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**Changing patterns of marital and reproductive
behavior of young women in the urban settlement
(on the example of Ust-Kamenogorsk, East
Kazakhstan oblast, Kazakhstan)**

PhD Thesis

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I declare that this dissertation is my own work under the supervisor of Prof. RNDr. Jitka Rychtaříková, CSc. Where other sources of information have been used, they have been acknowledged.

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In Prague, 22.08.2017

Zhaniya Karmenova

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Changing patterns of marital and reproductive behavior of young women in the urban settlement (on the example of Ust-Kamenogorsk, East Kazakhstan oblast, Kazakhstan)

Abstract

This study primarily addresses nuptiality and fertility patterns among youth in East Kazakhstan region. The data are obtained from censuses, vital statistics and two surveys “Marital and reproductive behavior of young women in Ust-Kamenogorsk” conducted in 2009 and 2016. The survey data collection has been supported by Center of International programs of Kazakhstan “Bolashak” and Charles University in Prague.

The thesis examines demographic behaviours of two main ethnicities (Kazakh and Russian) in East Kazakhstan oblast and influence of such factors like ethnicity, education, place of residence and socio-economic conditions on their marital and reproductive behaviour. East Kazakhstan oblast, compared with other regions of Kazakhstan, has lower birth and marriage rates, higher divorce rates, higher share of non-native ethnicities residing in urban areas and higher proportion of female workers employed in the industrial sector. The author tries to evaluate the importance of marriage to young females and its relation to their reproductive and marital behaviour. The general tendency observed from the conducted survey was that young women wanted to get married rather than stay single pursuing their career or education. Therefore, the author supposes that in spite of last changes in marital patterns it still plays important role in Kazakhstan and marital behaviour should be studied in close connection with reproductive behaviour.

Keywords: Nuptiality, Marriage, Divorce, Fertility, Kazakhstan, East Kazakhstan region, Ust-Kamenogorsk, Youth

Изменение моделей брачно-репродуктивного поведения молодежи в городской местности (на примере г. Усть-Каменогорск, Восточно-Казахстанская область, Казахстан)

Абстракт

Данная работа прежде всего затрагивает процессы брачности и рождаемости среди молодежи на территории Восточно-Казахстанской области. В ходе написания работы были использованы данные переписей населения, текущей статистики и двух социологических исследований на тему «Брачное и репродуктивное поведение молодежи города Усть-Каменогорска», проводимых в 2009 и 2016 годах. Сбор полевого материала обеспечен при содействии Центра международных программ «Болашак» Республики Казахстан и Карлового университета в Праге.

В диссертации исследуется демографическое поведение двух основных этнических групп (казахи и русские) в Восточно-Казахстанской области и влияние таких факторов, как этническая принадлежность, образование, место жительства и социально-экономические условия на их брачное и репродуктивное поведение. Восточно-Казахстанская область по сравнению с другими регионами Казахстана имеет более низкие показатели рождаемости и брака, более высокие показатели разводов, более высокую долю некоренного населения, проживающего в городских районах, и более высокую долю работающих женщин в промышленном секторе. Автор пытается оценить важность вступления в брак для молодых женщин и связь между брачным и репродуктивным поведением. Общая тенденция, выявленная в ходе проведенного опроса, заключается в том, что молодые женщины по-прежнему хотят выйти замуж, а не оставаться одиночками, предпочитая делать карьеру или получать образование. Поэтому автор полагает, что, несмотря на последние изменения в семейных тенденциях, брак играет важную роль в Казахстане, и брачное поведение следует изучать в тесной связи с репродуктивным поведением.

Ключевые слова: Брачность, Брак, Развод, Рождаемость, Казахстан, Восточный Казахстан, Усть-Каменогорск, Молодежь

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Introduction

Differentiation of marital and reproductive behavior in Kazakhstan: the impact of ethnic structure or the growth of urbanization?

The delay of marriage and childbearing has been explained by economic burden and social disorders since Malthus (Agadjanian, 1999). Several researchers found that there is a strong relationship between socioeconomic impact and marriage and fertility rates at the aggregate level (Galloway, 1988; Richards et al., 1983; Weir et al., 1984; Schofield et al., 1981). The quick and hurtful transition in the post-soviet countries may provide a new area of research in marital and fertility behavior because of transformations that these societies have encountered. The Malthusian thesis seems to apply in this case. Marriage and fertility rates have fallen dramatically in Eastern Europe as if in support of this thesis (Conrad et al., 1996). This drop might be explained by transformation of these societies to western model of nuptiality and fertility. Vishnevsky (1996) argued that a drop in fertility rates in post-soviet Russia demonstrated the “westernization” of reproductive attitude in Russia. “Westernization” is the term that is used in the study, since it describes marital and fertility processes that took place in the beginning of the 90-s, when fertility rates in the Western countries were lower than in Post-Soviet countries. This term, however, lost its initial definition, since the fertility rate is lower in Russia now than in the Western countries.

At present, Kazakhstan is a dynamically developing country with a young population that has comparatively favorable indicators of nuptiality and fertility. The sharp decline of birth rate in Kazakhstan in the 90-s has altered to the relative rise in the 2000-s, particularly among Kazakh ethnic group, which has coincided with a period of economic stability in the country (Alekseenko, 2004; Eshpanova, 2005). Qualitative changes in fertility patterns, which had occurred in recent decade, allowed politicians to manipulate the data and present to the public that the cause of that youngsters preferred to marry and have children because the future was clear to them, they felt economically safe and they were ready to have families (Tatimov, 2009; Nazarbayev, 2012). The

birth rate of simple reproduction level is on the rise in Kazakhstan, however, its rate is uneven among regions. It is quite probable that the low population density in Kazakhstan (6.12 people per sq.km.), the uneven settlement distribution and the forthcoming decline of marital and birth rates in large cities will lead to the negative demographic situation of the country.

Therefore, there is a need for a study of demographic situation in Kazakhstan from the scientific point of view, which may assist in development of demographic strategy in Kazakhstan. This kind of analysis should be multifold concerning regional, economic, political and social factors. I hope that this research will contribute to the development of demographic studies in Kazakhstan.

There are regional differences in the marital and reproductive behavior in Kazakhstan; the Southern regions have higher rates of marriage and birth rate, while the Northern regions demonstrate lower marriage and birth rates. These differences could be explained by the different ethnic structure of regions, the economic development of regions, urbanization processes and geographic neighborhood. In this study, the researcher seeks to examine how ethnicities and their behavior influence the marriage and birth rates in Kazakhstan. Generally, Russians and other European ethnicities in Central Asia have had lower age at marriage and higher fertility rates than those in the European part of the former Soviet Union (Agadjanian, 1999). Some researchers argued that these differences were due to the impact of the pronatalist indigenous sociocultural milieu in the region (Bondarskaya et al., 1979; Tishkov, 1994). Likewise, the large European population might also influence the marital and fertility behavior of the indigenous group Kazakhstan, a country in Central Asia (Bondarskaya et al. 1979).

In this study, the researcher seeks to analyze the trends of marital and reproductive behavior based on the data obtained in the East Kazakhstan oblast and projects the future trend. My general hypothesis is twofold. First, the birth rate of a region is largely determined by its ethnic component, such that Kazakhs, a major ethnic group in the Southern Kazakhstan, demonstrate the highest birth rate in Kazakhstan. While Russians, a large ethnic group in the Eastern Kazakhstan, have one of the lowest birth rates along with the highest divorce rates in the country. The researcher used the term “russified” to describe Kazakhs that resided in regions where Russians were the majority of population and changed their behavior because of their influence. Second, Russians residing in Kazakhstan are more traditional than Russians residing in Russia, which might be due to the impact of Kazakh ethnicity. Thereby, the researcher will study the difference of reproductive behavior of two main ethnicities of Kazakhstan and their influence on each other, assuming that Kazakhs, who were less influenced by Russian majority, have more traditional behavior than “russified” Kazakhs and Russians.

Another important issue is a changing picture of marriage and birth rates in urban areas, which is related to the increasing inflow of rural migrants. Urbanization is one of the global processes in the modern world. At present, almost all countries in the world have faced this phenomenon in various forms depending on its level of socio-economic development, geographic location and demographic processes. Kazakhstan is the most urbanized country in Central Asia with urban population comprising 50% of total population (Zimovina, 2009). The growth of urban population

is particularly high in Almaty and Astana cities, and even their suburbs are growing at a fast pace. According to the statistical data, Western regions of Kazakhstan are developing well, but the growth of urban population is limited due to its oil and gas industry, which is located out of urban areas. The Southern Kazakhstan has the highest potential for population growth with 15% of population of Kazakhstan residing there. The population of Shymkent, the largest city in South Kazakhstan region, is almost a million people. At the same time, some cities in Kazakhstan faced de-urbanization process. Karaganda, once, one of the largest cities in Kazakhstan, which is well known for its vast resources of coal and other minerals, faced a decrease in number of population compared with Soviet period due to the problems in the industry (Zimovina, 2009).

In 2003, the state program on development of rural territories in 2004-2010 was announced, the aim of which was to create normal living standards in rural areas on the basis of optimization of rural settlement. As a result of this program, it was expected that only 15% of population of Kazakhstan would be rural inhabitants, while at the moment of the announcement 43% of population lived in rural areas. Despite the program, the announced rates of urbanization were not achieved by 2010. With regards to the change of socio-economic situation the Government of Kazakhstan decided to adjust its plan for development of rural areas, and a new program was introduced by the President in 2012. The President of Kazakhstan offered a new global trend for development of Kazakhstan – social modernization, partly based on the processes of urbanization of Kazakhstan. The program includes a new model for social relationships, new jobs in rural areas, increase of social welfare of rural inhabitants, which shall have an overall positive impact on the processes of urbanization in the country.

At present, migration rates of rural inhabitants into cities in Kazakhstan are quite high. The mass migration of rural inhabitants to satellite towns made the marital and reproductive behavior of towns more traditional. The reason for this was, firstly, because the majority of migrants were of Kazakh ethnicity, and, secondly, that the migrants were young which meant that the most part of them had just reached a reproductive age. Because of this trend, we observe that today rural migrants mostly influence on marital and reproductive behavior of cities, and not vice versa. We can say that there is a process of ruralization that is taking place in cities.

The aim of the thesis is to characterize the pattern of women marital and reproductive behavior and prospects of its development in East Kazakhstan oblast.

For achieving this goal, it is necessary to investigate following objectives:

1. Examine the various theoretical approaches to socio-demographic concept of "marriage";
2. Compare the youth attitude towards marriage, family and birth of children from two surveys conducted in East Kazakhstan dated 2009 and 2016;
3. Determine the regional features of mating behavior and the trends in common-law marriages, extramarital births, divorce and remarriage among young people, taking into account the ethnic component;
4. To assess the impact of population policy and the current family law on matrimonial behavior;

5. To estimate future trends of nuptiality and fertility in the regions.

The object of the study will be marital and reproductive situation in East Kazakhstan oblast and the subject will be demographic analysis of nuptiality and fertility, and their factors.

The research is based on the data from official statistics published in National Demographic Yearbooks, on the data from Censuses, on materials from Demographic collections of Statistical Agency of the Republic of Kazakhstan, on the data from sociological surveys “Reproductive attitudes of women in East Kazakhstan oblast” published in 2003. The qualitative characteristics of youth from Ust-Kamenogorsk were gathered from two surveys conducted by author in 2009 and in 2016 in Ust-Kamenogorsk, East Kazakhstan oblast, Kazakhstan. Also, when describing the reproductive behavior of the youth existed data were supplemented with data from a sociological survey conducted by the National Centre for healthy lifestyle supported by UNFPA in 2010, named "Analytical study of the reproductive health of adolescents and young adults aged 15-19 in urban and rural areas of the Republic of Kazakhstan, their awareness and safe behavior".

It seems that there is a certain relation between marital behavior and reproductive patterns. If a person gets married earlier in his/her lifetime, then he/she will probably have higher reproductive orientation. Higher orientation to have a family refers to the fact that a person who gets married in younger ages has relatively high number of children. Correspondingly, weaker desire in family life leads to a postponement of marriage or a refuse of marriage and consequently having fewer children. In Kazakhstan, the majority of births are still performed in a marriage, so it is important to study primarily marital behavior of young people to make correct forecasts. It is particularly important to study the behavioral aspects of young citizens of the Republic of Kazakhstan, which are at the reproductive age.

Outlines of the study

The main aim of this research is to conduct a comparative analysis of East Kazakhstan for the period 2009-2016 on aspects of marital and reproductive behavior. The analysis is restricted to empirical character of the research and to availability of statistical data.

The first chapter presents basic methodology, such as definitions, theories, and relevant methods. When choosing relevant methods, an important attention was given to data availability, and therefore, the selection is limited to calculation of basic demographic indicators from a cross-sectional perspective for a hypothetical population. When choosing a relevant theory, we analyzed official approaches as well as alternative views. The leading theory that the researcher referred to is the theory of the first and second demographic transition. However, these theories may not always be applicable for situation in Kazakhstan.

The second chapter describes modern trends in marital and reproductive behavior of youth in Kazakhstan generally and in East Kazakhstan particularly. In this chapter the following information is provided: nuptiality dynamics, unregistered marriages and extramarital births, trends of divorce and remarriage. I will also consider the situation with the inter-ethnic marriages taking into account

regional differences. The analysis is performed on the basis of published official data provided by the statistical agency of Kazakhstan. The data from the census until 1989 was used for more in depth analysis. Moreover, the researcher analyzed various socio-economic and political factors which may influence women behavior in the East Kazakhstan. Generally, population differs by number of factors, such as ethnic, territorial, socio-economic, etc.

The third chapter analyzes attitude of Kazakh and Russian youth towards marriage and childbirths, based on results of conducted surveys using the methods of demography. To get the whole picture, a comparative analysis of changes in marital and reproductive behavior for the past 15 years was conducted. Furthermore, the correlation method is used to highlight factors that have impact on marital and reproductive behavior.

The fourth chapter analyzes state policy in the promotion of marriage and family support. In particular, it examines the impact of family policy on marriages, divorces and births. It also offers recommendations for improving state policy to support the family.

Relevance and limitations of this study

Strictly speaking, this thesis is a continuation of the project called “Reproductive attitudes of women in East Kazakhstan oblast” which was held in 2002 as a part of the research program «Strategy of demographic development of the East Kazakhstan oblast” led by a group of scientists from the Demographic Research Institute. This has some positive and negative moments for our research. The positive moment is that this group gathered the basic data and made its analysis, so that we have some demographic data for comparison with the current situation. Moreover, we have an opportunity to monitor how the model of marital-reproductive behavior of women in East Kazakhstan progresses. The negative side is that there may be some divergence in the problem approach, since the previous group may have different methodology. Furthermore, the survey I conducted in 2009 and repeated in 2016 was for a narrower group (18-29 years) but with more issues in it. The young age of the respondents and the relatively short segments of their lives covered by the survey limit our ability to examine higher-order births and marriages. As a result, our modeling of second births is based on a rather small number of observations. It is hard to analyze the formation of second- and higher-order marital unions because few respondents had experienced divorce/separation, and even fewer had remarried by the time of the interview. The narrow age range of the respondents also precludes us from accounting for a calendar period effect: any attempt to split our observation time would lead to an unbalanced distribution of the age groups in the various sub-periods.

Relevance of this work consists of an approach where reproductive behavior is examined with regards to marital behavior. Moreover, the author uses sophisticated methods of demographic analysis including the use of software SAS.

The main points identified in the study:

- ✓ marital behavior of women influences their reproductive behavior significantly due to the important value of marriage in the society of Kazakhstan;
- ✓ positive changes in number of events of recent years are related to a younger population structure than to changes in reproductive attitudes;
- ✓ factors like ethnicity, education and place of residence have exceptional importance in differentiation of women behavior. Thus, it is assumed that the lowest indicators of fertility will have Russian women which live in cities and have university education;
- ✓ new tendency of ruralization of marital-reproductive behavior taking place in cities, which is related to intensive migration from countryside to satellite towns, mainly to Ust-Kamenogorsk and Semey (example from East Kazakhstan).
- ✓ demographic behaviors of two main ethnicities in East Kazakhstan oblast differ significantly from demographic behaviors of these ethnicities living in other regions. Particularly it differs from behavior of Kazakhs staying in South Kazakhstan region and Russians living in Russia.

The question of the family future stays open. State's lack of interest towards marital behavior of population continues in the absence of system of proper current statistical records of marriages and divorces, as well as government policies aimed at strengthening the institution of the family. Therefore, at the beginning of the 21st century, Kazakhstan and Russia have a very peculiar model of mating behavior: from traditional patriarchal families with numerous children to periodically changing unregistered unions with children and without. At present, Kazakhstani women have become closer to European women in their behavior. Women's desire for higher education, increase in an average marriage age, decline of fertility and rise in the number of incomplete families confirms our assumption.

Chapter 1

Theoretical framework

1. 1. Overview of the literature

The research of family and marriage transformation fits into the context of one of the most heated intellectual disputes of the modern developed world. Early studies of family and marriage were reflected in writings of ancients. Ancients highlighted the role of the family in a society (Russell, 2005). Plato was first to suggest the need to control family and marriage by the society. He talked about social character of the family and its close bond with the society. Further, Aristotle defined “the family” and described its role in emergence and functioning of the society. The scientific approach to study the family was developed in XIX century. At this time, sociologists started focusing on the social essence of a family and on changes that happen in family and society in the Industrial Age.

In the Industrial Age the Western societies went through major transformations, such as kinship breakdown and transition to nuclear family (Good, 1963). The transformation of the family institute in urban areas in this period was closely associated with reduced fertility and increased life expectancy. In 1929, Thompson distinguished three groups of countries, which differed in fertility and mortality rates, later in 1945, Davis suggested a term “demographic transition”. Initially, the modernization theory argued that this transition directly depended on the level of economic development of a country. However, the research that was conducted in many European countries in the 1960s demonstrated significant cultural differences in fertility rates (Weeks, 1978). The question of the universality of the demographic transition remains open.

The subject area of population’s reproductive behavior within the general birth rate issue started to attract attention of many scientists since the second half of the 20th century. A series of contributions were published in the fifties, introducing methods of birth rate measurement, designs of marriage reproductive performance (Karmel, Hajnal, Bourgeois-Pichat), parity progression ratio (Henry), cohort method (Whelpton, Henry, Ryder), children’s number expected factors (Whelpton, Freedman). Special sampling survey started like the family survey in England in 1946 under the guidance of D. Glass and the research of social and psychological factors related to fertility behavior. Since this time the research practice has been extending and by the sixties they covered all economically developed and some developing countries. Extensive surveys and comparative

researches have appeared concerning the birth rate dynamics and differentiation with the use of apparatus critics of sciences neighboring demography - sociology, psychology, ethnography and etc.

Within the area of neoclassic political economy they are working out “economic theories of fertility and household”, concepts of “importance and value of children” based on the interaction of economic and demographic process. In the point of view of one of the authors of the given direction named as G. Becker (1974: 304), “the family reproductive activity can be considered as the variety of consumers’ behavior and children as goods”. In view of this, the central position of reproductive behavior research is the characteristics of economic motivation of need in children, influence of family income level, human time factor, housing conditions, education expenses, medical service and social insurance presenting “real level of demand in children” in the result. Other researchers which works worth to mention in this field of study are Schultz, Willis, De Tray , Benham , Mincer , Leibowitz, Gronau, Nerlove and others. In 1974 under editorial of Schultz compilation of works of these authors was combined in «Economics of the family: marriage, children and human capital», which was dedicated to economic theory of family. The work of Gary Becker and others initiated contemporary research on family economics with the application and extension of microeconomic theory and empirical methods.

Throughout the 1970s and 1980s, when public discourse centered on the future of the “family”, researchers studied cohabitation, childbearing outside marriage, alternative life-styles and high rates of divorce. During this period, both in the United States and several European countries, the divorce rate had significantly increased. Furthermore, the growth of extramarital births and unregistered cohabitation joined this trend in the 1980s. The majority of researchers studied changes in family roles (Scinovasz, 1984), and stability of family (Lewis, Spanier, 1982).

From the mid of the 1980s the central theory for explaining demographic processes was the theory of second demographic transition. Up to that time a change in the birth rates was explained by the theory of the first demographic transition (FDT), i.e. demographic revolution. Though in many western countries due to fall in the level of fertility below replacement level, it developed into the theory of the “second demographic transition” (SDT) (Lesthaeghe and Van de Kaa, 1986; Van de Kaa, 2002). The SDT brings sustained sub-replacement fertility, a multitude of living arrangements other than marriage, the disconnection between marriage and procreation, and no stationary population. Eastern European countries face declining sizes, and if it were not for immigration, that decline would have started already in many European countries. In addition, extra gains in longevity at older ages in tandem with sustained sub-replacement fertility produce a major additional ageing effect as well. This population ageing cannot be fully compensated by “replacement migration”. Instead, multi-ethnic societies come into existence (Lesthaeghe, 2010).

Lesthaeghe supposed that the answer to the question whether the SDT can spread beyond Western societies and cultures is probably positive. Just like the FDT in many developing countries benefited from communication revolution, so will also the diffusion of the SDT be enhanced by global communication and by the power of “developmental idealism”. Van de Kaa is not so sure in

this. "Whether the SDT will prove to be as universal as the FDT is impossible to say with any certainty. There is mounting evidence that it will be. It is, in any case, not at all unlikely that populations faced similar conditions in their lives will chose the same behavioral options. But the final verdict on this and certain other issues concerning the Second Demographic Transition is still out." (Van de Kaa, 2008:94).

According to Van de Kaa (2002) SDT has the following main features:

- Substantial decline in period fertility rate, partly resulting from postponement of births, so that (estimated) cohort fertility of currently reproducing women is expected to reach a maximum value well below replacement

- Substantial decline in the total first marriage rate is associated with an increase in mean age at first marriage

- Strong increase in divorce rate (where allowed) and in the dissolution of unions

- Strong increase in cohabitation, even in countries where this was not a traditional practice

- Strong increase in the proportion of extramarital births

- Catalytic shift in contraceptive behavior with modern means replacing traditional methods.

Besides SDT there are also a number of other theories of low fertility, such as rational choice theory, risk aversion theory, post-materialist values theory and gender equity theory (McDonald, 2002), which can explain low fertility. John C. Caldwell seeks a unitary explanation for the fertility declines that have occurred in the economically advanced western countries since the beginning of the Industrial Revolution. He tries to find explanations in the continuing transformation of the economy. The declines in fertility arise from the specific nature of labour force demands. That of the first demographic transition in the late nineteenth and early twentieth century arose because men were doing different types of work from farming. This was work not done around the home and not easily learned by sons copying fathers. There came a need for universal and prolonged education to secure for the sons the better paid positions in the new society. The costs imposed directly by this education and indirectly by children being withdrawn from home production meant that large families were too expensive for most parents and so the first demographic transition took place. With increased industrial development, the demand for additional female labor grew, and from the 1960s fertility fell again, only to stabilize in the 1980s. This time the cause was not the increasing cost of children, but the incompatibility for most mothers between their work outside the home and domestic activities including childcare. Nothing else can be regarded as a basic cause of either fertility transition. Nevertheless, the slow development of primitive means of births control in the late nineteenth century and the explosive development of better method in the 1960s helped dictate the exact timing and speed of the decline. Ideational changes, especially in the areas of sexuality, reproduction, and union formation, were more an effect than a cause, but probably played a limited role in accelerating fertility declines and a greater role in justifying them (Caldwell, 2008).

Coleman (2004) noted that the authors of the "second transition" emphasized sociological aspects - values and family formation in post-industrial societies, which, though connected with the issues of population, but not the subject of demography. He also stressed that the second

demographic transition definitely takes place only in some European countries. At the same time, similar trends in marriage, divorce and fertility, including extramarital births in East European societies and Russia should be explained by different reasons. It is not necessary that these countries will repeat the same European path. Coleman on his side proposed a theory of the third demographic transition - a situation where the indigenous population decreases compared to the number of migrants, and therefore a radical transformation of societies takes place. To prove his point of view he presented data from a number of European countries, according to which the fertility rates are higher among migrants compared to the native population, and among nonwestern citizens compared to western citizens. It should be mentioned that Coleman does not consider his theory as universal and suppose that it should be applied for selected areas only.

Most theories of fertility transition have focused on a range of factors likely to affect couples' childbearing behavior. Although microeconomic mechanisms affecting the costs and benefits of childbearing and childrearing have dominated the research literature (e.g. Becker, 1974; Willis, 1973), additional perspectives have also been suggested. Some of these focus on changes in institutional contexts (McNicoll, 1980; Smith, 1989); others focus on variation in women's relationship to their husbands and in-laws (Dyson et al. 1983; Mason 1987), changes in the social organization of families (Axinn, 1992; Axinn et al., 2001; Thornton et al., 1994), or on diffusion of new technology or new ideas (Anderson, 1986; Cleland et al., 1987; Knodel et al., 1986; Montgomery et al., 1993).

One of the most interesting is the theory of fertility supply-demand (Bulatao et al., 1983; Easterlin et al., 1985), which posits that a couple's supply of and demand for children jointly determine their motivation to regulate – or limit – their fertility. In other words, the number of children a couple wants given the number they have determines their motivation to stop childbearing. This motivation to regulate fertility, combined with the potential costs of regulating fertility – including monetary costs (e.g., the price of a contraceptive method), opportunity costs (e.g., missed work during recovery from a sterilization operation), and psychological costs (e.g., stress associated with violating personal or societal proscriptions against contraceptive use) – determines contraceptive use behavior (Hermalin, 1983). Thus, couples who have at least the number of children they want will tend to use a contraceptive method to terminate future childbearing (permanent contraception) if its cost do not overweigh their motivation.

Social psychological frameworks for understanding behavior are similar to this approach. For example, the theory of planned behavior (Ajzen, 1988; Fishbein et al., 1975) asserts that attitudes (in this case, attitudes toward additional childbearing) lead to behavioral intentions (intentions whether to have additional children), but are mediated by perceived social norms (e.g., disapproval of having or not having more children) and structural barriers (access to or costs of alternatives to having more children). An extension of the theory predicts that attitudes toward alternatives to large families, such as attitudes toward contraceptive use or sterilization, are likely to influence fertility decisions as well (Barber, 2001). For example, the extension predicts that positive attitudes toward contraceptive use are likely to reduce positive attitudes toward additional childbearing, to reduce the

perceived costs of contraceptive use, and to increase the likelihood of adopting a permanent contraceptive method. In the fertility supply-demand framework, negative attitudes toward contraceptive use – for instance, the belief that contraceptive use is immoral – represent particularly important psychological costs to adopting a contraceptive method.

Of course, even individuals who prefer small families and who feel positively toward contraceptive use do not always adopt a permanent contraceptive method. Both the planned behavior theory and fertility supply-demand framework elucidate the importance of barriers to implementing childbearing preferences via contraceptive use. Other perspectives also emphasize the difficulty in translating preferences into rational behavior. One perspective describes humans as rational (e.g. Carley et al., 1994). Another describes the extent to which humans systematically deviate from expected utility theory (e.g., Kahneman et al., 1982; Ross et al., 1977, Tversky et al., 1974). For example, decisions may be made based on whether individuals think that they could possibly regret the decision, rather than on the decisions expected benefit (Bell, 1982; Loomes et al., 1982).

Today family researches study the same subjects, sometimes using different language (e.g. union formation, gay and lesbian partnerships), and with particular emphasis given to their effects on children. Many foreign scientists did and are still doing various researches of family formation process and marriage stability and among them Hungarian scientist E. Bacso and polish L. Stecky and O. Plankova and others.

The problem of reproductive behavior was under a big study in the soviet historiography. Moreover the principal theme of demographic research is presented by the study of birth rate decrease reasons and factors (Borisov, 1976; Darsky, 1972; Uralnis, 1978), the cohort analysis method comes to customary (Steshenko, 1966; Sifman, 1974), and marriage researches (Darsky, 1972; Tolc, 1986; Sinelnikov, 1989) and reproductive guidelines (Belova, 1975) are displayed.

The changes in birth rate character in the current period made necessary the designing of new methods of its measurement. The process research in real generations turned out to be the most effective by so called cohort method, introducing the following development and perfection of the anamnestic method cultivated by Batkis (1964) and Paevsky (1970). Sifman was one of the first ones who recreated the practice of anamnestic research.

Birth rate development peculiarities of some nations were the subject of research of Bondarskaya (1976) «Rozhdaemost v SSSR. Etnodemograficheskiy aspekt». The project of Gerasimova (1976) «Struktura semji» researches the formation process and family demographic structure on the basis of material of social economic sampling family research of Kostroma city conducted in 1969-1970. The monograph presents family research stages in the soviet historiography; family typology by kinship signs, by demographic types and by the number of family members, peculiarities of age related sexual structure of essential family types; interrelation of conjugal state and family structure; factors influencing the family distribution according to the size and others.

In whole, the theory of reproductive behavior was developed in the soviet demography in the seventies that indicates on the qualitative new approach to the given range of problems. Sociological demographical investigations on reproductive subject played a significant part here.

Later theoretical and methodological problems of reproductive behavior were discovered in the Antonov's (1980) research "Sociologiya rozhdaiemosti". This author was the first one who set forth the theory of reproductive behavior on the basis of soviet and foreign research materials, discovering its norms, policies, causes and other subjects. In addition he made an attempt to give definition to birth rate decrease and to determine the demographic policy measures according to its stimulation. In this way, there is a big attention given to questions of reproductive and self-preservation behavior in the tutorial of Medkov (2002) named as «Demografiya».

The book of Golod (1984) «Stabilnost semji: sociologicheskyy i demograficheskyy aspekty» was devoted to the analysis of family development regularity, to the classification of historical types and family values like intimacy and autonomy. The change of policies in respect of children's importance appears in the given project at the consideration of questions of marriage, sexuality, procreation.

The so called opinion researches on the family size were attempted in different countries in the twenties and thirties of the 20th century. One of the first researches was made by the workers of Kharkov University. The survey results of 119 peasant women allowed making a conclusion that the need of a woman in a child at the presence of a small number of children is quickly decreasing.

In 1936 the American Institute of Public Opinion entered upon the regular national-wide polling of men and women about the ideal family size. In 1965 and 1960 in the USA they implemented national-wide polling on the extensive research program of "American family development" (GAF-1, GAF-2 - opinion survey about the number of children and after 5 years period the degree of their realization on selection, representing the population of the whole family). Along with the ideal number of children the desired number revealed at the successful family conditions and an expected number of children. Similar researches were conducted in 30 countries approximately.

Since the beginning of the 1960s KAP (which is abbreviation of "knowledge, attitudes, and practice") – surveys in Asia, Africa and Latin America have been developing broadly where they investigated the policies of child sex and motives of child birth in a family (Casterline et al. 2000). A distinctive peculiarity of these researches was the conduction of experiments in the developing countries directed on the education of respondents for methods of contraception and birth regulation control.

In soviet science the opinions on family size were systematically investigated since the middle of the 1960s within the direction of "birth sociology". Since 1969 regular all-USSR polls of women have been conducted on expected number of children and on indicators of preferred number of children. In the 1970s with the appearance of the reproductive behavior theory in a more developed form, organized sociological demographical researches of new type (Belova, 1975; Bondarskaya, 1976; Borisov, 1975). For understanding the reproductive behavior mechanism the information on all of the behavior components was needed: the needs in children, family conditions for its

realization, value orientation of individuals (as criteria of valuation of reproductive situations). The Center of MGU on population's problem research fulfilled investigation by the united program (including questionnaire with more than 600 questions) in 1976 and 1978 in Moscow and in Vilnius in 1976.

The collapse of the Soviet Union and the resulting social and economic crises of the 1990s constitute a unique and nearly experimental setting for the study of the demographic responses in times of structural change. A substantial number of studies have tried to understand the demographic consequences of the collapse of the Soviet Union. Both the changes in mortality and reproduction (i.e. marriage and fertility) have been studied in details hitherto (for mortality: among many, Shkolnikov et al., 1999; Vallin & Meslé, 2006; e.g. Alder, 1997; Barkalov 2005; Eberstadt, 1994; Kharkova & Andreev, 2000; Sobotka, 2003; Witte & Wagner, 1995). These studies have focused however almost exclusively on the former socialist countries of Central and Eastern Europe, the Baltic countries, Russia and Ukraine. In comparison, only a limited number of analyses have addressed fertility and family changes in countries of Central Asia.

The transition from a planned to a market-oriented economy and the accompanying complete redefinition of the structure of opportunity and constraints observed in post-soviet republics during the 1990s offer a fascinating and nearly unique natural experiment to study the marriage and fertility responses to structural changes, since these countries shared fairly similar initial conditions during the Soviet Union, but differed radically in their development paths towards a market-based economy.

Significant contribution to the decision of methodological problems of marriage in the Russian historiography was made by scientists-demographers: Bessmertnyi (1991), Bondarskaya (1976), Vasiljeva (1975), Vishnevsky (1976, 1992), Golod (1984), Darsky (1972), Ilyina (1976), and Mackovsky (1989).

It should be noted that in 2002 Russia was included in a big international project named as "Generations and Gender Project" implemented by the consortium of many leading foreign exploratory demographic centers coordinated by the European economic commission of UN. The Generations and Gender Survey (GGS) is one of the two pillars of the Generations and Gender Programme designed to improve understanding of demographic and social development and of the factors that influence these developments. Institute of Demography (IDEM), Higher School of Economics (Moscow) continues to take part in this project (its scientific director in Russia is S. Zakharov) in a close cooperation with the Independent Institute of Social Policy (Moscow) and Max Planck Institute for Demographic Research (Rostock, Germany). The Russian side was entrusted to do the approbation of the essential questionnaire (conducted in 2002) by the result of which they made changes to the structure and content of the questionnaire that became the basic one for all of the countries participants of the project.

In summer 2004 within the GGP/GGS project in Russia the essential poll of population was held by the national representative sorting. The research was conducted by the Independent Institute of Social Policy (Moscow) at the financial support of the Pension Fund of the Russian Federation

and Max Planck Institute for Demographic Research (Germany). In summer of 2007 they performed the second wave of GGS in Russia at the financial support of the Pension Fund of the Russian Federation. The volume of selection like in the first wave made up more than 11 000 of respondents of both sex aged from 18-79 in 32 regions and 7.5 thousand respondents out of them (about 70%) were questioned in 2004 and 2007.

The key features of the survey include panel design, multidisciplinary, comparability, context-sensitivity, inter-generational and gender relationships. The survey applies the life course approach, focusing on the processes of childbearing, partnership dynamics, home leaving, and retiring. The selection of topics for data collection mainly follows the criterion of theoretically grounded relevance to explaining one or more of the mentioned processes. A large portion of the survey deals with economic aspects of life, such as economic activity, income, and economic well-being; a comparably large section is devoted to values and attitudes. Other domains covered by the survey include gender relationships, household composition and housing, residential mobility, social networks and private transfers, education, health, and public transfers. It includes the core that each participating country needs to implement in full, and four optional sub-modules on ethnicity, on previous partners, on intentions of breaking up, and on housing, respectively. The participating countries are encouraged to include also the optional sub-modules to facilitate comparative research on these topics.

Unfortunately Kazakhstan did not take part in the GGS survey, whereupon we don't have an extensive base on the given range of problems. Separate researches of reproductive behavior were made by the regions but there is no all-Kazakh data. It was Yesimova who studied the birth rate problems in the South Kazakhstan region. The reproductive policies of women in East Kazakhstan were researched by the group of scientists demographers under the direction of Alekseenko. It was this research that became fundamental for data comparison and conduction of analysis in the given project.

On the modern stage within the international program of medical demographic researches assigned to get and analyze the information on birth rate, family planning, mother and child health the Kazakh Academy of nutrition conducted medical demographic research in 1995 and 1999 at the technical support by Macro International Inc (USA) and at the financial one by USAID in Kazakhstan. It was the first research of demographic situation and health condition conducted on the all-national level using methodology of social survey, that allowed to separate out regional ethnic age related peculiarities of child-bearing process and to get data on such little-studied questions as reproductive health and nutrition of women and children, the practice of breast feeding, contraception use and others. The survey results were used later in at the program development in the sphere of public health of the Republic of Kazakhstan (Mediko-demograficheskoe issledovanie Kazakhstana, 1999).

The other important source for issues of birth rates in Kazakhstan was a survey conducted by the Health, Nutrition, and Population Family (HNP) of the World Bank's Human Development Network. As a result of this work, a paper named «Fertility regulation behaviors and their costs:

Contraception and Unintended Pregnancies in Africa and Eastern Europe and Central Asia» was published in 2007. The report consists of three parts: global trends in fertility, contraceptive use and unintended pregnancies; studies of two regions (Africa and Eastern Europe/Central Asia) and two countries (Nigeria and Kazakhstan) on the costs of fertility regulation behaviors and provider attitudes towards contraceptive use. The sixth chapter of this work was devoted to Kazakhstan that was named «Provider attitudes towards contraceptive methods and abortion and cost of services in Kazakhstan» (Lule et al., 2007).

Authors of this chapter (Rani, Chao, Arystanova and Radhimova) identified the following specific objectives of the study:

1. to assess the attitudes and perceptions of service providers towards contraception and abortion that may encourage or discourage reliance on abortion as a means of regulating fertility;
2. to understand the financing of abortion and family planning services and estimate the public financial burden of avoidable abortion services in Kazakhstan.

For this purpose researches conducted sociological survey. The field work was done from July 2005 to September 2005. The findings from the primary data were triangulated with secondary data collected under Kazakhstan Demographic and Health Surveys (KDHS) in mid-1995 and -1999 (KDHS 1995; 1999), and with other existing literature and data to derive the key recommendations and conclusions (Lule et al. 2007).

Three-stage stratified random sampling was used to select the health facilities—the primary sampling units—for this survey. Kazakhstan is divided into six geographical regions which are then administratively divided into 14 oblasts (provinces) and 220 rayons (districts), in addition to Almaty and Astana City. In stage 1, one oblast with relatively high abortion rates was sampled from each administrative Region (except from Central Region), and leading to the selection of four oblasts: South-Kazakhstan, West-Kazakhstan, North-Kazakhstan and East-Kazakhstan. Since abortion rates vary much more across regions, rather than between oblasts within the same region, this strategy led to a selection of oblasts with high, medium and low abortion rates. In addition, both Almaty and Astana were sampled, at the request of the Ministry of Health. In the second stage, one rural district and one urban district were randomly-sampled from the list of all the rural and urban districts, respectively, in the selected oblasts. Finally, one facility of each type, providing either family planning or abortion or both services was sampled randomly from the list of all the health facilities in that particular district, arranged by the type. A similar approach was used in the urban areas.

At least two service providers involved in providing abortion and/or family planning services were selected from the sampled facilities. In all, data were collected from 126 service providers from 52 health facilities. Structured questionnaires were used to elicit the providers' responses. Follow-up qualitative questions were asked to gain additional insight into providers' attitudes. The questionnaires were translated into the local languages and were administered by two trained professionals.

A structured questionnaire was used to gather costing data on both abortion and family planning services. Costing data on abortion were collected from 20 out of 52 sampled health facilities as only

these health facilities provided abortion services, due to a Ministry of Health order stipulating that abortion services be provided exclusively by facilities with inpatient and emergency services. Family planning services, excluding female sterilization, were provided only through the primary health care facilities such as city polyclinics, Family Group Practices, Women Consulting Centers attached to tertiary level institutions, etc. The costs of family planning services were collected from these facilities.

Medical personnel in charge of the provision of abortion and family planning services at the sampled facilities (gynecologists, nurses, midwives, et al.) were interviewed about the current clinical practices followed for abortion (including treatment of abortion complications) and for family planning services.

This work provides a rich source for little-investigated issue of contraceptive culture and attitude to abortions in Kazakhstan. Authors suggested a number of conclusions and implications. Kazakhstan still preserves high rates of induced abortion. Both, induced abortion and contraception in Kazakhstan is linked to a strong desire to control family size. Despite documentation of favorable attitudes towards contraception and negative attitudes towards induced abortion, in the absence of quality contraceptive services, induced abortion rates in Kazakhstan will remain high. The study clearly establishes the cost-effectiveness of investment to expand method choice over public spending on abortion services. Since, in my dissertation, I investigate the attitude of youth to these issues, this research has invaluable importance to me.

In general, it is worth mentioning that issues of birth rates and marriage in Kazakhstan have been little-investigated up to this time, therefore, the main source of information for the author was the two sociological surveys conducted in October - November 2009 and in Ust-Kamenogorsk, a regional center of East Kazakhstan.

1.2. Definition of marriage and nuptiality. History of marriage in Kazakhstan

The family is one of the fundamental social institutions in all societies, and such processes like marriage and birth form our imagination about it. But the definitions of the family and connected processes vary from place to place and from time to time. This section discusses theoretical issues in studies of marriage. It begins with the problems that arise in attempting to define the marriage and nuptiality. Next it describes the history of institution of marriage, its legal structure, and key features of the institution.

The marriage in demography is determined as “the ceremony, prescribed by law or custom, which establishes such a union between a man and a woman as spouses, i.e. husband and wife” (Multilingual demographic dictionary, 2013).

Relationships between male and female that lead to the birth of children, that is registered by the public authority and recognized by the society are referred to as marriages. Male and female residing together with their children (or sometimes with other relative) forms a family. Getting

married, in most countries today, is considered as a conscious decision of marital partners that is sanctioned and sometimes even led by the society. There are two main group of factors that determine willingness of marriage and its possibility, psychological, i.e. subjective factors play a significant role here (Antonov et al., 1996). Forms of marriage and family are objective factors, which are sustained by traditions, laws etc. However, getting married and choice of marital partner are not arbitrary. They are subject to certain cultural, social, psychological and socio-biological factors.

In Kazakhstan, the term marriage went under changes several times due to political and socio-economic reasons. Before, the family comprised a cell in the “aul” (village in Kazakh), which consisted several relative families. Several “auls” comprised family-“aul” community. A head of the family was considered a father, a spouse, which managed all family property, but not to the damage of other members of the family. Rights of the wife, daughters and even mothers were limited.

In comparison with other Central Asian women, Kazakh women had a greater freedom in family and in social life. “Adat” is a common law that does not restrict the number of wives a man may have. However, most of families were pairs (a man and a woman in a family), and only rich Kazakh men were able to sustain a few wives. Each wife was devoted with separate household. The senior wife, “baybishe”, had more rights among all wives.

The common law prohibited exogamous marriages. The only exception was allowed to “tore” - aristocratic class in the Kazakh society, direct descendants of Genghis Khan. Types of marriages were as following:

- “Kalym” (bride price) marriage
- Non “kalym” (without bride price) marriage
- Cradle agreement
- Exchange marriage
- Marriage with kidnapping
- Marriage with working off
- Levirate marriage
- Sororate marriage

The most common type of marriage was “kalym” marriage. The marriage was concerned as legal once “kalym” was paid for the bride. The agreement on marriage was concluded between parents. The marriage would be dissolved by agreement of both parties by return of “kalym”. The amount and content of “kalym” varied through the regions, and the amount of “kalym” was not bounded by the common law. The most frequent amounts of “kalym” that were paid was the high “kalym” – 77 horses, medium – 47 and low – 17. The “kalym” could be paid by things, money, through several payments. The payment of symbolic “kalym” consisted of several head of livestock. The father of the bride, on other hand, must have provided dowry, which included personal and real assets. The composition of “kalym” was not determined strictly, however, a wedding house (“yurta”), “saukele” – bride’s hat must have been included. Also, the dowry usually included sets of

clothes, beddings, home utensils, and livestock. The amount of dowry was equivalent to the amount of “kalym”.

The marriage without “kalym” was practiced very rarely. Usually, this was the case when parents agreed to marry their children without paying “kalym”. Also, the amount of “kalym” was lower if agreed while the children were still in the cradle. Exchange marriage considered that several marriages were agreed when “kalym” was not paid. “Adat” attitude to marriage with kidnapping was not uniform. Kidnapping of bride by groom was not a serious offense, especially if the bride-price was paid. Usually it ended in reconciliation. Kidnapping of bride that was proposed to someone else was a capital offense. If she remained in the kidnapper’s house, the bride-price had doubled, otherwise, she was returned to the former groom and the full bride-price had to be paid. Kidnapping of matched bride has been with her consent to treatment was accompanied by her parents to ask for forgiveness and a fine. In this case, the usual procedure began matchmaking and marriage, but the father of the bride could not refuse to release a dowry. Abduction same without the consent of the bride was considered a serious crime and the perpetrators should be a heavy fine.

Levirate or “amengerstvo” was one of the ancient forms of marriage. Widow after her husband's death after one year was to marry one of the brothers of her husband. The purpose of this marriage was the desire to preserve agriculture aside from crushing and leave the children in the community of their father. Customary law provides for other options. The widow could marry a stranger, but in this case she was deprived on parental rights to children and the object of her preference had to pay a ransom to the family of her previous husband. In case of wife’s death the husband had the right to marry her free younger sister. But her farther could refuse to marry because sororate right was not as binding as levirate. According to customary law dissolution of marriages were allowed by the will of the husband in case of his wife's infidelity or "disrespect". In this case, husband let his wife go to her parents with the part of dowry or with children, returning her dowry. Customary law norms allowed divorce on the wife’s initiative in two exceptional cases: with the apparent inability of husband to sexuality and with the systematic torture by husband.

After the October Revolution of 1917 Kazakhstan became one of the Soviet Union republics and began a new stage in the development of family law. Soviets destroyed the centuries-old nomadic way of life in steppes of Kazakhstan. Due to collectivization and industrialization most of Kazakhs left a nomadic lifestyle and settled in villages, towns and cities. On December 18, 1917, a decree "On civil marriage, children and the introduction of civil status" was issued. At the same year a decree “On marriage dissolution” was enacted. Unregistered marriage was equated with registered marriage, and extramarital children were equalled into the rights with children, born in marriage. Changing the legal framework was reflected in the transformation of attitudes towards marriage. Marriage started to be seen as a special institution. The Soviet Union aimed at determining marriage differently than in the Western world. First, marriage became secular since there was no place for religion in the soviet community. Second, marriage could not be considered as a contract; it had to be free of material purposes. The concept of “communist marriage” became actively promoted. According to this concept, marriage is concluded by love and mutual interest,

does not bear contractual obligations since a honest soviet person would possess only what she had earned (Nechayeva, 1984).

