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One-parent families in the East-Kazakhstan region

Master Thesis

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One-parent families in the East-Kazakhstan region

Abstract

This paper addresses single-parent families in the East-Kazakhstan region and their role in the development of population, as well as the analysis of extra-marital births and the factors of family dissolution, such as divorce and widowhood. The data used were taken from censuses in 1989 and 1999, vital statistics, results of surveys, adjusted data.

The aim of the thesis is investigation of one-parent families' contribution to population development in the East-Kazakhstan region through analysis of their structure, size, historical and modern conditions of origin and socio-economical situation.

Keywords: one-parent family, single-parent household, traditional and modern family, extra-marital birth, family dissolution, divorce, East-Kazakhstan region.

Неполные семьи в Восточно-Казахстанском регионе

Абстракт

Данная работа посвящена изучению неполных семей в Восточно-Казахстанской области и их роли в развитии населения, а также анализу внебрачной рождаемости, и факторов, определющих процесс распада семьи, таких как разводимость и вдовство. В ходе работы были использованы данные переписей населения 1989, 1999 годов, текущей статистики, результаты социологических исследований, а также были использованы методики манипуляции с данными для самостоятельного расчета недостающих данных.

Целью работы является изучение роли неполных семей в развитии населения в Восточно-Казахстанской области через проведение анализа их структуры, размеров, исторических и современных предпосылок появления и их социально-экономического положения.

Ключевые слова: неполная семья, домохозяйства, состоящие из неполных семей, традиционные и современные семьи, внебрачные рождения, разводы, Восточно-Казахстанская область.

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Chapter 1

Introduction

1.1 Problem specification, goals and objectives

Among scientists, politicians and public men there is a strong opinion that the family is the basis of society. In connection with this all the processes of transformation of society immediately affect the family and family relations. Industrialization, complexity of production procedures, urbanization and many other factors led to the growth of the population's mobility, rise of personal freedom, emancipation of women, the separation of children from parents (kindergartens, schools etc.) and more complicated socialization. From the middle of the 20th century significant and irreversible shifts in the Kazakhstani family institute took place, which are considered by many researchers as the crisis of the traditional family (E. Macklin and R. Rubin, 1983). One can observe a renunciation of marriage as a lifetime commitment, rising of divorce rate and marriage dissolution, a renunciation of stereotypes in upbringing of children, the increase in the number of one-parent families and families with stepparents, and the wide-spread increase in abortions and extramarital births.

That's why one of the main goals of this diploma thesis is to study the modern single-parent family issue and provide an assessment of perspectives of its further development. The study will consider all cardinal changes which happened regarding social life and mass consciousness throughout the 20th century and beginning of 21st century. All factors listed above underpin the urgency of this research and define whether the given changes are the crisis of family as a social institute, or definite forms of the organization of family life only. In this diploma thesis, single-parent families - their structure, the historical conditions of their origin, modern trends and patterns in lone-parenthood, and the role of one-parent families in population development in the East-Kazakhstan region will be analyzed.

Thus, the aim of the thesis is to provide an investigation into one-parent families' contribution to population development in the East-Kazakhstan region through an analysis of their structure, size, historical and modern conditions and factors of origin.

To achieve this goal the following objectives will be investigated:

- Determine the characteristics of a one-parent family, and identify definitions of the lone-parent family, complete family and single-parent household, and analyze the theoretical framework of the transition process from the traditional family to a modern one;
- Investigate single-parent household structures based on census data, and survey results, and analyze their patterns, characteristics and peculiarities of origin whilst providing their further development;
- Study existing one-parent family conditions of origin, and concurrently analyze trends and patterns in extra-marital fertility, widowhood and divorce by compiling a comparative analysis of the situation in urban/rural, male/female categories;
- Conduct a multistate analysis by using advanced demographic methods and LIPRO software in order to identify the role of the types of single-parent family origin factors in the process of a single-parenthood development;
- Introduce existing methods of data manipulation in order to estimate missing data.

Therefore, the object of this study is primarily one-parent families in the East-Kazakhstan region. The subject of this study is the demographic analysis of extra-marital fertility, divorce and widowhood, and their factors in the East-Kazakhstan region.

The diploma thesis is based on data from 1989 and 1999 censuses, Demographic Yearbooks for the East-Kazakhstan region, estimated data on population by marital status with help of LIPRO software. And also data from surveys: “Demographic Health Survey” (HDS) made by the support of Macro International Inc.; and “Religiosity of East-Kazakhstan Population” conducted by the East-Kazakhstan regional non-government organization “Center of Analysis and Forecasting” was used.

1.2 Outline of the study

The diploma thesis consists of four chapters, an introduction and conclusion. The chapters were formed by logical principles aimed at finding an answer to the question: which type of existing components (births out of marriage, divorces and widowhood) plays the largest role in the emergence and further development of single-parent families in the East-Kazakhstan region.

In the first chapter, named “Theoretical framework” basic information such as characteristics, definitions of lone-parent family and household is included, which is playing an important role in further more detailed analysis. In this chapter a reader can find mostly theoretical or methodological information concerning single-parent definitions, the concept of family diversity, the transition from a traditional family to a modern one in Kazakhstani history and reality, and the methods which were used in this study.

The second chapter addresses the households’ classification and mostly the single-parent households in the East-Kazakhstan region. The chronological evolution of households’ classification and the evolution of definition show how the process of family diversification and transformation from a traditional extended family to a modern one occurred. The chapter includes an analysis of household

typology according to the international practice, and also the process of shifting from the “family concept” to the “household concept” in the Soviet and Kazakhstani censuses.

The third chapter is devoted to the demographic analysis of trends and patterns in one-parent family development. The one-parent family’s appearance is the result of development to the components, namely extra-marital fertility and family dissolution due to divorce or widowhood. In this chapter attempts to answer the question: “Which of the components of single-parenthood appearance plays the biggest role?” will be made. The first part of this chapter is mainly aimed at answering this question by providing analysis which is based on available statistical data. The second part includes more advanced multistate demographic analysis based on adjusted data.

The practical importance of the research is of high importance in Kazakhstan’s scientific future. The data on population by marital status is available only from the census, and this is a big difficulty which was encountered during the work on the thesis. In this study a reader can find the information on the manipulation of data to estimate the population by marital status for five-year calendar intervals. This part of the study, where the ways of working with the unavailable data were introduced, makes this thesis more valuable.

Chapter 2

Theoretical framework

2.1 Overview of literature

The literature used in this study directly (as a proof of our thoughts) and indirectly (as a power for further findings) is divided into two large groups. The first group primarily addresses the theoretical bases of studying the single-parent families, while the second group of research literature deals mostly with the methodological principles of studying the single-parenthood. The first group consists of the following subgroups:

- The research on the transformation of family and family relations;
- The studies on family, single-parent family definitions;
- The Kazakhstani investigations on family transformation;
- The household and single-parent household findings.

Meanwhile, the second group includes following subgroups:

- The studies on general demographic methods;
- The research on demographic and statistical methods of studying of single-parenthood.

At the same time it should be mentioned that each group and subgroup do not have clear boundaries. This classification aimed to help author in the selection of the useful information. A big amount of research contains the theme of the transformation of family and family relations, for example: H. Gross and M. Sussman “Alternatives to traditional family living” (1982); R. Hill “Life cycle stages for types of single parent families: of family development theory” (1986); R. Bruynooghe “One-parent families in the context of variations in parenthood: between deviance and commitment” (1986); E. Macklin “Nontraditional family forms”, E. Macklin and R. Rubin “Contemporary families and alternative lifestyles” (1983); J. Trost “The concept of one-parent family” (1980); L. Wu and E. Thomson “Race differences in family experience and early sexual initiation: dynamic models of family structure and family change” (2001) etc. The next subgroup related to studies on the definitions of single-parent concept. More detailed description of this research is introduced in the next subchapter, which is called “One-parent family concept definitions”. Additionally, a few studies contain the definitions of single-parent families should be mentioned. For example: P. Stein “The lifestyles and life chances of the never-

married" (1978) and other his work, named "Single"; F. Kamarás "One-parent families in Hungary" (1986); J. Trost "One-parent families after cohabitation" (1986); M. Masui "Becoming an unmarried mother: a decision process" (1986). The next subgroup combines the Kazakhstani research and the Soviet and Russian studies. This big subgroup consists of the following literature: N. Masanov "History of Kazakhstan: population and culture" (1995), S. Asfendiarov "History of Kazakhstan from the ancient time" (1993), S. Ualieva "Trends in marriage and family relation of Kazakhstan's population" (2003), and the other work named "Marriage and family in Kazakhstan in the beginning of 20th century" (2003). The big part of Soviet and Russian research also includes partially the information about Kazakhstan's one-parent families. A. Barashova "Genezis of single-parent families in Republic of Saha" (1998), E. Ivanova, A. Miheeva "Extra-marital birth in Russia" (1999), A. Volkov "Evolution of Russian families in the 20th century" (1999), "Changes in the population family structure of Russia" (1996), V. Achkarian "Social and legislative basis of children allowances for poor families. The Soviet state law" (1975). The last subgroup in this group of research includes the studies devoted to the households in general and the single-parent households in particular. Such as: L. Hall, A. Walker, A. Acock "Gender and family work in one-parent households" (1995), M. Masui (1986) distinguishes the definitions single-parent household and one-parent family. This subgroup also includes the following researches: J. Rychtaříková and A. Akkerman "Trajectories of fertility and household composition in the demographic profile of the Czech Republic" (2003), M. Pilon "Household and family demography" (2006); N. Keilman "Households and families" (2006).

The second group of literature consists of the research addressing the methodological issues in a one-parent family analysis. This group was divided into two small subgroups: the first one deals with general demographic methods, the second one affect methods of single-parenthood's studying. In the first group following works were chosen, namely: C. Gibson "The U.S. fertility decline, 1961-1975: the contribution of changes in marital status and marital fertility" (1976), UN Manual II "Methods of appraisal of quality of basic data for population estimates" (1995), J. Rychtaříková "New methods of demographic analysis" (2008). The second subgroup includes: W. Dumon "One-parent families: conceptual and methodological issues" (1986); E. Algava and G. Robertson "France's one-parent families in 1999" (2002).

Thereby, this is a brief description of basic literature which was used during the writing of this thesis. The typology of literature shows that all research based on the provided information was divided into two big groups: theoretical and methodological. More comprehensive analysis of literature is given in the next chapter and it is also used in the further chapters.

2.2 The definition of lone-parent family concept

The demographic science considers a family from the importance of its reproductive function: that a child-bearing function is the most important for any family. So far family has been considered as the only source of population reproduction. However, there is a big variety of family types. They can be classified according to family structure, type of domination in a family, way of everyday life, social, economic and

geographic location, psychological health condition, and even joint activity cooperation degree. All of them in the final analysis draw the same conclusion that family is a social group with historically defined organization, members of which are connected by conjugal or blood ties (children taken into care also), by community of family life, by mutual moral responsibility and whose social necessity is made for society requirement in the physical and spiritual reproduction of population (Sociology of family, 2001). In addition, it's appropriate to distinguish family functions, which are different according to different data and different researchers. For example, Ferenc Kamarás highlighted the following family functions in his study "One parent families in Hungary": as being emotional, social, reproductive and economic. But undoubtedly, the most important typology of family remains classification, which is based on demographic factors.

Nowadays demographers have a tendency to mark out two types of families: traditional and non-traditional (or modern). According to Eleanor D. Macklin the key features of traditional and non-traditional family types comprise of the following:

Table 1. Traditional and modern families.

Traditional nuclear family	**Nontraditional family**
Legally married	Never married appear more frequently
With children	Voluntary childlessness appears more frequently
Two-parent	Single-parent (never-married; once-married)
Permanent	Divorce and remarriage (including joint custody and binuclear family, the stepfamily)
Male as primary provider and ultimate authority	Androgynous marriage (including the O'Neill's "open marriage", dual-career marriage and commuter marriage)
Sexually exclusive	Extramarital relationship (including sexually – open marriage, swinging, and Ramey's "intimate friendship")
Heterosexual mostly	Acceptance of same-sex intimate relationship
Two-adult household	Multi-adult household (including multilaterial marriage, communal living, affiliated families, and extended families)

Note: Swinging is a non-monogamous behavior, in which partners in a committed relationship agree to engage in sexual activities with other people
Source: E.Macklin, 1980

According to the classification, which was introduced by E. Macklin, the presence of one-parent families as one of the characteristics of a non-traditional family is observed. In this case it is reasonable to

distinguish between a traditional family and non-traditional family types. Meanwhile, it is also necessary to evaluate the level of deviation from the traditional family to become non-traditional. Thus, traditional family types are: a classic nuclear family that consists of a father, a mother and children. In addition, there is one more type – so called, an extended family type or a complex family including other relatives added by ascending line (grandfathers and grandmothers) and collateral line (spouses' brothers and sisters). At the same time such a family type may include other married couples (relatives' wives and husbands), which members are connected by relative ties and housekeeping. Any deviation from the traditional family type is referred to as a non-traditional family type. For example, Rosemie Bruynooghe's article "One-parent families in the context of variations in parenthood: between deviance and commitment" noted about the existence of two tendencies in consideration of such one-parent family phenomena as a deviation from traditional: The first dichotomy of thinking relies on the fact that, a one-parent families are products of deviation from the classic traditional family. Whereas, on the basis of the second tendency there is an explanation of the one-parent family development as a new phenomenon and one of the new life style forms. As R. Bruynooghe writes "The likelihood of ambiguity can be derived from the presence of two rather contradictory tendencies existing side by side in our society, one considering single parenthood as a kind of deviance, the other considering it as commitment to a new life-style"(R. Bruynooghe, 1985). According to the author, the main reason for the consideration of one-parent families as a deviation from the traditional family was the deficiency of one of the family functions. He goes on to state that: "The first tendency considers single-parent families as a problem. The elder one saw in one-parent families (then called broken homes, partial, incomplete, or fatherless families) a source of potential or actual functional deficiencies: one or more family functions would be performed less well or not at all: shortcomings in the socialization of the children, leading to deviant or culturally unwanted behavior or lack of parental nurturance and parental control, lack of providing function, leading to inadequate material standards of living for children and the single parent, lack of companionship for the single parent, endangering the physical, mental and social functioning…" (R. Bruynooghe, 1985). Moreover, there is one more opinion explaining the deviation as a new phenomenon or new life style. For instance, E. Macklin highlighted the following factors in her study assisting a life style change: the increase in the number of higher educated women in comparison to the previous years of the last century, and the growth of women's labor force participation. As a result, this was followed by an increase in the number of single women of marriageable age with active social and sexual life expansion. E. Macklin clarifies this with the sentiment that "The increase in the number of women in higher education and the expanding range of lifestyle and employment options for women; The fact that there are more single women than men at marriageable age; and the increasing ease with which singles can enjoy an active social and sexual life" (E.Macklin, 1980). Thereby, a one-parent family is one of the characteristics of a non-traditional family which is defined either by deviation from the standard or classic traditional family, or by the appearance of a new life cycle of the family, provided by existing changes in woman's status and social, sexual, premarital relations. However, the appearance of a new family life cycle or the transformation of the existing traditional family to a modern family is also determined more or less as a deviation from a traditional family lifestyle. Even though Bruynooghe emphasized the great importance of distinguishing

the difference between these two approaches, this study will focus on the one-parent families, and their characteristics without taking into account the way of non-traditional family occurrence. At the same time, it should be noted that it is rather difficult to define if it was an ordinary transformation connected with life style change or a deviation.

The notion of the "One-parent family" is one of the most important and crucial issues causing controversy among demographers. Consequently, this issue needs a detailed explanation for the further analysis. Currently, several definitions of the term are given. In Stein's opinion "one-parent families are families headed by an unmarried residential mother or father who lives with one or more children under the age of 18" (P.Stein, 1976). Conversely, Hungarian demographer Ferenc Kamarás mentioned the problems in the one-parent family concept definition. At first it may seem that it's very simple to define the "one-parent family" concept but in the more detailed consideration problems may occur. For example, F. Kamarás highlighted several meanings of the "one-parent family" definition in comparison with P. Stein. After analysis of Hungarian census data the conclusion regarding existing married couples and also couples living together regardless of their marital status (cohabited partners) was introduced. In addition, there were several types of parents, such as: blood-parents and foster parents (foster fathers or foster mothers), living with adopted children. Even if the child has got a foster parent instead of blood-parent and lives in a blended family he is still not a member of complete family. "…We can raise the question where to include the families in which one of the parents is not the child's blood-parent (foster-parent, step-parent). From the child's point of view such families, too, can in a certain sense be considered as one-parent families…" (F.Kamarás, 1985). In addition, the author described another example when the divorced parents live separately but their child has the possibility to communicate with a separated parent. In this case the child belongs to the category of one-parent family de-iure, but both parents are present in his life - de-facto. Thereby, there are two approaches in the "one-parent family" concept definition: the first one is based on conceptual consideration from the child's point of view, when the child's family condition is taken into account (the absence or presence of blood parent), the second touches upon conjugal condition of one of the parents, the parent's marital status is considered (single, divorced or widowed). In connection with this, Trost in his "One-parent families after cohabitation" article suggests considering the one-parent family expression as one of the parents (single, widowed, divorced) having one or more children living together in one house. In his opinion the term should be considered widely and the parent who doesn't live with the child or children but makes a definite contribution in the children's upbringing and development should be taken into consideration too. This study was based on the definition of one-parent families as families consisting of one parent living together with child or children under the age of 18 at one housing area.

There is one more issue in the demographic literature on differences and similarities between two terms: a one-parent family and a one-parent household. To see how these two terms correlate with each other, the concept of housekeeping or household has been included. The household definition based on the evaluation of the living way, which is aimed to show the process of housekeeping. The main feature of the household is joint housekeeping or cohabitation in a residential unit (flat, house) and their combination. In contrast to the family, a household firstly may include one independently living person,

and secondly include members which are not connected with others by relative or conjugal ties. Zdeněk Pavlík and Květa Kalibová's represented the Czech Statistical Office's definition of household. A household is the group of individuals living together in one residential unit and leading joint housekeeping. In their article named as "One-parent families in Czechoslovakia" they presented a household classification which was firstly introduced by the Czech Statistical Office in 1961. There are two types of households which were distinguished: family households and other households. The first one included two subspecies: a complete family household (a couple living together which are in lawful wedlock or civil marriage, with children or not, regardless of the children's age, but if the children are not in another family and have not created their own family) and a one-parent family household (one parent having at least one dependent child up to age 26). The second type of household consists of the following subspecies: non-family household with a high number of members (two or more people related or not related, leading joint housekeeping but not of one family), and one person living at own house or having it on lease. The presence of the unmarried mothers' phenomenon in society firstly was described by Masui in his research, named "Becoming an unmarried mother: a decision process". Using Belgian data he proved the existence of unions, where unmarried mothers live together with a partner who might not be a father of their children. In addition, unmarried mothers with children can live at one residential unit with their parents or other relatives. Therefore, he demonstrated how unmarried women, who belong to a single-parent family on the base of her marital status, at the same time, can live in the extended family household. Trost also introduced a number of arguments in order to distinguish clear boundaries between those two terms: one-parent family and single-parent family household. As an example he considered a single-parent household where a divorced parent lives with a new partner (mostly fathers), but meanwhile is a parent (one of the parents) to the child from a previous marriage. In this case he highlighted the necessity of clear information regarding a parent or a child's location in terms of space. Thereby, the single-parent household and one-parent family corresponds to absolutely different units, or micro-groups including one of the parents and the child (or children). In addition, a one-parent family is not strictly limited in the space, and there are vague borders between the de-iure and de-facto statuses, whereas the household corresponds to a unit or a micro-group with sufficiently clear characteristics such as: joint housekeeping joint dwelling. Meanwhile, it should be mentioned that the one-parent family is not always a single-parent household; at the same time a single-parent household is not always a one-parent family.

In connection with the fact that the conjugal status of any person depends on their private life circumstances and it may change quite often, some scientists consider it as a sufficiently dynamic process. Though, some characteristics (a child's condition for example) may be related to static processes. Such scientists, like Masui and Trost also introduce in the term "temporary one-parent families", or "interim population", meaning that for some members of one-parent families the given status is only one of the periods in their life cycle. The usage of these terms is only reasonable when considering one-parent families from the viewpoint of the parent's marital status. However, the approach with taking into account of child's position in the family is more static.

The family concept definition is a sufficiently complicated process that needs consideration of the given phenomenon from various points of view, the study of various approaches and consideration of

different life situations. One consequence of these differences is that it's appropriate to mark out the different types of one-parent families. The one-parent family typology is also a controversial issue and needs a multi-dimensional investigation. There are several approaches to the studying: stratification by internal factors (endogenous), and also by external factors (exogenous) (W.Dumon, 1985). Internal factors are referred to the classification depending on the gender position of the parent or the head of the family, and it's equally appropriate to distinguish one-parent families headed by a mother or a father. Another important approach is the marital status of the parent. There are one-parent families headed by divorced family members, by the widowed and by those who have never been married (especially women) but have a child or children. For instance Kamarás marked out: single-parent family "…types can be divided basically into three groups: 1. the cessation of marriage or cohabitation through the death of one of the spouses; 2. the cessation of marriage or cohabitation through divorce or separation; 3.the undertaking to give birth to a child without marriage or cohabitation…". External factors influencing the presence of various one-parent family types are referred to on a macro-level by: social policy (according to the social or economic position), employment rate (employed, part time employed etc.), on a micro-level by: the family's income level (above the average, average, below the average), and the family's head's educational level (higher education, high education, basic education) (W.Dumon, 1985).

Nowadays there are a huge number of various approaches and opinions on the meaning of the one-parent family concept. Thereby, the issue of the one-parent family definition is the principal starting point of this study. Only the fundamental key points of the one-parent family terminology were distinguished. Thereby, in this study the definition mentioned by Kool as a base of further analysis was taken: a one-parent family is the family which consists of a father or a mother with at least one child under the age of 18, living together in the same residential unit, without any other individual. Therefore, two approaches were taken into account: on the basis of a parent's marital status (single, divorced, widowed) and a child's position (absence of one of the parents). In this chapter the most common characteristics peculiar to one-parent families were clearly identified. However, this phenomenon is different depending on the time and location. For instance, European one-parent families differ from the ones in Asia, as well as one-parent families of the last century differ from the modern ones. In order to evaluate the differences between them the next subchapter aimed to analyze the historical background of the traditional family transformation. A time, a place and the historical background have an important meaning for the terminology and classification of one-parent families (W.Dumon, 1985). In addition, it's essential to pay special attention to the historical past of Kazakhstan. This was crucial in the occurrence of one-parent families, and also played a role in appearance of concubinage, the institute typical of Asian society.

2.3 Historical background of traditional family transformation to the modern family

The one-parent family phenomenon is relatively new for the traditional Kazakh society. There wasn't such a phenomenon in the historical past and it was defined by a number of reasons. Firstly, because of

the special type of nomadic culture, traditions and norms of Kazakh law that regulated relations in nomadic society. Up to the 20th century there was a system of customary law termed "adet". The most significant custom codification before the joining of Kazakhstan to Russia was launched by Tauke-khan (1680-1718). Seven codes "Zhety-Zhargy" created by Tauke-khan were different from written law and moreover they were mostly presented in the form of collection of oral proverbs and sayings to be well known. In addition, there were particular forms of lawmaking activity by judges, so called regulations of some judges "Yerezhe". They contained information on the norms of customary law that the judges would be guided on during the consideration of certain law cases. As such, the "Yerezhe" regulations became the source of law. There was one more source with the help of which it is possible to see the development of family relations in Kazakh society. Under the influence of Muslims Kazakh judges included some norms of the Shariah to the customary law which comprised several types of punishments for the dissolution of Islam requirements. In addition, it is necessary to note that customs were also the basic source of law in Kazakh society. Hereby, a kind of a symbiosis of traditional law, customs and Shariah norms introduced a regulator of family-conjugal relationship allowing talking about the unpopularity of one-parent families' phenomenon in traditional society.

According to articles of the "Zhety-Zhargy" law book there are several forms and types of family relations in Kazakh society which included the following parts:

1. Agrarian law (Zher dauy) where arguments on pastures and watering places were discussed.
2. Family and conjugal law where the order of marriage and divorce, rights and duties of spouses and family members property rights was established.
3. Military law (Askeri zan) regulating compulsory military service, the formation of military units and commanders' election.
4. Regulation on law proceeding, discussing the order of trial.
5. Punitive law, establishing punishment for various types of crime except of murder.
6. The law of "kun", establishing punishment for murders and grievous bodily injuries.
7. Widows' law (Zhesir dauy) regulating property and private rights of widows and orphans, as well as liabilities with respect to them from the community and relatives of the dead person.

(History of Kazakhstan (since earliest times up to now), 2000)

Two articles are in greater interest for us: "Family and conjugal law" and "Widows' law". By the given source it is seen that marriage form was individual (monogamy). But among the wealthy people polygamy was also very popular. In addition, there is one more peculiarity regarding widowed mothers. Such as: levirate is the custom which aimed to re-marry the widow woman to the husband's brother (in case of his absence to other relatives, regardless of the fact if they were already married). Thereby, on the basis of the existing sources it could be concluded, that single-parenthood even at the presence of widowhood was not widespread in Kazakh nomadic society. Family dissolution such as a divorce also was not popular in Kazakh society. In order to be divorced spouses needed a valuable reason, for example, wife's unfaithfulness. The wife's infecundity which is one of the reasons of divorce nowadays, in the historical past was compensated by the possibility to marry again (polygamy). A man could not use this right often because the new wife purchase required big means (the fiancé had to pay bride price

"kalym" to bride's parents). In spite of its permission by law, polygamy was not a widespread form of marriage and it was influenced by man's property status. Allowing polygamy for men the law of Shariah put strict bans on to provide women with chastity. This was the reason of necessity to demise to real children of their father. In addition, as one of the precautions of infertility prevention the marriage between relatives up to 7th generation was prohibited. It should be also observed that the crime concept (unfaithfulness to your husband for instance) merged with the evil deed concept (zhaman is), or sin (kune) and thus the unfaithfulness to your husband was equal to sin by the law of Shariah. Though by the Shariah religious law the dissolution of marriage was man's unilateral act and extremely depended on husband's will, it should be noted that men didn't use this right very often. Divorce procedure was limited by saying divorce expression. According to the Shariah norms children after divorce belonged to a father and that means the absence of families' possibility to stay lone with children after divorce of the spouses.

With the settling of Soviet power in the territory of modern Kazakhstan along with the reforms in policy, theysuch laws were implemented in the legislation regulating family-conjugal relations. In 1921 the "kalym" and theft, along with this the forced marriage, polygamy and levirate were prohibited. The equality between man and woman was recognized, and this entailed consequences directed to the change of women's role in society which exist currently. In addition, scientific communism and scientific atheism that means full prohibition of religious law and also Shariah were introduced. All of the family-conjugal relations were regulated by the USSR and then KazSSR Constitution. First Soviet constitutions included such fundamental norms as: family assistance, maternity care, rights and duties of spouses, parents and children. The equality of men and women in family relations declared in the Constitution and fixed in the 3rd article of "USSR legislation foundations on marriage and family". They also included women's rights to the dissolution of marriage which had never been observed in traditional Kazakh society and was a kind of an innovation in soviet society. The legal position of the mother and her child was also determined by the norms of national family assistance. Meanwhile, during the divorce process priority was given to a mother and in the majority of cases children were left with her. In connection with this, the necessity of regulation of alimentary commitment between spouses took place. The law defended the right of a mother with children to the legal alimony. It also had to find out whether the sued person fulfilled his commitments to child maintenance and whether the size of the given maintenance corresponded to the law and what exactly was the real reason of filing a claim. Thus the government attempted to defend mothers and children's rights to receive alimonies from fathers. As for the widowed mothers with children, their rights were regulated according to the right to receive death benefit (pension) from government.

There were two official institutes of conjugal relations regulation in the Soviet society. The first was the Registry Office (ZAGS in Russian) and was of great importance to the formation, change and cessation of family-conjugal relations. It was authorized to register acts of marital status, marriages, remarriages, divorces, births and deaths and etc. As for the disputes connected with the acts of civil status (for example dissolution of marriage, affiliation, amendment or change of act entries), they were within the jurisdiction of court. The latter did not have any rights to apply coercive measures to participants of family-conjugal relations, whereas courts regarding the purpose of family and motherhood care could

force them to implement their commitments. In addition there was one more so called non-governmental institute of family-conjugal relations regulation. The family right defense in the special (social legal) order was implemented by community courts. In conformity with "The case of community courts" community courts were able to "try cases on parent, tutor or trustee's non-fulfillment or improper fulfillment of their commitments for children's upbringing, on contemptible relation to parents, disgraceful behavior in family (as often as unfaithfulness, alcohol abuse and etc.), contemptible relation to women, property disputes between the spouses up to the sum of 50 roubles (an average monthly salary at this time was approximately 120 roubles), upon approval by dispute participants for legal investigation at the community court." The fundamental principle of the divorce was the consideration of the spouses' voluntary agreement at the dissolution of marriage and at the absence children of under the age of 18; it predetermined the dissolution of marriage by administrative means. A simplified order of dissolution of marriage was determined only for those cases when it was not possible to get voluntary agreement of both spouses or when one of the spouses was imprisoned for more than three years or if the family relations were interrupted for a long time. On behalf of children under the age of 18, a voluntary agreement of spouses was not accepted as the foundation for the dissolution of marriage by administrative means, but courts took this into account. Premarital sexual relations and birth out of wedlock were condemned and led to general censure at the community courts. In spite of a high moral ideology in the postwar years and in the 80s there were single cases, and later more frequent cases of extramarital births.

The number of divorces during the Soviet period also gradually increased. For instance in the former KazSSR the extra-marital birth rate according to the 1979 All-Union population census was equal to 1.85 per 1000 women. Whereas according to statistics from 1999 it increased to 6.70 per 1000 women. The percentage of extra-marital live births also increased from 16.1% to 27.6% between 1979 and 1999. Changes of woman's role and status in society, emancipation of society appeared from this period. Significantly, these phenomena have played an important role in the diversification of family types. Nevertheless, it should be noted that during the soviet period a traditional Kazakh family faced a number of changes substantially due to the change of the woman's role and status in society, the change of legislative base and traditional thinking, and the adoption of a new ideology which was different from the traditions and customs of the nomadic society. The occurrence of one-parent families in the nomadic pre-Soviet society was impossible due to the way of life, folk activity, custom observance, traditions and religious guidelines. Later on, at the time of the settlement of the Soviet management system there were some possibilities or so called "the resources" of one-parent family formation: such as divorce low simplification, polygamy prohibition, levirate (marriage of widowed woman to a husband's relative) prohibition, women and men equality in society, premarital sexual behavior. However, it is essential to note that the Soviet society of KazSSR, extramarital births were condemned in connection with a tough ideological upbringing, it was not widespread and took place in isolated cases. The traditional family transformation to the modern one was not a fast process. It included long and slow phased changes in mentality, in family psychology, in interrelations between men and women longed from generation to generation. This process was not finished in the Soviet period; it had features of traditional relations and at the same time features of modern family relations. In spite of this there, is an undeniable fact that the

beginning of a traditional family transformation to a modern family was initiated with the introduction of the Soviet management system.

After the collapse of the Soviet Union the family diversification process started developing more intensively. First of all, it was due to the political changes, which influenced changes in the economic, social and spiritual life of society. Along with the Soviet Union's collapse the ideological upbringing started to change and modern society revised priorities of development from communism construction to democratization. Also principles of ideology from scientific atheism to a return to traditional and religious facilities of Kazakh society were reformulated. All of this was accompanied by a deep economic, social and spiritual crisis and a heavy shock in the country that was reflected in the state of the family. The divorce rate in Kazakhstan during the period of 1999 to 2008 dramatically increased. Similarly, the number of extramarital births did the same. A more detailed analysis of modern patterns and trends in extramarital birth, divorce and widowhood will be described in the third chapter.

Therefore in hindsight, the traditional family transformation on the basis of historical events played an important role in one-parent families' occurrence and became the turning point in the current demographic picture of modern Kazakhstan. The emancipation of woman, the simplification of family-conjugal legislation and global political and economic changes had a significant impact on family. Nowadays the single-parent family appears due to be result of dissolution of marriage, death of one of the spouses, a woman's desire to give a birth to a baby out of marriage. In the following chapters, existing modern tendencies of one-parent family development in Kazakhstan as a whole, and in the East-Kazakhstan region in particular will be examined.

2.4 Data sources and methods

2.4.1 Data sources

The subject of this study is a demographic analysis of one-parent family and related phenomena such as: extra-marital fertility, divorce and widowhood and factors behind in the East-Kazakhstan region. Therefore, this analysis included the data obtained from the official statistics and special observations for instance, socio-demographic surveys. This research is based on three types of data:

- Results of 1989, 1999 censuses;
- Vital statistics;
- Surveys' results

The results of 1989, 1999 censuses were obtained from the Kazakhstan statistical office's publications, particularly containing data for East-Kazakhstan region. From the census publications such data as the number and size of households according to type of households, the number of children etc., population by age, sex and marital status, population by age, sex and education for urban and rural areas was taken.

Vital statistics is divided into published and unpublished data. Published vital statistics were obtained from the Demographic Yearbooks for Kazakhstan and East-Kazakhstan region. The

Demographic Yearbook contains the data on the total number of population without age, sex and marital status distribution, the number of live births according to age of mother, the number of birth represented only for married mothers of urban and rural areas of the East-Kazakhstan region, the number of marriages by age, sex and marital status, the number of divorces by age and sex. Unfortunately the data on number of extra-marital births is given in the total numbers without age distribution of mothers, the data on number of divorces by marriage duration and the population structure by age, sex and marital status were not included. The census data measures population in absolute numbers for the beginning of the year, which includes all permanent residents and temporarily leaving residents and grouping them by age, sex, nationality, population of urban and rural areas. There is also a vital registry system that records all the births, deaths, marriages and divorces in the region and country. The data grouped by age, sex, nationality, marital status in case of marriages, level of education in case of divorces etc. The population for next ten years after census is calculated by adding annual number of total births and immigrants to the data of latest census of population and subtracting the number of deaths and emigrants from it. The Demographic Yearbooks are available since 1999. The population structure by age, sex and marital status for the year 1999 compared with 1989. This is main reason of starting of the analysis from this 1999 in comparison of population structures with 1989. Unfortunately, other data on natality, nuptiality for ten years from 1989 to 1999 is not available. In this study unpublished data also were used. Such data as number of extra-marital births by age and birth order for 1999-2009, and age and sex structure for calendar years from 1999 to 2009 were taken from the East-Kazakhstan regional Department of Statistics. Unfortunately the data on age and sex structure by marital status do not exist.

The last group of data includes results of surveys: Demographic Health Survey 1995, 1999 and "Religiosity of the East-Kazakhstan population". The Demographic Health Survey is an investigation of Kazakhstani mothers' and children's state of health. It was conducted by the Academy of Preventive Medicine of Kazakhstan with financial support of USAID and technical support of Macro International Inc., USA. The aim of the survey is to obtain the data for governmental programs on family planning, health care and other facilities. From this survey results we obtained the data on the number of single-parent households, by structure and by number of children.

The survey "Religiosity of East-Kazakhstan population" is unpublished aimed to study, analysis and evaluate religiosity of population in the East-Kazakhstan region. This survey mostly conducted for the governmental organizations and their internal usage.

2.4.2 Methods

There are two types of the methods, which were used in this thesis: the general scientific, and the special demographic methods. The general scientific methods are description, analysis, synthesis, induction, deduction, comparison, retrospective analysis. These methods are mostly used in the first two chapters, where the information on theoretical, historical backgrounds and analysis of households is given. The demographic methods correspond to the demographic knowledge, in particular, age, gender and marital structure of the population, and depend on age and sex characteristics of demographic processes. In this

study we used the following demographic methods: standardization of divorce rates, decomposition of total fertility rates, multistate demographic analysis and construction of three attrition marriage dissolution table by age.

Before describing the demographic methods which were used, the description of indicators or measures of fertility and marriage dissolution should be mentioned.

Fertility is the process which refers to the numbers of births (mostly live births) that occur in a population. One of the measures of fertility is the total fertility rate (TFR) is the average number of children that would be born alive to a woman during her lifetime if she were to pass through her childbearing years conforming to the age-specific fertility rates of a given year.

$$TFR = \sum ASFR_x ,$$

where ASFR is age-specific fertility rate and x is unit of age from 16 to 49+

Another measurement of fertility is age-specific fertility rate, which is measuring the annual number of live births to women of a specified age x or age group per 1 000 women in that age group. There are three types of this rate. This is formula for the total women population and total live births without distinguishing the marital status of women.

$$ASFR_x = B_x / {}_{1.7}P^w_x ,$$

where B_x is number of live births by women at age x,

${}_{1.7}P^w_x$ is midyear population of women at age x,

x is age interval from 16 to 49+, by units of age or five-year age groups.

Other types of age-specific fertility rates are age-specific fertility rates for married and unmarried women of the first and the second kind. In the numerator of the formula of calculation of the first kind of age-specific marital fertility rate is number of live births by age and marital status of mother (single, married, divorced, widowed). In the denominator is midyear population of women by marital status at fertile age (singles, married, divorced, widowed at a given age). The ASFR of the second kind is calculated by dividing the number of live births according to the age and marital status of mothers (single, married, divorced, widowed) by the number of midyear population of women by age at fertile age, without taking into account the marital status of women.

