



**UNIVERSITY OF
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**DIVISION OF ECONOMICS
STIRLING MANAGEMENT SCHOOL**

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Toshtemir Majidov

Dipak Ghosh

Kobil Ruziev

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Toshtemir Majidov^a, Dipak Ghosh^a, and Kobil Ruziev^b

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^aDepartment of Economics
University of Stirling
Stirling FK9 4LA
Scotland, United Kingdom
E-mail: tm29@stir.ac.uk/
dipak.ghosh@stir.ac.uk
tel: +44 -1786 – 467479

^bSchool of Management and Business
University of Aberystwyth
Aberystwyth SY23 3DD
Wales, United Kingdom
E-mail: kkkr@aber.ac.uk
tel: +44-1970-622522

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Abstract

Uzbekistan's higher education system has undergone some dramatic changes in the past century, evolving from largely traditional religious colleges to fully state-funded communist-atheist institutions. Since the end of the communist administration and subsequent market-oriented reforms, the institutions of higher education (IHE) in Uzbekistan have had to reinvent and reform themselves again, as the demand for different kind of education increased. This paper puts the current changes and trends in IHEs into an historical perspective and highlights some important effects of the market reforms on the educational scene.

Key Words: Education, Higher, Uzbekistan, Reforms, Transition

JEL codes: H52, H75, I21, N75, P36

1. Introduction

Three independent khanates, centred in Bukhara, Khiva, and Kokand had dominated Turkistan between the 16th and 19th centuries before the region was occupied by Russia towards the end of the 19th century. Having ousted the Tsar and taking power in Russia, the Bolsheviks set up socialist republics in the former Russian colonies. Uzbekistan was created in the early 1920s as part of a ‘national delimitation’ that re-divided Bukhara, Khiva, and Kokand into new national republics. Uzbekistan SSR inherited the majority of the territories of these khanates, including all three capital cities.

The Soviet government set out to reshape dramatically the society in Uzbekistan and they needed an educational system to facilitate this change. They changed the education system from one of backward, religious institutions to a secular system built upon Marxist/Leninist ideology within two decades. The system they built, designed to eradicate illiteracy and facilitate social engineering, was geared towards creating a homogeneous Soviet citizen.

While the Soviet education system had achieved impressive results, even by international standards, the higher education system in Uzbekistan had to be reformed fundamentally again after independence in order to enable it to meet the demands of an emerging market economy with a rapidly increasing population. The Uzbek government has already carried out a comprehensive overhaul of the entire education system and continues to provide relatively high levels of funding for the sector.

The purpose of the paper is to evaluate the changes which the Uzbek higher educational system has experienced since the times of the khanates and to offer constructive policy recommendations for further improvement. After this short introductory section, Section 2 and Section 3 describe the Uzbek education system before and after the October revolution respectively. Section 4, discusses the nature of reforms that have been carried out in the education sector of the country since independence, focusing particularly on the higher education sector reforms. Finally, Section 5, discusses some

possible limitations of the present system and offers suggestions for further strengthening the system.

2. The Central Asian Education System before the Soviet Reforms

The Soviet academics/authorities maintained the view, which became the conventional wisdom for *sovietologists* worldwide, that before the *Bolshevik* revolution, the education system in Central Asia was extremely backward with an estimated adult literacy rate of as low as 2% (Grenoble 2003).¹ However, more recent and detailed studies, based on information that became available only after the collapse of the Soviet Union, reveal that the pre-Soviet education system was more robust and had its own merits, which had been ignored by the Soviet writers.

It had been, for many centuries, a tradition of Central Asian kings and princes to take great pride in the size of their libraries and the entourage of prominent scholars and poets in their courts. They extended their generous patronage to the brightest literary and scientific minds of their time and provided educational institutions with landed estates which were used to fund schools (*maktab*) and colleges (*madrasa*). *Maktabs* were the starting points where pupils would learn reading, writing, and other basic life skills. The more talented of the pupils would move onto *madrasas* for further education where they would spend over 10 years studying theology, literature, law, philosophy, and other 'worldly wisdom'. The curriculum was heavily based on Islamic teachings, as the *Shariah* was the Law of the Land. The noteworthy feature of the system was that both *maktabs* and *madrasas* were free for the general public, funded by the landed estates and charitable donations, which included gifts from the parents of their pupils.

Towards the end of the nineteenth century, the number of *madrasas* in the Bukharan emirate alone, with a population of around 5 million, had been estimated to be about 180 (103 of them in the

¹ The figure is for 1917. In another study, the adult literacy rate was reported at 3.8%, but this time for 1928 (MacKenzie 1969).

capital city of Bukhara) with some 15,000 students. At the same time 1,800 *Maktabs* taught another 150,000 pupils, while Khiva, Tashkent, Samarkand, Sir Darya, and Khokand had 25, 10, 50, 21, and 118 *Madrasas* respectively (Allworth 1994; Skrine and Ross 1899). Given that these institutions helped to add to the stock of literate adults continuously over time, the conventional wisdom of the Soviet writers, mentioned above, seems to be a gross underestimate of the real picture.