Later on, the concept of “communist marriage” was replaced by the concept of "socialist marriage", which was developed by theorists of socialist formation. In this concept, a lifelong marriage was included to the previous definitions. Such a position was based on the natural assumption that one of the main goals of the marriage should be the childbirth and upbringing of children (Nechayeva, 1984). However, the principle of lifelong marriage even in the days of "developed socialism" in the USSR had more desirable than actual character. The contrast of "socialist" marriage from "capitalist" marriage (Harchev, 1964) was especially emphasized in soviet literature. Soviet science showed a strong tendency to justify marriage in socialist society as a fundamentally new form of marital union of a man and a woman, different from the forms of marriage, applied experienced abroad in foreign countries. As opposed to the western family that was based on private property, inheritance and family nurturing, the soviet family did not have a right for private property, while all nurturing and education of children was delegated to society. Most scientific work consistently emphasized that marriage may not be a bargain or agreement, but is legally formalized, free and voluntary union of a man and a woman, aimed at creating a family, generating mutual rights and obligations (Yuridicheskij enciklopedicheskij slovar, 1984). With some minor differences the concept was given in works of Boshko, Matveyev, Nechayeva , Ryasentsev, Shahamatov etc. Subsequently, with the development of society, the concept of marriage in the Soviet science of family law was undergoing some changes, retaining, however, its understanding of its main meaning as the man and woman union to create a family.

Since the beginning of "perestroika" in the 1990s another restructuring of the institution of marriage and family started. Under the influence of "shock therapy" of socio-economic transformation and uncontrolled flow of information with pornographic content part of population, especially the youth, has viewed marriage as a temporary alliance with the aim to satisfy sexual needs, and not with the aim of creating a family and childbearing. There is a growing number of so-called serial monogamy, i.e. repeated marriages, mainly after previous divorce. The norm is that a person, man or woman, is constantly available for marriage, regardless of whether he/she is married or not. According to the American sociologist Farber (1964: 109) "every man, at least in theory, is always a potential spouse for all other members of the opposite sex. It is important that marital status of person does not restrict him/her in the sense that he/she remains possible spouse in later marriages".

Repeated marriages or “serial monogamy” is explained in the works of some American authors. According to them, in the context of globalization of economy the expansion of the American way of life with the cultivation of mass consumption is observed, which is inconsistent with the successful family functioning. Emphasis of that particular perception of the world of things, as its ability to meet the needs of the perceiver, can be transferred to the human world. Range of “goods” (people) is so huge that during selection each of them may be tempted to try the rest. Both serial monogamy itself and conciliatory attitude to it as a phenomenon reflects the growth of institutional

crisis of the family, the consequences of which appear so threatening in modern demographic dynamics.

Finalizing all said above and based on observed works of sociologists and demographers the following definition of the marriage could be done. Marriage is a voluntary, equal union between man and woman, created to address sexual, physical, domestic problems and give childbirths, registered or non-registered in accordance with the law, but recognized by the society. This definition is contrary to the legal justification of marriage.

By the legislation of the Republic of Kazakhstan the marriage is defined as a free, voluntary and equivalent union of a man and a woman based on sense of love and respect concluded for a family and generating mutual rights and duties of spouses (Kodeks Respubliki Kazakhstan o brake i semje, 2011).

As to marriage and marital relations, there are inadequate theoretical tools, which arose from the uncritical transfer of legal terminology to demography and sociology of family and understand which is not always easy. Such terms as “civil marriage”, “cohabitation”, “common-law marriage” either identified or opposed in different sources, and the authors refer to specific regulations. In particular, the term “common-law marriage” is sometimes used as synonym of cohabitation, contrasting to registered marriage.

As regards to “civil marriage”, completely opposite definitions of the term are used in different sources. Prior to 1917, under the civil marriage it was understood marriage contracted without committing the respective religious ceremony (wedding, etc.).

Some modern authors (Volkov, Zakharov) suppose, that civil marriage should be mentioned as registered marriage, and term “cohabitation” used when marriage is not legally recognized. Other authors (Medkov, Vishnevsky) under the “civil marriage” understand marriage, which is unregistered in registry office and allocate such forms of marriage as a legal marriage and common-law marriage (consensual union).

Consensual marriage is a marriage in which a man and woman live together but their relationships are not legally authorized. The information about such marriages is gathered during the census or surveys. Obligatory condition for recognizing of such a marriage is living in joint household, occasional meetings of sexual partners cannot be considered as consensual marriage. The second requirement is its duration, but put a clear time frame in this case is not possible, that’s why this condition is optional.

In different cultures, consensual marriages have different status, specified motivation and characteristics of spouses. In Ancient Rome, consensual marriages named as concubinat (from Latin “con” - together and “cubo” - lie) were popular. They appeared because marrying people from different social classes was prohibited.

In Soviet Union in 1926-1944 years, consensual marriages in terms of the legal consequences were equaled to registered marriages. In modern Family Code of Kazakhstan unregistered marriage does not constitute legal rights and responsibilities of spouses. Extremely controversial statements could be found in some sources, which use different terms, such as: following concepts are

synonymous with consensual marriage: common-law marriage, civil marriage, unregistered marriage, consensual union, cohabitation.

It should be mentioned, that from 1917 “civil marriage” was a synonymous to registered marriage under the Decree of VCIK (All-Russian Central Executive Committee) and SNK (Council of People's Commissars) RSFSR from 18th of December 1917 “About civil marriage, children and registration of the civil status acts”. At the same year term “marriage” was determined as free cohabitation of two persons, joint cohabitation based on the principles of love, friendship and partnership. Thus, civil marriages could not be identified with unregistered relationships.

The term "common-law marriage," regardless of its use in law beyond the purely legal terminology it should only be used for the detection of the presence of real and effective marital relations – irrespective of their legal form. Opposition of common-law marriage to registered marriage is based on misunderstanding: registration of the marriage does not mean that spouses live together, and lack of registration does not mean that partners have strong union.

Sinelnikov, a famous Russian sociologist, has the same opinion. Type of marriages – consensual and common-law - is not mutually exclusive. The majority of registered marriages are also common-law marriages, and majority of common-law marriages are registered. Among registered marriages could be pro forma marriages that were legally documented not for family creation, but for acquisition of housing rights, vested interests or other. Some of registered marriages already disintegrated, but officially, they still exist as divorce is not registered. There are cases when someone is in registered marriage with one person, and in fact lives with another person. Therefore, only registered and unregistered marriages could be observed as alternative types.

Marriages could be divided on registered and unregistered. Nowadays unregistered marriages become more and more popular. The modern reasons for increase of proportion of unregistered marriages are different. In particular, economic independence of woman, development of medicine and contraception changed the value system of people, transformed marriage institute provoking the growth of consensual marriages. Regarding motivations and characteristics of spouses entering into consensual union, the following types of marriages could be allocated. "Trial marriages", when partners try better to know each other before marriage. "Student" marriages are formed in the younger age groups - when young people learn, making a career, accumulating capital for civil marriages, creation of family and childbearing. "Adults" marriages are formed among older people (over 40 years), who do not consider a legal marriage as a necessary reason to live together, give a childbirth and parenting. Typically, these marriages are repeated.

From sociological point of view, presence or absence of official registration of marital relations is very important indicator of the state of the family as a social institution. The increased number of official registration abandonment and spread of cohabitation, which was observed in the last decade, indicates the deepening crisis of the family, degradation of family value, the price of which is worsening of social ill-being, the growth of deviant behavior (Golod et al., 1994). The mere

possibility to live in cohabitation without official registration of marriage reduces the value of legitimate marriage as the only form of living together.

Unregistered marriages take a significant place in demographic analysis. The reason for this that both registered and unregistered marriage are connected with childbearing, and the current trend in our country and in western countries is increase in number of extramarital childbirths.

It is necessary to give definition to unregistered marriage, or cohabitation, and say few words about its indicators. Cohabitation is a sexual union not executed in accordance with the marriage laws of the country. Cohabitation is illegal marriage, nonscientific name of sexual union that is not issued in accordance with the marriage laws (Socialnaya enciklopedia, 2000). Cohabitation is living together in the same household of two adults who are not related by marriage or family relationships, but have emotional and sexual relationships (Knax et al., 1991). Motives, because of which people are not legally formalized their relationships, may be different. Accordingly, we can distinguish the following types (categories) of cohabitation and cohabiting: "emotionally trapped", but not yet ready for the marriage; intending to marry and living together waiting for it; living together for economic reasons (poor); considering cohabitation as a permanent alternative to marriage. Many people refuse to register the marriage primarily because they do not believe in its lifelong nature and do not want to create problems with divorce and the subsequent division of property. They want to keep the freedom to break with their partner, if love from one or both sides passes away.

We should also remember that in the definition of marriage, it is specified that its main purpose is to create a family. In the absence of adequate motivation such a union should not be considered as marriage. Extremely doubtful statement that marriage and family in our time just take some new forms: such forms of relations between men and women exist for centuries and they were never considered neither marriage nor family. These "families" absolutely are not able to provide neither reproduction of the population, nor normal upbringing of the rising generation (Borisov et al., 1995).

If the first three categories do not deny marriage itself, and even believe that they as though "check" themselves before making serious decisions about marriage, the fourth category includes people who do not wish to marry for any reason, right up to allegedly principal, "philosophical" reasons. Many people who are currently living in cohabitation, before that already were in registered marriage, but their experience of married life was unlucky, and they had to get a divorce. Moreover, they do not want to risk again, fearing to relive the drama of the divorce, but they have nothing against regular sexual relations with a partner they love. Others do not marry on the principle, as its "philosophical" opponents. These people, like homosexuals, according to the modernists, supposedly carry a "new sexual morality," that is identified as more "democratic" and more "tolerant" norms of sexual relations, but in reality, they are "vanguard" of the upcoming family destructive forces (Solodnikov, 1994).

According to observations of domestic and foreign researchers, there is a radical transformation of nature of marriage and matrimonial behavior (Golod, 1997). As pointed out by

Zakharov, common change of a marriage model connected with the transition from almost compulsory marriage ritual, symbolizing the completion of the entry into the adult socio-demographic stratum, to marriage, based primarily on rational considerations, including economic, and, in the general case, it does not matter what was the impetus for changing of external motivation (Zakharov, 1996).

Based on the economic and socio-cultural relations marriages can be divided on endogamous and exogamous. Wherein endogamy partner is chosen within a group – kin, class, caste, ethnicity, social status, etc. Exogamy allows selection of a partner from a foreign group. One manifestation of the division of marriages are that endogamous and exogamous marriages refer to mononational and multinational (multinational society), as the basis of classification is the ethnicity of the spouses.

Mono-ethnic marriages are dominant within one nation. Enter in marital relations due to language, religion, traditions and customs, behavioral stereotypes, ethnic identity and characteristics of mentality, serves as a kind of ethnos "stabilizer" (Kozlov, 1997). Endogamy ensures uniform ethnicity of families, socialization ensures continuity of the material and spiritual heritage, conservation, preservation of cultural core of ethnic group, transfer it to future generations and ultimately - the existence of the ethnic group as a special community of people (Kon, 1971).

It should be noted, that in general this trend was typical for the tribes, and contemporary ethnic communities with different levels of social and economic development. But in the second half of the XXth century the situation changed. Thanks to the development of mass media, communication between nations becomes not only a possible event, but an everyday occurrence. Structure of cross-border communication and cross-border marriages develops (Marinin et al., 1998).

Interethnic marriages are of particular interest because they represent a new trend in the development of family institute, which will have an impact on international relationships in the future and on dynamic of ethnic composition, especially in countries with mono-ethnic population. Unfortunately, this phenomenon has attracted relatively slight attention of scientific community. Interethnic marriages and families reflect a lot of ethno social and ethno demographic processes. Studying them allows better understanding of some processes; reveal their laws and consequences. Thus, the study of interethnic marriages is important not only from scientific point of view, but for solving problems of modern society. Interethnic marriages are one of forms of exogamy. By registration in registry office interethnic marriages could be divided on registered and unregistered with the following division on all possible forms.

We can conclude that modern definitions of joint unions of men and women, which are reflected in classification of marriages used by demography and sociology, have their origins in legal regulations that were exposed to historical transformation. Particular definitions, such as “free and voluntary union”, “monogamous union”, “union between the different sexes” included in definition of marriage. Moreover, the term “civil marriage”, which causes great controversy, better not to use in scientific literature.

For demographic situation, the proportion of registered and unregistered marriages is very important. Since the number and proportion of unregistered marriages in Kazakhstan is increasing, it becomes a particularly important issue to study focusing on the causes of its formation, development trends, implications for the future of Kazakhstan, and attitude of youth to these unions.

The interest of demographers to marriage was traditionally considered as secondary comparing with analysis of fertility. However, the shifts of the institution of marriage and transformation of marital processes in the second half of the XXth century increased the interest to analysis of marriage. If marriage involves creation of union between a man and a woman, nuptiality is the process of formation of couples in the population. Each capable citizen has a certain marital status.

By nuptiality, the process of formation of married couples among the population is meant, including getting into the first and remarriage. In combination with the processes of widowhood and divorce, nuptiality determines reproduction of marital structure of population (Narodonaselenie. Enciklopedicheskij slovar, 1994). Nuptiality in the broad sense of this word, including the expansion of marriages and age at first marriage, is one of the most important parameter of the population reproduction.

Marital status - the status of the man or woman associated with being at one or another marital category. Marital categories can be classified according to the legal framework and statistical practice of the country. There, married and unmarried men and women who can be classed as married, cohabited, single or never married, widowed, divorced.

Marital status is one of the most important parameter of the person. This term can be applied to persons who have reached the minimum age for marriage and determined all their previous marital biography - first and repeated marriages, divorce, and widowhood. By marital status, the position of the individual in relation to the institution of marriage is understood, determined in accordance with the customs or legal norms of a country.

Currently, the statistical agencies of most countries tend to follow the rules of determining of marital status, which are contained in the relevant recommendations of the UN Statistical Commission. They have devoted following categories of marital status: never married; married and living together; widowed and not remarried; divorced and not remarried; married but not living together; unclassified cases. These six categories are the main categories of marital status, which are reported by demographic statistics in most countries.

Kazakhstani censuses at different times reported different number of marital status – from two (married, not married) to four (never married, married, widowed, divorced).

In addition to the above-mentioned basic marital statuses, statistical bodies of some countries allocate other types. In particular, it is separated persons in a registered and unregistered marriage (unmarried but living together). In recent years, interest to these two categories is strengthened due to the sharp increase of the proportion of so-called extramarital births. Unfortunately, in Kazakhstan these categories of marital status were not reported during the Census.

Marriageable age is the minimum age at which the law or custom allows marriage. In most countries marriageable age is established by law, taking into account the age of puberty, psychological and social maturity of the spouses, as well as traditions, customs, and other conditions of the country (Narodonaselenie. Enciklopedicheskij slovar, 1994). Ability to marry somebody is a legal right to join a registered marriage. In the context of monogamy, unmarried men and women who are of a legal minimum age at marriage have this right on the general grounds or as an exception.

In modern Kazakhstan, as in most other countries, marriage is a civil and not a religious act. The current marriage and family law does not neither upper age limit for being married, nor maximum number of repeated marriages for one person or a mandatory minimum period between divorce (or widowhood) and remarriage. The only restriction is minimum age for marriage that is 18, but the age limit may be lowered up 2 years if the bride is pregnant or if the spouse has common children. Therefore, all confessional or ethnic groups apply uniform criteria for determining of ability to marry (Narodonaselenie. Enciklopedicheskij slovar, 1994).

Marriage is the final stage of marital selection. Marital selection is considered as the process resulting in the selection of the only partner from the aggregate of possible, potential mates (which is sometimes called marital circle), who becomes the husband (wife) or those with whom may "live together".

Process of marital selection is historically concrete; it depends on demographic, economic, social, cultural and other existing in society conditions. Main features of the marital selection process are connected with the fact that in different cultures and on different stages of historical development both space of possible mates and level of freedom of individual choice differ. In regards to the defining of possible mates space all societies differ depending on fact either they allow repeated marriages or not.

If repeated marriages are not allowed, as in cultures of traditional, strong monogamy, or if a person who is married or was married and is not now, cannot marry again because of sociocultural, moral and legal restricts, potential mates space in this society form only those persons who are not married and even (in a stronger form, existing in some societies) those who were never married. Person enters into this area when he/she is at the age of marriage, and leaves it after marriage.

If repeated marriages are allowed, which means that serial monogamy are possible in the society, then a term, from which the selection of mate is made, is extremely broad and includes both married and unmarried. In the society of European, Western type, the historical trend is movement from strict monogamy when repeated marriage was restricted even in the case of widowhood (especially for women), to serial monogamy, when repeated marriage becomes commonplace.

From sociological point of view, marriage means a change of one of the social status, which is subject to each person, in this case - a change of marital status. For the demography, it is interesting both massive process of union formation (and their disintegration), i.e. massive process of a change of marital status - marriage, divorce, widowhood, and the distribution of the population by marital status, i.e. marital structure.

When people marry, divorce or become a widow they change their marital status, moving from one stage to another. At the population level, these cases change marital status together constitute reproduction marriage structure of the population.

Knowledge of marriage structure of the population is necessary for a better understanding of the formation and disintegration of families, trends in fertility, mortality and reproduction of the population as a whole. Distribution of the population by marital status, on the one hand, reflects on itself last dynamics of demographic processes (not just marriage and divorce, but also fertility and mortality, and migration), and on the other - allowing them to predict its dynamics, possible changes in the future. Therefore, the analysis of marital structure is important element of studying of population reproduction.

Nuptiality tables allow to measure the process of nuptiality more accurately, and which are an ordered sequence of indicators that characterize the process of marriage of people belonging to a certain age cohort. They give a description of the process of marriage, regardless of the current age structure of the population, allow make regional comparisons, analyze the intrinsic patterns and identify the characteristics of the process.

Particularly I would like to define the “marital behavior” concept. Marital behavior is the behavior aimed at satisfaction of need in marriage, the behavior connected with the choice of marital partner (that means conjugal selection). Conjugal selection is the process by which due to complex of possible selections of marital partner somehow or other the one is selected as the only partner who will be a husband (wife) or the one to live with (Antonov, 1998).

Marital behavior is the system of actions and relations mediating the selection of marital partner and marriage. Sometimes marital behavior is understood much widely including actions directed on divorce (Medkov, 2002).

I'd like to mention that the marital behavior will be considered into widen extent in the given dissertation that means it will include women attitudes on marriage as well.

Thus, demography deals with concrete implementations of such and such social phenomenon and relations. It considers the positions of such and such people from the point of view of the institute of marriage – their marital state, or the cases of changes of such state, that means the cases of marriage or its stopping due to divorce or widow. Meanwhile it deals with not separate persons but with the totality of demographic events (marriages, divorces, deaths) leading to the change of this state.

1.3. Definition of fertility, fecundity and reproductive behavior

Fertility in demography is a central issue. In modern conditions of relatively low mortality, the reproduction of population is determined solely by the level and dynamics of fertility. The topic of fertility appears also because there are many different opinions about fertility, which sometimes comes to considerable controversy. While in relation to mortality (the death), there is a negative consensus of all people; whatever place in society they occupied. This subchapter discusses

theoretical issues in fertility studies. It starts with describing key definitions of fertility and different related concepts.

Fertility is described in demography as the frequency of live births in a particular social environment. Fecundity is a biological ability of a woman, a man or a married couple to the conception and birth of a number of children. It is measured by the number of potential live births among women, which depends on the genetic quality and health of both spouses, as well as the combination of its physiological properties in marriage (sometimes pregnancy does not occur in healthy spouses due to their biological incompatibility).

In some cases, the number of possible births can vary in a very wide range, from 0 to 35. However, fecundity is rarely fully realized. The average fecundity of the species, i.e., fecundity of the human species, is 10-12 live births per lifetime, or 12-15 pregnancies (considering stillbirths and miscarriages). In fact, the total marital fertility indicators in large size of the population never reached such a magnitude and rarely exceeded 8 births in the entire married life from 15 to 50 years. The observed maximum was of Hutterites. Their total fertility rate was 12.1 live births per woman (Eaton et al., 1954).

In the past, it was quite common notion that fertility varies depending on the climate, race, cultural level of the people, etc. It was believed that in a hot climate puberty occurs earlier and fertility is higher than in temperate climates and that "wild" peoples' fertility is higher than "civilized" one. Even in the XIXth century outstanding scientists (Sadler, Proudhon, Spencer, Dumont et al.) believed that fertility decreases from mental exertion, or difficulties on social climb, or from excessive fullness of man. Similar views were based more on impressions and prejudices than on the results of special investigations. Modern research has not confirmed any geographical, ethnic or social differences in fecundity.

The term infertility means the inability of mature organism to reproduction or just an inability to childbirth. Usually infertile is the marital union where they still don't have children for three or more years at the absence of contraception or conception, or because the pregnancies end by spontaneous abortion or stillbirth.

In the first case at the conditions of normal sexual life they say about sterility that means about inability for conception. Here one distinguishes permanent sterility (in older ages, after achieving a menopause) in reproductive period (as the sequence of illness or sterility operation) and temporary sterility (in the period of pregnancy, postpartum or post abortion, amenorrhea as a result of using contraception); natural sterility (produced by normal physiological reasons: age, pregnancy, breast feeding, amenorrhea and etc.) and artificial sterility (contraceptive), and also pathological (due to illness or trauma); absolute (null chance to conception) and relative (keeping some probability for conception).

Childlessness may be due to sterility but like the word infertility includes both physiological infertility and voluntary infertility which is often inaccurately called voluntary infertility (Multilingual demographic dictionary 2006: 38). It is important to differentiate between childless and childfree. The former implies that a couple or person is explicitly without something which is,

perhaps, naturally expected (Paul, 2001). For example, being homeless or friendless. The latter, however, is far more positive, and implies a kind of emancipation from something either by choice or by good fortune – carefree or disease-free (Basten, 2009).

The number of births in different territories (country, region, and continent) in a different period and measured by common demographic indicators (general and total fertility rate, age specific fertility rate and etc.) is the function of two variables. One of them is the demographic structure that means the distribution of population by sex, age, marital status and other parameters. The other one is the reproductive behavior expressed in demography by fertility intensity.

In the study of the causes which determine the state and dynamics of the level of fertility, demographers have long sought to delineate the factors of structure and factors of individuals and families behavior in their total impact on the birth rate. All of them anyway are based on the use of the concept of natural childbearing proposed in 1961 by French demographer Louis Henry. Natural fertility is a fertility, which level is determined by physiological and structural factors, i.e. state of fertility and structure of the population by sex, age and marital status, in the absence of deliberate birth control through contraception and abortion. Natural fertility is a very real in any population (regardless prevalence of measures of within-family limitations on fertility) in the form of a socio-biological potential, which is partially realized, depending on the socio-economic, cultural, psychological and other factors that influence the formation and satisfaction in number of children. Natural fertility level of present population with the widespread practice of within family limiting of the number of children can be determined only hypothetically. Nevertheless, measurement of such a hypothetical level of socio-biological potential is important and even necessary. Because comparing actual level of fertility with its socio-biological potential, specific to each of the real population, we could have an idea on the extent of the population practices in within family intentional (willed) fertility limitations, the role of behavioral factors in fertility.

In contrast to other studies in which attempts are made to determine the maximum of natural fertility, Borisov in 1971 developed the method determining the hypothetical minimum of natural fertility (hereinafter-abbreviated HMNF). It is such a level of fertility, which is the minimum requirement without affecting any negative circumstances (reduced fecundity of a large part of the population, a high proportion of spouses living separately for a long time, and so on). The author believes that using the index HMNF it could be shown that the main role in reducing fertility belongs to behavioral factors rather than structural.

Studies of fertility factors conducted mainly by specialists in the field of statistics and statistical methods have been focused mainly on the search for objective reasons that force women (family) to limit the number of their children. The researchers started from the subconscious assumptions about the "natural" character of reproductive motivation of women, the "natural" desire of every woman to have many children, which is limited only by the lack of external conditions needed to satisfy this desire. Later this research orientation has received the name of the concept (or paradigm) of barriers. According to this concept, to increase the birth rate it is enough to find out what specific conditions of life prevent people (women) to meet their physical needs in a large number of

children, and with the help of social policy measures to remove these obstacles. And then, it seemed, the fertility will automatically rise to indefinitely high (until desired, optimal) level. By the mid of 70s., it becomes clear, as a direct result of research based on the study of family's opinion on desired and planned number of children, that the majority of families have a clear idea on the number of desired children, and this number is quite finite and differs in different social groups. Many studies, especially the largest conducted by demographers of NII (Nauchno-issledovatel'skiy institut) TSSU (Central Statistical Administration) USSR have shown that not only the actual number of children in families is inversely proportional to the level of well-being, but also the desired and expected (planned) number of children on average is in inversely proportional to the family's material conditions of life. These results indicate negative correlation between the living conditions and the number of children in the family, the person who is actually giving birth to the children, the whole of the psychophysical human activities related to childbirth. Such activities were called reproductive behavior.

Reproductive behavior is the system of actions and relations mediating definite number of children in a family (an also extramarital) (Antonov, 1998; Borisov, 1976).

In Belova (1970) opinion who is the leading specialist in the sphere of reproductive behavior research the reproductive behavior is the individual's inclination to act in a varying way in all questions connected with child-bearing (use or misuse of contraceptives; deeds connected with the number of children in a family and etc.).

Issues of reproductive behavior and its structure have been discussed in the literature not long ago. Practically up to the seventies the study of birth rate within demography was mostly led without any mentioning or use of "behavior" concept that means without the use of methods of sociology or social psychology. The so called "factual approach" prevailed in demography where meanings of varying social economic factors were compared to indicators of birth rate. It was only in the middle of the fifties that they started to move away from it and made an introduction to analysis of so called "spontaneous determinant" of birth rate mediating the action of social economic or basic factors on it.

When study birth rate to consider only external behavior factors is not enough and it's necessary to take into account internal factors, social and psychological structures – value orientations of a person, his desires, motives and needs. And reproductive behavior is expressed not only in somewhat external conditions, reproductive events, but also in changes of these internal structures, persuasions, strategies and motives.

The most stable and practically unchangeable reproductive behavior structure element of a person in all his/her life is the need for children.

The need for children is the social and psychological feature of a socialized individual which appears in the fact that the individual starts to feel difficulties in his/her individual self realization without children or appropriate number of children. For understanding of main point of the need for children there is a big role played by reproductive norm concept (Antonov et al., 1998).

Reproductive norms are patterns or stereotypes of appropriate behavior related to childbearing of definite number of children determined by social milieu and accepted in those social groups where an individual belongs or would like to belong.

It's necessary to distinguish a particular intensity or strength in the need for children. In this connection one distinguishes reduced reproductive behavior (1-2 children in a family), average children reproductive behavior (3-4 children) and having many children (5 or more children in a family) reproductive behavior and within each of these types the lines of reproductive behavior represented by specific combination of results of reproductive behavior characterized by definite direction and firmness. And it's the need for children interacting in dispositional system with life conditions that forms concrete lines of reproductive behavior (Antonov, 1999).

Quantitative and qualitative inertia of the need in children is appropriately discovered in reproductive attitudes and reproductive motive concepts.

Reproductive attitudes are psychological position of a person, specifying mutual coordination of actions of various types, characterized by positive or negative relation to childbearing of desired number of children.

Reproductive attitudes are divided into two classes:

- strategies of having children regulating achievement of desired number of children. This class involves strategies on successful pregnancy, proto-genetic intervals (between formation of alliance and first birth) and inter-genetic interval (between the births of children by birth order), strategies on child sex, and strategies on adoption;

- strategies for contraception use and abortion.

In the fertility research one usually uses the concept of ideal, desired and expected number of children in a family; sometimes they use the number of children being planned at the moment of marriage.

Ideal number of children is not a reflection of child having intentions; it rather characterizes the awareness of respondents about varying problems of family, population and birth rate discussed in a society. Ideal number of children setting the best child having in society but not for a concrete respondent characterizes from one side that the awareness on what number of children is considered as "proper" by social opinion and from another side the perception of that what the interviewer expects from the respondent. In any case, ideal number of children doesn't reflect social norm of a personal child having and consequently the need for children (Antonov et al., 1998).

Expected number of children in a family and the number which was being expected or planned at the moment of marriage is the most reliable and exact due to the sense of reflection of need in children and first of all of final prediction of the number of children in a family among the all factors of preferred number of children. It's witnessed by the results of comparison of different variants of preferred number of children with actual child having.

Reproductive motives reflect psychological position of an individual, impelling him to achieve individual aims of different type through the delivering of definite number of children. Reproductive motive characterizes personality sense of child's birth to this world of any sequence.

Children here are the means of achievement of varying aims. Reproductive motives should be differed from the birth rate limitation motives.

Separate aspects of reproductive motivation were researched in the 40ies but the attempts of creating reproductive motives classification and revealing all of the possible totality refer to the 60ies. At present there are tens of attempts to design the classification of reproductive motives. Here the projects of Kingsley were of great significance. He emphasized that the motivation to child bearing is only done by society (social organization) rejecting the presence of biologically provided determination of reproductive behavior and birth rate.

Child bearing motives typology developed by Judith Blake takes an important place in the history of reproductive behavior study. She subdivided all of the motives on economic and non-economic. This allowed to set the intensity of the last one typical to “modern” relation to children, that means non-economic, contradicting the wide-spread opinion that it’s economically more profitable to have less number of children in a family.

According to modern notion, reproductive motives or motives of birth rate are subdivided into economic, social and psychological.

Economical motives of child birth are the ones which stimulate for birth of varying number of children owing to the fact that through this event they achieve definite economic aims, that means the aims connected with the desire to get somewhat material profit or to increase (or keep) economic status. If the childbirth doesn’t lead to any economic profit or doesn’t propose them, then we should understand it as the absence of any economic motive of childbirth.

Social motives are those which stimulate for childbirth of definite number of children within the current social cultural norms of child having and which are individual reactions to these norms. Definite conformism against social cultural norms (including reproductive), that means, peculiar desire to live “like everybody” is the distinguishing characteristic of any (including reproductive) behavior. Social motives reflect this endeavor supported by various stimulus of moral and social (prestigious status) plan.

Social motives exist in the place where stimulus are found, meaning the strengthening or increase of social status, the growth of authority and prestige and etc. On the contrary, if there is no stimulus, benefits and “profit”, then there is no social motives for birth rate of definite number of children. For example, in modern urban sphere with few children, parents of three or more children are subject to negative social psychological sanctions. They might be and are the object of mockery, moral censure and other types of negative social opinion.

Psychological motives are the motives which impel for birth of definite number of children owing to the fact that over this they achieve some purely private, social psychological and somewhat internal aims of the individual. They don’t reflect social but exceptionally private interest in birth of definite number of children (Antonov et al., 1998).

Correlation in the reproductive motivation structure of economic, social and psychological motives doesn’t remain unchanged. It changes from era to era, reflecting the global process of historical death of having many children. General tendency here consists in the fact that economic

and social motives of birth of several children in one family gradually declines or even tails, and the psychological internal motives come in to the picture.

So, we have considered essential types of family behavior of individual – the marital and reproductive. Each of them, being the part of the family behavior is characterized by autonomy and independence from others. This autonomy, increasing in the course of historical development is specified by the fact that marital reproductive behavior is directed on satisfaction of the most important human needs – the need in family and the need in children.

1.4. Data sources and methods

1.4.1. Data sources

Studying of marriage, marital and reproductive behavior of population requires a researcher not only to deal with main characteristics of study area, but also socio-economic indicators, because it is almost impossible to analyze demographic processes not knowing significant factors influencing them. Demographic and economic analyses of marriage, fertility and related issues with them demand accurate and detailed characteristics of individual facts, of which these processes and phenomenon occurs.

This analysis may include data obtained from official country statistics (population censuses, vital statistics, administrative data, etc.) and special observations, such as socio-demographic surveys.

The history of the study of the processes of marriage by statistical methods starts from the end of the XVIII century. Academician Ptuha specifically dealing with this issue, names the Swiss pastor Muret as the author of the first nuptiality table. His work, containing nuptiality table, appeared in late 1764 and was awarded by the Economic Society of the city of Bern. Muret's work for a long time was the only source of information on marriage and it was used in various modifications for about 100 years. Despite the fact that since the compilation and publication of the first nuptiality table have passed more than 200 years, the number of marriages is the least studied of all major demographic processes. In many ways, this can be explained by the fact that for a long time it was believed that studying of nuptiality has purely academic interest.

Significant contribution to the study of nuptiality made following scientists: Muret (1764, developed first nuptiality tables), Bernoulli (1786, widowhood table), Duvillard (1787, widowhood table), Sprague (1879, nuptiality tables for the first marriages), Boeckh and Rahts (1875, 1885, 1895, tables of marriage dissolution for Berlin), Hubert (1913, tables of marriage dissolution for France on 1609-1906), Korchak-Chepurkovsky (1926, divorce table; 1934, nuptiality table for Ukrainian women in 1925-1928), Henry (1966, differentiated nuptiality tables for the partners with different characteristics), Darskyj (1968, nuptiality tables for USSR women in 1949-1959), Khristov (1974, table of marriage dissolution for the real cohort of Bulgarian population), Tolc (1975-1976, differentiated nuptiality tables), Sinelnikov (1978, evaluation of average marriage

duration), Darskyj and Ilyina (second half of 80-s, nuptiality tables for Ukrainian men and women in 1980-84), Volkov (tables of marriage dissolution in USSR in 1968-1971 and 1988-1989).

In addition to nuptiality tables, widowhood, divorce and combined (dissolution of marriage and duration of marriage) tables are also constructed, based on the probability of marriage dissolution (due to her husband's death, due to the death of his wife, because of divorce, the probability of termination of marriage) and the average expected duration of marriage. The most common types of tables - general nuptiality tables (built for all marital statuses) and tables for never married (or for the first marriages); rarer tables for widowed or divorced.

Data system on population's nuptiality includes two main sources, covering whole population: population censuses and vital statistics, as well as additional sources such as sample surveys, various lists and registers of the population. The most accurate and reliable demographic information are given by specific national statistical offices of countries. The Statistics Agency of the Republic of Kazakhstan carries out collection, development and publication of data on population, representing the Department of vital statistics and census.

Main sources on information about population and demographic processes in Kazakhstan are population censuses. It should be noted that in independent Kazakhstan since 1991 for the entire period of its existence two censuses were held: in 1999 and in 2009. Prior to this, the data in Kazakhstan can be found in the Russian Empire census of 1897 and in All-union censuses. Censuses of 1897 and 1926 took into account the following marital statuses: "never married", "married," "widowed", "divorced". In following censuses of 1979 and 1989 it has been added the category "split up", i.e. persons who are in the actual divorce - which is important in population studies. In censuses of 1937, 1939, 1959, 1970 population was divided only by married and unmarried. Unfortunately, in censuses conducted by independent Kazakhstan this category was eliminated.

In February 2009, in Kazakhstan was held regular national population census. In the Agency of Statistics reported that census was conducted by visiting of residences and collecting information about every person. Range of information is determined by the program of the census, the bulk of which consists of the features common to the entire population - demographic, economic, ethnic, level of education and others. All these data give the opportunity to find out the socio-demographic composition of the population. Specifying the location of the respondent and the place of his usual residence at the time of the census allows distributing population by categories. Registration of such characteristics as the previous place of residence, place of residence for a specific date, place of birth and length of residence in the locality - provides information on internal migration; arrival time and the country from which arrived - on external migration; location, place of work or school - on commuting.

The population census is carried out within a few days, at a time when people are least mobile; in Kazakhstan - in the winter, so that the resettlement of people at the time of the census was as much as possible in line with the usual one. All information is collected on the principle of census duration, that is, on date of the census (usually at midnight on the eve of the first day of the census),

which was set on February 25, 2009. Born and died after this time is not considered. Thus, we obtain a snapshot of the population. In accordance with international practice census in Kazakhstan is conducted by interviewing. Specifically accepted and trained workers (counters) complete census forms when they visit residential and other premises. Counters based on the respondent's answers fill census forms. Population is registered at their usual place of residence, which may be a house, an apartment, a room, where the respondent usually spends most of his time. The entire population, which at this time is in hotels, hospitals, institutions with a permanent residence, must be covered by census. Population that is in the way - at stations and on trains and airports, should be registered at the place of arrival in the settlements.

For many years (censuses of 1937, 1939, 1959, 1970) the question on marital status offered only two possible answers: married or not married. Only since 1979 an expanded approach to the subject appeared: never married, married, widowed, divorced (for previously officially married), split up (for cohabited, and now split up, and for persons previously officially married, and currently divorced, but divorce was not registered in the registry office). However, in the censuses of independent Kazakhstan this classification was reduced to four categories: never married, married, divorced and widowed. Because marital status was based on the information provided by the respondents, often the census count of married women exceeded the number of married men.

It is not enough simply to collect information about the population, it is also necessary to process and group the data in the tables, which then can be used by both scientists and those who need the information about the population in practice. Therefore, the census is not limited to data collection. Important stage is development and publication of census materials. Program on development the census materials includes a huge number of tables on various issues that contribute to the census data. A significant part of these tables is then published on the level of the country as a whole and at the level of its individual regions.

Current vital statistics are based on civil registration. Natural population increase include demographic events which directly (live births, stillbirths and deaths) or indirectly (marriages, divorces) affect the reproduction of the population. On the basis of information about the natural population change it is calculated population of the country, the relative indicators of natural movement (in conjunction with census data), is forecasted the size and composition of the population in the future.

The state registration of acts of civil status is established in order to protect property and non-property rights of citizens, as well as in the public interest. Through state registration of marriage, registry offices perform following tasks: monitor compliance with statutory procedures and conditions for marriage; formalize marital relationship between a man and a woman to satisfy their personal needs and interests in starting a family; get information about the marital status of citizens and keep a record of every fact of the marriage, which then is used in statistical reporting in the Republic of Kazakhstan and development of main directions of state family and population policies; get opportunity to control over the legality of possible cases of divorce in the future.

Registration of vital events is primarily associated with the legal consequences of an event, so is mandatory for all residents. With the mandatory registration of events is connected completeness of its accounting. Law determines dates and registration of vital events. By the end of the 1990s, Kazakhstan has established a system of current vital statistics that meet international standards.

Currently, not all the information contained in the acts of civil status, designed and analyzed by the statistics agency. More detailed information on vital events is developed in the year of census. As a result of the loss of a number of demographic characteristics of marriage, regular national census gives the most complete picture of marital status of population. Recently it is increased the importance of sample surveys and polls which are mating behavior of certain social groups, distributed by age, sex, ethnicity and other characteristics. Important role acquire sociological survey provides information on the marital behavior of the population. In the present study marital attitudes of young people in Kazakhstan were investigated using sociological methods, since this information is not available in statistical sources.

Two groups of data sources were used while writing this work:

Publications of Committee on Statistics of Kazakhstan;

Results from data processing of the social surveys:

“Marital and reproductive behavior of youth of Ust-Kamenogorsk”, which were conducted by the author in autumn 2009 in Ust-Kamenogorsk;

“Marital and reproductive behavior of youth of Ust-Kamenogorsk”, which were conducted by the author in autumn 2016 in Ust-Kamenogorsk.

The demographic and socio-economic data were obtained from publications of Committee on Statistics of Kazakhstan at their website stat.gov.kz. Apparently, the Demographic Yearbooks of Kazakhstan were used a lot. The Demographic Yearbook contains data about administrative territorial division, changing the overall size and age structure of the population, its location on the territory of Kazakhstan. It presents time series of population size by age, sex and urban/rural residence, data related to natality, mortality and nuptiality, divorce and migration processes. It also includes generalized demographics indicators that characterize the processes of reproduction of the population of Kazakhstan's regions, total fertility rate, life expectancy at birth.

The data measures population in absolute numbers for the beginning of the year, which includes all permanent residents and temporarily living residents and grouping them by age, ethnicity, rural and urban population. There is a vital statistics system that records all the births, deaths, marriages and divorces in the country. The data is grouped then by region, gender, age, ethnicity etc. Population is calculated by adding annual number of live births and immigrants to data of latest census of population and subtracting number of total deaths and emigrants from it.

Unfortunately, data from annual yearbooks of Kazakhstan is only available since 1999. Demographic data had not been published in a systematic way until that time. Although we could find some helpful data from the published work by Committee on Statistics of Kazakhstan named “Independent years of Kazakhstan (1991-2007)”. However, this data is not enough to conduct

complete analysis of our research topic. Therefore, we relied on Censuses of Population conducted in 1989 and 1999. Moreover, other statistical sources were used as well.

The negative point is that all demographic yearbooks are published in Word or PDF format, and it takes a lot of time to handle with all the necessary data. The other drawback is that there is a lack of available data on population by age-sex structure and marital status, number of births by year of birth of mothers, and etc., which makes it impossible to conduct cohort analysis and self-calculation of many important demographic indicators, such as total fertility rate.

Fortunately, the situation with the access to the data and opportunities for analysis has been changing. On 27th of December 2011, the President of Kazakhstan signed a Law “About ratification of the Agreement on loan (KAZSTAT: Project on strengthening the national statistical system) between the Republic of Kazakhstan and the World Bank”. The total amount of the project was 22.9 Mio US dollars (3,360 Mio KZT), out of which the World Bank contributed 20 Mio US dollars (2,938 Mio KZT), while the government of Kazakhstan contributed the remaining 2.9 Mio US dollars (422 Mio KZT).

The project is implemented in a partnership with a consortium of foreign statistical offices of Germany, Finland, Czech Republic, Slovakia, South Korea and Russia. The German federal statistical office led the mission on key issues, such as improvement of IT, statistical infrastructure, instruments and methodology and HR.

The main aim of “KAZSTAT: Project on strengthening the national statistical system” project was to provide users with quality statistical information and improvement of efficiency of statistical system of Kazakhstan in accordance with international methodology and best practices.

The main outcome of the implemented project was development of improved national statistical system according to the level of European countries, introduction of best practices, growth of user satisfaction of statistical data by 80% and shortening of 40% time necessary to fill in statistical report form by local companies.

On the 1st March of 2016 a new data system TALDAU were launched. It allows users to find data using e-catalogue, calculate many indicators, draw graphs. The system is still in a testing regime and its database is not full yet, but it has good potential for development and can be useful for researchers (<http://taldau.stat.gov.kz/ru/Catalog>).

A special attention was dedicated to East Kazakhstan in this thesis (Map 1). Therefore, when studying marital and reproductive behavior of population of these regions statistical sources were provided by Statistics Department of East Kazakhstan oblast. Particularly, we obtained data from demographic yearbooks of the region in 1999-2015, reports on economic development of the region, demographic situation in the region etc. (www.stat.gov.kz/vko).

Map 1 - Kazakhstan with indications of selected regions and cities, 2016



Another source of data about marriage and fertility rates is provided by sample surveys, which may become very important in demographic researches. For our research, it was important to assess youth's perceptions of marital life and their adjustment in this period of market relationships. Overall, this study used results of two sociological surveys conducted in East Kazakhstan oblast but in different time periods. The initial survey was conducted in autumn 2009, the second one in summer 2016. The sample survey and questionnaire were the same in both surveys. Table 1 shows data from these surveys, descriptions for which are provided below the table. Questions from the survey questionnaires that were used in this study are included in the appendix.

Table 1 - Summary table of the surveys used in dissertation

No	Name	Location	Year	Number of respondents
1	Marital and reproductive behavior of youth of Ust-Kamenogorsk city	Ust-Kamenogorsk, Kazakhstan	2009	480
2	Marital and reproductive behavior of youth of Ust-Kamenogorsk city	Ust-Kamenogorsk, Kazakhstan	2016	480

The core of this study is based on the surveys that were done by the author of this thesis herself. The author saw it necessary to conduct a sociological survey to extend our knowledge about marital

and reproductive behavior of youth in East Kazakhstan oblast. The survey was named “Marital and reproductive behavior of youth of Ust-Kamenogorsk city” and it was conducted in October - November of 2009 and in August-September, 2016 in a city of Ust-Kamenogorsk, East Kazakhstan oblast, Kazakhstan. Ust-Kamenogorsk is a city with a well-developed infrastructure, universities and jobs, which makes it attractive for region’s rural inhabitants. Since the largest part of this migration trend is the Kazakh youth, we decided to constrain our study to analysis of the youth, but particularly this group of migrants. Sample consisted of 480 young women, of which 120 were Russians and 360 were Kazakhs. The groups were divided into 4: Russian women that were city residents – 120, Kazakh women that were city residents–120, Kazakh women that moved to the city before age 10–120 and Kazakh women that moved to the city after age 10–120. It seems quite interesting for use to observe adaptation process by rural migrants into urban life and to see changes into the marital and reproductive behavior if any.

Results of data processing of the surveys with full characteristics of respondents and their marital and reproductive behavior are presented in the Chapter 3.

1.4.2. Methods

Studying marriage and fertility attracts interests of researchers, because these processes along with divorce and widowhood determine form of family in modern societies.

As is characteristic of other demographic variables, there are many different measures of marriage and divorce. The most frequently cited statistic is the absolute number of marriages each year. While this statistic is useful in measuring gross changes in the number of marriages, it is not an analytically useful number because it does not take into account variations in population size or age structure. On the other hand, it can be used to evaluate primary views about changes of nuptiality through time-periods (Medkov, 2002).

“The study of nuptiality deals with the frequency of marriages i.e., unions, between persons of opposite sexes which involve rights and obligations fixed by law and custom; with the characteristics of persons, united in marriage; and with the dissolution of such unions” (Multilingual demographic dictionary, 2013).

Increases (or decreases) in the number of marriages can result from a rise (or fall) in the population or an increase (decrease) in the number of young people in the population, such as resulted from the entry of the baby-boom cohorts into young adulthood in recent 10 years.

Nuptiality is a type of process that may take a form of repeated events or no event. At present, a person can marry several times during his lifetime. And she can marry for the first time only once (so can she for the second, third etc).

The simplest measure of marriage is the crude marriage rate, which is the number of marriages occurring among the population of a given geographical area during a given year, per 1,000 mid-year total population of the given geographical area during the same year. Note that the crude marriage rate represents the number of marriages, not the number of people getting married.

Crude marriage rate can be calculated using the following formula:

$$CMR_t = M_t / {}_{1.7}P_t * 1,000$$

Where M_t is total number of all marriages in one year and ${}_{1.7}P_t$ is the average number of persons living in that year (Siegel et al. 2004).

