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THESIS WORK

Theme: «The cost sharing analysis of Kazakhstani Higher Education.  
Who pays and who should pay?»

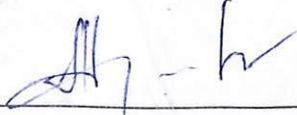
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Master Student, group  
«Economics»

  
\_\_\_\_\_  
(signature of the student)

Aisulu Yenikeyeva

Scientific Supervisor  
PhD

  
\_\_\_\_\_  
(signature of the supervisor)

Aigerim Azimbekova

Kaskelen, 2019

## ABSTRACT

The purpose of this study, which is conducted using document analysis and primary data collection in order to understand the policy and problems of access and equity in Kazakhstani higher education in terms of financial issues. The absence of adequate financial support is the most major obstacle to accessing the education in Kazakhstan. At the same time higher education institutions are not allowed to raise funds and help students with decreasing the fees. The main answer of the question who pays and who should pay for higher education in Kazakhstan is revealed. The main findings reveal the proper information about higher education financing sources and opinion of the students about the most appropriate source of education from the perspective of the Kazakhstani population. The correlation between main characteristics and wishes of the students was attempted to identify through the discriminant analysis. All of the findings are important for policy makers. The information could be used to make a decision about different financial sources provisions.

## АҢДАТПА

Құжаттарды талдау және бастапқы деректерді жинау арқылы жүргізілген зерттеудің мақсаты қаржылық мәселелер бойынша қазақстандық жоғары білім берудегі қолжетімділік пен теңдік саясатын түсіну болып табылады. Қаржылай қолдаудың жеткіліксіздігі - Қазақстандағы білімге қол жеткізудің негізгі кедергісі. Сонымен қатар жоғары оқу орындарына қаражат жинауға және студенттерге ақы төлеуді азайтуға көмектесуге рұқсат берілмейді. Қазақстанда жоғары білім алуға кім төлейтін және кім төлейтіні туралы сұраққа негізгі жауаптар ашылады. Негізгі нәтижелер жоғары білім беруді қаржыландырудың маңызды көзі болып табылады. Студенттердің негізгі сипаттамалары мен тілектерінің арасындағы корреляция дискриминанттарды талдау арқылы анықталды. Барлық тұжырымдар саясаткерлер үшін маңызды. Ақпарат әртүрлі қаржы көздерін жасау үшін және оларды практикада қолдану үшін пайдаланылуы мүмкін.

## АННОТАЦИЯ

Целью данного исследования, которое проводилось с использованием анализа документов и сбора первичных данных, является понимание политик и проблем доступа и справедливости в казахстанском высшем образовании с точки зрения финансовых вопросов. Отсутствие адекватной финансовой поддержки является основным препятствием для доступа к образованию в Казахстане. В то же время высшим учебным заведениям не разрешается собирать средства и помогать студентам в снижении платы. Раскрыт основной ответ на вопрос, кто платит, и кто должен платить за высшее образование в Казахстане. Основные выводы раскрывают наиболее важный источник финансирования высшего образования с точки зрения населения. Корреляция между основными характеристиками и пожеланиями студентов была предпринята путем выявления дискриминантного анализа. Все выводы важны для политиков. Информация может быть использована для создания различных финансовых источников и применения их в практике.

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## **LIST OF ABBREVIATIONS**

HE – Higher Education

USSR – Union of Soviet Socialist Republics

OECD – Organization for Economic Co-operation and Development

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## 1. Introduction

“Everyone has the right to education... higher education (HE) shall be equally accessible to all on the basis of merit”. These words are taken from 26th article of the Universal declaration of Human Rights, which demonstrates importance of equal access to higher education. The desire and capability to attend university are all you need to get a higher education in a “perfect” world, in which education is equally available to all citizens. However, more access does not always bring an increase in equity (Reisberg and Watson, 2011). In order to attain an equity today it is necessary to “address the underlying factors that determine who enrolls and who persists to graduation” (Reisberg and Watson, 2011).

According to OECD, there are two main features of equity, fairness and inclusion. No personal or social conditions (such as gender, ethnic origin or family background) should prevent education (OECD, 2012). All individuals have the right to acquire basic knowledge and most students should have an opportunity to access high-level education (OECD, 2012). There are some principles which will ensure equity in higher education:

- Every individual who is able to study in a higher education institution should have an opportunity to do so.
- There should not be any discrimination on the basis of social class, gender, religion or ethnicity in the selection process for a place in higher education.
- Everyone should get same opportunities to develop and improve their skills (James, 2007).

These principles are interpreted in different ways and commonly used in governmental policies and strategies (James, 2007). They also can be taken as a measure of effectiveness of government work in the educational sphere (James, 2007). Numerous countries are creating different strategies for improving access to higher education (James, 2007). The educational systems considered as the best are those which combine equity and at the same situation right access to higher education taking into consideration students’ qualitative outcomes (James, 2007). That is why

different variations of governmental strategies and method first of all are based on effective and efficient financing of educational system, quality of knowledge offered and support provided to people looking for education (James, 2007).

Higher education gives individual skills and knowledge that result in positive effects for the economy, on that individual's career and well-being, which will reduce the unemployment rate and increase standards of living (Department for Business Innovation and Skills, 2015). Higher education is also considered a good influence factor in various aspects of society, such as life satisfaction, social inequality, social cohesion, public safety and so on (Department for Business Innovation and Skills, 2015). Bringing equity to higher education is one of the most critical issues in current discussions. Surely there is positive role of higher education in social and economic life, nevertheless the methods and ways of distribution funds in these spheres have different influence and do not always consider in accessing the higher education (Department for Business Innovation and Skills, 2015).