Teachings at *Madrasas* were based on the seminar/tutorial system and successful graduates would develop into all-round intellectuals, as described below by Allworth (1994: 349):

‘A diligent, capable scholar emerged with the command of the Central Asian Turkic, as well as Persian and Arabic literary languages and a thorough grounding in the great writings of the poets, theologians, philosophers, historians, and geographers of the Muslim world, plus long experience with the pedagogical methods employed in the *maktab* and *madrasah*. ... The talented Central Asian composed and performed original music, wrote elegant poetry employing a fine calligraphy, disputed religious questions with learned theologians, and actively participated in the witty, intellectual circles found in every important center.’

The graduates would then expect to become employed as 'a teacher or professor, a secretary to merchants, nobility, or other men of affairs, manager of a philanthropic institution, a judge or law clerk, or as a last resort a member of clergy' (*ibid*: 354). In other words, whatever profession they chose, they would become leading intellectuals in the community.

In short, although the education system of this period was not free from problems, through *maktabs* and *madrasas* funded by the landed estates, it provided the general public with reasonable opportunities for free education and in this sense satisfied at least the minimum need of a feudalistic society for intellectual minds. The system provided talented individuals with an opportunity to achieve their potential and offered them the limited upward social mobility afforded by an otherwise rigid feudal society. The society was rigid in the sense that, it protected the privileges of the royal and upper class families and the best the ordinary people could hope for were clerical positions at royal courts or

similar government related offices.

However, although the education system of this period had appropriate structures and institutions that met the requirements of a feudalistic society, which had already become past history in the more advanced Western capitalist countries, it was outdated and suffered from a number of weaknesses. First, the quality of education was not uniform throughout all educational institutions and furthermore the majority of the population did not even attain an education good enough to enable them to read and write. Only a handful of *madrasas* in big cities such as *Mir-Arab* in Bukhara and *Beklarbegi* in Tashkent could boast of the kind of quality described by Allworth. Secondly, even the top institutions were far behind their European counterparts, especially in terms teaching science subjects such as mathematics, physics, chemistry, engineering, etc.

A group of local intellectuals, inspired by the Muslim enlightenment movements in European Russia, initiated a reform movement which later became known as *Jadidism*.² The *Jadids*, as the movement members were called, actively promoted reforms in the methodology of teaching and the ways it was organized and administered at local *Maktabs* and *Madrasas*. They also published new text books and introduced new subjects to be taught in these institutions. As most of the members of the reform movement were from wealthy merchant families, they had travelled around the world, were aware of the progress made in the Western world and were particularly inspired by the works of the 'Young Turks' movement in Turkey. The *Jadids* also set up a foundation that sponsored talented youth who wanted to continue their studies abroad, mainly in Germany.

Unfortunately, the reform movement in Central Asia faced a formidable opposition from such traditionalists as the members of the clergy. The clergy were able to stifle most of the proposed reforms because of their direct involvement in the administration of *maktabs* and *madrasas*. As a result,

² The name comes from Arabic name *Usouli-Jadid*, meaning the New Method, given to a collection of new methods employed in the reformed schools in the Muslim part of the Russian Empire during the late 19th and beginning of the 20th centuries. For detailed discussion of *Jadidism* see Khalid (1998).

undeterred by their unsuccessful attempts to introduce changes to the existing schools, the *Jadids* opened their own schools, a total of 92 of them by 1917, and created new text books for the use in these schools (Vaidyanath 1967).

Surprisingly, at least in the earlier years of the *Bolshevik* revolution, the *Jadids* found more support for their cause from the new Soviet government and took high ranking positions in the first Communist administration in Central Asia. However, that co-operation did not last very long, because the *Jadid* ideology contradicted the Soviet plans for turning Central Asians into homogeneous Soviet citizens or '*Homo Sovieticus*', who would speak the same language (Russian) and share the same Marxist-atheist culture.

The essence of the conflict, also common in other parts of the Soviet Union at the time and termed the 'Red Expert problem' in the literature, was that, although the Communist Party held political power in key areas of social and economic life, at the grassroots levels they had to rely too much on the indigenous experts and managers, who did not necessarily share the communist vision and ideology; and in fact more often than not resisted reforms introduced by the Communists.

By the 1930s the Communist Party apparatus had completed the 'liberation' of the country from the hands of the non-Party specialists and replaced them by a newly created class of 'Red-experts', who by now had acquired adequate technical training and skills to deal with the issues of the economy themselves (Guroff 1983: 202). In reality, the Communists went a step further in their pursuit of solving the 'Red Expert' problem, as they purged everyone with the slightest perceived connection with the previous regime. Unfortunately, the purges swept away not only the *Jadid* reforms but also the personalities associated with the *Jadid* movement; as most of these pioneers of the early educational reform either had to leave the country or were executed before the end of the 1930s.