While this rate takes into account changes in the size of the population, it is affected by segments of the population that are not at risk of marriage, such as minors or those people currently married. Crude marriage rates are used most effectively for gross analyses in areas that may not have the additional data to compute more refined measures.

The same type of formulation was used to calculate the crude divorce rate, which is the number of divorces occurring among the population of a given geographical area during a given year, per 1,000 mid-year total population of the given geographical area during the same year. The formula of Crude divorce rate could be seen below:

$$CDR_t = D_t / {}_{1.7}P_t * 1,000$$

Where D_t is total number of all divorces in one year year and ${}_{1.7}P_t$ is the average number of persons living in that year (Shryock et al. 2004).

Also, the mean age at 1st marriage for women was used as an indicator to characterize nuptiality processes. It is equivalent to singulate mean age at marriage (SMAM) (Hajnal, 1965). The singulate mean age at first marriage is calculated from the proportions single by age. *Step 1.* Calculation of the person years lived in a single state, using five year age groups, denoted by A:

$$A = 15 + 5 * \sum_{\alpha=15-19}^{45-49} S_{\alpha}$$

where S_a is the proportion single in age group a .

Step 2. Estimation of the proportion remaining single at age 50, denoted by B:

$$B = (S_{45-49} + S_{50-54}) / 2$$

Step 3. Estimation of the proportion ever marrying by age 50, denoted by C:

$$C = 1 - B$$

Step 4. Calculation of the number of person-years lived by the proportion not marrying, denoted by D:

$$D = 50 * B$$

Step 5. Calculation of singulate mean age at marriage (SMAM):

$$SMAM = (A - D) / C$$

Fertility is another key conception that helps us to develop the topic of research. The analysis of fertility is, in several ways, more complicated than the analysis of mortality. The difference is in the complexity of measurement of natality result from the special and, to some extent, unique characteristics of natality and of the factors affecting childbearing. These special characteristics give rise to a variety of measures, which may be quite different and which may give inconsistent results.

Siegel and Swanson (2004) enumerated six such characteristics. First, the entire population is not subject to the risk of having a child. Motherhood is largely restricted to women of childbearing age, while fatherhood, even though less constrained by a man's physiology, usually occurs within a somewhat limited range of ages.

Second, natality may be measured in relation to fathers as well as mothers, or even couples. Two parents, with different demographic, socioeconomic, and other characteristics, are involved in each birth.

Third, the event of birth in a sense occurs to both a child and a parent (or parents) and, in measuring natality, the characteristics of both the child and the parent have to be considered jointly.

Fourth, the same adult can have more than one birth in a lifetime and may be more or less continuously exposed to the risk of parenthood even after having a child. In fact, parenthood may occur twice to the same individual in a single year and, even, in the form of multiple births, twice or more to the same individual at the same hour.

Fifth, the time period of reference in relation to the population at risk is quite important because of the possibility of large annual fluctuations in fertility and large differences between annual levels of fertility and the levels of fertility performance of individuals and couples over a lifetime.

Finally, changes in fertility are strongly affected by personal attitudes, preferences, and motivations of women and their partners as shaped by the social and economic contexts within which they live. Shifts in childbearing have taken place in some highly industrialized countries like the United States and Sweden within the context of even more profound changes in the way in which individuals form relationships and establish families. It is no longer sufficient to analyze fertility within the bounds of traditional marriages; in many countries, it is necessary to explore the growing tendency to have children in nonmarital unions or independently of either legal or nonmarital unions. Such complexity requires the collection of extensive data, care in measurement, and the development of often elaborate theoretical frameworks.

The variables of first importance in the measurement and analysis of natality:

- age of mother;
- age-sex distribution of population and, particularly, age distribution of women in reproductive age (15-49);
- marital status of mother and marital structure of female population (Denisenko et al., 2006).

The simplest and most common measure of fertility is the Crude birth rate. The Crude birth rate is defined as the number of live birth in a year (B_t) per 1,000 midyear population (${}_{1.7}P_t$).

$$CBR_t = B_t / {}_{1.7}P_t * 1,000$$

Although the crude birth rate is a valuable measure of fertility, particularly in indicating directly the contribution of fertility to the growth rate, its analytic utility is extremely limited. This is because it is affected by many factors, particularly the specific composition of a population with respect to age, sex, and related characteristics. Because the age and sex composition of a population has such a strong influence on the level of its crude birth rate, measures of fertility that are less affected by differences in age-sex composition from one population group to another are more

useful analytically for inter area and inter group comparisons. A number of such measures have been developed and are variously referred to as specific, general, adjusted, or standardized, and as birth rates, fertility rates, or reproduction rates, depending generally on their degree of complexity or on their particular significance.

The total fertility rate was obtained from publication of Committee on Statistics of Kazakhstan. The total fertility rate (TFR) of a population is the average number of children that would be born to a woman over her lifetime if she were to experience the exact current age-specific fertility rates (ASFRs) through her lifetime, and she were to survive from birth through the end of her reproductive life. It is obtained by summing the age-specific rates at a given time for women between the ages 15-49. So, to obtain TFR we should firstly calculate ASFRs using the following formulae:

$$ASFR_x = B_x / W_x * 1,000$$

where B_x - the number of live births of women in the x -th age of childbearing age and W_x - the number of women in the x -th age of women of childbearing age. After that we could calculate TFR, which is:

$$TFR = n \sum ASFR_x / 1,000$$

where n – number of years in each age group, $\sum ASFR_x$ - sum of ASFR for women between the ages 15-49..

The TFR is a synthetic rate, not based on the fertility of any real group of women, since this would involve waiting until they had completed childbearing. Nor is it based on counting up the total number of children actually born over their lifetime, but instead is based on the age-specific fertility rates of women in their "child-bearing years," which in conventional international statistical usage is ages 15–44 or 15-49. The TFR is therefore a measure of the fertility of an imaginary woman who passes through her reproductive life subject to all the age-specific fertility rates for ages 15–49 that were recorded for a given population in a given year.

Also it was used one additional indicator to investigate the timing of the birth – mean age at childbearing. In statistical terms, this is an expected value of the age of the mother. “To eliminate the effect of differences in the age-sex composition of the populations being compared, these measures should be calculated on the basis of age-specific birth rates rather than numbers of births. It may be interrupted then as describing the age pattern of childbearing of a synthetic cohort of women, i.e., a hypothetical group of women who are viewed as having in their lifetime the fertility experience recorded in a single calendar year” (Shryock et al., 2004:473).

This indicator is compiled for 5-year age groups according to the formulae:

$$x = \sum x_a * ASFR_x / \sum ASFR_x$$

where x_a - is the midpoint of each age interval (17.5, 22.5 etc.), $ASFR_x$

– is an age-specific birth rate for a 5 year age group.

Migration is another key component of population change which plays an important role in the country’s population profile. Here was used the net migration rate indicator calculated by using the following formulae (Medkov 2002):

$$\text{NMR} = (\text{Immigration} - \text{Emmigration}) / 1,000 \text{ units of population}$$

To analyze data of survey “Marital and reproductive behavior in Ust-Kamenogorsk” SAS 9.2 software was used (data sorting, cross-tabulation, figures and charts). Firstly, matrix was developed in Excel, which included list of all questions and possible responses to them by the respondents. Each respondent was assigned with individual code. Each question was encoded, and if it required more than one answer an additional column was included for that. In case a respondent left question unanswered or “null”, for instance she indicated number of children as “0”, then we entered “-1” there. Other variants were encoded starting from “1” and above. As a result we obtained 480 observations in each survey.

Table 2 - Matrix sample in Excel

№	Nation	Year_bir	Educ	Occup	Dur_city_st	Place_bir	With_move	Marstat
1	1	1989	4	6	1	-1	-1	1
2	1	1988	4	6	1	-1	-1	1
3	1	1990	4	6	1	-1	-1	1
4	1	1991	3	6	1	-1	-1	1

It was important for us in the study to obtain a full picture of socio-economic characteristic of the respondent. All the respondents were first divided by ethnicity (Kazakh and Russian), then by age (18-21, 22-24 and 25-29) and duration of stay in cities of Kazakh female respondents (resident from birth, moved before age 10, moved after age 10). Then, the respondents were asked about their education (primary, lower secondary, upper secondary (general or vocational), tertiary), occupation (student, employed, unemployed), family status (single/never married, married, divorced), number of children if any, income level, housing type (own, family, rented) and size family if any. For the respondents, who had a partner, we asked questions about their partners’ education and occupation. Besides, the respondents answered questions about the type of family they were raised in (full, single-parent, adopted), education level of their parents and presence of brothers and sisters.

The obtained characteristics were then analyzed in comparison with their responses on questions about their marital reproductive behavior. The researcher sought to understand what were the significant factors that influenced marital and reproductive behavior of the youth, such as urbanization level, ethnicity, education level, living standard, and impact of parental family.

Then cross-tabulation was made through procedure FREQUENCY. The FREQ procedure produces one-way to *n*-way frequency and contingency (cross tabulation) tables. For two-way tables, PROC FREQ computes tests and measures of association. For one-way frequency tables, PROC FREQ computes goodness-of-fit tests for equal proportions or specified null proportions. For one-way tables, PROC FREQ also provides confidence limits and tests for binomial proportions, including tests for noninferiority and equivalence. In this work one-way and two-way cross tabulation tables were set.

```
proc sort data=anketa.ANKETA;
by nation ;
run;
```

Then we used PROC FREQ (example):

```
options formchar = "|----|+|----+=|-\<>*";
proc freq data=anketa.ANKETA;
tables Educ*Educ_husb/ out=anketa.Educpart;
by nation;
run;
```

The FREQ Procedure

Table of Educ by Educ_husb

Educ(Educ)		Educ_husb(Educ_husb)					Total
Frequency	Percent	-1	2	3	4	8	
Row Pct	Col Pct						
1	2	0	0	0	0	0	2
	0.56	0.00	0.00	0.00	0.00	0.00	0.56
	100.00	0.00	0.00	0.00	0.00	0.00	
	0.75	0.00	0.00	0.00	0.00	0.00	
2	23	1	7	4	0		35
	6.39	0.28	1.94	1.11	0.00		9.72
	65.71	2.86	20.00	11.43	0.00		
	8.68	50.00	16.28	8.16	0.00		
3	86	0	20	7	1		114
	23.89	0.00	5.56	1.94	0.28		31.67
	75.44	0.00	17.54	6.14	0.88		
	32.45	0.00	46.51	14.29	100.00		
4	154	1	15	37	0		207
	42.78	0.28	4.17	10.28	0.00		57.50
	74.40	0.48	7.25	17.87	0.00		
	58.11	50.00	34.88	75.51	0.00		
5	0	0	1	1	0		2
	0.00	0.00	0.28	0.28	0.00		0.56
	0.00	0.00	50.00	50.00	0.00		
	0.00	0.00	2.33	2.04	0.00		
Total	265	2	43	49	1		360
	73.61	0.56	11.94	13.61	0.28		100.00

Here we have education of respondent's partner (Educ_husb) by respondent education (Educ) for ethnicity 1, which means «Kazakh». «-1» means that those respondents don't have a partner.

SAS software also was used to calculate duration specific divorce rate and average number of children. To construct figures Microsoft Excel was used.

The method of binary logistic regression was used to analyze marital and reproductive behavior of youth in East Kazakhstan based on data of both surveys. Logistic regression describes the relationship between a categorical response variable and a set of predictor variables. A categorical response variable can be a binary variable, an ordinal variable or a nominal variable. Each type of categorical variables requires different techniques to model its relationship with the predictor variables. For a binary response variable, such as a response to a yes-no question, a commonly used model is the logistic regression model.

A logistic regression model describes a linear relationship between the logit, which is the log of odds, and a set of predictors.

$$\text{logit}(\pi) = \log(\pi/(1-\pi)) = \alpha + \beta_1 * \mathbf{x}_1 + \beta_2 * \mathbf{x}_2 + \dots + \beta_k * \mathbf{x}_k = \alpha + \mathbf{x} \boldsymbol{\beta}$$

We can either interpret the model using the logit scale, or we can convert the log of odds back to the probability such that

$$\pi = \exp(\alpha + \mathbf{x} \boldsymbol{\beta}) / (1 + \exp(\alpha + \mathbf{x} \boldsymbol{\beta}))$$

The analysis included several different measures of the young women's characteristics at or before the time of marriage:

Predictor variables (categorical)

Respondent's age: 18-21, 22-24, 25-29 (reference category '22-24').

Respondent's ethnicity: Kazakhs, Russians (reference category 'Kazakhs').

Respondent's residential status: city resident, moved before age 10, moved after age 10 (reference category 'city resident').

Respondent's education: secondary or vocational, tertiary (reference category 'tertiary').

Response variables (categorical)

Respondent's marital status: single, ever married (reference category 'ever married').

Respondent's number of children: zero, one+.

Probabilities modeled are cumulated over the lower ordered values

Table 3: Distribution of data according to variables included in the model

Variable	Category	Total, 2009	Total, 2016
Age	18-21	160	160
	22-24	160	160
	25-29	160	160
Ethnicity	Kazakhs	360	360
	Russians	120	120
Residential status	Local residents	240	240
	Moved to the city before the age 10	120	120
	Moved to the city after the age 10	120	120
Education	Secondary or vocational	197	234
	Tertiary	283	246
Marital status	Single	315	304
	Ever married	165	176
Children	Zero	370	368
	One+	110	112

Source: Sample Survey Ust-Kamenogorsk, 2009, 2016

Then we used PROC LOGISTIC:

```
proc logistic data=anketa.anketa desc;
class agegroup nation dur_city_st educ /expb;
model marstat = agegroup nation dur_city_st educ / expb;
run;
```


Zhaniya Karmenova : Changing patterns of marital and reproductive behavior of young women in the urban settlement (on the example of Ust-Kamenogorsk, East Kazakhstan oblast, Kazakhstan)

```
proc logistic data=anketa.anketa desc;  
class agegroup nation dur_city_st educ marstat /expb;  
model children = agegroup nation dur_city_st educ marstat / expb;  
run;
```

Using the ODS GRAPHICS statement and the PLOTS option we produced plots of the results.

Chapter 2

General description of socio-economic situation in Kazakhstan and its impact/influence on demographic trends.

Kazakhstan is an upper-middle-income country with GDP per capita of nearly US\$10.5 thousand in 2015 (World Bank).

Kazakhstan possesses significant amounts of fuel reserves as well as plentiful supplies of other minerals and metals. It also has considerable agricultural potential: its vast areas of steppe accommodate both livestock and grain production. Kazakhstan's industrial sector rests on the extraction and processing of these natural resources and on a relatively large machine-building sector specializing in construction equipment, tractors, agricultural machinery, and defense items. In this chapter, we would provide more detailed characteristics to existing socio-economic trends that influence demographic behaviour of two major ethnic groups in Kazakhstan: Kazakhs and Russians.

2.1. Changes of national composition in Kazakhstan

Kazakhstan is the largest country in Central Asia and the second largest of the former Soviet republics, but at the same time one of the most sparsely populated in the world (appr. 6 people per sq.km.). Also, Kazakhstan is a polyethnic country, which has many different ethnic groups.

The ethnic makeup of Kazakhstan's population has been shaped through centuries of demographic and political processes. The formation of the Kazak people dates back to the mid-fifteenth century, when a political confederation of pastoral nomadic tribes of primarily Turkic ethnolinguistic stock was created in the territory of today's Republic of Kazakhstan. The following centuries have seen a further development of Kazak national identity and social structure based on the Islamic religious and cultural tradition. Since the middle of the eighteenth and especially toward the end of the nineteenth century, the area of modern Kazakhstan was gradually conquered by the Russian Empire, which led to increasing in-migration of Russians and other Slavs of primarily Orthodox Christian background (Alekseenko, 2004).

After the Bolshevik revolution of 1917, when Kazakhstan became part of the Soviet Union, due to processes of industrialization and development of virgin lands ("tselina"), this in-migration

intensified further, culminating in a massive government-sponsored influx in the 1930s and the 1950s. In addition, a large number of ethnic Germans were deported from the Volga region to Kazakhstan by the Stalinist regime following the Nazi invasion of the Soviet Union in 1941. European population was largely concentrated in centers of industrial construction, where cities were developed later on, and in “tselina” agricultural regions of the country. There were some distinctive areas where nonindigenous nationalities were settled that were North, Centre and East of the country. Kazakhs being agrarian for a long time concentrated mainly in rural areas, as well as in South and West of Kazakhstan.

As a result of soviet migration policy, according to the last All-Union population census conducted in the Soviet Union in 1989, Kazaks, the republic's titular ethnic group, constituted 40 percent of Kazakhstan's population, ethnic Russians made up 38 percent, and the proportion of other groups of European origin, such as Ukrainians, Byelorussians, and Germans, was also significant (Itogi perepisi RK, 1999).

Rising ethnic tensions and growing uncertainty about the future prompted many Russians and members of other groups of European background to leave Kazakhstan in the late 1980s and especially after the breakup of the Soviet Union and the proclamation of Kazakhstan's independence in 1991. The regions with decreasing number of population were North, Central and East Kazakhstan. On the contrary, in South and West Kazakhstan population increased. Nonetheless, despite increasing net out-migration of Europeans, the share of these groups in the country's population remains highest among all of the Central Asian nations (Zayonchkovskaya, 1994).

This European group has following characteristics to be taken into consideration:

The majority of European ethnic groups live in cities. Thus, the birth rate among urban population is low.

This group is more likely to emigrate, which has direct and indirect consequences for the demographic situation.

The demographic behavior of Kazakh ethnic group has become similar to Russians due to long-term assimilation processes in cities (Alekseenko, 2004).

The differences in reproductive behaviour and indicators between indigenous Central Asian ethnic populations, including Kazaks, on the one hand, and ethnic groups of European stock, primarily Russians, on the other, are well known. Whereas Russians and other European groups have already completed the fertility transition, the fertility of Kazaks still remains well above replacement level. According to data of Kazakhstan Demographic and Health Survey for 1999 TFR of Russians were 1.38, of Kazakhs – 2.5 (KDHS: 44, 1999). The last available data on TFR by ethnicity were in 2012, the source is the Agency of Kazakhstan (Ethnodemographic Yearbook, 2013). According to this source TFR of Russians was 1.59, of Kazakhs – 2.79.

But this simple ethnic dichotomy - Kazaks versus Russians-does not reflect the complexity of the issue accurately. However, when we study demographic behaviour of two major ethnic groups, one has to assume as a basis more complex ethnocultural identity. Kazakhstan had been influenced

by Russians more than any other post-soviet countries. The evidence for which is a use of Russian language in everyday life. Even though Kazakh language gained an official status since independence, Russian language remained a language for interethnic communication. Still Kazakhs residing in cities prefer to communicate in Russian. And it is well-known that the language that a person uses reflects this person's sociocultural background, tastes, and preferences. In the Soviet era, the authorities vigorously promoted Russian language and culture among the non-Russian population of the union as an instrument of sociocultural and political integration. Considering the impact of process of russification on native population, there is three groups of population we are going to segregate in our study: Russians, russified Kazakhs – native urbans, and Kazakhs that moved to cities recently, thus being less subject to the process of russification.

Populations of two main ethnic groups of Kazakhstan changed drastically during the last twenty-five years. According to the Committee of Statistics of Kazakhstan, there were 16,199,200 people residing in Kazakhstan in 1989, 6,496,900 (40%) of which were Kazakhs and 6,062,200 (37.4%) were Russians. By the end of 2015, the population of Kazakhstan increased up to 17,670,500 people, 11,748,100 (66.4%) of which were Kazakhs and 3,644,500 (20%) were Russians.

A key factor in the reduction of Russian population was due to the migratory outflow, which took place in Kazakhstan. In the early 1990s the mass emigration was caused by the collapse of Soviet political system, which was followed by deep economic crisis. Russian and other European ethnic groups left Kazakhstan to return to their ethnic motherland. The most significant losses were among highly qualified staff. This trend has stopped only after the crisis was overcome. Migratory flow has become more selective since then, and it is less dependent on political factors. Interstate migratory flows have decreased, while interregional migratory flows have increased.

Since Russians of Kazakhstan mainly reside in urban areas, it means that the ethnic structure of cities has changed. Furthermore, because of increased internal migration “village-city” urban Russians were replaced by rural Kazakhs. Also the difference deepens due to higher birth rates among Kazakhs (higher than simple reproduction level).

We may observe (figure 1a) that for the last 10 years the percentage of Kazakh population has increased almost in all regions of Kazakhstan. It should be mentioned that regions ordered by alphabet. The proportion of population has changed a little in the Western and Southern regions of Kazakhstan due to the historical high proportion of Kazakh population. One of the significant factors in the rise of Kazakh population was inflow of ethnic Kazakhs that repatriated to Kazakhstan, so called “oralmans”. Issues of “oralman” settlement have become one of the critical social issues nowadays.

Figure 1a – Distribution of Kazakh population in regions of Kazakhstan (in %), in selected years

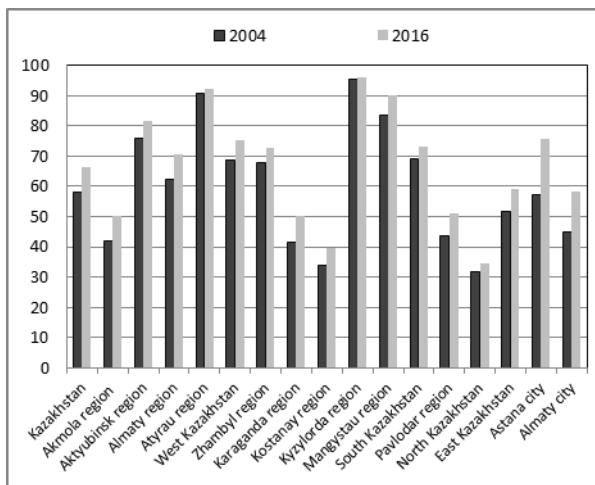
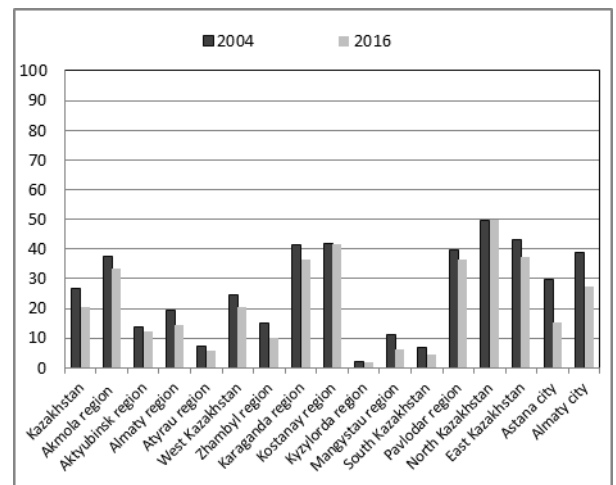


Figure 1b – Distribution of Russian population in regions of Kazakhstan (in %), in selected years



Source: The Agency of statistics of Kazakhstan

Given the current situation, since its independence, one of the most important areas of state policy was “directed intensification” of migratory processes. Since 1991 Kazakhstan accepted over 957,000 ethnic Kazakh 6,840 families. The peak of repatriates, 164,000 ethnic Kazakhs returned back to the country in the middle 1990s. The term “oralman” became widespread for ethnic Kazakhs returning back from foreign countries. The inflow of migrants was so large that the Government of Kazakhstan took measures to decrease number of comers, restricting entry quotas. The main issue for newcomers was socialization, since many migrants were not prepared sufficiently to adaptation in Kazakhstan. Oralman faced issues of language barrier, settling and employment. Many repatriates that could not socialize formed own communities, which is still common in South region. Internal migration went out of control, since many repatriates practiced seminomadic way of life. This was due to large number of reasons – lack of strict legislative basis up to 1997 that regulated migratory relations, social differentiation of incoming oralman, general socio-economic situation in Kazakhstan that was difficult and the Government had limited resources to manage these complex processes.

The main problem was a lack of clear mechanism for population settlement pattern of repatriates and completely unclear how the status of oralman could be gained. Mechanisms of government control were not sufficiently efficient in determining those who really needed state subsidies and those who used this program for self-interest.

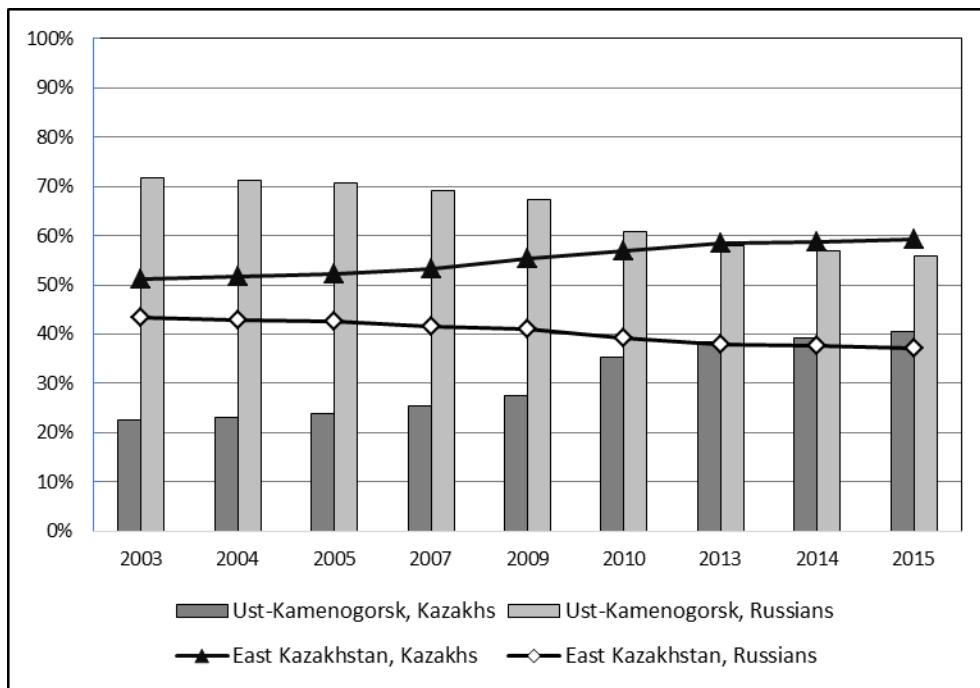
Majority of oralman are from CIS-countries: Uzbekistan, Russia, Turkmenistan, Kyrgyzstan, as well as China and Mongolia. Mostly, oralman speak only Kazakh language, are poorly educated and qualified (skilled). Therefore, it was rather difficult for them to adapt in traditionally Russian-speaking regions of Kazakhstan. That’s why, even though oralman were first settled in northern regions that was mostly depopulated due to emigration in the 1990s, they preferred to move to

southern regions of Kazakhstan, where the economic situation and language barrier was more favorable. According to the Committee of Statistics of Kazakhstan, 46% of all oralmans settled in the South Kazakhstan. Taking into account that the South Kazakhstan is the densest region in Kazakhstan (ab.20 people per sq.km.) the demographic situation in the region is very crucial. It is also worth mentioning that oralmans have relatively high reproductive rates, which will have its impact on ethnic composition of the region in the future.

Seven oblasts were determined to accept oralmans according to changes in the law “About migration of population” in 2013. These oblasts were located in the Northern and Eastern regions of Kazakhstan, which have lower population densities and higher proportion of Russian population. The composition of population has not changed significantly since its introduction.

The situation with population changes in the East Kazakhstan is similar. As described above, East Kazakhstan (in our study is represented by regional center of East Kazakhstan – Ust-Kamenogorsk) is one of the most russified region in Kazakhstan (figure 2). In the early 90-s, after Soviet Union dissolution ethnic composition of population in the cities of East Kazakhstan oblast started to change. As a result, in figure 2, we may observe sharp changes in proportion of two ethnic groups during last 10 years. The proportion of Russians in Ust-Kamenogorsk decreased from 71% (218,991 people) in 2003 to 55% in 2015 (186,231). While the proportion of Kazakhs living in city increased from 22% (68,675 people) till 40% (134,898 people). The proportion of other nationalities residing in the city is insignificant.

Figure 2 - Population of East Kazakhstan oblast and Ust-Kamenogorsk by ethnicity (in %), in selected years



Source: The Agency of statistics of Kazakhstan

It is necessary to note that in Ust-Kamenogorsk increase share of Kazakh population took place only in post-soviet period. Therefore, it is even more interesting to observe the dynamics of changes in reproductive behaviour of townsmen, which was mostly affected by migrations of recent periods.

2.2. Economic, social, and cultural trends

The decline in fertility that started in the 1990s has been preconditioned by numerous determinants of various origins, which manifested themselves at different time intervals, have different sequences and strengths and various effects on the childbearing behaviour of the population. First, the determinants that played an important role in the drop in fertility in the Western countries, and that are summarized in the theoretical framework of the second demographic transition, should be distinguished. Second, there are also specific determinants that are typical only for the post-communist countries experiencing transition to a market economy. Finally, there are national level determinants. In all of them, the impact of the old and new conditions on the demographic, specifically childbearing, behaviour is interrelated.

During the period of recent transformations, all spheres of public and private life have been changing fundamentally and rapidly, and all these changes have had an effect on childbearing behaviour and fertility patterns.

This and following subchapters provides an overview of the key determinants that have affected the decline in fertility in Kazakhstan. They have been grouped as follows:

economic determinants of the transformational period: economic transformations, economic crises, unemployment, low income, poverty, etc.;

transformation effect factors: orientation towards paternalistic state policy, conflict between patriarchal attitudes and emancipation, housing shortage inherited from the Soviet system, paid education and specifics of female employment;

demographic determinants: internal emigration of youth from countryside to cities, family de-institutionalization and changes in family formation;

determinants of the second demographic transition in the transformational environment: individualization, emancipation, increasing freedom of choice, secularization, modern methods of contraception, etc. (van de Kaa, 1987, Lesthaeghe, 1995)

2.2.1. Economic determinants

During the Soviet period Kazakhstan was a supplier of agricultural and raw materials for the former Soviet economy, where the military industry played the major role. Main economic and political essence of 25 years of independence has become transition from the central command planning to a market system. During these years, Kazakhstan has made considerable progress in implementing complex political, economic and social reforms to establish a democratic state with a market economy. While the country has not experienced political disturbances during the transition period, it has faced numerous economic, social and environmental challenges.

In the period of transition to a market economy and the formation of the labour market, the loss of Soviet era employment and minimum salary guarantees became crucial for part of the population, so much so that a consolidation of market rules was followed by a tremendous decline in the national economy and a shrinking of industry. In the initial phase of the transformations, large numbers of former industrial employees were thrown into a new and highly specific status of economic inactivity. They were given unpaid leave and thus lost their wages. For many, the unpaid leave lasted a long time - a year, two years, or even longer. Loss of employment and income were common in other branches of the economy, too. It was rapid and massive where it related to the destruction of Soviet economic units, but also gradual, through the reorganization and transformation of various economic structures.

Thus, during the first years of the transformations, the establishing of new labour market rules, the lowering of income and the weakening of social guarantees were taking place in parallel with an economic decline. The changes were rapid and drastic and had significant consequences on marriage and fertility. In later years, when the Kazakhstani national economy had recovered, for the passive segment of the population the loss of social guarantees was still painful and caused deprivation or even poverty, produced doubt about the future and modified childbearing behaviour. Part of the population still has difficulty adapting to the new conditions of the market economy.

Kazakhstan's declaration of independence in 1991 and its political separation from the Soviet Union was followed by a speedy and evident breach in economic relations, a decline in industry, and a complete breakdown of the enterprises which were producing for the military industry of the USSR. Organization and privatization of the entire economic chain, which took places simultaneously, also had a destabilizing effect on the economy of the country.

The production cycle of industries in the command economy is regulated and planned directly by the government. Moreover, primary production and later stages of production supply-chain was divided among many Soviet republics and was coordinated by the government officials. After a collapse of the USSR the supply-chain management of industries had disintegrated, firms were not ready for the fact that all the processes in economy were not regulated and directed by the central government, but by market forces. Also, firms faced trade and other bureaucratic barriers, as countries had become independent. The first few years of Kazakhstan's independence were characterized by an economic decline (mostly due to the destabilizing force of disintegration of the Soviet Union): by 1995 real GDP dropped to 61.4% of its 1990 level. This economic deterioration exceeded the losses experienced during the Great Depression of the 1930s. The wide-ranging inflation observed in the early 1990s peaked at annual rate of up to 3,000% in mid-nineties, which had a pauperizing effect on a large portion of the population and increased income inequality in the society. Significant changes were taking place in the sphere of employment. A western type labor market was just emerging, alongside which unemployment appeared and was rising. For a society, which had had no previous experience of functioning under labour market conditions, not to mention in the environment of a deep crisis, the blow was tremendous. Furthermore, the

institutional labor market system was forming slowly. At the beginning of the 1990s, Kazakhstani society experienced a nearly five year long, extreme economic decline (Alekseenko, 2004).

In response to worsening economic conditions, the government began accelerating reforms with a revised package of structural reform. Kazakhstan was one of the earliest and most vigorous reformers among the countries of the former Soviet Union. In the early years of transition, prices were liberalized, trade distortions reduced, and small- and medium-scale enterprises (SMEs) privatized. The treasury and budget processes were significantly improved. Between 1995 and 1997, the pace of the government's program of economic reform and privatization quickened, resulting in a substantial shifting of assets into the private sector. The December 1996 signing of the Caspian Pipeline Consortium agreement to build a new pipeline from western Kazakhstan's Tengiz oil field to the Black Sea increases prospects for substantially larger oil exports in the near future.

However, there was a downward turn in Kazakhstan's economy in 1998 with a 2.5 percent decline in growth of the gross domestic product (GDP) due to slumping oil prices and the Russian financial crisis in August. Another complicating factor was moving the capital to Astana, which has both disrupted government operations and diverted a large portion of the government's budget into the massive construction necessary to make Astana a functioning capital.

Disintegration of the Soviet collective farm system brought the rural economy to such degradation, that it had not overcome all consequences of the agricultural crisis yet. The sharp decline in the number of livestock and crop areas had caused mass unemployment and huge outflow of rural population into nearby cities. Big industrial cities became a popular destination for rural migrants, because they still had some infrastructure and chances to get paid. Other towns, which were formed around industrial enterprises, were abandoned once the companies went bankrupt.

Only after a decade of reforms the crisis has passed. After posting moderate growth of 2.7% in 1999 as a whole, Kazakhstan's real gross domestic product (GDP) rose by 9.6% in 2000 and 13.2% in 2001, easily the country's best year of economic performance since independence. During 2002-2004 GDP growth was 9.0%, 9.1% and 9.3%, respectively. Moreover, according to The Economist Intelligent Unit Kazakhstan, Kazakhstan was within Top 10 world fastest-growing economies in 2005. Real income during this period grew by 13.5%. Real growth of average monthly pensions was 23.4% and there has been a significant increase in social payments by the state. Kazakhstan scores much less favorably, however, in the areas of land reform in the rural areas, in the creation of an enabling environment for the small and medium sized enterprises, and in the elimination of corruption. The government has established a basic framework to attract foreign direct investment (FDI) into its resource-rich oil and mineral sector. Banking reforms and pension reform followed, together with the unbundling and partial privatization of the electricity sector.

Despite the world liquidity crisis that began in August 2007 together with falling world prices on commodity resources in the second half of 2008 brought the crisis to the economy of Kazakhstan. The banking sector and oil-mining industry were among first that suffered. Shortening of international financing in the banking sector made the growth of domestic credit of economy to

fall, which in consequence froze the economic activity. As a result rates of economic growth have decreased from 8.5% in 2007 to 1.2% in 2009.

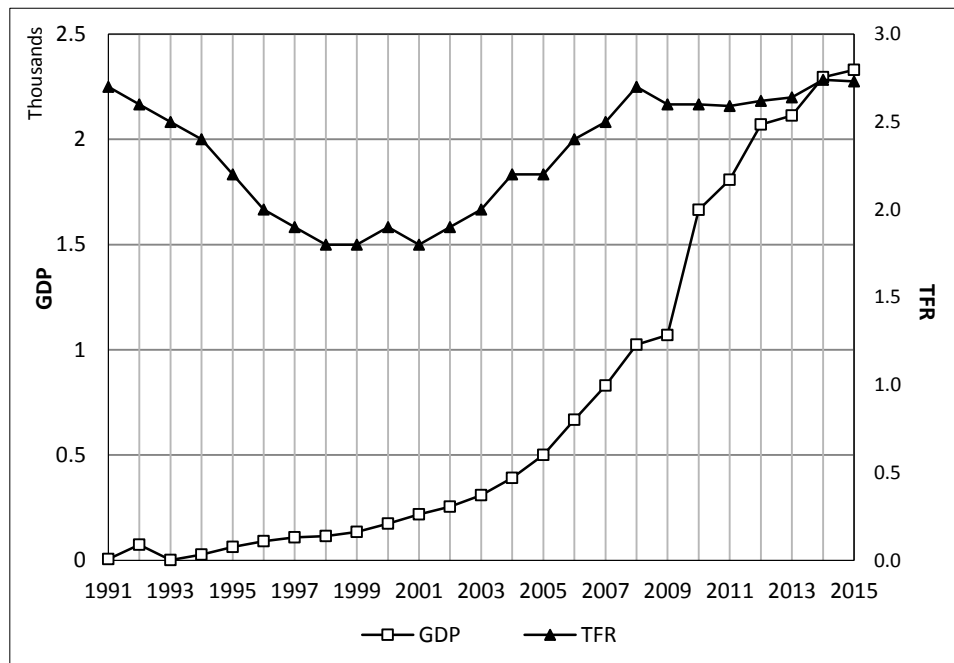
Although Kazakhstan is rich in mineral resources, the production capabilities of the country are limited. The same applies to agricultural production, which is mainly exported at lower prices due to shortages of storage and deficiencies in production. Dependence on regions with mining industry makes the economy even more volatile. Considering that, development of manufacturing and service sectors became the most important priority of government policy. The main goals of current structural policy are diversification and development of non-oil sectors of economy. A number of development agencies and research centres (Development Institutions) has been established and the Government is looking at establishing techno and science parks to support the diversification of higher-value added industries. Although income levels and labour force of the service sector in economy has increased during the last decade, Kazakhstan still remains a centre for natural resources production.

The year of 2015 was marked by the launch of a new wave of structural reforms. The “100 Concrete Steps, a Modern State for All” Program is structured around five major pillars of the institutional reform agenda: (i) professionalizing public administration, (ii) enforcing the rule of law, (iii) increasing state transparency and accountability, (iv) fostering economic diversification and growth, and (v) uniting the nation (official site of the President of the Republic of Kazakhstan www.akorda.kz). Strengthening institutions, improving physical infrastructure, and raising the quality of human capital (as part of the skills-enhancing agenda) are all key pillars of the long-term development strategy “Kazakhstan 2050,” which aims to transform Kazakhstan into a knowledge-based diversified economy driven by the private sector.

It should be mentioned that in 2015 due to falling oil prices and weakened domestic and external demand the real GDP's growth was slowed. The move to a floating exchange-rate regime in August 2015 led to a sharp depreciation of the explain, which negatively affected private domestic demand and intensified inflationary pressures.

Changes in economics were reflected in changes in fertility. It is not surprising that fertility indicators dropped sharply at the beginning of the 1990s, especially in the period 1991-1998. In the early 1990s, childbearing intentions decreased significantly (Alekseenko, 2006). The curves of economic instability are followed in form by the shape of the TFR dynamics (Figure 3). There is, however, no doubt that the decline in fertility was also influenced by a multitude of other determinants. Although the economy of Kazakhstan has been growing rapidly since the beginning of the 21st century, it could not reach the TFR level of 1989, which was 2.9 (2.73 in 2015).

Figure 3 - Changes in gross domestic product per capita (in thou. KZT) and TFR in Kazakhstan (1991-2015)



Note: KZT Kazakhstani Tenge

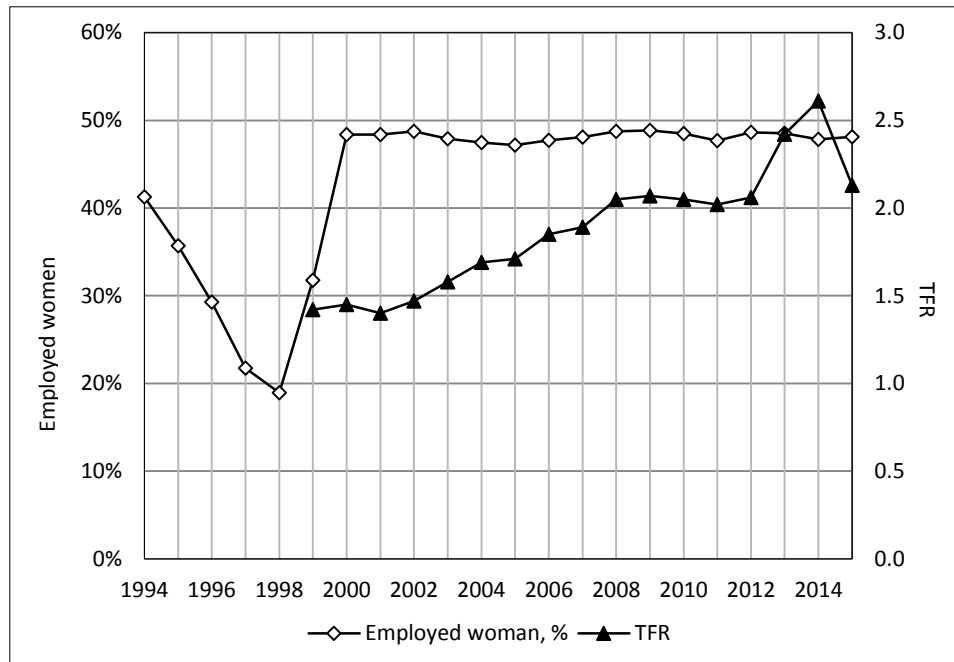
Source: The Agency of statistics of Kazakhstan

The economy of East Kazakhstan oblast was in a deep recession after the collapse of the Soviet Union. In that period, as it is now East Kazakhstan oblast was the centre of nonferrous metallurgy of Kazakhstan. The largest industrial companies, such as KazZinc, Titano-Magniyevyi Kombinat and Ulbinskyi Metallurgicheskyy Zavod are located in Ust-Kamenogorsk. In the crisis period of 90-s, most of the industrial companies did not operate at its full capacity. A large part of the population that worked at these companies became unemployed. The employees at the social and government organizations suffered due to delays of payoffs. The situation was worsened by outflow of Russian specialists and engineers from urban areas, which could not be compensated by rural Kazakhs moving to cities, particularly to Ust-Kamenogorsk. According to the Census 1989, there were 1,031,598 people residing in urban areas of East Kazakhstan oblast, 214,479 (20%) of which were Kazakhs and 714,342 (69%) were Russians. The number of urban population decreased to 899,745 in 1999, the proportion of Kazakhs increased to 33%, while Russians decreased to 59% of population. Many highly qualified employees of industrial companies, engineers and others were first to leave the country. Therefore, not only the ethnic picture of the city has changed, but also the social structure has changed, which influenced the fertility rates.

The growth of unemployment has affected the population income and changed the structure of employment. Women were first to suffer from unemployment. In the 90s the number of employed women decreased drastically, the population income shrank and the proportion of expenses on food increased. On figure 4, one may observe that TFR dropped along with the decreasing employment

rate of women in East Kazakhstan oblast. And when the economy started to grow in the late 90s, the increased employment of women resulted in the growth of TFR and delayed births.

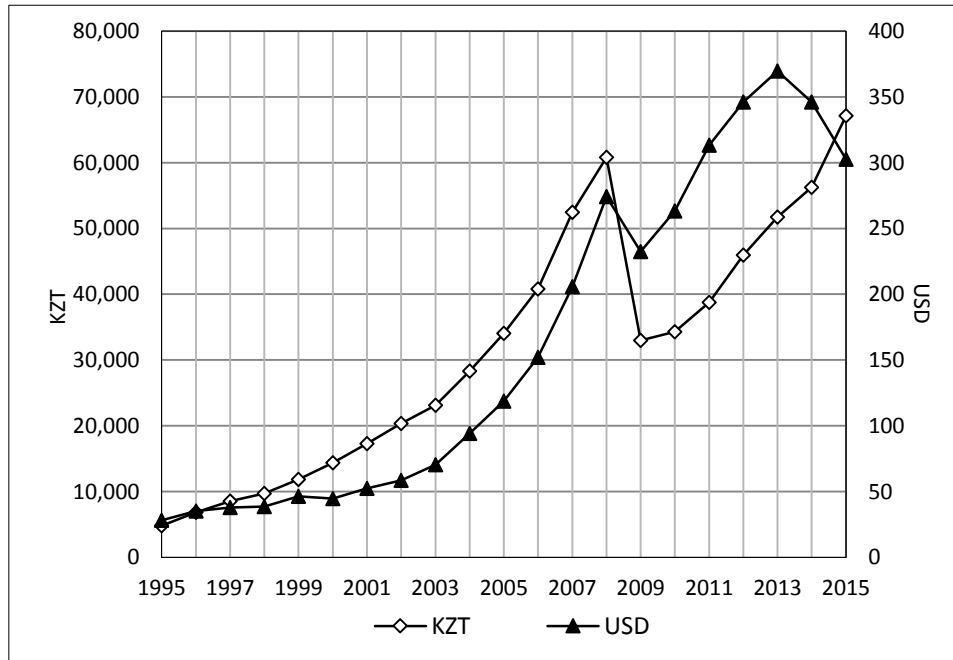
Figure 4 - Changes in percentage of employed women and TFR in East Kazakhstan oblast (1994-2014)



Source: The Agency of statistics of Kazakhstan

Although the economy of Kazakhstan was very unstable in the 1990s, it was, on the whole growing till 2015. Since 2015, because of low oil prices the population income has decreased significantly, the devaluation of national currency has resulted in higher import prices. Furthermore, the income of small and medium sized enterprises has plunged, the large enterprises started to send their employees on an unpaid leaves. If we compare data on nominal income in Kazakhstan starting 1995 (when tenge replaced soviet ruble), then we can see that in tenge the income has increased each year on 15-20%, but if we compare data in dollar terms, then the situation is even worse. The economic picture gets even worse if we take into account uncounted income in 2016 and almost a hundred percent devaluation of national currency – tenge to US dollar. Since most FMCG products are imported to Kazakhstan, it is obvious that level of income of population decreased over last five years.