The mean age at childbearing (MACB) is the mean age of mothers at the moment of birth of their children. The mean age at childbearing is computed as the sum of age-specific fertility rates multiplied by the central age of each age group, divided by the sum of the age-specific fertility rates.

$$\bar{a} = \sum ((a+0.5)*ASFR_a)/\sum ASFR_a,$$

where a is unit of age from 16 to 49+,

$ASFR_a$ is age-specific fertility rate at age a.

Nuptiality is a type of process that may take a form of repeated events as births. Nowadays person can marry and divorce several times during his lifetime. First marriages can be only once during the person's lifetime. The simplest measures of marriage and divorce are crude marriage rate and crude divorce rate. The crude marriage rate is the number of marriages occurring among the population during

the given year, per 1 000 midyear total population during the same year.

$$CMR = M/{}_{1.7}P*1000,$$

where M is total number of marriages in one calendar year,

${}_{1.7}P$ is the midyear population

The crude divorce rate is the number of divorces occurring among the population during the given year, per 1 000 midyear total population during the same year.

$$CDR = D/{}_{1.7}P*1000,$$

where D is total number of divorces in one calendar year,

${}_{1.7}P$ is the midyear population

Another measure used in this study is age-specific divorce rate, which is number of divorces in a given age divided by the number of married men or married women at the same age.

$$ASDR_x = D_x/{}_{1.7}P^m{}_x,$$

where D_x is number of divorces in a given age,

${}_{1.7}P^m{}_x$ is number of married midyear population

x is unit of age from 18 to 65+

In this thesis also was used another type of measurement, which is named Coale's indexes. Coale's indexes are well-established measures in historical demography. We used it to compare extra-marital fertility with marital one, and to make previous steps for more detailed analysis.

Coale's index of general fertility:

$$if = B/(\sum(ASFR^{hut} *{}_{1.7}P^{fem,all}{}_x)),$$

where B is number of all births in a given year,

$ASFR^{hut}$ is age-specific fertility rate for Hutterites which is used as a standard of natural fertility,

${}_{1.7}P^{fem,all}{}_x$ is number of midyear population of all females in a given year,

x is unit of age from 15 to 49

Coale's index of marital fertility:

$$ig = B^{marital}/(\sum(ASFR^{hut} * {}_{1.7}P^{fem,\ married}{}_x)),$$

where $B^{marital}$ is number of births for married women in a given year,

$ASFR^{hut}$ is age-specific fertility rate for Hutterites,

${}_{1.7}P^{fem,\ married}{}_x$ is number of midyear population of married women in a given year at age x,

x is unit of age from 15 to 49

Coale's index of extra-marital fertility:

$$ih = B^{nonmarital}/(\sum(ASFR^{hut} * {}_{1.7}P^{fem,\ unmarried}{}_x)),$$

where $B^{nonmarital}$ is number of births for unmarried women,

$ASFR^{hut}$ is age-specific fertility rate for Hutterites,

${}_{1.7}P^{fem,\ unmarried}{}_x$ is number of midyear population of unmarried women in a given year at age x,

x is unit of age from 15 to 49

Coale's index of proportion of married population:

$$im = \sum (ASFR^{hut} * {}_{1.7}P^{fem,\ married}{}_{x}) / (\sum (ASFR^{hut} * {}_{1.7}P^{fem,all}{}_{x})),$$

where $ASFR^{hut}$ is age-specific fertility rate for Hutterites,

${}_{1.7}P^{fem,\ married}{}_{x}$ is number of midyear population of married women in a given year at age x,

${}_{1.7}P^{fem,\ unmarried}{}_{x}$ is number of midyear population of unmarried women in a given year at age x,

x is unit of age from 15 to 49

The next method, used in this study is decomposition of difference between two TFR into three components: effect of changes in structure according the marital status; effect of changes in marital fertility rates; effect of changes in non-marital fertility rates.

According to Campell Gibson total effect of changes in structure by marital status, marital fertility rates and non-marital fertility rates, between two periods can be computed by the following formulas:

1) TFR (difference in structure according the marital status) = a+0.5*d+0.5*e;
2) TFR (difference in marital fertility rates) = b+0.5*d+0.5*f;
3) TFR (difference in non-marital fertility rates) = c+0.5*e+0.5*f.

Where *a* is the effect changes in marital status;

b – effect of changes in marital fertility;

c – effect of changes in non-marital fertility;

d – interaction of structure and marital fertility;

e – interaction of structure and non-marital fertility;

f – interaction of marital and non-marital fertility

$a=[\Sigma f_x^{mar(A)} * p_x^{mar(B)} + \Sigma f_x^{unmar(A)} * p_x^{unmar(B)}] - TFR^{(A)};$

$b=[\Sigma f_x^{mar(B)} * p_x^{mar(A)} + \Sigma f_x^{unmar(A)} * p_x^{unmar(A)}] - TFR^{(A)};$

$c=[\Sigma f_x^{mar(A)} * p_x^{mar(A)} + \Sigma f_x^{unmar(B)} * p_x^{unmar(A)}] - TFR^{(A)};$

$d=[\Sigma f_x^{mar(B)} * p_x^{mar(B)} + \Sigma f_x^{unmar(A)} * p_x^{unmar(B)}] - TFR^{(A)} - (a+b);$

$e=[\Sigma f_x^{mar(A)} * p_x^{mar(B)} + \Sigma f_x^{unmar(B)} * p_x^{unmar(B)}] - TFR^{(A)} - (a+c);$

$f=[\Sigma f_x^{mar(B)} * p_x^{mar(A)} + \Sigma f_x^{unmar(B)} * p_x^{unmar(A)}] - TFR^{(A)} - (b+c)$

where f_x^{mar} is marital fertility rate at age x,

f_x^{unmar} is non-marital fertility rate at age x,

p_x^{mar} is the proportion of married women at age x, from all women at age x

p_x^{unmar} is the proportion of unmarried women at age x from all women at age x

In this study indirect standardization method for divorce ratio by education was used. As a standard we took age-specific divorce rate (for Kazakhstan and East-Kazakhstan region respectively). Educational specific divorce ratio was calculated by following formula:

$$ASDR^{edu} = D^{edu} / (\sum (P^{edu}{}_{x} * ASDR_x)),$$

where D^{edu} is number of divorces by education in a given year,

$P^{edu}{}_{x}$ is a number of population by age and education in a given year,

$ASDR_x$ is age-specific divorce rate taken as a standard,

x is unit of age from 16-54.

In this thesis we used the classification of education which was accepted with the Soviet Union's appearance. The existing differences between national and international classifications should be noted. "The International Standard Classification of Education (ISCED) was designed by UNESCO in the early 1970's to serve 'as an instrument suitable for assembling, compiling and presenting statistics of education both within individual countries and internationally'. It was approved by the International Conference on Education (Geneva, 1975), and was subsequently endorsed by UNESCO's General Conference when it adopted the Revised Recommendation concerning the International Standardization of Educational Statistics at its twentieth session (Paris, 1978)" (International Standard Classification of Education, 1997). The present classification, now known as ISCED 1997, was approved by the UNESCO General Conference at its 29th session in November 1997. It was prepared by a Task Force established by the Director-General to that effect and is the result of extensive consultations of worldwide representation. ISCED 1997 covers primarily two cross-classification variables: levels and fields of education. Kazakhstan also has designed the education levels according to this ISCED:

Level 0 - Pre-primary education
Level 1 - Primary education or first stage of basic education
Level 2 - Lower secondary or second stage of basic education
Level 3 - (Upper) secondary education
Level 4 - Post-secondary non-tertiary education
Level 5 - First stage of tertiary education
Level 6 - Second stage of tertiary education

In Kazakhstan's classification these levels have their analogues. Level 0 corresponds to preschool education (kindergartens), Levels 1, 2 and 3 correspond to basic education in Kazakhstan (1-4, 5-9, and 10-11years of education in the basic schools), Level 3 corresponds also to the first steps of vocational education, after 9 years of basic education (colleges, vocational schools), Level 4 corresponds to the last steps of vocational education, after 11 years of education in the basic schools, Level 5 is the first step of education in the universities (bachelor degree), and Level 6 corresponds to MA, PhD. In the further analysis of divorces by education basic educational level, which corresponds to the Levels 1, 2 and 3; vocational education (Levels 3, and 4) and higher education (Level 5) will be used.

In order to summarize the changes in demographic behavior according to marital status, the method of multistate life tables according to marital status was applied. The multistate life tables were calculated using LIPRO ("Lifestyle projection") software. This program aimed to prepare multidimensional demographic projection of population by marital status. LIPRO 4.0, which is the first LIPRO version for Windows, and available for release since Spring 1999. It includes all the usual MicroSoft Windows facilities for user interface and data exchange. Communication with Microsoft Excel has explicitly been incorporated. We are not aimed to prepare marital status projection, and will use the LIPRO software only at first stages of preparing and manipulating of input data, which is more important for us to estimate number of population by marital status in 2004 and 2009. In the process of manipulating input data we will use MicroSoft Excel. Two types of input data were prepared:

- The population by age, sex and marital status for 1st January 1999;
- The events such as number of deaths, first marriages, remarriages, divorces by age for five-year intervals from 1999 to 2003.

The second step is calculating of transition probabilities from one marital status to another such as probabilities of dying for males and females, probabilities to get married according to marital status, probabilities to get divorced. The next step is the checking the data procedure, which is described more precisely in the fourth chapter of this thesis. After preparing the input data, we are going to the next step, which is aimed to calculate the number of population by marital status for two years: 2004 and 2009. We should import the data on an initial population and observed events to the LIPRO program by using command TOOLS/IMPORT/EXPORT. From these data we can estimate corresponding rates and person years with command TOOLS/CALCULATE RATES. To receive the information regarding changes of the marital statuses from the moment of birth until the moment of death we are using command OUTPUT/LIFE TABLE ANALYSIS. In these tables the default radix of the life table is 100,000 for "never married" and equal to zero for the other marital statuses. Also from this output we can obtain fertility indicators, such as total fertility rate, the percentage of extra-marital fertility rate, NRR, GRR, mean age at childbearing etc. To investigate the proportion ever married and proportion of marriages ending in divorce, we should create experience tables with help of command CALCULATE EXPERIENCE TABLE. After preparing all data on an initial population by marital status per 1 January 1999, rates for fertility, mortality and marriage formation and dissolution, estimated from observed demographic data during the period from 1999 to 2003, we can make the estimation of population by marital status in 2004 and 2009. We have chosen the estimation for males and females, so following two-sex consistency algorithm should be created:

- the number of males entering marriage should be equal the number of females entering marriage in this period;
- the number of divorcing males should be equal the number of divorcing females in the same period;
- the number of married males, who die should be equal the number of females entering widowhood;
- the number of males who become widow should be equal the number of married females who die.

Finally, the estimation of population can be made by issuing the command RUN. In the output window the absolute numbers of population per 1 January 2004, and 2009 as well as the pyramids by age, sex and marital status can be observed.

Chapter 3

The structure of households, single-parent households

3.1 International practice of household classification

In connection with evident ambiguity in definition, as well as in delimitation of "household" and "family" concepts, including certain difficulties in data comparison, a detailed investigation into this problem is essential. In this chapter the typology of "survey" and "census" households of international practice, the gradual transformation of Soviet and Kazakh census: from family to household will be described. In addition, this chapter contains census data and the Demographic Health Survey (DHS), which in essence is sociological research made with the support of Macro International Inc.

The peculiarities associated with the household concept as well as its classification in European countries should be highlighted. As aforementioned, the essential difference of "family" and "household" concepts is in the presence (or absence) of a blood relationship. Nico Keilman highlighted the following definitive features in his "Households and Families" article: "nevertheless the difference of family from household is frequently expressed in economical load. If the family seems to be a natural biological unit, then the household is considered as the economical unit connected with the place of living, habitation conditions and etc". In addition, in the opinion of Marc Pilon, the author of "Household and family demography" article, the households concept was created mainly in the West through the suggestion of statisticians and demographers "in search of statistical unit for operational observation that makes it possible to identify individuals without omission or double counting during censuses and surveys; gathering information on kinship being above all a method of identifying individuals…". Households allow combining individual features typical of families that in turn simplify the process of data collection

and its classification. However, the majority of problems do not appear in the data collection process, but in the methods of interpretation. Mainly, there are infinite forms and types of data classification. One of the reasons of misunderstanding and difficulties is connected with an incorrect explanation of "family" and "household" definitions, and also with the absence of an exact definition of those units as well as the absence of a common system of household classification or typology. The household classification depends on the family diversity process in the world as well as in the one region or a country. Moreover, it is further complicated by the fact that the process is still not complete. The family evolution theory (or the transformation process from traditional family types to modern ones) is the key doctrine in the household definition. The household typology is getting more complex with the appearance of new family types. For example the Table 2 presented European households' typology, which was created by Peter Laslett in 1972.

Table 2. The typology of households according to Peter Laslett (1972)

Type of households	**Characteristics**
1. Solitary	a. Widows or widowers
	b. Single people
2. Household without a family	a. Brothers and sisters co-residing
	b. Other relatives co-residing
	c. Unrelated co-residing
3. Simple household	a. Married couple without children
	b. Married couple with children
	c. Widows with children
	d. Widowers with children
4. Extended household	a. Extended upward
	b. Extended downward
	c. Extended laterally
	d. Combination of the above
5. Multiple household	a. Multiple upward
	b. Multiple downward
	c. Multiple in both directions
	d. Forereaches (coresident siblings)
	e. Other

Note: Extended household consist of nuclear families plus one or more relatives who do not form other couples. Extended upward is including the widowed father or mother in the nuclear family, or the not married siblings of parents; Extended downward is including unmarried grandchildren. Multiple household is containing more than one couple, who are closely related. Multiple upward consist of the couple and the wife's parents; Multiple downward couple and a married child with spouse.
Source: Mark Pilon

In the given classification the type of household that includes one-parent families does not exist. This is due to the fact that knowledge of the phenomenon in this period was not widespread. But it should be noted that the separate category of household includes the widowed having children dependant on them. Whereas, Table 3 of household typology illustrates more complicated forms and species of European households in 2005, where "widowed with children" are combined to a general category of

"one-parent families".

Table 3. The typology of households (2005)

Type of households	Characteristics
One-person households	
Multi-person households or non-family households	a. Persons related to each other
	b. Relatives and non-relatives
	c. Non-relatives
Family household	
One-family household	a. Couples with unmarried children
	b. Couples without children
	c. Lone-parent with children
Multi-family household	a. Two or more families

Source: Czech Statistical Office

According to Patrice Vimard nowadays there are no "good" or "bad" household classifications because they all primarily depend on the aims of research and peculiarities of population observed. For instance, the classification of the Czech Statistical Office for the Czech Republic includes three types of private household: dwelling household, economical and census households where the census household is divided into family household (traditional and one-parent family households) and other forms of household (free ones, those who live alone, several people not connected to family relations but live in one area) (J. Rychtaříková, 2003). Thus in every single country (in a geographical aspect) and in every single situation (in chronological aspect) the different types, species or forms of household classification could be singled out. It is filled with different content and corresponds to forms of life and activity unique for the individual but, at the same time is general to the region.

In order to obtain a more complete picture of the household research, the experience of international organizations was analyzed. It is of great importance to evaluate the United Nation's (UN) definitions. Firstly, due to the fact that all agreements within the UN were ratified by Kazakhstan and additionally, that Kazakhstan takes into account the UN's recommendations on organization and implementation of the census. The UN recommends defining households as a "one-person household, i.e., a person who lives alone in a separate housing unit or who occupies, as a lodger, a separate housing unit but does not join with any of the other occupants of the housing unit to form part of a multi-person household as defined below; or a multi-person household, i.e., a group of two or more persons who combine to occupy the whole or part of a housing unit and to provide themselves with food and possibly other essentials for living" (UN, 1998). This definition divides the households into two groups: households presented by one dweller and households where one or more dwellers live together. In addition, the inter-link between these groups includes the following precondition: joint housekeeping and habitation in one housing area. Meanwhile, two approaches were expressed and combined in a prescribed way in the term: housekeeping-unit concept and household-dwelling concept. In projects of different authors the household concept varies between these two approaches. The first is viewed as a housekeeping-unit concept where the joint housekeeping is fundamental, and the second as a household-

dwelling concept where the main factor is joint habitation in one housing area. For example Todd and Griffiths (1986) conducted research where they investigated the influence of introduced changes carried out for the household concept to their quantity in England. Up to 1981 the majority of sociological surveys made by the Bureau of the Census referred to the households as a housekeeping-unit concept. This meant that for the household definition it sufficed to run joint housekeeping, but since 1981 changes have been made which caused the inclusion of members to the household composition, who lived in one housing area, even if they had separate housekeeping or separate food. The change effect in terminology was sudden and according to the data received the total amount of households decreased by 0.6 %.

The UN also recommends the family terminology which is suggested to be included in a population census: "two or more persons within a private or institutional household who are related as husband and wife, as cohabiting partners, or as parent and child. Thus a family comprises a couple without children or a couple with one or more children or a lone parent with one or more children" (UN, 1998). The given definition except legal spouses also includes cohabitants and one-parent families. Thus three types of families are categorized: spouses in lawful wedlock (with children or without), cohabitants (or partnership) and one-parent families. In the given context the UN recommendation concerning the "child" conception definition is of great interest. The UN suggests considering a child as "any person with no partner and child who has usual residence in the household of at least one of the parents" (UN, 1998). Age limits were not included in this terminology and any person is considered as a child if he lives with his parents in one housing area. The main condition is the absence of their children. The given concept however is not common to all countries, for example the Czech Republic's census considers only those children who are supported by parents (economically dependent) and at the census moment are not older than 25 years old. In addition, there is a category of children who are obliged to live in two households (for example after parents' divorce). Such children are considered to belong to one of these two households and the choice criteria between these households is presented by the presence of residence permit at one of the households and "the largest quantity of nights" spent in one of these households. There can be cases when three or more generations live in one household: the family of grandfathers and grandmothers, families of children with grandchildren. In this case the UN suggests "A three-generation household consists of two or more separate family nuclei or one family nucleus and (an)other family member(s). A woman who is living in a household with her own child(ren) should be regarded as being in the same family nucleus as the child(ren) even if she is never-married and even if she is living in the same household as her parents; the same applies in the case of a man who is living in a household with his own child(ren). Thus, the youngest two generations constitute one family nucleus" (UN, 1998). As for the terminology connected with one-parent families there is no definite explanation in the UN's recommendations. In addition, no difference is produced between one-parent families (a mother or a father who lives with children) and so called cohabiting one-parent families (a mother or a father who has children to support and lives with a partner). What is more, there is an important fact that nowadays inaccuracies in "place of residence" concept definition can be found. The main criteria for including a certain person to that household or another is the indispensable residence in one housing area, and the introduction of clarity to the "one housing area" or "place of residence" concepts. There are also places of

residence as de-iure (place of residence permit) and as de- facto (the place where a person actually lives). The UN suggests the following concept definition of "the place of residence" as a basis – "the geographic place where the enumerated person usually resides; this may be the same as, or different from, the place where he/she actually is at the time of the census; or it may be his/her legal residence. A person's usual residence should be that at which he/she spends most of his/her daily night-rest" (UN, 1998). In other words the place of residence is defined by the actual location of a person at the time of census. In this case the question appears: to what category should the one-parent family member with a partner be ascribed if the partner has got his own lodging but at the moment of census is living in a one-parent family member's house?

Conclusively, there are a vast range of definitions pertaining to family and household concepts, and an infinite number on household classification and typology, provided by concrete geographic, demographic, social and cultural and demographic situations in different continents, countries and even cities. Based on this evidence, more detailed consideration of the notions of the household concept in the statistical data of Kazakhstan is required.

3.2 From traditional family to modern households in the Soviet and Kazakhstani censuses

Nowadays, there are two sources of household study in Kazakhstan: the population census made every 10 years and the surveys. The history of census that sprung from the second half of the 18th century, from the period of entry of Kazakhstan to the Russian Empire's composition is of particular interest. In the 18th century and in the first half of the 19th century, all population data was collected as a process of revision. Starting from the sixties of the 19th century the population enumeration was conducted in the large cities and also in a few smaller ones. Such an enumeration of the city population was made in Astrakhan province in 1873 and in the Akmola region in 1877, where the majority of Kazakhs lived. The first and last general census of the population of the Russian Empire covering also the territory of Kazakhs was held in 9 February (28 January) 1897. The census questionnaire consisted of 14 questions including: sex, age, marital status, estate, birth place, and place of residence permit, religion, native language, literacy, and occupation, occurrence of physical disability or mental disease. In order to evaluate the development of family structure the short classification that marked out only 4 family types was suggested: a) simple families – parents and children; b) compound families – parents with children and senior citizens, the structure of these families only included lineal relatives; c) unified families – simple and compound families with the structure having relatives by collateral line as brothers or sisters; d) celibate families – single persons and families composed of relatives by collateral line.

The first Soviet population census was complied in 28 August 1920 together with agricultural census and short register of industrial enterprises. The main report form was a personal list which had 18 questions and among them in addition to the census of 1897 included: nationality, citizenship, education, workplace, occupation, source of means of subsistence and others. The family structure used in the 1987 census remained the same in the 1920 census.

The first all-USSR population census was conducted on 17 December 1926. This census included all territories of the former Soviet Union for the first time. The classification of the demographic family composition was developed further in the material of this census. The following family types were marked out: families with a married couple, incomplete families and compound families of two or more married couples. A more detailed classification is shown in Table 4. The enumeration, designations and type names remained unchanged as it was presented in the 1926 census.

Table 4. The typology of households according to 1926 all USSR population census

Type A. Families with wedding couple:	
A 1 Without children	
A 1 a	Without family members (relatives)
A 1 b	With economically inactive family members
A l c	With economically active family members
A 2 With all registered children	
A 2 a	Without family members (relatives)
A 2 b	With economically inactive family members
A 3 c	With economically active family members
A 3 With only children from previous marriages	
A 3 a	Without family members (relatives)
A 3 b	With economically inactive family members
A 3 c	With economically active relatives
Type B. Incomplete families, with children:	
B a	Without family members (relatives)
B b	With economically inactive family members
B c	With economically active relatives
Type C. Incomplete families, without children:	
C a	Without family members (relatives)
C b	With economically inactive family members
C c	With economically active relatives
Type D. Extended families: the family consisting of two or more couples, each with at least one member of an active.	

Source: A. Volkov, 1999

According to this classification individuals without assistance secured themselves financially and also supported the inactive ones who were financially depended on other members of the family named as active relatives. Moreover, the active members of the family had income from some kind of activity in the contrast with inactive relatives.

The all-USSR 1937 census was conducted as one-day census. For the census organization and implementation they involved 1,250,000 enumerators. It was the first soviet census conducted in Kazakhstan by the one-day census principle, where the only available population was taken into account. Also, it was the first time that the control round was used in the soviet census practice. The data received differed from the previously declared estimate of the population in the USSR and consequently, the population census organization was confirmed unsatisfactory and the materials as defective. The second

all-USSR population census was conducted 17 January 1939. The majority of 1939 and 1937 census results were turned into material for administrative use and only an insignificant small part was published. The methodological census basis divided families into the following categories: one married couple with children and without them; one married couple with children and without them plus one of the spouse's parents; one married couple with children and without them, with one of the spouse's parents (or without one) plus other relatives; two or more married couples with children and without them, with one of the spouse's parents (or without one) plus other relatives (or without them); mothers (fathers) with children; mothers with children and one of the mother's parents (a father); fathers with children with one of the father's parents (a mother) and other families. The leading principle in this classification is the principle of differentiation by the degree of complexity of family structure. Children and life cycle stages are not taken into account. The classification allows some general indicators to be figured out, namely: the proportions of traditional and one-parent families, the proportions of simple and compound families. The traditional families are the families of married couples and the one-parent families are those with one mother (father) with children. Family distribution by the number of members allows categorizing minor, middle and large families. Combinational family grouping is performed by the number of members and by the demographic composition allowing calculating family size norm in every group.

The materials of the 1959 postwar all-USSR census and the following three 1970, 1979 and 1989 all-USSR population censuses remained the same since they were first introduced in 1939. According to them the family was defined as a group of two or more persons connected by filiations or relationship by marriage living together and having a common budget. People living beyond a family were subdivided into two categories as single persons and persons living apart from their families. The difference between them depended on the person in terms of whether he had regular financial relations with one of his relatives or not. Those who had such relations (though this concept wasn't fully defined) were considered as family members living apart and those who did not have such relations were considered as single persons. Such a division was introduced at the population 1939 census and remained until the 1989 census inclusive. It didn't offer the possibility to sort out the category of the so called institutional population in the census material. Two completely different people categories were mixed and couldn't be separated: persons living single creating one-person household and persons constantly living together with no joint housekeeping but under governmental or social or religious organizations' security (custodial institutions, disabled homes, orphanages, chronic patients' hospitals, monasteries, quarter, penitentiaries and etc.). In addition, all these censuses (1939, 1959, 1970, 1979 and 1989) did not substantially differ from each other in terms of organizational and methodological relations, and it afforded the opportunity to compare various population data. In view of ideological and political aims the following family groups were marked out: workpeople, collective farmers, clerks and mixed. In the further census such groupings will be revised subject to what happened regarding social economic and political improvements.

In 1999 the first independent national population census was performed in the Republic of Kazakhstan. The program took into account the cardinal changes in the social economic development of the country and society's structure, but at the same time an indispensable continuity for comparability of

future census data with previous results remained. Meanwhile, an attempt was made of maximal approach regarding the performance of international analogs. Specifically, the transition of criteria and definitions was made corresponding to international recommendations for the household definition generally accepted in global practice. In compliance with international recommendations it was the first time that households became a registration unit in the 1999 census. Here the household is defined as:

- The aggregate of persons living in one housing area or part of it, jointly providing themselves with food and other necessary means for living and combining their income fully or partially;
- One person living separately at one housing area or in a part of it, singly providing himself with food and other necessary means for living.

In addition, households are divided into private households, collective households and households of homeless. The private households are those living at housing areas like: flats, individual homes, dormitories, other living spaces and nonresidential premises adapted for living. Collective households are persons constantly living at institutions of social and medical service, quarters, places of detention and religious organizations. Households of homeless are the persons of no fixed abode (those who don't have lodging). A detailed household classification was suggested which consisted of one person; one married couple; two married couples, a mother with children or a father with children, persons not related, and other households.

The central failure of the given classification is the joining of households (families) of different composition into one type. So, in the type "households of married couples without children, with one of the spouse's parents (or without one), with a mother (a father) with children and other relatives or people not related" the households are combined together consisting of a married couple with one of the spouse's parent and without their parents as well. In addition as many sociologists note the comparability with previous census and research data was not provided at the designing of household data. Nevertheless it's essential to note that "household" registration instead of previous "family" didn't mean only the replacement of one concept with another but a wider range of categories were taken into consideration. The household definition differed from previous the family definition of population census in two cases: firstly, one-person households weren't considered as families before and were added to "single persons" or "family members living separately"; secondly, people not related and living together with a family and having common budget were not included in the family composition. They were also considered as "single persons" or "family members living separately" and if they were related between each other, then they were considered as a separate family. In essence, in the conditions of a market economy the household is the widest social phenomenon of people's habitation than the family. The household members can be relatives, persons married and persons not connected by any relations.

There is one more category named as "housekeeping" met in the standard of living statistics and in budgetary survey particularly. But a rather different definition is used as: "Housekeeping is the group of people living at one housing area, combining their income and property partially or not and jointly consuming definite types of product and services, housing service and food essentially". In addition there are a few more various definitions of "housekeeping" concept close to the household's census definition and meaning housekeeping as the field of economic activity in the national economic accounting as well.

To understand the similarity between the census households and economic households lit is essential to refer to the budgetary survey statistics.

The beginning of budgetary survey statistics in Kazakhstan is related to the period of the Republic's entry to the USSR, however its formation as an independent branch refers to the postwar period when budgetary surveys began their implementation on a continual basis. After years of Kazakhstan's independence the household statistics underwent significant changes, expanded and improved. In the period from 1991 to 1995 a Republic net of constant survey of family income and expenditures by social demographic groups was formed instead of previous all-USSR branch-wise selection principle and a new form of survey as "Family budget" was introduced. A methodical and instructive material on family budget survey was devised and adopted to practice.

Later in 1996-1998 a new program of household survey was introduced which didn't take into account social demographic groups anymore. Rather they corresponded with an interconnected set of survey forms that were aimed to receive the economic and the statistical information on the level and structure of income and expenditures of household, the sources of population's cash income, consumer goods and services, the differentiation of population by income and expenditure level and several other economic factors. In real terms the survey data substantially aimed at getting the information about the population's standard of living, consumption, housing conditions, education, labor market and domestic production.

In 1999-2000 they started a project on transition to new methods of household survey corresponding to international standards and this increased an opportunity to study the economic problems. In particular they confirmed a new survey, created a system of households by the method of random probabilistic selecting, created a system unit of factors describing the population's standard of living and conducted monitoring of the reasons and conditions of poverty. The research basically was directed to get information about the population's accessibility to education and health service, poverty reasons and conditions and time budget usage. Moreover, within the research of material conditions and population's poverty reasons the activity was directed to define income criteria for labeling the population as middle class. The typology of so called economic household doesn't exist but there is a list of characteristics which were compulsory for data collection. The list of the characteristics includes: the characteristics of housing conditions of households and the accomplishment of the house occupied; household characteristics according to occupied lodging ownership; household characteristics according to the number of rooms, household characteristics according to lodging type; household characteristics according to lodging's accomplishment type; information about hygiene and sanitary conditions of households; the presence of durable goods; irregularities (cutoff) in the provision of households with housing service; drinking water availability and etc. From the list given it is obvious that these households differ from census households by the aim to receive extensive information on the scale of living, income and living conditions and are not going too deep in details on essential demographic factors: family composition, one-parent families' presence and etc.

Conclusively, the observation unit in the Kazakhstani population census was initially presented by families, in their simplest forms. Later this tendency underwent a range of changes (transition to

households) connected with the complication of family conjugal relations, the change of social economic and political situation. Households as the population's census units were introduced. The desire to correspond to the UN's recommendations led to the absence of data continuity and also to their uselessness for comparison with early census results. In addition, there are two types of households: census households and so called economic households, whose difference is mainly expressed in the kind of the information being received: whether it is social demographic or economic. The household classifications by the demographic composition can be presented in various options. The choice of concrete classification in every individual case is performed with a glance at the following conditions: the necessary degree of typology specification, the sphere of practical usage of material received and the division to the possibility defined by the source of information content.

3.3 Single-parent household characteristics and their development

Initially, this research was mainly intended to study single-parent households, so it was considered vitally important to get the necessary data from the census and survey. According to the 1999 census results there were 4152.7 thousand households in Kazakhstan, where 14775.5 thousand people lived. On the whole, the average household size in Kazakhstan is 3.6, including 3.1 in a city and 4.4 persons in the villages. The percentage of city households with 5 and more persons counts for 17.5% of the total number, while in the villages it makes up 43.2%. The results of the 1995 and 1999 Demographic Health Survey show exactly the same numbers. Table 5 shows the insignificant changes in a household's size from 1995 to 1999.

Table 5. The average household's size according to Census 1999, DHS 1995, 1999

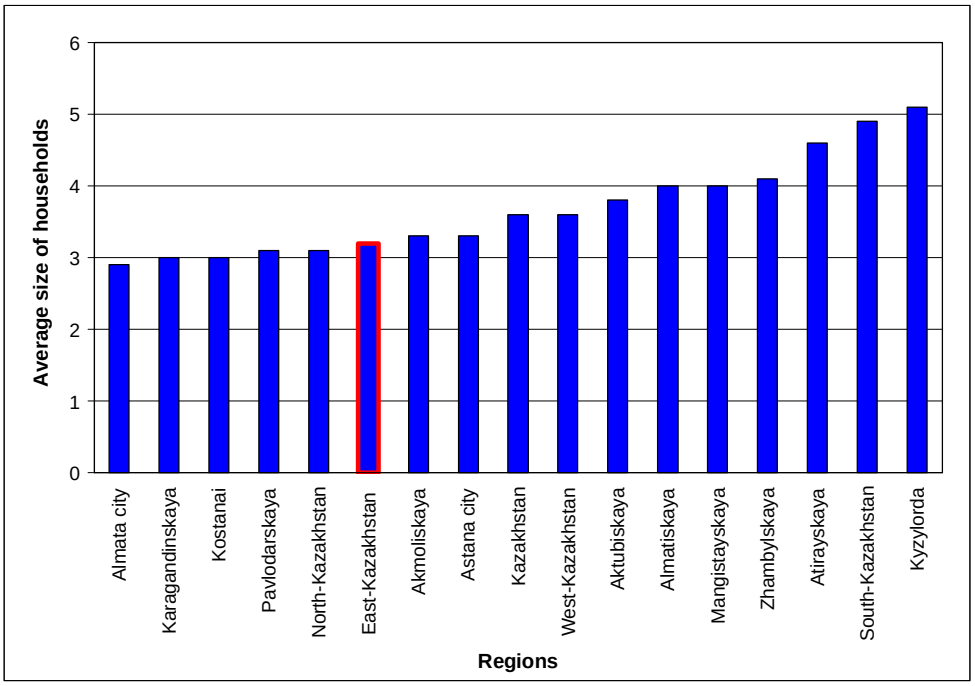
Census 1999			**DHS 1995**			**DHS 1999**		
Urban	Rural	Total	Urban	Rural	Total	Urban	Rural	Total
3.1	4.4	3.6	3.1	4.7	3.8	3.0	4.4	3.6

Source: Kazakhstan statistical office, Demographic Health Survey (DHS) survey results

Figures 1 and 2 represent the average size of households in Kazakhstan's regions. The East-Kazakhstan region in comparison with other regions has a relatively low average size of households. For example, in the East-Kazakhstan region it is 3.2 while in the South-Kazakhstan region the average size of households is 4.9, in Kyzylorda – 5.1.

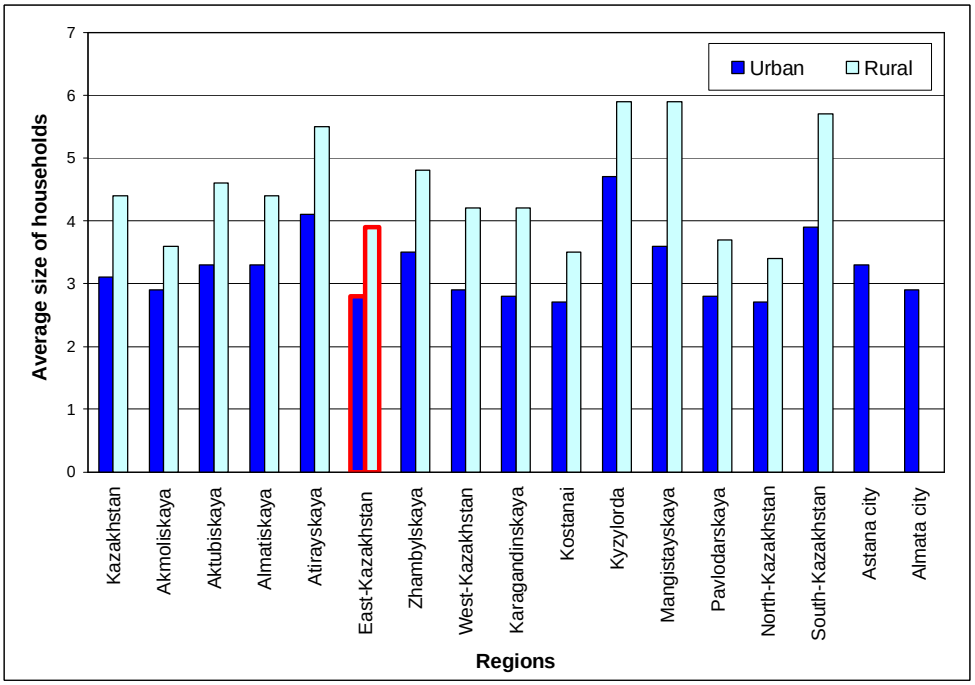
The regional distribution of the average size of households in the urban and rural areas of Kazakhstan shows big differences not only between regions, but also between cities and villages. In the rural areas the average size of households is higher than in the urban ones. In the urban areas of the East-Kazakhstan region the average household consists of 2.8 persons, while the rural average size of households is higher at 3.9 persons. The biggest size of households can be found in Kyzylorda: 4.7 for urban and 5.9 for rural areas, and in the South-Kazakhstan region: 3.9 and 5.7 respectively. Figure 2 shows the regional differentiation of the urban and rural average size of households. This is due to the high birth rates which is usual for these regions.

Figure 1. The average size of households in the regions of Kazakhstan, 1999



Source: Kazakhstan statistical office

Figure 2. The regional distribution of the urban and rural average size of households, 1999



Source: Kazakhstan statistical office

The percentage distribution of children living with parents and without them in 1999 in Kazakhstan (Table 6) shows not only the frequency of children living in one-parent families according to their age, but also the information on the number of children living with their mother or father. According to the survey data 81% of children up to the age of 15 live in complete families, which in real terms means with both parents. Whereas 14% of children live with a mother, 4% of them due to the father's death and 10% of children have a father alive but living in a different household. The proportion of children living with their father because of their mother's death or due to the parents' divorce is significantly lower.