### **1.1. Background theories**

Cost sharing theory: stipends, student loan, necessity and rationales. It is accepted from the beginning the 21st century higher education brings welfare to students and their families, in professional and social conditions, social, cultural and economic well-being. In the addition, higher education is valued when students are nominated to increase enrollment and it become more popular among the population. Governments are supported by other urgent social needs, many of which seem politically motivated rather than higher education requirements. The government, or taxpayers, has four high categories: (1) government or taxpayers; (2) parents; (3) students; and / or (4) individual sponsors or institutions. These parties could be identified as the donors for the any public good financing system. In the particular disseratation, these parties are used to identify sources of financing the higher education in any country. The level of participation among the different sources depends on the different factors including the policy, economic system and other.

### **1.1. Problem statement**

The result is intellectual growth in tertiary education programs of many countries and the increase in the value of some state revenues. In addition, tertiary education in many countries has been attacked due to lack of guidance in answering, or visibility, or in response to students, the ministry, or business and business. In this problem, problems and perspectives come from the idea of cost sharing. As explained in Johnstone's view (2003), cost sharing relates to the switching of higher education costs from self-support or dependence on governments or taxpayers, the dependence on some funds for parents and / or students either in the form of study fees or " cost of the user "for paying the room's expenses. provided by government or board room.

### **1.2. Significance of the study**

This article is shows the inside statistics of the cost sharing analysis of higher education in Kazakhstan. In the addition it helps to show the preferred sources of financing it by students. It should help policy makers to analyze the situation with cost sharing of higher education in Kazakhstan. However, there are some limitations within the study in face of not deep just descriptive analyses.

### **1.4. Research questions**

Question #1 Who pays for higher education in Kazakhstan?

Question #2 Who should pay for higher education in Kazakhstan?

Question #3 How does different characteristics of the studetns affect the preffered source of financing their higher education?

## 2. Literature review

### 2.1. Types of financing higher education

In economics and mechanism design, a cost-sharing theory is the process by which several agents decide on the scope of a public product or service, and how much agent should pay for it (Johnstone, 1991). The goal of cost-sharing theory is to divide it among external agents. The meaning of the cost-sharing is used in higher educational financial system, and as used in this dissertation, means the transfer of the higher educational costs among government, or taxpayers, to parents and students, and other different sources (Johnstone, 2006). As this particular study researches the higher education cost sharing theory, some examples and descriptions of different agents are listed below.

*Government.* Most market markets are focused on revenue sources not only as "governments", but also as taxpayers (Johnstone, 2003). Many citizens can pay taxes directly and indirectly, such as income tax, property, small-volume sales, general use or specialized goods such as fuel, tobacco, alcoholic beverages, air transport or imported goods (Johnstone, 2003). Alternatively, the tax is not paid directly and is paid for free. As for example, direct taxes are paid directly to the main source of expenses. If they are governed by government prices, because they are used for many socialist programs, and if companies are unable to transfer their taxes in the form of high prices, those in the industry, or price, should be in an area worn by low-wage workers and earnings (Johnstone, 2003).

*Parents.* The other group is at the expense of sharing with parents, who would pay some higher education costs, or bear other living expenses for students, sometimes holding a local student (Johnstone, 2003). Parents themselves have paid their current income, either partially from previous savings, or partially borrowing - that is, being a future reward (Johnstone, 2003). Neither grandparents nor members of an extended family, or members of a village or church, are "parents" when it comes to supporting a student (Johnstone, 2003).

*Students.* The third part is to share the responsibility of higher education for students who can carry other long-term expenses or a holiday room or loan (Johnstone, 2003). Loans can also be repaid when a student is successful and employed, such as regular money, monthly rates or refunds for deductions from the employer, to the compensation fee when (such as income tax, insurance premiums or pension funds). ) and goes towards the consumer (Johnstone, 2003). Payments can also have income or can be paid at a certain percentage of salary. Or in a very similar way, the one who managed to repay the money (for the borrowing is taken, therefore, the lease, the government) using a surtax of income tax, or an additional income tax until the money is returned, including a percentage interest percentage (Johnstone , 2003). In all the usual cases, the war is equally successful, or what the income is worth the student (or what should be accepted in the advertised world) is not a type of loan or liability, but (1) the existing selling price of the expected costs and (2) the number of years of renewal, in relation to # 1, defines a monthly payment.

*Individual or institutional donors.* The last costing group is a donor, whose contribution could be aimed at improving the university level (and thus accessing education) in relation to institutional budgets (which reduces the amount that should be delivered to parents and (Johnstone, 2003), or to students , in the form of money or scholarship, whether these are based on the financial needs of students or students and / or earning a small salary, reduce demand for other sources of income (Johnstone, 2003). These donations are, in fact, continuous the university itself can look like a donor because it provides students with experienced students from poor families, but real users in such cases can be parents of rich students who may be paying more than they would have to meet the normal cost of an institutional education, but who can see that the university can provide a certain path rebu - an instruction based on the quality of the institution's quality - and as a cost-effective institution (Johnstone, 2003). Students' loans could be introduced in the developing countries so that disadvantage students could find the source of finance through bank (Woodhall, 1988). There could be different types of loans which depends on the

economy of the country and assessed by special agencies (Ziderman, 2002). In the addition, universities and other charitable organizations could be distinguished as the part of this source of financing the higher education (Johnstone, 2003). The examples of such institutions are Tatischev Foundation which makes donations to lots of students each year (Tatischev foundation). The industry also supports the students in higher education such as Kazenergy grants (Kazenergy). Such a donations made from the perspective in human resource capacity building.