Figure 5 - Changes in income per capita per month of population of Kazakhstan (1995-2015, in KZT and USD)



Source: The Agency of statistics of Kazakhstan

In order to describe the standard of living and income level of women in Kazakhstan, we need to look at the employment of population by sector of economy. The majority of population in Kazakhstan are employed in the service sector. The share of employed in the service sector has increased in recent years, while the share of employed in agricultural sector has decreased. The share of employed in the industrial sector has not changed at all (Figure 6). These turbulent economic transformations required a lot of adaptation from society and were accompanied by an increased risk of losing one's job. There was a need to change professional qualifications, etc. It is noteworthy that, despite the marked increase of employment in the service sector, social services are still rather poorly developed.

Figure 6a - Employed persons by sector in Kazakhstan (2001-2015, in %)

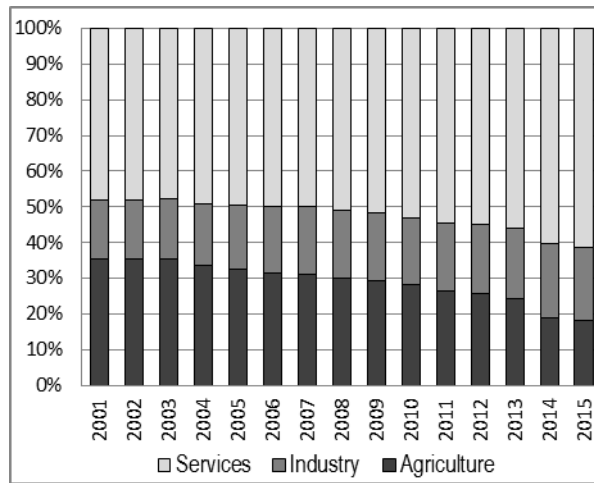
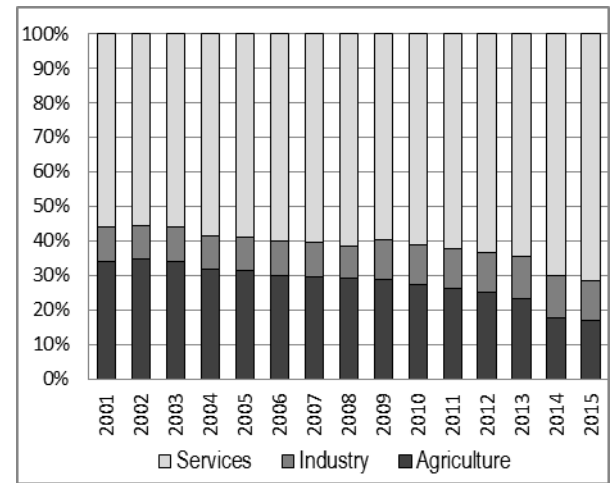


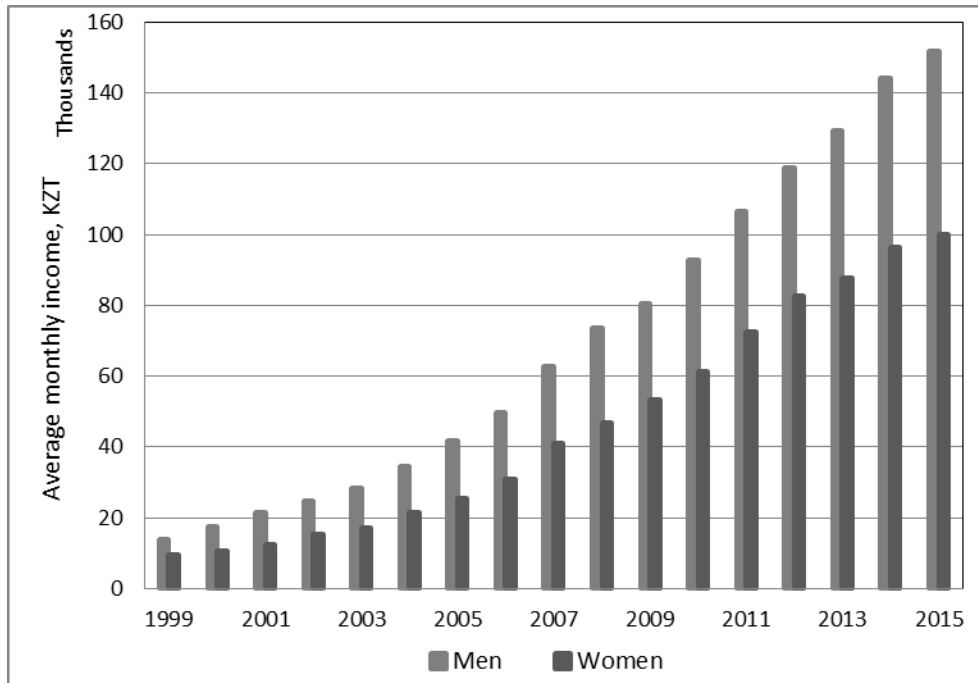
Figure 6b - Employed women by sector in Kazakhstan (2001-2015, in %)



Source: The Agency of statistics of Kazakhstan

It is worth mentioning that women accounted for 48.8% of the country’s workforce in 2015. At the same time the majority of employed women work in the service sector (education and health) and in the agriculture (Figure 6b). It should be taken into account that salaries vary depending on the sector of economy. Thus, the lowest salaries are in the agriculture (72,207KZT; 327 USD monthly) and education (77,542 KZT; 349 USD), and the highest are in the mining industry (275,624KZT; 1,243 USD). Salaries of workers in the service sector, such as education and health are three times lower than those employed in the industrial sector. Which means that in average women’s salaries are lower than men’s that are employed mostly within the industrial sector (Figure 7). This situation rises tensely in the society.

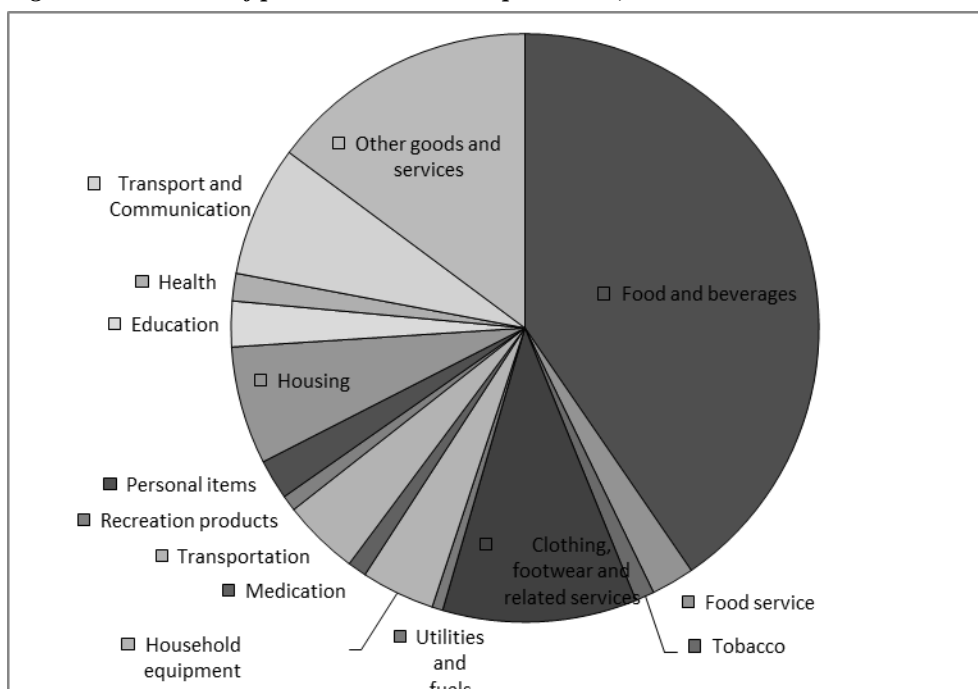
Figure 7 - Changes in average monthly income between men and women in Kazakhstan (1999-2015, in KZT)



Source: The Agency of statistics of Kazakhstan

It is easy to see that a personal income in the country is lower than official figures by looking at the structure of their expenses. Unfortunately, we don't have the data on personal consumer expenditures (PCE) by regions, so we used data for the whole Kazakhstan. Here for classifying it is used definition of personal consumer expenditures (PCE) suggested by Bureau of Economic Analysis, USA, where all expenditures are divided into three groups: food commodities, non-food commodities and market services. Food commodities constitute the largest part of expenditures (48%), 90% of which is spent on food for home consumption, while food and beverages purchased for off-premises consumption is only 10% of all expenses from this category. Non-food commodities category including clothing, footwear, and household equipment is only on the second place and has 24%. Services have 18% from all PCEs, and other items are 15%. So, it is obvious that half of all population's income is spent for purchase of food commodities. A majority of the population can afford larger purchases only by means of credits, the interest rate on which remains still high.

Figure 8 - Structure of personal consumer expenditures, 2015



Source: The Agency of statistics of Kazakhstan

Another important characteristic of living standard is housing. A dying away of the centralized and regulated system of housing supply, and transition to an open housing market, accompanied by a great shortage of accommodation, the absence of an alternative system for acquiring a home, and large increases in prices for accommodation have been, and still are, very painful for residents, especially those from the lower social strata. The absence of a favourable loan system for the purchase of a home is a very sensitive issue, particularly for young people, and has had a serious effect on their matrimonial and childbearing behaviour.

As a result of housing reforms conducted after Soviet Union collapse, most part (95%) of state housing assets was privatized. While according to Census of 1989 only 33% of housing was owned by private proprietors. To develop housing market the government of Kazakhstan initiated privatization process (transfer of housing fund owned by government and municipalities to private ownership) and municipalization (transfer of housing fund to local municipal governments). However, privatization made housing more expensive. And those who suffered more was the youth, cause from that moment on, it became impossible to get public housing from the workplace, while earnings were not enough to provide a young family with housing.

Table 4 - Distribution of households in Kazakhstan by type of houses in selected years (in %)

	<i>All households</i>		<i>Urban zone</i>		<i>Rural zone</i>	
	1999	2009	1999	2009	1999	2009
<i>Private house</i>	43.2	41.8	24.9	24.8	76.1	69.2
<i>Part of private house</i>	0.2	1.3	0.2	1.0	0.3	1.8
<i>Flat</i>	52.0	51.6	68.7	67.5	22.1	26.1
<i>Municipal apartment</i>	0.3	0.3	0.4	0.4	0.1	0.1
<i>Dormitory</i>	2.2	2.0	3.3	2.6	0.3	0.3

Source: Census of Republic of Kazakhstan in 1999, 2009

Housing has become an extreme issue in cities due to a mass migration of rural inhabitants into cities, which was aggravated by government policy for reduction of rural settlements. The housing issue has become a nightmare for young people in particular, since the age structure of migrants is rather young. Until the crisis of 2015 mortgage crediting was very popular among the population, although credit conditions were usurious enough. At present even this opportunity is limited. A majority of immigrants lodges in private sectors in city suburbs. Only few migrants may afford to buy their own apartment (all utilities included), the majority of them rents a room. Just-married couples face a paradox-situation, where they have to reside with their parents as a result of economic issues rather than tradition principles.

There are certain improvements in housing conditions, but it is not enough yet. Before independence, there were 9.36 million people living in cities, and a city resident was provided with 12.5 sq.m. of dwelling. By the beginning of this year, there were 9.14 million people residing in cities (decreased by 2.4%), and a city resident had 23.5 sq.m. of dwelling. However, housing rates in Kazakhstan is lower than in Russia, Ukraine or Belarus. The rate is 21 sq.m. per capita in Kazakhstan, which is twice as low as it is in Europe, and four times lower than in Norway or the US. If we keep the current construction levels that are quite high, we will need over 50 years to attain the housing rates of Europe (Potashev, 2009).

Actually, there are over millions of Kazakh people which need housing. But they do not have enough savings or property to assign a mortgage. There are issues with unemployment in villages and provincial towns, making people move closer to bigger cities. The houses in villages become abandoned and destroyed.

In 2012 a new housing program “Kazakhstan 2020” was launched, the aim of which was to improve housing conditions of Kazakh people by making it more affordable to save for housing. This program has two parts, both of which are to provide population of average income with better housing conditions. Firstly, the government via its bank invests into building new apartments, which then leased as a mortgage at low fixed interest rates (5-9% annually). Secondly, the government bodies offer housing for a leased rent. The cost of such housing is only 125,000 tenge per sq.m. (378 USD), which is much lower than the market cost but still rather high for the most part of citizens comparing with their level of income.

Alas, this program is yet constrained by construction capacity, and it is not able to satisfy housing needs. The housing is built mostly in large regional centres, but the housing deficit still remains in smaller cities and rural areas. Housing prices are still quite high despite all the government support. For instance, one sq.m. of an apartment will cost 125,000 tenge (378 USD), so that two room apartment of 65 sq.m. will cost around 24,570 USD. Considering the fact that to get a mortgage loan, one have to accumulate 50% of apartment price beforehand, it is not quite affordable for inhabitants of Ust-Kamenogorsk with a salary of 96,470 tenge to improve their housing conditions.

The situation is especially complicated for young families. In Kazakhstan, a young family is a family where age of both partners does not exceed 29 years old. This age bound is determined in the law “About the youth”. To have benefits of being a young family, which makes housing more affordable, partners have to be married for at least two years. Since majority of the youth in Kazakhstan pursue upper secondary education, and later they pursue career, these couples postpone their marriage, so the support of government reaches only few proportion of the population.

Developed countries have sophisticated instruments to fulfil housing needs such as rent, which has higher demand than in Kazakhstan. For instance, to rent a 100 sqm three room apartment (2 bedroom, US) is appr. 150,000 tenge (450 US dollars). So, monthly family income shall be at least 500,000 tenge. And even we consider that there are two persons working in a family, it is still four times as much as an average wage in Kazakhstan. Therefore, we conclude that main housing problem in Kazakhstan is lack of solvent demand due to overpriced property in the market (Kalinin, 2012).

Economic determinants evidently had a strong effect on the decline in fertility at the beginning of the economic transformations and during the crises. In fact, they served as the impetus for the change in family formation, renouncement and postponement of marriage, avoidance of long term matrimonial obligations, etc., and fertility, postponement of childbearing, or having fewer children. However, in the second half of the 1990s, the effect of these economic determinants started to weaken and was increasingly overwhelmed by determinants related to ideational changes that were taking place in the society.

2.2.2. Social determinants

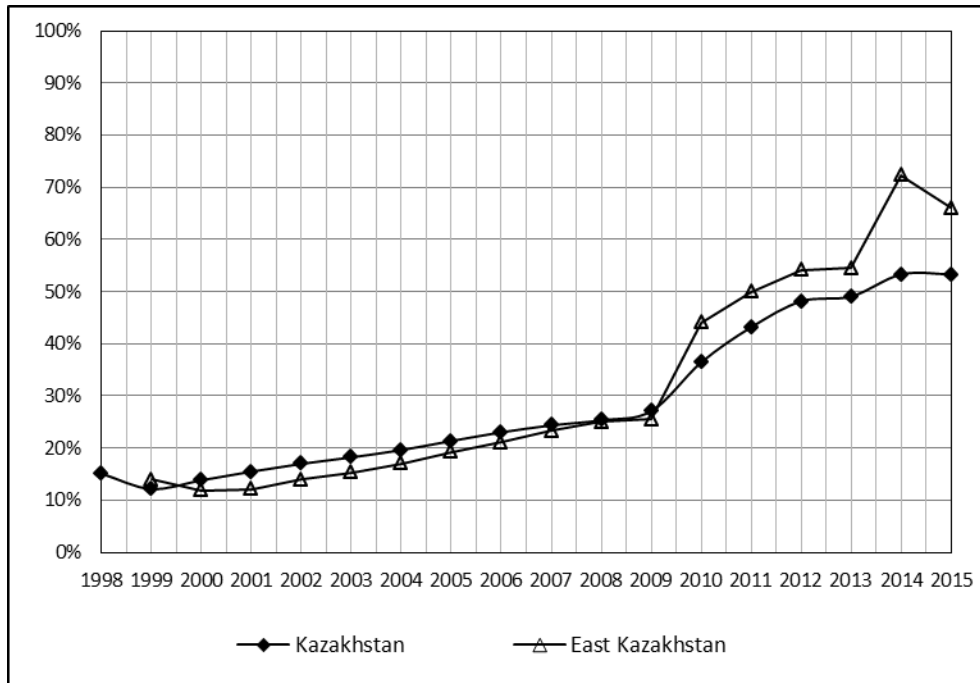
The population of Kazakhstan has relatively high literacy level. This level is related to reforms that took place in the Soviet Union, when upper secondary vocational education became free and compulsory. The admission to higher education was free but limited though. Since the disintegration of Soviet regime a situation in education system has changed. Since 1991 a new independent system of education has started to form in Kazakhstan. For its legislative basis, the laws “About education” (1992) and “About higher education” were passed.

The most significant changes in Kazakh education happened to attendance of preschool institutions. The attendance issue of preschool institutions is of great importance regarding to support of preschool education, nutrition and health of children. Nowadays, preschool institutions in

Kazakhstan educate children that are 3-6 years old. In the Soviet period attendance of kindergarten was very popular, and almost half of children aged 1-7 attended these kindergartens. It should be mentioned that in USSR preschool education was free of charge. After the collapse of the USSR, many kindergartens were privatized and used for other purposes by their new owners. Previous allocation system was based on parents-enterprises, which were abolished. Only few enterprises could provide kindergartens for children of their workers. The preschool education has become a main concern for policy makers. But even the government failed to solve this issue. In 20 years the number of children attending preschool institutions had sharply declined not only due to decrease in population and birth rates, but also as a cause of budget deficit, which lacked financing and made most kindergartens close. The preschool education has become paid, with a fee of 12,000 tenge (37 USD) in state kindergartens and 30,000 to 80,000 tenge in private ones per month. The number of preschool organizations decreased from 8,881 in 1991 to 1,102 in 1999. The number of children attending childcare centres also fell significantly in the first years of independence. It decreased from 1,023,099 in 1991 to 124,401 in 1999 (Figure 10), and if the percentage of children that attended kindergartens in 1991 was 57.4%, in 1999 it reached its minimum of 16.2%. The fertility rate has increased since 2000, and consequently intensified the deficit issue of kindergartens.

The issue of preschool education is particularly critical for rural areas, and it also contributes to a further disproportion between cities (77% of total preschool education) and villages (23%). Moreover, there are some disproportions in a regional aspect, which is due to economic differentiation of regions. According to data from UNICEF, preschool education is mostly provided in cities of Astana and Almaty, Karagandinskaya and Pavlodarskaya regions, and in a less degree in Akmolinskaya, Almatinskaya, Kyzilordinskaya and South Kazakhstan regions. East and North Kazakhstan regions are provided with preschooling at the country's average (Figure 9). Besides that, there is a financial issue of parents lacking enough budgets for preschooling. And this, restrains families with low incomes to preschool education, making social inequality even worse. It seems that the only solution for that is a free preschool education.

Figure 9 - Proportion of children in cities attending kindergartens from all children of respective age (1999-2016, in %)



Source: The Agency of statistics of Kazakhstan

In 2010 the government changed norms for registering preschool institutions. Mini-centers for children development, which were opened in schools, mostly focus on children of age 5 and more to prepare them for the school. Also, private preschool institutions were launched to function.

It is worth mentioning that demand for kindergartens drove the growth of the number of private ungraded kindergartens, particularly in large cities. This type of kindergartens could place 70-80 children in apartments or private condominiums. Although the sanitary and educational norms are not met in these kindergartens, urban families have no choice but to send their children there instead of public kindergartens which do not have capacity to place all the children.

All these led to an increase in number of preschool institutions in Kazakhstan: 1,852 of them in 2010 and 7,059 in the beginning of 2016. Nevertheless recent increase in a number of kindergartens still is not enough to cover the large deficit that has occurred in the preschool education sector especially in urban areas. Existing kindergartens are overcrowded. They still do not meet the requirements of families for quantity, quality or availability of the services.

The education reform also was applied to primary and secondary education systems. The secondary education in Kazakhstan is up to 11th grade (pupils of age 6-18) is compulsory and free. Since Kazakhstan gained its independence from the USSR, schools started to teach in native Kazakh language along with former Russian schools. A number of such schools are growing rapidly, which is due to increasing popularity of native language. Thus, a number of pupils in the regions studying in Russian schools decreased relatively to those studying in Kazakh schools

(Figure 10a). These facilities made Kazakh language more popular in the country on one hand, but let Russians leave the country on the other.

The proportion of pupils studying in Kazakh in Kazakhstan surpassed those studying in Russian in 1998. In East Kazakhstan, the proportion of pupils studying in Kazakh surpassed those studying in Russian only in 2005 due to high proportion of population of Russian ethnic groups. However, the general trend is similar. In 1991, in Kazakhstan, the percentage of pupils that studied in Kazakh language was 34%, in Russian – 63.3%. In 2015 it changed completely, so that 65.4% studied in Kazakh language, in Russian – 31.3%.

In East Kazakhstan the difference between indicators is less, but the number of pupils studying in Kazakh is also increasing (Figure 10b). These changes indicate following shifts: 1) decreasing proportion of Russians in the region; 2) decreasing fertility rates among Russians. Unfortunately, there is no data available on ethnicity of pupils that study in a selected language. But we assume that most pupils studying in Kazakh are of Kazakh ethnicity.

Figure 10a - Proportion of pupils in secondary schools in Kazakhstan by language of study (1991-2015, in %)

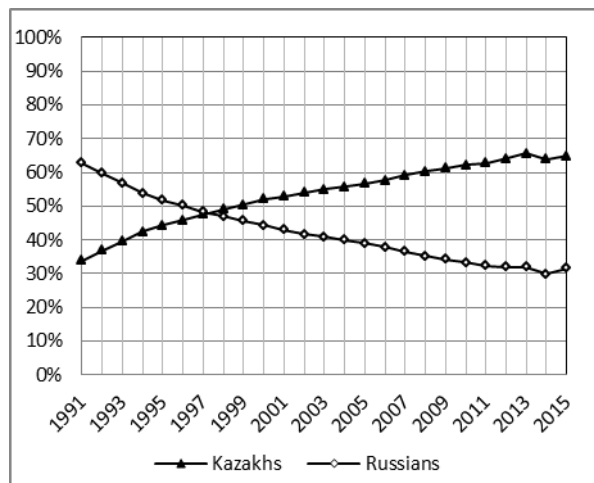
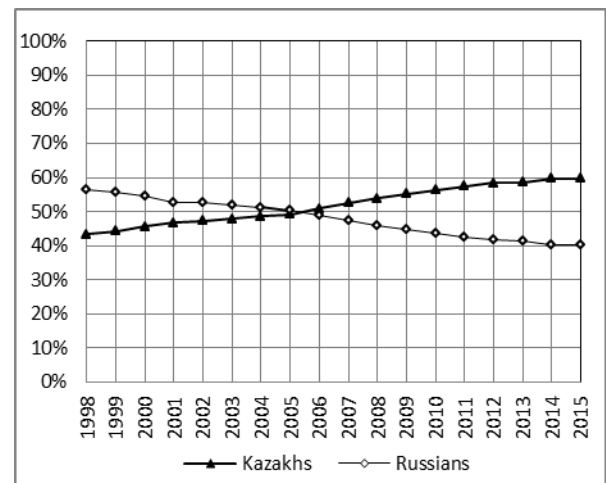


Figure 10b - Proportion of pupils in secondary schools in East Kazakhstan by language of study (1998-2015, in %)



Source: The Agency of statistics of Kazakhstan

Education reforms considered higher education system as well. The main trend for development of higher education was that the Government abandoned state monopoly on the education, eliminated strictly centralized management and complicated regulations of higher education institutions. As a result of this private institutions in Kazakhstan have emerged. Public higher education institutions gained economic independence and started to accept tuition fees for education. Universities, colleges and private schools started to charge tuition fees. Scholarships were provided only to the best school graduates, the remaining students were charged a relatively low tuition fees. These reforms brought about a rapid increase in the number of universities: private universities emerged, and former institutes and colleges were reorganized as universities.

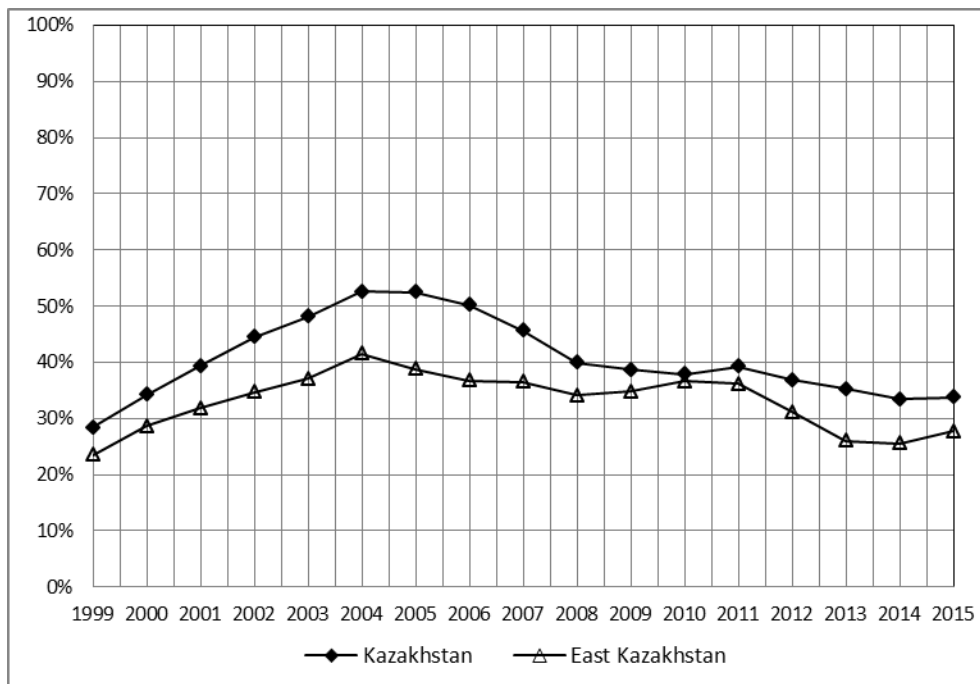
The only classical public institution that existed for a long time in Kazakhstan was Kazakh state university, which was launched in 1934 (Almaty). Only in 1974 the second university was opened

in Karaganda. In two decades of Kazakhstan’s independence, the number of universities has increased by 3 times (55 in 1990 and 127 in 2016). Of which 26 are public, others are subject to accreditation. Universities that started to run their facilities only recently were mainly based on pedagogical institutes, and still have some character of higher education institutions. However, this rapid increase had a disastrous impact on a quality of education. Ministry of Education had to cease facilities of many universities after auditing them according to new education standards required by Boulogne convention.

Numerous reforms, frequent changes of management in related ministries, overgrown system of higher education have led to a significant reduction in the quality of higher education in Kazakhstan and to downfall of the ratings of Kazakhstani higher education. Both the above mentioned reasons and a high cost of higher education (varies from 400,000 to 800,000 tenges per year depending on the selected faculty and university) have led to decline in the number of students.

In the boundary regions, there is a significant student outflows to universities of neighbouring regions of Russian Federation. In East Kazakhstan, which located close to RF, the most popular universities in Russian federation are universities of Barnaul, Tomsk, Omsk and Novosibirsk. It should be mentioned that after graduating in Russia the majority of young people prefer to stay for good there, changing their citizenship. Figure 11 shows that the proportion of students studying at universities is slightly lower in East Kazakhstan oblast than the national average. This might be related to the fact that students choose popular universities in Astana and Almaty where majority of young people trying to enrol at, which affect indicators of the region.

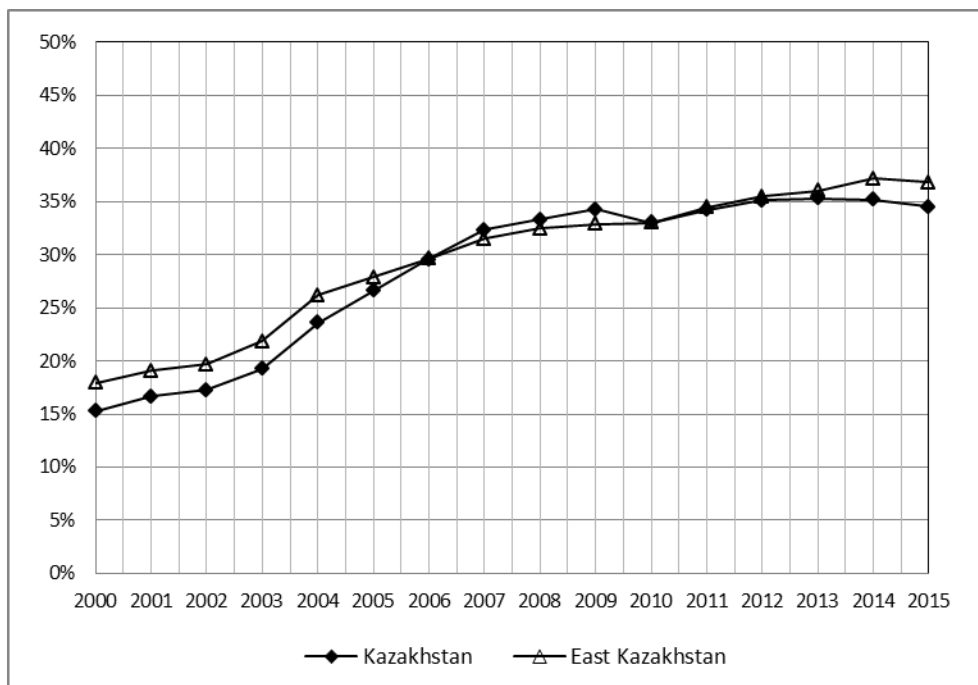
Figure 11 – Proportion of people attending universities from all people aged 18-22 (1999-2015, in %)



Source: The Agency of statistics of Kazakhstan

It should be noted that the proportion of women among students was 55.9% in 2015, which sought education degrees in social sciences and health care, while young men chose technical majors. Although the number of students enrolled at universities in the country is falling in recent years, the number of students enrolled at colleges or vocational technical schools is rising (figure 12). This is related to the easier access to colleges since students who decide to continue their studies in colleges. Students pass college tests, which have easier content and comfortable exam environment. The Unitary National Test on the other hand, is not only a university entrance exam but it also has effect on the grade at the school leaving attestation (certificate). Therefore, the Unitary National Test is a high-stake exam with a stressful test environment that there were cases when students committed suicides because of low scores. Our assumption is confirmed by the fact that the number of students enrolled in colleges has increased since 2003 when the Unitary National Test was introduced in the country. Moreover, the government of Kazakhstan allocated lots of scholarships for college students, particularly for pupils graduating after 9th grade. Furthermore, the tuition fees in colleges are much lower than in universities.

Figure 12 - Proportion of people attending colleges from all people aged 18-22 (2000-2015, in %)



Source: The Agency of statistics of Kazakhstan

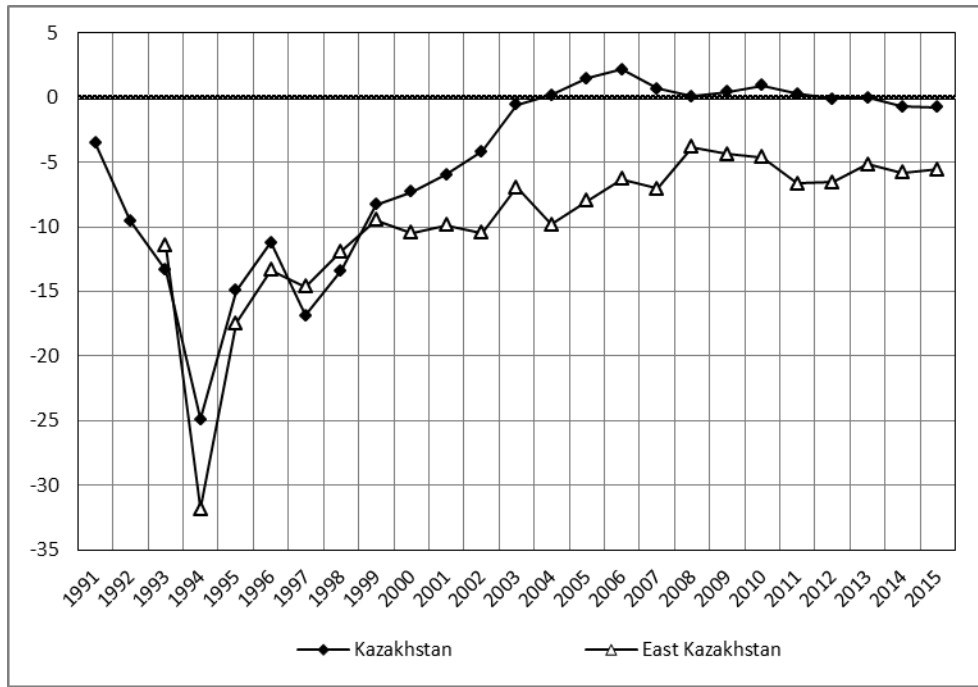
As a whole, the statistical information on the access to upper secondary education in Kazakhstan reports that the majority of young people, including young women prefer to continue their education and get a specialty, which results in the postponed age at marriage and reproductive behaviour.

2.3. Population trends

Political and economic changes that took place in Kazakhstan since its independence had an impact on demographic development as well.

The socio-demographic development of the country for the period since its independence could be divided into three stages. The first stage (1993-1997) is characterized by hard stagnation in economic and social spheres. The number of population during that stage had declined from 16.4 to 14 million people. This was a result of decreasing birth rates along with mass emigration from Kazakhstan to other countries (Figure 13).

Figure 13 - Net migration rate in Kazakhstan and East Kazakhstan oblast per 1,000 (1991-2015)



Source: The Agency of statistics of Kazakhstan

Emigration reached its peak in 1994 (Figure 13). These were first years of country's independence, when Kazakhstan took its own pace for building a sovereign state. The first elections were held, the constitution was passed. In 1993 Kazakhstan already introduced its own currency – tenge. The European population, primarily Russians showed disapproval and were frightened of their future. The people realized that Soviet Union had collapsed. It is worth mentioning that simultaneously with mass migration of Russians to their historical mainland the German government started its active policy for immigration of Germans residing in post-soviet countries. Another wave of emigration took place in 1997-98. This was particularly evident in northern regions. Migration was caused by economic crisis of 1997 and a new law "About language" when Kazakh became a state language. At this stage, mostly Russians emigrated. Since 2000 the flow of migrants out of the Kazakhstan has declined, but net migration rate still remains negative.

In the second stage (1997-2000) the socio-economic sphere was stabilized, which decreased dynamics of negative trends. At this stage the basis for further improvement of socio-demographic indicators was formed.

In the third stage (since 2000), due to improving economic development and demographic factors in Kazakhstan the socio-demographic situation was characterized by positive trends and increase of other indicators. Birth rates and life expectancy at birth have improved, death rates have decreased and migration balance has become positive. Although other significant issues lost their importance they still remain. Birth rates are still lower than they were in 1991. It is particularly evident in regional aspect. There is also a huge difference of life expectancy at birth between men and women. Marriages are becoming less popular, divorces are increasing, as a result of which children live in incomplete families and fall into socially vulnerable environment. Moreover, the number of extramarital births and children living in incomplete families has increased, which is related to a spread of cohabitation and increasing number of lone mothers in the society (Yeshpanova, 2005).

Since 2002, there was a steady increase in the number of population of Kazakhstan. The natural growth was 267,044 people in 2015, while it was only 70,200 in 1999. According to official statistical data in 2015 the population was over 17,670,579 people, almost 1 million more than it was in 1999. The population growth was caused by decrease of migration outflow, increase of birth rates and the policy of attracting of Kazakhs residing abroad.

Speaking about change in the number of population in a region, it is firstly necessary to analyse changes of natural increase/decrease. Even though natural change is positive in Kazakhstan, it still varies for East Kazakhstan oblast (Figures 14a, 14b).

Figure 14a - Natural population change in Kazakhstan per 1,000 (1991-2015)

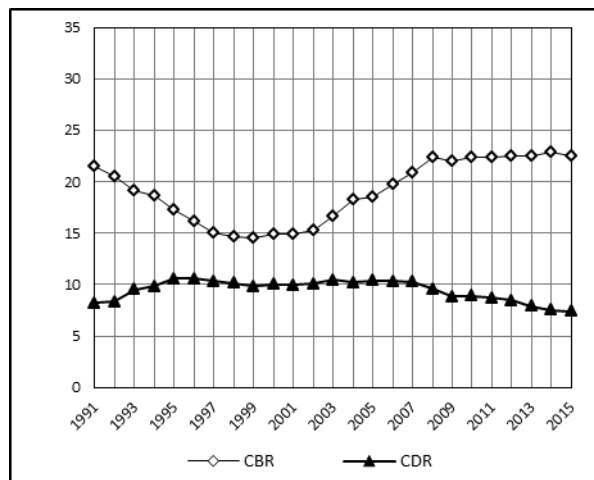
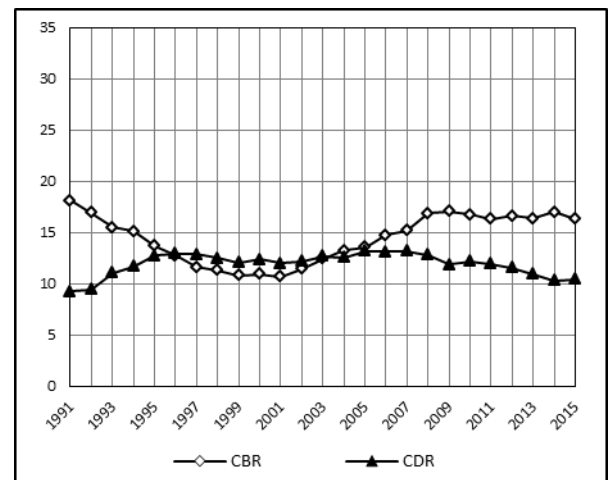


Figure 14b - Natural population change in East Kazakhstan per 1,000 (1991-2015)



Source: The Agency of statistics of Kazakhstan
 Note: CBR - crude birth rate; CDR - crude death rate

Birth rate is a significant factor that determines natural population growth. Moreover, bearing children has been the primary reason for family formation in Kazakhstan. If we look at the demographic situation, we can see that despite the crisis of 1990s and decline in fertility rate the country avoided “the demographic cross” (more deaths than live births). The positive population growth in Kazakhstan was attained due to traditionally high fertility rates in southern regions of the country.

If we take into consideration the facts of birth rate decrease and migration, then it becomes clear that the demographic situation is rather critical in the East Kazakhstan oblast. We can see on figure 14b that the crude death rate (CDR) in the East Kazakhstan oblast has exceeded the crude birth rate (CBR) since 1996. That was the most difficult year for the economy of the young country. Thus this process has begun three years earlier in urban areas of the East Kazakhstan oblast (1993), but it never took place in rural areas of the region. Only after 7 years (2003) did the East Kazakhstan overcome the demographic crisis, though for urban areas it took place for 13 years (2006). Since midst of the 1990s, population of the East Kazakhstan oblast has decreased as a consequence of negative net migration both internal and external, and because number of deaths became higher than number of live births. Even after overcoming the crisis of 90-s, it has not reached the rates of 1991 yet. The population decreased by 27% (377.5 thousands) between 1991 and 2015.

Speaking about death rate in Kazakhstan, CDR slightly increased since 1991, and then stayed at the same level of 9.9-10.9 deaths per 1,000 people during 1993-2011, it slightly decreased in the last five years. At the same time the total number of deaths increased by 3,271 or 2.5% in 2015. Aside of natural causes, the main causes of death were circulatory diseases, accidents, intoxications, injuries, tumours, and diseases of respiratory and digestive organs, infectious and parasitic diseases. Negative trends are partially related to high maternal and child mortality. And it should be mentioned that CDR are 1.5 times higher in rural areas due to low availability of quality medical services there.

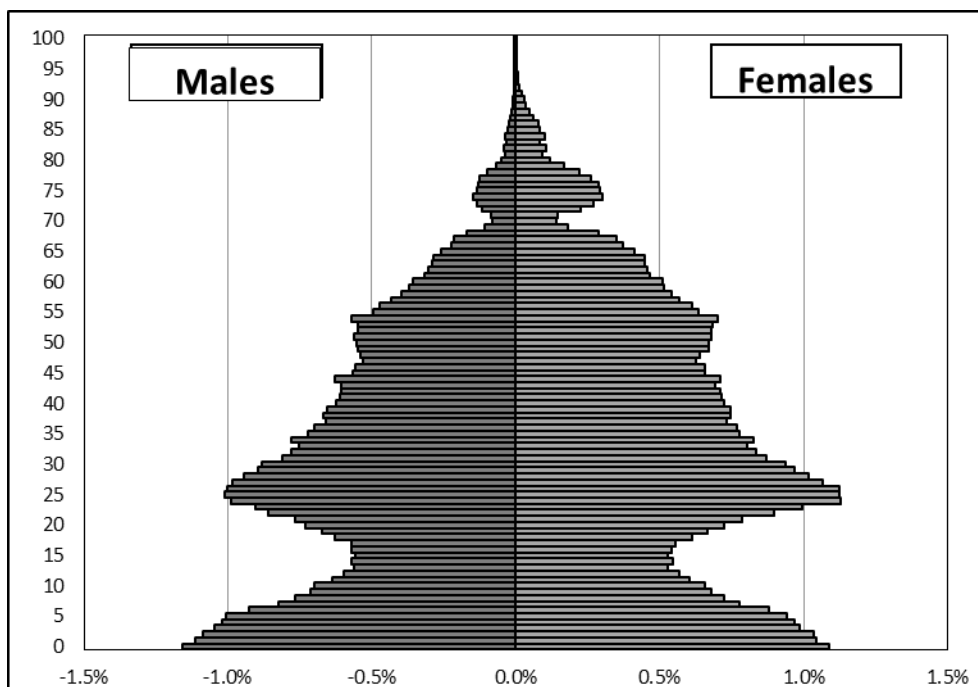
It is observable at Figure 14b that East Kazakhstan oblast has higher death rates. This is due to older age composition in this region comparing with Kazakhstan generally.

A demographer has taken into consideration sex ratio that has significant impact on the formation of future trends in human reproduction. This component in Kazakhstan has been subject to significant disproportions in various age groups. Alas, there is no recent statistical data available for age-sex structure by marital status of population in Kazakhstan, except published censuses of 1989 and 1999. Therefore, we will use usual age-sex structure for population characteristics. Since the main interest of our study is urban population, the data of age structure is going to be constructed for urban areas in Kazakhstan only.

In 2015 proportion of men in Kazakhstan outweighed women slightly (53.01%). Ratio of men per 1,000 women by age in 2015 was as following: 0-14 years – 1059, 15-29 years – 949, 30-49 years – 890. Tendency of increase in number of women regarding men starts from the age of 25-29. There are twice as many women as men that live at age of 60-69. A huge difference in death rates of men and women fail to complying normal proportion of genders in the population structure, and

ratio of women is higher even in younger age groups. Thus, disproportion of sex structure in the country might affect negatively the formation of marital and family structure.

Figure 15 - Population pyramid in Kazakhstan in 2015, urban population



Source: *The Agency of statistics of Kazakhstan*

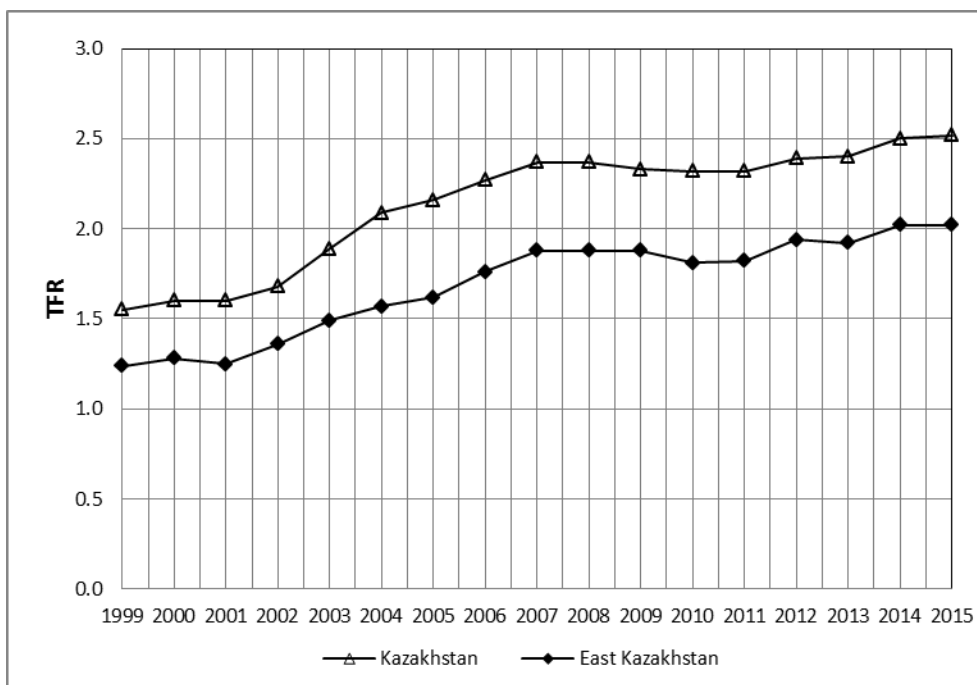
The lowest life expectancy at birth was in 1995, for women 69.4 years and for men – 58 years. The situation has improved only in the last five years. For twenty-five years since independence, the life expectancy at birth has risen only by 4.02 years, which implies low living standards of population, especially among men. Moreover, the highest difference in life expectancy between men and women was in 2007 (11.9 years). At present (2015), the life expectancy at birth is 67.12 years for men, and 75.94 years for women. The life expectancy as a whole is still low – 71.62 years, and is increasing at a low pace. This age difference cause disproportions of population in older age groups, and large number of widow pensioners, which aggravates their situation when they are old.

Peculiarity of change in population age structure in 1991-2015 was also decline in the number of children below age of 14 in total population from 31.6% to 24.7%. However, the proportion of population over age of 65 was 7.2% in 2015 increasing from 5.9% in 1991. And the increase of birth rates in the recent years could not compensate this process. Overall, these processes say about demographic ageing of population of Kazakhstan. According to classification of UN demographers, population of a country is young if the proportion of population over 65 years and more is 4% of total population. If it is 4-7% then population is at the edge of ageing, and if more than 7% then population is ageing.