3. Soviet Educational Reforms

The October Revolution of 1917 brought about changes, unprecedented both in scale and pace. The existing system was completely abolished and replaced by a system that was entirely secular and based on Marxist/Leninist ideology. By 1924-25, when the Uzbek SSR was officially formed, there were 981 primary and middle schools with an estimated 75,000 pupils, 23 colleges, 8 professional-industrial schools, and 8 industrial schools (Vaidyanath 1967). Not a single aspect or element of the old system, including the reforms introduced by the *Jadids*, was allowed to be carried over; even the teachers and instructors were not spared.³ The Central Asian State University, the first of its kind in the region, and the Communist University of Tashkent were also established during that period. The graduates from these new institutions were fast-tracked into appointments at all levels of academic and administrative positions in spite of their lack of experience.

By 1938-39, there were 1.1 million pupils at schools out of a population of about 6.3 million and there were 29 institutions of higher education, 105 technical high schools, and 23 scientific research institutes (Mandell 1942). The new system was initially geared towards eradicating illiteracy and therefore the greatest allocation of placements at the newly established universities was for the educators. As Table 1 shows, about 1,700 pedagogical specialists graduated from higher education institutions in 1940, and their number increased to about 24,000 by 1951-55. The table also shows that the higher education institutions initiated the preparation of specialists *en masse* in areas, which had not been studied before the revolution, such as engineering, heavy industry, transport and communications, agriculture, and economics.

Table 1. Specialist Graduates of the Uzbek Higher Education System.				
<i>Fields</i>	<i>1940</i>	<i>1941-45</i>	<i>1945-50</i>	<i>1951-55</i>
Heavy industry, transport-communication	487	1,626	2,372	4,659

³ Allworth observed that by the 1950s there was only one *Madrassa* left functioning in the whole of Central Asia training between 50-100 students at a time and even that was not part of the official educational system (Allworth 1994).

Agriculture	408	657	1,427	3,992
Economics	266	709	1,689	2,336
Law	89	430	1,086	1,774
Education	1,691	4,662	9,064	24,184

Source: Medlin and Cave (1962: 168)

The new institutions of higher education also developed research facilities in all areas and the number of people choosing scientific research as a career increased significantly over time. As Table 2 shows, within a relatively short period of time between the 1930s and 1950s, despite the disruptions of World War II, the education system in Uzbekistan achieved considerable progress both in terms of the number of graduates and scientific personnel. According to the 1959 population survey⁴, the 'intelligentsia' in Uzbekistan consisted of over 210,000 professionals, 50.8% of whom were employed in education and research, while 23.2% worked in the health care sector.

**Table 2. Scientists and Degree-holders in Uzbekistan
(Out of a population of about 8 million)**

	1950	1956
1) Scientists (researchers and teachers; includes non-native)	4,541	6,424
a) In research institutions	1,586	1,936
b) In educational institutions	2,880	4,375
c) In administrative and industrial enterprises	75	113
2) Candidates of Science	1,198	2,100
3) Doctors of Science	159	183

Source: Medlin and Cave (1964)

Thus, by secularizing the local population, which for many centuries had lived according to Islamic principles and practices, the educational system designed by the Communist Party achieved

⁴ Central Statistics Department of the Cabinet of Ministers of the USSR (1962).

two of its main goals: universal literacy; and social engineering.

In short, the education system Uzbekistan inherited from its communist past consisted of the following elements: secondary schools, vocational schools or “professional-technical schools” (PTUs known as *‘uchilishye’*), technical schools or “specialized secondary schools” (SSUZs called *‘technikums’*), and higher education institutions (VUZs) that included both universities and specialized institutes. Prior to 1984 the legally-required period of secondary schooling in the USSR was ten years, of which eight years were compulsory; after this time the age of entry into primary schools was reduced from seven to six years. As a result, most children after this date received eleven years of schooling, which extended the compulsory years of schooling to nine. PTUs and SSUZs provided alternatives to the last two non-compulsory years of schooling. There were about 8,000 PTUs and 4,500 SSUZs in the USSR in 1990. Graduates of PTUs and SSUZs could compete for places in VUZs, but in 1986 only 2% from PTUs and 4% from SSUZs, in contrast to 15% from general secondary schools, successfully enrolled.

The VUZs offered five-year degree courses. The graduates of both VUZs and SSUZs were subject to administrative assignments for the first three years of employment. There were about 900 institutions of higher education in the USSR in 1990 of which only 69, with nearly 600,000 students, were classified as universities. Around five million students were enrolled in VUZs, 40% of which were enrolled in courses taught in the evenings or by correspondence. An interesting fact about higher education specialization in the USSR was that the majority of courses offered in VUZs were geared towards technical careers; over 40% of graduates from VUZs were classified as engineers (IMF 1991: 166-68).

