform, new exams had intensified competition among students to enter state-funded and prestigious programs as a result of student results scaling. In other words according to the new system students results are distributed on a 200 scale and only the top 1 percent receives a maximum score. While such scaling allows universities to choose the best students from this year's pool, it intensifies competition, *'since even those students who know the school program well could not be guaranteed top scores'*, as has been noted by the USETI Program consultant (Educational official A). Therefore, in order to increase their admission chances students attend private lessons. As the interviewed university professor (Educational official B) put it *'when almost everyone in the class has a private teacher, not hiring one for your child equals decreasing his chances to be admitted to a desired university'*. Foondun noted similar patterns in the context of east-Asian countries: *'parents are using private tutoring as a mean of retaining a relative advantage for their children in the education race'* (Foondun 2002, p.491).

Second, there is some evidence that the system of centralized external testing increased transparency and reduced opportunities for corruption in the admission process (Action 2009). Thus, it is not unreasonable to argue that it is likely, that the money that was channeled to ensure desired placed at universities in the form of bribes, had been, at least partly, transferred to private tutoring as a new primary available mechanism for increasing ones admission chances. The same university professor stated: *'since bribing became much harder and in many cases impossible, now funds are invested in tutoring'*.

Third, even though UCEQA claims that all new tests are 100 percent aligned with the official secondary school curriculum adopted by the MES⁶, a gap between *official* curriculum and *real* curriculum (real level of teaching) is likely to encourage students to turn to private tutors. It is illustrative that the percentage of surveyed student who choose the answer ‘because school curriculum has not covered everything that was required for university exam/standardized testing’ as the main reason for taking tutoring, does not seem to change significantly despite implementation of standardized testing.

Evaluation of the testing effectiveness conducted by the testing centre confirms that there is a gap in educational level within a country. For example, the percentage of pupils from rural areas who obtained more than 195 from 200 possible points during a math test in 2008 was six times as low as that for pupils from urban areas (Belyakov et al 2009). Some educational experts argue that in Ukraine the obstacle to equal access to higher education is not so corruption, but rather unequal secondary school study opportunities (Rakov 2008). While previous admission system clearly encouraged additional tutoring by frequently setting university requirement above school level, CST does not seem to decrease the need for additional tutoring even for well performing students due to the discrepancies in ‘*what is taught and what should be taught at schools*’, as has been noted by the Testing Centre employee (Educational official C). Kim and Lee (2004) pointed out in their study of private tutoring in Korea that parents hire often tutors in order to compensate for the low quality of a mainstream school education system.

Finally, tutoring when entrenched may be not easy to reduce. Herding behavior of consumers and persistence of tutoring over time are likely to contribute to the list of reasons why despite some theoretical arguments demand for private tutoring does not appear to decrease in Ukraine after the reform. The former is mainly due to social pressure. In a telephone conversation with the author on July 20th, 2010, father of a newly admitted student stated that ‘*parents hire tutors often not because their children need additional lessons, but mainly because everyone does it*’. Similar patterns have been emphasized by Bray, who argues that ‘pupils in some settings find themselves under considerable pressure

⁶ <http://testportal.gov.ua/index.php/text/rezukur/>

to invest in tutoring because their peers all seem to be receiving tutoring' (Bray 2009, p.14). As Bray demonstrated on Mauritius example, when tutoring becomes deeply embedded, in other words when 'tutoring culture emerges' – it is not easily amenable to change (ibid). Moreover, it is not unreasonable to hypothesize, that interest groups, that have benefited from tutoring are likely to try to keep entrenched practices and maintain the status quo.

To sum up, the study provides some suggestive evidence that private tutoring in Ukraine did not decrease after standardized testing, as been hypothesized by the literature. Contrary, the data from the quantitative and qualitative research indicate increase in scope and intensity of tutoring over time. Four possible explanations, such as increased competition among students, decrease in direct corruption in the admission process, discrepancies between the official and real curricula as well as a persistent nature of tutoring, while clearly being not an exhaustive list, are likely to shed light on why CST has led to increase in private tutoring in the admission process in Ukraine.

5.2. Providers: who offer private tutoring and why

Reflecting how private tutoring has changed over the period 2006-2009, the surveys and interviews suggest, that popularity of tutors shifted from university lecturers to secondary school teachers. Out of all 4th year students (admitted prior to the reform), who took private tutoring, majority – 53% reported that their private tutors were university professors/lecturers (37% being a lecturer from the same university and 16% from another university) (see Table 5).