## **2.2. Context: educational system in Kazakhstan**

Similar to most countries, Kazakhstani government faces problems with access and equity in higher education. Comparatively, Kazakhstan is a young country with a market economy, democratic governance, civil society and the rule of law. The context of education in Kazakhstan today is changed from the system provided under the former Soviet Union. The government of USSR provided free and equal access to education for every competent person in country (Sarinzhipov, 2013). The education system was fully controlled because of strict views and also was funded by Soviet Union (Sarinzhipov, 2013). Affordability was not a problem because higher education was free for all (Sarinzhipov, 2013). This system had benefits for children of working class families, children from rural areas and children from certain ethnic groups (Heyneman, 2010). Nevertheless, higher education was in the hands of institutions, which could control admission of students through their own entrance examinations, which were obscure and usually inequitable (Heyneman, 2010).

After the collapse of USSR, the Kazakhstani government needed policies to regulate the educational system, therefore “Law of education” was created on the base of previous management experience in order to take control of all educational institutions (Heyneman, 2010). From the years following independence up until now different amounts of money have been given to universities in form of grants to create financial accessibility of higher education (Heyneman, 2010). Nevertheless, this amount of money is not sufficient to create equal rights to higher education and

accessibility (Department for Business Innovation and Skills, 2015). During the years of transition new opportunities have appeared in Kazakhstani higher educational sphere, because of the growing desire to increase the number of available places in higher educational institutions (Heyneman, 2010). Very soon, improving the access to higher education became an important mission for government (Heyneman, 2010). By Constitution of Kazakhstan, every citizen of our state has the right to get free higher education on a competitive basis in public universities. As well private institutions are also regulated by the Constitution. Thus because of increasing rapid demand for higher education, the higher education institutions have expanded, mostly in the form of private provision (Heyneman, 2010). From the 1999 till the 2005 Kazakhstani higher education enrollment increased its quantity ti two times (Narenova,2006). This disseratation focuses on the problem of the access and equity in Kazakhstani education policies which should ensure education to be available to all, despite the different characteristics as economic or social status.

*Table 1 - Number of students in higher education, 1999-2005 (in thousands)*

	1999-00		2000-01		2001-02		2002-03		2004-05	
	000s	%	000s	%	000s	%	000s	%	000s	%
Total number of students	365.4	100.0	440.7	100.0	514.7	100.0	597.5	100.0	744.2	100.0
Full-time	226.2	61.9	254.5	63.5	288.2	56.0	300.3	50.3	349.6	47.0
Evening	2.8	0.8	2.1	0.48	1.9	0.37	1.8	0.3	2.3	0.3
Distance	136.4	37.3	184.1	41.8	224.6	43.6	295.4	49.4	392.2	52.7
Total number of students in private HEIs	94.4	25.8	126.9	28.8	182.5	35.5	256.0	42.9	344.2	46.3
Full-time	45.2	12.4	55.6	12.6	79.8	15.5	109.2	18.3	125.9	16.9
Evening	1.8	0.5	1.5	0.4	1.5	1.5	1.7	0.3	2.2	0.3
Distance	47.4	12.9	69.8	15.8	101.2	19.7	146.1	24.5	216.2	29.1

*Source : Narenova, M., et al. (2006), unpublished background report and presentation prepared for the review team; UNICEF IRC (2006), TransMONEE 2006 database, UNICEF IRC, Florence.*

Table 1 shows the rapid increase in enrolment rates which have resulted in gross participation rates of 44.3% among 19-to-24-year-old population demonstrating evidence of high access to higher education. A deeper investigation of Table 1 also shows that full time gross participation rose from 14.6% in 2000 to 20.8% in 2005. During the same period, higher education participation rate has grown from 2.9% to 7.5% in the private education sector in 2005. Whereas, distance learning the highest level of the enrolment increase occurred in 2000. It was approximately grown 4 times from 50 thousand to 200 thousands students. 53% percent of all student's study part time. These participation rates show good indicators of accessibility and according to the OECD average of 53% for high income countries (OECD, 2012). Kazakhstan has made a real progress in increasing higher education participation rate from the year 1996. Two policies have improved access to higher education which include inclusivity of the well-off and rural areas. In the addition, the new form of student evaluation was accepted in 2003 year. It was called UNT (United National Test) which is used as the bridge among the school and university. In the addition, it does assess the knowledge given at the times of school.

### **2.3. Cost sharing of Kazakhstani Higher Education**

Since, 2003-2004 years' admission department of each university is dependent of the UNT. The UNT is an attempt to implement a corruption-free, transparent admission procedure (OECD, 2012). According to OECD recommendations UNT should be improved and developed in order to increase equity in students' enrollment (OECD, 2017). Kazakhstan has introduced a public education scholarship, which allows selected students to access an elective institution. In 2006, 32,500 public educational institutions were awarded, -60% of Kazakh students who spoke 40% of speakers from Russia (Damitov, et al., 2006). These scholarships from the Ministry of Education and Science on Government Orders have awarded Altyn Belgi, the Olympics, always competitive, and on the basis of government currencies, due to certain aspects of the language, students pass of the lowest points (Damitov, et al.).