Since the main topic of our study is characteristics of marital and reproductive behavior, further we are going to discuss birth rate and marriage. When using absolute numbers or crude rates, it is

necessary to consider an impact of age factors on parameters of birth rate. Thus, here we used also Total Fertility Rate (TFR). Comparing data of Kazakhstan and East Kazakhstan oblast, we observed that TFR in East Kazakhstan is lower than country average, but follows the rising dynamics of Kazakhstan. This is largely due to changes in national composition in urban areas, decline of the proportion of Russian population and the growth of Kazakh population, which traditionally has higher fertility rates.

Figure 16 - Total Fertility Rate (TFR) in urban areas of Kazakhstan and East Kazakhstan oblast (1999-2015)



Source: The Agency of statistics of Kazakhstan

The comparative analysis of age specific fertility rates for selected years demonstrates that in 2015 the peak of fertility level was among women aged 25-29, while in 1999 it was 20-24 (Table 4). The fertility rates of older women have increased after the crisis due to postponed births. Thus, women who could not afford bearing a child in the 1990s started to give births once the economic situation had been stabilized. The positive role for increase of fertility rates in these ages, to some extent, was due to prenatal care. The scope of prenatal care (services of physicians, nurses and midwives) is very high in Kazakhstan; almost every woman (99.9%) in Kazakhstan goes through prenatal care. Thereby, increase of birth rate would allow us to say that Kazakhstan reached substantial increase of reproductive indicators of population.

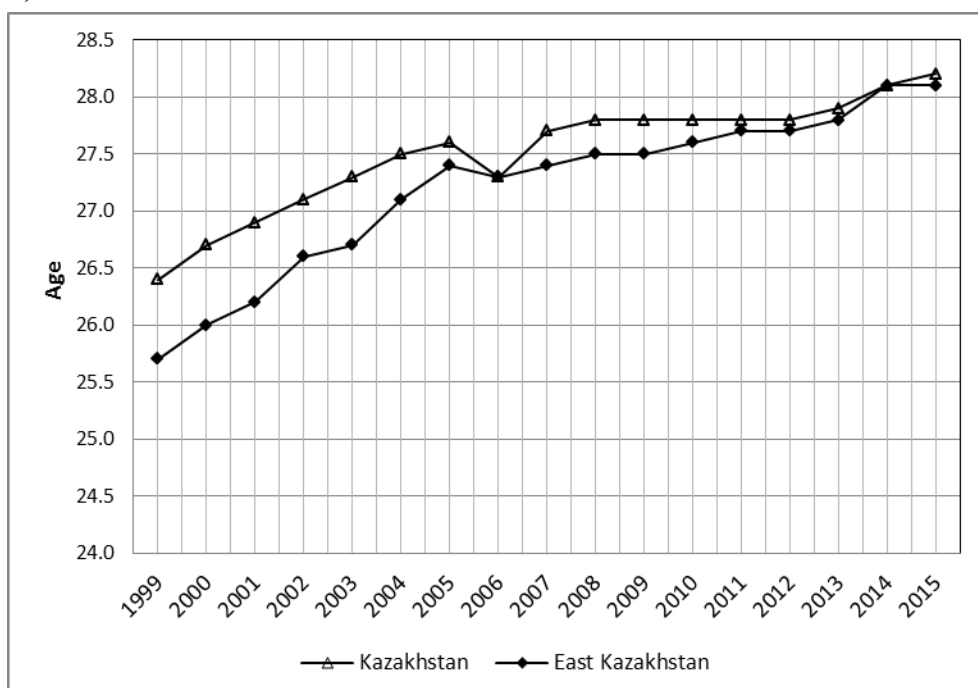
Table 5 - Age specific fertility rates in urban areas of Kazakhstan in selected years (in ‰)

		15-19	20-24	25-29	30-34	35-39	40-44	45-49	TFR
1999	Kazakhstan	31.33	114.16	86.81	51.46	21.54	4.36	0.32	1.55
	East Kazakhstan	31.62	97.50	68.17	35.05	13.10	2.14	0.09	1.24
2007	Kazakhstan	35.08	164.21	152.04	106.20	56.66	13.56	0.63	2.37
	East Kazakhstan	31.25	119.16	110.23	73.95	35.41	7.93	0.18	1.88
2015	Kazakhstan	32.58	141.97	152.34	110.57	63.50	15.81	0.87	2.52
	East Kazakhstan	29.05	109.71	119.77	90.61	48.46	10.70	0.46	2.02

Source: The Agency of statistics of Kazakhstan

By this time, we can observe that an average age of mother at childbearing (computed from the ASFR) in Kazakhstan and East Kazakhstan oblast in urban areas is increasing annually (Figure 17). One has to pay attention that an average age of mothers at childbearing is high not only because women postpone birth, but because they have larger number of children (consequently at later ages) than in previous years. Hence, the childbearing ages are rising among women due to second and third births. This process already comes to the end now. Moreover, births are not likely going to increase in the near future, because the number of women of reproductive ages is decreasing due to low birth rates in 90s. And they out his adapting Western family model, which is oriented on postponement of marriage on later ages and smaller number of children (1-2). The pattern of this reproductive behavior is seen among women of East Kazakhstan oblast.

Figure 17- Dynamic of mean age at childbearing in urban areas of Kazakhstan and East Kazakhstan oblast, 1999 - 2015



Source: The Agency of statistics of Kazakhstan

This assumption is confirmed by the data from distribution of livebirths by birth order. An increase in the number of newborns in recent years was due to the growth of first birth order and also of women who already have children. Table 5 shows that the proportion of 1st birth order children decreased compared to 1999. There was an increase of the proportion of 2nd and 3rd order children in all of observed regions. This trend developed due to increase of internal migration from rural to urban areas, which was reflected in the fertility rates in urban areas.

Table 6 - Distribution of live births by birth order in urban areas of Kazakhstan and East Kazakhstan oblast (in %)

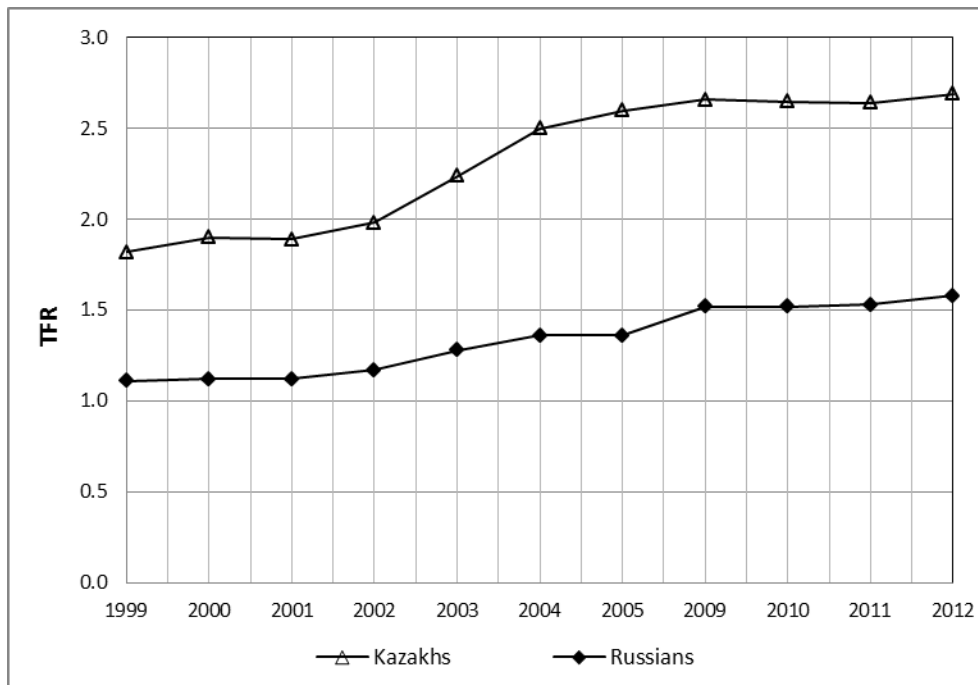
<i>Birth order</i>	<i>Kazakhstan</i>		<i>East Kazakhstan</i>	
	<i>1999</i>	<i>2015</i>	<i>1999</i>	<i>2015</i>
<i>Total</i>	100	100	100	100
<i>1st birth order</i>	50.15	40.89	60.02	40.37
<i>2nd birth order</i>	29.69	28.95	27.69	33.59
<i>3rd+ birth order</i>	20.16	30.16	12.29	26.04

Source: The Agency of statistics of Kazakhstan

Reproductive patterns are also related to ethnic groups. Below on the figure 18 it could be seen TFR by ethnicity in urban areas of Kazakhstan and East Kazakhstan oblast for selected period. Unfortunately, the data is very scarce and it does not allow observing the dynamics over the selected period, but only a few years. Moreover, there is no data available to compare the situation in East Kazakhstan oblast and Kazakhstan as a whole. Despite this fact, it is possible to analyze TFR difference by ethnicity. Figure 18 illustrates that TFR of Kazakh ethnicity is higher than those of Russians. Kazakhs prefer to have 2-3 children and more rarely more than three children, while Russians prefer to have 1-2 children. The survey of 2007 conducted in East Kazakhstan tells that the share of first birth order children among Kazakhs is 44.9%, while the share of second birth, third birth orders and over is 55.1%. Comparatively, the share of first birth order among Russians was 61.2%, Tatars – 55.7%, Germans – 56.5%. Moreover, the share of third birth order among Kazakhs was 16.1%, Russians – 6.2%, Germans – 6.3%.

After 90-s TFR of Kazakh women in urban areas increased. However, it does not mean that fertility rates of urban Kazakh women increased, but that the proportion of rural Kazakh women moving in cities had increased, which had high fertility that changed the urban reproductive picture. The paradox situation has emerged. Crude birth rates in urban areas have recently exceeded crude birth rates in rural areas (Alekseenko, 2011). This process is common not only for East Kazakhstan, but also for the country in general. The growth in cities is related to ethnic factor. There is an increasing number of Kazakh populations of reproductive age, which migrated from rural areas into cities. Their reproductive behavior depends on establishing traditional families yet. These migrants replace decreasing European population, which has small families, and they contribute to the growth of fertility rates in cities.

Figure 18 - TFRs by ethnicity in urban areas of Kazakhstan in selected years, 1999-2012



Source: The Agency of statistics of Kazakhstan

In Kazakhstan, a childbearing has traditionally been related with marriage. Until the late 1980s, family formation, through its official registration, was universal in character and marriage was still rejuvenating. Consensual unions and childbirth outside of marriage were poorly tolerated by society and quite uncommon. Since the early 1990s, attitudes towards the institution of marriage and marital behavior have experienced considerable changes. Since 1991s marriages started decreasing rapidly, crude marriage rate (CMR) from 10.1‰ to 5.75‰ in 1999. Thereafter, marriage rates began rising again, but the increase was rather moderate compared to the pre-transformational period. CMR was 9.22‰ in 2014, which is lower than in 1991. In addition, this happens taking into account that there is a third demographic wave in Kazakhstan since 2000, i.e., there is significant proportion of younger population born in the end of 70-s and 80-s of last century who entered “marriage market”. Furthermore, marriages began to be delayed to an older age in the 1990s. The mean age of women at first marriage for urban areas increased from 23.5 years in 1999 to 24.9 years in 2014. In East Kazakhstan, the gap was even larger, from 23.1 in 1999 to 25.2 in 2014. It is interesting, that the majority of marriages (63.7%) were registered in urban areas. Therefore, in urban areas of Kazakhstan the increase in CMR was higher due to younger age structures in cities, but CDR is also higher comparing with rural areas. On the Figures 19a and 19b we could see changes in Kazakhstan and East Kazakhstan during last 15 years. However, women from rural marry first time earlier than urban.

Figure 19a – Dynamic of crude marriage rate and crude divorce rate in urban areas of Kazakhstan, 1999-2014 (in ‰)

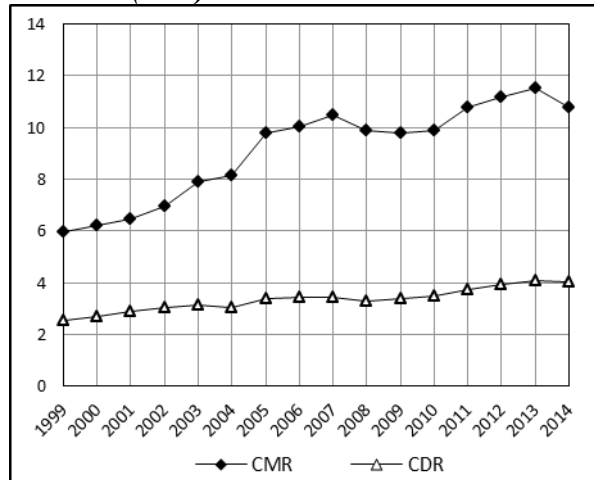
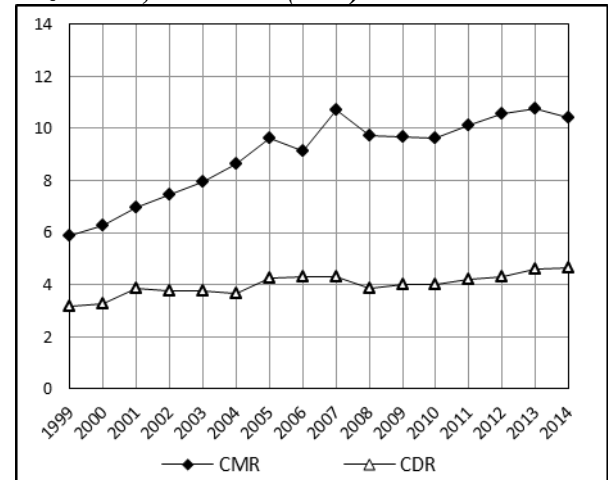


Figure 19b – Dynamic of crude marriage rate and crude divorce rate in urban areas of East Kazakhstan, 1999 -2014 (in ‰)



Note: CMR - crude marriage rate; CDR - crude divorce rate

Source: The Agency of statistics of Kazakhstan

The assumption is that the decline in the marriage rates recently experienced by many countries is partly due to postponement of marriages. In addition, a considerable part of the decline of marriage rate can be explained by the increase in cohabitation (Uvaliyeva, 2007; Uvaliyeva, 2012). Sange, a Research center in Kazakhstan, conducted surveys ordered by UNFPA (2004), Ministry of Education of Kazakhstan (2009), the Agency of Statistics of Kazakhstan (2008) and identified that there was a sharp rise of extramarital births in Kazakhstan. For a long time before the 1990s, the proportion of extramarital births in Kazakhstan ranged between 5 and 7 per cent of the total, and since the early 1990s the numbers have grown fourfold, reaching almost 30 per cent in 2014. Increasingly, more children born outside marriage are registered by both parents instead of a lone mother, showing that more children have been born to cohabiting couples.

Nevertheless, there is a tendency of decreasing number of extra-marital births in recent years (Figure 20a, 20b). Since higher extramarital birth rates were registered in northern and eastern regions, it is possible to assume that it is due to higher proportion of Russian population there. Moreover, extramarital births are more characteristic to urban areas. According to some researchers, children that were born out of marriage and staying with one parent are more exposed to diseases and have higher mortality rates than children staying with both parents. Also, children staying in one parent families are subject to difficulties in their lives, and have less material security. Thus, a rise in number of children in this category may bring negative consequences to the society. (Source: Report of EKR Department of Statistics Agency of Kazakhstan).

Figure 20a – Proportion of extramarital births in Kazakhstan for all births and births from urban areas, 1999-2014 (in %)

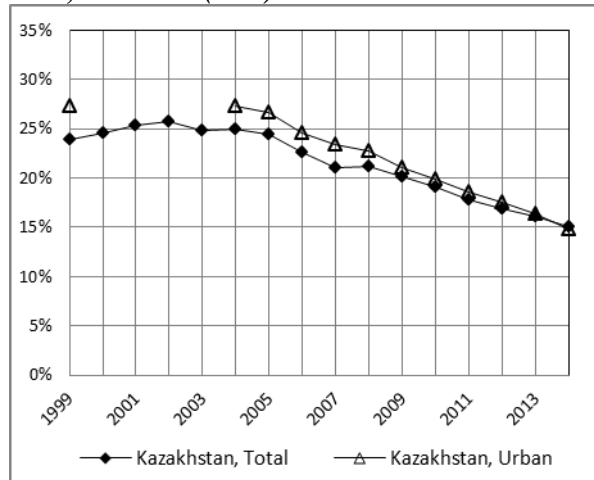
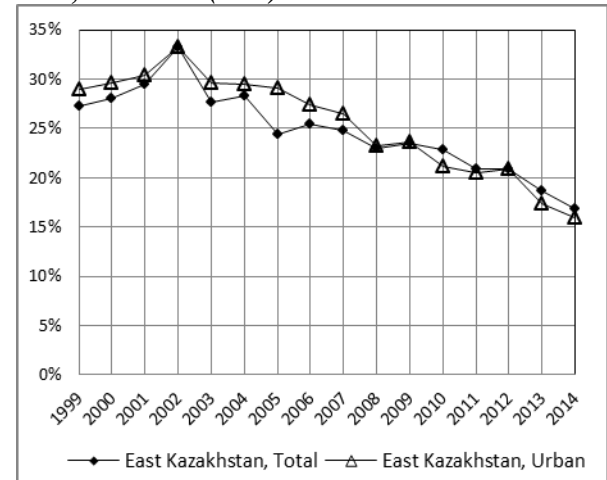


Figure 20b – Proportion of extramarital births in Kazakhstan for all births and births from urban areas, 1999-2014 (in %)



Source: The Agency of statistics of Kazakhstan

Interesting fact to us is the changes in interethnic marriages. For the past 15 years, number of such marriages increased by 37%, but the proportion of interethnic marriages declined (Figure 21a). The popularity of interethnic marriages in Kazakhstan was caused by existence of two big nations on its territory. When we compare interethnic marriages between Russians and Kazakhs by gender, we may observe that the percentage of Kazakhs of both genders that concluded interethnic marriage is lower than of Russians (Figure 21a). The certain discrepancies between these two ethnic groups were distinguished. Kazakhs tend to register homogenous marriages. Whereas Russians have higher rates of interethnic marriages. The situation could be explained by different proportions of national composition and traditional views of Kazakhs towards homogenous marriages. Moreover, in a gender aspect, there are more interethnic marriages concluded by Kazakh men than women. The proportion of interethnic marriages among Russians in Kazakhstan has experienced a steady decline. The reason for that trend is seen in migration of Russians, particularly young population, to Russia after 90-s. Therefore, the age structure of young people at the marital market has altered since. Apparently, there is a symbiosis of cultures in the city life; however, Kazakh women still marry more often with their own ethnic group than Russians.

Figure 21a – Proportion of interethnic marriages in Kazakhstan, 1999-2014 (in %)

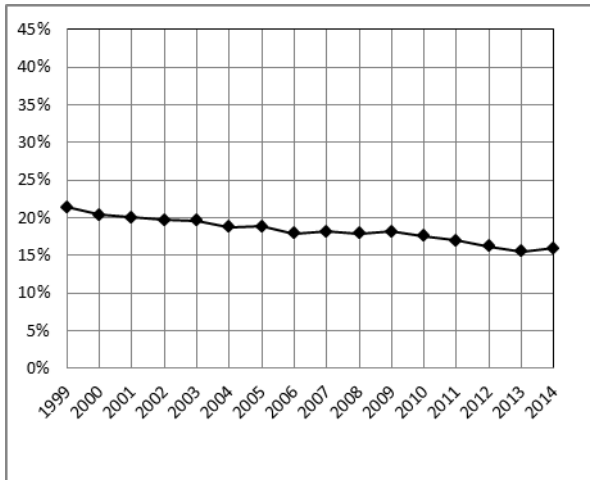
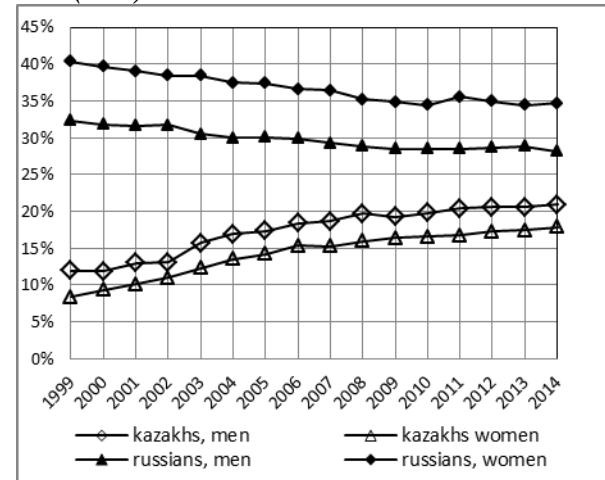


Figure 21b – Proportion of interethnic marriages by ethnicity and sex of spouses in Kazakhstan, 1999-2014 (in %)



Source: The Agency of statistics of Kazakhstan

The divorce rate is another important factor in a formation of marital-family structure of population and its reproduction. The divorce rate determines marriage stability and traditionalism of a society. In the recent decade divorce rates in Kazakhstan stay almost at the same level, though they started to increase since late 90-s (Figure 19a). Crude divorce rate increased from 1.7‰ in 1999 to 3.05‰ in 2014. The divorce rates in urban areas are much higher than in rural areas. For instance, CDR of urban Kazakhstan in 2014 was 4.04‰ (Figure 19a). During many years, divorce rates in the East Kazakhstan oblast were higher than country average. The highest rate in the East Kazakhstan took place in cities of Ust-Kamenogorsk and Ridder, distinguished by high proportion of European population (The Agency of statistics of Kazakhstan, 2015).

Further, we are going to analyze other characteristics of divorces in Kazakhstan. First, the average age of spouses at divorce is steadily increasing for both men and women. So that in 1999, it was 32.8 years for women and 35 for men, while in 2011 it rose up to 33.5 and 35.9 respectively. The average age at divorce increased most in East Kazakhstan oblast (almost 1.5 years). This is possibly related to increase in mean age at first marriage. The analysis of marriage duration before divorce shows that in the last fifteen years the duration of marriage before divorce has decreased. The most divorces both in Kazakhstan and East Kazakhstan occur before 5-9 years of married period (about 64% of all divorces) (Table 6). The reasons for divorce are different: from material difficulties to psychological incompatibilities of couples (Alekseenko et al. 2005). An adverse environment in family and divorce of parents has negative impact on children’s own marriage life. However, presence of children in families is not an obstacle for getting divorced. Almost in every second divorced marriage in Kazakhstan (37.2%) in 2014 there was one child brought up, in every seventh – two and more children. There is a higher rate of divorced parents with two or more children that took place in rural areas, while in urban areas there are more divorces of parents with one child.

Table 7 - Distribution of divorces by duration of marriage in Kazakhstan and East Kazakhstan (in %)

Duration of marriage	Kazakhstan		East Kazakhstan	
	1999	2011	1999	2011
Total	100	100	100	100
before 1 year	2.71	5.11	2.17	4.19
1 year	4.92	8.52	4.87	8.25
2 years	5.67	9.30	5.26	9.74
3 years	6.93	8.08	6.65	7.55
4 years	6.72	7.13	5.79	6.99
5-9 years	30.62	26.69	31.97	26.60
10-14 years	18.68	12.04	18.45	11.24
15-19 years	11.15	8.10	12.18	8.33
20 years and more	12.44	15.03	12.63	17.11

Source: The Agency of statistics of Kazakhstan

Remarriages compensate broken marriages due to divorce and widowhood. So, in Kazakhstan 20,733 men (13.01% of total married men) and 16,796 women (10.5% of total married women) married second time in 2014. Urban inhabitants marry second time (after divorces and widowhood) more often than rural inhabitants.

The family institute in Kazakhstan has experienced many negative trends since country's independence, such as higher divorce rates among the population and people getting divorces at younger ages. Often, divorces take place at first years after getting married, which imply frivolous attitude of the youth towards family values. There are lower fertility rates in urban areas in Kazakhstan, particularly in East Kazakhstan oblast. The age at first marriage is increasing and the number of interethnic marriages is rising among Kazakh population.

Generally, after 90-s the demographic situation in Kazakhstan has stabilized, and there are even positive tendencies of main indicators, namely increase of birth rate and marriage. However, we may observe that these indicators are temporary and related to quite large disproportion of population of reproductive age. On this basis, we may say that in Kazakhstan, particularly in urban areas of northern regions, the first signs of the second demographic transition have appeared since a new millennium.

2.4. Signs of Second Demographic Transition in Kazakhstan

The effect of the determinants typical of all post-communist countries experiencing transformational challenges was strongest in Kazakhstan in the 1990s, especially in the first half of the decade. Later, however, they became kind of supplementary determinants and gave way to other types of determinants. As was said above, in the recent years Kazakhstan has achieved quite favourable demographic behaviour. In the beginning of the 21st century almost all demographic

indicators have improved, and the risk of depopulation passed for the moment. However, signs of inevitable change in the fertility pattern emerged, and arguments were made that Kazakhstan, particularly more russified regions, was on the threshold of the Second Demographic Transition (SDT). Changes in the value orientations, preferences and life style of young people are particularly noticeable. Young people spend more and more time studying, looking for opportunities to realize themselves, and developing a professional career. Increasing importance is attached to quality of life, hedonistic aspirations, and consumption.

Proceeding from this, we want to assess pros and cons of SDT in the country. And also discuss which factors influenced on changing of population's behaviour. We suppose that there is an uneven development of demographic processes in Kazakhstan. Therefore, signs of SDT are not observable in all regions of the country. So that at present the South illustrates more traditional demographic behaviour. And SDT is applied to eastern and northern regions. The situation in the South of Kazakhstan is different. Due to a more traditional attitude towards family and marriage institutes, there is one of highest fertility and marriage rates, low level of divorces and less tolerant attitude towards premarital sexual relationships. Therefore, we are going to explore SDT based on the data from Census 2009 for urban areas of East Kazakhstan in comparison with Kazakhstan.

Figure 22a – Employment level by sex and age in 2009, urban population of Kazakhstan (in %)

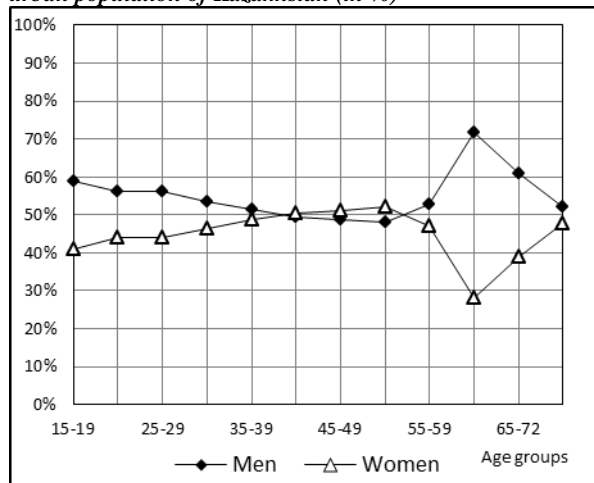
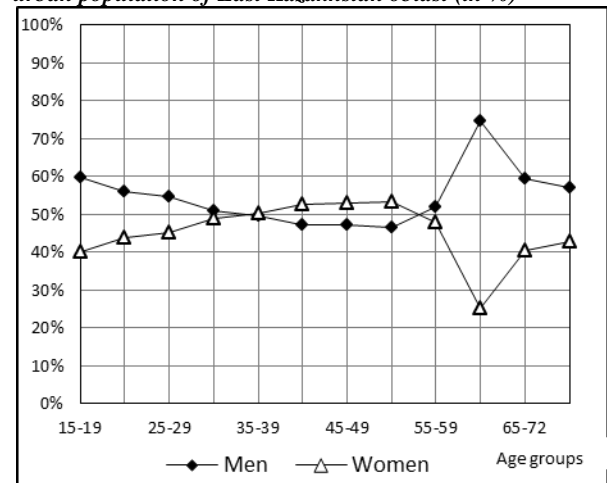


Figure 22b – Employment level by sex and age in 2009, urban population of East Kazakhstan oblast (in %)



Source: The Agency of statistics of Kazakhstan

Female emancipation during the years of transformation progressed in a highly controversial way in Kazakhstan. It was, and still is, developing, along with the preservation of the traditional/patriarchal attitudes towards gender roles. During the transformations, the conflict between traditional/patriarchal gender role expectations and actual female roles became more visible. Kazakhstan is notable for its high employment rate of women especially in young ages (Figures 22a, 22b). The figure shows that half of women aged 25-35 work, and this number is higher in East Kazakhstan oblast than the country average, while the employment level of women equals to men by age 30.

Furthermore, the educational level of women exceeds that of men and during the transformational period the difference increased even more (because of the devaluation of higher education in the early-1990s, when it yielded a lower income and consequently attracted fewer male students to universities). According to data from the 1999 census, the proportion of women with a higher education was almost 1.5 times higher than that of men in all age groups before 50. It is illustrated on figures 23a, 23b. Meanwhile, during the transformational period, particularly at the beginning, attitudes about the primary role of women as the tender of hearth and home became stronger. Although in recent years these attitudes have become less pronounced, they still remain popular. At present, nearly half the men and women (39.9 per cent of women according to our survey data (2009, 2016) agree that “a man's job is to earn money; a woman's job is to look after the home and family”. Besides, in many Kazakhstani families an asymmetrical distribution of responsibilities between the spouses (partners) has survived; household chores and caring for and looking after the children are mostly the responsibility of the woman.

Figure 23a – Women and men with tertiary education by age in 1999, urban zone of East Kazakhstan oblast (per 1,000 men and women)

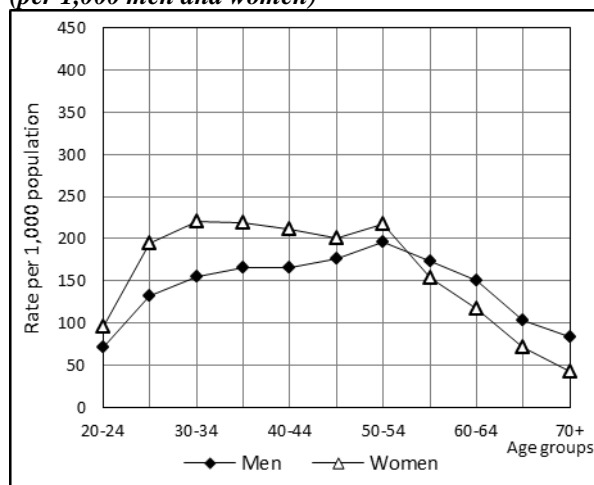
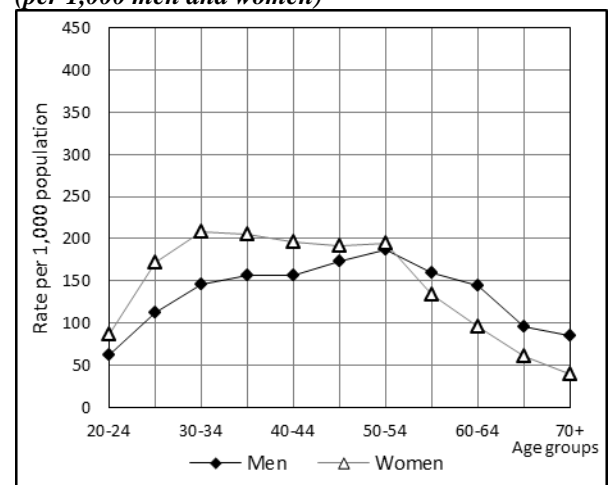


Figure 23b – Women and men with tertiary education by age in 2009, urban zone of East Kazakhstan oblast (per 1,000 men and women)



Source: The Agency of statistics of Kazakhstan

There is an evident contradiction between the high rate of female employment and education and the dominant patriarchal attitudes in Kazakhstan. However, the spreading manifestations of female emancipation, including longer lasting studies, search for career opportunities; striving for a strong material position and economic independence and varied leisure activities, call for essential social changes and adequate policy responses. Society's delay in adapting to the new female roles forces women to work out certain new strategies, which they use to the best of their needs and abilities, to solve the problem of reconciling the varied challenges of daily life. They postpone childbearing for a later period, have fewer children, or refuse to have children altogether. Against such a background in Kazakhstan, are clearly voiced the ideas of McDonald (2000) that alongside the modernizing, public gender system (female employment, education), the private gender system

(in the family) remains traditional, preserving the asymmetries (in distribution of functions, partner relations, etc.). It is natural that fertility falls to the low level under such circumstances.

TFR level (2015) in East Kazakhstan region is one of the lowest in the country. And it is that low even though the last decade had better situation than “post-perestroika” period. Mean age at childbearing in urban areas of East Kazakhstan region increased from 25.6 in 1999 to 28.1 in 2015 (Figure 17). Although there is no available data of mean age at first childbearing, we can state that mother’s age at childbearing has increased. Female urban residents of East Kazakhstan have almost 60% of their childbirths after age 25 (Table 7). Moreover, considering that majority of female respondents indicated job and work as their priority values, it seems clear that value of family, which was third popular value, has conceded to self-actualization.

Table 8 - Distribution of births by age of father and age of mother, in urban zone of East Kazakhstan, 2014 (in %)

<i>Age of father</i>	<i>Age of mother</i>							
	<i>before 20</i>	<i>20-24</i>	<i>25-29</i>	<i>30-34</i>	<i>35-39</i>	<i>40-44</i>	<i>45-49</i>	<i>Total</i>
<i>Total population</i>	3.19	29.16	35.85	20.19	9.70	1.80	0.11	100
<i>before 20</i>	0.40	0.22	0.02	-	-	-	-	0.64
<i>20-24</i>	1.99	12.03	2.11	0.16	0.02	-	-	16.32
<i>25-29</i>	0.71	13.93	19.84	2.55	0.28	0.01	-	37.33
<i>30-34</i>	0.06	2.38	11.01	9.40	1.50	0.10	-	24.44
<i>35-39</i>	0.02	0.50	2.34	6.08	4.33	0.33	-	13.61
<i>40-44</i>	-	0.05	0.36	1.59	2.79	0.97	0.03	5.80
<i>45-49</i>	-	0.03	0.09	0.33	0.61	0.28	0.05	1.39
<i>50-54</i>	-	0.02	0.04	0.06	0.15	0.09	0.02	0.37
<i>55+</i>	-	-	0.02	0.03	0.02	0.02	-	0.10

Source: The Agency of statistics of Kazakhstan

Marriage has preserved its leading position as an institute for family formation in Kazakhstan, as well as in observed Kazakhstani regions. Furthermore, marriage has still remained the predominant precondition for procreation. Also cohabitation and extra-marital births are rare. Another feature is the absence of home leaving in favour of independent single living or in favour of premarital cohabitation. Here, situation in Kazakhstan is similar to Japan or countries in Southern Europe, though these countries entered SDT by other indicators. Lesthaeghe explains this through D.Reher’s (1998) theory, which says that distinction between the historically “strong family system” of Southern Europe and the traditionally “weak” one of Western and Northern Europe.

In the “weak system” children can leave the parental household before marriage, and then they fend for themselves in an interim period of celibacy prior to marriage. Historically, they became servants, apprentices, landless and/or seasonal labourers, industrial workers, soldiers, seamen, or clergymen. In contemporary Northern and Western Europe, welfare provisions still stress this earlier independence via sufficient student housing, scholarships, student transportation subsidies, youth unemployment benefits and employment programs, and even guaranteed minimum incomes

for single persons older than 18 and no longer living at home. The result is still earlier home leaving for independent living, sharing or cohabiting. Even men learn to stand on their own feet, also when typical household tasks are involved. Greater gender symmetry also fosters higher female employment rates, and vice versa. The household standard of living is based on dual incomes, but women can take off spells of time for family reasons (e.g. maternity leave, optional leaves for child-rearing or caring for sick partner or parent, etc.).

In the “strong family” type, familial ties and solidarity – even allegiance to alliances of families as in Southern Italy - are more persistent throughout life. Men and women only leave the parental family to marry, and sons can even bring their wife into the parental home. Men are looked after by their mother and then immediately thereafter by their wife. The old gender roles persist and men stay away from housework. Furthermore, the family bonds continue to function throughout life, both between siblings (e.g. in business) and between generations. Older people are still taken in by their children. Even when most couples want to become home-owners relative high housing costs tend to retard the departure. The overall outcome has been that home leaving is much later than in Western and Northern Europe, and that there is little cohabitation or fertility among unmarried couples. Instead, young adults continue to live in their “guilded nests” provided by caring parents. And for women, motherhood also means dropping out of the labour force, not only because this is to be expected from a “good mother”, but also because child care facilities are scarce and the returning to an earlier job more difficult. Opportunity costs are hence increased as a consequence of the persistence of old role patterns and inflexible labour markets.

Increase of migration flows of rural youth into cities not only furthers independence of these youngsters, but also let new forms of relationships besides marriage to appear. Cohabitation is still impossible for many of young couples, but LAT (living apart together) is becoming very popular.

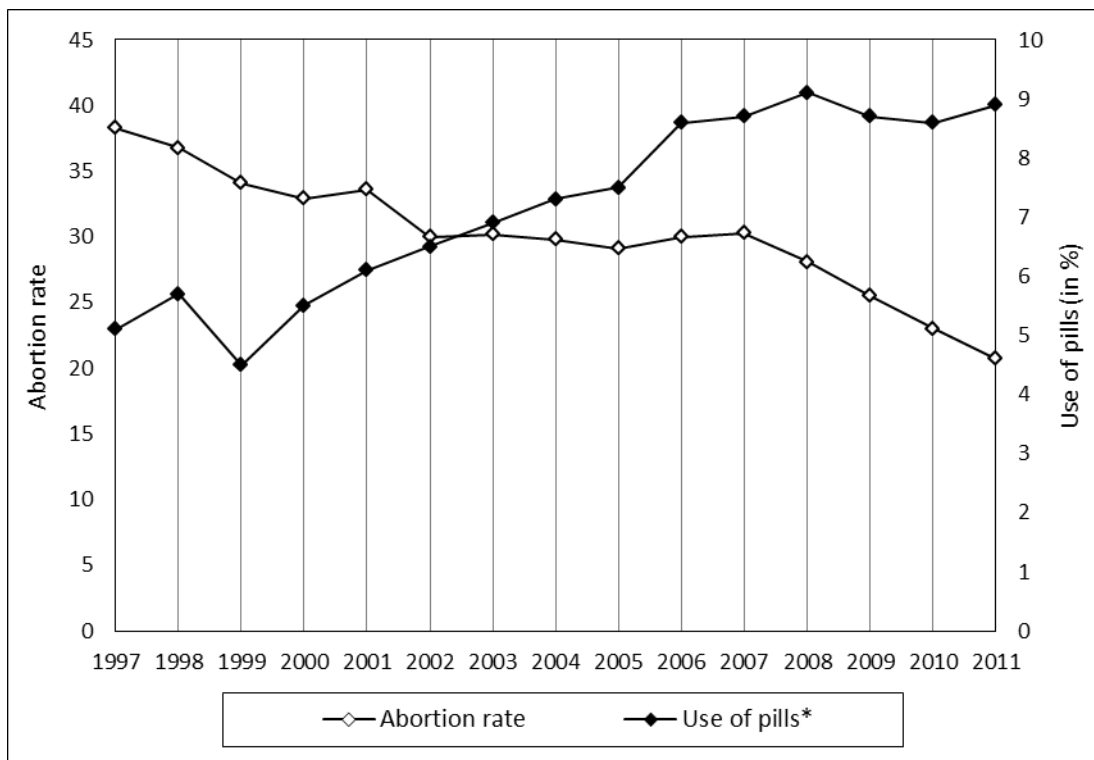
Another side of marriage is divorce. Countries that entered SDT have mostly high rates of divorce. In fact, marriage as a status is itself also considerably less attractive than around the mid-1960s when almost everyone ever entered into it. There is really no industrialized country at all where total first marriage rates have not declined and an increase in the mean age at first marriage has not been documented. There is variation in timing and speed. Despite increasing divorce rate in East Kazakhstan, marriage has not lost its attractiveness yet. Mean age at marriage is 25.2 in urban zones of East Kazakhstan region. Crude marriage rate has not changed much, cities has enjoyed higher rates due to increased flow of migrants, and exceeded rates in rural area. So we can conclude that SDT has not occurred in this field yet.

It is very difficult to estimate the usage of modern methods of contraception in Kazakhstan in the early 90s. There is no official data for use of contraceptives for East Kazakhstan in this period. The data is available only since 1998. The number of studies conducted in this field is rather insufficient. We would argue that one of the most reliable sources of information about the contraceptive behaviour of the Kazakhstani population is the Kazakhstan Demographic and Health Survey (1999). However, the survey data reflect the situation in 1995/99, and at that time modern contraceptives were not yet in common use in the country. At present (2015), 39.4% of women of

reproductive age use contraceptives; the most popular among them is IUD (55.5%), then contraception sheath (20.02%) and pills (17.7%). The proportion of women in East Kazakhstan who uses contraceptives is 35.7%, the popularity of contraception means has the same structure as in Kazakhstan generally: 48.5%, 26% and 21.8% respectively.

Saying about character of contraceptive use by the youth, only the results from survey conducted in East Kazakhstan help here. First of all, we can say that youth uses contraceptives very often, and urban residents are more experienced and diverse in using them. The proportion of couples in the reproductive age groups using contraception to prevent a pregnancy is high enough. At the same time the more traditional means of contraception were driven out by more effective means and methods. Since the survey was conducted among youth, sterilization was not a popular contraceptive mean among them. 56.8% of female respondents used contraceptives with married relying heavily on the IUD; while single the condom and the pill are preferred. So, we can say that female youth plans its pregnancy, and has sex not with aim to implement reproduction.

Figure 24 – Dynamic of use of contraception among women in reproductive ages and abortion rate in Kazakhstan, 1997-2011



Note: Use of pills (in percentages to number of women of reproductive age)

Source: The Agency of statistics of Kazakhstan

The significant decline in the abortion rate number of induced abortion per 1000 women aged 15-49 could also be considered an indicator, although indirect, of the increasing use of modern methods of contraception. Over the past 12 years, the abortion rate (number of abortions per 1000

women aged 15 to 49 years) has decreased to approximately one-quarter of the 1997 level (Figure 24).

The most typical distinction, which makes Kazakhstan different from other countries that entered SDT, is high mortality and low life expectancy. Lesthaeghe (2010) claims that where an increase in life expectancy has not occurred - as is the case in a number of former socialist countries - it can clearly be blamed on crisis conditions, the lack of proper medical care and services. The lifestyle in these countries probably was a contributing factor. Meslé (1996) specifically mentions dietary habits based on heavy consumption of pork and animal fats, and increases in alcohol consumption and cigarette smoking as contributing to a widening of the gap in life expectancy between these and the other industrialized countries. In the latter countries the end of the improvement in life expectancy is not yet in sight. Nizard (1997) has, in fact, argued that a fourth phase of transition has just begun. A phase during which mortality from malignant tumors will decrease and the incidence of such illnesses will decline as a consequence of improved nutritional information. But at present Kazakhstan is behind European countries by these indicators.

Hence, it is still early to say that East Kazakhstan entered SDT phase, although there is a tendency for establishing small families and increasing independence of young women, which seek their career, and this may lead to decrease in fertility.

Chapter III

Analysis of marital and reproductive behaviour of young women in Ust-Kamenogorsk

3.1. Description of the survey sample

In this chapter, the main results of the survey conducted in Ust-Kamenogorsk in 2016 will be described. The survey called “Marital and reproductive behaviour of women in Ust-Kamenogorsk” was conducted in May 2016 in Ust-Kamenogorsk, the capital city of East Kazakhstan region. The aim of the survey was to reveal characteristics of marital and reproductive behaviour of young women in Ust-Kamenogorsk and to analyse factors that influence them. The sample size consisting of 480 women aged 18-29 was considered sufficient for the aim of this study. The first indicator to consider was ethnicity of the respondent. Kazakh and Russian ethnic groups were surveyed since they comprised the majority of the city population. The second indicator that was taken into account was duration of city residence. The previous survey with the same sample and questionnaire was conducted in 2009. The survey of this study was repeated after seven years. In the analysis, some changes in participant responses were highlighted if they differ significantly from the first survey. However, since the time passed between two surveys was not very long, the difference might not be that significant in participant responses.

The survey conducted had following objectives:

- ✓ To examine marital and reproductive behaviour of young women depending on socio-demographic characteristics such as age, ethnicity, education, and duration of city residence;
- ✓ To analyse differences and similarities in respondent behaviour and develop a general model of female behaviour in an urban environment.

The researcher sought to investigate the following hypotheses:

Kazakh women have more traditional view towards family and children compared with Russian women. However, during the assimilation process the behaviour of Kazakh women has changed, while at the same time, the behaviour of Russian young women residing in a mixed ethnic environment (Kazakhstan) differs from their contemporaries living in a homogenous ethnic environment (e.g. Russia);

A modern young woman has a weak awareness of her future family, since the model of a family in her interpretation is too idealized, and it is not focused on family values;

The state does not support a family institute in Kazakhstan in a structural way, and the young couples get insufficient informational and financial support from the government.

The survey was mainly aimed at young women residing in urban areas, but for the purpose of the study, some categories of rural female respondents were included. We proceeded from an assumption that stereotypes of marital-reproductive behaviour of women were formed in the accordance to social reality in which the life experience was gained. Therefore, it is proposed that duration of city residence had some impact on determining fertility processes and reproductive traditions. Generally, the adaptation period of a person to his new residence was 8-10 years. By that time, a migrant had a chance to be acquainted with moral, social norms and to adjust his mentality to a new environment. In order to simplify the objective of the survey, we assumed that women residing in a city since age ten had similar attitude as city residents (Zayonchkovskaya, 2008). However, one kept in mind that family and relatives would still have a significant influence on her behavior.