Table 6. The percentage distribution of children living with their parents and without them according to child's age, 1999, Kazakhstan

Age of child	With both parents	With mother only		With father only		Do not live with parents				No data
		Father is alive	Father is died	Mother is alive	Mother is died	Both alive	Only father is alive	Only mother is alive	Both died	
0-2	88.8	6.7	1.2	0.2	0.0	2.3	0.0	0.1	0.0	0.7
3-5	85.2	8.8	1.8	0.6	0.4	2.5	0.0	0.0	0.7	0.7
6-9	81.4	9.2	3.6	0.4	0.1	2.8	0.3	0.2	0.3	1.7
10-14	75.7	11.0	6.1	0.6	1.0	2.6	0.6	0.4	0.3	1.8
Total	80.9	9.5	3.9	0.5	0.5	2.6	0.3	0.2	0.2	1.4

Source: Kazakhstan statistical office, DHS survey results

When the same indicator is compared by regions it's obvious from Table 7 that the percentage distribution of children living with parents and without them, the East-Kazakhstan region (after Almaty) is in second place among the other regions due to the low share of children living with both parents in one household (75.9%). In addition this region is on the second place in comparison with the other regions of Kazakhstan by the number of households with one-parent families (18.7%).

Table 7. Percentage distribution of children living with their parents and without them according to place of residence, 1999

Region	With both parents	With mother only		With father only		Do not live with parents				No data
		Father is alive	Father is died	Mother is alive	Mother is died	Both alive	Only father is alive	Only mother is alive	Both died	
Almaty	71.2	17.2	5.3	1.0	0.6	0.4	0.0	0.0	0.7	2.7
Southern	84.8	7.6	3.1	0.2	0.4	0.3	0.2	0.1	0.4	0.4
Western	83.1	5.6	5.6	0.3	0.5	0.3	0.7	0.3	1.1	1.1
Central	76.2	14.2	3.1	0.0	0.8	0.1	0.4	0.1	2.5	2.5

Northern	76.6	11.5	4.4	1.3	0.1	0.6	0.0	0.4	3.2	3.2
Eastern	75.9	12.9	4.0	0.3	1.5	0.1	0.2	0.1	1.6	1.6

Source: Kazakhstan statistical office, DHS survey results

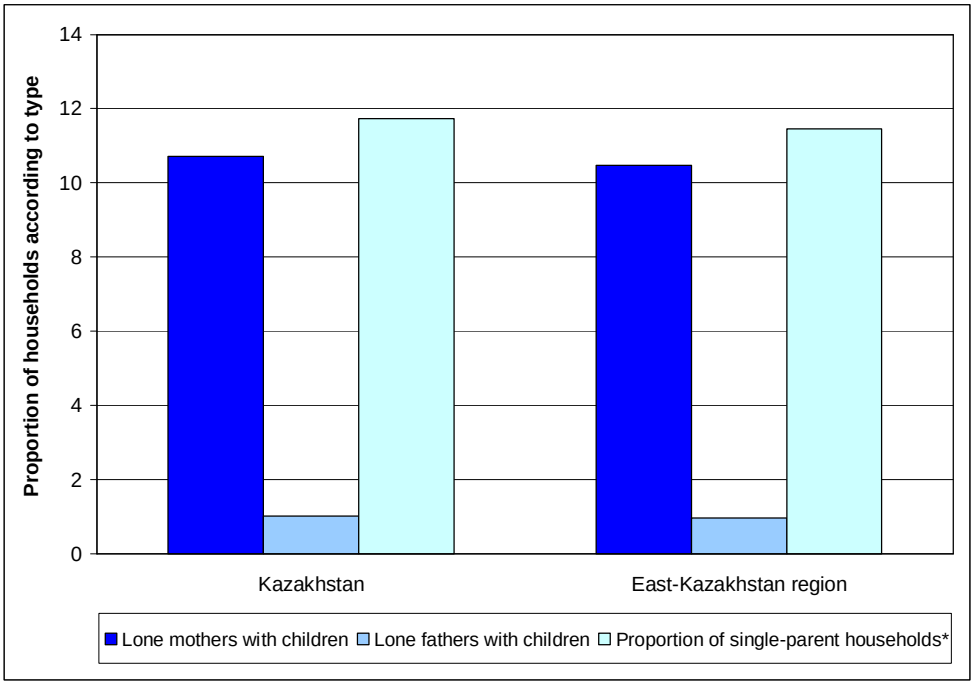
It should also be noted that households with one-parent families are more frequent in the cities than in the villages. This fact is clearly indicated in Table 8, which shows the percentage distribution of children living with parents and without them in a city and in a village. The share of children in the cities living in one-parent families was 16.4% whereas in the villages it makes 11.6%. In addition more than 80% of children in the villages live in households with both parents.

Table 8. Percentage distribution of children living with their parents and without them in Kazakhstan, 1999

Region	With both parents	With mother		With father		Do not live with parents				No data
		Father is alive	Father is died	Mother is alive	Mother is died	Both alive	Only father is alive	Only mother is alive	Both died	
Urban	75.7	12.3	2.8	0.8	0.5	6.6	0.2	0.2	0.0	0.8
Rural	81.3	6.8	3.4	0.6	0.8	6.3	0.1	0.2	0.1	0.4

Source: Kazakhstan statistical office, DHS survey results

Figure 3. Proportion (%) of single-parent households from the total number of households according to type for Kazakhstan and East-Kazakhstan region, 1999



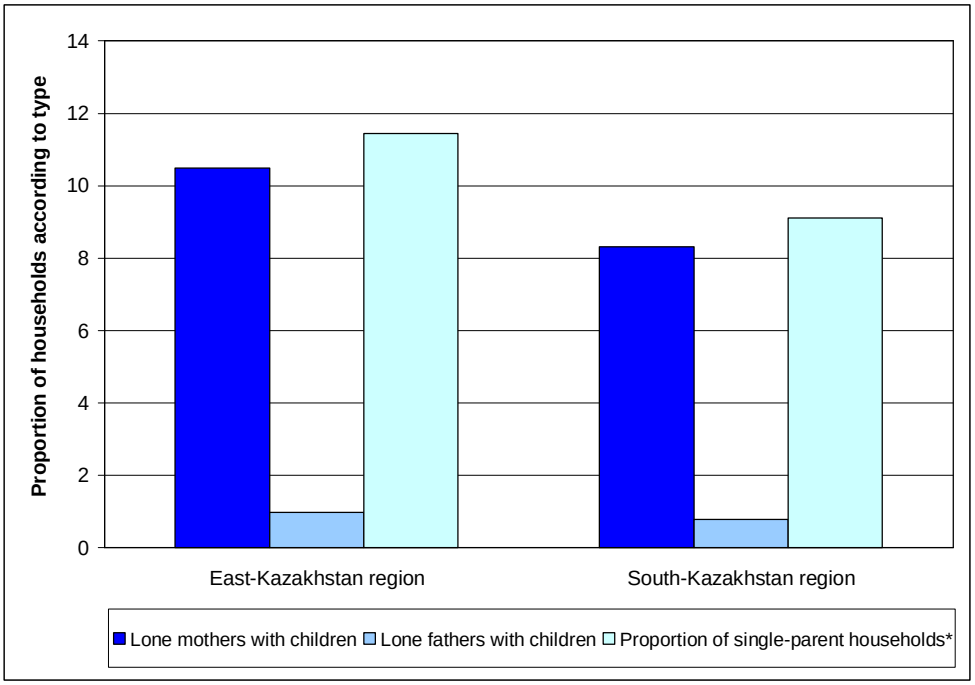
* Proportion of single-parent household = Lone mothers with children + Lone fathers with children

Source: Kazakhstan statistical office

Figure 3 shows the percentage of single-parent households in Kazakhstan and in the East-Kazakhstan

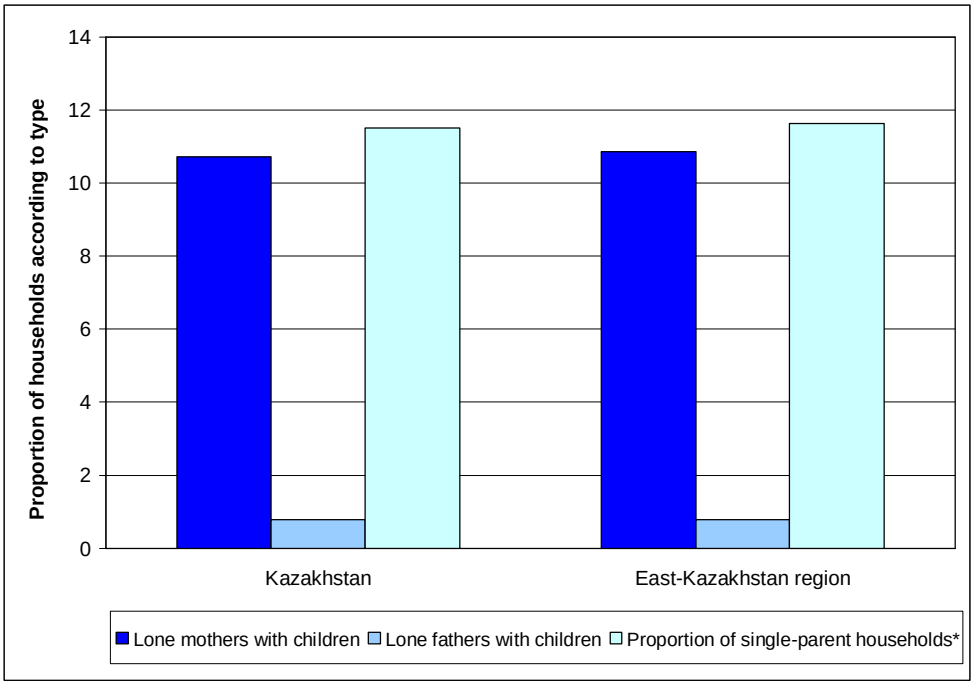
region. There are not such big differences between Kazakhstani and regional single-parent households. However, a big difference exists between the types of households. There is a higher share of mothers with children, than fathers.

Figure 4. Proportion (%) of single-parent households from the total number households according to type for East and South-Kazakhstan regions, 1999



Source: Kazakhstan statistical office
* Proportion of single-parent household = Lone mothers with children + Lone fathers with children

Figure 5. Proportion (%) of single-parent households with children under the age 18 from the total number of households with children for Kazakhstan and East-Kazakhstan region, 1999

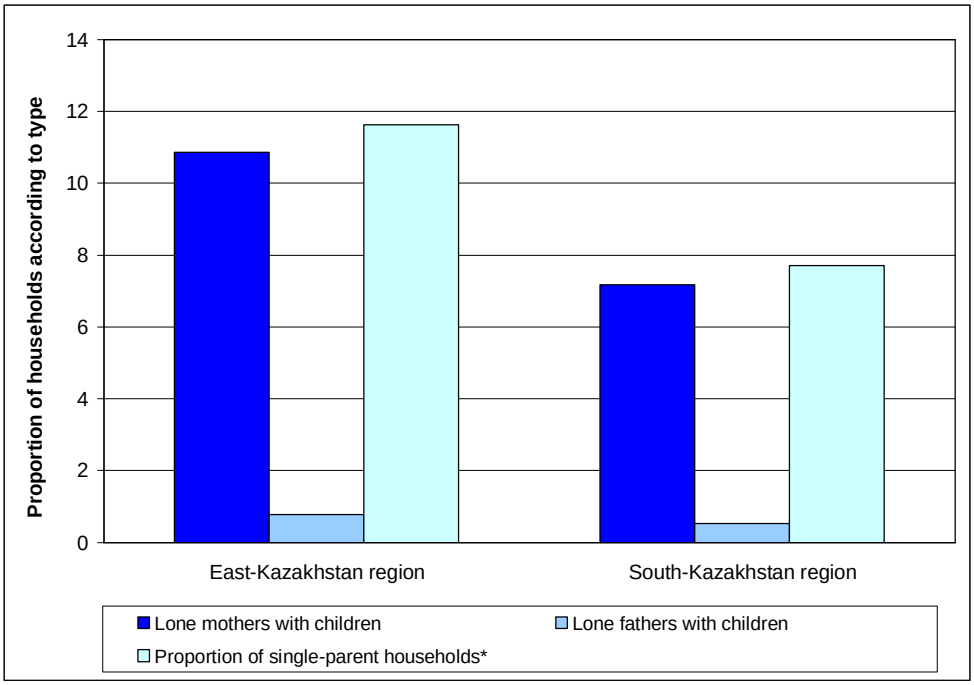


* Proportion of single-parent household with children= Lone mothers with children + Lone fathers with children

Source: Kazakhstan statistical office

Another situation is represented in the graphical view in Figure 4. There is a comparative regional differentiation of households according to type in the East-Kazakhstan region and the South-Kazakhstan region. Notably that there is a pattern of very traditional family behavior. As shown in Figure 4 there is a higher percentage of one-parent households in the East-Kazakhstan than in the South-Kazakhstan region. The difference is almost 3% in the total. The distribution of single-parent households with children under the age of 18 is also important for this analysis. Figure 5 represents the share of single-parent households with children under the age of 18 in Kazakhstan and the East-Kazakhstan region. There are not such big differences in the East-Kazakhstan regional proportion of such kind of household from Kazakhstani one. While the next Figure 6 shows big differences between two regions: East and South. The proportion of single mothers with children under the age of 18 is higher in the East-Kazakhstan region (11%), whereas in the South-Kazakhstan region the share of single mothers with children is 7%.

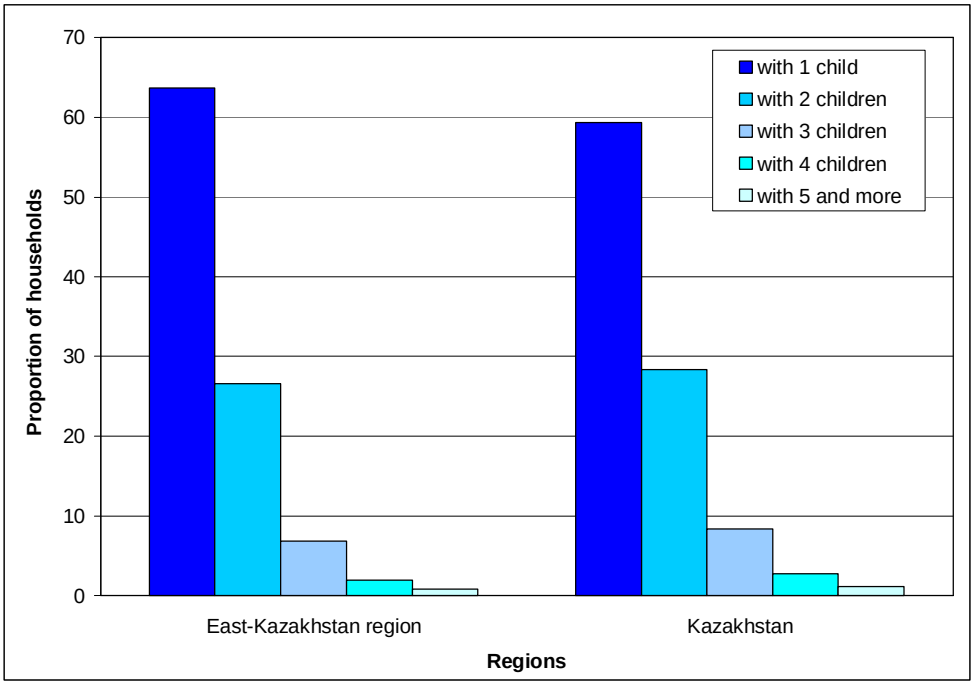
Figure 6. Proportion (%) of single-parent households with children under the age 18 from the total number of households with children for East-Kazakhstan and South-Kazakhstan regions, 1999



Source: Kazakhstan statistical office

In the East-Kazakhstan region there is a high proportion of single-parent households with one child and it is even higher than in Kazakhstan as a whole. There difference is not so apparent regarding the percentage of other categories of lone-parent households (with two and more children).

Figure 7. Proportion (%) of households according to number of children, 1999



Source: Kazakhstan statistical office

Table 9 shows the distribution of women in Kazakhstan living in households according to marital status. More than half of the women were legally married. The share of the divorced widowed and of those who are not living with a partner is significantly lower by comparison.

Table 9. Households women by marital status, 1999

Marital status	Weighted percentage	Weighted number
Single	23.5	885
Married	64.0	2,413
Cohabited	2.5	94
Widowed	2.9	108
Divorced	5.4	204
Separated	1.8	67

Note: Weights from the survey
Source: DHS survey results

Thus, in the course of the 1999 Demographic Health Survey the information was collected on the social and demographic characteristics of members and visitors of each identified housing estate. The housing estate members were those who lived together, shared meals and ran housekeeping. The people indicated as visitors were those who weren't members of a housing estate but spent a night there before the interview. The frequency of households with one-parent families is very high in the East-Kazakhstan region compared with the South-Kazakhstan region and more especially with one child; there is a majority of households with children who live with their mother, whereas their father lives in another housing estate. The percentage of one-parent families prevails more in cities than in villages where the

traditional type of households has remained; essentially the children live with both parents. Also it should be noted that the household classification used in the given research is very close to the census typology, adding the fact that the data is presented in a more detailed way than in the 1999 population census.

The research presents the current situation of one-parent household distribution in the territory of Kazakhstan and in the East-Kazakhstan region. Due to the limitations of statistical data on certain social demographic characteristics, it became necessary to give a more detailed evaluation of information on extramarital birth levels, divorce rates and widowhood.

Chapter 4

Family trends and patterns in the East-Kazakhstan region

4.1 Trends in extra-marital fertility, divorce and widowhood based on statistical data

In the third chapter an examination into the tendencies connected with the appearance of one-parent families and tendencies in extramarital birth notably, marriage dissolution trends (widowhood and divorce) will be carried out. Suggestions and conclusions in the given chapter will mainly be based on available statistical data concerning the East-Kazakhstan region.

According to current statistical data, the East-Kazakhstan region with the center in Ust-Kamenogorsk city, makes up a significantly wide territory (283.3 thousand sq. km) which starting from 1997 has included the territory of the neighboring Semipalatinsk region with the center in Semipalatinsk city. The third chapter will show comparative tables and schedules of the data on the census results of 1989 and 1999. Thereby it should be noted that in 1989, the East-Kazakhstan region had completely different administrative borders compared to those in 1999. Up to January 1, 1997 the area of the East-Kazakhstan region included 6 cities and 11 districts. The Semipalatinsk region included 3 cities and 13 districts. In compliance with the 1997 decree of the President of the Republic of Kazakhstan "On further measures of improvement of the administrative territorial system of the Republic of Kazakhstan" the Semipalatinsk region was integrated into the East-Kazakhstan region. Nowadays after conducted reorganizations, the East-Kazakhstan region includes 10 cities, 15 districts and 19 administrative units. The change of administrative borders significantly influenced the comparability of census data between 1989 and 1999. Therefore, the data in the present analysis of the two censuses from 1989 and 1999 were adapted to the current borders of East-Kazakhstan region. Thus the census results from 1989 were summarized in two regions: East-Kazakhstan region and Semipalatinsk region. In addition it should be noted that there is some difference traced between trends happening in urban and rural area in the East-Kazakhstan region and in Kazakhstan as well. This is due to the existing difference in the levels of economic, social and cultural development and there is a big difference in the mentality and psychological

thinking of city dwellers and villagers. If the cities of East-Kazakhstan present industrial centers (mainly nonferrous metallurgy), then the villages of East-Kazakhstan are generally presented as agrarian places and this fact has an impact on the standard of living of the cities and villages. In addition it's easier to get a highly-paid job in the cities than in the rural area. Moreover, the cities are characterized by easy accessibility to culture, entertainment, medical (the usage of high technology) and social services. Thereby it is considered as necessary to draw attention to the given difference between the city and the village in extramarital birth and marriage dissolution trends.

From Figures 8 and 9 it is obvious that the population structure according to marital status and age in 1989 differs from the same structure in 1999. The number of men and women who have never been married increased in the adult age group, for example, if there was no such category in the age groups of 40-45 and 45-49 in 1989, later in 1999 the number of men and women who have never been married accounted for 10% in the 40-49 age groups. In addition, the number of widowed women also increased in the adult age groups by 1999, which was connected to the death rate increase among men older than 45 years.

Figure 8. Age structure by sex and marital status in East Kazakhstan region, 1989

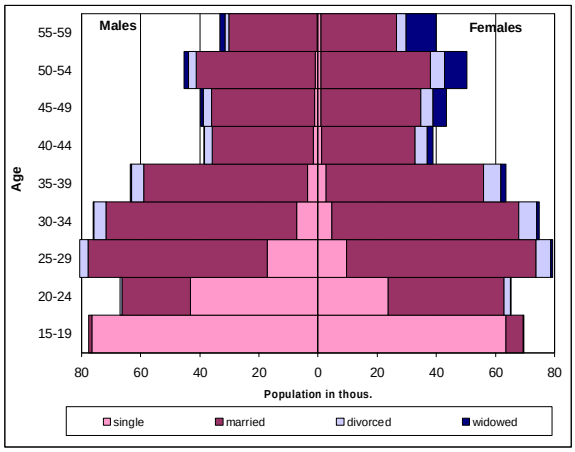
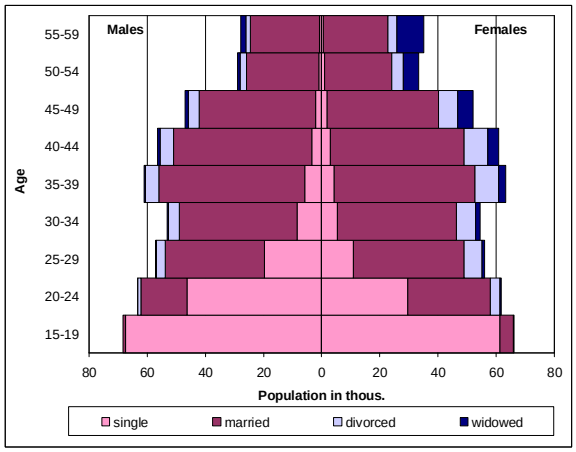


Figure 9. Age structure by sex and marital status in East Kazakhstan region, 1999



Source: Kazakhstan statistical office

Table 10. Age structure by sex and marital status East-Kazakhstan region, 1989, 1999 (in %)

Age	Males (in %)				Females (in %)			
1989	**Single**	**Married**	**Divorced**	**Widowed**	**Single**	**Married**	**Divorced**	**Widowed**
15-19	97.7	1.8	0.0	0.0	88.4	10.8	0.3	0.1
20-24	63.9	34.3	1.1	0.0	36.3	59.7	3.3	0.3
25-29	21.2	75.0	3.5	0.1	12.3	80.6	6.2	0.7
30-34	9.4	84.9	5.2	0.3	6.3	84.2	8.0	1.4
35-39	5.6	87.4	6.5	0.5	4.2	83.7	9.3	2.8

Table 10 continued

40-44	3.9	88.3	6.8	0.8	3.2	81.2	10.3	5.2
45-49	2.9	88.2	6.9	1.9	2.1	77.7	9.9	10.2
50-54	1.9	89.1	5.8	3.1	1.9	73.6	9.3	15.1
55-59	1.2	89.4	4.2	5.1	2.3	64.0	8.3	25.3
60-69	0.8	87.5	2.9	8.6	3.1	48.3	6.8	41.6
1999	**Single**	**Married**	**Divorced**	**Widowed**	**Single**	**Married**	**Divorced**	**Widowed**
15-19	98.3	1.7	0.0	0.0	90.9	8.6	0.4	0.1
20-24	73.0	25.3	1.5	0.1	47.9	46.0	5.3	0.8
25-29	34.3	60.0	5.3	0.3	19.6	67.7	10.9	1.8
30-34	16.0	76.4	7.1	0.5	10.1	75.0	12.1	2.8
35-39	9.5	82.1	7.7	0.8	6.7	76.4	12.8	4.1
40-44	6.1	84.1	8.5	1.3	5.0	75.5	13.3	6.2
45-49	4.5	85.2	8.3	2.0	3.8	73.4	10.0	12.8
50-54	3.3	85.9	7.5	3.3	3.1	69.2	11.5	16.2
55-59	2.3	85.2	6.1	6.4	1.9	63.0	8.5	26.6
60-69	1.3	83.7	3.8	11.2	1.9	50.8	40.9	6.4

Source: Kazakhstan statistical office

The same trend is seen in the population structure by marital status and age in the urban and rural area. The Figures 10, 11, 12 and 13 reflect the difference not only between the two census years 1989 and 1999, but the differences regarding the place of population's residence. The major part of the able-bodied population is more concentrated in cities than in villages. This is due to the fact that young rural people migrate to cities seeking high-paid jobs and a high standard of living. Villagers by birth also rush to cities to get professional education and afterwards they stay there forever. The population's urbanization in 1989 doesn't reach a high scale, whereas in 1999 it is more obvious. In addition, according to the structure of population in 1989 for the rural area it is possible to say that the dominating categories at of one middle age group are "married" and "divorced" compose a small percent compared to "widowed". Whereas in 1999 changes can be seen to the rural population structure: where the percentage of divorced and widowed increased not only among the people of middle age (35-45 years old), but also among the people within the younger age group category (20-30).

Figure 10. Age structure by sex and marital status in urban areas of East Kazakhstan region, 1989

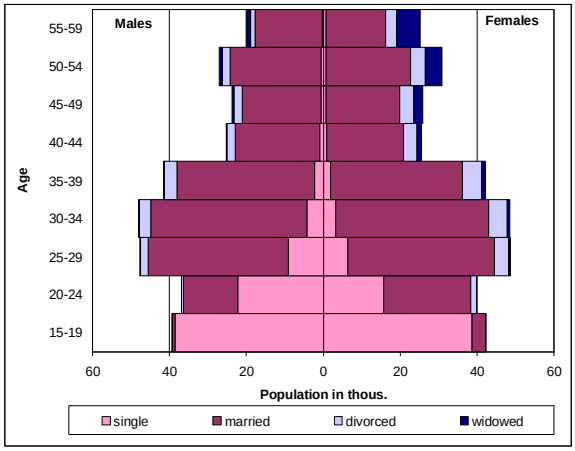
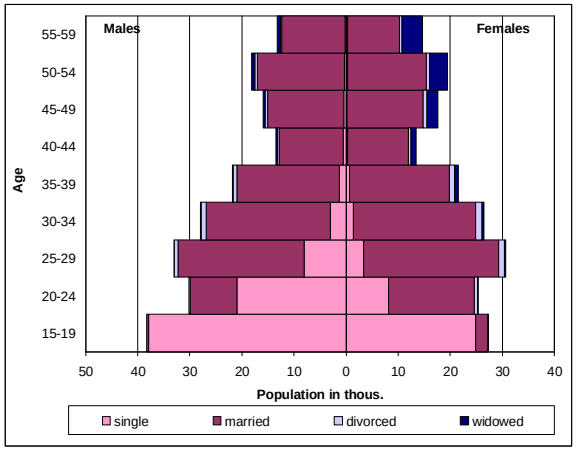


Figure 11. Age structure by sex and marital status in rural areas of East Kazakhstan region, 1989



Source: Kazakhstan statistical office

Table 11. Age structure by sex and marital status in urban and rural areas of East-Kazakhstan region, 1989

Males	**Singles**		**Married**		**Divorced**		**Widowed**	
1989	**Urban**	**Rural**	**Urban**	**Rural**	**Urban**	**Rural**	**Urban**	**Rural**
15-19	97.1	98.3	2.3	1.2	0.1	0.0	0.0	0.0
20-24	59.8	69.0	38.1	29.6	1.4	0.6	0.0	0.0
25-29	19.1	24.2	76.2	73.1	4.3	2.2	0.1	0.2
30-34	8.7	10.7	84.5	85.6	6.4	3.3	0.3	0.3
35-39	5.4	5.8	86.0	89.9	8.0	3.7	0.5	0.5
40-44	3.9	4.0	86.7	91.3	8.4	3.8	0.9	0.8
45-49	2.8	3.0	86.0	91.4	9.2	3.5	1.8	2.1
50-54	2.0	1.8	87.2	92.0	7.6	3.0	3.1	3.0
55-59	1.4	1.1	87.9	91.7	5.5	2.2	5.2	5.0
60-69	0.8	0.9	86.6	89.0	3.8	1.5	8.6	8.4
Females	**Singles**		**Married**		**Divorced**		**Widowed**	
1989	**Urban**	**Rural**	**Urban**	**Rural**	**Urban**	**Rural**	**Urban**	**Rural**
15-19	89.0	87.4	10.2	12.0	0.3	0.3	0.1	0.1
20-24	39.1	31.9	56.5	64.6	3.8	2.6	0.2	0.3
25-29	13.2	10.8	78.2	84.5	7.8	3.7	0.7	0.8
30-34	6.6	5.6	82.0	88.4	10.0	4.4	1.3	1.6
35-39	4.6	3.4	81.0	89.0	11.8	4.3	2.6	3.2
40-44	3.6	2.3	78.1	87.1	13.6	4.0	4.6	6.5

Table 11 continued

45-49	2.6	1.4	74.2	82.9	14.2	3.6	9.0	12.0
50-54	2.2	1.4	70.9	77.8	12.9	3.4	13.8	17.2
55-59	2.5	1.9	62.0	67.5	11.0	3.6	24.3	26.8
60-69	3.2	2.9	46.9	50.8	8.8	3.1	40.9	42.9

Source: Kazakhstan statistical office

The structure of urban population from 1999 shows a noticeable increase in the number of men and women who have never been married compared to 1989. At the same time the population growth of the given category, not only at a relatively young age (15-29) but in middle age (30-45) as well as among older (45-70) can be traced back. The percentage of widowed men and women remains particularly high in the senior age group, which is connected to a shorter life expectancy for men.

Figure 12. Age structure by sex and marital status in urban areas of East Kazakhstan region, 1999

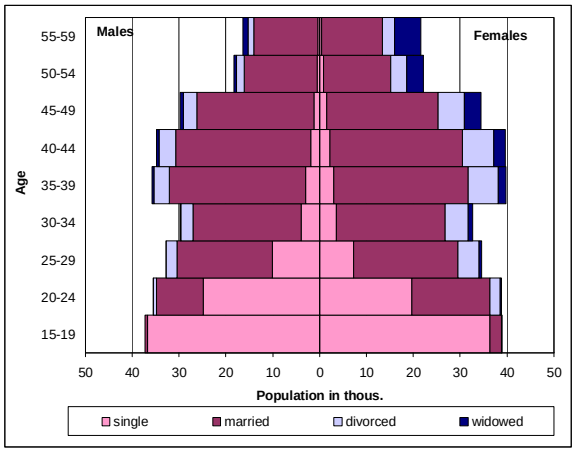
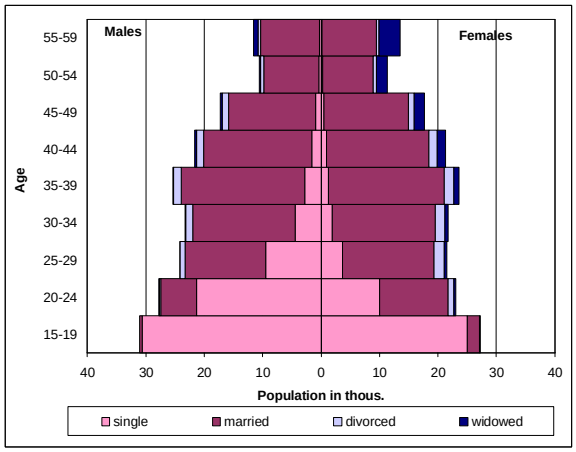


Figure 13. Age structure by sex and marital status in rural areas of East Kazakhstan region, 1999



Source: Kazakhstan statistical office

Table 12. Age and sex structure by marital status in urban and rural areas of East-Kazakhstan region, 1999

Males	**Singles**		**Married**		**Divorced**		**Widowed**	
1999	**Urban**	**Rural**	**Urban**	**Rural**	**Urban**	**Rural**	**Urban**	**Rural**
15-19	98.1	98.5	1.8	1.5	0.0	0.0	0.0	0.0
20-24	69.9	77.0	28.1	21.8	1.9	1.1	0.1	0.1
25-29	30.7	39.3	62.3	57.0	6.7	3.5	0.3	0.2
30-34	13.5	19.2	77.4	75.2	8.6	5.2	0.6	0.4
35-39	8.2	11.2	81.5	82.9	9.4	5.3	0.8	0.7
40-44	5.5	7.2	82.9	85.9	10.2	5.8	1.4	1.1

Table 12 continued

45-49	4.1	5.1	84.0	87.2	9.7	5.9	2.2	1.8
50-54	2.9	4.0	84.5	88.3	9.1	4.9	3.5	2.8
55-59	2.1	2.5	83.6	87.4	7.6	4.0	6.6	6.0
60-69	1.3	1.3	82.7	85.2	4.7	2.3	11.3	11.2
Females	**Singles**		**Married**		**Divorced**		**Widowed**	
1999	**Urban**	**Rural**	**Urban**	**Rural**	**Urban**	**Rural**	**Urban**	**Rural**
15-19	91.9	89.3	7.6	10.2	0.4	0.4	0.1	0.1
20-24	50.5	43.5	43.1	50.8	5.8	4.5	0.6	1.1
25-29	21.1	17.3	64.4	73.0	12.8	7.8	1.7	1.9
30-34	11.1	8.5	70.9	81.2	15.2	7.5	2.8	2.7
35-39	7.6	5.3	72.1	83.7	16.1	7.2	4.2	3.9
40-44	5.6	4.1	71.5	82.8	16.7	7.0	6.2	6.2
45-49	4.3	2.8	69.2	81.6	16.4	5.8	10.1	9.9
50-54	3.6	2.1	65.2	76.9	15.1	4.4	16.0	16.6
55-59	2.4	1.1	59.6	68.5	11.9	3.2	26.2	27.2
60-69	2.2	1.4	48.7	54.5	8.5	2.4	40.5	41.7

Source: Kazakhstan statistical office

The structure of the active population by marital status is of similar interest. Table 13 shows the proportion of employed males and females by age in the East-Kazakhstan region. The share of employed males is higher than females in all age groups. The proportion of males in the labor force is almost twice as high as share of females for age groups: 15-24 and from 50 to 72. The reason for such a situation is related to education, the biggest proportion of women at age 15-24 is still studying at universities, while a large number of men are working.

Table 13. The labor force participation in the East-Kazakhstan region by age and sex, 1999

Age	**Males**		**Females**	
	In abs. numbers	In %	In abs. numbers	In %
15-19	8732	70.0	3744	30.0
20-24	31977	60.7	20721	39.3
25-29	37057	58.8	25930	41.2
30-34	37229	57.0	28043	43.0
35-39	43907	54.7	36389	45.3

Table 13 continued

40-44	40748	52.7	36614	47.3
45-49	33381	53.2	29380	46.8
50-54	18227	64.2	10159	35.8
55-59	5958	72.2	2298	27.8
60-64	2106	68.0	989	32.0
65-72	654	63.8	371	36.2

Source: Kazakhstan statistical office

Table 14 shows the share of employed and unemployed population by marital status and age in the East-Kazakhstan region. The proportion of married men and women among the employed population is fairly high in most age groups except the age groups younger than 25. The share of population without a work place among single and divorced men is higher in comparison with employed single and divorced males. While the proportion of employed married and widowed males is higher than unemployed married and widowed men. Obviously, it is connected with the increase in economical responsibility for married and widowed men, which is expressed with the family's and children's appearance. However, it should be noted, that single, divorced and widowed women are more likely to work, while a half of married females mostly stay at home. This is also due to the increases in economical needs, which is becoming stronger without a husband. Moreover, this situation, when lone woman should work instead of upbringing of the children negatively affects on the process of the giving birth to the next children.