By 1989, the rate of adult literacy in Uzbekistan had reached 99% and the total number of students studying at the country's higher education system was 331.6 thousand (with a male/female ratio of 58.5/41.5). Nevertheless, placements in higher education institutions in Uzbekistan remained

under-funded; the average number of placements per 10,000 people in Uzbekistan (167) was well below that of the USSR (181) (Balzer 1992: 178). As a result, as indicated in Table 3, the average number of applications for placements in higher education institutions was considerably higher in Uzbekistan compared to that of the USSR average, even in the late 1980s. This may partly be explained by the demographic factors.

**Table 3. University Entrance Examination Competition in USSR and UzSSR, 1980-89
(Applicants/100 Places)**

	<i>1980</i>	<i>1985</i>	<i>1987</i>	<i>1988</i>	<i>1989</i>
Uzbekistan	263	235	280	291	342
USSR	204	182	196	192	228

Source: Balzer (1992: 178)

4. Educational Reforms after Independence

Historically, educational institutions had always played a very important role in the process of elite regeneration in Uzbekistan. As was discussed earlier, religious schools had produced most of the pre-colonial elite, while Russian language schools took over the dominant role after the Russian invasion. During the Soviet time, the traditional route to the top was through institutions of higher education and then specialist Communist party schools. The collapse of the Communist regime brought down the whole party infrastructure, including the party schools. Hence, the old career trajectory was disturbed. The Uzbek authorities tried to establish replacement institutions by opening new universities and upgrading the status of the older ones.

The Uzbek authorities have been giving considerable attention to reforms in the education sector, particularly in the higher education sector, since independence. The total number of institutions of

higher education (IHE) increased from 57 in 1995 to 64 (32 of them are located in Tashkent) in 2005.⁵ All of the IHE are state-owned and state-funded. Unlike such transition countries as Russia, Kazakhstan etc., the Uzbek authorities did not allow private sector involvement in this sector, fearing sub-standardisation of higher education degrees. At present the IHEs in Uzbekistan are classified into four general categories: academies, universities, institutes, and colleges. The academies have the highest status and offer mainly postgraduate and further education, as well as spearheading scientific research in their respective subject areas.

The most prestigious among the academies is the Academy for State and Social Construction, set up to take over the role of the old party schools in selecting and training potential leaders. Students for the academy are chosen from among the mid-level managers working in different parts of the administrative apparatus of the economy. The other academies are the Academy of Banking and Finance, the Tax Academy, and the Academy of Medicine. Only postgraduate programmes are taught in academies.

Most of the universities are generic institutions of higher education, much like universities in any other country, and offer both undergraduate and postgraduate degrees in various subject areas. A number of them, however, are specialized in specific areas. For example, the Tashkent State University of Economics focuses on economic-related subjects only, the University of World Economy and Diplomacy focuses on international politics and international economics, whilst the Technical University focuses on engineering and other related technical subjects. The status of being a university gives them prestige, and more importantly extra funding. There are twenty four universities in Uzbekistan and only six of them are specialized in this way. Similarly, all of the forty institutes in

5 The number includes the branches of three foreign institutions, namely: Westminster University (UK), Plekhanov Academy of Economics (Russia), and the Moscow State University (Russia) but it does not include the military colleges and the educational institutions affiliated to security services, police and the fire department. Those institutions have separate application and admissions procedures, different from the national unified system and there is very little information available about them. Since then the Gubkin Institute of Oil and Gas (Russia) and the Management Development Institute of Singapore have opened branches in Tashkent.

Uzbekistan are specialized in their respective subject areas and offer degree programme in different aspects of their specialized field.

Admissions to IHEs before independence were based on oral and/or written entrance examinations, usually in three relevant subject areas, administered locally at each individual institution. However, the growing concern about the subjectivity of such exams⁶, as well as widespread corruption in the higher education system, especially during the years of *perestroika* and subsequently during the early years of independence, led to the introduction of more centralized admission tests. In order to limit these corrupt practices and improve fairness in access to higher education, Uzbekistan introduced a centralized testing system in 1994 (after piloting it in 1993).