Four main respondent groups were formed in the survey as a result of the above-mentioned assumptions: Kazakhs, born in Ust-Kamenogorsk; Russians, born in Ust-Kamenogorsk; Kazakhs, which moved to Ust-Kamenogorsk before age ten; and Kazakhs which moved to Ust-Kamenogorsk after age 10. A distinction, subject to the ethnic group of respondents, is that migratory activity of Kazakh women is higher than of Russian women. Since the migration rate from rural areas to urban areas is low among Russian population, we only considered native Russian population in the urban area. Generally, Russians prefer to migrate to their historical motherland – Russia, while Kazakhs migrate from rural areas to urban. Thus, proportion of Kazakhs in cities has increased. According to recent research on the issue of reproductive behavior of women in East Kazakhstan region, Kazakh women who migrated from villages were more likely to find jobs and become city residents after graduating from university, rather than Russian women who were more likely to return to their villages after graduating (Zakharov & Surkov, 2009).

Since the focus of this study is reproductive behavior of young women, we restricted the age range in between 18 and 29. According to laws of Kazakhstan, youth is a category of people aged 16-29. But, since marriage is allowed officially from age 18, and nuptiality is still a dominant factor that determines fertility, we constrained age to 18-29.

All women were divided into three age groups (18-21, 22-24, 25-29). In addition, respondents had to disclose their education level with regards to their supposed work activity. The age group of 18-21 was selected, because we assumed that a majority of this group were pursuing their education. Women in this age group usually complete secondary school and continue to study either at university or college. The survey demonstrated that 93.1% of women in this age group were in education process. The second age group was characterized by women who had already finished their education and had an opportunity either to continue their education to receive graduate degree, or to start working, or to get married and stay at home on maternity leave. According to the survey,

this age group was characterized by women that were already working (63.4%), and only some of them continued their education (26.7%), most of which were pursuing their Master's degree, and their marital life was postponed to a later period. The last age group was represented by the oldest women in our survey. Most of them had already been married and had children. Majority of women (80.6%) in the age group of 25-29 had already worked. Moreover, there were 11.9% of women in this age group, who were on maternity leave comparing to 8.1% in the age group of 22-24.

The absolute number of respondents contributed to these groups is shown on the Table 6.

Table 9: Distribution of women according to ethnicity, age, and duration of city staying

Ethnicity	Age groups	Status of residence			Total
		Local	Moved before the age 10	Moved after the age 10	
Kazakhs	18-21	40	40	40	120
	22-24	40	40	40	120
	25-29	40	40	40	120
Russians	18-21	40	0	0	40
	22-24	40	0	0	40
	25-29	40	0	0	40
<i>Total</i>		240	120	120	480

Source: *Sample Survey Ust-Kamenogorsk, 2016*

Furthermore, there were other factors that were considered in the survey, such as education level and employment status of women, income, type of residence, and type of parent family. The characteristics of respondents obtained as a result of the survey might refer to their marital status, education level, and employment status of partners.

Education was seen as one of the most important characteristics, since it has an ingenuous impact on marriage age, and thereafter, on time of the first child birth (Maleva & Sinyavskaya, 2006). Women with tertiary education commit more to their jobs and career growth, which negatively impacts the family formation. Many graduates from secondary schools in Kazakhstan have an opportunity to continue their education in tertiary education institutes (mostly universities), as well as in vocational or technical upper secondary education institutes. Upon completion of a nine-year program, a pupil has a choice of either completing the remaining three years at a secondary school or transferring to a specialized professional training school. In the Soviet period, these institutes were divided into low-prestige PTU's (Professionalnoe Tehnicheskoe Uchilishe) and better-regarded technicums and medical (nurse level) schools. In 2000s, these institutions, if operational, were transformed to colleges. They provided students with working skill qualifications and the high school certificate equivalent to the 11-year education in a normal secondary school. Kazakh and Russian vocational schools at that time fall out of ISCED classification, therefore, the enrollment number reported by UNESCO is lower, 1.41 million; the difference is attributed to senior classes of technicums that exceed the secondary education standard.

According to International Standard Classification of Education classification all educational system is divided on 9 levels, each level had some categories and sub-categories: 1) early childhood education; 2) primary education; 3) lower secondary education (general and vocational); 4) upper secondary education (general and vocational); 5) post-secondary non-tertiary education (general and vocational); and 4 levels of tertiary education: 6) short-cycle tertiary education (general and vocational); 7) bachelor or equivalent level (general and vocational); 8) master or equivalent level (general and vocational); 9) doctoral or equivalent level (general and vocational). In the case of Kazakhstan, schooling from grades 1 to 9 can be classified as lower secondary education, schooling from grades 9 to 11 can be classified as upper secondary general education, leaving school for college after 9th grade can be classified as upper secondary vocational education, leaving school for college after 11th grade can be classified as post-secondary non-tertiary education. And graduating university or institute can be classified as tertiary education (ISCED classification for education levels from 2011).

The majority of female interviewees (51.3%) finished their first stage of tertiary education. And these data does not vary with age, which implies that the interest in getting a tertiary education by young women recent time is stable.

Another popular response to the question about their education level was vocational or technical (19%). It is important to mention that popularity of vocational and technical education has risen recently among young people. The main factors influencing that are economical: the growth of tuition fees in higher education institutes and rising requirements of university entrance examinations. At the same time, the system of vocational and technical education has gone through dramatic changes. The Ministry of Education of Kazakhstan has recently introduced the dual system of education, guaranteed employment after graduation, and access to education, particularly for students with special needs. In addition to that, the tuition fees for the vocational and technical education in Kazakhstan are planned to be waived in 2017.

There are only a small percentage of women (9.2% and 6.3% respectively) which have basic or secondary education among older age groups. The reason is that employment opportunities for female workers who do not have any college or university degree are constrained due to large availability of workers with diplomas and unqualified staff.

Table 10: Education of respondents by ethnicity

Education of respondents	Ethnicity		Total
	Kazakhs	Russians	
Primary	0	1	1
Secondary	107	32	139
Vocational	60	31	91
Tertiary	190	56	246
Other	3	0	3
Total	360	120	480

Note: in abs. numbers

Source: Sample Survey Ust-Kamenogorsk, 2016

Also, we can compare the data of education level of respondents, their parents and partners.

Table 11a: Education of respondents and their partners: Kazakh ethnicity

Education of respondents	Education of husband					Total
	Primary	Secondary	Vocational	Tertiary	Other	
Primary	0	0	0	0	0	0
Secondary	0	1	3	1	0	5
Vocational	0	2	16	4	0	22
Tertiary	0	2	17	60	0	79
Other	0	0	1	1	0	2
Total	0	5	37	66	0	108

Note: in abs. numbers

Source: Sample Survey Ust-Kamenogorsk, 2016

Table 11b: Education of respondents and their partners: Russian ethnicity

Education of respondents	Education of husband					Total
	Primary	Secondary	Vocational	Tertiary	Other	
Primary	0	0	0	1	0	1
Secondary	0	0	1	1	0	2
Vocational	0	0	7	8	0	15
Tertiary	0	0	5	20	0	25
Other	0	0	0	0	0	0
Total	0	0	13	30	0	43

Note: in abs. numbers

Source: Sample Survey Ust-Kamenogorsk, 2016

In the table, it was displayed absolute numbers since many respondents did not have any partners at the time of the survey causing in low values in several categories. Interestingly, in most cases education of a husband and a wife coincided with each other, which showed the preferable homogeneity of marriage by the education level. It was worth mentioning that among married men of both nationalities the proportion of those who had the higher education degree twice exceeded those who had the vocational and technical education degree.

Table 12a: Education of respondents and their parents (in %): Kazakhs

Education of respondents	Education of parents								Total, Mothers	Total, Fathers
	Secondary		Vocational		Incomplete tertiary		Tertiary			
	Mother	Father	Mother	Father	Mother	Father	Mother	Father		
Primary	0	0	0	0	0	0	0	0	0	0
Secondary	12	17	41	34	6	9	48	38	107	98
Vocational	13	12	30	31	4	3	12	9	59	55
Tertiary	15	17	77	74	15	9	82	77	189	177
Other	0	0	2	2	0	0	1	1	3	3
Total	40	46	150	141	25	21	143	125	358	333

Note: in abs. numbers

Source: Sample Survey Ust-Kamenogorsk, 2016

Table 12b: Education of respondents and their parents (in %): Russians

Education of respondents	Education of parents								Total, Mothers	Total, Fathers
	Secondary		Vocational		Incomplete tertiary		Tertiary			
	Mother	Father	Mother	Father	Mother	Father	Mother	Father		
Primary	0	0	1	1	0	0	0	0	1	1
Secondary	4	0	13	14	1	0	14	12	32	26
Vocational	5	3	15	18	3	0	8	6	31	27
Tertiary	2	4	27	31	1	0	26	18	56	53
Other	0	0	0	0	0	0	0	0	0	0
Total	11	7	46.2	64	4.2	0	48	36	119	107

Note: in abs. numbers

Source: Sample Survey Ust-Kamenogorsk, 2016

The data about education level of respondent parents showed that their parents had lower education level than their children. Only 39.9% of female and 37.5% of male parents of Kazakhs and 40.3% of female and 33.6% of male parents of Russians completed the tertiary education. The vocational education was very popular among the parents though. This is related to the soviet system of education, which provided free education for all, but restricted acceptance to universities. At that time, the country needed workers in factories and plants particularly, and the basic vocational education was enough to work in these types of work.

Female employment is another important factor, which influences marital and reproductive behavior. The intense competition in the labor market, low incomes of young specialists lead to the fact that these young people work on several jobs or even overwork. That influences marital and reproduction behavior of young couples.

Table 13: Occupation of respondents by ethnicity

Education of respondents	Ethnicity		Total
	Kazakhs	Russians	
1	75	15	90
2	79	52	131
3	13	6	19
4	3	0	3
5	32	2	34
6	156	43	199
7	1	1	2
8	1	1	2
Total	360	120	480

Note: in abs. numbers

Occupation:

Work in public (budgetary) organizations

Work in commercial organizations

Have own business

Work out of household (paid or unpaid)

Housewife

Student

Unemployed

Disabled

Source: Sample Survey Ust-Kamenogorsk, 2016

By occupation, most of women work in public (budgetary) organizations (18.8%) and in commercial organizations (27.3%), which corresponds to the statistical data about distribution of female workers employed mainly in service sector on the national level. Only 4% of women had their own business. It was worth noting that the share of migrant women working in public organizations (25.7%) was higher than of local residents (16.2%), which prefer to seek employment in private companies (35.7% versus 11.8%). In fact, wages in public organizations are lower than in private companies, but the competition level is lower there too. Overall, local residents have more advantages over migrants at the labor market, such as better networks, education level and ambitions.

Table 14a: Occupation of respondents and their partners: Kazakhs

Occupation of respondent*	Occupation of partner								Total
	1	2	3	4	5	6	7	8	
1	16	9	2	0	0	0	1	0	41
2	8	17	6	0	0	0	0	0	25
3	2	1	3	0	0	0	0	0	2
4	0	2	0	0	0	0	0	0	2
5	15	12	3	0	0	1	0	0	14
6	0	1	1	0	3	0	0	0	7
7	0	1	0	0	0	0	0	0	4
8	0	0	0	0	0	0	0	0	1
Total	41	43	15	0	3	1	1	0	104

Note: in abs. numbers

Source: Sample Survey Ust-Kamenogorsk, 2016

Table 14b: Occupation of respondents and their partners: Russians

Occupation of respondent*	Occupation of partner								Total
	1	2	3	4	5	6	7	8	
1	3	2	3	0	0	0	0	0	8
2	1	20	2	0	0	0	0	0	23
3	1	0	4	0	0	0	0	0	5
4	0	0	0	0	0	0	0	0	0
5	0	0	1	0	0	0	0	0	1
6	2	1	1	0	2	0	0	0	6
7	0	0	0	0	0	0	0	0	0
8	0	0	0	0	0	0	0	0	0
Total	7	23	11	0	2	0	0	0	43

Note: in abs. numbers

Occupation:

Work in public (budgetary) organizations

Work in commercial organizations

Have own business

Work out of household (paid or unpaid)

Housewife

Student

Unemployed

Disabled

Source: Sample Survey Ust-Kamenogorsk, 2016

A workplace of a husband determines his income level, which influences reproductive behavior of a young family. Even though majority of husbands worked in commercial organizations and government agencies, and only few of husbands owned a business, yet this situation was not homogenous. Most men preferred to work in commercial organizations, because it was easier for them to be hired there.

The income level and housing conditions may refer to social status of respondents. The major source of support for majority of women studying in college or university was provided by their parents. Relations between parents and children are of great importance in Kazakhstani families, which last for a long time, particularly among Kazakh population. This may be expressed as a financial assistance to children and later to their grandchildren, and nonmaterial help. One of the widespread practices is when young migrant couples that are in financial trouble send their older child to their parents to be upbrought until a certain age. Another kind of family support is when young couples cannot afford their own dwelling and stay with their parents. Such that, a common Kazakh family may include several generations living together: grandfather and grandmother, father and mother, children (grandchildren).

In the survey, we asked women to characterize their income level (by income level I mean available earning) with their ability to cover consumer needs. The highest possible category was that “income is enough to afford everything” and the lowest was that “income is not enough to buy food”. Majority of respondents of both nations described their income level as middle and slightly above middle (78.3%). This data do not vary with age a lot, which supports our assumption about income source of the youth.

Table 15a: Income of respondents by age (in %): Kazakhs

Income*	Age groups			Total
	18-21	22-24	25-29	
1	19.2	16.7	5.8	13.9
2	33.3	35.0	40.0	36.1
3	41.7	41.7	45.8	43.1
4	2.5	6.7	3.3	4.2
5	0.8	0.0	1.7	0.8
6	2.5	0.0	3.3	1.9
Total	100	100	100	100

Table 15b: Income of respondents by age (in %): Russians

Income*	Age groups			Total
	18-21	22-24	25-29	
1	20.0	10.0	2.5	10.8
2	30.0	32.5	52.5	38.3
3	40.0	42.5	30.0	37.5
4	0.0	2.5	10.0	4.2
5	0.0	2.5	0.0	0.8
6	10.0	10.0	5.0	8.3
Total	100	100	100	100

Note: N= 480

Income

1. Income is enough to afford anything I want

2. Income is enough to purchase long durable goods (refrigerator, TV sets etc), but I cannot afford to

buy a house or a car at the moment

3. Income is enough to cover costs on necessities (food and clothing), although larger purchases have to be postponed
4. Income is only enough to buy food
5. Income is not enough to buy food, and I am constantly in debts
6. No answer

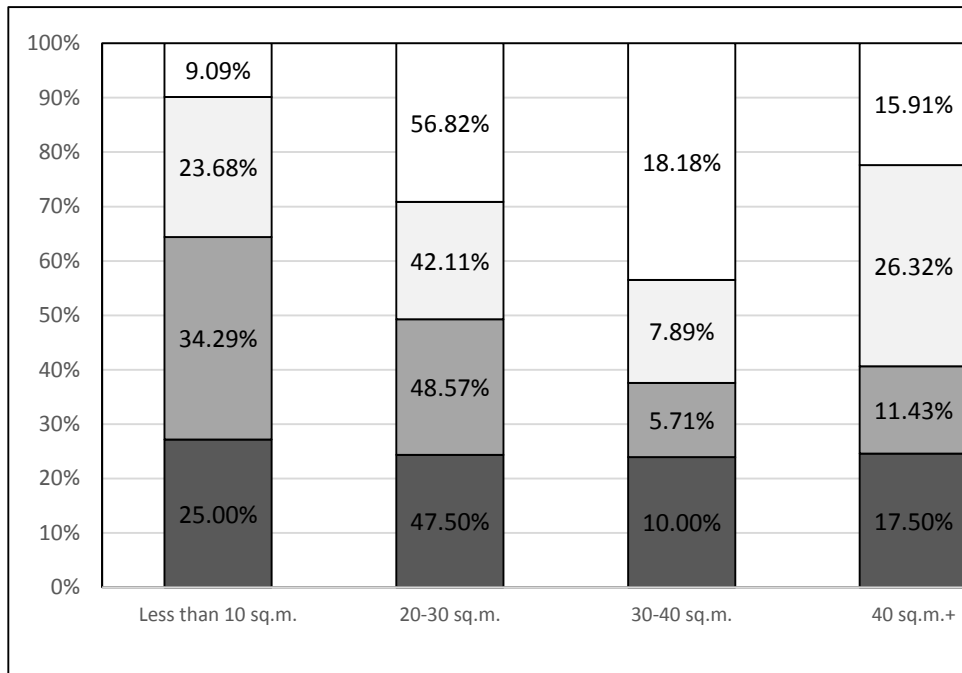
Source: Sample Survey Ust-Kamenogorsk, 2016

A housing issue is one of main issues for the youth in Kazakhstan, particularly for those who moved from rural areas. This is also the main cause for marriage and child birth delay. Generally, income of one spouse is not enough to cover costs of a whole family, which makes both of spouses to work. High costs and deficit of preschool organizations make the situation even more critical. Due to high housing prices, mortgage rates and relatively low incomes of young families, chances of them buying their own dwelling is very limited.

73.3% of interviewees said that they stayed in dormitories, rented houses, or with their parents, and only 26.7% had their own dwelling. Only 20.8% of female migrants had their own dwelling, while 30.8% of local residents and 24.2% of those moved before age 10 stayed in their own apartment or house. The share of migrants (24.1%) residing in dormitories is much higher than local residents (3.3%) and those who moved before age 10 (10%). It should be noted that dormitories are allowed both for local and rural residents.

Another issue related to housing conditions is distribution of housing area per person in a household. To understand the standard of living of young families, we decided to analyze the housing area of married women only. The survey data showed that women of both ethnicities that stayed in the city for a long time have lesser deficit of housing space. Majority of them had 20-30 sq.m. per person. The situation of rural migrants is more problematic since their income level and standard of living is lower.

Figure 25: Distribution of housing area per respondent in a household (in %), by ethnicity

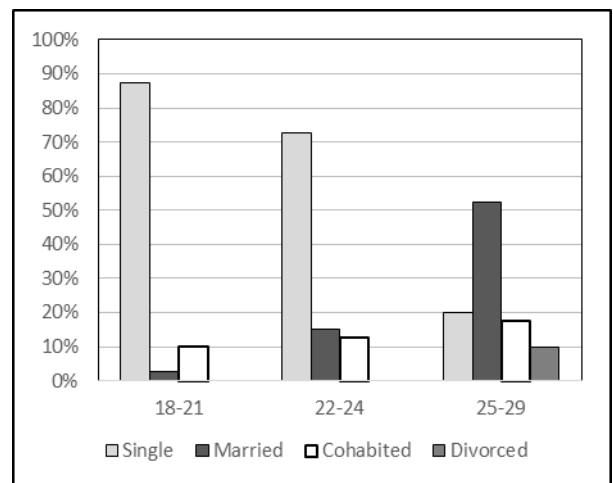
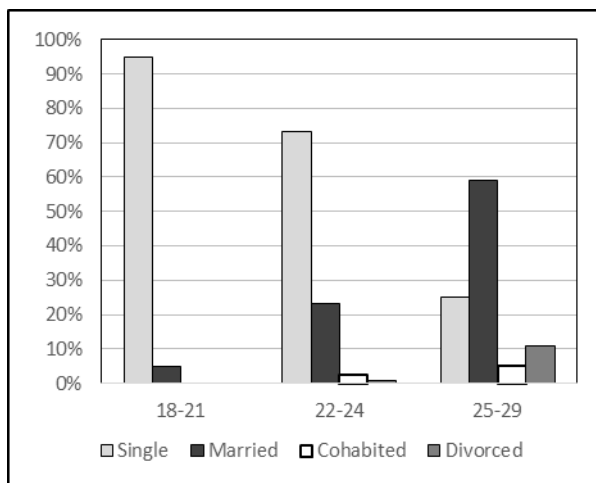


Source: Sample Survey Ust-Kamenogorsk, 2016

The questionnaire was divided into three blocks (parts) to get more detailed information about marital status of young women: women, who are engaged in their first official or unofficial marriage; women, who are divorced or widowed; and women, who have not married yet.

Figure 26a: Marital status of respondents by age (in %): Kazakhs

Figure 26b: Marital status of respondents by age (in %): Russians



Source: Sample Survey Ust-Kamenogorsk, 2016

The marital status of respondents varied with age; the older was a woman, the more chance she was married. Thus, the highest concentration of married, cohabitated or widowed women was in the oldest age group 25-29. A majority of respondents of both ethnicities (63.3%) stated that they were

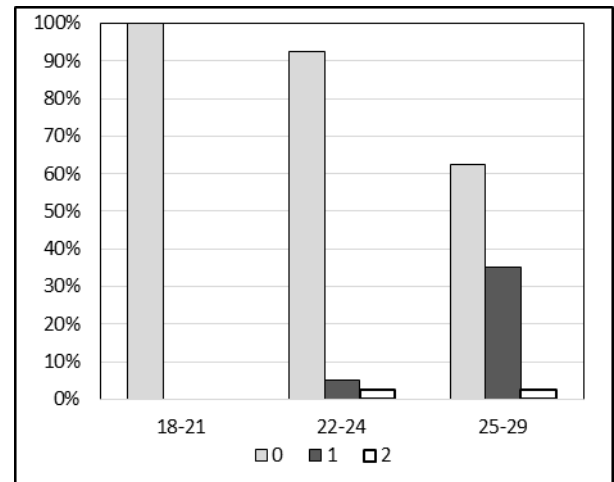
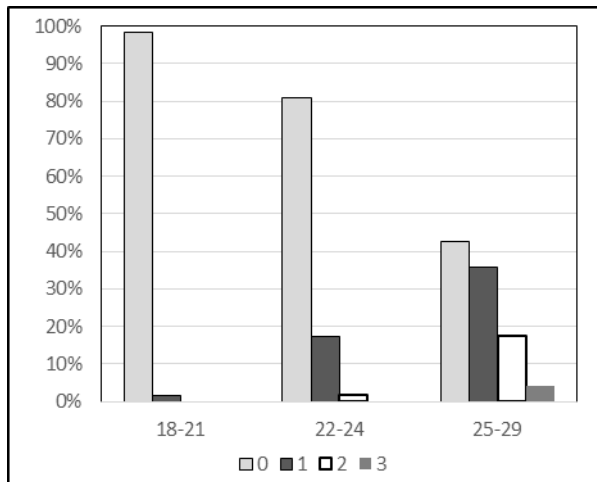
lonely, while 32.9% of interviewees lived with a partner. Many women postponed their marriage until age of 22-24, and many until age 25-29. There was a higher proportion of cohabitating females among Russians in older age groups, Kazakh females being more traditional concerning the family institute.

Another important factor in the family status in a society is an occurrence rate of divorce. Only 4.8% of respondents indicated that they were divorced, majority of whom got married when they were 20-23, and the average marriage duration was 2-3 years. More than half of female respondents (56.5%) got divorced within three years after the marriage. 21.7% of these divorced respondents got already married for the second time. 73.9% of divorced women had one or more children at the time of divorce.

Majority of women of both ethnicities did not have any children (77.3%), or had one child (16.7%), two or more children is rare. The oldest age group of 25-29 had higher birth rates, however, even there majority of women did not have any children. Average number of children for Kazakhs was 1.35 and for Russians - 1.11.

Figure 27a: Number of children per woman by age (in %): Kazakhs

Figure 27b: Number of children per woman by age groups (in %): Russians



Source: Sample Survey Ust-Kamenogorsk, 2016

This tendency implies fertility postponement, which may negatively impact the number of births in the future. Considering that the reproductive age is constrained, and there are other negative factors, such as poor environment, low level of medical care and high infant mortality rate, it is possible that women will not have more than 3 children in the future.

Distribution of birth rates according to marital status of women confirms our assumption about relationship between marriage and birth rates. It can be seen that married women or those women who were married have higher birth rates. The other thing that is obvious is that they do not hurry to have a second child. The phenomenon of small families is becoming widespread in Kazakhstan. This term came from Russian researchers, which already faced this issue in 1990s. A small family

consists of one or two children. Antonov, a Russian researcher, suggested that the older generation to be replaced by following generation, an average family shall have 2.1 children, which is equivalent to one quarter of two children families, one third of three children families, 14% of those who do not have any children at all or have one child, and 7% of five and more children families. Otherwise, depopulation will take place. It is obvious that almost all young couples want to have children, but what is more important how many they will actually have.

The survey showed that a majority of divorced women had one child, while those who cohabitated had two children. This means that there is an increasing number of children who will be upbrought in a family with one biological parent. These children may face not only psychological problems in the future but also socio-economic problems as well. They are less socially protected than children upbrought in full families, and they have higher morbidity and mortality rates.

It is necessary to mention women's attitude towards contraception when considering the reproductive behavior. Contraception indicates the level of the female sexual competence on one hand, and proliferation of premarital sexual relations on the other hand. It is well-known fact that ignorance when using an urgent contraceptive (like Postinor, which is very popular among Kazakhstani youth), may cause serious health consequences, even infertility. Moreover, because of inaccurate use, the undesirable pregnancy may appear.

Medical doctors concluded that main changes in reproductive health of women took place in recent years. That caused an increase of infertile couples in Kazakhstan. A few years ago, for instance, the proportion of infertile marriages was 8-10%. This proportion is increasing in the country annually and is about 16-17% presently (Daubassova I., 2013). The main reason was sexual infections. From one side, the number of premarital sexual relations are increasing and the age of first sexual relations is decreasing, while from the other side, there is a lack of informational support of youth about contraception means.

The survey showed that the majority of respondents of both ethnicities did not use any means of contraception (30.21%), which was probably related to the fact that there were many married women, and those women who had irregular sex or did not start sexual life yet. The second popular answer was condoms (26.25%), hormone pills were the third popular choice among women aged 22-29 (18.13%), however, only 1.88% of the youngest age group 18-21 used them. More adult women (10.63%) marked that they used intrauterine devices. The youngest women aged 18-21 (29.38%) did not have sex at all. The option "not having sex" were selected fifteen times more than women in other age groups, which means that sexual activity in this age group has not started yet. It is worth noting that urban women use safer means of contraception than rural migrants, moreover, their range of them is wider.

Table 16a: Use of contraception by marital status of respondents (in %): Kazakhs

Contraceptive use*	Marital status					Total
	Single	Married	Cohabited	Divorced	Widowed	
1	39.66	25.71	44.44	7.69	0.00	34.44
2	10.34	29.52	22.22	61.54	0.00	18.06
3	1.72	15.24	22.22	15.38	0.00	6.67
4	2.59	2.86	11.11	0.00	0.00	2.78
5	0.86	14.29	0.00	15.38	100.00	5.56
6	0.00	0.95	0.00	0.00	0.00	0.28
7	29.31	1.90	0.00	0.00	0.00	19.44
8	15.52	9.52	0.00	0.00	0.00	12.78
Total	100.00	100.00	100.00	100.00	100.00	100.00

Note: N= 480

Source: Sample Survey Ust-Kamenogorsk, 2016

Table 16b: Use of contraception by marital status of respondents (in %): Russians

Contraceptive use*	Marital status					Total
	Single	Married	Cohabited	Divorced	Widowed	
1	16.67	21.43	18.75	0.00	0.00	17.50
2	56.94	32.14	56.25	50.00	0.00	50.83
3	6.94	28.57	25.00	25.00	0.00	15.00
4	0.00	0.00	0.00	0.00	0.00	0.00
5	0.00	7.14	0.00	25.00	0.00	2.50
6	0.00	0.00	0.00	0.00	0.00	0.00
7	9.72	0.00	0.00	0.00	0.00	5.83
8	9.72	10.71	0.00	0.00	0.00	8.33
Total	100.00	100.00	100.00	100.00	0.00	100.00

Notes: N= 480

Contraceptive use

1. I do not use any means
2. Condoms
3. Hormonal (pills)
4. Biological methods (calendar etc.)
5. Intrauterine devices
6. Surgical sterilization
7. Abandoning sexual life
8. No answer
9. Other

Source: Sample Survey Ust-Kamenogorsk, 2016

The data about use of contraceptive means by respondents according to their marital status suggests that the most popular means are condoms and hormonal pills. However, in 2009 the intrauterine devices were very popular among married women. This trend suggests that the female behaviour has gone through progressive changes. Condoms were most popular among Russian women who did not have regular relationships, such as lonely, divorced or widowed women. Abandoning sexual life was a characteristic of lonely young women, and widowed. There was a substantial difference in attitudes of Russian and Kazakh women, particularly, lonely ones. Russian

females used contraceptives more often and talked about that openly, while Kazakh women, particularly, single, preferred not to answer that question at all.

To complete characteristics of respondents, it seems necessary to trace relations between generations. A parental family is a main institute that forms marital and reproductive behavior of respondents. In the questionnaire respondents were to answer a range of questions characterizing a family type of their parents. 77.3% of women said that they were brought up in a two-parent family, where both of them were their biological parents. 14.6% of respondents were brought up by a single mother and 5.2% were raised in families where one of parents was not their biological parent. These findings contradict with the notion that divorce existed in the older generation and that had an impact on the behavior of the youth.

If we compare marital status of respondents with the type of family, we may observe that the behaviour of the youth has changed drastically in a single generation. This is particularly true for Kazakh women. The total distribution for some groups was less than 100% since we did not include all types of parental families, and we omitted those for which there were only few answers. A majority of young divorced Kazakh women (92.3%) were brought up in families with both parents. The ratio of Russian women who were raised in single-parent families was higher than of Kazakh women, which was reflected in their cautiousness when forming their own families. Among Russian women, many preferred to be either single or cohabitante with their partner without registration. It is obvious that changes in the family model of the youth did not always comply with the views of their parents.

Table 17a: Respondents according to type of parental family and marital status category (in %): Kazakhs

Type of family*	Marital status					Total
	Single	Married	Cohabited	Divorced	Widowed	
1	78.0	83.8	66.7	92.3	100.0	80.0
2	2.6	6.7	22.2	0.0	0.0	4.2
3	1.3	1.0	0.0	0.0	0.0	1.1
4	15.1	6.7	11.1	7.7	0.0	12.2
5	2.2	1.9	0.0	0.0	0.0	1.9
Total	100.0	100.0	100.0	100.0	100.0	100.0

Notes: N= 480

Table 17b: Respondents according to type of parental family and marital status category (in %): Russians

Type of family*	Marital status					Total
	Single	Married	Cohabited	Divorced	Widowed	
1	65.3	81.5	68.8	60.0	0.0	69.2
2	4.2	11.1	18.8	20.0	0.0	8.3
3	1.4	0.0	0.0	0.0	0.0	0.8
4	29.2	7.4	12.5	20.0	0.0	21.7
5	0.0	0.0	0.0	0.0	0.0	0.0
Total	100	100	100	100	100	100

Notes: N= 480

Type of family

In complete family with both biological parents
In complete family, where one of my parents was not my biological father (mother)
In incomplete family with father
In incomplete family with mother
In the family of my grandparents / In the family of my relatives

Source: Sample Survey Ust-Kamenogorsk, 2016

When we analyze the type of family in a relation to ethnicity of respondents, we may see that Kazakh women have more traditional behavior. A majority of Kazakh women lived in two-parent extended family. The proportion of Kazakh women who were brought up in incomplete family was two times less than the proportion of Russian women (20.0% against 30.8%, respectively). This was probably related to more strong family ties among Kazakh rural families. Up until recently, a Kazakh woman who lived alone, without a husband or divorced, was considered as a “square peg in a round hole”, and was condemned by relatives and society. Their children were brought up in incomplete families as a consequence of widowhood of one parents, rather than being divorced. This was particularly widespread in rural areas.

Interestingly, majority of women considered their parental family as a traditional one (88.3%). This view was typical, particularly, among Kazakh women, which moved to the city recently. Russian women were more critical in this issue, the proportion of those who did not consider their parental family as a traditional one were 1.5 times higher (16.7% against 10.0%). This is an evidence of the fact that family, even deformed one, continues to remain something special for majority, a symbol of traditions.

The survey consists from several parts dealing with following topics: marital and reproductive behavior and attitude towards marriage, children and family duties.

3.2. Marital behavior of respondents

Despite current modernization of Kazakhstani society, a marriage still remains a significant value to many young women. It is common in our society to marry before having children. However, recently new tendencies have taken place in the formation of families: a rapid growth of cohabitating couples, an increase of divorce rates and a postponement of child births. In this section of the research, an analysis of marital and family norms of young women will be made. The survey questionnaire included such topics as marital behavior of young women, their attitude towards premarital sexual relations, the age of marriage, obstacles to get married, the attitude towards a divorce, the desired type of family and the allocation of duties in a family.

As we have mentioned above, most of young women aged 18-29 were not married, and the highest chance to be lonely was in the age group of 18-21. In this study, one sought to analyse the attitude of respondents towards the marriage according to their marital status.

Women, who were in marriage at the time of the survey, were asked about the duration of their relationships with the future husband before marrying, and whether they dated other partners before that. These questions allowed one to estimate how traditional relationships in the society were, since

long-term relationships with the future husband until the marriage for a few years and premarital sexual relationships were features of the modern society. A process of family formation is an important characteristic, based on which one can determine its future. It was tried to understand how responsible was married women to that issue, what was the duration of relationships with their current husbands, and what was the social criteria in a choice of their partner.

Table 18a: Place of meeting her future husband by age group (in %): Kazakhs

Acquaintance	Age groups			Total
	18-21	22-24	25-29	
School/University	25.0	32.1	30.3	30.6
Job	0.0	14.3	15.8	14.8
Party	50.0	42.9	34.2	37.0
Family party	25.0	0.0	11.8	9.3
Internet	0.0	7.1	5.3	5.6
Other	0.0	3.6	2.6	2.8
Total	100	100	100	100

Notes: N= 480

Table 18b: Place of meeting her future husband by age group (in %): Russians

Acquaintance	Age groups			Total
	18-21	22-24	25-29	
School/University	60.0	18.2	18.5	23.3
Job	0.0	9.1	11.1	9.3
Party	20.0	45.5	59.3	51.2
Family party	20.0	0.0	3.7	4.7
Internet	0.0	27.3	3.7	9.3
Other	0.0	0.0	3.7	2.3
Total	100	100	100	100

Notes: N= 480

Source: Sample Survey Ust-Kamenogorsk, 2016

The survey showed that a majority of women of both ethnicities met their current husbands at school/university (25.2%) or at party (37.8%). Which means that an institution of matchmaking, when young pairs get acquainted at some family meetings, does not function anymore weakening that family institution. Up until pre-revolutionary period in Kazakhstan, one's parents chose a spouse for her. In Soviet time, these traditions were abandoned, however, in rural areas parents had a last word for couple's marriage. This is particularly true for those young women who are struggling to get married. They are brought together with single men through relatives and friends. However, the survey showed that this was not the case in the city.

Table 19: Duration of relationships with the future husband by duration of being resident in Ust-Kamenogorsk and ethnicity (in %)

Duration, in years	Duration of being resident in Ust-Kamenogorsk*				Total
	1		2		
	Kazakhs	Russians	Kazakhs	Kazakhs	
1	45.7	48.8	50.0	32.4	44.4
2	20.0	27.9	25.0	35.1	27.2
3	25.7	7.0	13.9	8.1	13.2
4	5.7	4.7	2.8	8.1	5.3
5+	2.9	11.6	8.3	16.2	9.9
<i>Total</i>	100	100	100	100	100

Notes: N= 480

Duration, in years

1. Women staying in the city since their births
2. Women staying in the city before age 10
3. Women staying in the city after age 10

Source: Sample Survey Ust-Kamenogorsk, 2016

As the data in table 19 shows, a majority of married women got married in the first year of dating future husbands, and this data did not vary with regards to the duration of residence in Ust-Kamenogorsk. Thus, attitudes of rural and urban inhabitants were similar in this case. This implies that there have been changes in the society, and woman emancipation is becoming stronger. The marriage is a matter of choice, and most young women prefer to verify relationships with the time. Also, this may be a matter of financial and other difficulties young couples face in the urban environment.

To understand how traditional the premarital behavior of young women was, we asked them the number of serious relationships they had before the marriage. We did not ask the number of premarital sex partners straightforward, because it was considered impolite in Kazakhstan. But the researcher argues that serious relationships might imply having premarital sex most of the time.

Table 20: Number of boyfriends before future husband by duration of being resident in Ust-Kamenogorsk and ethnicity (in %)

Number of boyfriends	Duration of being resident in Ust-Kamenogorsk*				Total
	1		2		
	Kazakhs	Russians	Kazakhs	Kazakhs	
0	67.5	36.1	63.9	59.0	57.0
1	25.0	38.9	33.3	23.1	30.2
2	7.5	16.7	0.0	10.3	8.7
3	0.0	8.3	2.8	7.7	4.0
<i>Total</i>	100	100	100	100	100

Notes: N= 480

Duration, in years

1. Women staying in the city since their births
2. Women staying in the city before age 10
3. Women staying in the city after age 10

Source: Sample Survey Ust-Kamenogorsk, 2016

Kazakh respondents showed traditionalism in a question about premarital partners. Women said that they did not change their partners frequently before marriage, 57% of respondents reported that that they did not have any boyfriend, and 30.2 % said that they have only one boyfriend before the marriage. Rural migrants changed their partners more often though. However, a majority of city residents said that they did not have any serious relationships with other men, or that they had only one. Russian women demonstrated more loyalty in choosing partner (38.9% of them indicated that they had one boyfriend and 25% that they had several partners before meeting their husband). From responses, one can conclude that women were less traditional before the marriage.

Another group of respondents was divorced women. We tried to find out reasons for divorce in the questionnaire, whether they married again or built new relationships, and the reason for not starting new relationships. The portion of divorced women was very small (4.5%) compared to average statistical data in the region, and this might influence reliability of results.

Divorced women were then asked to identify a reason for divorce, out of 8 reasons they could have chosen up to 2.

Table 21: Reasons of divorce for divorced women by ethnicity (in %)

Reasons*	Kazakhs		Russians		Total	
	Reason #1	Reason #2	Reason #1	Reason #2	Reason #1	Reason #2
1	0.0	0.0	0.0	0.0	0.0	0.0
2	11.8	0.0	0.0	66.7	9.1	28.6
3	23.5	0.0	60.0	0.0	31.8	0.0
4	11.8	0.0	0.0	33.3	9.1	14.3
5	5.9	25.0	0.0	0.0	4.5	14.3
6	11.8	0.0	0.0	0.0	9.1	0.0
7	29.4	50.0	40.0	0.0	31.8	28.6
8	5.9	25.0	0.0	0.0	4.5	14.3
Total	100	100	100	100	100	100

Notes: N= 22

Duration in years

Inability of having children

Poor health of spouse

Interference of parents/relatives

Adultery of spouse

Unreasonable jealousy, violence in family

Sexual incompatibility

Alcoholism of one of spouses

Irreconcilable contradictions between spouses

Source: Sample Survey Ust-Kamenogorsk, 2016

Most frequent reason for divorce among young women was an interference of parents or relatives. This implies that the value of parents opinion on young couples has decreased, and traditional relationships in family have changed as well. Another important reason was alcoholism of spouse.

Sexual incompatibility and adultery of spouse was chosen by 18.2% of Kazakhs and 14.3% of Russians interviewees. At the same time, inability to have children was of little significance for divorce among all women and it was not even chosen.

Of all divorced women that were interviewed only 31% remarried. The rest 45% were ready to start new relationships, 4.5% were not ready yet, and 18% found difficulty in replying.

An analysis of responses of divorced women on the reason for delaying new relationships showed that the main barrier for divorced women to remarry was not a financial one, but a lack of a partner and a fear of a new mistake. This implies that divorced women still want to marry, but it is difficult for them to find a worthy candidate. Kazakh women find it even more difficult to get remarried. This is probable related not only in finding a suitable partner, but also due to some cultural traditions since a woman is blamed for being divorced. Therefore, being divorced is considered as an improper behavior for a Kazakh woman.

The remaining group of respondents was single young women who constituted a majority of the interviewed women. 38.2% of them said that they had a boyfriend, and, the other 61.8% did not have any serious relationships at the moment of the interview. Therefore it was interesting to know when they were planning to marry, and what prevents them from doing so.

Table 22a: Planning of marriage for single women by age groups (in %): Kazakhs

Planning of marriage	Age groups			Total
	18-21	22-24	25-29	
Next year	6.1	21.1	28.6	14.6
In 5 years	45.2	42.2	7.1	39.5
In 5-10 years period	13.9	6.7	0.0	9.4
Not going to marry	2.6	3.3	3.6	3.0
Have not thought about that	20.9	8.9	10.7	15.0
No answer	11.3	17.8	50.0	18.5
Total	100	100	100	100

Notes: N= 233

Table 22b: Planning of marriage for single women by age groups (in %): Russians

Planning of marriage	Age groups			Total
	18-21	22-24	25-29	
Next year	8.6	6.9	12.5	8.3
In 5 years	37.1	24.1	25.0	30.6
In 5-10 years period	20.0	0.0	0.0	9.7
Not going to marry	5.7	3.4	0.0	4.2
Have not thought about that	11.4	27.6	25.0	19.4
No answer	17.1	37.9	37.5	27.8
Total	100	100	100	100

Notes: N= 72

Source: Sample Survey Ust-Kamenogorsk, 2016

There were 39.5% of Kazakhs respondents and 30.6% of Russians who were planning to get married in next five years. And even an absence of a permanent partner was not an issue. Those

women who had a boyfriend often planned to get married in a year (27%) or in five years' time (37.4%) at the maximum.

In the questionnaire, women were asked reasons in their way to get married. For that, they were offered five options to choose from. However, most of women constrained themselves with two or three reasons. Here, we only indicated most popular answers.

Table 23a: Troubles for marriage of first importance for single women by age (in %): Kazakhs

Trouble for marriage of first importance	Age groups			Total
	18-21	22-24	25-29	
1	66.1	33.3	10.7	46.8
2	19.1	27.8	17.9	22.3
3	1.7	3.3	7.1	3.0
4	6.1	28.9	60.7	21.5
5	6.1	5.6	3.6	5.6
6	0.9	1.1	0.0	0.9
Total	100	100	100	100

Table 23c: Troubles for marriage of second importance for single women by age (in %): Kazakhs

Trouble for marriage of second importance	Age groups			Total
	18-21	22-24	25-29	
No trouble reported	73.0	65.6	71.4	70.0
2	0.0	0.0	0.0	0.0
3	12.2	13.3	3.6	11.6
4	3.5	5.6	3.6	4.3
5	6.1	8.9	0.0	6.4
6	0.0	0.0	7.1	0.9
Total	100	100	100	100

Notes: N = 233

1. Need to complete education
2. Desire to make a career
3. Lack of financial conditions
4. Lack of worthy candidate
5. Moral and physical unreadiness

Source: Sample Survey Ust-Kamenogorsk, 2016

Table 23b: Troubles for marriage of first importance for single women by age (in %): Russians

Trouble for marriage of first importance	Age groups			Total
	18-21	22-24	25-29	
1	57.1	6.9	12.5	31.9
2	20.0	20.7	25.0	20.8
3	5.7	17.2	12.5	11.1
4	14.3	41.4	25.0	26.4
5	0.0	6.9	25.0	5.6
6	2.9	6.9	0.0	4.2
Total	100	100	100	100

Table 23d: Troubles for marriage of second importance for single women by age (in %): Russians

Trouble for marriage of second importance	Age groups			Total
	18-21	22-24	25-29	
No trouble reported	48.6	69.0	75.0	59.7
2	0.0	0.0	0.0	0.0
3	28.6	3.4	0.0	15.3
4	11.4	3.4	12.5	8.3
5	11.4	3.4	12.5	8.3
6	0.0	0.0	0.0	0.0
Total	100	100	100	100

N = 72

Almost half of respondents indicated the only reason as a barrier for marriage. One of the main reasons of marriage delay among women aged 18-21 was to complete their education, for the rest women it as pursuing a career. The second main barrier was a desire to make a career and a lack of a worthy candidate. A lack of financial conditions was not a barrier for most of women, especially for younger ones. Only few were stopped by the lack of financial conditions (4.9% of both

nationalities). It is interesting that romantic sentiments give away in front of material values. Only some women indicated an absence of a worthy candidate (22.6% of both nationalities), although in the oldest age group it had a greater role than in other groups (60.7% of Kazakhs aged 25-29 and 25% of Russians). Moreover, we can state that ethnicity and the duration of living in a city have an insignificant impact.

3.3. Reproductive behaviour of respondents

Reproductive behaviour of young women is one of the main factors that determines the demographic future of a country. In the beginning, it will be presented finding on behaviour of young women who are already married. Respondents of this category were asked if they planned to have children in the next three years. From that point, the researcher tried to analyse reproductive plans of married women with regards to the number of children they had at the moment of the survey.

Figure 28a: Planned number of children for married woman depending on the number of children she has (in %): Kazakhs

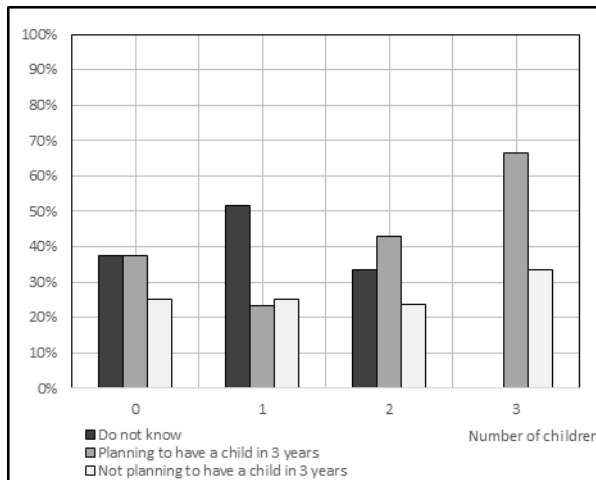
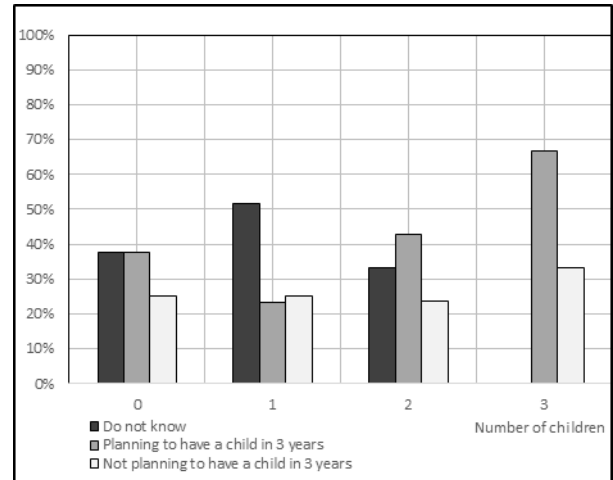


Figure 28b: Planned number of children for married woman depending on the number of children she has (in %): Russians



Source: *Sample Survey Ust-Kamenogorsk, 2016*

The survey showed that young women are cautious about family planning, and they did not plan to have any children in the next three years yet. However, childless women were more eager to bear a child (56.25% of both ethnicities). As the number of children increased, women’s desire to expand her family decreased. The conclusion made is that a majority of women consider a family with one or two children as an ideal one.