Table 5. Providers of private tutoring lessons (percentage of students)

	Who was your private tutor?					Total
	my class teacher	teacher from another school	lecturer/professor from my university	lecturer/professor from another university	professional in the field of study	
2006	18,0	16,0	37,0	16,0	13,0	100
2009	25,5	27,3	16,8	17,4	13,0	100

This is consistent with finding of Hrynevych et al (2006), who argued that private tutoring in Ukraine in 2005 (prior to the reform) was 'a niche predominantly occupied by university professors/lecturers' (Hrynevych et al, 2006, p.316). However this pattern seems to have changed significantly with the implementation of CST. Among all the respondents admitted after the reform 52,8 percent reported that their tutors were school teacher (up from 34

percent prior to the reform). Conversely, percentage of private tutoring users, who took lessons from university professors working at the same institution decreased from 37 percent to 16,8 percent. Not surprisingly, when asked about their perceptions, number of students, who agreed to the statement that 'university lecturer was a better private tutor than a secondary school teacher' reduced from 72,4 percent to 48 percent. These results clearly suggest increase in popularity of school teachers as private tutors for admission and can likely be attributed to several factors: *first*, centralized and unified admission system, eliminated the 'monopoly power' and thus comparative advantage of university professors, *second*, transparent 'rules of the game' (requirements and exam rules are published on UCEQA web site), equalized access to information and *third*, the fact that new exams are aligned with official national *school* curriculum put school teachers in a better position. Such changing patterns are also consistent with the literature, namely from Lithuania and Azerbaijan (Budiene and Zabulionis, 2006; Silova and Kazimzade, 2006), which document, that in the context of unified external testing 'private tutoring market is dominated by school teachers' (Budiene and Zabulionis 2006, p.229).

Together, the findings provide some suggestive evidence that are consistent with the hypotheses, that implementation of standardized testing could reshape providers of tutoring and increase supply of private tutors by making school teacher more desirable tutors in the process of admission. The reform seems to reduce the 'monopoly power' of university professors and, while it is not possible to state with confidence, that it has reduced corruption associated with it, it is safe to state based on the findings, that it has reduced *opportunity* for unethical behavior by university affiliated lecturers/professors. However, inclusion of school teachers should not be considered as unambiguously positive development. High school teachers may shrink their duties, teach less during the official schooling and encourage 'compulsory private tutoring' (Foondun 2002). Such dynamics may be an interesting topic for further research.

5.3. Consumers: who take private tutoring and why

Comparison between the two groups of students (those who entered university before and after the reform) reveals the changes in household income, parents education, urban/rural residence as well as educational achievements of surveyed private tutoring users.

Educational achievements

It is important to note that while prior to the reform main consumers of private tutoring were not necessarily low achievers, this tendency does not seem to change with implementation of CST. Out of both 4th-year and 1st-year students surveyed, more than 85 percent disagree with the statement that 'only low-achieving students were taking private tutoring'. These findings suggest that while in some countries tutoring is associated with remedial education (for example, An Even Start program in Australia (Watson 2008) and remedial 'balsaki' program in India (Banerjee et al 2007) this does not seem to apply to Ukraine. More over the pattern does not seem to be affected by the educational reform.

Urban/rural location

According to the survey results out of all surveyed students admitted prior to the reform, who took private tutoring, 66,7 % were from urban location.

This general observation is consistent with the results of Hrynevych et al (2006) study and other studies of private tutoring in the region. Various factors have been offered by the literature to explain such difference in tutoring between urban/rural students, including higher competition in urban areas, more households with higher income, who could afford private tutoring, etc (Bray 2003). Conditional on acceptance to universities, the percentage of tutoring users from urban areas seems to increase after implementation of CST (up from 66,7 percent to 73,5 percent) (see Table 6).

Table 6. Private tutoring users by place of residence (percentage of students)

	Where did you graduate from secondary school?			Total
	in a city - regional centre	other city/town	in a village	
2006	37,3	29,4	33,3	100
2009	35,5	38,0	26,5	100

Education of parents

The findings suggest that, the higher education level of parents, the more likely their children to receive supplementary private tutoring (see Table 7). The general pattern does not seem to change with the implementation of standardized testing. Interestingly, however, out of all students who have been admitted after the reform, the percentage of

students with at least one parent with higher education increased from 67,6 to 81,6 percent.