Since then entrance examinations to most higher education institutions (except for the branches of foreign ones, academies, and performance-based ones like arts and sports) have been centrally administered by the State Test Centre (STC). Applicants are still required to submit their application to a university or institute of their choice, but examination questions are prepared and marked centrally by the STC. Each year, applicants compete for a fixed number of placements for the degree programme of their choice. In any one year, each candidate is allowed to apply for one programme only. They now need to sit a uniform national test, which consists of thirty six multiple choice questions in each of the three different subjects related to the candidate's chosen field of study. To be more specific, subjects vary depending on the degree programme, for which a candidate is being tested, but the number of subjects and questions, three and thirty six respectively, are the same for every degree programme. Moreover, subjects carry different weights for each specialization. For example, applicants for

6 A popular joke of the 1980s about the subjectivity of oral entrance examinations in history helps to clarify this point. The son of an *apparatchik* comes to the examination room and the examiner asks him when World War II started and when it finished. The applicant says that World War II started in 1939 and finished in 1945. "Well done!" says the examiner, "You passed with an excellent mark!" Next the son of a farmer comes to the examination room. The examiner asks him the same question and the applicant gives the same answer. However, the examiner is not satisfied this time. "Well, how many Soviet people died in that war?" he asks as a follow-up question. "About 20 million", answers the farmer's son. "Can you count them by their name?" asks the examiner. "No? Unfortunately, you failed. Please come next year with better preparation," the examiner advises.

economics and business degrees are tested in mathematics, one foreign language (usually from English, German or French), and the applicant's native language (which can be Uzbek, Russian, or any other minority language); each correct answer to multiple choice questions in these subjects carries scores of 3.1, 2.1, and 1.1 respectively, hence giving the maximum achievable score of 226.8. At the end, the applicants with the highest total points scored are selected for admission.⁷

The Soviet higher education was universally free. However, since independence, specifically since 1994, higher education placements in Uzbekistan have been offered on a mixed funding basis: the government sponsored placements, the so called 'grants' that cover tuition fees and offer student stipends (which are scaled on students' academic performance), and the standard placements, or the so called 'contracts' under which students need to find sponsors independently or pay the tuition fees by themselves (mostly through their parents).⁸ Each year the State Test Centre announces the number of fixed placements, also indicating the proportion of grant and contract placements, for each degree programme. The allocation of the fixed grant placements is based on the entrance examination results. For example, assuming that a degree programme admits 100 fixed placements of which 40% are on grant basis and 60% are on contract basis, if 400 applications are received for the programme, only the top 100 performers in the exam will be offered placements; of these, the top 40 performers will win government-sponsored placements and the rest will be offered contract placements.

The fixed total number of placements for the 2006/07 academic year was 57,269 but 186,154 applications were received. In other words, there were 3.25 applications per placement. This shows a slight improvement from the pre-independence figure of 3.43 applications per placement. Table 4

7 There are some allegations that the new admissions system also suffers from corrupt practices in the sense that some applicants are able to cheat the system in order to obtain higher scores. However, due to the way the new system was designed, it is not possible to stop top-scoring talents from gaining admission to the degree programme of their choice; which was not guaranteed under the old system. See the ICG (2003) for details.

8 Although student loans are on offer from state-owned banks, they are not popular due to the bureaucratic and cumbersome nature of the application process. Moreover, because these loans are collateralised, they discriminate against poor families who find it hard to meet the banks' condition on acceptable form of collateral.

summarizes key information on the applications and test results for the 2006-07 academic year. The admission test results for the 2006-07 academic year show some clear trends in both the number of applications and examination results. First, regional generic universities attracted a lot of applications with the southern-most university in Termez attracting the highest number of applications per placement. This implies that most of the applicants have chosen to go to the geographically nearest university rather than opting to go to the ones in the capital, possibly because of higher living costs. Secondly, an interesting fact is that, in spite of the high number of applicants, the regional university entrants achieved much lower average points in the examinations, implying that the most talented applicants are still choosing to go to the top IHE located in the capital city. Thirdly, another interesting trend is that degrees in agriculture, science, and engineering, traditionally popular during the Soviet times, have attracted the lowest number of applicants and these also have achieved lower scores in the test. Apart from medical degree programmes, which have always been popular and attracted a lot of talented applicants, the brightest candidates seem to choose the degree programme in business, economics, finance, and law. In 2006-07, the total minimum scores required to gain entry to a grant placement in the Tashkent Institute of Finance, the University of Economics, the University of World Economy and Diplomacy, and the Tashkent Institute of Law were 190.6, 191.1, 194.0, and 197.3 respectively. In other words, in order to obtain grant placements in these institutions, students needed to attain well over 85% of the total possible score of 226.8. Similarly, the total minimum score required to obtain contract placements in these institutions also ranked highest, ranging between 170.8 and 168.5, i.e. well over 74% of the total possible score.

Table 4. Entrance Examination Results and Number of Applicants for Selected IHE in Uzbekistan in 2006-07.