Table 14. Age structure by marital status of employed and unemployed population, East- Kazakhstan region

	Employed population				**Unemployed population**			
	Singles	**Married**	**Divorced**	**Widowed**	**Singles**	**Married**	**Divorced**	**Widowed**
				Males				
15-19	12.3	47.9	36.4	25.0	87.7	52.1	63.6	75.0
20-24	44.1	69.4	47.9	55.9	55.9	30.6	52.1	44.1
25-29	49.5	75.4	49.9	55.8	50.5	24.6	50.1	44.2
30-34	50.1	76.6	48.5	56.5	49.9	23.4	51.5	43.5
35-39	46.4	77.2	48.3	58.0	53.6	22.8	51.7	42.0
40-44	43.9	77.0	48.4	56.1	56.1	23.0	51.6	43.9
45-49	43.0	75.4	46.3	55.9	57.0	24.6	53.7	44.1

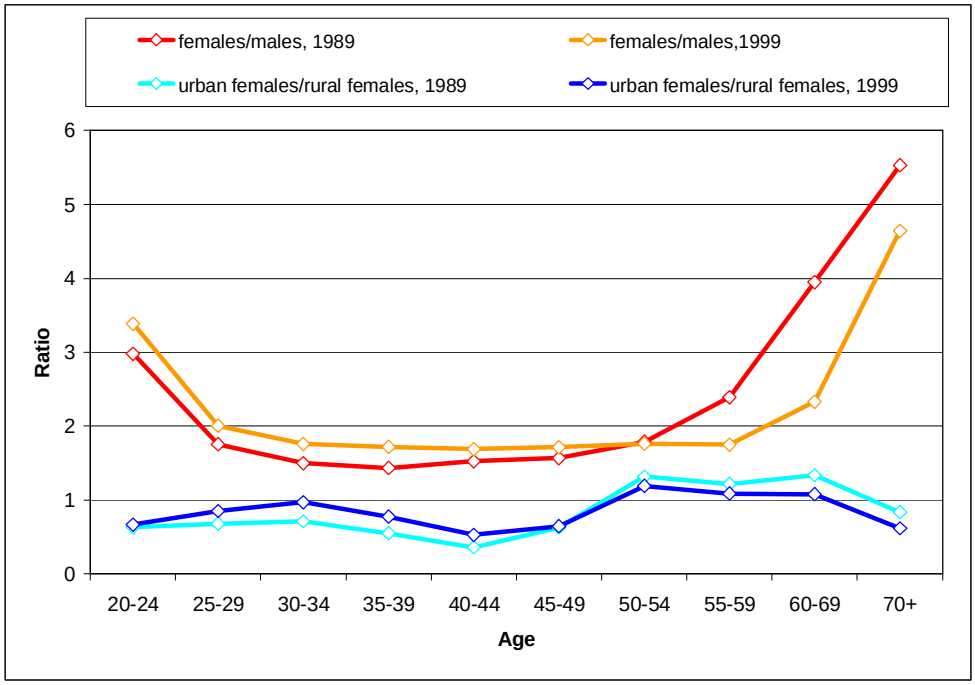
Table 14 continued

50-54	34.4	66.5	42.0	48.0	65.6	33.5	58.0	52.0
55-59	11.2	22.7	16.0	12.2	88.8	77.3	84.0	87.8
				Females				
15-19	4.9	15.4	17.7	13.9	95.1	84.6	82.3	86.1
20-24	34.6	31.5	41.1	33.9	65.4	68.5	58.9	66.1
25-29	52.9	43.1	54.7	42.7	47.1	56.9	45.3	57.3
30-34	57.0	49.2	60.7	53.6	43.0	50.8	39.3	46.4
35-39	60.0	55.5	66.0	60.6	40.0	44.5	34.0	39.4
40-44	62.9	58.3	68.7	63.1	37.1	41.7	31.3	36.9
45-49	57.4	54.5	64.9	59.2	42.6	45.5	35.1	40.8
50-54	39.6	29.5	37.8	27.0	60.4	70.5	62.2	73.0
55-59	12.8	6.1	10.5	5.9	87.2	93.9	89.5	94.1

Note: calculation from the total number of population by marital status in the corresponding age group
Source: Kazakhstan statistical office

Figure 14 demonstrates the ratio between divorced men and women in the 1989 and 1999 census results in the East-Kazakhstan region. Notably, there are more divorced women than divorced men in the age groups 15-25 and 55-70. Also it should be noted that the number of divorced women in urban areas is higher in comparison with rural females. The ratio of divorced urban/rural females is higher for 1999 in comparison with 1989 at younger ages. But at the same time this ratio for 1999 lower at older ages 45-70+. This crossover of curves is seen from the graph (Figure 14). It could have been caused by increases in the number of divorced women in rural areas in 1999 in comparison with 1989. In the last decade of 20th century villages were completely different from current situation. Later on, in the beginning of 21th century the crisis of family and family transformation processes in villages of the East-Kazakhstan region proceeded faster. This expressed into increase in single and divorced people and decrease in married population.

Figure 14. Ratios of divorced people in the East-Kazakhstan region 1989, 1999

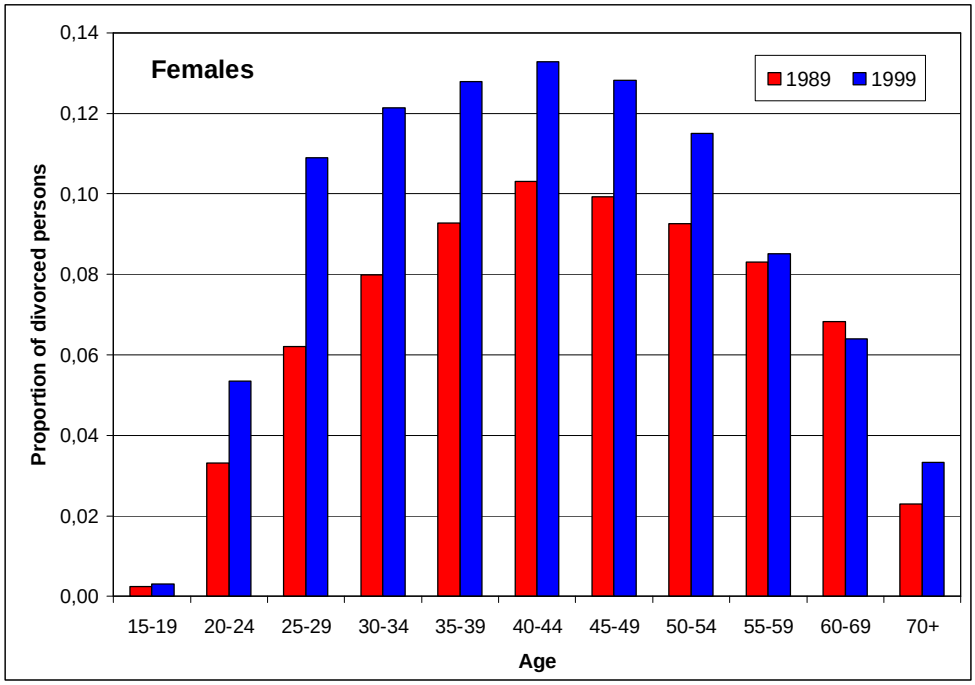


Source: Kazakhstan statistical office

Note: There are only a few cases of divorces at age 15-19

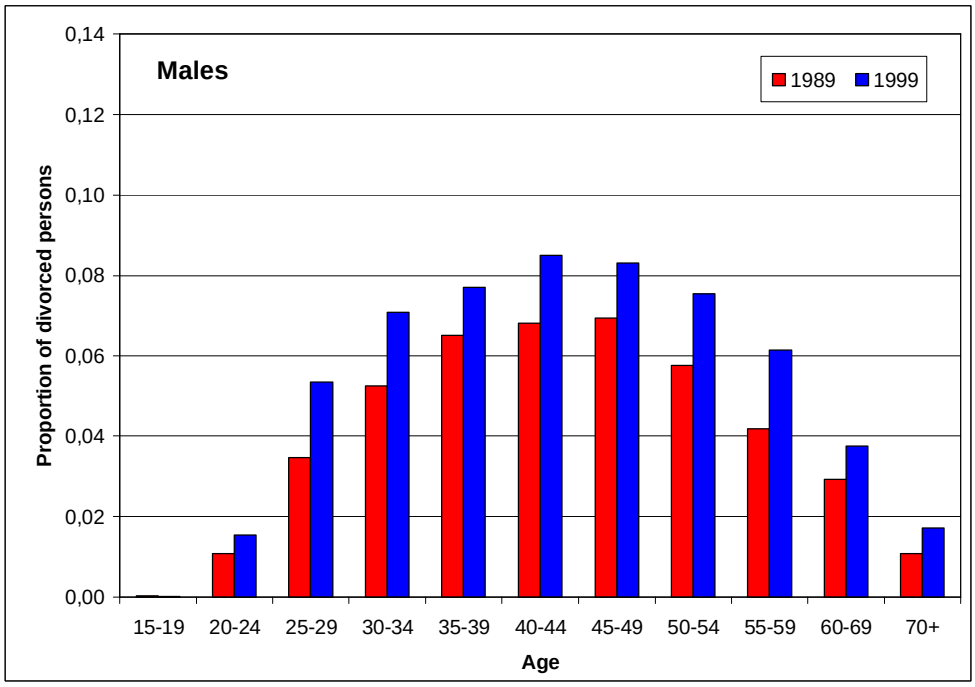
For example Figures 15 and 16 demonstrate the proportions of divorced men and women by the 1989 and 1999 census results in the East-Kazakhstan region. It can be observed that there are more divorced women than divorced men and it is firstly related to the fact that divorced men get married more often than divorced women. In addition the percentage increase of divorced men and women in 1999 compared to 1989 is clearly acknowledged. For men and women as well the highest percentage of divorced falls to the middle age and the peak is in the 40-44 age group.

Figure 15. Proportion of divorced females in the East-Kazakhstan region, 1989, 1999



Source: Kazakhstan statistical office

Figure 16. Proportion of divorced males in the East-Kazakhstan region, 1989, 1999

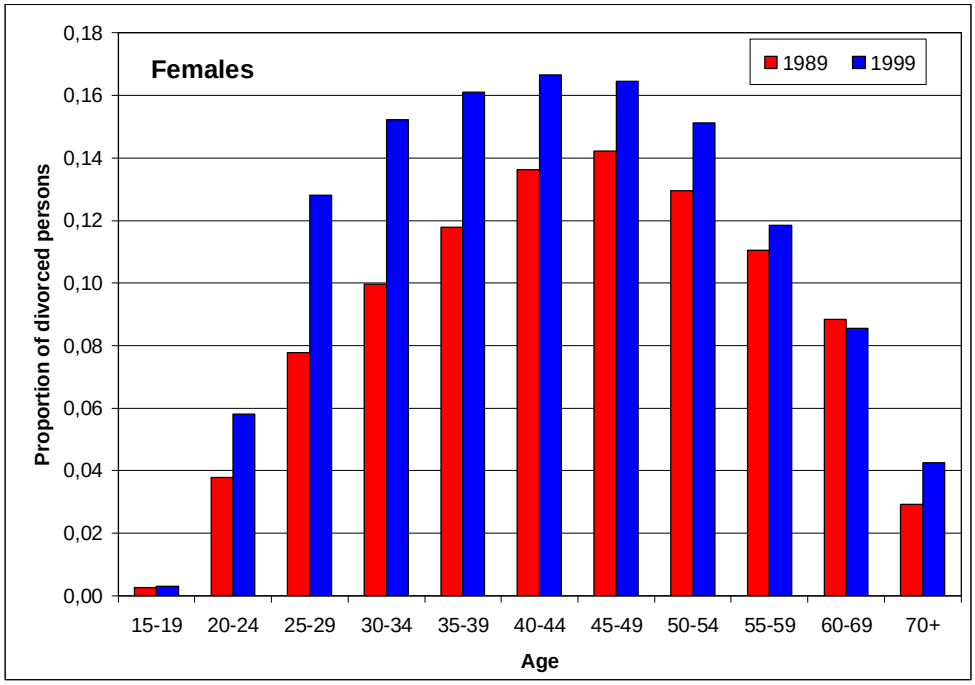


Source: Kazakhstan statistical office

Figures 17 and 18 show the proportion of divorced women in the urban and rural areas. As can be seen from Figure 18, a significant increase in divorced women in the rural area is observed from 1989 to 1999, from 4% to 7%, whereas the share of divorced urban women slightly increases and remains high enough

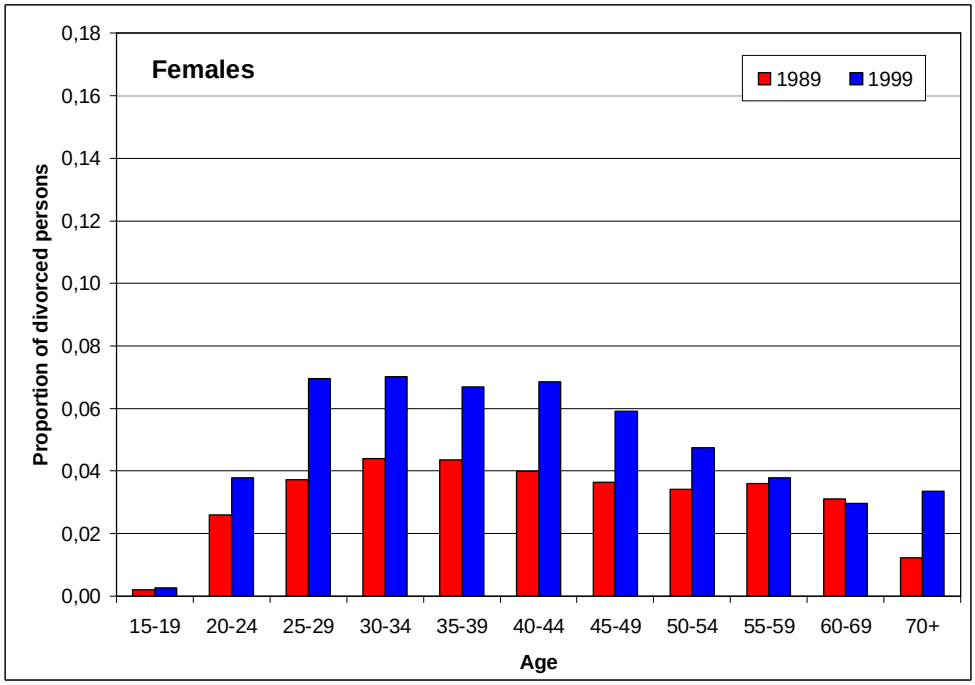
over a the period of a decade.

Figure 17. Proportion of divorced females in the urban areas of East-Kazakhstan region



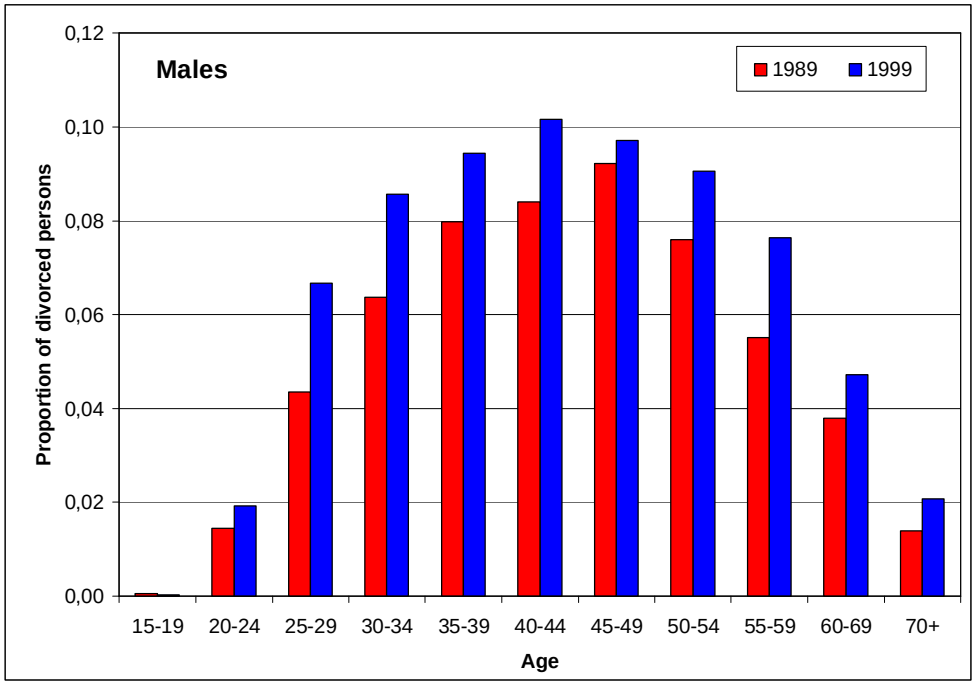
Source: Kazakhstan statistical office

Figure 18. Proportion of divorced females in the rural areas of East-Kazakhstan region



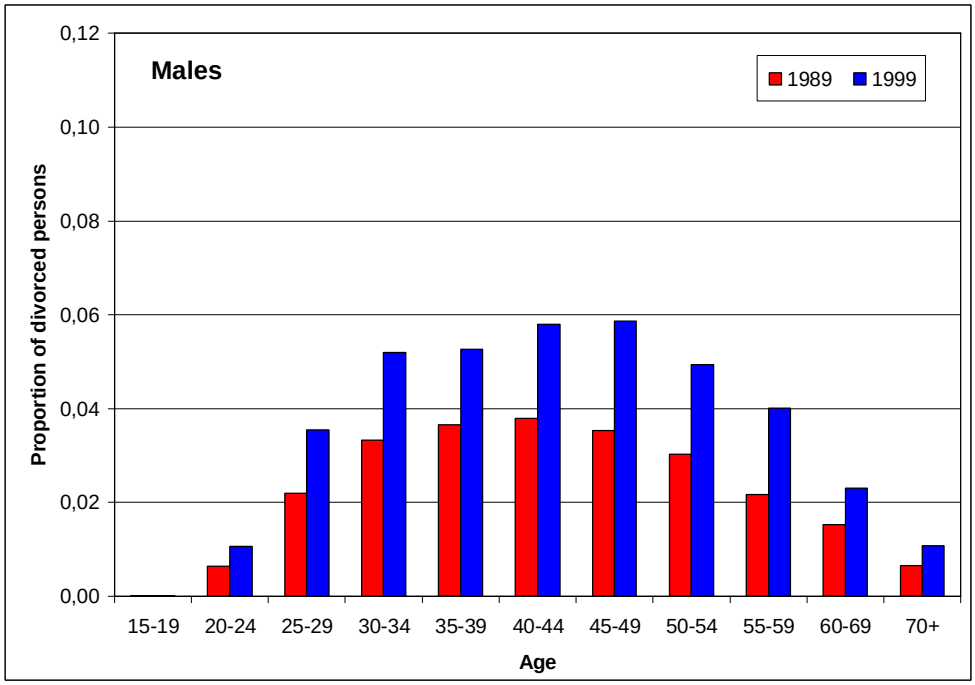
Source: Kazakhstan statistical office

Figure 19. Proportion of divorced males in the urban areas of East-Kazakhstan region



Source: Kazakhstan statistical office

Figure 20. Proportion of divorced males in the rural areas of East-Kazakhstan region

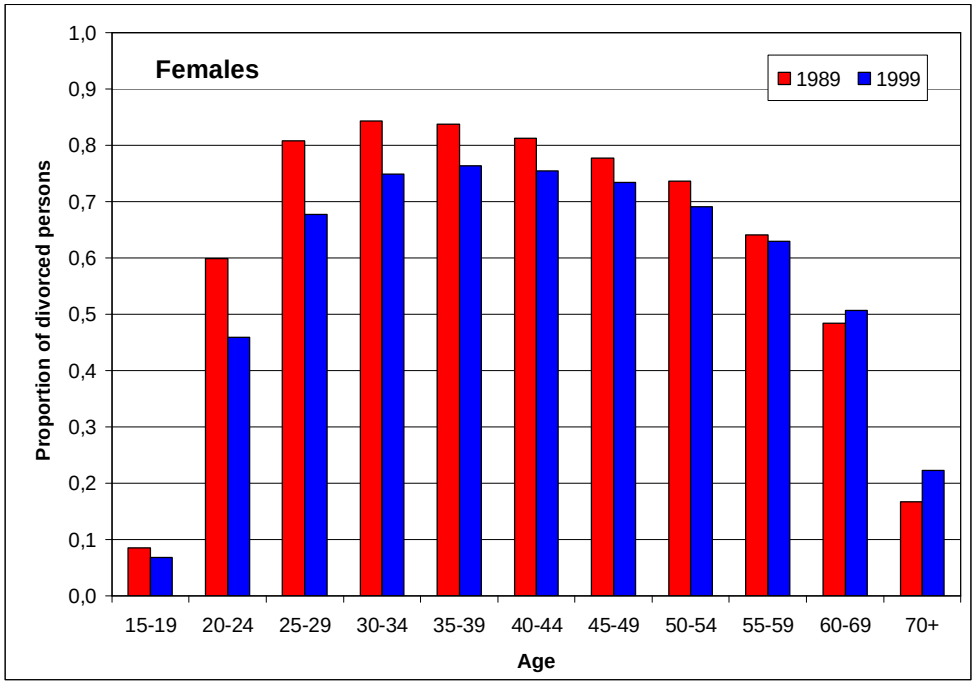


Source: Kazakhstan statistical office

Figures 19 and 20 accordingly reflect the share of divorced men in the urban and rural areas. There is also a significant increase in divorced men in villages and the percentage of divorced urban men increases less but remains high. The inverse process of the decrease in the percentage of married women and married

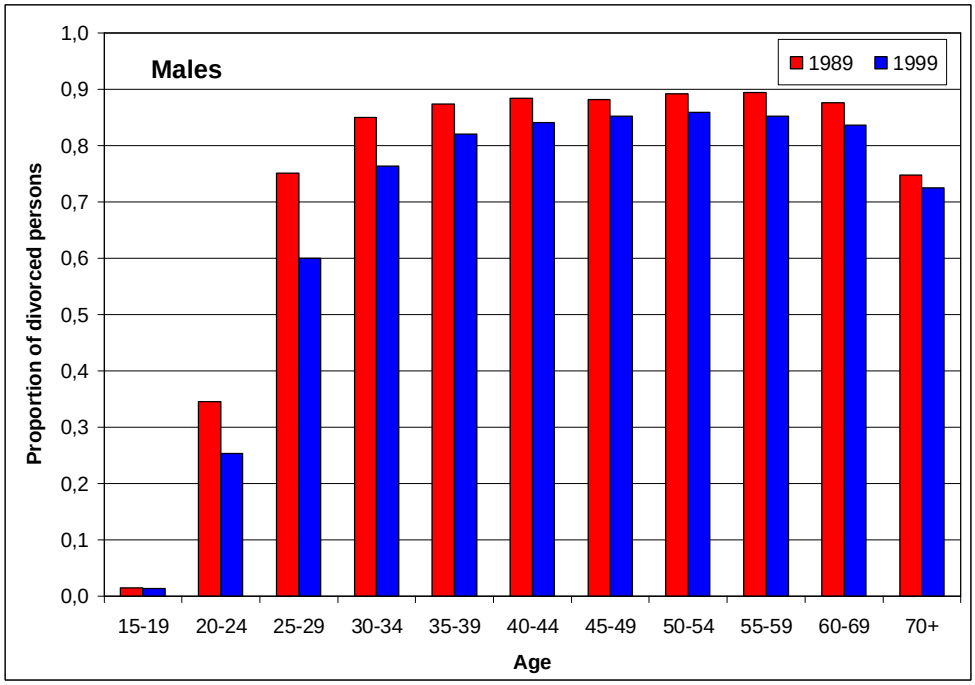
men on the whole in the East-Kazakhstan region is demonstrated in Figures 21 and 22.

Figure 21. Proportion of married women in the East-Kazakhstan region



Source: Kazakhstan statistical office

Figure 22. Proportion of married men in the East-Kazakhstan region

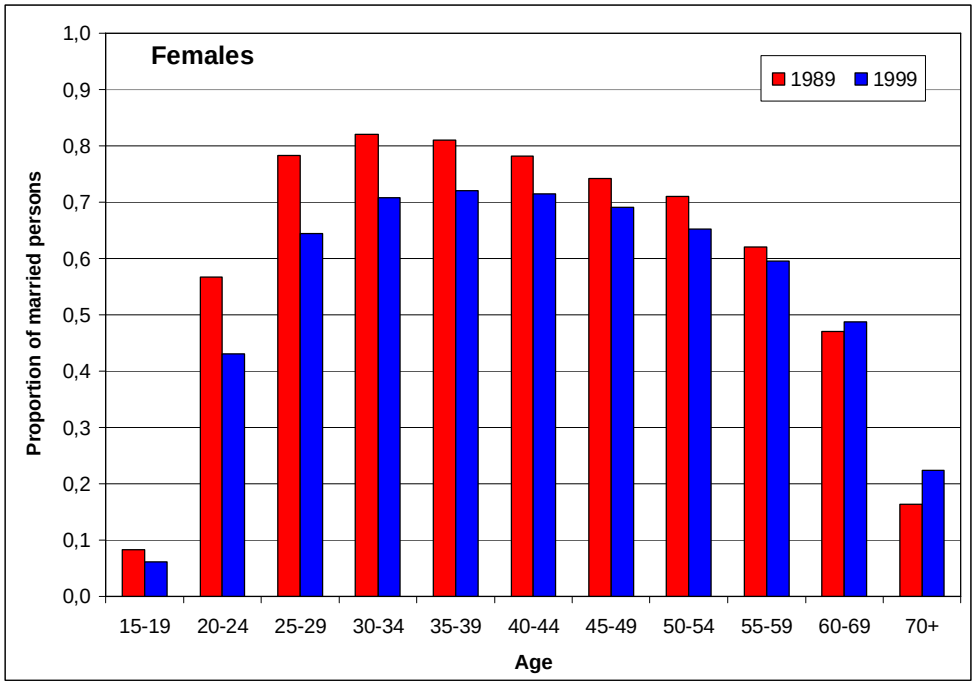


Source: Kazakhstan statistical office

The data underpins a high percentage of married people in the total population of the East-Kazakhstan region in 1989, and then later in 1999 it decreased. To a considerable degree the decrease in married women can be seen in the age groups of 20-24, 25-29 years connected with an increase in marriages at middle age. The highest number of married women is concentrated in the young and middle ages whereas the proportion of married men is distributed equally in all of the age groups. There are also differences between the proportion of men and women by marital status between the urban and rural population.

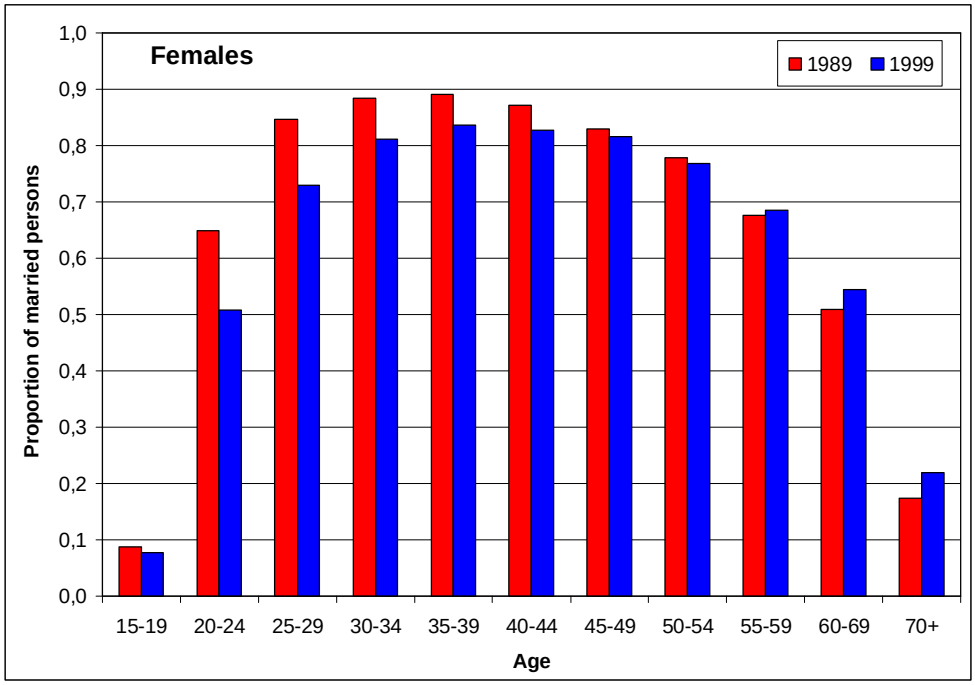
Figures 23 and 24 show the distribution of married urban and rural women by age. The share of married women in the city is lower than in the village but there is a decrease by 1999 compared to 1989. Figures 25 and 26 accordingly reflect the distribution of married men in the city and in the village. There is a slight but constant decrease in the share of married men in the city whereas in the rural area the percentage of married men decreased slightly but remains higher than in the urban one.

Figure 23. Proportion of married women in the urban areas of East- Kazakhstan region



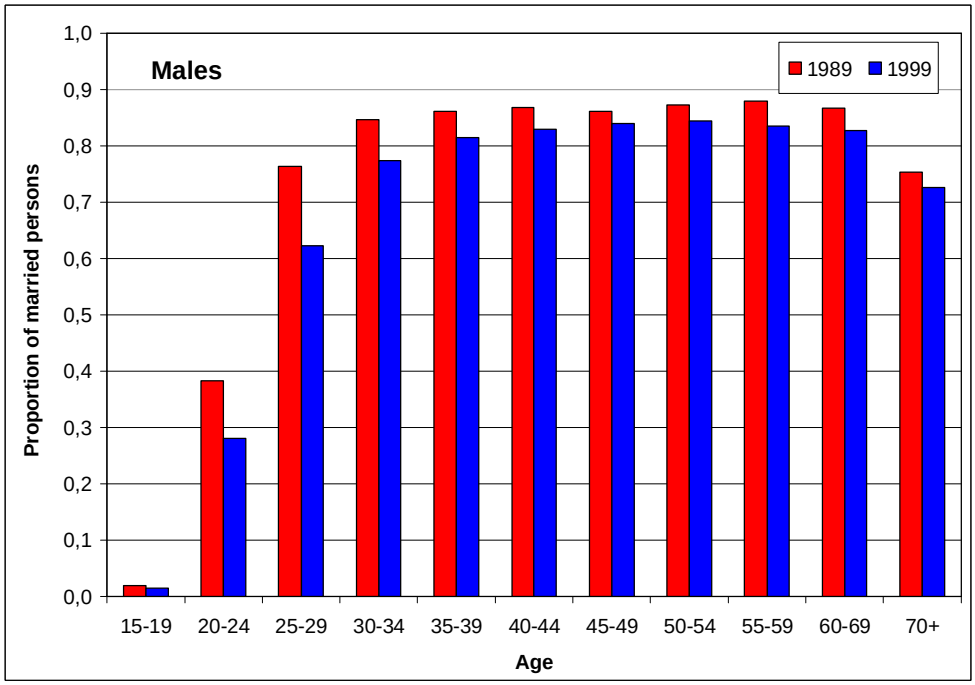
Source: Kazakhstan statistical office

Figure 24. Proportion of married women in the rural areas of East-Kazakhstan region



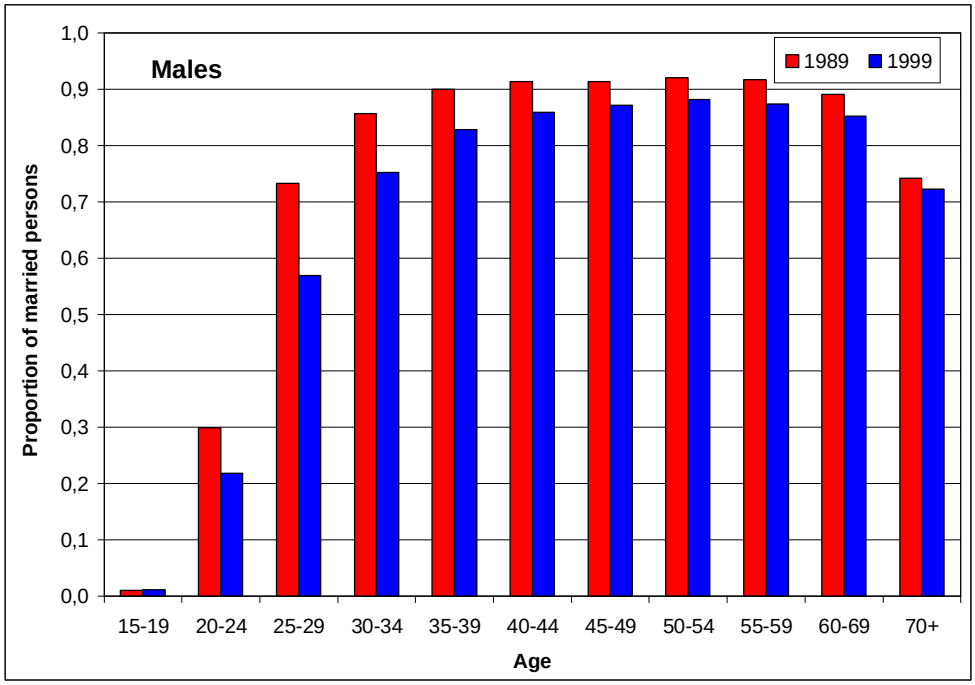
Source: Kazakhstan statistical office

Figure 25. Proportion of married men in the urban areas of East-Kazakhstan region



Source: Kazakhstan statistical office

Figure 26. Proportion of married men in the rural areas of East-Kazakhstan region



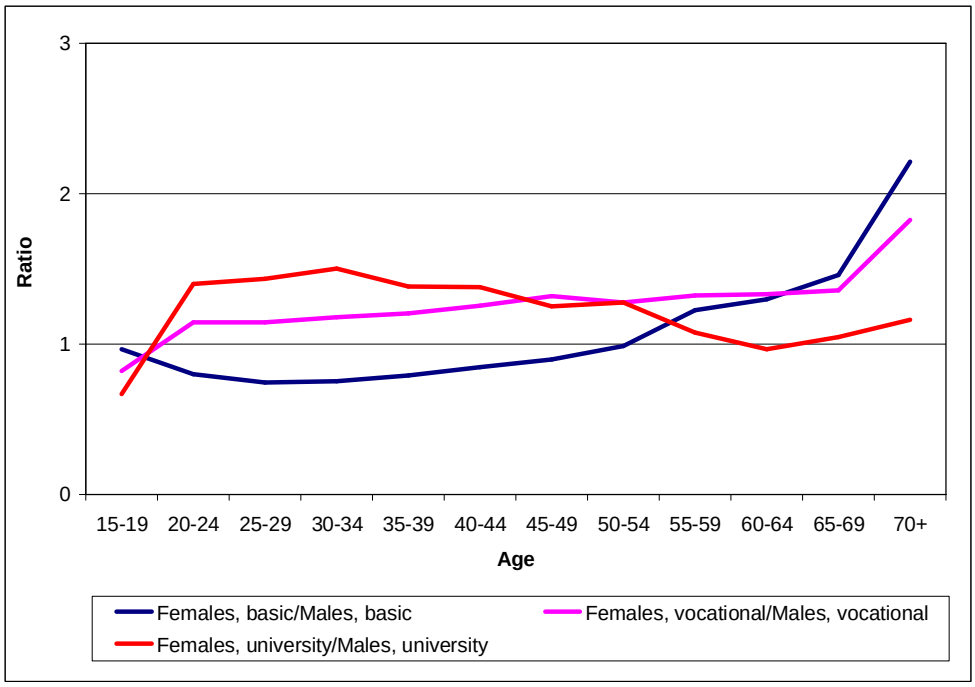
Source: Kazakhstan statistical office

Thus the East-Kazakhstan region as whole, urban and rural areas as well, is characterized by a decrease in the share of married men and women at the period between the two censuses of 1989 and 1999. At the same time, this decrease is expressed sharply in the rural area, whereas in the city it's practically insignificant. In addition, the data highlights an increase in divorced men and women, particularly in the rural area where in spite of this the proportion of divorced people is lower than in the cities. The share of women who have never been married rises in the age groups of 15-19 and 20-24 years by 10% in the urban area and 12% in the rural area. In addition an increase in the percentage of women who have never been married in other age groups by 5-6% in the 10-year period was observed. Let's consider in detail the trends connected with extramarital birth and family dissolution (divorces and widowhood) as they are the main sources of the appearance of one-parent families. First of all, it is necessary to analyze the general social and cultural characteristics of men and women of the East-Kazakhstan region. In connection with the fact that determining the factors of an unmarried woman's decision to give birth to a child as well as the spouses' decision to divorce are the education level, economic activity and level of religiousness of both males and females, thus it is considered necessary to draw attention to this aspect in a more detailed way.

The percentage distributions of women and men by age and education are shown in Figures 27 and 28 accordingly. Approximately the same number of women of the East-Kazakhstan region belonging to the middle age group (25-54) had a high, vocational education in 1999, whereas the majority of men of the same age had basic, vocational education. Younger women (up to the age of 50) have had a higher education than men; and furthermore in the older ages there is higher proportion of women with basic education compared to men. This is due to the fact of low popularity of higher education among men in

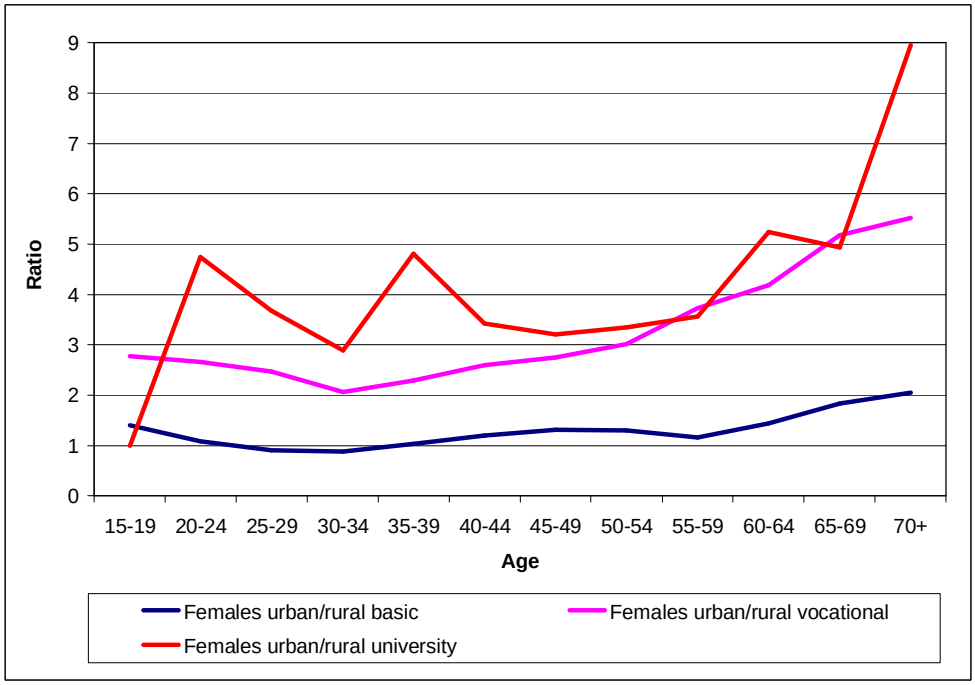
the soviet period. They mostly were employed in the factories and collective farms.