Table 7. Private tutoring users by education of parents (percentage of students)

	What is the highest level of education of your parents?			Total
	Both parents -secondary education	One of the parents - higher education, one secondary	Both parents -higher education	
2006	32,4	23,5	44,1	100
2009	18,4	30,1	51,5	100

Household income

The findings suggest that private tutoring is more widespread among students from better of families. Out of all 4th-year students – private tutors users, 71, 6 percent indicated their family welfare was average, 22,5 % – estimated it as above average, and only 5,9 % as below average. The effect of CST on the distribution of consumers of private tutoring according to the estimated family welfare is mixed.

Table 8. Private tutoring users by family welfare (percentage of students estimating their welfare)

	How could you estimate the welfare of your family at the time of admission?			Total
	below the national average	around the national average	ahead of the national average	
2006	5,9	71,6	22,5	100
2009	3,7	74,8	21,5	100

In sum, these results suggest that on average tutor users were not predominantly low achievers and this trend seems to remain after the reform. Moreover the findings are consistent with cross-country observation of Dang and Rogers (2008), who argue that in general students from richer, more educated urban households are more likely to attend private tutoring. Interestingly, however, despite theoretical predictions tutoring did not seem to become more affordable to students from lower socio-economic backgrounds after the reform (proxy by education of parents, rural/urban residence) – at least in the short run. How could this be explained? Even though supply of ‘good tutors’ seems to increase; there is some evidence that cost of tutoring increased as well (the aspect discussed at length later), which is likely to be a result of rise in demand for this form of supplementary education. No significant evidence from the self reported household income data is likely to indicate the noise of the proxy.

5.4. Cost of private tutoring

As has been noted in the methodology section, questioning students about the cost of tutoring is problematic. Therefore, since the aim of this subsection is to estimate the changes that have occurred in the cost of tutoring over the period 2006-2009, this paper relies on interviews with tutors complemented with review of media sources. Private tutoring is a difficult topic for open discussion with teachers ... and costs are the most delicate area of this discussion' (Budiene and Zabulionis 2006, p.222). Therefore, it took a significant challenge to talk openly about the cost with private tutors, which is not surprising, considering that most tutoring is in the 'shadow', thus untaxed. However this approach has two clear advantages: first, tutors, as opposed to students, are more likely to remember accurately the cost of their services, since they are directly involved in the transactions; second – tutors often conduct private teaching on a regular basis for many years, compare to students, for whom admission to universities in most cases is a one time action. Therefore the former are more likely to be in a position to estimate the cost change over time (before and after implementation of standardized testing).

The study indicates interesting dynamics that seem to take place in Ukraine. Even though the supply of 'good private tutors' increased by adding school teachers to the pool of desirable private teachers, the price does not appear to *fall*. Quite contrary there is some evidence that cost of tutoring increased after implementation of standardized testing. The likely explanation is that in such unregulated market as private tutoring market in Ukraine the rise in demand for tutoring (discussed in this section above) outweighs increase in supply, therefore leading the price to rise.

Among interviewed tutors, who agreed to discuss the cost, all noted increase in the price for private lessons after CST. Private tutor A, who is employed by one of the Lviv universities as a Math lecturer and who has been preparing students for university admission for the last 12 years, when asked to estimate the average cost of tutoring before and after the reform noted:

*'Before CST price was 10 USD per lesson (one lesson = 45 min *2). Average preparation course was 50 lessons. Thus cost of the course was equivalent 400-500 USD. Last year the price rose to 15 USD per*

lesson and the number of lessons increased to 60 lessons per course. Therefore the cost of the course reached 800-1000 USD'.