	<i>Minimum Acceptance Score for Grant Placements</i>	<i>Minimum Acceptance Score Contract Placements</i>	<i>Applicants Achieving Minimum Score As % of Total</i>	<i>Applicants Per Placement</i>
<i>Generic Regional Universities:</i>				
- National University	145.62	112.04	49.40	4.03
- Andijan State University	127.42	98.44	43.40	5.63
- Bukhara State University	121.60	93.97	41.43	3.42
- Gulistan State University	108.62	83.27	36.72	5.27
- Karakalpak State University	137.93	107.78	47.52	4.57
- Karshi State University	119.40	92.23	40.67	6.79
- Namangan State University	125.01	98.24	43.32	5.87
- Samarkand State University	132.32	101.83	44.90	5.17
- Termez State University	121.70	94.28	41.57	8.42
- Urganch State University	119.65	96.44	42.52	5.43
- Feghana State University	122.23	96.20	42.42	4.86
University of World Economy and Diplomacy	194.00	168.51	74.30	3.81
State University of Economics	191.10	173.31	76.42	4.66
Tashkent Institute of Finance	190.55	169.66	74.81	4.11
<i>Technical and Engineering Sub-group:</i>				
- Tashkent Textile Institute	115.86	86.64	38.20	3.22
- Tashkent Chemical Technology Institute	128.35	91.09	40.16	2.90
- Samarkand Institute of Architecture	113.03	79.73	35.15	2.08
- Tashkent State Technical University	123.75	90.98	40.11	3.65
- Tashkent Institute of Architecture	128.04	92.51	40.79	2.43
<i>Medical Sub-group:</i>				
- Tashkent Medical Institute (1rst)	160.90	133.13	58.70	5.69
- Tashkent Medical Institute (2nd)	147.80	120.34	53.06	3.83
- Tashkent Pediatrics Institute	153.94	110.28	48.62	2.76
- Tashkent Institute of Pharmaceutics	159.86	131.68	58.06	6.67
- Andijan Medical Institute	140.06	116.15	51.21	4.26
- Bukhara Medical Institute	136.72	113.83	50.19	3.72
- Samarkand Medical Institute	160.03	125.47	55.32	4.85
<i>Agriculture Sub-group:</i>				
- Tashkent Agrarian University	116.75	83.67	36.89	3.15
- Tashkent Institute of Irrigation	115.87	86.26	38.03	2.93
- Andijan Institute of Agriculture	112.09	81.67	36.01	3.63
- Samarkand Institute of Agriculture	111.76	78.87	34.78	2.34
Tashkent State Institute of Law	197.26	170.8	75.31	7.31

Students who are applying for popular degree schemes, such as economics, business and law, know from the previous years' entrance examination results that there is stiff competition for placements, and that, to obtain a contract placement, let alone a grant placement, is a lot more difficult in these subject areas than to obtain a grant placement in subject areas such as science and engineering. Arguably, the popularity of some subjects is explained by the fact that spending on these degrees on a contract basis is justified because of the comparatively higher expected returns to education in these specific areas.

Although the centralization of the entrance tests administered through the newly established State Test Centre was a radical change from the past, the comprehensive reform of the education system in the country started only in the mid 1990s. The reform programme of the education system, named 'The National Programme for Personnel Training', became law in 1997 and contained details of a three stage reform plan.

By introducing the national programme, the Uzbek government recognized the fact that a well-developed system of education is one of the most fundamental factors in promoting economic prosperity in a market-based environment, and therefore committed itself to creating an education system that reflected national values and produced highly qualified specialists. Moreover, the reform was seen as an opportunity to de-ideologize the education system, to improve the higher education curriculum, and to increase the range of degree programmes offered.

The first stage of the programme was planned to be carried out between 1997-2001 and envisaged the creation of appropriate infrastructure necessary to implement the programme and to achieve its targets. This stage included changing the legal status of some of the existing IHEs and creating a network of vocational colleges and academic lyceums. In particular, some specialized institutes were turned into universities and the previous system of vocational and technical schools

(PTUs and SSUZs) was abandoned and replaced by specialized vocational and academic institutions called colleges and lyceums respectively. The purpose behind expanding the network of colleges and lyceums was to provide better opportunities for young people who finished secondary schools after nine or eleven years of schooling but failed to get into higher education. The published text of the programme quoted that only 10% of the school graduates were able to enrol in IHEs and the rest had to enter the labour market untrained. The new system of colleges would offer them a chance to gain some basic technical and vocational skills and increase their employability.

The second stage was planned for the 2001-05 period which envisaged: (i) a full implementation of the programme with fully functioning vocational colleges; (ii) reorganization of the existing five-year academic degree courses in IHE into a Western style four-year Bachelor's degree and two-year Master's degree programmes; and (iii) a nationwide drive for development of teaching content, including text books, electronic and online learning materials.

The third stage, envisaged to be implemented after 2005, intended to improve and fine-tune the programme after the first five years of the implementation and improve both the skills of teaching personnel and IHE infrastructure.

Within the framework of this programme hundreds of new colleges and lyceums were built in the country. For example, according to official statistics, there were 303 colleges in 2001, 414 in 2002, 533 in 2003, and 827 colleges in 2004. As a result, the total number of students enrolled in vocational colleges increased from about 60 thousand students in 2000 to over 1 million in 2006.