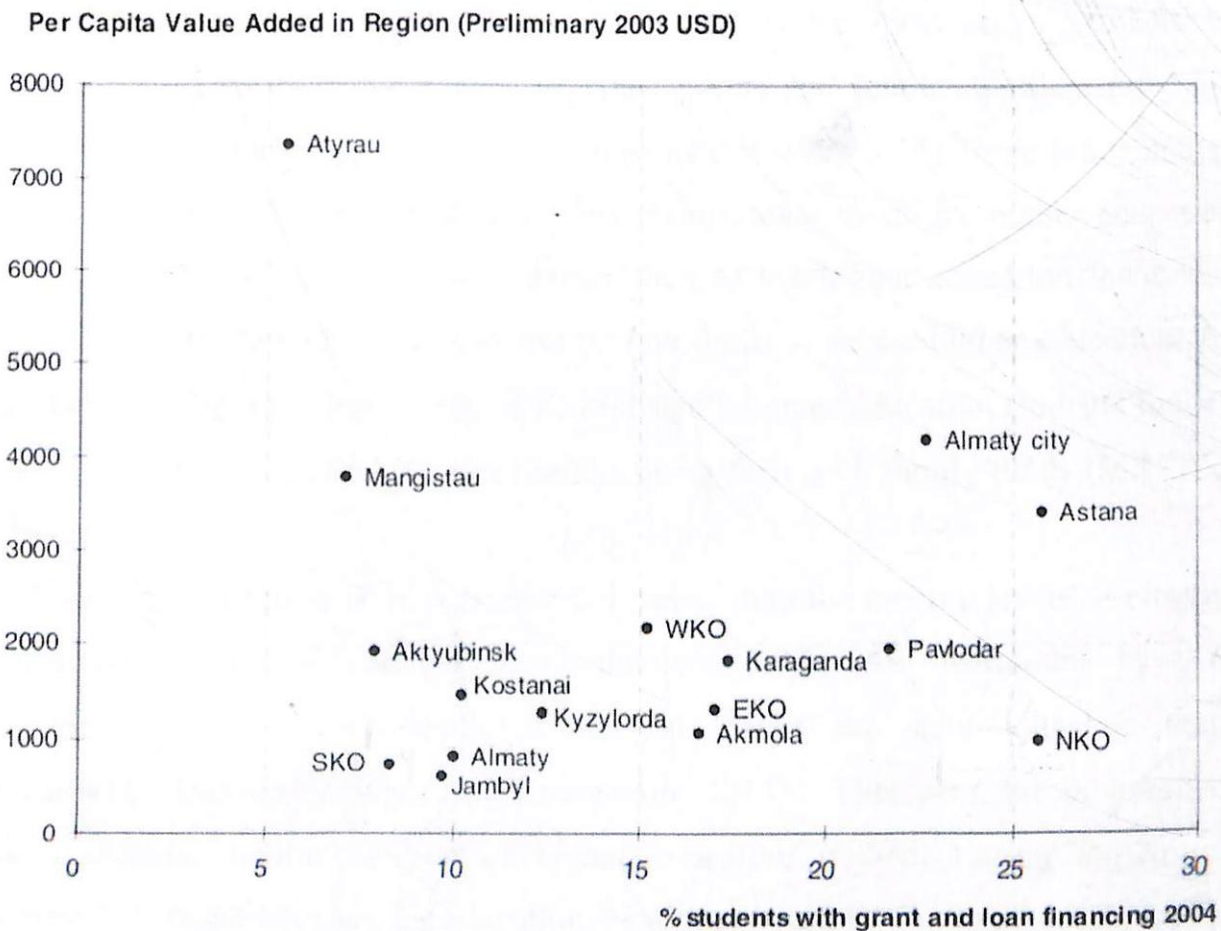
Potential impacts of UNT transitional rates for rural students have access to the resources discussed below (Damitov, et al., 2006). Quotas are based on public educational resource rewards in this way - 30% of government orders for rural students to have the main priorities in the field of learning, economics; 2% in Kazakhstan, who are citizens of Kazakhstan; 0.5% of children with disabilities; 1% of orphans and children without parental support (Damitov, et al., 2006). After introduction of the UNT, government covered approximately 30% of the all students payments and finances in the same amount till nowadays (MNERK, 2014-2015).

As-mentioned above there is a link between the financial status of a region and UNT scores. Therefore, Kazakhstani government should deeply investigate socio-economic status of applicant and make informed decisions about right financing in education area. Actually, Kazakhstan has difficulties obtaining reliable information about social-economic status of citizens and one of the most significant reasons of this problem is widespread "grey" economy (MESRK, 2014). Thus, authentic data about the income levels of the population can not be defined. Data from the Ministry of Education and Science (based on a survey of higher education institutions, to which 80 institutions replied) shows us that almost two-thirds of "students from poor families" study without any financial support (MESRK, 2014). A study by the National Center for Educational Statistics and Evaluation (NCESE, 2014) shows that UNT scores are related to the regions where students are located: on regions with high numbers of people living in lower standards of living, the UNT scores were considerably lower. By comparison, the high-income cities of Almaty and Astana usually achieve the highest scores on the UNT (NCESE, 2012).

Even if there is not enough reliable information about socio-economic status of students, it is surely obvious that there is an interconnection with the geographic location of students, their SES and their academic performance (MESRK, 2014). Rural students in Kazakhstan are more likely to be of low SES status and to perform less well on the UNT (MESRK, 2014). This inequal competition for state grants have a negative effect on the completion of studies by these students, because rural and

urban students do not receive totally fair consideration or do not receive totally fair consideration or appreciation.

Figure 1 Regional value added per capita and grant financing



Source: Damitov, B.K., et al., (2006), "Natsionalniy doklad o sostoyanii i razvitiy obrazovaniya" (National Report on the Status and Development of Education), National Centre for Educational Quality Assessment, Astana.

Financial imbalance is also reflected in the economic report of citizens. According to the employment profile, about 44% of Kazakhstani employees are classified as low income, 43% in the middle group and 10-13% in the incoming

classified as low income. +) > 0 in the income. 84% of students now pay higher

education fees (MNERK, 2014-2015). Access to higher education for young people eligible for state aid is a major problem (OECD, 2016). The national survey found that 59.8% of high schools from poor families did not have the opportunity to continue their education, of which 76% lacked funding as the main reason (OECD, 2016).