According to Private tutor B, the cost of tutoring varied significantly depending on tutor (school teacher vs university professor/lecturer) prior to the reform. This is likely to be an indication of the popularity of university tutors. However, standardized testing seems to eliminate variation in price among providers of tutoring. Not surprisingly, after the reform, which made university admission requirements more transparent and tests standardized across the country, as has been noted by Private tutor B: *'school teachers started to charge the same rate as university professors/lecturers'*. It is important to note, that since the study only interviewed tutors from urban areas, the price charged by rural school tutors is likely to be different. Moreover, the price of services remains depended on the subject. According to Private tutor C, who is employed as a school teacher - *'most popular testing subjects Ukrainian language, Math and English are also the most expensive'*

Another way to estimate the cost is through review of media sources. One of the leading Ukrainian newspapers – *Dzerkalo Tyzhnya* (Mirror of the Week) – cites Ihor Likarchuk, the Testing Centre (UCEQA) Director, who argues that over the last year tutoring services became much more expensive: *'According to our estimates, one hour lesson with a good tutor in Kyiv costs up to 30 EURO'* (Dzerkalo tyzhnya 2010). Similarly, Olena Hordiyeva notes in *Gazeta.UA* by citing a private tutor from Kyiv Polytechnic University, that *'the cost of tutoring for university admission doubled after standardized testing has been implemented'* (Gazeta.UA 2009). Interestingly she also points to the price discrimination patterns: *'Competition among tutors is also high. Therefore private tutors often increase the price for rich parents. For poorer always make a discount'* (ibid).

In sum, the findings from the interviews complimented by the review of national media provide some suggestive evidence that the cost of tutoring in the process of admission increased after the implementation of CST in Ukraine.

6. DISCUSSION AND CONCLUSION

In trying to determine the effect of CST on private tutoring, this paper used a recent reform in Ukraine. By comparing experience with tutoring during the admission process of those who were admitted in 2006 and 2009 (before and after the reform) it aimed to estimate the changes that occurred in private tutoring market (scope, nature, intensity, providers and consumers) and argued that those changes could be attributed to the implementation of CST. However, caution should be taken in interpreting the findings, as these results are obtained under certain underlying assumptions.

One would like to know what the private tutoring market would have been in the absence of CST? This answer requires specifying a counterfactual. Up to this moment the paper implicitly assumed that without the reform the scope, nature and intensity of private tutoring in 2009 would be at the 2006 level. However, one might argue that since private tutoring in Ukraine seems to have been rising after independence, it was likely to *continue* rising after the reform. If this is true, increase in scope of tutoring during 2006-2009 could be attributed to the same reasons, that had caused the growth of tutoring in the early 1990s (discussed in the empirical setting section), rather than to the implementation of CST. It should be said, that such argument is not implausible. However, this paper presents some reasons to be sceptical about this view.

First, if one accepts that tutoring has been rising in Ukraine after independence, similarly to other Post-Soviet countries, it is not obvious that it would have continued to rise over 2006-2009. Complex socio-economic conditions that were favourable to private tutoring in early 1990s were quite different in 2006 (before CST was implemented). While growing correlation between education and labour market opportunities was likely to trigger tutoring during the transition process from the planned economy to free market in the 1990s, it is not that clear that changes in education/labour opportunities relationship between 2006 and 2009 (which are arguably less evident) could be considered a reason for growth of tutoring. However, verifying this claim is beyond the scope of this paper. Moreover, even though teachers salaries were still relatively low, they were rising from 2006-2009 by around 16-20 percent a year⁷. The third and the most often cited reason for the growth of tutoring during the admission process in Ukraine, such as a gap between

⁷ http://www.kmu.gov.ua/control/publish/article?art_id=74938275

official school curriculum and university entrance requirement has actually been directly eliminated by the CST reform.

Second, as we have mentioned above, there is, in fact, a scarce statistical evidence on the extent of tutoring. The study by Hrynevych et al (2006) being the only study that measured the scope of tutoring in Ukraine, administered their questionnaire to students admitted in 2004. This paper on the other hand has focused on the cohorts admitted in 2006 and 2009. Therefore if one looks at the findings of both studies (percentage of students, who used tutoring for admission out of all surveyed students) the following picture emerges: 2004 – 67,5%, 2006 – 65,4%, 2009 – 83,2%. Therefore, given the evidence available at the moment, there is no reason to believe that the increase in private tutoring in the 1990s, which has been discussed by the literature, continued prior to the CST.

Yet, one might argue that some external factors *specific* to the period 2006-2009 (apart from the mentioned in the previous paragraph) might have caused the changes, or may have accounted for a substantial part of growth in tutoring, rather than CST. While it is clearly not possible to disprove this statement, this paper argues that the below mentioned time-specific variables are unlikely to have led to the result presented by this paper.