As Table 5 shows, the number of students enrolled in IHE has also increased dramatically during 2000-06. In 2000, IHE in Uzbekistan offered about forty five thousand placements at undergraduate level and about three thousand placements at postgraduate (master's degree programmes only) level; by 2006 these figures went up to about sixty one thousand and six thousand respectively. The total number

of students increased from about 184,000 to about 286,000 in 2006. An increase of more than 100,000 in six years shows the speed with which the higher education system has been growing over the past several years. Since no specific target was set regarding the third stage and the duration of this stage was not mentioned, it is difficult to assess the extent of the implementation of the third stage at present.

Table 5. Enrollment and Total Number of Students Attending Uzbekistan's IHE during 2000-06. (In Thousands)

	2000	2001	2002	2003	2004	2005	2006
Enrolment in IHE:	44.7	50.6	54.6	61	59.3	59.6	61.1
- Undergraduate Degrees	41.9	46.6	50.6	56.1	54.2	54.2	55.4
- Master's Degrees	2.8	4.0	4.0	4.9	5.1	5.4	5.7
Total Number of Students:	183.6	207.2	232.2	254.4	263.6	278.7	286.3
- Including Master's Students	4.0	6.8	8.7	9.5	10.4	11.3	12.6

Source: National Committee for Statistics (2007)

Maintained at about 9% of GDP, the country's expenditure on education is higher than that in any other country in the region—indeed, higher than that in any OECD country (World Bank, 2005). However, as Table 6 shows, the share of expenditure on higher education, as a percentage of GDP, has gradually fallen since 2000, although the total expenditure on education has remained in the region of 9% of GDP. This trend is a part of the Uzbek government's strategy to increase the proportion of contract-based placements in higher education and to divert more resources to vocational-professional training.⁹

⁹ As a result, the proportion of grant-based placements in IHE fell from an average of 38% in 2005 to 34% in 2008 (STC, 2008). The proportion of grant placements does not differ significantly from subject to subject, ranging between the 35% 42% of the total fixed placements.

Table 6 Table Public Expenditure on Education in Uzbekistan (% GDP)

	1988	1989	2000	2001	2002	2003	2004	2005
Total expenditure on Education	7.8	9.9	9.6	8.8	9.1	8.6	8.5	8.8
Higher Education	0.55	0.5	0.48	0.48	0.45	0.45	0.44	0.4

Source: UNDP (2008)

5. Limitations of the Present System and Suggested Recommendations

The evolution of the education system in Uzbekistan has been examined over three distinctive social and political orders. In each one of these periods the educational system played a crucial role in the way the Uzbek society functioned. In the first period, the educational system was dominated by religious leaders and became a main bone of contention between old elites and new enlightenment movements – the *Jadidism*. Nevertheless, the old educational system, even in its unreformed, backward state, did deliver graduates that were of sufficient quality and calibre to meet the demands of the society in which it functioned.

When the backward education system of the feudalistic central Asia was seriously challenged by the far superior system and methods of education in advanced capitalist countries, the education sector turned into a battle ground of experiments and disagreements between the status quo of the existing elite and new ideas put forward by the *Jadid* movement. The Soviet authorities saw potential danger in the continuation of the *Jadid* movement's influence in the education system. They made it a priority to control and radically reshape the education system by means of massive investments in both infrastructure and human capital to make sure they gained full control of the hearts and minds of their subjects.

The Soviet educational system has always been hailed as a great success story for eradicating

illiteracy and achieving very high levels of internationally-recognized scientific excellence. The system provided the Soviet citizens with opportunities to choose education and research as a career choice and also served as a road map for other careers. A successful academic record was virtually a prerequisite for ambitious people in all sectors of the economy. The Communist Party successfully utilized the educational system in its entirety, from primary schools to institutions of higher education, to groom and promote the cadre it needed for its continuous leadership renewal. Excessive industrialization and militarization of USSR, partly due to the demands of the Cold War, resulted in a higher educational system which had as much as 40% of its degree programmes classified as technical-engineering related.

Many countries of the former Soviet Union failed to maintain the level of expenditure on the education system after the break down of the USSR. As far as Uzbekistan is concerned, however, despite the economic difficulties of the early years of transition in the 1990s, the country was able not only to maintain but also to increase the level of spending on the education sector (Ruziev et al. 2007). The country has been carrying out large-scale reforms in its education system since independence. The Uzbek government's commitment to this cause is noteworthy, as indicated by the scale and continuity of the reforms in this sector. The country's expenditure on education, maintained at about 9% of GDP during transition, is higher than that in any other country in the region - indeed, higher than that in any OECD country.

The fact that so much of the resources of the country have been directed to this sector begs the important questions of whether the reforms have been effective and can be further improved. This study does not claim to give any definitive answers to these questions. Rather, it highlights the scale and continuity of education reforms and attempts to open a debate on this topic.