Figure 27. Differences between females/males population by education and age, 1999



Source: Author's calculation

Figure 28. Differences between urban/rural females by education and age, 1999

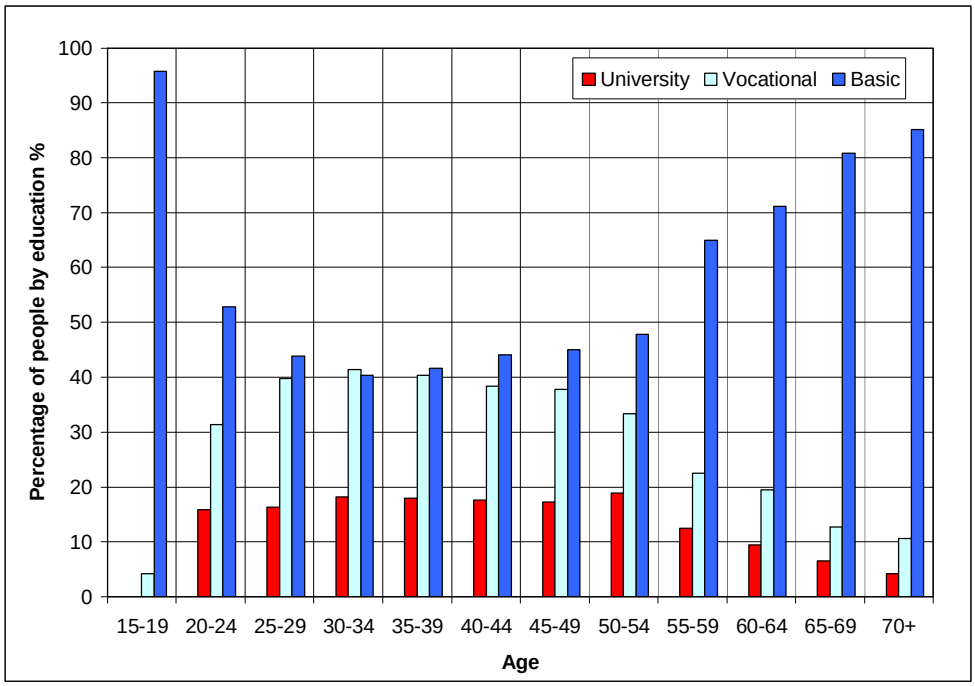


Source: Author's calculation

The percentage of population by age and education is shown in Figures 29, 30. It should be noted that the biggest share of population in the East-Kazakhstan region belongs to the category of population with the

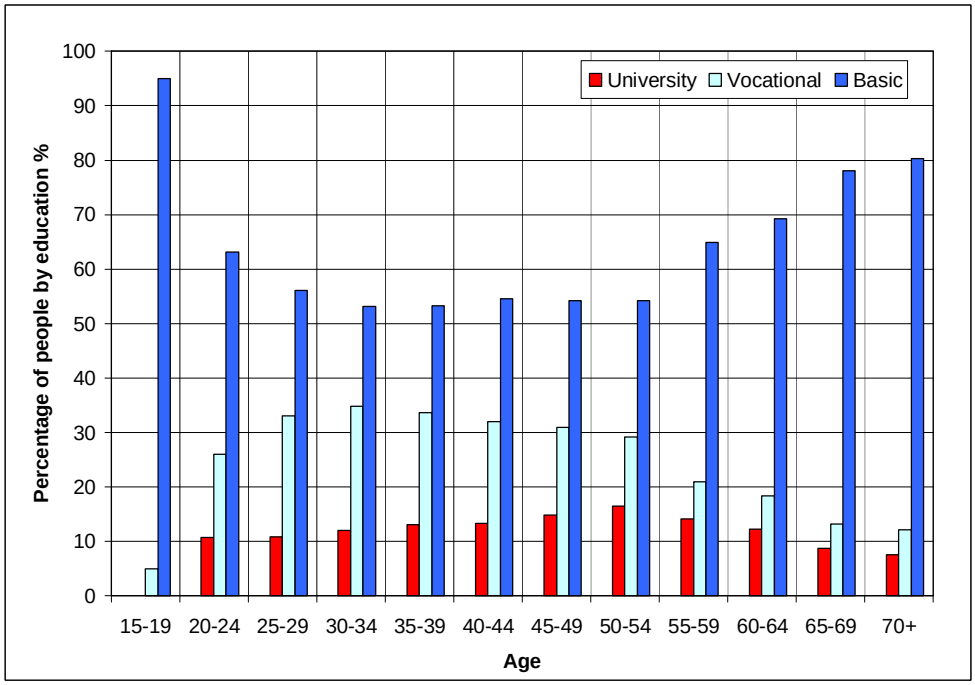
most basic and vocational education, while the percentage of higher educated population remains low. Moreover the difference between males and females by education is very high, as aforementioned.

Figure 29. Distribution of women by education in the East- Kazakhstan region



Source: Kazakhstan statistical office

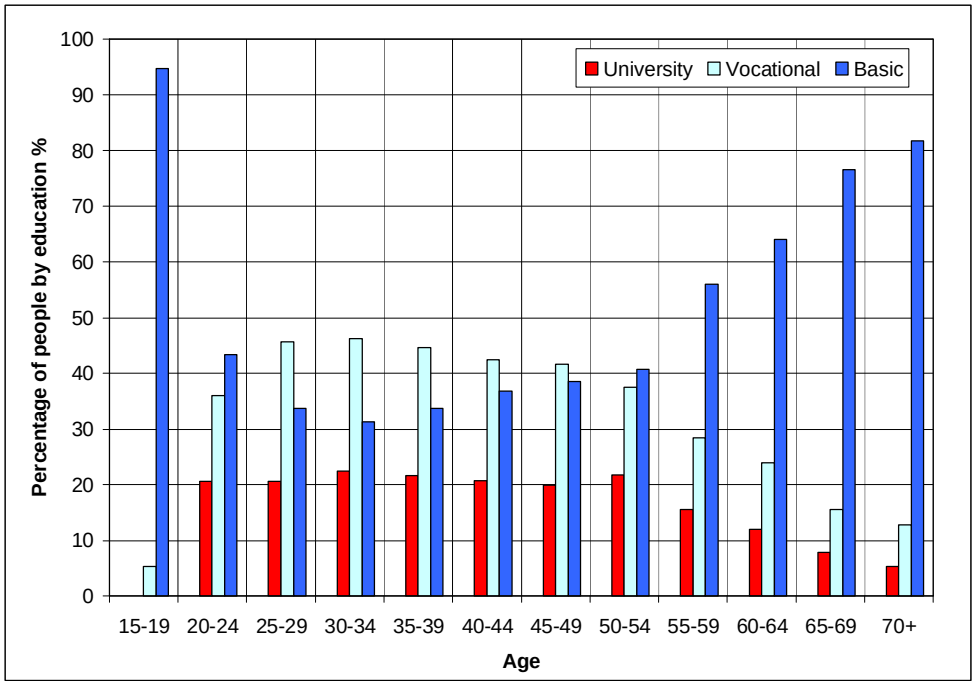
Figure 30. Distribution of men by education in the East-Kazakhstan region



Source: Kazakhstan statistical office

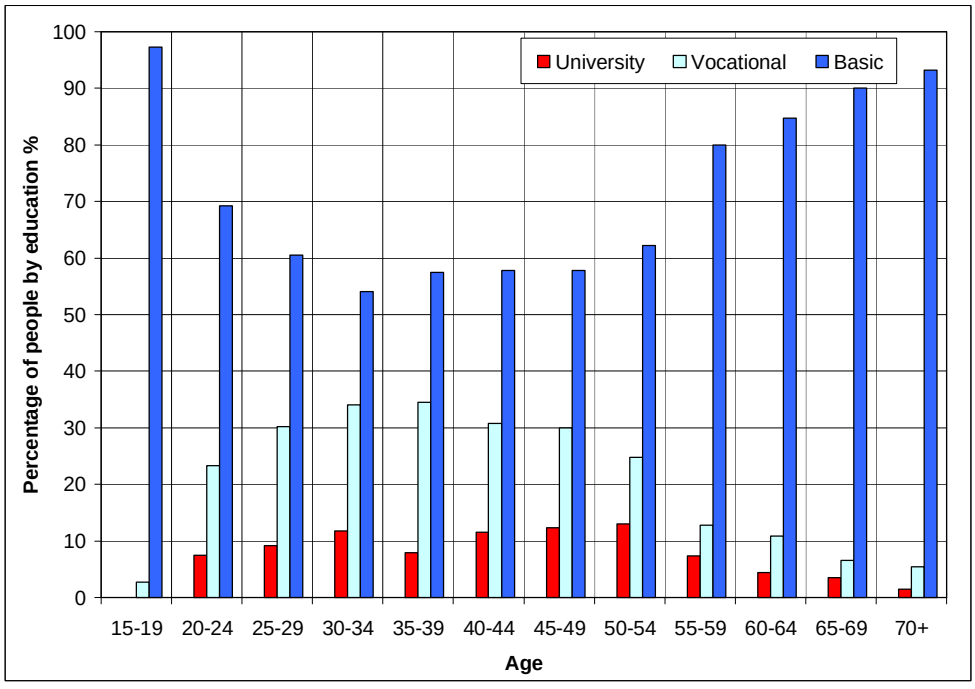
Let's consider differences between the structures of men and women by educations who live in urban and rural areas of the East-Kazakhstan region. Figures 31 and 32 demonstrate the percentage of urban and rural women by level of education.

Figure 31. Distribution of women by education in the urban areas of East-Kazakhstan region



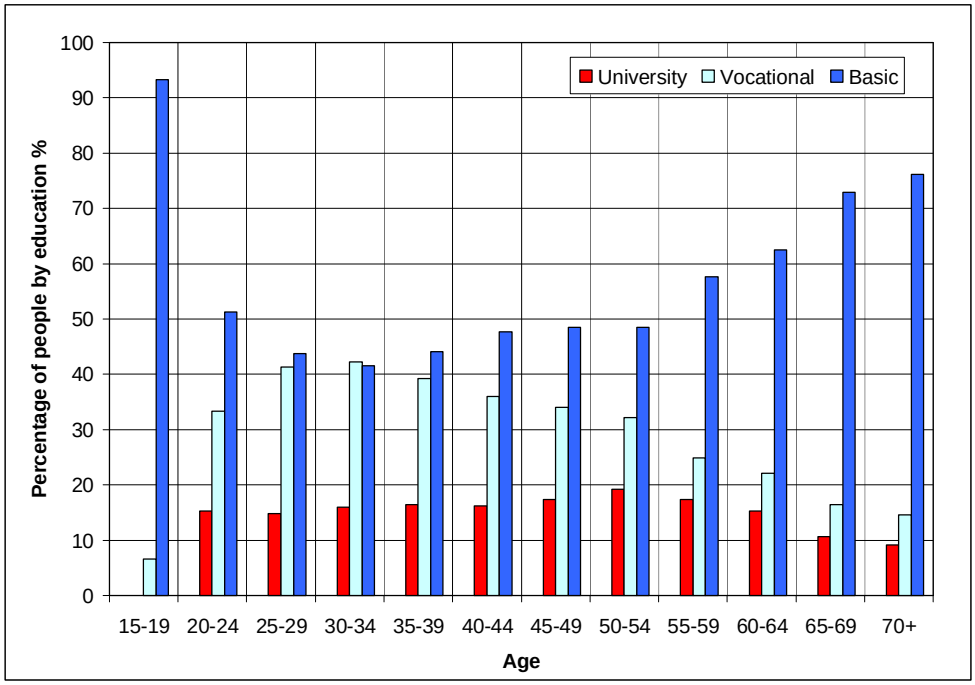
Source: Kazakhstan statistical office

Figure 32. Distribution of women by education in the rural areas of East-Kazakhstan region



Source: Kazakhstan statistical office

Figure 33. Distribution of men by education in the urban areas of East-Kazakhstan region

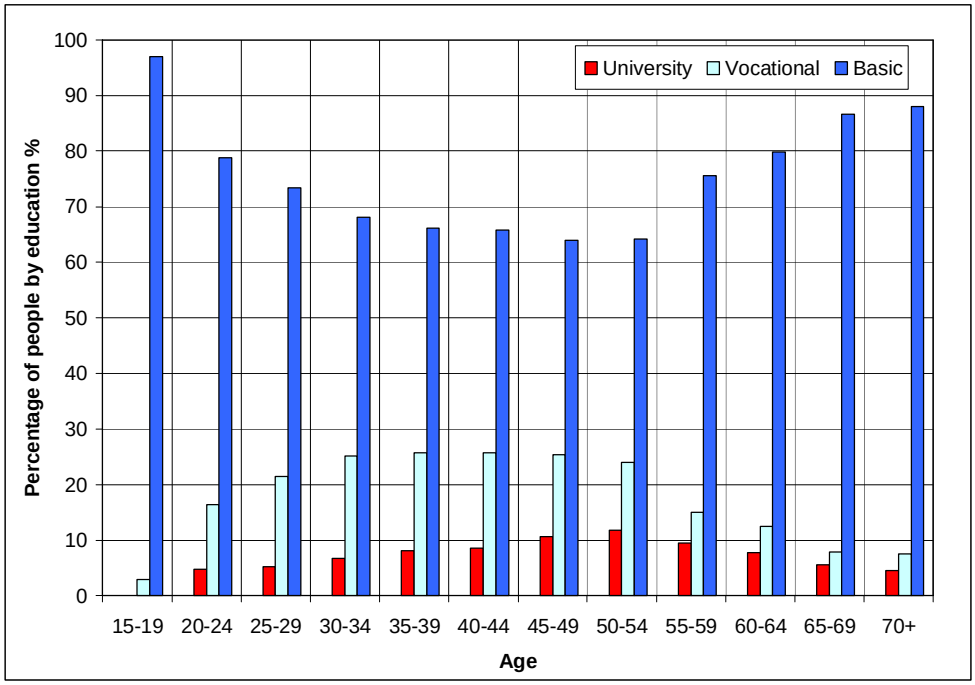


Source: Kazakhstan statistical office

Cities have a high proportion of women with higher and vocational education whereas the majority of villagers is represented by women with a secondary and vocational education. This is firstly due to the fact that the urban area of the East-Kazakhstan region is concentrated with large-scale universities and high schools whereas there are only secondary schools and secondary professional schools in the rural area. In addition, there is no demand for specific types of specialization in higher education in the majority of rural regions. For example, it includes such subjects as metallurgic and construction specialties and etc.

The same situation is evident with the urban and rural men of the East-Kazakhstan region. Figures 33 and 34 highlight the proportion of men by their level of education in the urban and rural areas. Males are more educated in the cities than in the villages. There are a high proportion of males with university and vocational education in the cities of the East-Kazakhstan region, while in the rural areas there are a high percentage of men with basic and vocational education. Obviously, this is due to the agrarian character of the majority of villages in the East-Kazakhstan region, which do not need higher educated workers.

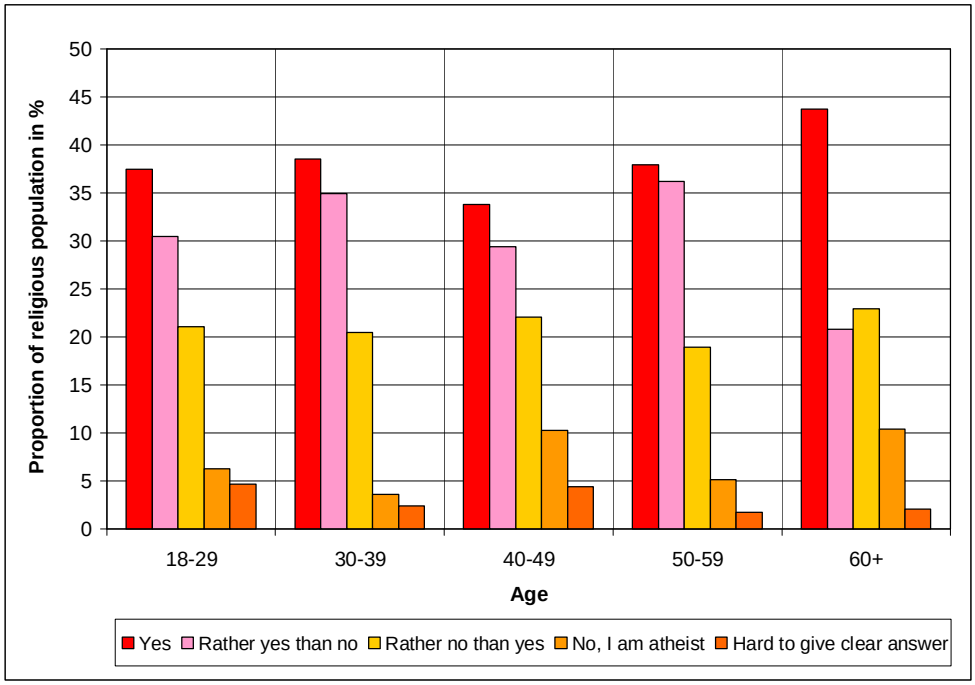
Figure 34. Distribution of men by education in the rural areas of East- Kazakhstan region



Source: Kazakhstan statistical office

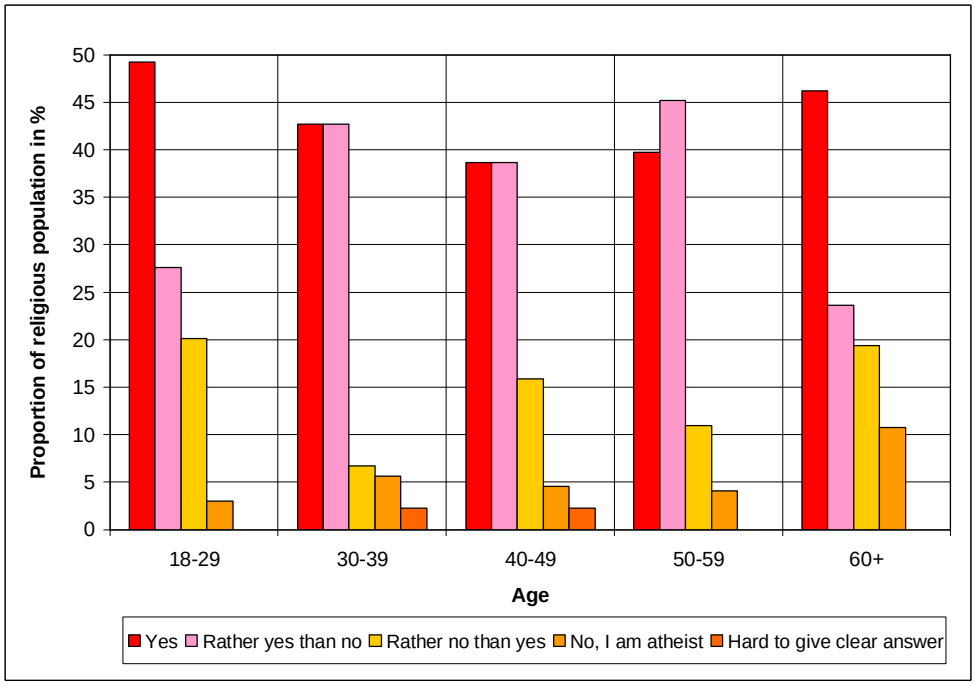
The level of the population's religiousness is also of great importance. This is undoubtedly because religion is one of the determining factors during the transformation period, and is also a key matter in an unmarried woman's decision to give a birth to a child, and a spouses' decision to divorce. The results of sociological research made in 2009 by the East-Kazakhstan regional center of analysis and forecasting on the study of the population's religiousness level are demonstrated in the graphs bellow. Figures 35 and 36 reflect the respondents' answers to the question: Are you religious? Among the suggested possible answers were: yes; rather yes than no; no, I am an atheist. The sample size consisted of 1000 respondents. From the results it is obvious that a large proportion of men and women of all age groups gave a positive answer. The share of those who gave a negative answer including the ones, who doubt, is higher among women than men. However, they are not such strong believers and those, who live according to the religious rituals and rules. In the East-Kazakhstan region a very small part of population can be named as a strong religious population, the other major proportion of believers is only expressed in their position of belonging to the one or another group, for instance: Muslims, Christians etc. Historically in the 20th century when Kazakhstan was part of the USSR there was a strong ideological transformation from religion to scientific atheism. From the early 90s and the independence of the Republic of Kazakhstan, people returned to religion, traditions and their native language as one of the symbols of independence. This was mostly popular among young people.

Figure 35. The share of religious females in the East Kazakhstan region



Source: "Religiosity of East-Kazakhstan population" Survey results

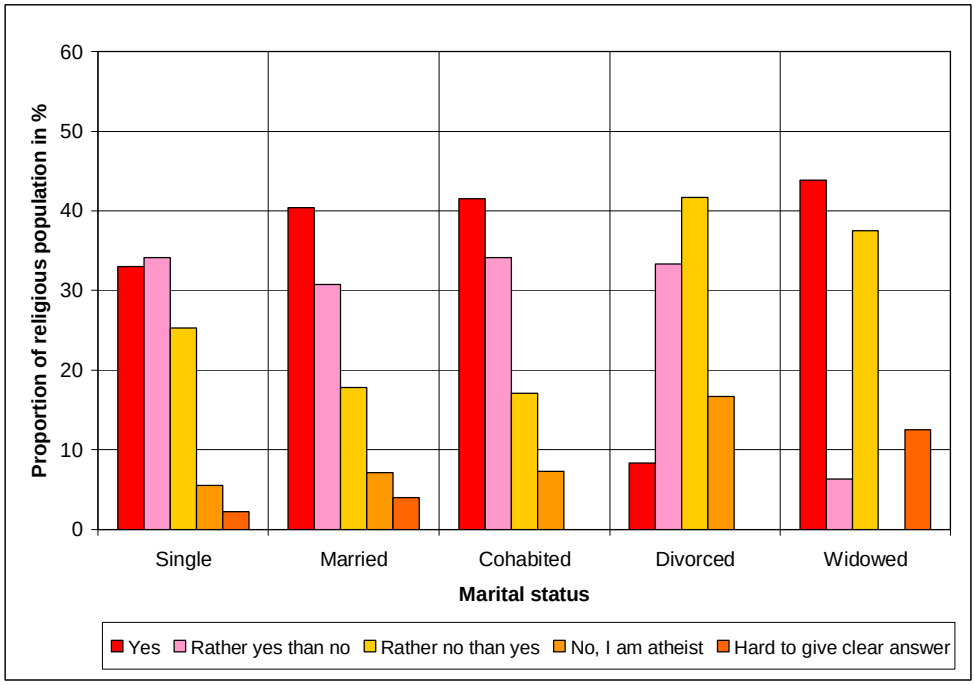
Figure 36. The proportion of religious males in the East-Kazakhstan region



Source: "Religiosity of East-Kazakhstan population" Survey results

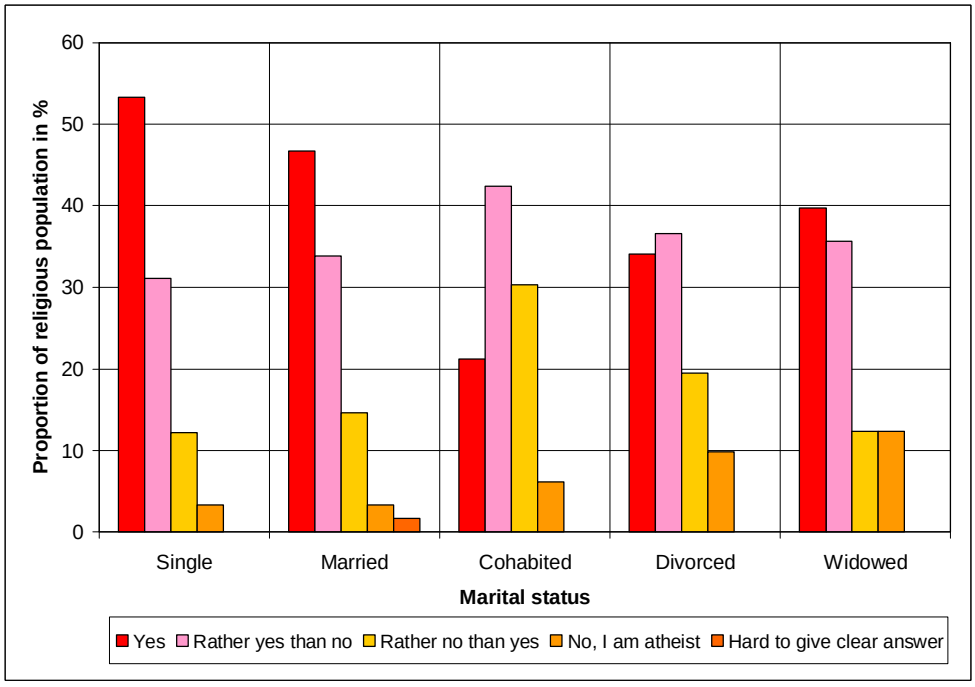
The answers of respondents according to the age and marital status are of greater scientific interest. The biggest percentage of nonbelievers among people age 60 and over can be explained by the historical fact of being part of the Soviet Union, where scientific atheism was practiced.

Figure 37. The proportion of religious females by marital status in the East-Kazakhstan region



Source: "Religiosity of East-Kazakhstan population" Survey results

Figure 38. Proportion of religious males by marital status in the East-Kazakhstan region



Source: "Religiosity of East-Kazakhstan population" Survey results

The following Figures 37 and 38 illustrate the answers of men and women according to the marital status to the question about their religiousness. The graphs show the respondent's distribution of answers according to their marital status. The majority of positive answers are among married and

cohabiting women, whereas there are more negative answers among divorced and widowed ones, those who are hesitant are mainly widowed. The biggest percentage of believers is among the singles (more than 50%), married (46%) and widowed men (39%), whereas divorced men and cohabiting men gave preference to the answers – rather yes than no and rather no than yes. Thus the largest population percentage in the East-Kazakhstan region considering themselves as believers is among men in all age groups, those who have never been married, married ones and widowed. Whereas the female part of population tended to choose the variants of answers like: rather no than yes; no, I am an atheist. The largest number of non-believers women is among divorced women (42%), widowed women (38%), and those who have never been married (26%).

The dynamics of the percentage of extra-marital births among all of the births is shown in the Table 15. It also demonstrates absolute numbers reflecting the number of extra-marital births in every calendar year from 1998 to 2000.

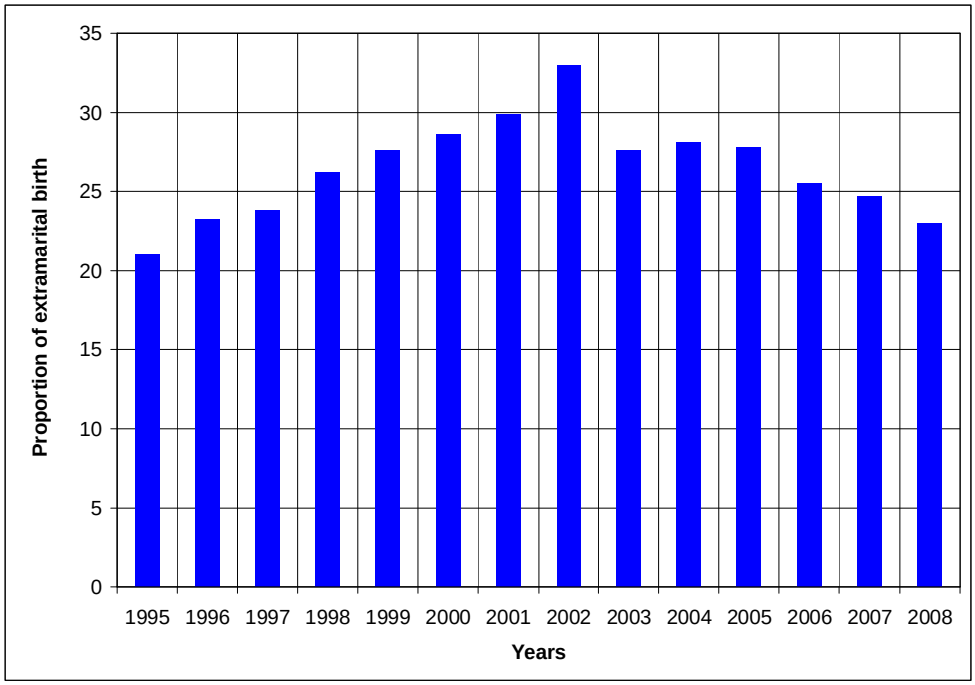
Table 15. Changes in extramarital birth in Kazakhstan and the East-Kazakhstan region (in %)

	1998	**1999**	**2000**	**2001**	**2002**	**2003**	**2004**	**2005**	**2006**	**2007**	**2008**
	Percentage of extramarital birth (in %)										
Kazakhstan	-	23.8	24.5	25.4	25.8	24.8	24.9	24.4	22.7	21.1	21.1
East-Kazakhstan	26.2	27.6	28.6	29.9	33.0	27.6	28.1	27.8	25.5	24.7	23.0
Urban regions of East-Kazakhstan	28.2	29.4	30.2	30.7	33.2	29.6	29.4	29.1	27.4	26.5	23.3
Rural regions of East-Kazakhstan	24.0	25.6	26.6	28.9	32.8	24.8	26.3	25.8	22.5	22.2	22.7

Source: Kazakhstan statistical office

The share of extra-marital births among all births was the highest in 2002, and then it slowly decreases. In addition, the proportion of extra-marital births in the cities of the East-Kazakhstan region is quite high compared to the rural area. The difference is about 4-5%. Figure 39 shows a graphical view of the percentage of extra-marital births among all live births from 1995 to 2008.

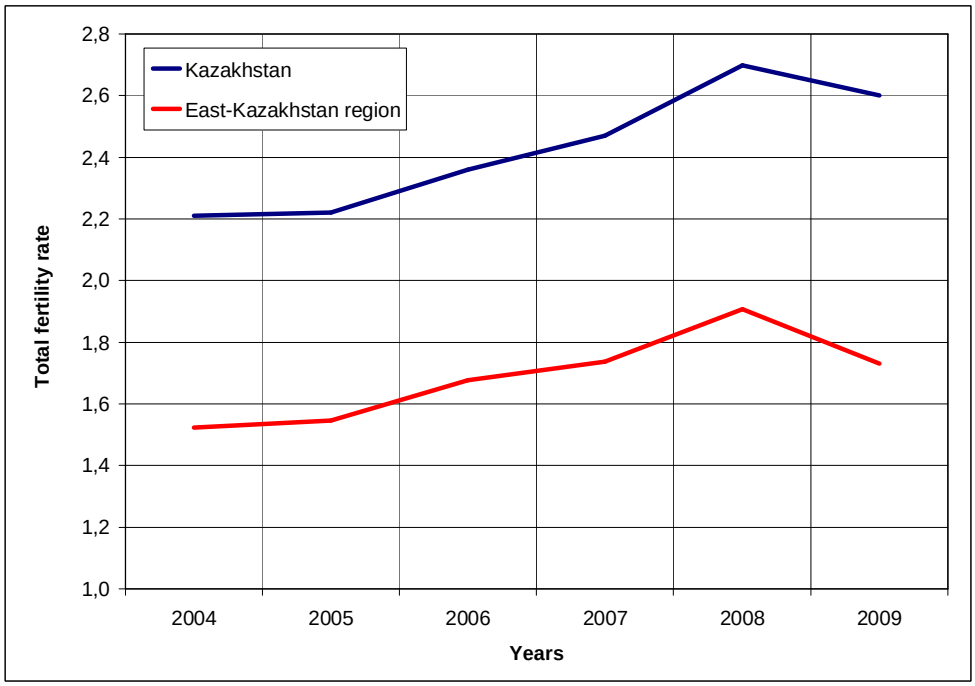
Figure 39. The percentage of extra-marital births in the East-Kazakhstan region



Source: Kazakhstan statistical office

To trace the dynamics of the extra-marital birthrate increase properly, it is necessary to conduct a more detailed analysis. Let's consider in detail age-specific fertility rates for all women of the East-Kazakhstan region and for women who aren't married as well.

Figure 40. Changes in Total fertility rates, Kazakhstan and the East-Kazakhstan region, 2004-2009



Source: Author's calculation

Figure 40 gives a picture which features the dynamics of total fertility rates from 2004 to 2009 for Kazakhstan and the East-Kazakhstan region. The total fertility rate is higher for Kazakhstan, but lower for the East-Kazakhstan region. TFR for East-Kazakhstan region is changing over time. If there were up to 1.5 births per woman in 2004, in 2009 there were 1.7 births per woman.

In addition, Figures 41 and 42 reflect age-specific fertility rates for married and unmarried women. They are age-specific birth rates of the second kind, where the denominator consists of the total female population according to age. If not specified by kind, the birthrate in the East-Kazakhstan region is noticeable for its transformational transition from one age group to another. For instance, the extramarital births had the same transition which can be seen from the graphs bellow. This is connected with a common tendency to postpone pregnancy until a later period, together with the necessity to get an education and promotion at work. As for extramarital births – in most cases they are accidental or unexpected due to the low popularity of contraceptives and methods of family planning among youth. In connection with this it could be argued that later on, in 2009 the so-called deliberate extramarital births appeared, and at the same time the births were delayed for a later period. All these factors together lead to the rise in the mean age of the first childbearing, which is demonstrated in Figure 43. If all the births are characterized by some stability after a slight increase at the beginning of the year 2000, then the rise of the mean age of the first childbearing for extramarital birth is continuing and this process is going to be inalienable in the next 5-10 years.

Figure 41. Age-specific fertility rates of the second kind for married women, East-Kazakhstan, 2004-2008

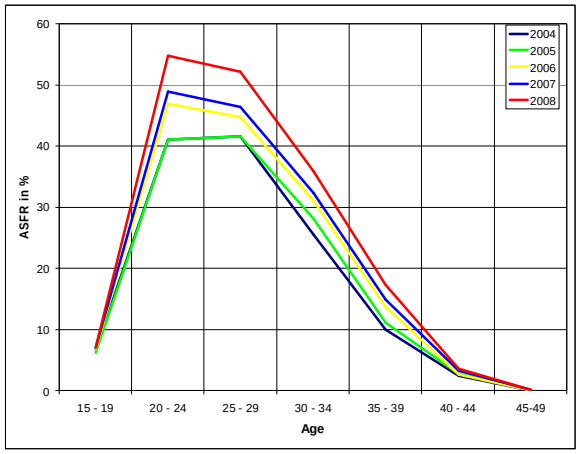
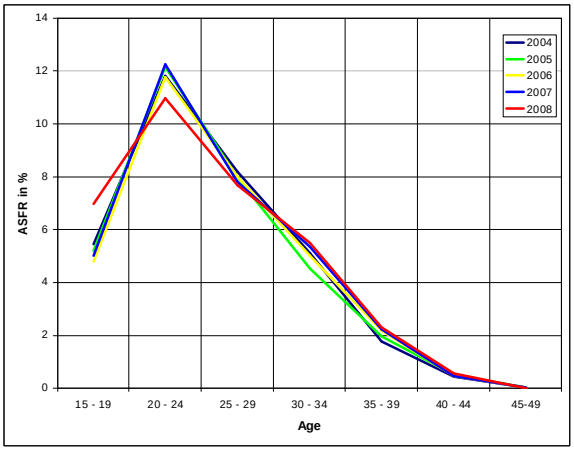
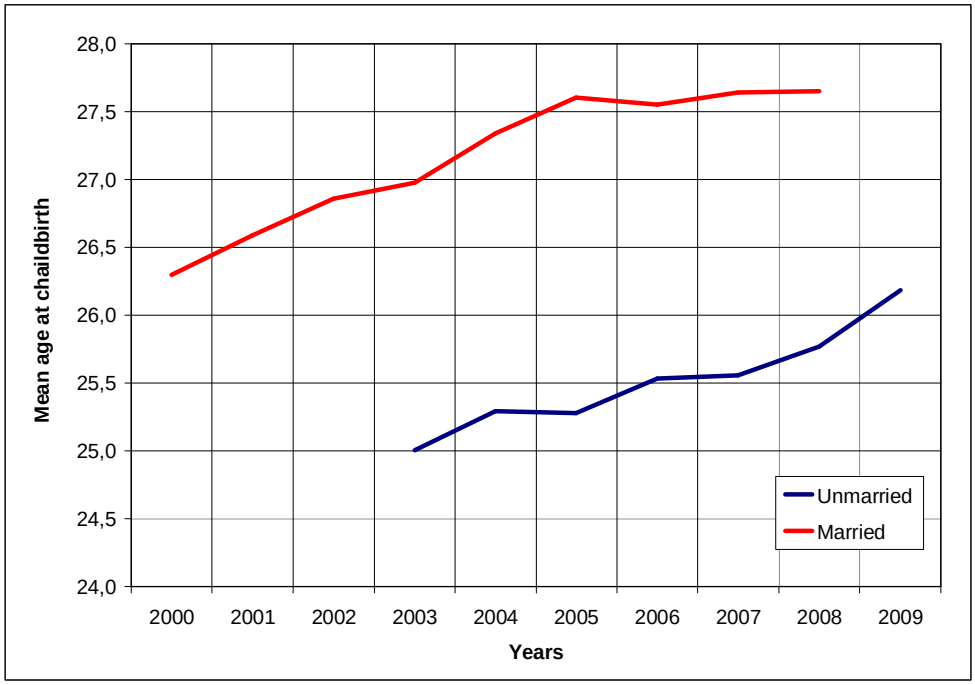


Figure 42. Age-specific fertility rates of the second kind for unmarried women, East-Kazakhstan 2004-2009



Source: Author's calculations

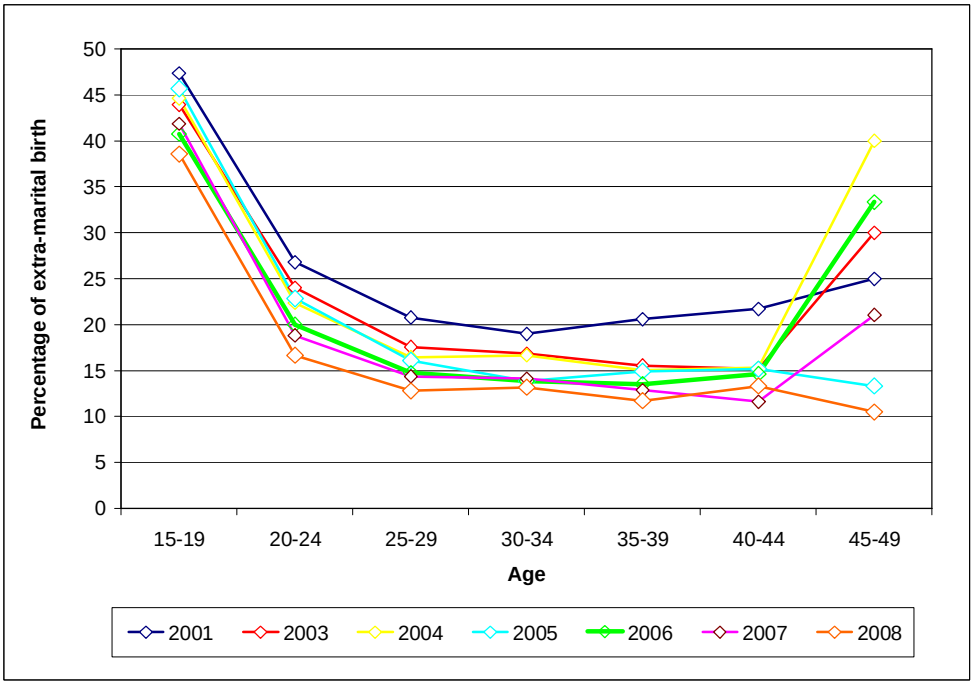
Figure 43. The mean age at first childbearing for married and unmarried women, East-Kazakhstan



Note: Calculated from the distribution of absolute numbers of first order births
Source: Author's calculations

The percentage of extramarital births from all births according to the mother's age (Figure 44) shows a big proportion of extra-marital births in the age groups: 15-19 and 45-49. The share of births out of wedlock is continuously declining for women in the most age categories.