For example, the economic crisis that emerged in Ukraine at the end of 2008⁸ may have effected experience with tutoring of those entering universities in 2009. Specifically one might argue that financial downturn and rise in unemployment also increased a number of applicants to higher education institutions, who considered further education a way to increase their qualification and wait until the crisis is over (and therefore increased demand for private tutoring). However, the comparison of Ukraine university applicants in 2008 (prior to the crisis) with the number of applicants in 2009 does not suggest increase in demand for higher education (512591 in 2008; 461981 in 2009)⁹. Moreover, average acceptance rates to HEI seem to remain relatively stable (82% in 2008; 80% in 2009). Conversely, one might argue that economic crisis, which led to reduction in income, has also led to reduction in the demand for supplementary tutoring. To the extent that this is true, our results must underestimate the effects of CST.

⁸ <http://www.interfax.com.ua/eng/main/3168/>

⁹ Number of applicants who registered for compulsory test in Ukrainian language and literature (<http://testportal.gov.ua/>)

It is important to note, that this paper does not claim that the results of this study are the only cause of CST. Nevertheless together our findings and this particular analysis should be considered as providing some suggestive evidence of the impact of the CST on private tutoring.

CONCLUDING REMARKS

This paper posed three questions about consequences of the CST implementation into the Ukraine university admission system. Was the reform effective in reducing the power of university tutors and increasing supply of 'good tutors' by adding school teachers to the pool? Did it reduce the scope of tutoring by reducing the need for it, given the fact that the rules of new tests are more transparent and requirements are aligned with the official national school curriculum? Did it reduce the cost of tutoring, therefore making it more affordable for an average Ukrainian family? This study has given answers to all three questions.

This paper's main contribution has been primary obtained QUAN and QUAL data that allowed providing the first (to the best of our knowledge) empirical evidence on the effectiveness of CST as a private tutoring regulation policy. For the results to be credible it must also be that the counterfactual makes sense. This paper presented our underlying assumptions and discussed some possible alternative explanations.

If one accepts the underlying assumptions, the results are quite strong. The paper finds that CST indeed reshaped the providers of tutoring by adding school teachers to the pool of 'good tutors' and therefore arguably reduced the possibility for unethical behaviour by university tutors. The role of CST as a demand reducing policy seems, however, to have been overstated. This paper has shown that, in contrast to theoretical predictions, CST did not seem to reduce the scope of tutoring and it provided some possible explanation of why this may have occurred. Moreover, it has shown that the cost of tutoring seems to have risen after the reform, which, it turn, has not made tutoring more affordable to families from lower social-economic backgrounds.

These results may have important implications for an overall educational policy; in particular, policies that seek to limit ‘power’ of university tutors and/or reduce demand for private tutoring at the stage of university admission. Again, it is important to emphasize that this paper does not assess effectiveness of CST as such, as it is a complex policy that affects various aspects of education. In other words, this paper is simply looking from one out of many perspectives. Even if CST has not lived up to all the expectations of its ardent supporters – in terms of its effectiveness as a private tutoring regulation policy in Ukraine – it is possible, that CST was effective in addressing *other* issues, like combating direct corruption in the admission process (and, actually, there is some evidence to support this claim¹⁰).

Finally one also needs to maintain a long-term perspective. The consequences of CST may differ lets say in 5-10 years in Ukraine. In particular, if the government puts more effort to increase quality of school education and equalize school study opportunities across the country (which some claim has been put into a policy agenda recently precisely because of the disparities that CST revealed), the need for additional private tutoring may decrease. The reform, however, is too recent to ascertain with any degree of certainty its long-term consequences. No doubt, future research will be beneficial in order to both evaluate how CST affects private tutoring in the long run in Ukraine and to gather more data from other countries in the region that implemented CST. Regarding the former it would be interesting to survey applicants at the stage of registration for CST. This method of data collection is likely to deliver high response rates and allow to surveying those who are planning to enter HEI (as opposed to just those who have been admitted).

¹⁰ Action, 2009. Corruption in Ukraine. Comparative Analysis of National Surveys: 2007–2009 for the MCC Threshold Country Program

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APPENDIX A



APPENDIX B - Questionnaire

The following survey is conducted with academic research purpose. It is anonymous, which means that your answers are confidential. Please remember the last year before your admission to the university and provide answers below.