This study draws attention to two important drawbacks of the system of higher education and suggests changes that could improve its efficiency considerably. The first serious drawback of the

system is the fact that applicants are allowed to apply for one degree programme only each year and have to choose the degree of their choice when submitting their application. As a result, if applicants fail to achieve the necessary total score to be admitted to their degree of choice, they will not have another chance to apply to another similar degree programme in the same academic year.

For example, applicants for business and economics-related degrees are tested on three separate subjects, namely, mathematics, a foreign language, and the applicant's first language. According to the 2005-06 entrance examination results, an applicant who chose an economics degree at the Tashkent State University of Economics would be given a grant or contract placement only if he or she scored above 91% and 85% of the total respectively. However, in the same year, for the same degree programme, the minimum passing scores for grant placements and contract placements were about 40% and 30% of the total respectively at the Ferghana State University. An applicant who earned, say, 80% of the total score would fail to get into the Higher Education System altogether if he or she submitted his or her application to the Tashkent State University of Economics in that year. Hence, the unnecessary rigidity of the current system, by unfairly penalizing talented applicants for being more ambitious, results in a waste of a valuable resource – talented young people.

This problem could easily be eradicated if applicants were given an option to choose from a limited number of universities, say, three for example, during the application stage, clearly indicating their first, second, and third choices. Given that the entrance examination procedures are already centralized, this change would not involve too many extra resources. One way of implementing this change would involve centralization of the application procedure by introducing a uniform application form which would be distributed to all institutions of higher education. Centralization of the application process in this way would reduce the hassle for the applicants too, as they would not need to travel from regions to the capital city where most of the popular universities are located. Applicants would go to any university that offered a degree scheme they were interested in and submit their application form

clearly indicating their preferred choices. Once examination results were ready, the State Test Centre would inform the applicants of the score they achieved and whether or not it was sufficient to gain admission to any of their preferred university choices.

Alternatively, the national test could be administered before the application process, allowing the applicants to choose a degree programme they were interested in on the basis of their achieved score. Either way, the fairness of the admission system would be improved and a larger proportion of talented applicants would be allowed into the higher education system of the country.

The second aspect of the current system, which could be improved, is the distribution of government-sponsored grant placements. According to the latest available data, the average proportion of grant placements in the total fixed placements in IHE is 34% (STC 2008).¹⁰ The allocation of grant placements does not differ significantly across degree programmes and institutions, meaning that the most popular degree programmes have similar proportion of grant placements to the least popular degree programmes.

The fact that in 2006-07 applicants with scores of more than 75% of the total still chose to study at the Tashkent Institute of Finance on a contract-basis instead of going to another institution where they could easily study on grant-basis illustrates the case. It might have been justified to give grants to economics, law, and business-related degrees during the early years of transition, as the economy needed administrators as well as entrepreneurial talents. However, this view and this policy seem to have outlived their justification. Considering the fact that applicants would be more willing to pay for degree programmes with higher expected returns, government funds would be better spent in areas where degrees are currently less popular but might offer more public benefit, such as engineering and general education.

As demonstrated in Section 4, the brightest applicants tend to opt for four institutions: the

¹⁰ This figure ranges slightly from subject to subject in the region of about 5-7%.

University of World Economy and Diplomacy, the Tashkent State University of Economics, the Tashkent Institute of Finance, and the Tashkent State Institute of Law. Unfortunately, the programmes offering degrees in agriculture, science and engineering are the least popular. Although the so called ‘hard’ subjects like science and engineering have never been the ‘popular’ subjects in any society, during the Soviet period, nevertheless, about 40% of the students who graduated from the VUZs were classified as engineers. Since scientific and technical human capital is an essential ingredient for the growth and prosperity of an economy, perhaps the policy makers should examine the reasons behind the phenomenon that the country’s brightest human resources are opting for training in non-scientific and technical subjects. Only conjecture can be offered to explain this phenomenon.

Arguably, in addition to returns to education, one of the main reasons why the brightest candidates are opting out of science and engineering-related programmes is the Uzbek society’s perception about security of employment. Since the state was the sole provider of secure employment in all sectors of the economy during the Soviet period, the society has become used to associating job security with employment in the public sector. Since independence, such sectors as agriculture and manufacturing have been privatized or are in the process of being gradually privatized. As a result, ‘secure’ employment can be found either in state administrative departments or in state-owned institutions such as banks. This could explain the overwhelming preference for training in administrative, diplomatic and legal skills on the part of the brightest minds in the society. Obviously, as the market economy matures and people’s faith in the resilience of the private sector grows, this tendency will gradually change. However, the policy makers may consider looking into ways of encouraging bright students to train for skills which can help accelerate and strengthen the growth of the productive sectors of the economy. The fact remains that the brightest candidates opt for programmes which prepare them more for employment in the bureaucracy or service sector. Therefore the policymakers in Uzbekistan perhaps need to find out the reasons for the reluctance of the brightest

human capital of the society to opt for training in skills essential for the productive sector of a modern day market economy.

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