It is important to mention that childbearing is inseparable with marriage for most women. We deduced this by comparing reproductive behavior of single and married women. Single women were asked if they planned to have children in the next three years.

Table 24a: Planning of children in nearest 3 years for unmarried women by age (in %): Kazakhs

Planning of children	Age groups			Total
	18-21	22-24	25-29	
Yes	6.9	27.8	42.9	19.2
No	66.4	35.6	14.3	48.3
Do not know	26.7	36.7	42.9	32.5
Total	100	100	100	100

Notes: N = 233

Table 24b: Planning of children in nearest 3 years for unmarried women by age (in %): Russians

Planning of children	Age groups			Total
	18-21	22-24	25-29	
Yes	8.6	20.7	25.0	15.3
No	80.0	31.0	37.5	55.6
Do not know	11.4	48.3	37.5	29.2
Total	100	100	100	100

Notes: N = 72

Source: Sample Survey Ust-Kamenogorsk, 2016

18.3% of female interviewees answered to this question positively, most of which were Kazakh women (42.9% versus 25%) in older age groups. Rest of women had a negative answer (50%), or had a doubt about that (31.6%). These results confirm that marriage is still a significant institution in the society, and also imply that young women are more interested in getting married than having children. The youngest female respondents showed the least interest, in particular.

Studying the desired number of children is more significant for analyzing reproductive behavior of youth than studying real birth rates. Norms about childbearing is developed out of the ideal number of children, which is usually 2 times higher than real birth rates. This helps us to understand an ideal type of family and assess reproductive behavior of society.

Table 25: Ideal number of children per woman by duration of being resident in Ust-Kamenogorsk and ethnicity (in %)

Ideal number of children	Duration of being resident in Ust-Kamenogorsk*				Total
	1		3		
	Kazakhs	Russians	Kazakhs	Kazakhs	
1	3.3	1.7	0.8	0.8	1.7
2	22.5	60.0	15.0	18.3	28.5
3	50.8	33.3	54.2	49.2	46.7
4	13.3	1.7	20.8	23.3	14.8
5	10.0	3.3	7.5	8.3	7.3
6	0.0	0.0	1.7	0.0	1.0
Total	100	100	100	100	100

Notes: N = 480

Duration of being resident in Ust-Kamenogorsk

1. Women staying in the city since their births
2. Women staying in the city before age 10

3. Women staying in the city after age 10

Source: *Sample Survey Ust-Kamenogorsk, 2016*

The survey showed that the average ideal number of children was 2.99 children per respondent. This average was higher for Kazakh women (3.2 versus 2.45 for Russians), particularly for those women who moved to the city recently (3.31). This indicator was lower for women of both ethnicities that were local residents (2.51).

To get a broader picture, we included in our survey a question about the expected number of children. This is a distinctive measurement tool for assessing transformation of individual reproductive orientations under existing influences, and it is also a connecting chain between the desired and existing number of children.

Generally, behavior norms do not always transform into definite behavior activities. This was true for our case in demographic sphere as well. The average expected number of children was 2.43 children per respondent. This was 0.56 less than the ideal number of children and 0.3 more than the coefficient of normal reproduction per female. If we consider that positive demographic trend was largely due to the age structure, this picture is going to worsen due to low birth rates in 1990s.

Table 26: Expected number of children per woman by duration of being resident in Ust-Kamenogorsk and ethnicity (in %)

Expected number of children	Duration of being resident in Ust-Kamenogorsk				Total
	1		2		
	Kazakhs	Russians	Kazakhs	Kazakhs	
1	3.3	14.2	0.8	0.0	4.6
2	31.7	50.0	24.2	11.7	29.4
3	20.0	20.0	14.2	17.5	17.9
4	3.3	0.0	3.3	4.2	2.7
5	2.5	0.8	2.5	1.7	1.9
As God wills	39.2	15.0	55.0	65.0	43.5
Total	100	100	100	100	100

Note: $N = 480$

Source: *Sample Survey Ust-Kamenogorsk, 2016*

It is worth noting that the expected number of children varied among different social groups insignificantly. The main difference was between Russian and Kazakh women. Russian females preferred to have a family with one-two children, while Kazakh females were more inclined to have a family with two-three children.

There were 1.7% and 46.7% of respondents who considered an ideal family with one and three children, respectively, and these proportions changed when we asked about the expected number of children substantially – 4.6% and 17.9%.

A distinctive standard of family size by interviewees regardless of their ethnicity and age was a family with two children. Third of all respondents (29.4%) preferred this family size. 17.9% of respondents preferred to have a family with three children and 4.6% of women preferred to have a

family with one child. Four children family was chosen by 2.7%. Reproductive behavior of young females did not go beyond four children in a family.

Another possible answer for the expected number of children was “As God wills”, and 43.5% of respondents chose that answer. Answers varied with regards to age: 49.4% and 45% of female interviewees in age groups 18-21 and 22-24 chose that answer, while the older age group 25-29 had fewer reliance on God in this issue (37.5%), as well as with regards to ethnicity: Kazakh women relied on Allah’s (God) will more often (53.1%), while only 15% of Russians did.

Experience that female respondents earned in their families was another significant factor that influenced the desired number of children.

Table 27a: Expected number of children by number of children in parental family (in %): Kazakhs

Expected number of children	Number of children in parental family				Total
	1	2	3	4	
1	2.1	1.9	0.9	0.0	1.4
2	25.0	25.6	19.4	12.5	21.9
3	16.7	17.9	20.4	8.3	17.2
4	2.1	3.8	4.6	2.1	3.6
As God wills	2.1	2.6	2.8	0.0	2.2
Total	100	100	100	100	100

Note: N = 360

Table 27b: Desired number of children by number of children in parental family (in %): Russians

Desired number of children	Number of children in parental family				Total
	1	2	3	4	
1	17.6	15.2	5.3	0.0	14.2
2	55.9	42.4	68.4	0.0	50.0
3	5.9	25.8	21.1	100.0	20.0
4	0.0	0.0	0.0	0.0	0.0
As God wills	0.0	1.5	0.0	0.0	0.8
Total	100	100	100	100	100

Note: N = 120

Source: Sample Survey Ust-Kamenogorsk, 2016

It was found that there was a direct relationship of the desired number of children depending on the type of parental family. Almost all respondents focused on numbers of children by parental family, except families with one child, which only few have indicated. Most young females indicated a family of two-three children as an ideal one. Russian women were more oriented on a family with two children, while Kazakh women wanted to have three children on the average. A majority of those women who wanted to have a family with three children grew up in families with many children. Therefore, the impact of parental family on this behaviour was obvious.

Then it was tried to understand what factors made woman reduce the desired number of children. Several factors were distinguished that may be a barrier for having the desired number of children: socio-economic (financial and housing issues) and individual-psychological (health conditions, work and study).

The main factors that prevented our respondents from implementing their reproductive preferences were indicated by them as following: financial issues (47.9%), problems at work/study (25.6%) and health conditions (15.8%)

Table 28: Factors influencing on realization of reproductive preferences of respondents by ethnicity (in %)

Factors preventing from having desired number of children	Ethnicity		Total
	Kazakhs	Russians	
Your job / study	19.4	15.0	18.3
Job / study of your husband	2.8	0.8	2.3
Housing conditions	19.2	25.8	20.8
Financial difficulties	27.5	38.3	30.2
Level of health	22.8	9.2	19.4
Lack of help from relatives	1.4	1.7	1.5
Alcoholism of a spouse	0.8	0.0	0.6
Middle age	1.1	0.8	1.0
Lack of government support	0.6	0.8	0.6
No husband/ family	1.9	2.5	2.1
Ecology	2.5	5.0	3.1
Total	100	100	100

Note: $N = 480$

Source: Sample Survey Ust-Kamenogorsk, 2016

These factors varied their significance with regards to ethnicity, age, financial conditions, level of education and family status of respondents.

Financial matters, as a factor preventing from having the desired number of children, lost their significance with age increase of respondents; however, a housing issue arised there. Urbanization processes led to price increases for houses, which most of migrants could not afford. This explained partly why many young women still stayed with their parents after marriage (22.8%). Another way to deal with the housing issue was to buy suburban cottages (“datchas”), which were then transformed to make it a permanent dwelling. If a young couple moves with their family, then they try to buy a house that fits all its members. Money they get from selling their house in the village is just enough to buy “dacha” or uncomfortable house at city outskirts. However, when a young couple moves alone, then they rent a flat or stay at a dormitory. And this situation may continue even after marriage.

The housing issue is very critical for those couples that stay in rented flats (31.7%) or dormitories (26.5%), where respondents have only up to 10 sq.m. per person of living area.

One has to mention that financial issues are almost equally significant for respondents with different income levels. Such that female respondents with income above middle and with middle income almost equally indicated this issue as significant (27.6% versus 34.5%). Apparently, this is not related with real cost calculation on child, but with level of comfort that decreases with a child birth.

Indicating such barriers of having the ideal number of children as work and study shows an increase of women's financial independence. On the other side, this implies that one spouse cannot provide his family financially, and both spouses have to work. Significance of those factors increases among older age groups.

To sum up, a majority of young females consciously withhold to have the ideal number of children for their families, because they are afraid to disturb their usual lifestyle, financial stability, or career.

3.4. Value orientation of respondents

To understand the significance of marriage and family in lives of youth, it was examined how the youth assessed its importance among such values as job, education, friends, money, politics, religion etc. This issue was also important, because of the fact that the value transformation was determined by some researchers as the second demographic transition.

Recently, there were many debates run in Kazakhstan about the value deterioration amongst the youth, and increasing moral degradation of the society. Traditional life values such as family, children, love and friends were replaced by new "market" values, such as money and career. We will analyze how justified this valuation is, and whether the value notion of family is still the same amongst the youth and if it changed that much.

The socio-historical analysis of family behavior of citizens of Kazakhstan showed that family and children had high significance for its inhabitants. Kazakhstan right up to joining the Soviet Union was a traditional proislamic state, where large families were a norm, the elder had an indisputable authority, ethic, moral and behavior was under the tough control, and levirate and polygamy was widely spread. Family was of primary importance to Kazakhs. High fertility rates of our ancestors prove that fact. The breakdown of family values started when Kazakhstan became a part of the Soviet Union, when high industrialization rates demanded extra labor forces of women, which made them over-busy and decreased women's interest in family. Moreover, relationship between parents and their children had deteriorated due to the fact that busy parents passed upbringing and education of their children to public institutions, such as nurseries, kindergartens, schools, boarding schools, all sorts of interest clubs etc. and as a result children cooled towards their parents.

The collapse of Soviet regime caused a deep economic crisis in Kazakhstan, where social values were lost on one hand, and formation of new social values emerged on other. For instance, return to religion and practice of religious norms has awakened traditional ceremonies of marriage proposals and child births. East Kazakhstan region had gone through some changes, which was evident in Ust-Kamenogorsk, particularly. Shift of rural Kazakh population into urban centers has altered the general pattern of family relationships, because rural migrants preserved their marital and reproductive behavior in the city. This caused a population growth in urban areas.

Besides, nowadays Kazakhstan is oriented on the West in its economic and political reforms. As a consequence, western ideology is widely-spread, particularly among the youth, so-called the new generation. In this chapter, it was sought to understand how these two contradictory tendencies affected value norms of the youth.

3.4.1. Value ranking of respondents.

To determine the value of family and children in youth's understanding, respondents were asked to rank twelve values starting from the most important ones for them. Among those values were education, work, social recognition, implementing own ideas, power, money, marriage, life in happy marriage, child birth, upbringing of children etc.

Table 29: Ranking of values by ethnicity (in %)

Value	1 rank		2 rank		3 rank	
	Kazakhs	Russians	Kazakhs	Russians	Kazakhs	Russians
Education	41.9	31.7	3.1	10.8	5.0	5.0
Job	12.5	16.7	33.3	25.0	5.8	15.8
Marriage	13.6	11.7	16.1	16.7	28.1	16.7
Children	6.1	12.5	15.0	9.2	18.3	20.8
Husband	5.0	5.0	10.8	7.5	9.4	10.0
Power	0.8	0.8	1.1	3.3	4.4	2.5
Money	0.0	0.8	1.4	3.3	3.3	6.7
Upbringing children	7.8	6.7	7.5	9.2	9.2	9.2
Quiet life	6.4	3.3	2.8	5.0	6.1	2.5
Active life	4.2	7.5	3.6	3.3	6.1	4.2
Public recognition	1.1	0.8	1.9	1.7	2.5	4.2
Creative realization	0.6	2.5	3.3	5.0	1.7	2.5
Total	100.0	100.0	100.0	100.0	100.0	100.0

Note: N = 480

Source: Sample Survey Ust-Kamenogorsk, 2016

Top most important values for both ethnicities were education, career, marriage and child birth. Education was the most important priority (39.4% of all respondents put it on the first place), particularly it was important for the youngest age group 18-21 (56.3%). The second most important factor was well-paid job, which was chosen by 31.3% of respondents, and again it was the most popular choice in the youngest age group 18-21 (40.6%). Getting married was only of third importance for young women (25.2%), Kazakh girls are more willing to marry though (19.3%). Having a child was a priority number four for respondents (13.4%). This arrangement of values, when marriage is a higher priority than having a child implies that marriage is still a traditional way of family formation. The significance of family formation increased with ageing. Thus, there was a wide dispersion for value of family between four highest priorities in the age group 25-29. Hence, it is obvious that the youth is still highly oriented on family formation and it follows with child births.

Living with one husband, upbringing children, both quiet and active life was of secondary importance to our respondents. The most unpopular priority values were authority, implementation

of creative ideas, money and public recognition. A majority of respondents rated them as 10-12 most important priority values.

Relevance of life values differed among various social groups. Age was one of significant differentiating factors. Thus, priority values such as marriage and child was significant for the eldest age group of 25-29, which suggested that family formation had not lost its significance, but shifted its age scope. Nowadays, young women prefer to establish their social status, and only then to form a family, which is a normal consequence of adaptation to the new economic environment.

Moreover, it is worth to note that education and job is the highest value priority for those women who moved to the city recently, which is probably related with the objective of their migration, and implies about the change in reproductive behavior of villagers. Family formation is more of an issue in cities rather in villages because the modern urban family does not require many children.

It was surprisingly found that value orientations of both ethnicities were almost identical. There was only a little difference in willingness to marry (19.3% of Kazakh and 15% of Russian women were willing to marry). Other parameters were almost identical. This supports our hypothesis that family values of two ethnicities converge due to their interaction in the urban environment.

Another important moment in assessing values of the youth was their attitude towards premarital sex. Regarding premarital sex, respondents had less traditional view. The majority justified premarital sex if they were in love – 36.5%, 31.5% of women supposed that you could have sex only with your future husband, and only 20.4% of respondents were intolerant towards premarital sex. 10% of women considered premarital sex as a proper action. Russian and urban Kazakh women were more open towards having sex before getting married. The youngest women had views that were more romantic, and were against premarital sex, while the oldest group of females in the study were more cynical, and found premarital sex acceptable even without love.

Thus, we can observe that family and children has high value among respondents. Young women, as twenty years before, were willing to get married by love, give birth and educate their children. However, new desires were included to these feminine values, such as getting a tertiary education or seeking a career. Respondents had a healthy attitude for their sexual life, which might have a positive impact on their reproductive behavior. In the next sub-chapter the researcher will present the reasons behind formation of a family.

3.4.2. Value attitude of respondents towards marriage

Value questions that were addressed to respondents regardless of their marital status were to reveal women's attitudes towards family, allocation of duties in family, reasons for marriage and divorce, and ideal age at marriage. The question we wanted to discuss first was the type of family that was desired by the respondents. Family type is one of significant elements of the traditional society. The extended family is ruined primarily as a consequence of urbanization. 54.8% of respondents indicated that they preferred to live as a nuclear family (a husband, a wife, one-two children). This answer was frequent, particularly, among urban inhabitants. Only 24.6% of respondents saw an

alternative - living in a traditional family. The older respondents were opting for a nuclear family more often. All these give evidence that behavior of rural migrants changed gradually under city life. Thus, the researcher concludes that urbanization has a disastrous effect on the traditional family type.

The conclusion we made is supported by respondents' answers on other questions related to family life concerning reason for marriage. Significance of marriage for women varied depending on several reasons. A majority of women got married because of love (67.7%), others wanted to have a happy family life (21.9%). Such answers as relatives' persistence, financial well-being, desire to live independently from their parents etc. were not frequent choices among respondents.

Figure 29a: Ideal situation in marriage by age of respondents (in %): Kazakhs

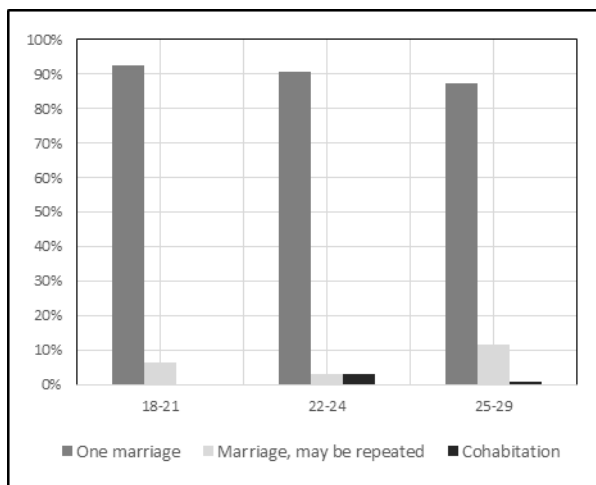
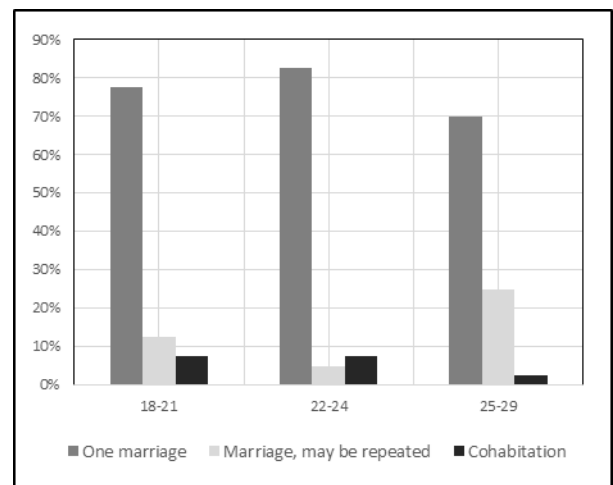


Figure 29b: Ideal situation in marriage by age of respondents (in %): Russians



Source: *Sample Survey Ust-Kamenogorsk, 2016*

It was found that the youngest women chose to marry once for whole life, while the older were more cautious to choose. They thought that it was normal to marry several times. Repeated marriage was mainly supported by Russian women (14.2% against 7.2%), and urban Kazakh women (14.2% against 4.2% rural migrants). The number of respondents considering cohabitation as an optimal choice was insignificant, which means that marriage was still important for women. It is obvious from findings that the oldest age group of women was more democratic in their answers; however, there were many women amongst them who had a traditional view of marrying once and for a whole life.

Other finding was that there was an increase of tolerance towards mixed marriages. 31.3% of women were ready to get married with a man of other ethnic group; the proportion of Russians was higher (38.3%), although Kazakh women demonstrated high level of loyalty (28.9%).

The age at marriage is very important factor in formation of a family. In a traditional society women marries at earlier age, and her reproductive age begins earlier. Interviewees were asked to tell an ideal age at marriage for males and females. We wanted to compare the ideal age at marriage for males and females (by women's point of view).

Figure 30a: Ideal age at marriage for males and females by respondents' opinion (in %): Kazakhs

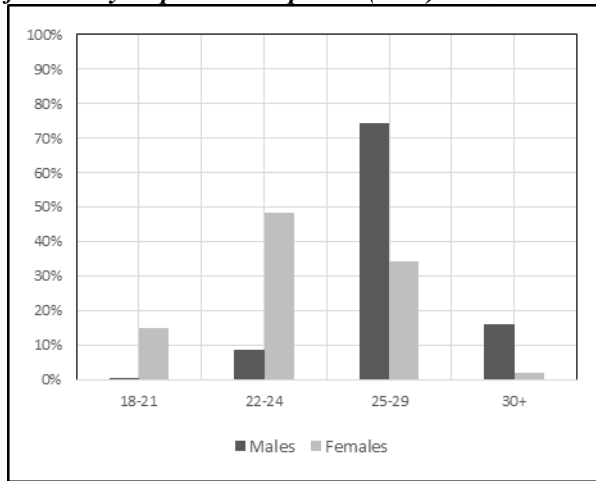
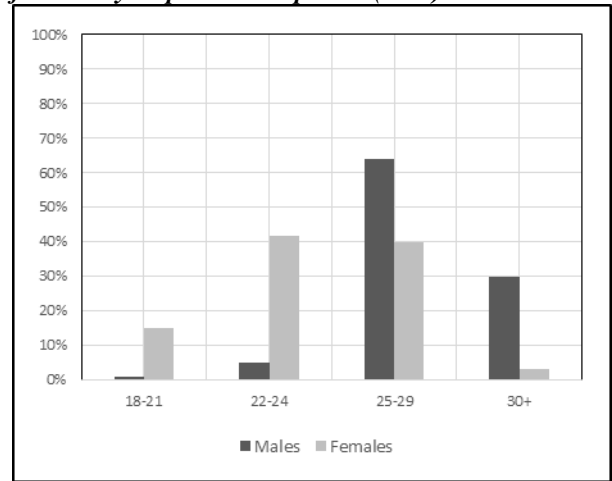


Figure 30b: Ideal age at marriage for males and females by respondents' opinion (in %): Russians



Source: Sample Survey Ust-Kamenogorsk, 2016

In the analysis, the answers of women about the ideal age by age groups were combined with four identified age groups (18-21; 22-24; 25-29; 30-35). A majority of women indicated age of 22-24 as an ideal for women, so that they would complete university and start working. But, there was still the gender inequality in the age of getting married. Men's age shifted to a later period, and the difference between women's age became 3-4 years. Kazakh woman, migrants in particular, had more traditional view; they indicated earlier ages at marriage for females.

The other side of marriage is a divorce. We tried to understand interviewees' attitudes towards divorce identifying reasons that could lead to divorce. They were asked to indicate up to three reasons for divorce. Despite that many of them indicated only one or two reasons (67.7% indicated two reasons) for divorce. Therefore, only first two reasons were demonstrated graphically.

Figure 31a: Attitude towards divorce of all categories of respondents by age (in %): Kazakhs (first reason for divorce)

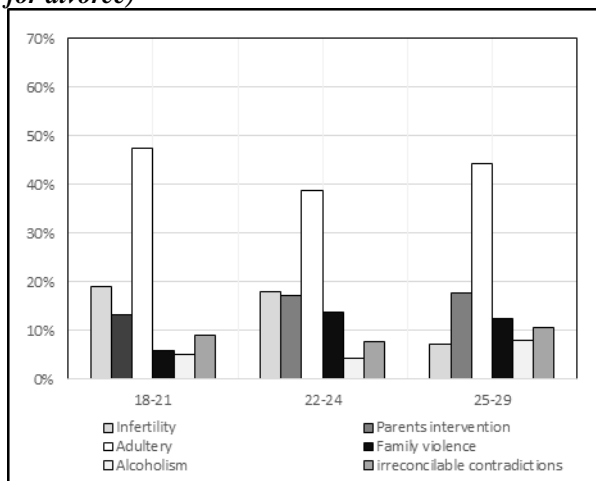


Figure 31b: Attitude towards divorce of all categories of respondents by age (in %): Russians (first reason for divorce)

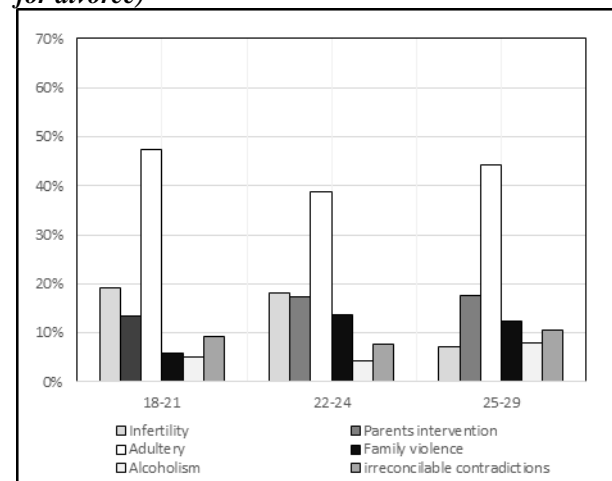


Figure 31c: Attitude towards divorce of all categories of respondents by age (in %): Kazakhs (second reason for divorce)

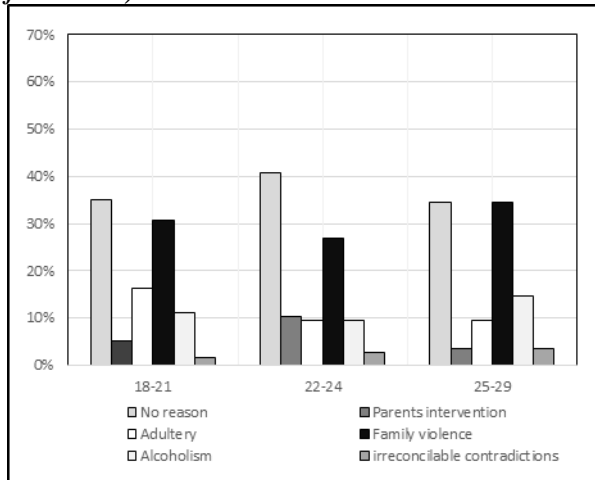
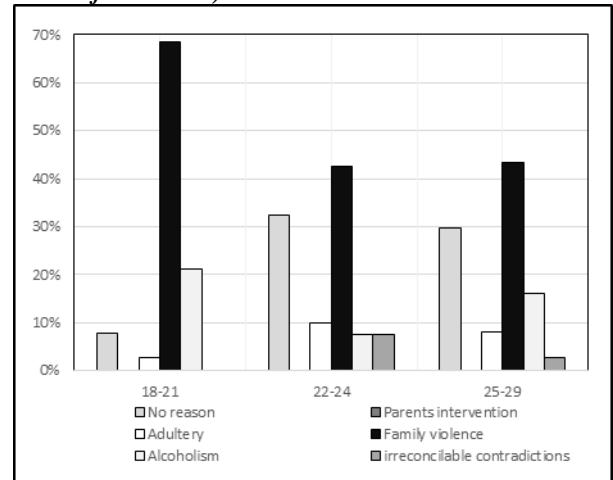


Figure 31d: Attitude towards divorce of all categories of respondents by age (in %): Russians (second reason for divorce)



Source: Sample Survey Ust-Kamenogorsk, 2016

The first reason the majority of respondents indicated was adultery of husband (46.04%), the second reason was parents' intervention (13.96%), and family violence (11.46%) and infertility (11.88%) was third reason. Interestingly, alcoholism of the future husband and irreconcilable conditions were not seen as the big issue for women (5.21% and 8.54% respectively). The age of women was the main factor that influenced attitude towards divorce. The youngest women were the most romantic, because they tended to maximize personal relationships and its integrity. It could be observed from their negative attitude towards adultery of husband and infertility.

The inability to have children is such a reason for divorce which characterizes the level of traditional relation to family. This response was relatively popular among Kazakhs (14.4%), which inferred to a stronger male role in the family. Unfortunately, up until now majority of male Kazakhs think that childless family is guilt of women. Talking about a male infertility, at the same time, is a matter of taboo.

The attitude towards family may also be observed by seeing how respondents allocate their domestic chores. Respondents were asked how they would like their duties to be allocated in their future families, considering how it happened in their parents' families, and how allocation happens in families of women who already have partners. The researcher sought that it was important observe the desired distribution of domestic duties, because it might reveal youth's attitude towards family life.

Figure 32a: Desired distribution of domestic chores by age and family types (in %): Kazakhs

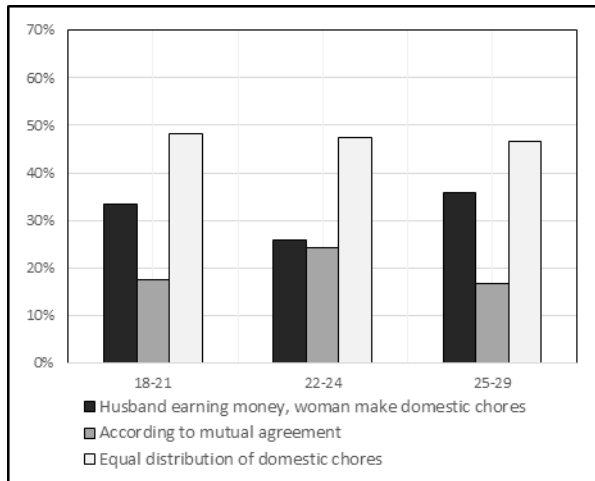
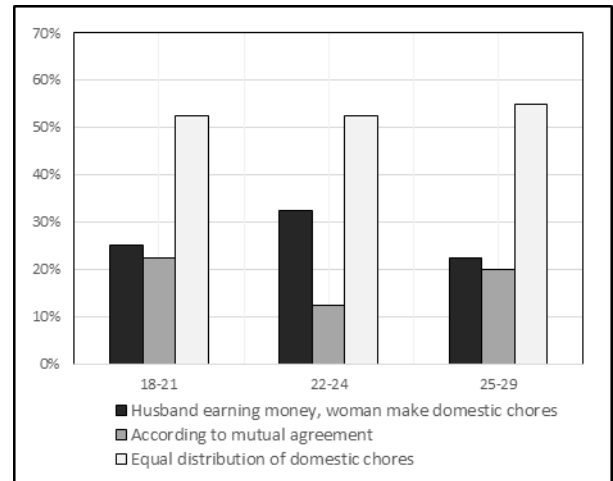


Figure 32b: Desired distribution of domestic chores by age and family types (in %): Russians



Source: Sample Survey Ust-Kamenogorsk, 2016

A majority of women responded that a husband and a wife should have equal duties at home (48.96%), the rest thought that the husband should earn money and the wife should look after home and family (30.42%). Interestingly, the last answer was indicated by twice as much among older women, which were already married. In figures above, we can see that this answer was more frequent among female Kazakhs, particularly in older age groups. However, if we compare distribution of duties in families of married respondents, many women told that they had equal income contribution to families with men. Thus, desires of women did not coincide with the real economic situation.

The growth of marriages in the city could be explained by migratory processes between villages and cities, because most of migrants were Kazakh youth, who continued to live according to those marital and reproductive norms installed in their childhood. These young women are in ambiguous situation at present though, when their traditional behavior is faced with the necessity to adapt in a city life. The majority of those women started to change their behavior towards an urban model family, which might decrease a number of marriages and births in the upcoming future.

Marginalization of urban population has a negative impact on reproductive behavior, which we are going to discuss in the next sub-chapter.

3.4.3. Value attitude of respondents towards childbearing

Interviewees were asked an ideal age at childbearing for males and females.

As the data shows, women have younger age ideals than men. Most respondents indicated the age group 25-29 as an ideal age for men, and the most popular age was 25 (22.9%). For women an ideal age was 20-25, and here again the most popular age was 25 (29.8%). The age scope varied with regards to ethnicity of respondents: Russian women were disposed to postpone childbearing to a later time.

Table 30: Ideal age at childbearing by respondents' point of view for males and females by ethnicity (in %)

Age at childbearing for males	Ethnicity		Total	Age at childbearing for females	Ethnicity		Total
	Kazakhs	Russians			Kazakhs	Russians	
20-24	5.0	1.7	4.2	18-19	0.3	0.8	0.4
25-29	70.0	53.3	65.8	20-24	51.7	37.5	48.1
30-34	21.1	39.2	25.6	25-29	43.3	51.7	45.4
35-40	3.9	5.8	4.4	30-35	4.7	10.0	6.0
Total	100	100	100	Total	100	100	100

Note: N = 480

Source: Sample Survey Ust-Kamenogorsk, 2016

Then, the researcher sought to understand the impact of society's opinion on women when planning children. Opinions of the majority were divided into two.

Table 31a: Importance of one's opinions for respondents in determining number of children (in %): Kazakhs

Opinion*	Age groups			Total
	18-21	22-24	25-29	
1	2,7	6,1	0,8	3,2
2	51,8	49,1	53,3	51,5
3	0,0	5,3	4,2	3,2
4	38,2	36,8	37,5	37,5
5	7,3	2,6	4,2	4,7
Total	100	100	100	100

Notes: N = 360

Options

1. Prevailing norms and traditions in society
2. Spouse's opinion
3. Parents'/relatives' opinions
4. Own opinion
5. No answer

Source: Sample Survey Ust-Kamenogorsk, 2016

Table 31b: Importance of one's opinions for respondents in determining number of children (in %): Russians

Opinion*	Age groups			Total
	18-21	22-24	25-29	
1	0,0	0,0	0,0	0,0
2	27,8	25,7	38,5	30,9
3	2,8	0,0	0,0	0,9
4	52,8	65,7	59,0	59,1
5	16,7	8,6	2,6	9,1
Total	100	100	100	100

N = 120

Kazakh women relied mostly on their spouses' opinions in determining the number of children (51.5%), particularly non-local residents, and only then their own opinions (37.5%). Only 3% of respondents indicated that they listened to their parents' opinions or followed norms in the society. For Russian women, the most important was their own opinion (59.1%), and then their spouses' opinions (30.9%). There was almost nobody who cared about opinion of their parents or the society in determining the number of children. As we may observe, the youth, particularly urban, is becoming more individualistic in determining the number of children, and this supports our hypothesis of the breakdown of a traditional family under the influence of urbanization.

Attitude towards induced abortion as a means of "contraception" shows sexual literacy of women, and their treatment of health. It would be cautious if a majority women denied induced abortion as a means of contraception, because a child birth would threaten mother's life.

Table 32a: Reason for induced abortion by age (in %): Kazakhs

Reason for abortion*	Age groups			Total
	18-21	22-24	25-29	
1	50.0	62.5	59.2	57.2
2	5.8	5.8	16.7	9.4
3	4.2	5.0	0.0	3.1
4	40.0	26.7	24.2	30.3
Total	100	100	100	100

Notes: N = 360

Reason for abortion

If child birth threatens her mother's health

If fetus has anomalies while developing in mother's womb

If a child is undesired

Unallowable despite any condition

Source: Sample Survey Ust-Kamenogorsk, 2016

Table 32b: Reason for induced abortion by age (in %): Russians

Reason for abortion*	Age groups			Total
	18-21	22-24	25-29	
1	50.0	47.5	57.5	51.7
2	15.0	15.0	12.5	14.2
3	7.5	10.0	5.0	7.5
4	27.5	27.5	25.0	26.7
Total	100	100	100	100

N = 120

A majority of respondents conceded induced abortion only due to medical reasons; Kazakh women appealed to the health of mother (57.2% against 51.7%), while Russians to the health of a child (14.2% against 9.4%). Almost 30% of women considered that making abortion was unallowable by any reasons. However, 4.1% of the youngest respondents approved abortions in order to prevent undesired pregnancy, which was mostly supported by urban women.

Another factor of weakening family relations is an abolishment of such social institute of upbringing of children as parental family. For that, respondents were asked who they would approach for assistance in upbringing their children.

Table 33a: Destination of approach for assistance in upbringing children by age groups (in %): Kazakhs

Care about children*	Age groups			Total
	18-21	22-24	25-29	
1	24.2	20.0	14.2	19.4
2	68.3	62.5	70.0	66.9
3	5.8	14.2	11.7	10.6
4	1.7	3.3	4.2	3.1
Total	100	100	100	100

Notes: N = 360

Care about children

Only grandparents

Grandparents and preschool institutions

Only preschool institutions

Other

Source: Sample Survey Ust-Kamenogorsk, 2016

Table 33b: Destination of approach for assistance in upbringing children by age groups by age groups (in %): Russians

Care about children*	Age groups			Total
	18-21	22-24	25-29	
1	22.5	12.5	7.5	14.2
2	70.0	65.0	70.0	68.3
3	0.0	20.0	12.5	10.8
4	7.5	2.5	10.0	6.7
Total	100	100	100	100

N = 120

Only 18.1% respondents said that they would ask for assistance solely their parents. Most interviewees believed that preschool institutions were necessary for child upbringing, but also did

not reject their parents' assistance (67.3%). The factor that might explain decreasing role of grandparents in upbringing children is that they continue to work full-time, and they do not have enough time to spend with their grandchildren. The fact is that we are spending less and less time in family, but rely more on public social institutes, rather than assistance from our relatives.

Another factor in determining level of traditionalism of female reproductive behavior is a family with many children. Respondents were asked what the minimal number of children we that defined a family with many children. There were considerable differences of opinions. A significant differentiation was revealed in groups of respondents by nationalities, residence status, and age.

Table 34a: Definition of family with many children (in %): Kazakhs

Number of children	Age groups			Total
	18-21	22-24	25-29	
3+	30.0	37.5	37.5	35.0
4+	37.5	38.3	39.2	38.3
5+	32.5	24.2	23.3	26.7
Total	100	100	100	100

Notes: N = 360

Table 34b: Definition of family with many children (in %): Russians

Number of children	Age groups			Total
	18-21	22-24	25-29	
3+	45.0	62.5	50.0	52.5
4+	35.0	32.5	35.0	34.2
5+	20.0	5.0	15.0	13.3
Total	100	100	100	100

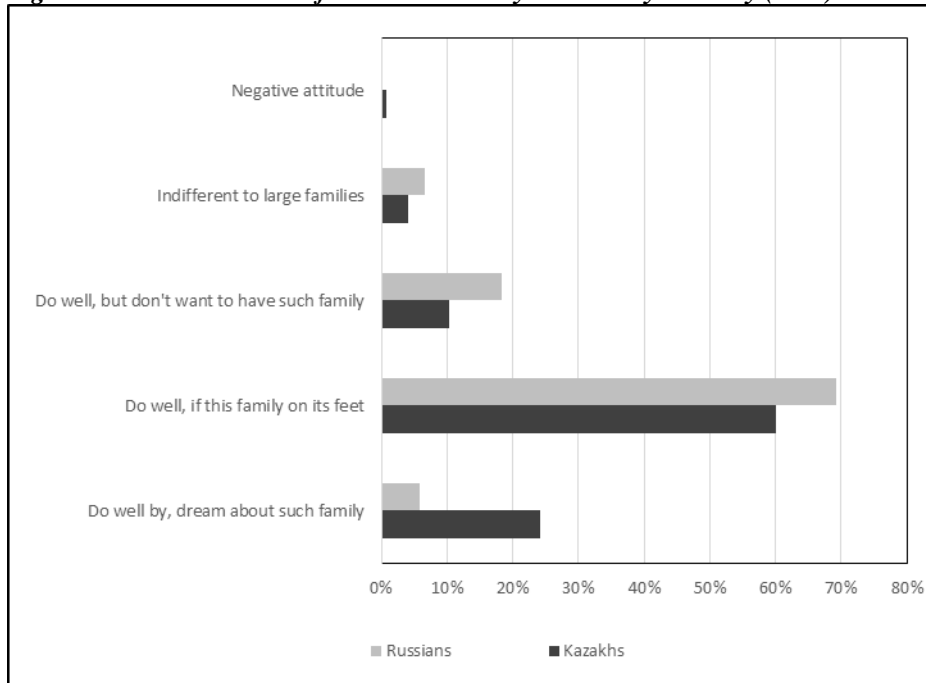
Notes: N = 120

Source: Sample Survey Ust-Kamenogorsk, 2016

Russian women considered a family with three children as many children family (52.5% of Russian women versus 35 % of Kazakh women). A majority of local residents defined a family with many children, which consisted of three or more children (46.4%). However, a majority of migrant women determined a family with many children when there were four or more children in the family (34.2% of women which stay in the city before age 10 and 44.2% of those which stay after age 10).

Then, we asked respondents to characterize their own attitude towards families with many children. Out of that the researcher sought to assess possibility of them building such a family.

Figure 33: Attitude towards families with many children by ethnicity (in %)



Source: Sample Survey Ust-Kamenogorsk, 2016

Although, the majority of respondents had a positive attitude towards such families, only 20% of them wished to have such a family. They were mainly, rural migrants, which recently moved to the city. Negative attitude towards families with many children was observed among city residents regardless of their ethnicity; however, their portion was only 0.1%.

3.5 Factors impacting youth preferences from multidimensional perspectives

3.5.1 Binary logistic regression

Logistic regression investigates the relationship between a categorical response variable and a set of predictor variables. The categorical response variable can be binary (for example, success or failure), ordinal (for example, normal, wild and severe) or nominal (for example, major TV networks viewed at a certain hour). In the analysis binary logit mode (categorical logistic regression) will be used. “Marital status” (being single=1 or being ever-married=2 with the reference category 1) and “Having children” (yes=1 and no=2 with the reference category 2) were taken as dependent variables. The classification “Age”, “Ethnicity”, “Residential status” and “Education” stand for independent variables and the effect of each classification variable is expressed by reference parameterization scheme. Thus, for each following variables a reference category has been chosen: “Age”-“22-24”, “Ethnicity”-“Kazakhs”, “Residential status”-“Urban”, “Education”-“tertiary”. Referenced categories are unchanged in each model.

For binary response models, the response, Y , of an individual or an experimental unit can take on one of two possible values, denoted for convenience by 1 and 2 (for example, $Y = 1$ if a respondent is single, otherwise $Y = 2$). Suppose x is a vector of explanatory variables and $\pi = \Pr(Y=1|x)$ is the response probability to be modeled. The linear logistic model has the form

$$\text{Logit } \pi = \log (\pi / 1-\pi) = \alpha + \beta'x,$$

where α is the intercept parameter and $\beta (\beta_1, \dots, \beta_x)$ is the vector of s slope parameters.

To analyze the trend in patterns of marital and reproductive behavior we decided to compute models for both surveys. The data of both surveys were analyzed separately, but finally only the results from the last survey were put in the text of the thesis and commented. It should be mentioned that descriptive results for the survey conducted in 2009 were fully described and analyzed in my Master Thesis in 2010. Therefore, the researcher have not included them in this paper taking into account that there were just small changes in indicators. Since the logistic regression method was not used in the previous work, it was decided to compute models for them too. Results for the 2009 sample could be found in Annexes 2 and 3. As it was mentioned, there were just small differences between both models.

Two types of models were constructed: one for probability of being married and one for probability of having children.

Furthermore, it should be mentioned that categories for dependent variable “Marital status” and “Having children” were changed from initial data provided by surveys. In the survey the respondents had several options to answer on the question of their marital status including such options like single, married, cohabitated, divorced or widowed and other. And for the question on number of children we were interested in the exact number of children that women have at the time of the survey. But as the sample included women aged 18-29 and probability to experience few stages of marriage and dissolution and have more than one child was really small it was decided to consolidate the answers. The most important issue for the researcher was to understand the probability of being single or being ever-married and the probability of having or not having children.

3.5.2. Marriage preferences

The results of binary logistic regression of probability being married are presented in Table 35.

Despite current modernization of Kazakhstani society, marriage still remains a significant value to many young women. It is common in our society to marry before having children. However, recently new tendencies have taken place in the formation of families: a rapid growth of cohabitating couples, an increase of divorce rates and a postponement of childbirths. In this part, an analysis of marital preferences of young women will be made. The survey questionnaire included such topics as marital behaviour of young women, their ranking of values including such values as marriage, childbearing compared with education, career making. All descriptive data were presented in Chapter 3.

Table 35. The results of binary logistic regression (probability modelled is being ever married)

Effect	Estimate	p-value	Odds ratio	95% Wald Confidence Limits	
Age					
Age group 18-21 vs 22-24	-1.2432	<.0001	0.133	0.061	0.292
Age group 25-29 vs 22-24	-2.0172	<.0001	10.217	5.980	17.456
Ethnicity					
Russians vs Kazakhs	0.1665	0.6198	1.181	0.612	2.280
Residential status					
Moved before age 10 vs Local residents	-0.2222	0.5200	0.801	0.407	1.576
Moved after age 10 vs Local residents	-0.0204	0.9518	0.980	0.505	1.901
Education					
Secondary or vocational education vs Tertiary	0.6893	0.0236	1.992	1.097	3.618

Notes: Significant at $p < 0.05$

Source: Sample Survey Ust-Kamenogorsk, 2016

The computed model demonstrated that marital behaviour of young women still has more traditional characteristics than modern. The age is great indicator and it demonstrates that mostly women in older age groups will be rather married than single. The probability of being married after 25 years is 10 times higher than in the age group 22-24. So, in spite of increase of popularity of higher education and career development, the importance of marriage is obvious. The obtained results demonstrated high interest towards marriage but also demonstrated delay in getting married. The highest probability is among the oldest age group. It is obviously connected with requirement to finish some education and to enter first labour market. The young women after age 22-24 only start thinking about family life.

What is interesting is that Russian females have slightly higher probability being married than Kazakhs. It is connected with their approach to marriage institute. We included in the group “being ever married” all responses included being cohabitated. For Kazakhs being cohabitated is still abnormal behaviour because it is not be accepted by the family especially in rural areas and small towns where everybody knows its neighbours. For Russians this new trend is already normal. The attitudes towards family models were described in Chapter 3 (see Figure 29b). Most of respondents were grown up in single-parent family or in the family where one of the parents was not biological, so the changing of the family model for them started in the childhood.

Duration of living in the city does not have such a big influence on being married as it could be thought. This is possibly connected with the equivalent conditions for young women at the start of their independent life. In spite of duration of being city resident all categories should enter the labour market and obtain some stable position before being independent. Local residents had better living conditions but nevertheless they share their home with parents, they are not able earn more as newcomers and depends on parental income. The women from 2nd and 3rd category may not have

any residence in the city at all and live on rental premises. All described limit the marital expectations for both groups: urban residents and rural migrants.