The absence of adequate financial support is the most major obstacle to accessing the education in Kazakhstan. State grants and scholarships are provided only for one-quarter of higher education students (NCESE, 2014). There is a voucher-type system of grants in Kazakhstan. This means, state funds for higher education places are allocated to the student, rather than to the higher education institution (NCESE, 2014). And most students use private funds to access higher education. As we can see in figure 2 about 73% of Kazakhstan's higher education students funded their places in higher education institutions using their own family funds (MNERK, 2014-2015).

The rate of tuition is increasing much faster than the income levels of citizens (Nazarbayev University School of Graduation, 2014). All institutions have to guarantee that the tuition levels do not fall below the state education grant (Nazarbayev University School of Graduation, 2014). Therefore, the government cannot increase public funding of higher education without raising the tuition payments for those who pay for education. Minimum grant/tuition funds levels are set on by government, and change by institutions and disciplines (Nazarbayev University School of Graduation, 2014). Typical tuition levels at public institutions range from roughly KZT 300 000 to KZT 700 000 or roughly USD 900 to USD 2 000 at mid-2016 conversion rates and the private institutions usually charge several times more than that (Nazarbayev University School of Graduation, 2014).

Free higher education is available on a competitive basis only and educational grants give students a chance to access the institution of their choice. Mostly, the grants are distributed among state education institutions. The state can regulate the number of specialists that are needed the most through managing the number state

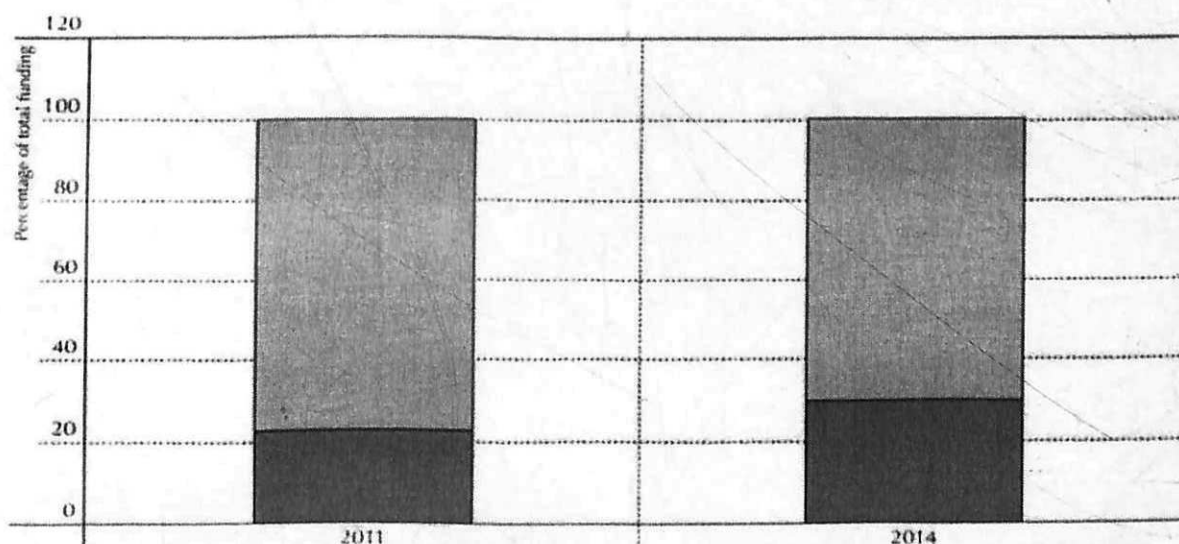
grants' or particular specialities and institutions (Government of Republic Kazakhstan, 2009). Thus in certain fields, such as law, as few as one in ten bachelor-level students studies on a state grant (Government of Republic Kazakhstan, 2009). In other fields, such as engineering and technology, roughly six in ten students hold a grant and in agricultural sciences, as many as eight in ten do (JSC Information-Analytic Center, 2015).

Along with usual state grants government implemented grant set-asides which have been introduced for students from a range of backgrounds: rural students, those in priority social and economic disciplines, Kazakh ethnic minorities, Kazakhs who are citizens of another country, students with a disability and orphans and children without parental support (Government of Republic Kazakhstan, 2009). In the case of equal scores on the UNT, orphans and children who need support are given preferential treatment (Government of Republic Kazakhstan, 2009). Other grants and discounts in many higher education institutions have introduced their own discounts for various groups of students. Fees may be reduced by between 15% and 50% for high-achieving students, elite athletes, students with dependents, and where two or more students come from the same family (JSC Information-Analytic Center, 2015). Data provided by the JSC Information-Analytic Center in May 2016 suggest that nearly one in twelve students may be in receipt of such discounts with students from poor families somewhat more likely to receive them. Employers provide grant funding for students with these grants more common in the fields of engineering and technology (JSC Information-Analytic Center, 2015).

Higher education institutions themselves currently have only limited opportunities to raise revenue and to use this to offer additional financial support to students in need because of lack of authority. Kazakhstan's highly centralized financial regulations do not allow higher education institutions to establish endowments which have proven to be an effective approach for funding targeted initiatives in a number of countries (Griffith University, 2016). The restrictions in Kazakhstan limit higher education institutions' ability to access philanthropy and to

develop active partnerships with industry that could support disadvantaged students. Those who are approved for a state-guaranteed loan still need co-signers. It was reported to the OECD review team that a significant percentage of "guaranteed" borrowers do not in the end receive loans. Sometimes the bank breaks off contact with the borrower, and sometimes a co-signer cannot be found. It was also reported to the review team that the typical credit recourse of students who need to borrow is to private loan markets, where interest rates may be upwards of 25% (Nazarbayev University School of Graduation, 2014).