Figure 44. Percentage of extra-marital birth by age, 2001-2008, East-Kazakhstan region



Thus despite the fact that the percentage of extramarital births in the East-Kazakhstan region remains high, at the same times it cannot be said that it makes a definite contribution to the rise of the birthrate as a whole. It is necessary to conduct more detailed analysis with the help of advanced demographic methods. On the basis of existing data it can be summarized, that extramarital births by their character can be divided into so-called unplanned (the beginning of sexual relationships when a woman is not aware enough of the methods of contraception and family planning) and deliberate (in the process of sexual relations when a woman decides to give a birth to a child outside of marriage). Judging by a further increase in the mean age of first childbearing for unmarried women, it is possible to argue that extramarital births in the East-Kazakhstan region are increasingly gaining a deliberate character. In essence, this is when a woman decides to postpone family planning until later life.

Another important aspect is to study the family dissolution process. In the given case a family might dissolve, which can only be traced back in terms of statistical data through: the divorce (official registered dissolution of marriage by the help of the Registry Office or a court) and widowhood (death of one of the spouses). Thus it is necessary to focus on the frequency of divorces in the East-Kazakhstan region. Figure 45 shows crude marriage and divorce rates. The number of marriages in the East-Kazakhstan region is lower in comparison with Kazakhstan as whole, and at the same time the number of divorces is higher than in Kazakhstan. The dynamic of the changes is also different over time. If there were 5.5 marriages and 2.2 divorces per 1000 people in 1999, then in 2008 there were 8.0 marriages and 3.0 divorces per 1000 people. It should also be noted that the number of marriages in 2007 dramatically decreased from 9.0 to 8.0 per 1000 people and this had an effect on divorces to a lesser degree – they remained at a level of 3.0 divorces per 1000 people.

Figure 45. Crude marriage and divorce rates, Kazakhstan, the East-Kazakhstan region, 1999-2008

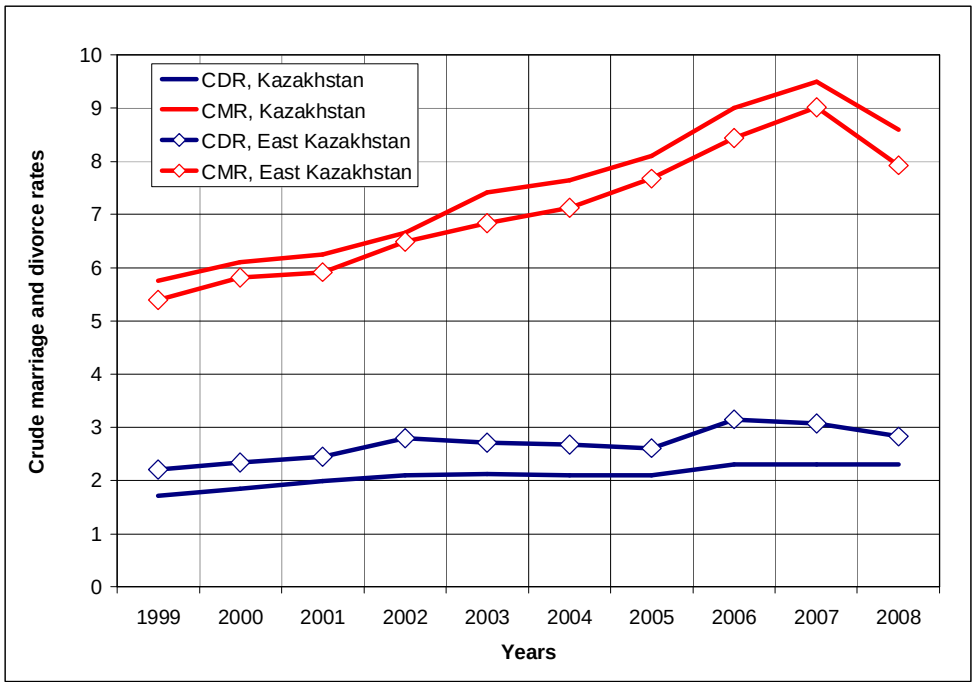
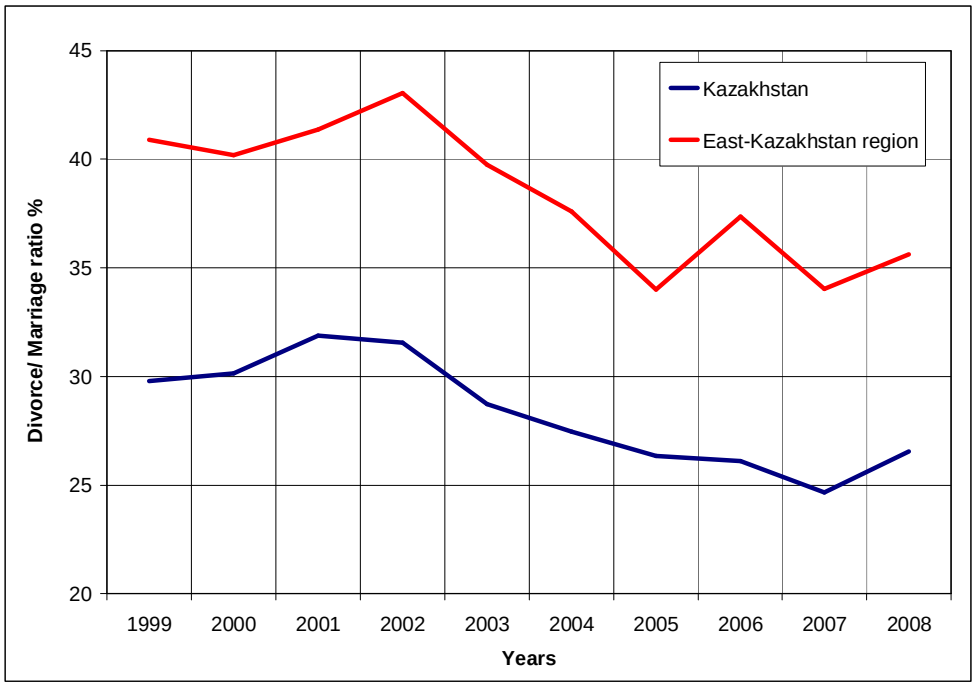


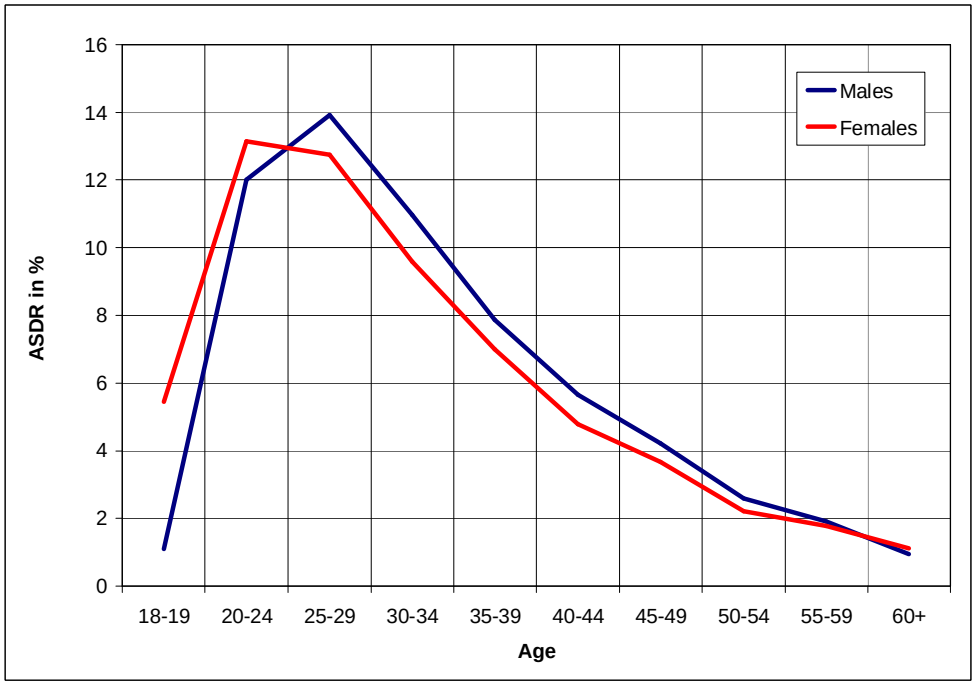
Figure 46 shows the divorce/marriage ratio. The largest numbers of divorces compared to marriages were observed in 2002 and 2006 calendar years.

Figure 46. Divorce/marriage ratios, Kazakhstan, the East-Kazakhstan region, 1999-2008



Source: Author's calculation

Figure 47. Age-specific divorce rates for males and females, 1999



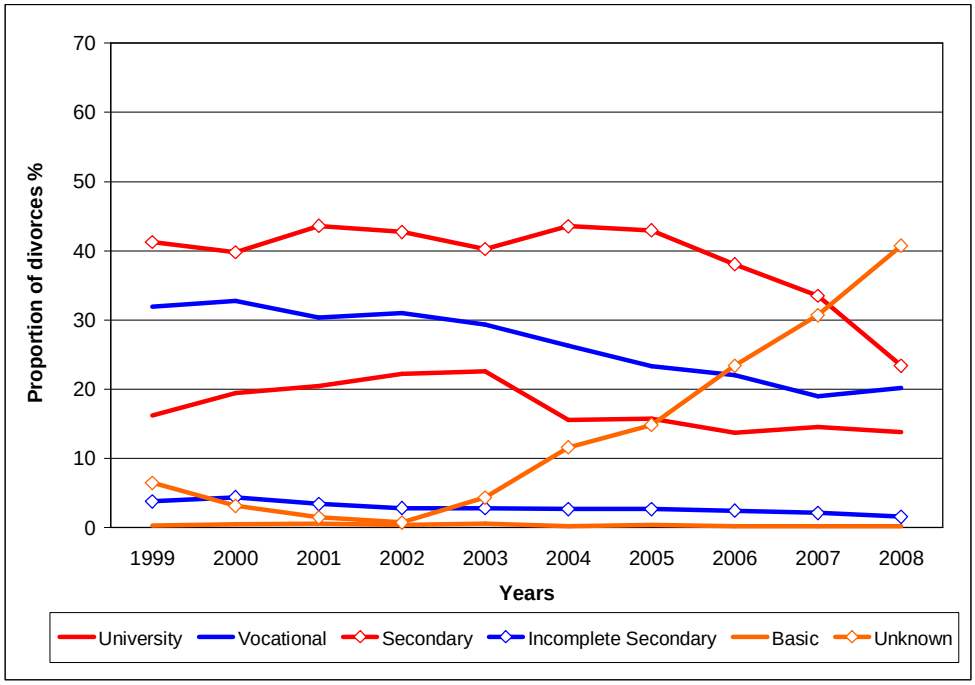
Note: divorces reported to married males and females

Source: Author's calculation

Figure 47 illustrates age-specific divorce rates for men and women according to the 1999 census data. The divorce rates for males and females are higher among the younger age groups in comparison with the older ones, which are explained by the fact of high probability to get divorced in first years of marriage. Young people are more likely to make extreme decisions.

Thus, along with belonging to younger or older age groups there is one more important factor, the level of education of the divorced people. Due to the absence of the data on number of population by marital status per one calendar year, the percentage of divorced population by education from the total number of population by education could not be calculated. Clearly, more research is required. In connection with this the following Figures 48 and 49 reflect the percentage of divorced women and men by level of education from the total number of divorces. As the graphs highlight, the biggest percentage of divorced men and women have a secondary and vocational education. The third place is taken by men and women with a higher education. It's also of great interest to trace back the dynamics of change of frequencies in the course of calendar years in order to receive the complete analysis.

Figure 48. Proportion of divorced women by education, East-Kazakhstan

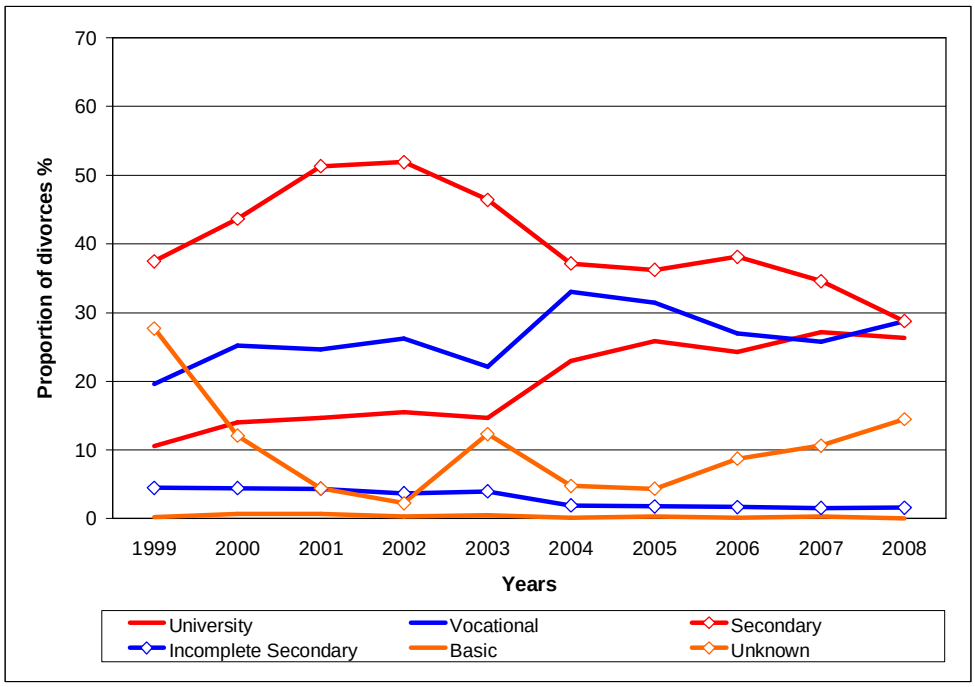


Note: The proportions calculated from the distribution of divorced women according to education
Source: Kazakhstan statistical office

It is ostensibly more beneficial to observe an example of women, because the change dynamic of men is undergoing some changes presently. For example, among divorced women of the East-Kazakhstan region in the first years, 40% in 1999 vs. 50% in 2001 had left school, 20% in 1999 vs. 35% in 2004 had vocational education, and those who had a high (university) education made 10% in 1999 vs. 28% in 2005. By 2008 the difference in the proportion of divorced women belonging to the education levels listed above came to its minimum and became insignificant. While the representatives of the given categories within the category of divorced women made 30% in every category. Thus in what follows

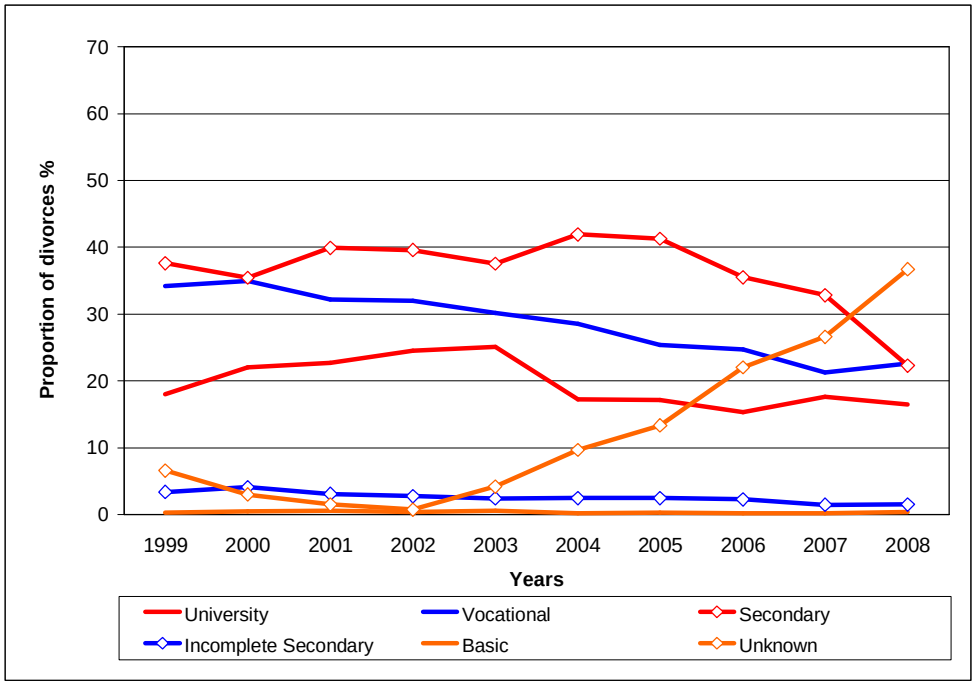
there is some alignment of population by the level of education, thereby the proportion of the population with higher education increases and at the same time, the population's percentage with secondary and secondary professional education decreases. The tendency data can be easily traced back to the difference between urban and rural trends in divorces of the East-Kazakhstan region. Figures 50 and 51 illustrate the percentage of the divorced by the level of women's education in the urban and rural area. Among the divorced women in the urban area in 1999, the highest percentage is observed among the representatives of secondary and secondary professional vocational education, whereas by 2008 there was a convergence of distribution among the divorcees between women with secondary, secondary professional and a higher education. The rural area continues to show big differences between the proportion of women with secondary, secondary professional and higher education.

Figure 49. Proportion of divorced men by education, East-Kazakhstan



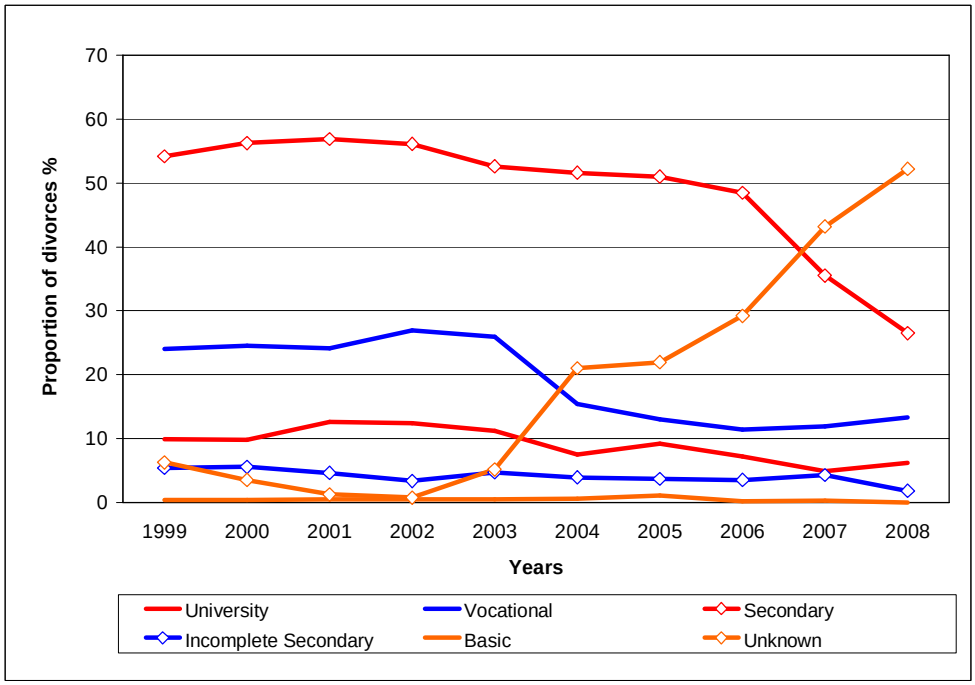
Note: The proportions calculated from the distribution of divorced men according to education
Source: Kazakhstan statistical office

Figure 50. Proportion of divorced women by education in the urban areas of the East-Kazakhstan region



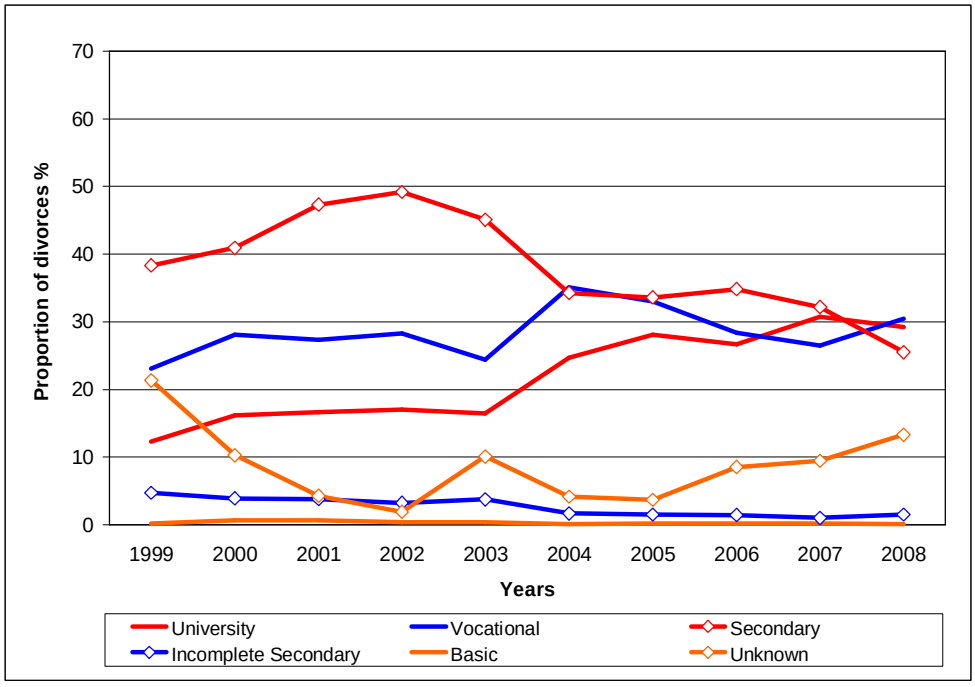
Note: The proportions calculated from the distribution of divorced women according to education
Source: Kazakhstan statistical office

Figure 51. Proportion of divorced women by education in the rural areas of the East-Kazakhstan region



Note: The proportions calculated from the distribution of divorced women according to education
Source: Kazakhstan statistical office

Figure 52. Proportion of divorced men by education in the urban areas of the East-Kazakhstan region

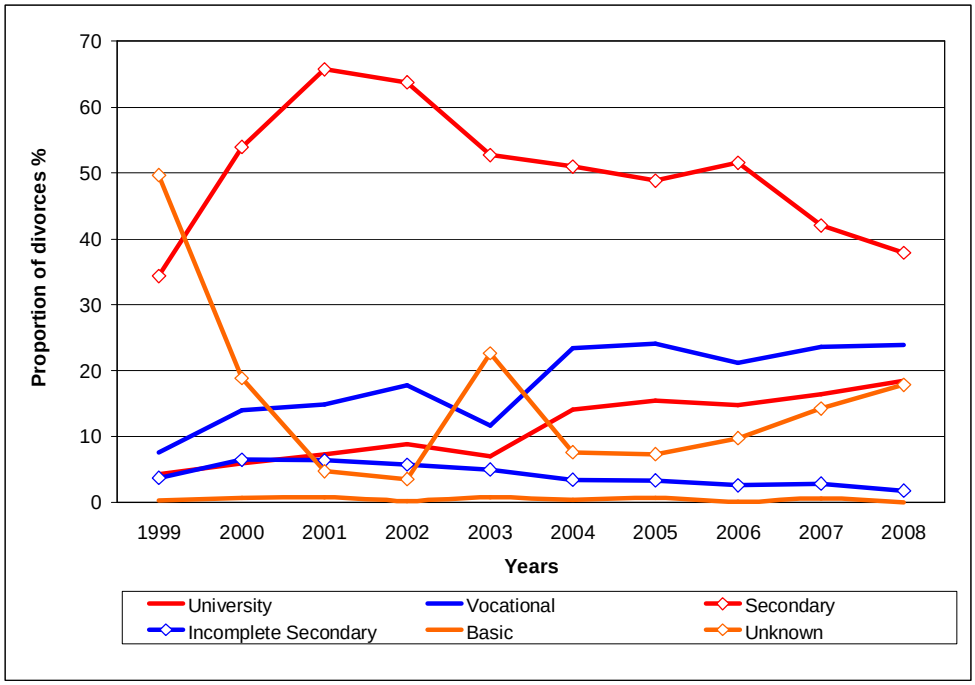


Note: The proportions calculated from the distribution of divorced men according to education

Source: Kazakhstan statistical office

Figures 52 and 53 illustrate the percentage of divorced men by the level of education in the urban and rural areas of the East-Kazakhstan region. The biggest difference between the city and the village is made up by the specific weight of divorced men in three essential categories: secondary, secondary professional and higher education. The gap between the given three categories of education of divorced men in the city decreases and comes to a minimum by 2008. Conversely, in the rural area there is a large gap between the divorced with secondary education, and other categories of education. It should be also noted that men and women of urban and rural areas are characterized by low divorce rates and have basic education. Despite the fact that earlier data was given on the proportional distribution of divorced people by level of education from the total number of divorces, it must be acknowledged that this data is not sufficient for a complete picture.

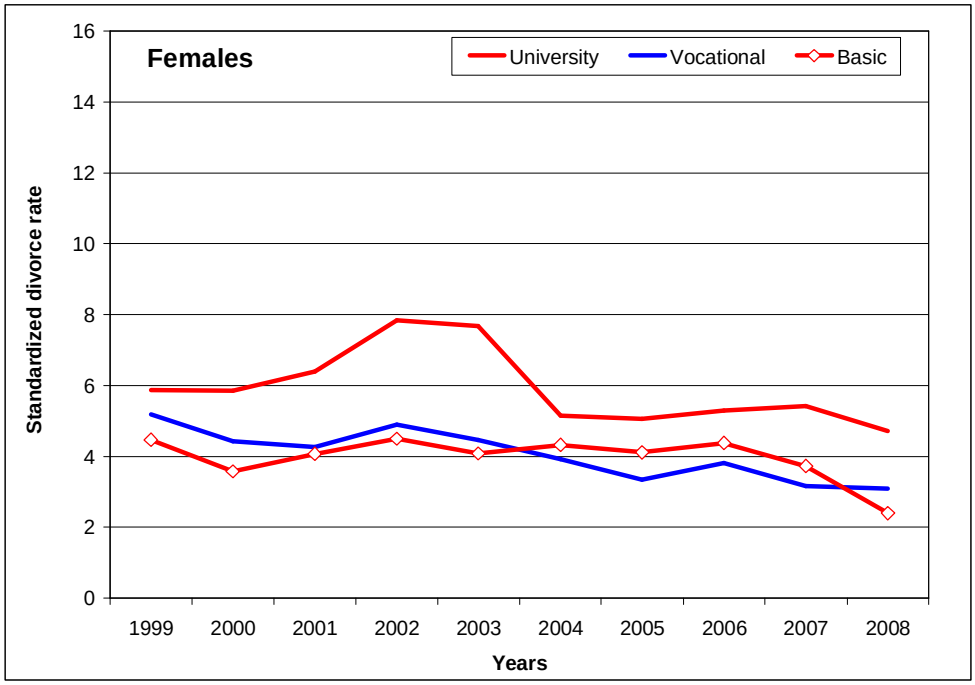
Figure 53. Proportion of divorced men by education in the rural areas of the East-Kazakhstan region



Source: Kazakhstan statistical office

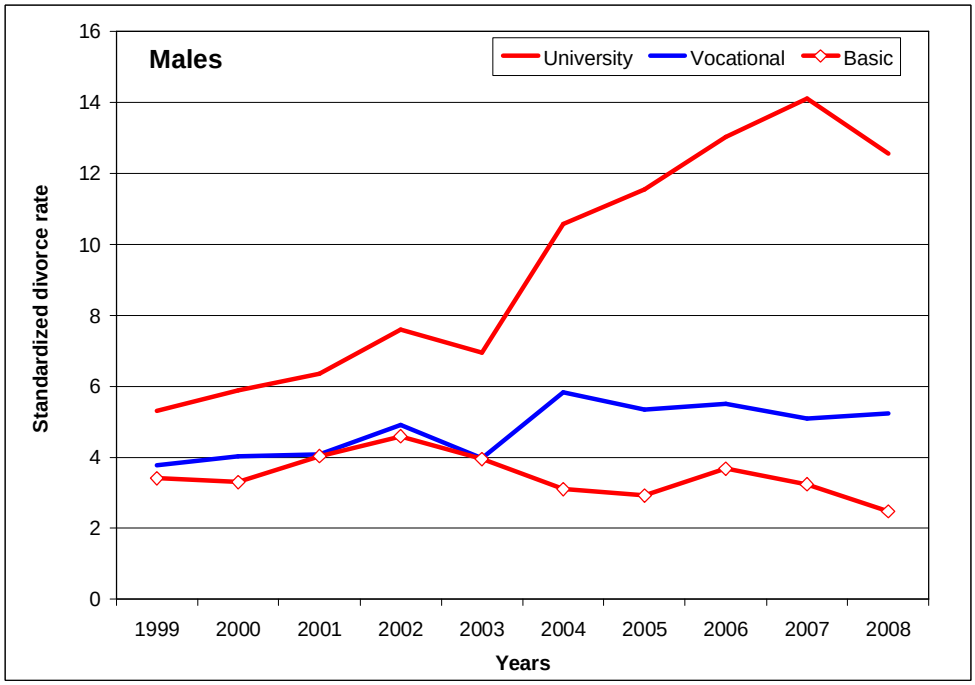
The next two Figures 54 and 55 show another situation among divorced people by education. Standardized divorce ratios were calculated for females and males for the following categories: university, vocational and basic education, as an age-specific divorce rate standard was taken for Kazakhstan and was the same for both sexes. Thereby, it must be noted that according to these figures a big difference between Kazakhstan as a whole and the East-Kazakhstan region levels of divorces appeared. The highest value of standardized divorce ratio appeared among males and females with a university education, and the ratios for people with vocational and basic education are approximately at the same level. The difference between divorced women by education is not as big as it is among men. Thus, despite the fact that the highest percentage of divorced men and women belong to the category of people with basic and vocational education, it should be noted that when indirect standardization is used there is a relatively high divorce rate among the higher educated people.

Figure 54. Standardized divorce ratios for females by education, 1999-2008



Source: Author's calculation, standard: age-specific divorce rates for each year apart in Kazakhstan

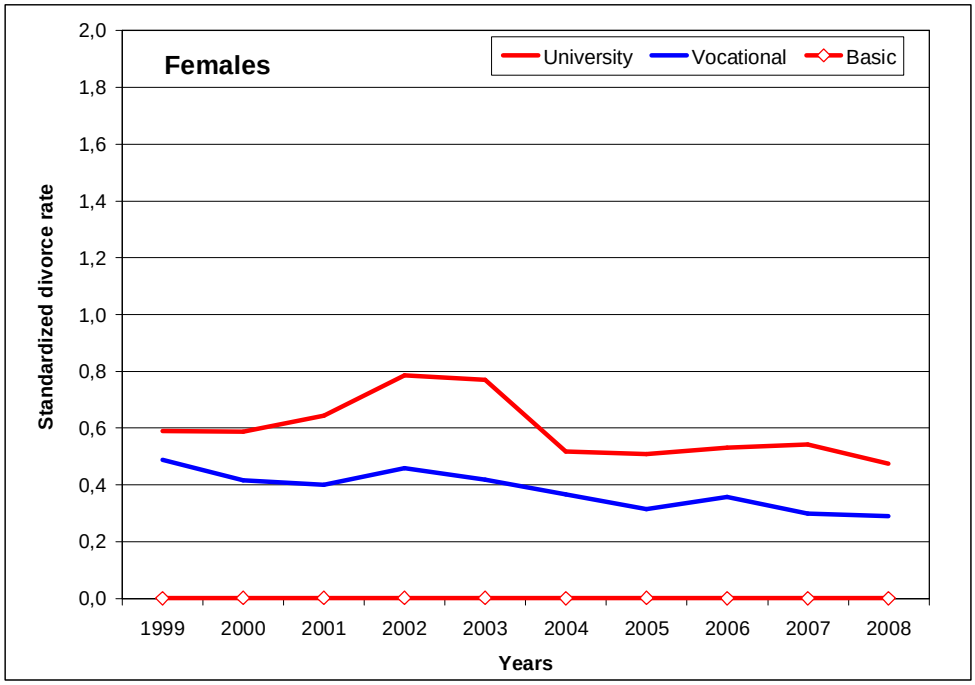
Figure 55. Standardized divorce ratios for males by education, 1999-2008



Source: Author's calculation standard: age-specific divorce rates for each year apart in Kazakhstan

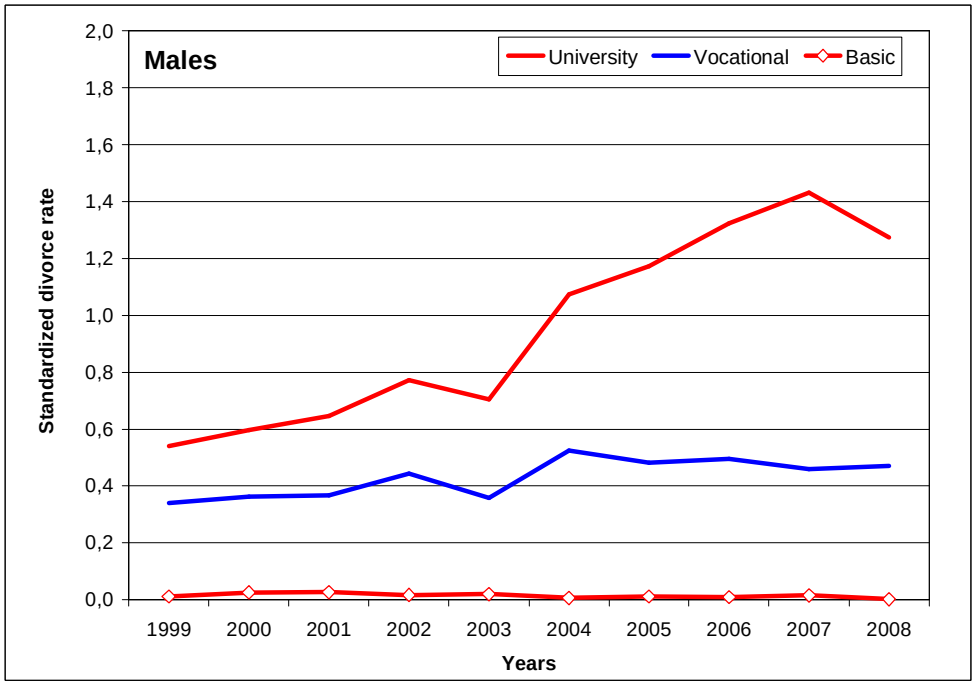
Also standardized divorce ratio was calculated which is based on a standard age specific divorce rate for both sexes of the East-Kazakhstan region for 1999. The next figures show the difference between the male and female number of divorces by educational level (Figures 56 and 57).