1. Name of university _____
2. Program of study _____
3. Year of study _____
4. How is your study financed? state-financed self-financed
5. What type of university entrance exams have you taken ?
 internal university examinations standardized external testing
6. Gender: female male
7. Where did you graduate from secondary school?
 in a regional center in other city/town in a village
8. What is the highest level of education of your parents?
 mother: higher secondary
 father: higher secondary
9. How could you estimate the welfare of your family at the time of admission?
 far ahead of the national average a bit ahead of the national average
 around the national average below the national average
10. Regardless of the way your study is financed now, when you were entering University, which were you willing to take?
 only state-financed place self-financed place, too

Section A – private tutoring

11. Have you used private tutors for preparation for university entrance exams?

yes no

if 'NO' could you please describe why (check all that apply)

- I knew I was doing well without private tutoring
- private tutoring was too expensive for my family
- I had no information about good tutor, otherwise I would have used one
- friends helped my free of charge
- when I realised I needed private lessons, it was too late to join
- other _____

(please specify)

If you did not use private tutors' assistance, go directly to SECTION B :

12. For how many subjects have you used private tutoring?

one two three more

13. In what subjects did you use private tutoring lessons?

Ukrainian language math

other _____

(please specify all that apply)

14. Could you please estimate the financial burden of private tutoring (all subjects) for your family?
 very large large average minor can not estimate

15. Have you ever had to miss school classes in order to attend private tutoring?
 often sometimes never

Now, please choose a subject for which you have used private lessons most frequently preparing for entrance exams and answer the following questions:

16. My answer below will be about the subject _____

(please write down – for instance ‘math’)

17. Who was your tutor?
 my class teacher teacher from another school lecturer/professor from my university
 lecturer/professor from another university professional in the field of study

18. What were the main reasons for taking private lessons with this tutor for preparation for university admission ? (check all that apply)

- in order to increase my chances to enter university
- because official school curriculum did not cover everything that was required for university exam/standardized testing
- because of low quality of teaching at school
- to remember and systematize course/topics learned earlier
- to fill a gap in my knowledge
- parents made me take lessons with private tutors
- other students used private tutoring that is why I decided to use it
- other _____
 (please specify)

19. How regularly have you been working with the private tutor during the last school year?

on a regular basis through the school year occasionally through the school year
 occasionally in the last semester/trimester a regular basis in the last semester

20. Could you please estimate to what extent the result of your entrance exam/standardized testing depended on work done with the private tutor?

it had a great impact it had some impact
 it did not help at all could not estimate

21. Please remember your classmates from the secondary school you graduated from. What percentage of them have used private tutoring lessons?

almost all more than half less than a half

SECTION B - Your general attitudes towards the phenomenon of private tutoring.

All questions are related to your attitude at the time of admission. Could you please estimate whether you agree/disagree with each statement (check one box in each row)

	Agree	Disagree
The university lecturer was a better private tutor than a secondary school teacher.	<input type="checkbox"/>	<input type="checkbox"/>
Taking private tutoring was the only way to successfully pass university exams/standardized testing	<input type="checkbox"/>	<input type="checkbox"/>
It was common for a student to ask his/her class teacher to provide private lessons for university preparation for him/her	<input type="checkbox"/>	<input type="checkbox"/>

In general private lessons were expensive		
If you are a good student at school you could successfully pass university exams/standardized testing without private tutoring		
Only low-achieving students were taking private tutoring		
Only students from wealthy families could afford private tutoring		
Students who were using private tutoring were more likely to enter university than students of equal abilities who did not use private tutoring.		
School teachers should not be allowed to offer private lessons to their own students.		
University professors should not be allowed to provide tutoring for prospective students of their own educational institutions		
Educational system should be such that no one would need private tutoring.		

Thank you!

APPENDIX C - LIST OF INTERVIEWEES

Private tutors:

Private tutor A – lecturer in one of the Lviv universities (interviewed 15 July 2010)

Private tutor B – professor in one of the Lviv Universities (interviewed 18 June 2010)

Private tutor C - school teacher in Lviv (interviewed 25 June 2010)

Educational officials:

Educational official A – consultant for USETI (interviewed 8 January 2010)

Educational official B – university professor (interviewed 8 January 2010)

Educational official C – employee of UCEQA (interviewed 5 January 2010)