*Figure 2 Sources of funding of higher education in Kazakhstan*



*Sources: Ministry of National Economy of the Republic of Kazakhstan, Committee on Statistics (MNERK) (2014-2015), retrieved from [www.stat.gov.kz](http://www.stat.gov.kz)*

The Finance Center of the Ministry of Education and Science reported to the OECD review that, since the inception of the State Educational Accumulation Scheme (SEAS) in 2012, only 11 000 people have created deposits under the scheme — a figure which is far below the 500 000 depositors predicted at the program's outset. Kazakhstanis' uncertainties about the economy (given rising inflation and the risk of further currency devaluation) reduce the appeal of a savings vehicle denominated in tenge. There is also a cultural bias implicit in this scheme: it will be

more attractive to those families who have the financial capacity to save and a predisposition towards doing so and it will thus use public funds to encourage behavior that may well have happened anyway. However, it will be less attractive for lower SES households both because they often lack funds to save and because they are less likely to aspire to higher education for their children. Yet it is precisely these families that stand to benefit the most from an effective targeted allocation of incremental public funding.

### **3. Methodology**

The purpose of the research is to identify the sources of higher education in Kazakhstan. At the same time find out the preferences of students in terms of several sources of financing the higher education. As the bonus of the study, dissertation would like to identify the main characteristics of the students who prefer different sources of higher education. These questions should be asked from the big amount of people. As the research approach is descriptive, study is going to use quantitative method. Researchers mostly use this kind of approach in order to describe and show the significant part of the respondents (Leavy, 2017). Despite of the exploratory studies which is aim to dig deeper the problem, descriptive study is conducted when problem is not revealed in the stated context (Leavy, 2017). The subjective opinions matter for qualitative, whereas quantitative aims to collect as much as possible opinions by restricting the mode of answers (Leavy, 2017). In the addition, sating the philosophy perspective of the researcher is exteremly important in order to understand the findings and interperations (leavy, 2017). It helps to understand the point of view of the researcher so that study could be correctly interpreted (Leavy, 2017). This dissertation uses postpositivist philosophic approach which is most appropriate withih the use of the quantitative research (Cresswell, 2008).

#### **3.1. Data collection strategy**

The aim of our study is to accomplish the cost sharing analysis of higher education in Kazakhstan. As research was intended to collect data all over the Kazakhstan and interpret the opinions of different regions, collecting questionnaire through the qualtrics.com which is the most useful research tool. The questionnaire was summed up upon the qualitative research questions of the previous authors such as Mhamed (2007). About 5000 students were emailed all over the Kazakhstan and 416 students answered the survey questions. Snow ball sampling strategy was used and questionnaires were sent by emails and whatsapp application through the researchers' boundaries among higher education instructors and academicians. There

was no criteria to become an interviewee. The only one is to have relation with higher education. As this topic were not explored yet in Kazakhstan, study aims to describe the situation through the appropriate tool. Despite taking the cases of some regions, collecting data all over the Kazakhstan will be useful to generalize the findings.

## 4. Findings

### 4.1. Descriptive statistics

The table 2 shows the descriptive statistics which shows all the demographic information about respondents. Total number of participants is 416. The demographic statistics shows that the respondents are those whom study need as they could be most disadvantaged in acquiring the higher education.

*Table 2.1 - Gender descriptive statistics*

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Female	284	68.3	68.3	68.3
	Male	132	31.7	31.7	100.0
	Total	416	100.0	100.0	

*Source: complied by author based on calculations on SPSS*

*Table 2.2 - Age descriptive statistics*

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	15-24	372	89.4	89.4	89.4
	25-34	40	9.6	9.6	99.0
	35-44	4	1.0	1.0	100.0
	Total	416	100.0	100.0	

*Source: complied by author based on calculations on SPSS*

*Table 2.3 - Education descriptive statistics*

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	School	28	6.7	6.7	6.7
	Special	84	20.2	20.2	26.9
	Bachelor	252	60.6	60.6	87.5
	Master	48	11.5	11.5	99.0
	PhD	4	1.0	1.0	100.0
	Total	416	100.0	100.0	

*Source: complied by author based on calculations on SPSS*

*Table 2.4 – Bachelor specialization descriptive statistics*

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Business Studies	212	51.0	51.0	51.0
	Translation Studies	44	10.6	10.6	61.5
	Law Studies	44	10.6	10.6	72.1
	Education Studies	28	6.7	6.7	78.8
	Engeneering Studies	12	2.9	2.9	81.7
	Social Studies	68	16.3	16.3	98.1
	Technology Studies	8	1.9	1.9	100.0
	Total	416	100.0	100.0	

*Source: complied by author based on calculations on SPSS*

*Table 2.5 – Reason of choice descriptive statistics*

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Own wish	232	55.8	56.3	56.3
	Parents' desire	52	12.5	12.6	68.9
	Low cost of education	4	1.0	1.0	69.9
	Availability of scholarships	64	15.4	15.5	85.4
	Popularity on the industry	24	5.8	5.8	91.3
	Other	36	8.7	8.7	100.0
	Total	412	99.0	100.0	
Missing	System	4	1.0		
Total		416	100.0		

*Source: complied by author based on calculations on SPSS*

*Table 2.6 – Experience descriptive statistics.*

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	0	116	27.9	27.9	27.9
	1-3 years	248	59.6	59.6	87.5
	4-5 years	32	7.7	7.7	95.2
	6-10 years	16	3.8	3.8	99.0
	11- more	4	1.0	1.0	100.0
	Total	416	100.0	100.0	