Figure 56. Standardized divorce ratios for females by education, 1999-2008



Source: Author's calculation, standard: age-specific divorce rates in East-Kazakhstan 1999 for both sexes

Figure 57. Standardized divorce ratios for males by education, 1999-2008



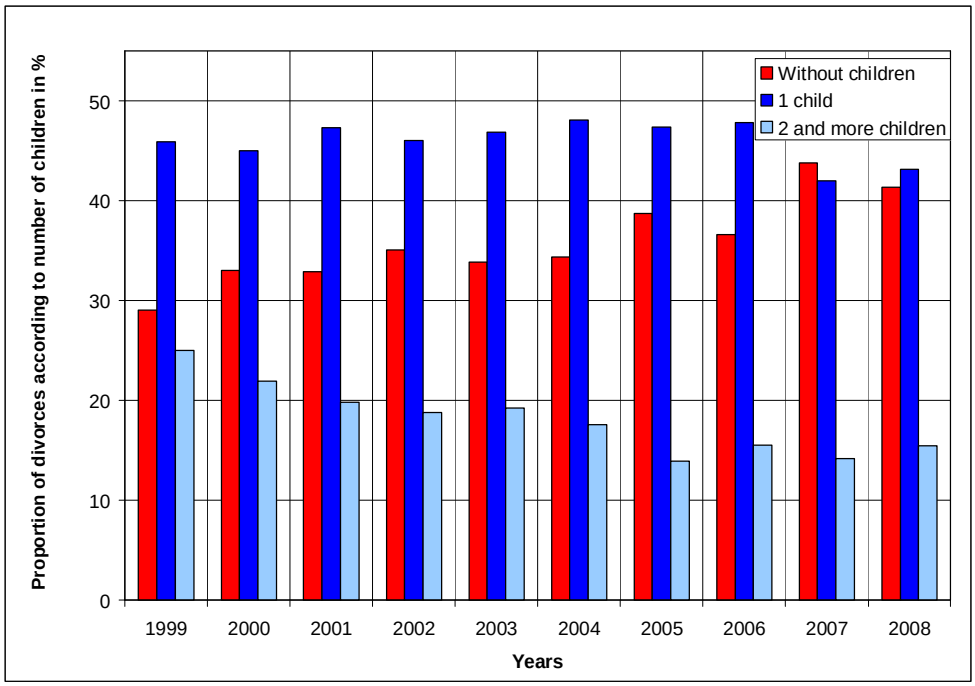
Source: Author's calculation, standard: age-specific divorce rates in East-Kazakhstan 1999 for both sexes

The difference from the previous standardized ratios is concerning standardized divorce ratio of men and women with a basic education. The ratios show the high number of divorces among females and males with the university education. The divorces of men and women with vocational education as well as a

basic education are relatively on the same level.

From the point of view of the appearance of one-parent families the presence or absence of children of divorced men and women is of great importance to this study. Figure 58 illustrates the percentage distribution of divorces by the number of children younger than 18 years. The proportion of divorces with one child is practically stable with some insignificant changes over a period from 1999 to 2008 and makes up more than 40% except for 2001, 2004, 2005 and 2006, where it was close to 50%. Also, the proportion of divorces for married childless couples (who don't have children under the age 18) nearly doubles from 28% in 1999 to 44% in 2007 and 42% in 2008. Meanwhile, the share of divorces with two or more children under the age of 18 decreased from 25% in 1999 to 15% in 2008.

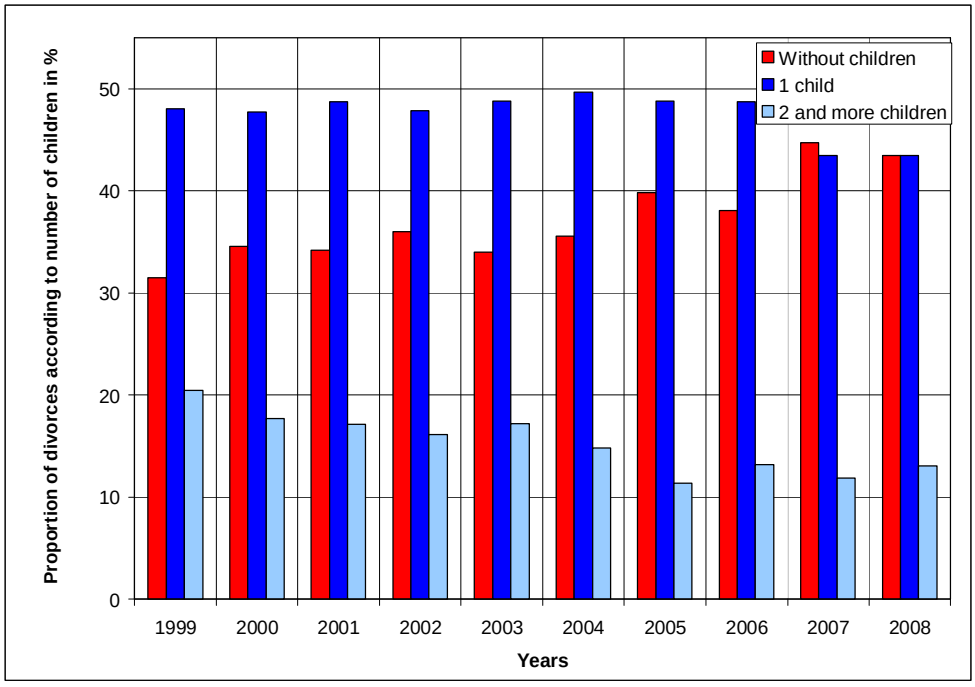
Figure 58. Percentage of divorces by the number of children under the age 18



Source: Kazakhstan statistical office

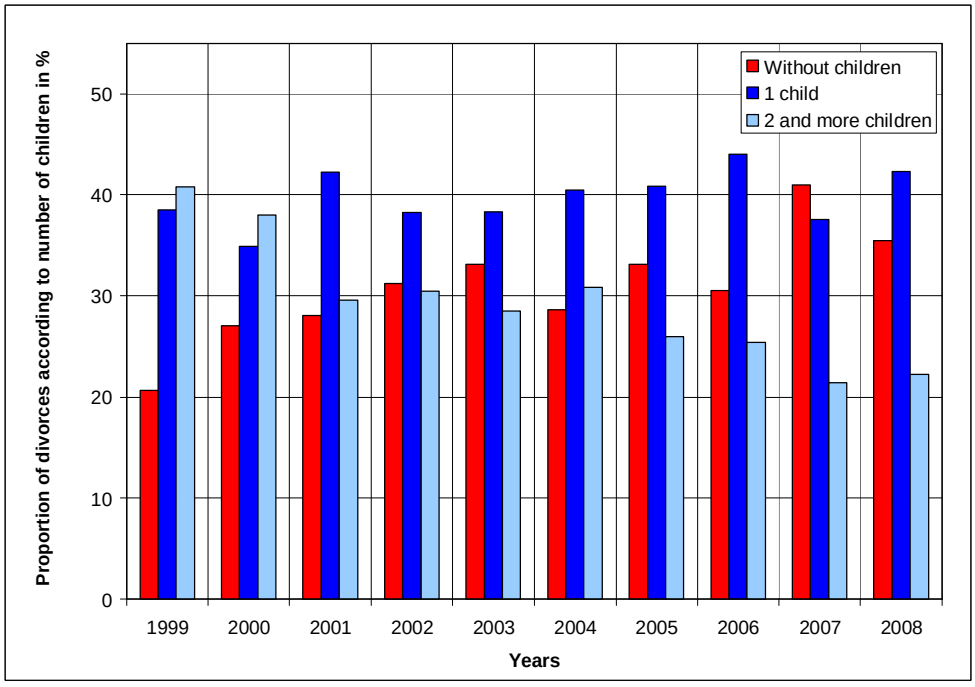
It is also vital to evaluate the percentage of distribution of divorces by the number of children in the villages and cities of the East-Kazakhstan region. The percentage distribution of the number of divorces by the number of children under the age 18 for the urban area is approximately the same as the East-Kazakhstan region as a whole. There is no trend in the share of divorces with one child, a decrease in the proportion of divorces with two or more children, or an increase in the proportion of divorces of married couples who don't have children under the age 18. However, the structure of divorces by the number of children in the rural administrative territorial units is diametrically opposite. For example 42% of divorces in 1999 were from divorces with two or more children under the age 18 while 38% of divorces were made up of divorces with one child, and only 20% of divorces fell on married couples who had no under-age children.

Figure 59. Percentage of divorces by the number of children under the age 18 in the urban areas



Source: Kazakhstan statistical office

Figure 60. Percentage of divorces by the number of children under the age 18 in the rural areas



Source: Kazakhstan statistical office

The quantity of divorces with one child increases in 2008 and reached 43% whereas about 21% of divorces are divorces with two or more children and there is also an increase in the number of divorces of married couples who don't have children under the age 18, which increases to 36%. Thus the biggest number among the divorced in the cities of the East-Kazakhstan region is observed in families with one child under the age of 18 or without one. The proportion of divorces with two or more children makes up 10-12%. The same situation is apparent in the rural area where divorced families have one child or none. Though the specific weight of divorces with two or more children remains high and makes up about 22%.

There is a gradual change to the population's structure by age and marital status in the East-Kazakhstan region. The percentage of those who have never been married not only in their youth but in the middle and senior ages is increasing. In addition, the proportion of divorced women is rising compared to men in the city and in the rural area as well. It's primarily connected with the fact that men remarry more frequently than divorced or widowed women who have children. In spite of a relatively high religiousness of men compared to women, the importance of extramarital birth is increasing from year to year, and a category of so-called deliberate extramarital births appears on the scene where the reason of extramarital children's birth doesn't mean a lack of knowledge on family planning and contraceptives use. The mean age of the first childbearing for married and unmarried women is also increasing. The proportion of the divorced also increases from year to year. If primarily in 1990s it was only men and women with elementary or secondary education who divorced, then by the end of 2008 the share of divorced by education level is getting more complex – among the divorced men and women we can see those with a higher education. The number of divorces with one child is increasing while divorces with two or more children are decreasing compared to previous years. Such is the general overview of trends in the East Kazakhstan region based on statistical data. The next chapter will consider in detail extra-marital fertility, divorces, and widowhood. The analysis is based on adjusted data obtained with the help of LIPRO software using advanced demographic methods for multi-dimensional analysis.

4.2 Trends and patterns in one-parent families' development based on adjusted data

4.2.1 The process of collection and checking of data

If the previous chapter was devoted to the analysis of single-parent families, which was based on published statistical data, this chapter is devoted to a detailed study of the key trends, based on indicators derived from specific estimations aiming to correct some data inconsistencies. It begins with methods that were the basis of calculation of missing data for advanced demographic analysis. In the previous chapter, data on population according to sex, age and marital status from the 1989 and 1999 censuses was used. Unfortunately, the new census conducted in 2009 cannot be used in this analysis due to the fact that at the time of writing the thesis, data were not officially approved by the Statistics Agency of Kazakhstan. In this regard, it was decided to use self-calculating adjusted data on the numbers of population by age, sex and marital status in 2004 and 2009. The estimation of data has three steps:

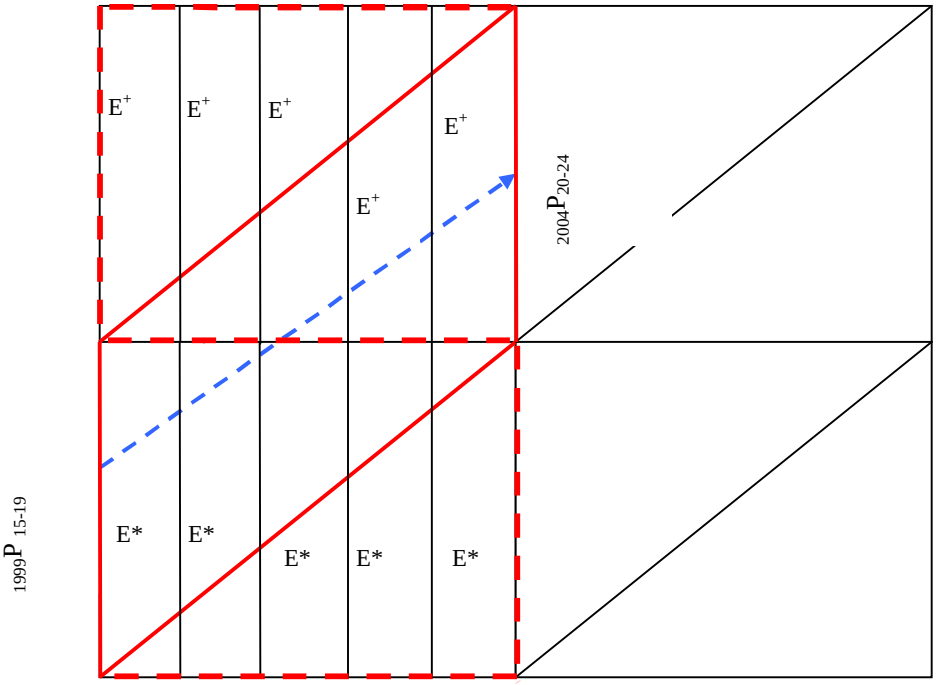
1. Collecting the entry data (or formulating assumptions);
2. Checking the entry data;
3. Data correction

Data concerning population by sex and marital status were collected by five-year age groups; data regarding events were also done in five calendar years. Primarily, the following assumptions were articulated:

1) It was assumed that the probability of dying for males and females for the period 1999-2003 is the same for each marital status and constant for two estimation periods 1999-2003 and 2004-2009. In order to receive numbers of deaths by marital status, probabilities of dying for males and females by age were multiplied by the population according to age and marital status.
2) All events such as: divorces for males and females, marriages by sex, age and marital status of spouses were calculated for five calendar years from 1999 to 2003 and they stay constant for the next estimation period from 2004 to 2009. (Figure 61).
3) Estimation of population by marital status was done without taking into account migration.

This study's estimation process is located in the second set of events, which is shown in Figure 61.

Figure 61. Location of events in the third set of events of Lexis diagram



Source: author's calculation
E* - events: number of deaths, marriages, divorces and life births for one age group and each calendar year
E^+ - events: number of deaths, marriages, divorces and life births for the next age group and each calendar year

The data of population by marital status, distributed by five-year age groups are available from the 1999 census. It is of great importance to estimate the size of the population by marital status for 2004 and 2009. Firstly, events distributed by five-year age groups were taken for each calendar year (1999,

2000, 2001, 2002, and 2003): divorces for males and females, marriages for males and females by marital status, the number of deaths for males and females by five-year age groups, and the number of live births for married and unmarried females in age profile. The number of divorces and marriages by sex, age and marital status as well as the number of live births by age of married mothers were available from published statistical data. The data on number of births for unmarried females by age of mothers was taken from the East-Kazakhstan regional statistical office. The problem was to estimate the number of deaths by marital status. From life tables for the total number of females and males the projective probability of dying by the following formula: ${}_5q_x=1-L_{x+5}/L_x$ was calculated. After it was assumed that the number of deaths were proportionally distributed according to marital status within five-year age groups. During these calculations the data on all possible events was received, namely: the number of deaths according to marital status by five-year age groups, the number of marriages by marital status and five-year age groups, the number of divorces by five-year age groups, entries to widowhood also aggregated in five-year age groups, and the number of live births by age and marital status of mothers. It was assumed that the number of widowed women corresponding to the one calendar year should be equal to the number of dead men in this calendar year, and the number of dead women should be equal to the number of widowed men. For this reason we took number of deaths for married females and males as entries to widowhood. Those events are located in the third set of events (Figure 61). So it is necessary to transform this data to the second set of events.

The number of age groups in the classification of events should be equal to the number of age groups in the classification of the population plus one. All experienced events in one age group should be shifted by one age-group in the next year. A more detailed flow data on events collected in complete ages were needed. It was assumed that all events were equally distributed in one age group and divided the number of events corresponding to one age group by five to receive the number of events for one complete age. After these manipulations with data it was re-aggregated into five-year age groups with help of following formula:

$$E_{(x\ldots x+4)} = (0.8E^{*}+0.2E^{+}) + (0.7E^{*}+0.3E^{+}) + (0.6E^{*}+0.4E^{+}) + (0.3E^{*}+0.7E^{+}) + (0.2E^{*}+0.8E^{+}),$$

where $E_{(x\ldots x+4)}$ is event corresponding to one age-group in the second set of events,

E^{*} is event corresponding to one age group in the third set of events

E^{+} is event for the next age group in the third set of events

Thus the following entry data is available for the next analysis:

- Population per 1st January 1999 by marital status (never married, married, divorced, widowed) for males and females, five-year age groups;
- The number of deaths by marital status for males and females by five-year age groups and five calendar years in the second data set;
- The number of first marriages for males and females by five-year age groups and five calendar years in the second data set;
- The number of remarriages for divorced, widowed males and females by five-year age groups and five calendar years in the second data set;
- The number of divorces for males and females by five-year age groups and five calendar years in

the second data set;

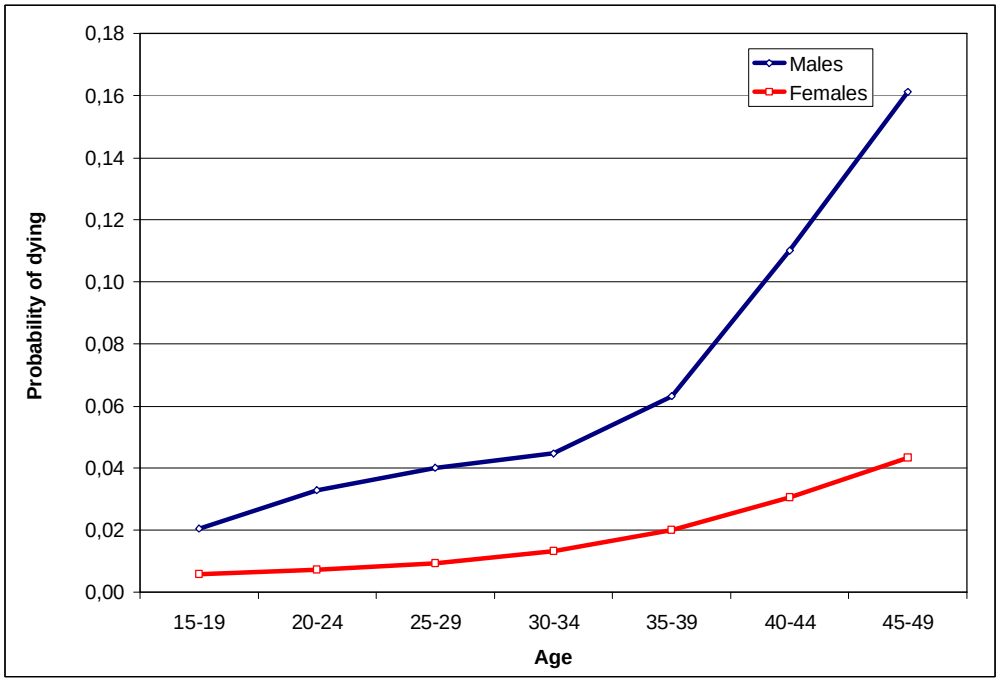
- Entries for widowhood for males and females by five-year age groups and five calendar years in the second data set;
- Number of births for married and unmarried women by five-year age groups and five calendar years in the second data set.

The next step aimed to check the data which was received from the calculations. According to the United Nations' "Manual on methods on estimating populations" there are several methods of appraisal of quality of basic data for population estimates. For example they mentioned five types of testing procedures:

- Comparison of observed data with a theoretically expected configuration;
- Comparison of data observed in one country with those observed elsewhere;
- Comparison with similar data obtained for nondemographic purposes;
- Balancing equation of directly interrelated data;
- Direct checks (re-enumeration of samples of the population)

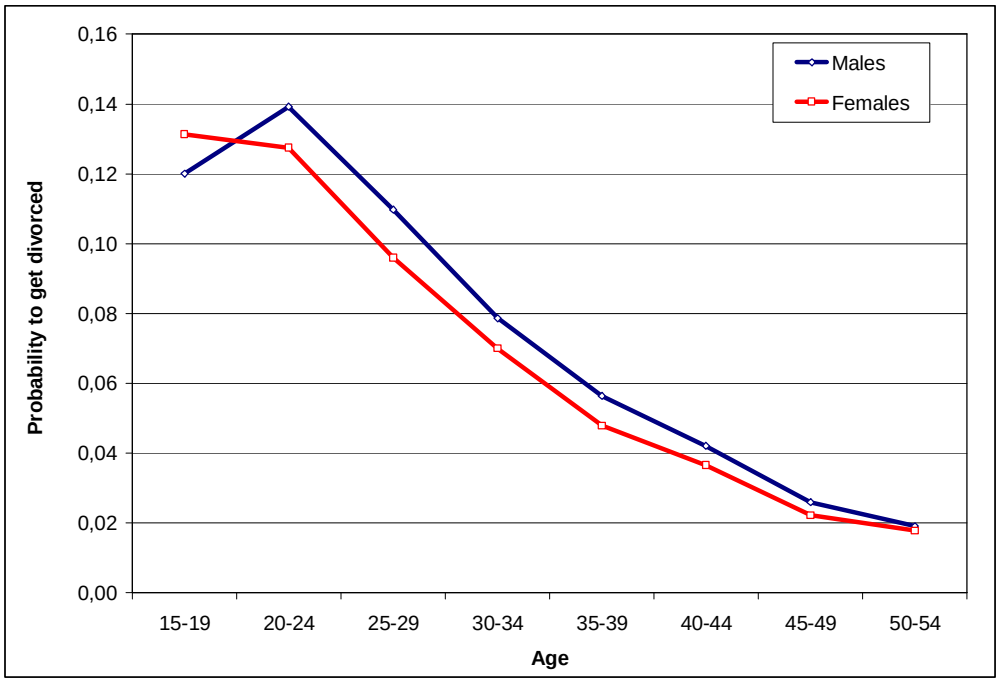
Unfortunately, there is no nondemographic or interrelated data, and we also don't have the opportunity for the re-enumeration of events. The first two types of testing our data were chosen. First of all the simple "expected configurations" were made, such as: comparative analysis of projective probabilities (second set) to move from one marital status to another. The second step would be a comparison of data calculated for the period 1999-2003 with data available for earlier years (1989, 1999).

Figure 62. Probability of dying by age for males and females, East-Kazakhstan region, 1999-2003



Source: Kazakhstan statistical office, author's calculations

Figure 63. Probability to get divorced by age for males and females, East-Kazakhstan region, 1999-2003



Source: Kazakhstan statistical office, author's calculations

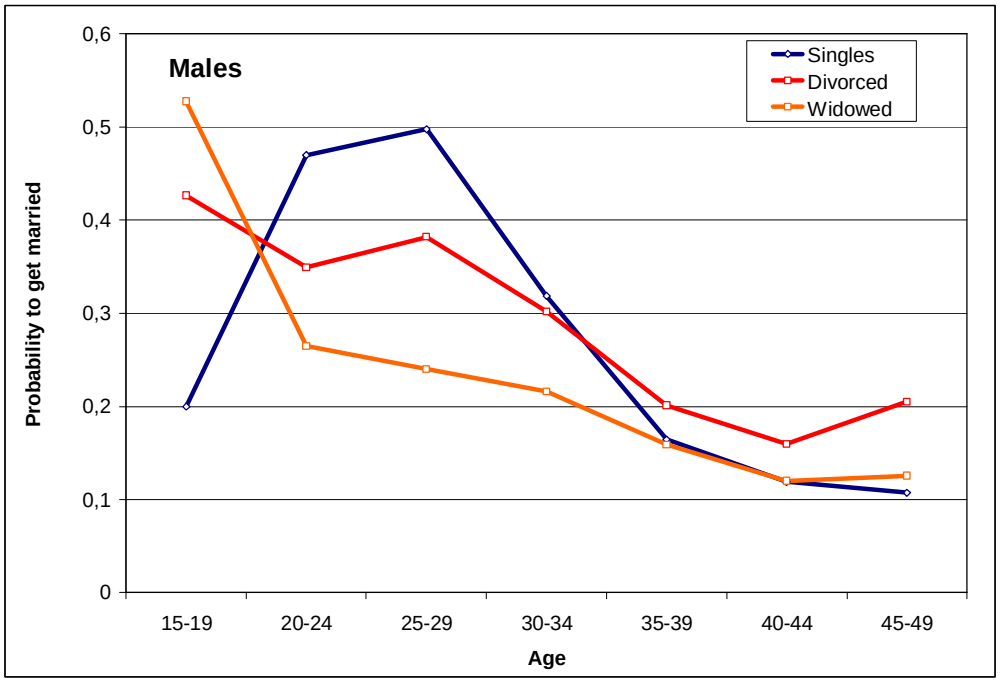
The probabilities of dying over five-year intervals (1999-2003) are graphically shown in Figure 62. In Kazakhstan generally, and also in the East-Kazakhstan region there is a big difference between male and female mortality, especially at older ages. This difference is mostly due to external causes of death such as accidental death, and specific lifestyle (alcohol, smoking etc). These values were expected before the process of collecting data.

The next transition probability from one marital status to another is the probability of getting divorced for married males and females. The numerator was also received through calculating a simple average of events for each calendar year. The graphical view is shown in Figure 63.The numerator for calculation of probability to get married for each category of men and women: singles (first-marriages), divorced and widowed (re-marriages) were calculated by the same principle as divorces and deaths. The denominator for all those probabilities was taken from the census data. The probability of getting married for males is not so different according to marital status. After marriage dissolution divorced or widowed men more often get married than women.

The probability of re-marriage for females is lower than the probability of a first marriage. This situation is common for the East-Kazakhstan region, divorced and widowed men are more likely to take an advantage of a second or third chance to create a new family. After family dissolution in the case of divorces, children mostly stay with their mother and the frustrated husband can marry again. The probability to get married for a young widowed man with one or more children is also higher than for woman. This is due to cultural and psychological aspects of the different behavior of men and women, not only in society, but also in family relations. Such differences are the reasons for the behavior of men and

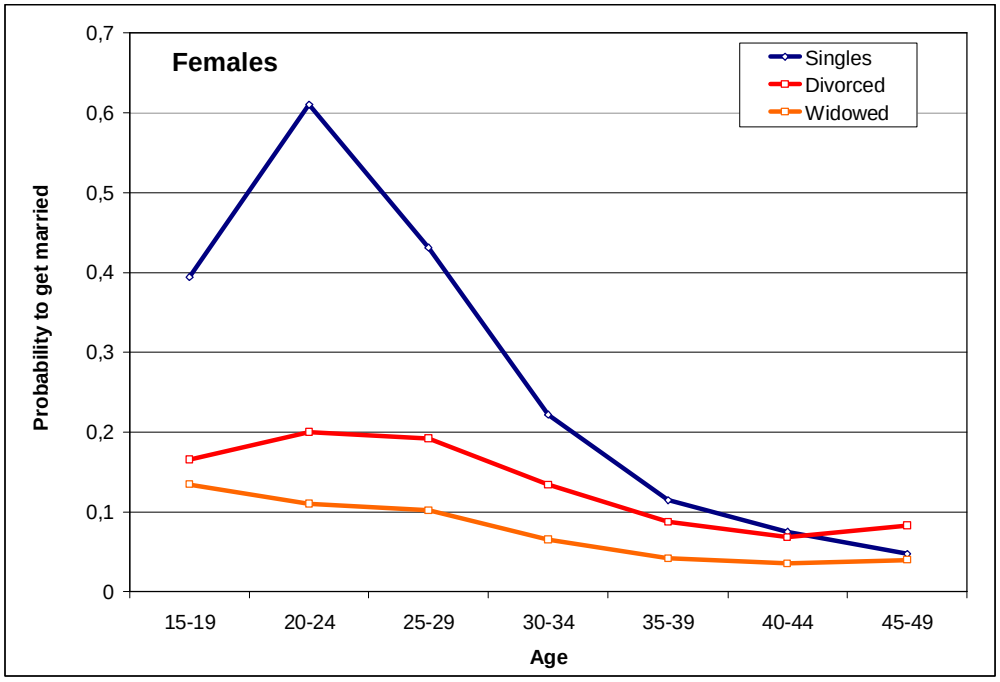
women after the dissolution of the family. The Figures 64 and 65 respectively represent a graphical view of the probabilities of getting married for males and females according to marital status for five-year calendar intervals.

Figure 64. Probability of getting married by age for males, East-Kazakhstan region, 1999-2003



Source: Kazakhstan statistical office, author's calculations

Figure 65. Probability of getting married by age for females, East-Kazakhstan region, 1999-2003



The estimation of population by marital status is based only on possible events. The list of possible and impossible events is shown in Table 16 The events matrix. For example, from the status never married there is only one possibility to become married. From the state married the person could become widowed, divorced or died, becoming never married is impossible etc.

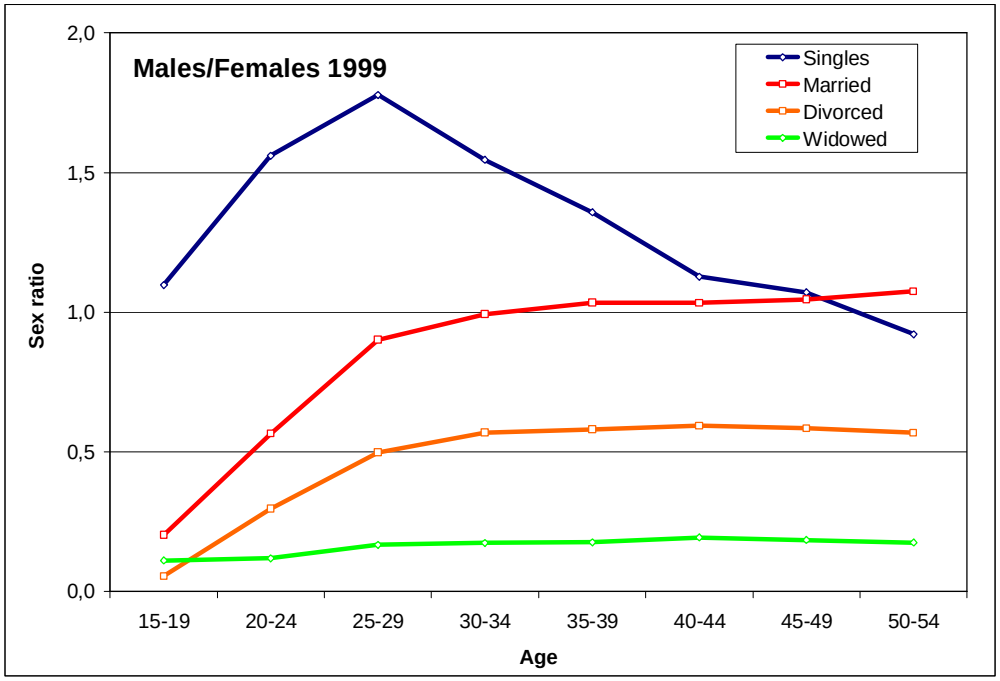
Table 16 The events matrix

From	To: NEVR	MARR	WIDO	DIVO	DEAD
NEVR	-	+	-	-	+
MARR	-	-	+	+	+
WIDO	-	+	-	-	+
DIVO	-	+	-	-	+

Note: '+' = possible event; '-'= impossible event

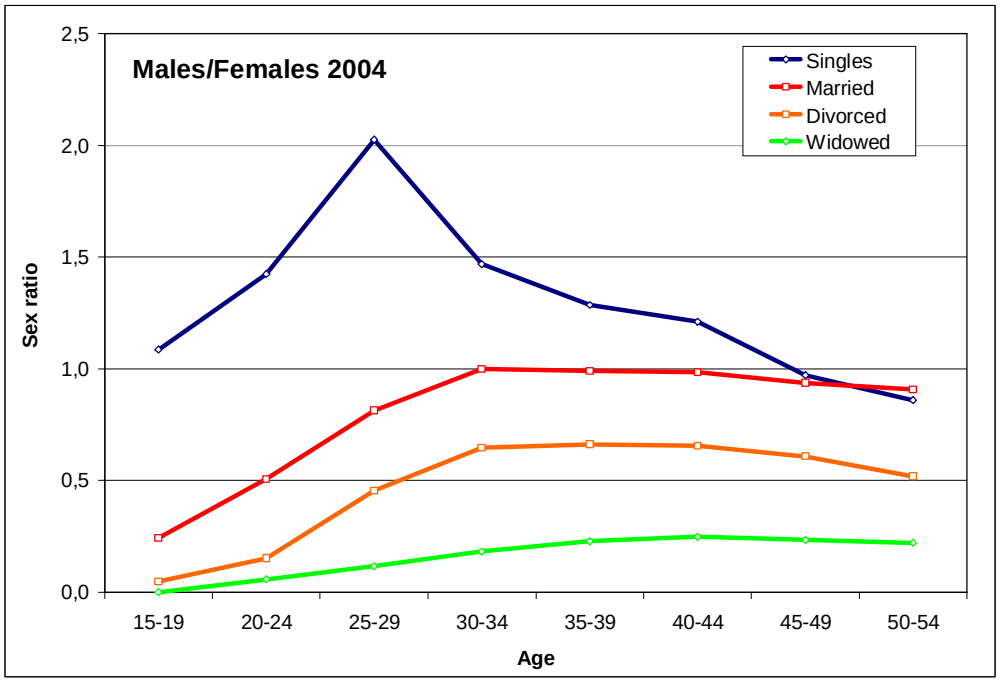
After receiving the first results it is essential to check the data. The best way of checking is the comparison of sex ratios according to marital status. On the following graphs there are three charts with sex ratios. The control year will be 1999, the data from the census. The estimated data for years 2004 and 2009 were checked.

Figure 66. Sex ratio of population by age and marital status, East-Kazakhstan region, 1999



Source: Kazakhstan statistical office, author's calculations

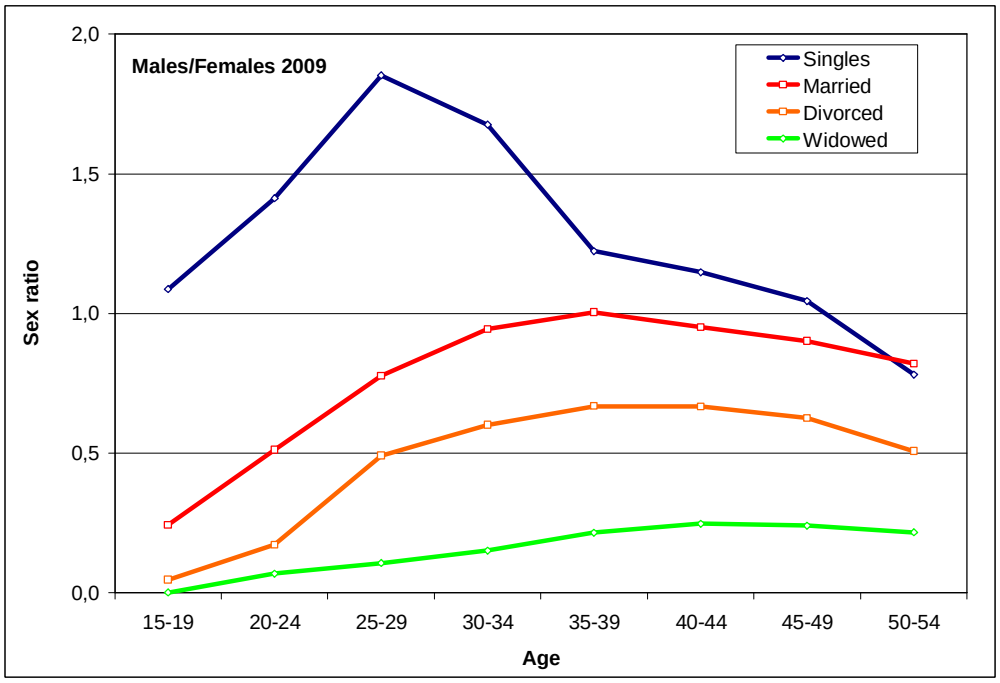
Figure 67. Sex ratio of population by age and marital status, East-Kazakhstan region, 2004



Source: Author's calculations

Figure 67 represents the sex ratio in the East-Kazakhstan region in 2004 according to estimated values of the number of population by marital status. The sex ratio for year 2009 is shown on Figure 68.

Figure 68. Sex ratio of population by age and marital status, East-Kazakhstan region, 2009



Source: Author's calculations

4.2.2 The multidimensional analysis based on adjusted data

After the process of checking the data, which was obtained from the estimation, the data can be used in the following advanced demographic analysis. In this subchapter the results of multistate analysis with help of LIPRO software will be presented. The best way to describe the data by marital status is presenting the age and sex pyramids. The age pyramid by marital status for 1999 census year was given in first subchapter of this chapter; this subchapter is going to represent age pyramids for the two estimated years 2004 and 2009.