Education is important factor, because it significantly constraints the time frameworks for marriage. Women decided to enter the university have to devote 4-6 years of their life to obtaining diploma and then need some time to enter labour market and become a specialist. Women who do not have tertiary education lost only 2-3 years of their life and have more modest expectations concerning career making. So they have higher probability of being married as demonstrated constructed model.

It should be highlighted that we do not receive unexpected results, and our deliverables demonstrate that in spite of growing emancipation of young women marriage still play important role in their lives.

3.5.3. Fertility preferences

The most important finding from the second model (Table 36) is that marriage still has great significance for having children. Married women have 74 times higher odds of having children than single women. So we can conclude that studying of marriage patterns in Kazakhstan is of great importance for understanding reproductive behavior. As before, for young girls, string of logic “first marriage then birth of a child” keeps doing. The researcher did not aim to see how the behavior of women in a registered marriage differs from the behavior of women in an unregistered marriage, since in absolute terms the proportion of respondents from second group was very low.

It was expected that with age, the likelihood of having a child increases. Thus, women aged 25-29 have 3.5 times higher odds than women aged 18-21. Ethnicity also reflects on the model. Surprisingly, Russians have almost one time higher odds to have more children than Kazakhs. This result is closely connected with the previous model. They support our assumption that Russians could be in a cohabited union and could start their reproductive cycle earlier than Kazakhs.

Length of stay in the city practically also influence on the chosen indicator. Women moved from rural area demonstrate more traditional reproductive behavior than urban residents.

Girls with a lower level of education are more likely to give birth to a child than girls with the higher education.

Thus, we can see that even though the marriage rate among respondents is relatively low, the marriage value is still high. Marriage still remains the core of family life for the majority of women, and it is associated with births of children. The high value of marriage suggests that a number of lonely women will not be large. However, marriage delay by the majority of women automatically shortens generative activity of women, which in its case delays births of children.

Table 36. The results of binary logistic regression (probability modelled is having children)

Effect	Estimate	p-value	Odds ratio	95% Wald Confidence Limits	
Age					
Age group 18-21 vs 22-24	-2.2806	0.0068	0.102	0.020	0.533
Age group 25-29 vs 22-24	0.8075	0.0374	2.242	1.048	4.796
Ethnicity					
Russians vs Kazakhs	0.9152	0.0008	1.220	0.535	3.121
Residential status					
Moved before age 10 vs Local residents	0.2657	0.5859	1.304	0.501	3.392
Moved after age 10 vs Local residents	-0.3550	0.4340	0.701	0.288	1.706
Education					
Secondary or vocational education vs Tertiary	0.7129	0.0779	2.040	0.923	4.507
Marital status					
Being married vs Being single	4.3137	74.718	24.989	223.407	74.718

Notes: Significant at $p < 0.05$

Source: Sample Survey Ust-Kamenogorsk, 2016

At the same time, new tendencies take place in the society: loyal attitude towards cohabitation, divorces, premarital sex and mixed marriages. These new characteristics are easily adopted by Russian women, rather than Kazakh women, which demonstrate more traditional attitude.

Kazakh migrant women have more traditional attitude toward family relations, but their attitude alter in a city life. This is reflected in the delay of getting married and births of children, increase in value of education and job, and weakening of norms of sexual behavior. Regardless of duration of city residence, the majority of women prefer to have nuclear families.

Preliminary conclusion of the survey could be concise by the researcher as following:

Marriage has still a great value for many young women. We can asset with every reason that “everybody desires to get married” is relevant yet. The main reason for that is love.

The value of family (having children) is lower than the value of marriage. After getting married women do not hurry to have children due to financial reasons. Those women, which are not married yet have only abstract notion about having children, though their age is the most suitable for child-bearing.

Marriage preserves its traditional role of building a family. A young woman still keeps a cycle, when first the marriage and only then children. As the survey showed, extramarital births were not very popular among young respondents.

Most respondents preferred to have one or two children family. Main obstacles for increasing family size were study or work leading to egoistic approach towards her reproductive behavior in the urban environment.

Family duties are allocated democratically; home workload is divided between couples equally, though a husband preserves a leading role in decision of family issues.

The society has become more tolerant to deviations from the traditional family model, such as growth of premarital sexual relations and divorces. As a result, the number of single mothers has increased and cohabitation has become widespread.

Chapter 4

The impact of public policy on the family institute in Kazakhstan

It is very important to analyze the extent to which the state influences the marital and demographic behavior of young people. The analyzed survey data shows that there are several critical factors that significantly affect the quality of family life, and that require active regulation by the government. Therefore, it is necessary to identify the problematic issues of the institute of marriage and family in Kazakhstan since these institutes determine the future demographic situation.

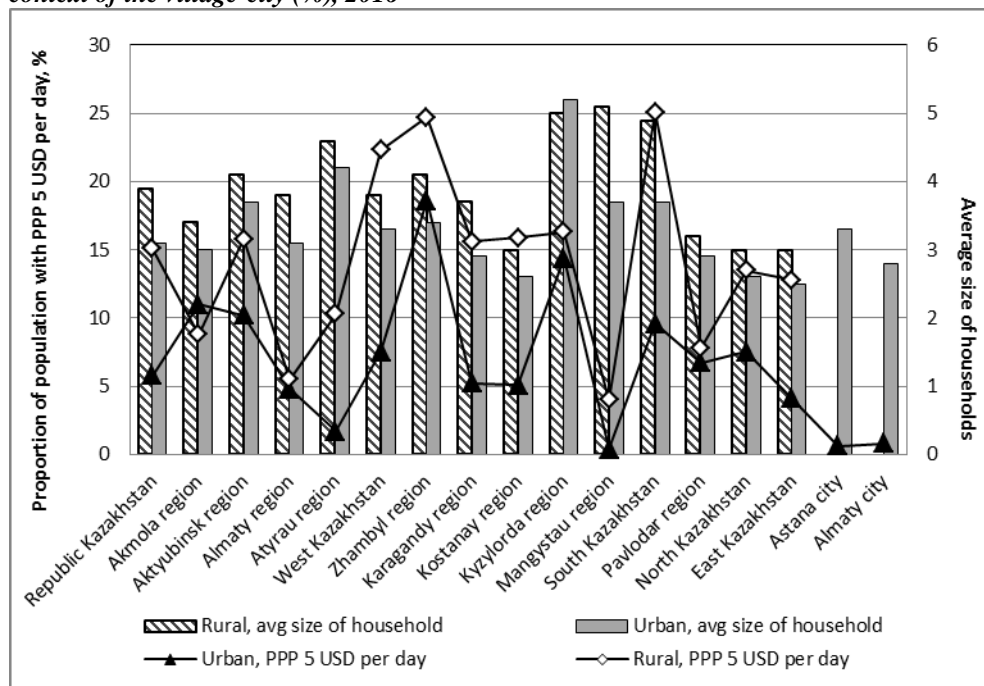
Firstly, there is a decline of marriage value among the youth in Kazakhstan. The evidence for this is shown by the steady increase of divorces. In 2015 there were registered 148,769 marriages and 53,293 divorces. Of these, only 42% did not have minor children at the time of the divorce. That is, the number of children that are brought up in single-parent families has been growing. In 2015, only 13% of marriages were registered by previously divorced individuals. A majority of divorces (44%) was registered at the age of 25-34. It seems that the growing number of divorces among the youth was related to low value of family among the youth. The public policy towards fathering led to a weak participation of fathers in the upbringing of children with the issue of paying alimony for the maintenance of the child. As of January 1, 2016, there were 279,000 cases on that issue (All statistical information was obtained from stat.gov.kz).

Secondly, there is an aggravation of the social situation, especially for families with several children in Kazakhstan. Many Kazakh families with children face rather critical living conditions in the modern economic and political reality. Large families, single mothers, families with disabled children, student families traditionally belong to the most unsecured category of the population. For the vast majority of families with children, the main source of income is the earned salary. Meanwhile, the real purchasing power of national currency has decreased by several times in recent years; savings of families kept in national currency have significantly depreciated. In Kazakhstan, the poverty level is determined by the minimum consumer basket. According to the methodology of the Committee on Statistics of the Republic of Kazakhstan, the poor population includes the population that has incomes used for consumption below the subsistence level as a percentage of the total population. The poverty threshold is set at 40% of the subsistence level (KZT 9,144 or USD 40 per month per 1 person). According to the Committee on Statistics of the Republic of

Kazakhstan, the poverty level in Kazakhstan is declining at a significant pace. The poverty level in Kazakhstan has decreased from 7% in 2010 to 2.8% in 2016. However, the international standard for poverty assessments is dominated by the position of the World Bank, based on the use of several income criteria. At present time, the poverty threshold for countries with economies in transition has been estimated at USD 4 per day and poverty at USD 2 per day.

The 2015 devaluation of national currency led to a significant increase in the poverty rate in Kazakhstan and reached the 2012 level. Given that the prices of consumer goods and services in the Republic of Kazakhstan largely depend on the exchange rate of tenge to dollar, which is confirmed monthly by the inflation rate, the influence of the exchange rate on the level of poverty can be attributed as a direct factor in the country.

Figure 34. The average size of households in the regions of Kazakhstan in the context of the village-city (people) and the share of the population with PPP USD 5 per day in the regions of Kazakhstan in the context of the village-city (%), 2016



Source: The Agency of statistics of Kazakhstan

This figure shows that the highest percentage of the low-income population is concentrated in rural areas in the southern regions having the highest average size of households at the same time. That is, the growth of poverty in Kazakhstan, especially in rural areas is of a concern. Thus, those South Kazakhstan families that experience high fertility rates are in the category of socially disadvantaged.

Thirdly, there is a low level of reproductive health of young women in Kazakhstan. The level of infertility among married couples is very high. According to the Committee on Statistics, every fifth family in Kazakhstan could not have children. Doctors argue that the main reason for that is sexually transmitted infections, which young people experienced due to early premarital sexual activity and unprotected sex. Another reason that has a negative impact on the reproductive health

of young women in Kazakhstan is unhealthy abortions. According to the official data, there were 20.2 abortions per 100 births in 2015. According to the Multiple Indicator Cluster Survey (MICS) conducted in 2016 by the Committee on Statistics of the Republic of Kazakhstan with the support of UNICEF, one in five women (20.1 percent) aged 15-49 years had at least one induced abortion in her lifetime. In four regions of the country - North Kazakhstan, Kostanay, East Kazakhstan and Akmola oblasts - every third (31-32.5%) woman aged 15-49 years had at least one abortion. In urban and rural areas, the proportion of women who have experienced at least one induced abortion is approximately the same (20.7 and 19.4 percent, respectively). Women aged 40-44 years and 45-49 years might have had at least one induced abortion, compared with younger women (3.7 percent at the age of 20-24 years). The age group of 25-29 has the highest rate among young women - 20 abortions per 1000 women. The age group of 15-19 has lower rate of 3 abortions per 1,000 women, while the lowest rate is among the age group of 45-49 with 1 abortion per 1000 women. Although the undergone induced abortion in the absence of complications may not have a long-term adverse impact on women's reproductive health, it should be noted that abortion procedures are not always followed in accordance with all the prescribed requirements. Not all health facilities can provide these services. The situation is particularly critical in rural areas. Incorrect procedures may lead to bleeding, infection, perforation of the uterus, delay of conception products and anesthesia complications. 22% of all maternal deaths in 1996 were related to unsafe abortions, according to the Ministry of Health of the Republic of Kazakhstan. Another unsafe method of contraception is the use of emergency contraceptives based on levonorgestrel. This method has a very negative impact on the health of women, thus categorically prohibited by WHO, but it is still of great popularity among young women to prevent undesired pregnancy after accidental unprotected sex. Regrettably, these contraceptives are freely sold and released without any prescription in Kazakhstan. To summarize, we can infer that there is a low contraceptive literacy of the population and an absence of the state regulation in this area.

The state mechanisms of the family support system in Kazakhstan were greatly formed in the Soviet period. In Soviet law, the state policy on the family was based on the principles of gender equality, especially in the public sphere, paternalism, and institutionalization of childcare. The Soviet state had developed a whole set of actions aimed at creating favorable conditions for women to combine motherhood with professional activities and their participation in public life. On a par with that, the mother was seen as a major provider of childcare in the family and responsible person for a housework in the family (Chernova, 2012). An example of this statement is the leave to take care of a child, a maternity leave, the right to which was granted exclusively to women. Thus, in the Soviet family policy, only the mother and her children were seen as an object of the family institute. At the same time, the state did not consider the family and parental roles of men as its priorities. The greater involvement of men in the performance of unpaid domestic work was not assumed even at the level of the objectives and goals of Soviet family policy. In fact, it can be said that the state created conditions for women to maintain an autonomous household independently from men. The

patterns of unequal participation in the field of household duties and childcare are sustainably reproduced today.

In modern Kazakhstan society, family policy can be characterized as traditional, pro-natalist and familistic, which is oriented towards the normative model of the family (father, mother and children). The media regularly promotes the idea of the need to revive the family institute as a stronghold of the nation, in which a woman performs traditional roles of wives and mothers, and a man takes the economic responsibility for family (Strategy for achieving gender equality in the Republic of Kazakhstan for 2006-2016, Demographic Policy, Speeches of the President of the Republic of Kazakhstan).

Until recently, the main normative legal act that regulated the sphere of demographic development of the country was the Concept of the State Demographic Policy of the Republic of Kazakhstan, approved by Government Decision No. 1272 of August 17, 2000. It lost its force on 30.03.2011. The Decree of December 6, 2016 approved a new Concept of Family and Gender Policy until 2016. It tried to take into account the shortcomings of the previous concept, focusing on a strong family as a guarantee of stable development of the state. As noted in the Concept, the implementation of gender policy in the Republic of Kazakhstan will be based on the following principles:

- ensuring equality in the use of all economic, social, cultural, civil and political rights, regardless of gender;
- non-discrimination, gender asymmetry in state and public life;
- the formation of gender identity and the eradication of gender stereotypes in society.

The government of Kazakhstan provides specific measures to support families with children, mainly through social benefits and services. It includes benefits for the birth of a child and for the care of a child up to one year, for the upbringing of a disabled child, a state allowance for children under 18, and a special state allowance for mothers with many children and their families.

At present, the state undertook the obligation to pay lump-sum benefit for childbirth and allowance for child care until the age of one, which is paid from the national budget to unemployed women who had no income for the two years prior to registration of benefits. For employed women, in addition to the lump-sum benefit, a one-time social benefit of maternity leave caused by the loss of income and a monthly social payment for the care of a child until the age of one are calculated. Moreover, a working woman has a right not to work until the child reaches the age of three with the preservation of her workplace.

In monetary terms, all government payments vary annually, because they depend on the size of the MCI (monthly calculation index is a coefficient for calculation of benefits and also for application of penalties, taxes and other payments in accordance with the legislation of the Republic of Kazakhstan), which is determined annually (in 2017, 1 MCI = 2,269 tenge). Since 2017, all social payments have also been indexed. A lump sum on the birth of the first, second and third child from July 1, 2017 will be 86 222 tenge (261 euros), while on the birth of a fourth child -142,947 (433 euros), which are 22% more than in 2015. Monthly social benefits for unemployed women

with children until age one range from 13,069 tenge (39 euros) to 20,194 tenge (61 euros), depending on the order of birth. At the same time, the minimum living wage for one person in 2017 in Kazakhstan is 24,459 tenge (74 euros). For employed women, the monthly allowance comprises 40% of their average monthly salary for the last 24 months, of which 10% is retained into the accumulative pension fund. However, for employed women, maximum amount of child care allowance is 97 836 tenge (297 euros) in 2017. Thus, the income of employed women who earn more than 1,000 euros a month is constrained. All calculations were made by the researcher on the basis of information posted on the website egov.kz (Electronic Government of the Republic of Kazakhstan).

Women who give birth to children and take care afterwards receive these social benefits to compensate their foregone income that they could have earned otherwise. Accordingly, the amount of benefits is the main source of livelihood for the mother and her children.

There are several types of support for large families. Undifferentiated support in the form of a special state allowance for families with four or more co-living minor children, including children attending full-time education in medium, technical and vocational, post-secondary education, higher education institutions comprises of 4.16 monthly calculation index (independently From the actual number of children brought up in the family), which is 9 439 tenge (29 euros) - in 2017. At the same time, benefit parameters are not differentiated regarding the number of children being brought up in the family; it is assigned in the same amount regardless if it is four or eight children in the family. If there are four children in the family, then the allowance per child will be 7 euros, and if eight, then - 3.5 euros.

Low-income families have the right for a special state monthly allowance for children under 18 years of age in the amount of 1.05 MCI (2 382 tenge or 7 euros) per child. Moreover, they are provided with social and housing assistance. The size of the targeted social assistance amounts to the difference between the income level and 40% of the minimum living wage (poverty line) of each family member. For instance, an unemployed woman and her one-year-old child, for which the state has ceased its benefits, will get 15,973 tenge for the whole family. In addition to that, such a family has the right to child support in the amount of 1.05 monthly calculation index. Thus, the total income of the family will be 17 918 tenge (54 euros). If such a family has an individual home, then it can claim a housing assistance from the local budget in the amount equal to the utility expenditures, within the social norm of the housing area, the norms of utility consumption, excluding 10% of revenues. The Kazakh state only guarantees the above-mentioned material support for low-income families.

The intangible support of maternity includes the provision of free medical services in the framework of a medical package approved by the state for children under 16 years old, and free medical care for pregnant and parturient women, including the birth itself. Legislatively, the right to free schooling for all categories of the population is enshrined. Young families and large families have privileges in obtaining housing in the framework of the state program. However, there are strict criteria for the selection of beneficiaries: the age of the spouses must not exceed 29 years old,

while they must be married for at least 2 years. The housing area per person constitutes 15 to 18 sq.m. (minimum size 45 sqm apartment for a family of 3 persons, the lack of alternative accommodation). A family must have a minimum annual income (in Almaty and Astana - four times the minimum living wage (79,864 tenge or 242 euros), in other cities - three minimum living wages (59 898 tenge or 181 euros); maximum wage must not exceed twelve minimum living wages (239,592 tenge or 726 euros) (egov.kz). Families with large number of children have the priority, but it is more difficult for them to declare their income. Apartments for young families are sold and distributed only through rent with subsequent repurchase, through the state operator Zhilstroysberbank. The local executive body evaluates all applicants according to the point system, on the basis of which a decision on the housing allocation is made. It should be noted that the housing queue is moving much slower than the housing demand, particularly in large cities. In Astana, for instance, over thirty thousand people registered for the housing rent at the beginning of 2015 (data was taken from krisha.kz – the largest website about realty in Kazakhstan). Most young families leave the queue over the years since they do not meet the criterion of "young family" after a while. Large families have the opportunity for social housing rental, for which there is a separate waiting list. That property does become a permanent residence of the owner, since it could not be sold, exchanged or transferred it by inheritance.

At present time, the government support only partially covers costs of pre-school education in Kazakhstan. Preschool public institutions accept children of two-three years old up to five years old, after which children go to school. Parents only pay the child nutrition in the kindergarten, while all other costs are covered from the state budget. Tuition fees in kindergartens vary depending on their location (region, rural-urban), but on average they are about 12 000 tenge a month (36 euros). Most of the private kindergartens apply for the additional funding from the local budget in the amount of 20 000 tenge, parents only pay the food costs. Tuition fees in such kindergartens vary from 15 000 to 30 000 a month (45-90 euros). Due to the shortage of places in preschool public institutions and the high cost of private kindergartens, many women were forced to resort to the help of relatives, or to leave work in order to deal with childcare. The availability of pre-school education facilities is critical in major cities - Astana and Almaty, where the average cost of education in a private preschool institution is about 70 000 tenge (212 euros). Private babysitting services are also expensive (50 000 - 150 000 a month, or 150-450 euros, depending on qualifications of a nurse). (According informburo.kz).

To sum up, we can note the following:

Women lose more than half of their income on a year maternity leave.

Without the support of relatives, a woman has to stay on maternity leave for three years, since preschool educational institutions only admit children of age three, and some of age two. That makes a woman entirely dependent on income of her spouse or his family.

In Kazakhstan, part-time employment is not developed at all. After a maternity leave, women do not have options of temporary employment, a time for breast-feeding is not allocated, and childcare due to illness is not covered for more than three days.

There is a catastrophic shortage of housing in Kazakhstan. This mainly affects young families. According to UN standards, a person should have at least 30 sq.m. of living space. According to the largest real estate portal in Kazakhstan (krisha.kz), an average person has 20 sq.m. of living area. In Astana and Almaty, where the age at first marriage is higher than the country average and fertility rates are below the average country indicators, chances for young families to apply for housing under program criteria are low. Since Astana is a center of youth migration from whole Kazakhstan, the housing issue is rather critical for the young families.

Thus, we can observe that, despite the State's intention to stimulate the birth rate, the existing socio-economic measures will inhibit its growth. In a survey conducted in Ust-Kamenogorsk respondents were asked whether they were aware of the amount of the state allowance for childbirth and child care. Moreover, we tried to understand whether state support had any influence on their decision to have children.

93% of all respondents, regardless of age, nationality and duration of stay in the city agreed with the statement that the government should support families. Opinions differed on how exactly the government should support families. Respondents were asked to choose from several options for the proposed state support from low-income families to all families, even childless. The majority of respondents (37.2%) noted that the state should primarily support low-income families with children. The second popular answer was that "the state must support all families with children" (26.6%). 13.9% of respondents answered that "the state should support young families" and 14.1% - "the state should support all families". Support of large families was the least popular choice by female respondents (7.9%). We can see from the table that, regardless of marital status of female respondents, their responses did not differ much. It seems that low popularity of response about supporting large families is due to the fact that majority of female respondents did not have many children themselves at the moment of the survey. Large families might be associated with low-income families where spouses have alcohol issues and often change their partners. In question 48, 60% of respondents showed positive attitude towards families with many children in case those families could financially support their children. Therefore, it seems that young women tend to rely on their own families' material and moral resources and rather not depend on the state support in deciding the number of children in the family.

Table 37. Type of support that is needed, depending on the marital status of young women (in abs. numbers)

<i>Kind of governmental support</i>	<i>Marital status</i>		
	<i>Single</i>	<i>Married</i>	<i>Divorced / Widowed</i>
<i>All families with children</i>	77	47	4
<i>Low-income families with children</i>	116	54	9
<i>Large families</i>	27	10	1
<i>Young (novice) families</i>	43	22	2
<i>All families, including childless</i>	41	25	2
<i>Total</i>	304	158	18

Source: Sample Survey Ust-Kamenogorsk, 2016, total (absolute) number of the sample, N=480

The following three questions have caused the greatest difficulty among respondents. These questions were intended to find out whether young women were aware of the size of lump-sum allowance for childbirth to ordinary and large families, and the minimum monthly allowance for child care until the age of one. Most of the respondents refused to answer those questions saying that they did not know and could not even suggest the right answer. In that case, the interviewer asked female respondents to choose the response that they consider the most appropriate.

Only 30% of respondents answered correctly to those questions, of which the oldest age group had better awareness about those allowances. Female respondents in that age group had 43.13%, 46.88% and 46.25% correct answers to those questions. Whereas 43.09%, 28.62% and 37.17% of female respondents in the youngest age group, respectively, answered incorrectly to them. It is logical to assume that the young women, who do not have a family and do not plan children, may not know the exact amount of benefits. It seems that this unawareness is due not only to the lack of personal interest, but also to the high level of social infantilism. By "social infantilism" I refer to the unpreparedness of the individual to commit conscious social actions (Yefimova, 2011). Modern youth, according to the latest research, are less and less ready to take social and economic responsibility for their offspring (Benedik, 2008). That research supports the passive attitude of young people towards their reproductive rights, showed during the conducted sociological research.

The remaining three questions from this block of questions aimed at determining the level of impact of state support on the reproductive plans of young people. Initially, young women were asked whether state benefits affected the birth rate in the country. 41% of respondents answered positively, 21.5% negatively and more than a third of respondents (37.5%) found it difficult to answer. Interestingly, Kazakh women are more positive about the state support than Russian women (43.3% vs. 34.2%). Russian women are more skeptical about the state support, 30% of Russian respondents believe that the state has no influence on the birth rate in the country, while there were only 18.6% of Kazakh women who responded so. It might be that Russian women are aware of state support in Russia. Such that in Russia the maternity support system is more advanced than in Kazakhstan. In addition to the standard package, they also offer mothers who gave birth to a second child a so-called mother's capital in the amount of 453,000 rubles (7,947 dollars), which is a

one-time intangible aid aimed at improving housing conditions, the education of a child (or children), the formation of a funded mother's pension and the acquisition of goods and services for the adaptation of disabled children in the society (rsute.ru). Presently, there is no such support in Kazakhstan.

It should be noted that when answering this question older women are more critical than younger respondents are. Interestingly, regardless of age, nationality and marital status, the proportion of respondents who find it difficult to answer this question does not change. This could be explained by the fact that the majority of respondents did not have children yet at the time of the survey, that is, they only planned their families. And regardless of the presence or absence of state support, the first child is being planned by all young families. Therefore, at this stage, it is difficult for them to analyze how much support a third party like the state should provide. In Kazakhstan, family ties are still strong. Young families are supported morally and financially by their parents and close relatives, especially if it is a first child in the family.

However, the next question makes respondents take a more detailed look at their family plans. The respondents were asked whether they knew about the planned increase in benefits in 2017 and whether it would affect their decision to have a child. 50.6% of respondents answered that these changes will not affect their reproductive plans, only 17.9% answered positively, others found it difficult to answer. The assumption that young women prefer to rely on themselves when planning a family, while taking into account all options of support, is confirmed by the fact that the respondents' opinion on this issue was not affected by the presence of children. That is, both childless respondents and respondents with one or more children showed the same percentage of answers, both positive and negative. Among respondents who did not have children, 17.4% answered positively, 50% were negative, and 32.7% found it difficult to answer, whereas among respondents with one or more children, 19.5%, 53.7% and 27.7%, respectively.

The purpose of the last question from this block of questions was to find out to what extent young women count on the support of the state in planning of their families. Only 10.6% of the women answered that they fully count on the state when planning a family. 35.6% of women noted that they count on the state only partially, at initial stages. Whereas 51.3% of female respondents said they do not count on the state at all, since the allocated funds are not enough to even partially compensate for the child's expenses.

Table 38. Extent of reliance on government (in %)

<i>Hope for governmental support</i>	<i>Duration of being resident in Ust-Kamenogorsk</i>			
	<i>1</i>	<i>2</i>	<i>3</i>	<i>Total</i>
<i>Fully count on</i>	7.10	17.50	10.80	10.60
<i>Partially count on</i>	28.80	45.00	40.00	35.60
<i>Do not count on it at all</i>	64.20	37.50	49.10	53.80
<i>Total</i>	100.00	100.00	100.00	100

Notes

Duration of being resident in Ust-Kamenogorsk

1. Women staying in the city since their births
2. Women staying in the city before age 10

3. Women staying in the city after age 10

Source: Sample Survey Ust-Kamenogorsk, 2016, total (absolute) number of the sample, N=480

From the table 31 it is evident that urban residents count on the government support less of all. It might be caused by the fact that housing issue is not critical to them and not so much by their practicality or higher earnings. For female migrants that plan their families, the housing issue remains the most acute issue, and they rely on the support of the state in resolving this issue. Thus, it can be noted that young women are hardly aware of support they can receive from the state. For most women, their own resources are primarily important in planning the number of children in family, where the state acts more as an additional but not the main element of support. The degree of trust in the state support is higher among migrant women than local ones. The degree of trust in the state and the hope for its support among women goes down with their age and experience.

Conclusion

The analysis of marital and reproductive behavior of youth of East Kazakhstan region showed that even if there is a positive development of nuptiality and fertility at the moment, the value orientations of youth may affect this positive trend in future.

In the first part of the research we compared demographic trends of the region with country's situation, and also we studied socio-economic development of the region to determine external factors that may influence demographic behavior of population.

East Kazakhstan is a center of metallurgical production of Kazakhstan, main enterprises of which are concentrated in a city of Ust-Kamenogorsk, an administrative centre of the region. Yet an average salary in the region is relatively fair with comparison to country's average (10th rank among 16 regions). This is also true for GDP per capita of the region; it is ranked 12th among regions of Kazakhstan. And this is because there is an uneven distribution of production in the region. Metallurgical corporations are located mainly in the northern-east part of the region (particularly in Ust-Kamenogorsk), while cattle-breeding is a main source of income for the western and southern parts of the region. Since agricultural production in the region is rather unprofitable, salaries and GDP per capita there are also lower than in the industrial part. This makes Ust-Kamenogorsk with its jobs, universities and infrastructure an attractive place for rural inhabitants, which are mainly of Kazakh nationality.

Majority of residents of Ust-Kamenogorsk are Russians at the moment, while in the region Kazakhs are the largest group by nationality. An analysis of census for the last 3 decades (1979, 1989, 1999) showed that proportion of Russian and Kazakh population has been constantly changing so that the proportion of Kazakhs is rising among city residents. The most critical adjustments occurred in the late 1990s due to a large outflow of Russian population, mainly to the Russian Federation. Migration analysis showed that net migration rate in East Kazakhstan was lower than country's average, and it is not positive yet.

The national structure of the region with a high proportion of Russian population residing in cities in particular had impact on other demographic indicators, such as nuptiality and fertility. Thus, East Kazakhstan region is ranked the last by fertility level among other regions of Kazakhstan. An average age at marriage in the region is higher than country's average. In the 1990s the demographic situation became rather critical, so that CDR prevailed CBR meaning that the region entered so-called "demographic cross". It was overcome only in 2003.

An analysis of age-gender structure of the region demonstrated similar trends with the country's average. Distinct part, however, was that population of the region is older than country's average, particularly city population, which has the highest proportion of population above 55 years old. The youth born in a "baby-boom" of the 1980s entered their reproductive age at present, which boosted fertility recently in the region as well as in the country.

As a whole, population of the region has rather modernized marital and reproductive behavior than population of southern regions. The other distinct characteristics of the region are that recently indicators of nuptiality and fertility in cities are prevailing rural areas. This is explained by migration from rural areas into cities.

In the last part of the research we analyzed results from conducted sociological survey, the study object of which was women in Ust-Kamenogorsk aged 18-29. The analysis showed that marital and reproductive behavior of young women differs with regards to three characteristics that were chosen for the survey: nationality, age and duration of being resident in Ust-Kamenogorsk.

Characteristics of socio-economic indicators of respondents demonstrated that majority of female interviewees (59%) had or were pursuing their first stage of tertiary education (bachelor degree). And these data do not vary with age, which means that there is a stable interest in getting a tertiary education by young women over time. The working females are mainly employed in the public (budgetary) spheres, which has the lowest salaries. The income level of respondents, particularly in the youngest age group, is determined largely by income levels of their parents, which tells about financial dependency of young females from their parents or partners. The same is true about housing. The proportion of women having their house is rather low.

We can make the following conclusion about nuptiality and fertility among female respondents of our survey. The marital status of respondents varies with age; the older is women, the more chance that she is married. Thus, the highest concentration of married, cohabitated or widowed women is in the oldest age group 25-29. Majority of respondents of both nations (65.6%) stated that they were single, only 28.8% of interviewees live with a partner. To conclude, many women postpone marriage until age of 22-24, and many up until 25-29. There is a higher portion of married and cohabitating females among Russians in the older age groups, and also they have more divorces. Fertility picture is as following: majority of women of both nationalities do not have any children (77.6%), or have one child (16.7%), two or more children is rare. The oldest age group of 25-29 has higher fertility level, however, even there majority of women does not have children. Average number of children for Kazakhs is 1.33 and for Russians is 1.22.

Marital and reproductive behavior of young females is characterized by postponement of age at marriage and childbearing. Respondents explain this by the fact that they have to complete their education and find a job. At the same time, the value of marriage is still high enough. We can observe this from responses of women when ranging their values. Also, the fact that majority of women consider that childbearing is optimal while being married implies that marriage is a high priority for young females.

Ideal number of children for women is determined by norms that were inhabited in parental family. Typically, parental families of Russians exhibited low norms for having children, which showed up in their children's families; ideal number of children of them was 1-2. Ideal number of children of Kazakh females was lower than those of their parents as well and it varies between 2 and 3. However, young females, which grew up in families with many children demonstrated rather higher desire to have three or more children.

When we compared behavior of Kazakh females, then we saw that it differentiates with regards to duration of being resident in the city. Behavior of females who resides in the city since birth is similar to behavior of Russian females, meaning that they marry at older ages and have smaller families. Women that moved into the city before age 10 belong to an interim phase in behavior. They are more traditional than native city residents, but differ from behavior of rural inhabitants. The most perspective group from fertility growth point is Kazakh females which moved to the city recently and still follow traditions of rural life. They are the most loyal towards marriage, family with many children, and connectedness to their parental family.

Thus, we may conclude that behavior of young females residing in the city is not homogenous, but depends on many factors. They are nationality, age and duration of being resident in the city. Generally, we may observe that there is a growth of individual values, such as education and prestigious job. At the same time, the role of family is decreasing despite it still remains of high importance to young females.

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ANNEXES

Annex 1. Description of names of variables and categories used

Name	Description	Values
agegroup	Age groups	18-21 22-24 25-29
nation	Ethnicity	1=Kazakhs 2=Russians
Dur_city_st	Duration of being city resident	1= Local residents 2= Moved to the city before the age 10 3= Moved to the city after the age 10
Educ	Education	1=Secondary or vocational education 2= Tertiary education
Marstat	Marital status	1=Single 2=Ever married
Children	Number of children	1=0 2=1

Binary logistic function was chosen to specify categorical variables as explanatory ones. PROC LOGISTIC fits the binary logit model when there are two response categories and fits the cumulative logit model when there are more than two response categories (in program SAS 9.4 Help and Documentation).

```
proc logistic data=anketa.ANKETA;
class agegroup (ref='22-24') nation (ref='1') Dur_city_st (ref='1') Educ
(ref='2') / param=ref;
model marstat (ref='1') = agegroup nation dur_city_st educ / expb;
run;
```

*Zhaniya Karmenova : Changing patterns of marital and reproductive behavior of young women in the urban settlement
(on the example of Ust-Kamenogorsk, East Kazakhstan oblast, Kazakhstan)*

```
proc logistic data=anketa.ANKETA;  
class agegroup (ref='22-24') nation (ref='1') Dur_city_st (ref='1') Educ  
(ref='2') marstat (ref='1') / param=ref;  
model children (ref='2') = agegroup nation dur_city_st educ marstat /  
expb;  
run;
```

Annex 2. Results for modelling of probability being ever-married for sample'2009

The SAS System

The LOGISTIC Procedure

Model Information

Data Set	ANKETA.ANKETA	
Response Variable	Marstat	Marstat
Number of Response Levels	2	
Model	Binary logit	
Optimization Technique	Fisher's Scoring	

Number of Observations Read 480

Number of Observations Used 480

Ordered Value	Num_child	Total Frequency
1	1	315
2	2	165

Probability modeled is Marstat=2.

Class Level Information

Class	Value	Design	Variables
agegroup	18-21	1	0
	22-24	0	0
	25-29	0	1
Nation	1	0	
	2	1	
Dur_city_st	1	0	0
	2	1	0
	3	0	1
Educ	1	1	
	2	0	

Model Convergence Status

Convergence criterion (GCONV=1E-8) satisfied.

Model Fit Statistics

Criterion	Intercept Only	Intercept and Covariates
AIC	619.752	493.129
SC	623.926	522.345
-2 Log L	617.752	479.129

Testing Global Null Hypothesis: Beta=0

Test	Chi-Square	DF	Pr > F
Likelihood Ratio	138.6231	6	<.0001
Score	117.0163	6	<.0001
Wald	75.2801	6	<.0001

Effect	DF	Wald	Chi-Square	Pr > F
agegroup	2	71.5858		<.0001
Nation	1	5.3556		0.0207
Dur_city_st	2	0.0427		0.9789
Educ	1	0.8250		0.3637

Analysis of Maximum Likelihood Estimates

Parameter		Estimate	Standard Error	t Value	Pr > t	Exp(Est)
Intercept	1	-0.7237	0.2715	7.1032	0.0077	0.485
agegroup	18-21	-2.7084	0.4217	41.2542	<.0001	0.067
agegroup	25-29	0.8244	0.2317	12.6600	0.0004	2.280
Nation	2	0.7265	0.3139	5.3556	0.0207	2.068
Dur_city_st	2	0.0585	0.3140	0.0347	0.8523	1.060
Dur_city_st	3	0.0536	0.3138	0.0292	0.8644	1.055
Educ	1	0.2054	0.2262	0.8250	0.3637	1.228

Odds Ratio Estimates

Effect	Point Estimate	95% Wald Confidence Limits
agegroup 18-21 vs 22-24	0.067	0.029 0.152
agegroup 25-29 vs 22-24	2.280	1.448 3.591
Nation 2 vs 1	2.068	1.118 3.826

Analysis of Maximum Likelihood Estimates

Parameter	Estimate	Standard Error	t Value	Pr > t	Exp(Est)
Dur_city_st 2 vs 1			1.060	0.573	1.962
Dur_city_st 3 vs 1			1.055	0.570	1.952
Educ 1 vs 2			1.228	0.788	1.913

Association of Predicted Probabilities and Observed Responses

Percent Concordant	77.7	Somers' D	0.586
Percent Discordant	19.1	Gamma	0.605
Percent Tied	3.1	Tau-a	0.265
Pairs	51975	c	0.793

Annex 3. Results for having children for sample'2009

```

The SAS System

The LOGISTIC Procedure
Model Information

Data Set              ANKETA.ANKETA
Response Variable     Children      Children
Number of Response Levels 2
Model                 Binary logit
Optimization Technique Fisher's Scoring
    
```

```

Number of Observations Read 480
Number of Observations Used 480
    
```

Ordered Value	Num_child	Total Frequency
1	1	110
2	2	370

Probabilities modeled is Children=1.

```

Class Level Information

Class      Value  Design Variables
agegroup   18-21  1      0
           22-24  0      0
           25-29  0      1
Nation     1      0
           2      1
Dur_city_st 1      0      0
           2      1      0
           3      0      1
Educ       1      1
           2      0
Marstat    1      0
           2      1
    
```

Model Convergence Status

Model Convergence Status

Convergence criterion (GCONV=1E-8) satisfied.

Model Fit Statistics

Criterion	Intercept Only	Intercept and Covariates
AIC	518.737	286.434
SC	522.911	319.824
-2 Log L	516.737	270.434

Testing Global Null Hypothesis: Beta=0

Test	Chi-Square	DF	Pr > F
Likelihood Ratio	242.3026	7	<.0001
Score	226.5724	7	<.0001
Wald	103.7375	7	<.0001

Effect	DF	Wald	Chi-Square	Pr > F
agegroup	2	14.8468		0.0006
Nation	1	1.5270		0.2166
Dur_city_st	2	1.0020		0.6059
Educ	1	6.2495		0.0124
Marstat	1	78.8104		<.0001

Analysis of Maximum Likelihood Estimates

Parameter		Estimate	Standard Error	t Value	Pr > t	Exp(Est)
Intercept	1	-4.1220	0.5487	56.4402	<.0001	0.016
agegroup	18-21	-1.4484	0.6985	4.2992	0.0381	0.235
agegroup	25-29	0.8401	0.3224	6.7884	0.0092	2.317
Nation	2	0.5284	0.4276	1.5270	0.2166	1.696
Dur_city_st	2	0.3635	0.4529	0.6443	0.4222	1.438
Dur_city_st	3	-0.0518	0.4492	0.0133	0.9081	0.949
Educ	1	0.8016	0.3206	6.2495	0.0124	2.229
Marstat	2	3.6479	0.4109	78.8104	<.0001	38.393

Odds Ratio Estimates

Effect	Point Estimate	95% Wald	Confidence Limits
agegroup 18-21 vs 22-24	0.235	0.060	0.924
agegroup 25-29 vs 22-24	2.317	1.231	4.358
Nation 2 vs 1	1.696	0.734	3.921
Dur_city_st 2 vs 1	1.438	0.592	3.494
Dur_city_st 3 vs 1	0.949	0.394	2.290
Educ 1 vs 2	2.229	1.189	4.179
Marstat 2 vs 1	38.393	17.159	85.904

Association of Predicted Probabilities and Observed Responses

Percent Concordant	91.8	Somers' D	0.848
Percent Discordant	7.1	Gamma	0.857
Percent Tied	1.1	Tau-a	0.300
Pairs	40700	c	0.924

Annex 4. Results for modelling of probability being ever-married for sample'2016

The SAS System

The LOGISTIC Procedure

Model Information

Data Set	ANKETA2.ANKETA	
Response Variable	Marstat	Marstat
Number of Response Levels	2	
Model	Binary logit	
Optimization Technique	Fisher's Scoring	

Number of Observations Read 480

Number of Observations Used 480

Ordered Value	Num_child	Total Frequency
1	1	304
2	2	176

Probability modeled is Marstat=2.

Class Level Information

Class	Value	Design	Variables
agegroup	18-21	1	0
	22-24	0	0
	25-29	0	1
Nation	1	0	
	2	1	
Dur_city_st	1	0	0
	2	1	0
	3	0	1
Educ	1	1	
	2	0	

Model Convergence Status

Convergence criterion (GCONV=1E-8) satisfied.

Model Fit Statistics

Criterion	Intercept Only	Intercept and Covariates
AIC	632.871	448.664
SC	637.045	477.881
-2 Log L	630.871	434.664

Testing Global Null Hypothesis: Beta=0

Test	Chi-Square	DF	Pr > F
Likelihood Ratio	196.2071	6	<.0001
Score	180.8424	6	<.0001
Wald	133.9755	6	<.0001

Effect	DF	Wald Chi-Square	Pr > F
agegroup	2	115.5635	<.0001
Nation	1	0.2461	0.6198
Dur_city_st	2	0.4979	0.7796
Educ	1	5.1248	0.0236

Analysis of Maximum Likelihood Estimates

Parameter		Estimate	Standard Error	t Value	Pr > t	Exp(Est)
Intercept	1	-1.2432	0.2980	17.4073	<.0001	0.288
agegroup	18-21	-2.0172	0.4008	25.3347	<.0001	0.133
agegroup	25-29	2.3241	0.2733	72.3251	<.0001	10.217
Nation	2	0.1665	0.3355	0.2461	0.6198	1.181
Dur_city_st	2	-0.2222	0.3454	0.4139	0.5200	0.801
Dur_city_st	3	-0.0204	0.3382	0.0036	0.9518	0.980
Educ	1	0.6893	0.3045	5.1248	0.0236	1.992

Odds Ratio Estimates

Effect	Point Estimate	95% Wald Confidence Limits
agegroup 18-21 vs 22-24	0.133	0.061 0.292
agegroup 25-29 vs 22-24	10.217	5.980 17.456
Nation 2 vs 1	1.181	0.612 2.280

Analysis of Maximum Likelihood Estimates

Parameter	Estimate	Standard Error	t Value	Pr > t	Exp(Est)
Dur_city_st 2 vs 1			0.801	0.407	1.576
Dur_city_st 3 vs 1			0.980	0.505	1.901
Educ 1 vs 2			1.992	1.097	3.618

Association of Predicted Probabilities and Observed Responses

Percent Concordant	83.2	Somers' D	0.697
Percent Discordant	13.5	Gamma	0.721
Percent Tied	3.3	Tau-a	0.325
Pairs	53504	c	0.849

Annex 5. Results for having children for sample'2016

```

The SAS System

The LOGISTIC Procedure
Model Information

Data Set              ANKETA2.ANKETA
Response Variable     Children      Children
Number of Response Levels 2
Model                 Binary logit
Optimization Technique Fisher's Scoring
    
```

```

Number of Observations Read 480
Number of Observations Used 480
    
```

Ordered Value	Num_child	Total Frequency
1	1	112
2	2	368

Probabilities modeled is Children=1.

```

Class Level Information

Class      Value  Design Variables
agegroup   18-21  1      0
           22-24  0      0
           25-29  0      1
Nation     1      0
           2      1
Dur_city_st 1      0      0
           2      1      0
           3      0      1
Educ       1      1
           2      0
Marstat    1      0
           2      1
    
```

Model Convergence Status

Model Convergence Status

Convergence criterion (GCONV=1E-8) satisfied.

Model Fit Statistics

Criterion	Intercept Only	Intercept and Covariates
AIC	523.542	256.170
SC	527.716	289.560
-2 Log L	521.542	240.170

Testing Global Null Hypothesis: Beta=0

Test	Chi-Square	DF	Pr > F
Likelihood Ratio	281.3717	7	<.0001
Score	243.8190	7	<.0001
Wald	90.2216	7	<.0001

Effect	DF	Wald	Chi-Square	Pr > F
agegroup	2	14.3222		0.0008
Nation	1	11.1673		0.0008
Dur_city_st	2	1.6895		0.4297
Educ	1	3.1077		0.0779
Marstat	1	59.5873		<.0001

Analysis of Maximum Likelihood Estimates

Parameter		Estimate	Standard Error	t Value	Pr > t	Exp(Est)
Intercept	1	-4.0041	0.6318	40.1694	<.0001	0.018
agegroup	18-21	-2.2806	0.8427	7.3248	0.0068	0.102
agegroup	25-29	0.8075	0.3879	4.3335	0.0374	2.242
Nation	2	0.9152	0.4534	11.1673	0.0008	0.220
Dur_city_st	2	0.2657	0.4877	0.2967	0.5859	1.304
Dur_city_st	3	-0.3550	0.4538	0.6120	0.4340	0.701
Educ	1	0.7129	0.4044	3.1077	0.0779	2.040
Marstat	2	4.3137	0.5588	59.5873	<.0001	74.718

Odds Ratio Estimates

Effect	Point Estimate	95% Wald	Confidence Limits
agegroup 18-21 vs 22-24	0.102	0.020	0.533
agegroup 25-29 vs 22-24	2.242	1.048	4.796
Nation 2 vs 1	1.220	0.535	3.121
Dur_city_st 2 vs 1	1.304	0.501	3.392
Dur_city_st 3 vs 1	0.701	0.288	1.706
Educ 1 vs 2	2.040	0.923	4.507
Marstat 2 vs 1	74.718	24.989	223.407

Association of Predicted Probabilities and Observed Responses

Percent Concordant	93.1	Somers' D	0.879
Percent Discordant	5.3	Gamma	0.893
Percent Tied	1.6	Tau-a	0.315
Pairs	41216	c	0.939