*Source: complied by author based on calculations on SPSS*

*Table 2.7 – Region descriptive statistics*

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	North Kazakhstan	36	8.7	8.7	8.7
	South Kazakhstan	96	23.1	23.1	31.7
	East Kazakhstan	28	6.7	6.7	38.5
	West Kazakhstan	40	9.6	9.6	48.1
	Almaty	196	47.1	47.1	95.2
	Nur-Sultan	20	4.8	4.8	100.0
	Total	416	100.0	100.0	

*Source: complied by author based on calculations on SPSS*

*Table 2.8 - Revenue descriptive statistics*

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	0-80k	76	18.3	18.3	18.3
	81-150k	144	34.6	34.6	52.9
	151-300k	108	26.0	26.0	78.8
	301- more	88	21.2	21.2	100.0
	Total	416	100.0	100.0	

*Source: complied by author based on calculations on SPSS*

Within 416 participants 70% are females, most of them are young representatives, who study bachelor degree at the specialization of business studies,

whose reason to choose specialization was their own wish; they are somehow experienced at the workplace; mostly from the south and Almaty regions; which average income is between 80-150; whose education paid their parents. The demographic statistics shows that the respondents are those whom study need as they could be most disadvantaged in acquiring the higher education.

First question was about who pays for higher education in Kazakhstan. It is known from the report of Ministry of National Economy of the Republic of Kazakhstan, Committee on Statistics for the 2014-2015 years that government part for higher education payments which include scholarships is the 30% about for 15 years from the introduction of UNT. However, no one knows how students pays for their education. If the average income per family member is 80-150 (among respondents), parents could not be the only source of financing. As Mhamed (2007) stated the existence of “grey economy” which is obvious seen in the difference between the income and expenditure. From the findings it is seen that 50% is paid by parents, approximately 30% paid by government, 10% is held by loan programs and other 10% is equally divided by other different sources such as charitable organizations, university scholarships and others sources.

It is clearly understandable that government should work with industries and other organizations and show the importance of the human resource capacity building in face of giving scholarships. Vital need to rethink the cost-sharing of higher education. From the descriptive analysis of higher education cost sharing theory, this study gives several directions and ideas for policy makers to rethink the existed cost sharing theory. As the income does not match the expenses on the education. The main idea is to add other sources from industries as Germany did it, or create financial loan as US successfully practicing it. It will reduce the risk of existence of “grey economy”. Us this dissertation underlined the different sources and readiness to use the other types of sources by the population and students itself.

Second question reveal the opinion of the students about the preferred sources of higher education. Most of students answered that government should pay for their

education and it is the obvious answer. However, the aim of the question is to identify the readiness of people to pursue different sources of education such as loans and private scholarships. From the statistics it is seen that people may be don't know how to earn different sources and they are not aware of different possibilities such as loans and etc. The point for government and policymakers within the restricted amount of money dedicated to higher education could be taken from our discussions. The study shows the unready-ness of people to take loans or pursue different sources. Therefore, Kazakhstani government should work with industries and banks to develop different programs which support students. At the same time, proper advertisement should be spread among population. As previous loan sheems did not work well because of several reasons such as luck of awareness and extremely high interest rate. The readiness to pay high or low interest rate is other research which could be included into the future directions as well as investigating the reasons why people does not consider other sources as well as government.

*Table 2.9 – HE payment source descriptive statistics*

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Parents	224	53.8	53.8	53.8
	Government	108	26.0	26.0	79.8
	Charitable organizations	12	2.9	2.9	82.7
	University scholarship	12	2.9	2.9	85.6
	Company, in face of future employee	12	2.9	2.9	88.5
	Educational loans	40	9.6	9.6	98.1
	Other sources	8	1.9	1.9	100.0
	Total	416	100.0	100.0	

*Source: compiled by author based on calculations on SPSS*

## 4.2. Other findings

Table 3 reports summary statistics for the most appropriate source of financing higher education which were asked from students. Obviously, students prefer government to pay for them. However, there are different opinions which include companies and third parties. Less students think about loans, private scholarships, charitable organizations and etc. These statistics shows that introduction of studentsloan could be developed. However, it should be good advertised at the same time. The discriminant command in SPSS performs canonical linear discriminant analysis.

*Table 3 - The most appropriate source of financing HE*

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Parents	36	8.7	8.7	8.7
	Governments	272	65.4	65.4	74.0
	Educational loans	4	1.0	1.0	75.0
	University scholarship	8	1.9	1.9	76.9
	Company, as future employee	80	19.2	19.2	96.2
	Charitable organizations	12	2.9	2.9	99.0
	Other sources	4	1.0	1.0	100.0
	Total	416	100.0	100.0	

*Source: complied by author based on calculations on SPSS*

This dissertation third research question is interested in the relationship between the continuous variables and our categorical variables. Specifically, we would like to know how many dimensions we would need to express this relationship. The variables and different characteristics could associate the readiness to use different higher education financing sources. The discriminant analysis is significant as the results of sig. Is less than 0.005 which is equal to 0.004. From the table 5, it is obvious that reason why do students have chosen the exact

specialization could be associated with the preferred source of payment for education. It is seen from the table and significance level is on the appropriate level.

Using this relationship, it is predictable a classification based on the continuous variables or assess how well the continuous variables separate the categories in the classification. From this output, we can see that some of the means of variables differ noticeably from group to group in financing source. These differences will hopefully allow us to use these predictors to distinguish observations in one financing source group from observations in another financing source group. Next, we can look at the correlations between these three predictors. These correlations will give us some indication of how much unique information each predictor will contribute to the analysis. If two predictor variables are very highly correlated, then they will be contributing shared information to the analysis. Uncorrelated variables are likely preferable in this respect.