Figure 69. Age and sex structure of population by marital status, East-Kazakhstan, 2004

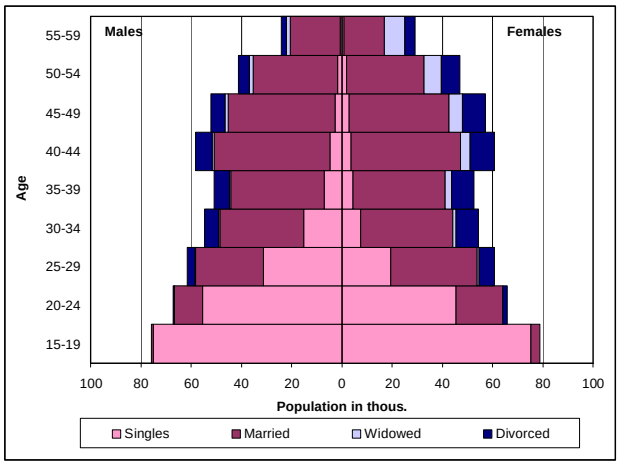
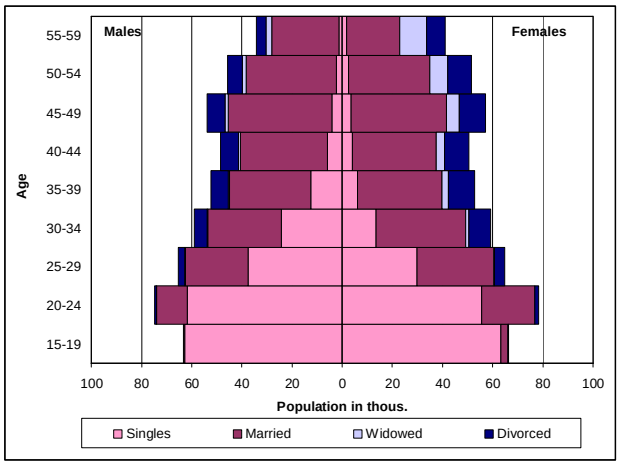


Figure 70. Age and sex structure of population by marital status, East-Kazakhstan, 2009



Source: LIPRO output

Table 17. Estimated age and sex structure of population by marital status, East-Kazakhstan region, 2004

	Males				Females			
Age	**Singles**	**Married**	**Divorced**	**Widowed**	**Singles**	**Married**	**Divorced**	**Widowed**
15-19	75 316	3 448	0	48	75 149	695	0	4
20-24	45 409	18 707	29	1 624	55 510	11 121	21	650
25-29	19 492	34 471	591	6 274	31 186	27 029	142	3 156
30-34	7 542	36 497	1 505	8 904	15 171	33 554	271	5 770
35-39	4 438	36 774	2 608	8 760	6 979	37 271	494	6 070
40-44	3 771	43 614	3 689	9 807	4 791	45 955	840	6 583
45-49	2 826	39 826	5 292	9 128	2 864	42 359	1 182	5 792
50-54	1 823	30 963	6 846	7 212	1 739	33 667	1 376	4 310
55-59	956	15 839	8 339	3 973	769	19 670	1 551	2 150

Source: LIPRO output
Note: in absolute numbers

A more detailed distribution of population by marital status is given in Tables 17 and 18. The number of never married women and men increased from 2004 to 2009, but this increase is not significant. The number of divorced persons is higher in 2009.

Table 18. Estimated age and sex structure of population by marital status, East-Kazakhstan region, 2009

	Males				Females			
Age	**Singles**	**Married**	**Divorced**	**Widowed**	**Singles**	**Married**	**Divorced**	**Widowed**
15-19	63 225	2 894	0	40	62 773	581	0	3
20-24	55 700	21 022	15	1 629	61 942	12 113	21	692
25-29	29 899	30 581	165	4 211	37 504	25 226	99	2 599
30-34	13 368	35 901	1 113	8 856	24 203	29 401	230	5 273
35-39	6 100	33 645	2 487	10 502	12 495	32 433	458	7 124
40-44	3 933	33 427	3 408	9 827	5 791	34 869	756	7 017
45-49	3 475	38 003	5 121	10 641	3 969	41 451	1 262	7 198
50-54	2 627	32 380	7 001	9 537	2 374	35 840	1 605	5 939
55-59	1 689	21 241	10 760	7 224	1 408	26 745	2 182	3 961

Source: LIPRO output
Note: in absolute numbers

The entry data related to the fertility was collected by five-year age groups and five calendar years, according to mother's marital status, as well as being done using data on marriages, divorces and deaths. From the life table cohort of women by age and by marital status all births including boys and girls are highlighted. Apparently, the 100,000 women of the life table radix have 135,355 children during their life time, 48,222 or 36% of which are born out of marriage (Table 19).

Table 19. Number of live births according to age of mothers and their marital status, from multistate life table 1999-2003, East-Kazakhstan

	Never married	Married	Never married	Married
Age	**In %**		**In abs. numbers**	
15-19	30	70	9 633	22 829
20-24	32	68	12 902	27 825
25-29	38	62	12 550	20 519
30-34	46	54	8 738	10 271
35-39	51	49	3 063	2 891
40-44	48	52	419	450
45-49	51	49	31	30
Total	**36**	**64**	**48 935**	**88 424**

Source: LIPRO output

Table 20. Fertility indicators for married and unmarried women, 1999-2003, East-Kazakhstan region

Indicators	Married	Unmarried	Total
Total fertility rate	1.17	4.58	1.44
Average number of children	0.49	0.88	1.37
GRR	0.57	2.24	0.71
NRR	0.24	0.43	0.67
Mean length of generation	27.88	26.22	26.82
Annual growth rate	-5.13%	-3.20%	-1.49%

Source: LIPRO output

In Table 20 the basic indicators are shown. The average number of children equals 1.37, from which 0.49 for married, and 0.88 for unmarried women. The average number of children should be equal total fertility rate, there are different numbers with two decimal places, but the same numbers in one decimal 1.4 (the rounding effect). The average number of live born daughters is 0.67 which equals the net reproduction rate. The mean length of generation (approximately equals the mean age of fertility) is 26.82 for all women, for married women equals 27.88, and for unmarried women 26.22, which is calculated without taking into account the birth order. In combination with an NRR of 0.67 this implies an annual growth rate in the stable population of -1.49%.

The aim of a more detailed analysis is to evaluate the role of one-parent families in the population development. The changes in fertility levels by marital status and the impact of changing structures by marital status were also evaluated using the Coale's indexes approach. Firstly, we have calculated the Coale's indexes for the East-Kazakhstan region for two time periods: 1999-2003 and 2004-2009 (Table 21). The Index of overall fertility (if) decreased from 0.19 to 0.18; at the same time the index of marital fertility (ig) increased from 0.20 to 0.31. The index of extramarital fertility (ih) halved from 0.016 to 0.07. The proportion of married people (im) also decreased significantly. At first sight it seems that the role of extramarital birth in the East-Kazakhstan region is unimportant. Therefore, it is of upmost importance to move to another, more advanced method of analysis, such as the decomposition of differences between two total fertility rates.

Table 21. Coale's indexes, East-Kazakhstan region

Indexes	1999-2003	2004-2009
Index of overall fertility	0.019	0.018
Index of marital fertility	0.021	0.030
Index of extramarital fertility	0.016	0.007
Proportion of married people	0.541	0.498

Source: Author's calculations, based on adjusted data

The subject of this research also touches upon the issue of the contribution of extramarital births to the total fertility rate. In connection with this we consider necessary to resort to a more detailed observation of the given matter. This study will use the method of decomposition and compare the total fertility rate in 1999 with the one in 2009 and at the same time it will draw special attention to the difference of two total fertility rates made by the contribution of marital and non-marital fertility changes and also due to the change of population's structure by marital status. Table 22 demonstrates the results of the calculation (the method is described on page 27) where we can see the changes of total fertility rate over the last 10 years. The total fertility rate decreased between 1999 and 2009 from 2.1 to 1.7, i.e. by 0.44. The effect of extra-marital fertility contributed to the overall decline by -0.26 and was higher than the effect of change in marital fertility of -0.16. The effect of changing structure by marital status was minimal amounting to -0.02.

Table 22. Decomposition of Total fertility rates for 1999 and 2009, East-Kazakhstan region

The difference between total fertility rates	-0.44	100%
Total effect of structure according to the marital status	-0.02	5.0%
Total effect of marital fertility	-0.16	36.5%
Total effect of non-marital fertility	-0.26	58.5%

Source: Author's calculations, based on adjusted data

In relative terms, the impact of declining extra-marital fertility was 58.5 % and the decrease in marital fertility contributed by 36.5 % to the total fertility decline. The next step is to evaluate the role of family dissolution in the process of a one-parent families' appearance. As such, the marital status life tables from the LIPRO life table analysis are depicted below (Table 23).

Table 23. Person-years according to the marital status from multistate life table for males and females 1999-2003, East-Kazakhstan

Age	Singles	Married	Widowed	Divorced	Total
		Females			
Births	244 133	0	0	0	244 133
0-4	481 000	0	0	0	481 000
5-9	478 900	0	0	0	478 900
10-14	467 245	10 581	0	101	477 928
15-19	393 947	78 048	39	4 150	476 184
20-24	275 861	176 794	549	18 489	471 693
25-29	185 129	236 759	2 945	37 940	462 773
30-34	137 325	250 009	8 611	54 529	450 476

Table 23 continued

35-39	116 120	240 306	15 200	64 755	436 380
40-44	104 899	220 709	22 086	70 018	417 712
45-49	97 080	190 314	30 670	71 915	389 979
50-54	90 091	145 564	46 989	71 018	353 662
55-59	82 110	93 338	75 516	66 941	317 904
60+	543 595	340 329	949 779	482 666	2 316 369
TOTAL	3 697 435	1 982 752	1 152 384	942 521	7 775 092
		Males			
Births	242 899	0	0	0	242 899
0-4	476 417	0	0	0	476 417
5-9	473 052	0	0	0	473 052
10-14	469 224	2 171	0	9	471 404
15-19	424 048	41 501	52	1 636	467 237
20-24	317 980	128 666	372	10 353	457 371
25-29	229 399	186 394	1 000	25 228	442 021
30-34	183 197	201 743	1 946	37 129	424 015
35-39	151 424	206 611	3 334	43 638	405 006
40-44	125 550	203 876	5 100	45 748	380 274
45-49	104 039	186 999	7 089	44 514	342 641
50-54	85 254	157 848	10 226	39 928	293 256
55-59	69 543	126 694	17 552	34 354	248 143
60+	243 538	502 444	187 045	144 829	1 077 856
TOTAL	3 595 564	1 944 946	233 715	427 367	6 201 592

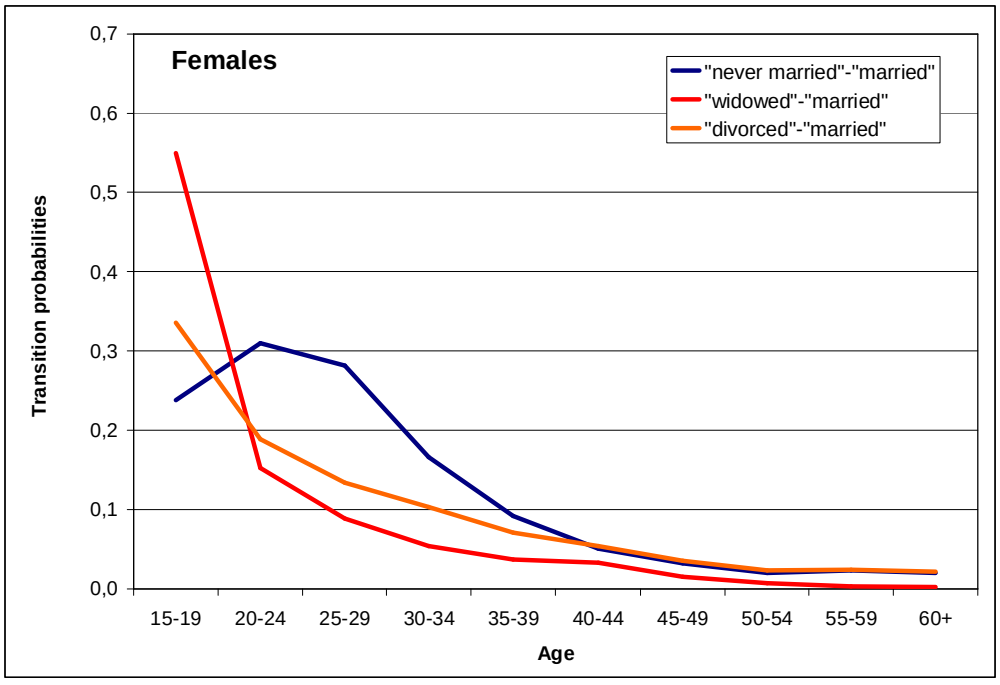
Source: LIPRO output

The total life expectancy at birth for females of East-Kazakhstan region for the period from 1999 to 2003 equals 77.7 years (received from the table total person years for females divided by 100,000 table root), of which 36.9 (total umber of person years for single females divided by 100,000) years are lived in the state

"never married", 19.8 in the state "married", 11.5 in the state "widowed" and 9.4 in "divorced". The total life expectancy for males equals 62, of these 62 years 35.9 are lived in the state "never married", 19.4 in "married", 2.3 in "widowed" and 4.3 in "divorced".

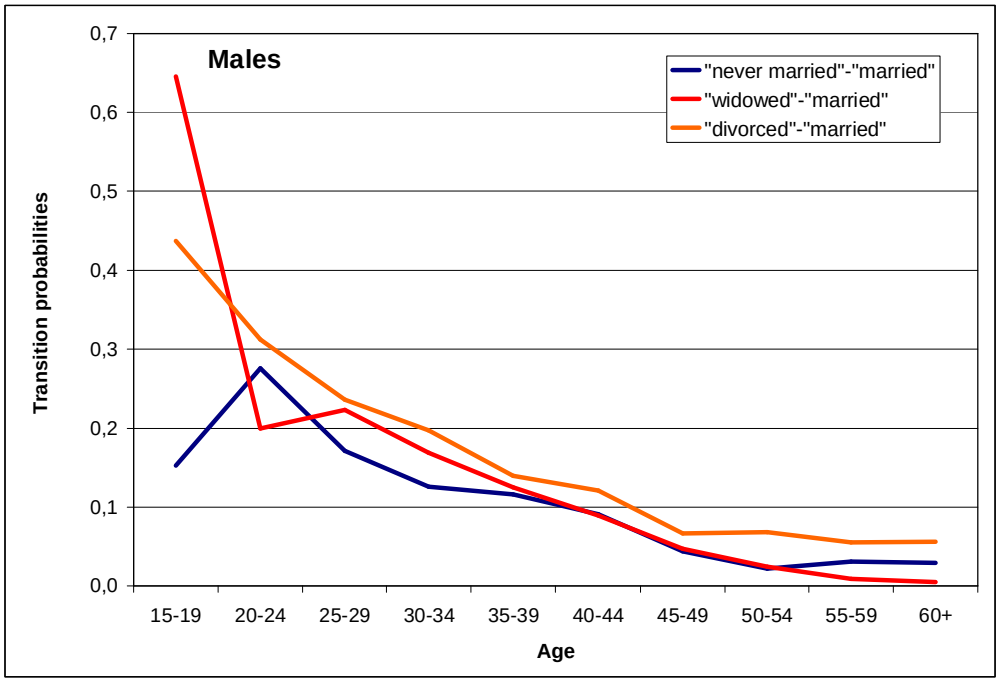
Next two Figures 71 and 72 show the distribution of transition probabilities by age and marital status from the multistate life tables for females and males. The probability to move from the state "never married" to "married" is relatively higher at young ages for females and males. Moreover, the probability of transition from the states "widowed" and "divorced" to "married" is higher for males in comparison with females. Obviously, this is due to the high intension to remarry for males, while females more likely to stay in the same marital status, such as: "widowed" or "divorced" during they life. The probability to be married for divorced males is even higher than for never married men. This is caused by the fact that usually, making a new relationship is easier for those males, who had experienced at least one divorce in their lifetime. The probability to remarry for widowed males also higher than for never married males, especially for the age groups: 25-29, and 30-34. The main motivation for remarriage among the widowed men is the presence of young children who need maternal care. Another important reason is the need to have a partner who will share the household responsibilities.

Figure 71. Transition probabilities from the state "never married" to "married", "widowed" to "married", and "divorced" to "married" from multistate life table for females, East-Kazakhstan, 1999-2003



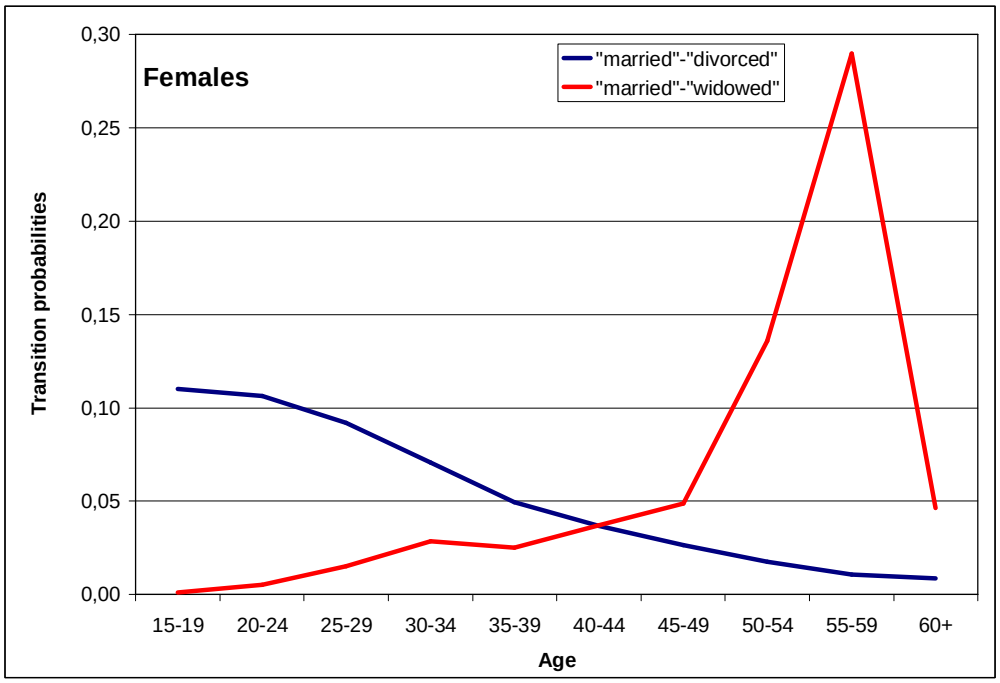
Source: LIPRO output

Figure 72. Transition probabilities from the state "never married" to "married", "widowed" to "married", and "divorced" to "married" from multistate life table for males, East-Kazakhstan, 1999-2003



Source: LIPRO output

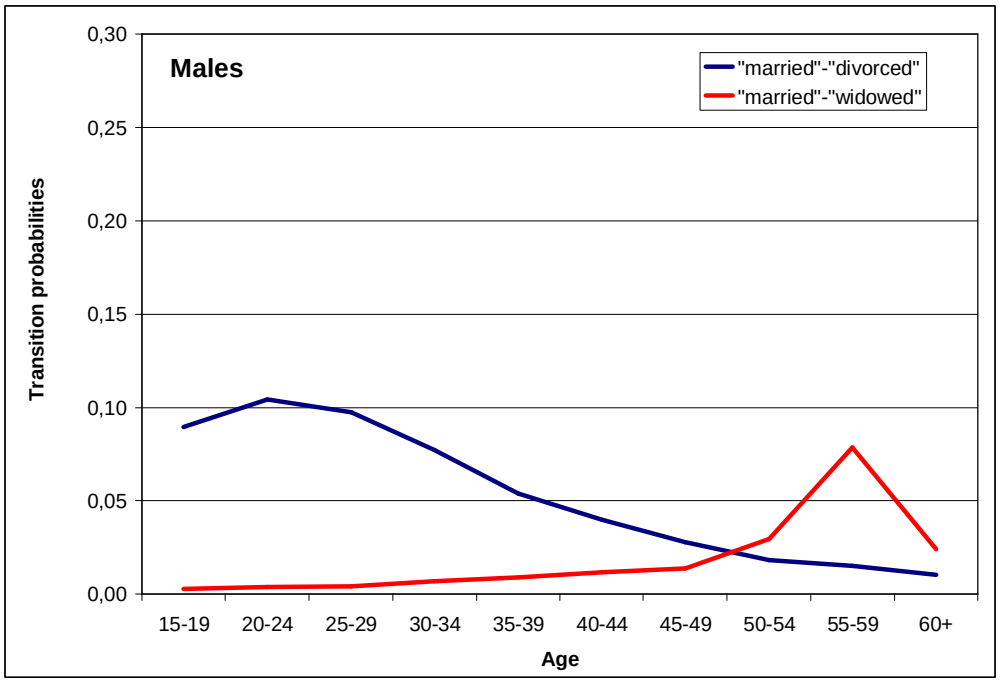
Figure 73. Transition probabilities from the state "married" to "divorced", "married" to "widowed" for females from multistate life table, East-Kazakhstan, 1999-2003



Source: LIPRO output

Figures 73 and 74 show the differences between transition probabilities from the state “married” to the states “divorced” and “widowed” for females and males. It is essential that, the probability to become widowed is higher for married females than males. This is caused by very high mortality level among men, and relatively short life expectancy for males in comparison with females. Also it should be noted, that the gap between male and female life expectancies at birth is almost 12-14 years. However, the probability to be divorced for females is on the same level as for males and shows the same trend: it is higher for younger ages.

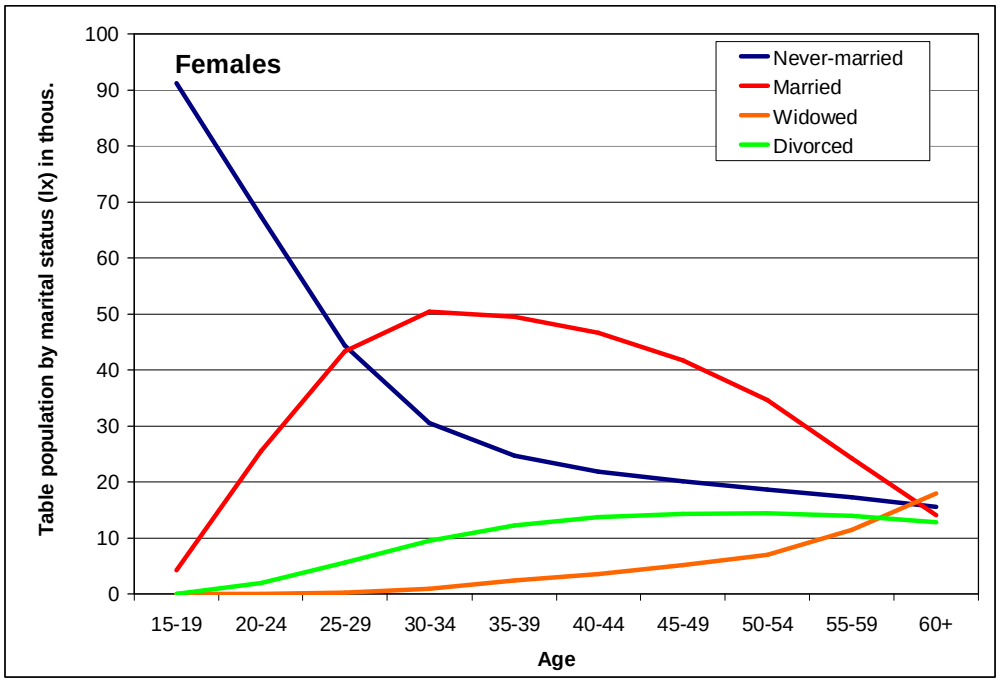
Figure 74. Transition probabilities from the state “married” to “divorced”, “married” to “widowed” for males from multistate life table, East-Kazakhstan, 1999-2003



Source: LIPRO output

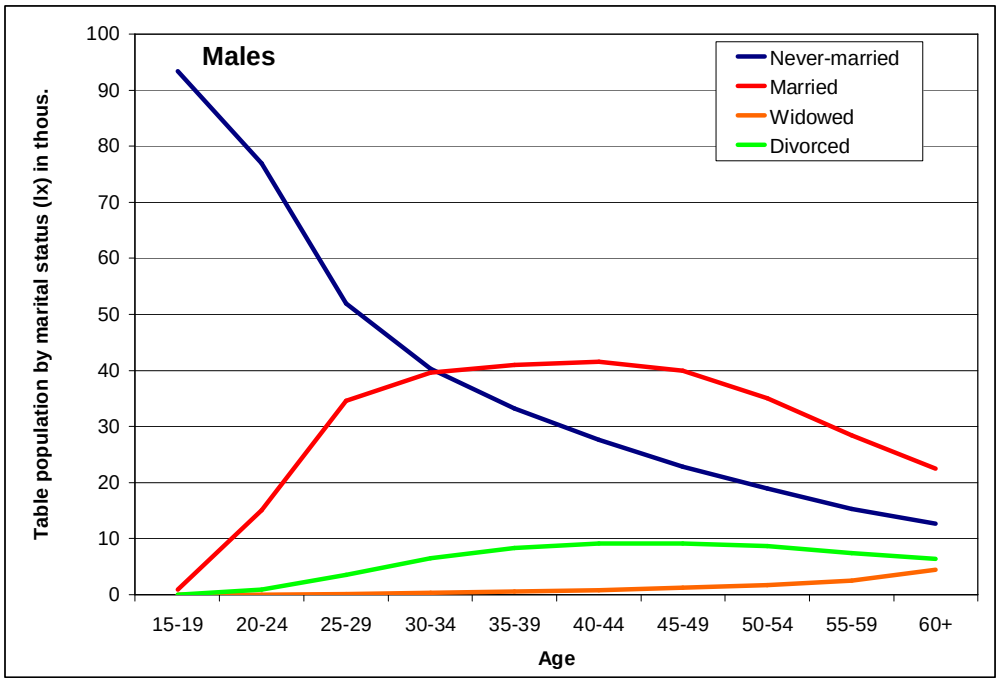
The distribution of table female and male population by age and marital status from the multistate life table is shown on the Figures 75 and 76. The individuals start they life in the “single” state, that is why the radix for the state “single” equals 100,000 and 0 for the rest states: “married”, “widowed”, and “divorced”. In creating the life tables, LIPRO sets the rates for international migration equal to zero. So that the population is assumed to be closed (N. Keilman and E. Imhoff, 1991). From these Figures it is obvious, that the number of table married, divorced and widowed population is higher for females in comparison with males for all ages. At the same time, the number of table singles is higher among males, than females. Moreover, for the age group 30-34 a half out of 100,000 women is already married, while the number of married males is only 40,000. This is due to the fact that their marriages are distributed more gradually within several age groups.

Figure 75. Table female population by marital status from multistate life table, East-Kazakhstan, 1999-2003



Source: LIPRO output

Figure 76. Table male population by marital status from multistate life table, East-Kazakhstan, 1999-2003



Source: LIPRO output

In order to investigate the proportion of ever married, the proportion of marriages, ending in divorce, and widowhood the total numbers of table population experienced events were calculated. Out of 100,000 women 74,612 are ever married. The proportion of ever married females at age 60+ is 74.6%. The number of ever married males is 62,833 out of 100,000 men, or 62.8%. The mean age of first marriage for females equals 27.4, and 29.1 for males (Table 25). Significantly, 21,650 females in the East-Kazakhstan region die after experiencing at least one divorce, which is 21.65% of the total number of women and 29.01% of the women ever married. The number of men experienced divorce during their life time is 18,730 and this is 18.73% out of total males, and 29.8% of ever married men. The average age at first divorce for females is 34.5, for males is 36.8, the mean age of any divorce (might be repeated) for women is 36.1 and for men is 38.1 (Table 25).

Table 24. Mean age at experienced events, 1999-2003, East-Kazakhstan region

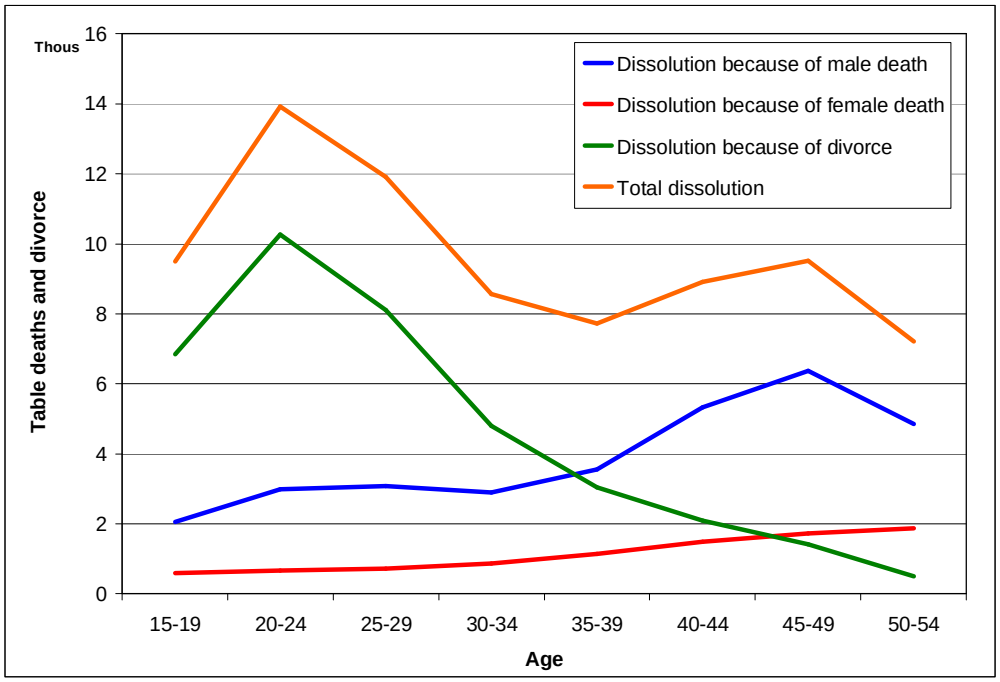
	First event		Any event	
	Females	**Males**	**Females**	**Males**
Mean age at first marriage	27.4	29.1	-	-
Mean age at widowhood	56.6	60.2	62.7	62.2
Mean age at divorce	34.5	36.8	36.1	38.1

Note: First marriage can be only ones during the lifetime
Source: LIPRO output

According to the aim of this thesis, it was necessary to investigate the proportion of widowed women and men in the East-Kazakhstan region. The number of widowed females equals 20,020, whereas the number of widowed males is 5,780. It is related to high mortality intensities among men. Moreover, 20% of the total number and 26.8% of the ever married women ended the marriage in the status "widowed". At the same time, the percentages of widowed men of the East-Kazakhstan region are 5.7% of the total number and 9.1% of the ever married males. The average age of entering to the widowhood as a first event is for females 56.6 years, for males is 60.2 years. The mean age of any widowhood as a repeated event is 62.7 and 62.2 for females and males respectively (Table 25).

In the Kazakhstan statistical agency, the data on marriages and divorces by duration of marriage are absent. Thereby as a base it was necessary to take the data on age profile and construct a three attrition marriage dissolution table, where it was assumed that at age group 15-19 there is a 100 000 table - married population. At young ages the majority of marriage dissolutions is caused by divorce, while in older age groups the majority of dissolutions is because of the death of one of the spouses, especially due to male mortality (Figure 77).

Figure 77. Three attrition marriage dissolution table by age, 1999-2003



Source: Author's calculations

Thus, in this subchapter the data obtained during the estimation of data on the population by age and marital status for 1 January 2004, and 31 December 2009 was used. The calculation of the basic fertility indicators and creating of the multistate life tables was compiled with the help of LIPRO software. The structure of population by marital status is changing over time. In 2009 a high number of never married people appeared. The proportion of ever married women is higher than men and equals 74.6% and 62.8% respectively. The mean age at first marriage is also increasing. Moreover, there is a higher number of divorced people in comparison with the previous years. The percentage of people who experienced divorce in their life time for the period 1999-2004 is relatively high and equals 29.01% and 29.8% for ever married women and men. The percentage of females, entering to the widowhood is higher then males, which is caused by a shorter life expectancy for men. The basic fertility indicators show the decrease in the total fertility rate, and the biggest impact to this process belong to the extra-marital fertility. The average age at childbearing is higher for married women in comparison with unmarried. This is due to the influence of birth order: in the case of married women it could be the second or third child. According to multi-dimensional analysis it could be concluded that the role of extra-marital birth in the one-parent families' appearance is not significant. The biggest impact to the increase of percentage of one-parent households belongs to the marriage dissolution process, such as divorce and widowhood.

CONCLUSION

The studying of one-parent families is not only an investigation of family transition, and statistical analysis of extra-marital fertility and family dissolution processes. Moreover, this thesis was aimed evaluating the role of one-parent families in population development in East-Kazakhstan region. The thesis attempted to provide an investigation into one-parent families' contribution to population development in the East-Kazakhstan region through an analysis of their structure, size, historical and modern conditions and factors of origin.

The study also aimed to focus on the characteristics of a one-parent family, definitions of the lone-parent family, and single-parent household, and analysis the theoretical framework of the transition process from the traditional family to a modern one. Conclusively, nowadays there are a huge number of various approaches and opinions about the single-parent concept. Thereby the issue of one-parent family definition is the principal starting point of this investigation. In what follows it could be argued that a one-parent family is a family which consists of a father or a mother with at least one child under the age of 18 living together in the same residential unit and without any individual that could take the place of the blood parent. Hereby two approaches were taken into accounts which are the basis of term consideration: from the parent's point of view and from the child's point of view. Moreover, the historical events that laid foundation to the beginning of traditional family transformation to modern shape, that played a role in one-parent families occurrence due to the dissolution of marriage, death of one of the spouses, a woman's desire to give birth to a baby beyond the marriage, became the turning point in the demographic picture of modern Kazakhstan. Society emancipation, family-conjugal legislation simplification and global changes to the political and economic arena of Kazakhstan had a significant impact on family. However, this study touched upon only brief description of the main theoretical characteristics, such as definitions of one-parent family concept, the process of transformation of family structure, diversification of family.

Initially the study aimed to investigate single-parent household structures based on census data, and survey results, and also analyze their patterns, characteristics and peculiarities of origin whilst providing their further development. The problem of distinguishing one-parent families and single-parent households was clearly identified. Special attention was given to this problem. There are a large amount of definitions on family and household concepts and an infinite number of household classification and

typology as well, provided by concrete geographic, demographic, social and cultural and demographic situations on different continents, countries and even cities. The specific weight of households with one-parent families is very high in the East-Kazakhstan region where there are a majority of households with children who live with their mother, whereas their father lives in another housing estate. The percentage of one-parent families prevails more in cities than in villages where the traditional type of households has remained; children live with both parents. Although this aim was achieved, the current situation was not investigated properly. The problem was the lack of household data for the last ten years. The analysis was mostly based on available 1999 census data and also the results of the Demographic health survey.

The thesis aimed to study existing one-parent family conditions of origin, and concurrently analyze trends and patterns in extra-marital fertility, widowhood and divorce by compiling a comparative analysis of the situation in urban/rural, male/female categories. Also this study attempted to conduct a multistate analysis by using advanced demographic methods and LIPRO software in order to identify the role of the types of single-parent family origin factors in the process of a single-parenthood development. The analysis of family trends and patterns was addressed. There is a gradual change of population's structure by age and marital status in the East-Kazakhstan region over recent time. The percentage of those who have never been married not only in the young age but in the middle and senior ages is increasing. The proportion of ever married women for the period from 1999 to 2004 is higher than men and equals 74.6% and 62.8% respectively. The mean age at first marriage is also increasing. In addition, the proportion of divorced women is rising compared to men in the city and in the rural area as well. It's primarily connected with the fact that men are more willing to espouse repeatedly than women who remain alone with children to be supported. The percentage of people who experienced divorce in their life time for the period 1999-2004 is relatively high and equals 29.01% and 29.8% for ever married women and men. If primarily in the 1990s among the divorced were only men and women with elementary or secondary education, then by the end of 2008 the share of divorced by education level has become more complex. Equally, the number of divorces with one child is increasing and divorces with two or more children are decreasing compared to previous years. The percentage of females, entering widowhood is higher than males, which is caused by short life expectancy for men. Extramarital births by their character are divided into so-called unexpected (the beginning of sexual relationships when a woman is not aware enough about the methods of contraception and family planning) and deliberate (in the process of sexual relations when a woman decides to give a birth to a child out of marriage). In spite of a relatively high religiousness of men compared to women the specific weight of extramarital birth is increasing from year to year and a category of so-called deliberate extramarital births appears on the scene where the reason of extramarital children's birth doesn't mean the lack of knowledge on family planning and contraceptives use. The mean age of the first childbearing for married and unmarried women as well is increasing. According to the statistical data the big role of extra-marital birth in the process of one-parent families' development occurred. Thus, despite the fact that percentage of extramarital births in the East-Kazakhstan region remains high at the same time we cannot say that it makes a definite contribution to the rise of birthrate in whole. The basic fertility indicators show the decrease of the total fertility rate, and the biggest impact to this process belong to the extra-marital

fertility. The average age at childbearing is higher for married women in comparison with unmarried. The mean age at first marriage is also increasing. Moreover, there are a high number of divorced people in comparison with previous years. The percentage of people who experienced divorce in their lifetime for the period 1999-2004 is relatively high. The percentage of females entering widowhood is higher then males, which is caused by a short life expectancy for men. According to multi-dimensional analysis it can argued that the role of extra-marital birth in the one-parent families' appearance is not significant. The biggest impact to the increase of percentage of one-parent households belongs to the marriage dissolution process, such as divorce and widowhood. However, it should be noted that during the process of achieving those aims the problem of the lack of data was crucial.

Also this study aimed to introduce existing methods of data manipulation in order to estimate missing data. This study can be used by demographers in order to investigate data, which is not available. It also can be used as a key point in the process of checking census data. The advantages of this thesis are: it is the first of its kind in Kazakhstan, it investigated one-parent families and single-parent households in the East-Kazakhstan region, it evaluated the extra-marital births, divorces and widowhood, including the multistate demographic analysis, and it introduced the methods of data manipulating in order to estimate missing values.

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