The discriminant command in SPSS performs canonical linear discriminant analysis which is the classical form of discriminant analysis. In this calculations, we specify in the groups subcommand that we are interested in the variable financing source, and we list in parenthesis the minimum and maximum values seen in financing source. We next list the discriminating variables, or predictors, in the variables subcommand.

*Table 4—The case processive summary*

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.242a	0.059	0.038	1.846

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	85.517	9	9.502	2.788	.004
	Residual	1369.861	402	3.408		
	Total	1455.379	411			

*Table 5 – Discriminant analysis*

		Source	Revenue	Region	Experience	Reason
Parents	Mean	12.5176	24.2235	9.0235	5.074	0.34211
	N	36	36	36	36	36
	Std.	4.64863	4.33528	3.14331	3.83221	0.000
	Dv					
Governments	Mean	18.5376	21.1398	10.1398	9.7431	3.458
	N	272	272	272	272	272
	Std.	0.038	0.05123	0.043	3.564	4.5506
	Dv					
Educational loans	Mean	8.5376	4.5506	3.2423	5.3321	6.2233
	N	4	4	4	4	4
	Std.	0.056	0.099	0.030	0.563	0.574
	Dv					
University scholarship	Mean	12.022	15.5758	21.1398	10.1398	15.4545
	N	8	8	8	8	8
	Std.	3.14331	0.052	0.023	0.431	0.667
	Dv					
Company, as future employee	Mean	4.8399	7.1209	5.6789	4.6754	3.7273
	N	80	80	80	80	80
	Std.	0.103	0.159	0.042	0.651	0.516
	Dv					
Charitable organizations	Mean	3.2678	2.3409	1.6723	5.1209	2.3154
	N	12	12	12	12	12
	Std.	0.176	0.054	0.163	3.248	0.001
	Dv					
Other sources	Mean	3.14331	4.3289	2.8734	1.0912	5.2309
	N	4	4	4	4	4
	Std.	0.006	0.051	0.007	0.123	0.902
	Dv					
Total	Mean	15.6393	20.6762	10.5902	15.4545	13.2424
	N	416	416	416	416	416
	Std.	0.140	0.139	0.057	1.006	0.315
	Dv					

This dissertation is interested in comparing the actual groupings in financing source to the predicted groupings generated by the discriminant analysis. Actually, from the discriminant analysis it is obviously seen that the reason why does students choose the sources come from their characteristics. The study stated 3rd research question according to which study identified some findings. Several interesting findings were underlined. It is the difference among the regions. The poor region students are interested in different sources. It could come from the reason that they are disappointed into gaining the governmental grant. It is supported by OECD (2017). They found out the great difference among the applicants from different regions. Such as applicants from Almaty, Nur-Sultan, or Aktau gain grants much more times better than other students. Unfortunately, no other significant difference or approximate correlation is not found. Experience, age, specialization, etc does not affect the choice of the higher education financing sources.

## **6. Conclusions and limitations**

Sometimes, barriers to higher education arise from students' limited financial resources. Growing up in a family where parents have low levels of education often means having less financial support available for studies. In addition, some young adults may have to enter the labour market early in order to support themselves and their families. Thus if the education system does not support students from disadvantaged backgrounds more challenges for government occur.

According to the State Program of Education Development in the Republic of Kazakhstan (2010-2020) (Government of Republic Kazakhstan, 2009) adopted by the government developed countries spend about 3 percent of GDP for higher education while Kazakhstan spends 1,5 percent of GDP. If Kazakhstan spends two times less than developed countries, government should not wait for results which would be the same.

However, the resolution of this problem is not necessarily "free tuition for all", as that approach can lead to inefficient use of public funds. This option may help those who cannot afford higher education, but also those who can. Instead, decreasing prices to a moderate level of tuition fees would give opportunities to lower-income students and private returns acquired from studying in higher education system, at the same time increase access to higher education and at least save public resources. For instance, Gale and Palter (2013) found that Australian students from certain target groups (particularly low SES students) appear to benefit from three forms of financial support: support to repay tuition fees, such as loan repayment schemes, income support while studying at university and funding schemes to the specific needs of target groups.

Kazakhstani government could use one approach which is embodied in financial aid systems that combine means-tested grants with loans whose later repayment levels are directly related to graduate's income. Australia and New Zealand have used this approach to soften the impact of high tuition fees, encourage disadvantaged students to enter higher education and reduce the risks of high student

loan debt. There are numerous ways to increase access and improve equity related to higher education. Kazakhstani government should make a comprehensive commitment to explore the ebst options for improvement. Not one single country can discuss the problems of economics and political leadership in this millennium without making global reforms on professional education (Zhakenov, 2013).

## APPENDIX

*Thanks that you agreed to participate in our survey!*

**1. Gender:**  female  male

**2. Age:**  15-24  25-34  35-44  45-+

**3. Region:**  North  South  East  West  Almaty  Nur-Sultan

**4. Average income per family member:**  1-80k  81-150k  151-300k  300k+

**5. Education:**  school  special  bachelor  master  PhD

**6. Experience:**  0  1-3years  4-5years  6-10years  11-+

**7. Bachelor specialization:** \_\_\_\_\_

**8. Who paid for your higher education?**

parents  Government  Charitable organizations  University scholarship

Company, in face of future employee  Educational loans  Other sources

**9. The most appropriate source of financing higher education**

	Totally agree	Agree	Neither agree or disagree	Disagree	Totally agree
Parents					
Government					
Charitable organizations					
University scholarship					
Company, in face of future employee					
Educational loans					
Other sources					

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