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SOCIO-CULTURAL CAUSES AND CONSEQUENCES OF TOTAL FERTILITY RATE CHANGES IN TURKEY FROM 2000 TO PRESENT*

Özlem SERTKAYA DOĞAN**

ABSTRACT

Population growth in Turkey and in the world can be explained with several reasons. However, the main reason that determines population growth is fertility. The total fertility rate refers to the average number of children a woman gives birth to during the period when she is fertile (the 15-49 age group). The fertility rate in Turkey has been declining for years. As a result of high fertility and rapid population growth, Turkey has a young population structure. According to the census results of 2000, while approximately 30% of the population was aged 15 and under, the share of those aged 65 and over was about 6%. Significant reductions, especially in fertility rates, have occurred in Turkey in recent years. Depending on this, the age structure of the population in Turkey is also changing. The total fertility rate, which was five children per woman in the 1970s, decreased to 2.65 children in the 1990s and to 2.26 children today. This change has also caused the median age in Turkey to rise. In Turkey, the median age, which generally ranged from 19.6 to 20.3 years in 1940-1960, increased steadily after 1970. The median age, which was 24.8 in 2000, reached 32 in 2018. As of the end of 2018, the median age was determined to be 31.4 in males and 32.7 in females. This change arises as a result of the economic and socio-cultural development in Turkey.

Define Turkey's social development as a priority and is associated with increased educational opportunities of men. Increased, leadership service life more easily folded in the possibility of strengthened. The age of marriages and the age of having a child are shifted further, leading to changes in the number of children according to age groups.

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** Prof. Dr. İstanbul Üniversitesi, E-posta: srtkydgn@istanbul.edu.tr

STRUCTURED ABSTRACT

Differences in the fertility rate between regions and cities are also a result of the economic and socio-cultural differences between regions. The fertility rate is, at the same time, a value that provides information about the development levels of countries. The fact that developed countries have lower fertility rates also causes an increase in national income per capita at that rate. With increased levels of education in developing countries and women's inclusion in the labor force, fertility rates are also decreasing.

Census in Turkey has been carried out since 1927. From 1927 to 2018, Turkey's population has increased continuously, while some period showed variability in the rate of population growth. The transition from high fertility and death rates to low both of them is called demographic transformation theory. Turkey has lived the third stage of the demographic transition theory, that a decrease in death and birth rates, population growth has experienced balanced. However, Turkey is aging even more, with the 2023 "too old" countries will enter the classroom. In order to better analyze the population constitutes one of the main topics of human geography and in order to determine Turkey's demographic transformation, the characteristics of the population (age structure, gender status, education status, household size, distribution of workers by economic sector, rural-urban population rates) are studied in this study. Compared to the population projections of 2023, 2040, 2060 and 2080, which are formed by considering the Address Based Population Census Results, future demographic opportunities and what should be done in this context have been put forward.

Turkey has a total population of 82 million 3 thousand 882 in 2018. Rural population is 6 million 337 thousand 385 and 7.7% of our population. Contribution to the agricultural economy and rural population in Turkey's economy plays a primary role. Demographic projection is a method to help us prepare prudential economic and social policies. These projections provide useful predictions about, current population structure, it's vocations and also helps us to determine if the current behaviour of the population keeps having the same vocation, what kind of population would appear in near future, population density, migrations, sex and age pattern of the population and sociocultural changes. Demographic Projections not only suggest that Turkey's young and constantly growing population pattern is changing but it also shows that it's fertility rates and structures showing some changes as well. Changes through Low Death and Fertilty Rates from higher rates, what we can define as "Demographic Change Process", affects on population's age structure as well. What we gathered from recent projection researchs indicates that there will be constant fall on young population levels, there will be rise in the number of population in working till 2040 but then there will be fall on the number in the same population group afterwards. Based on these informations, elderly population in Turkey constantly growing. These changes on both age and demographic structures makes impact in direct or indirect ways on both Social and Ekonomic live in Turkey. Demographic changes brought some positive outcomes(having a peak on population in working age level) along with the risks that Turkey never have been faced before(aging population). This situation requires taking measures for many sectors, especially the agricultural economy.

Therefore, our study of the demographic transformation of Turkey, the rural population and population projections to 2080 are analyzed.

The fertility rate is, at the same time, a value that provides information about the development levels of countries. The fact that developed countries have lower fertility rates also causes an increase in national income per capita at that rate.

The total fertility rate, which was five children per woman in the 1970s, decreased to 2.65 children in the 1990s and to 2.26 children today. This change has also caused the median age in Turkey to rise.

In our study, the course of the population development in Turkey was discussed in three different periods based on the applied population policies. These periods are the period between 1927 and 1965 during which pronatalist policies were applied, the period between 1965 and 2014 during which antinatalist policies were applied, and the second pronatalist period that started to be implemented after 2014.

The population of the year 1927 is observed to be 13,648,270 people, and the population density is observed to be 18. Approximately 25% of this population is considered as urban and 75% as rural population. In the second census conducted in 1935, our population was determined to be 16,158,018. In this process, there was an increase of 21.10%, in other words, approximately 2.5 million. The population of Turkey continued to increase in the next periods.

When the statistical data in the table are evaluated, it is observed that despite the increase in the total population, the population growth rate has relatively decreased, especially in the period between 1935 and 1950.

From the year of 1927 till the year of 1965, our population generally tends to increase. In the process, there is an exceptional situation for 1945.

After the Second World War, the transition to a multi-party democratic regime resulted in an atmosphere of peace and security, psychological relief, increased national income, improved technology, improved health services, improved nutrition and accommodation conditions, and increased transportation and communication facilities, and these were effective in the increase of the population. Nowadays, our population is 82 003 882 people, and our population density is 107. During the 53 years between 1965 and 2018, our population increased by approximately 265%. In Turkey, the total number of births increased by 70% between the years 1950-1980, by 19% between the years 1980-2010, and by 2.3% between the years 2010-2017. Demographic studies carried out in Turkey in the last 40 years indicate that nearly all women marry by the end of the reproductive age. This case shows that marriage is a universal phenomenon, which is accepted in all social groups in Turkey.

Keywords: Population, Birth Rates, Socio-Cultural Structure.

TÜRKİYE’DE 2000 YILINDAN GÜNÜMÜZE TOPLAM DOĞURGANLIK HIZI DEĞİŞİMLERİNİN SOSYO-KÜLTÜREL SEBEPLERİ VE SONUÇLARI

ÖZ

Türkiye ve dünya üzerinde nüfus artışı çeşitli nedenlerle açıklanabilir. Ancak nüfus artışını belirleyen temel neden doğurganlıktır. Toplam doğurganlık hızı, bir kadının doğurduğu dönem (15-49 yaş grubu) boyunca doğurduğu ortalama çocuk sayısını ifade etmektedir. Türkiye’de doğurganlık hızı yıllar itibariyle düşmektedir. Yüksek doğurganlık ve hızlı nüfus artışlarının da bir sonucu olarak Türkiye genç bir nüfus yapısına sahiptir. 2000 yılı nüfus sayım sonuçlarına göre nüfusun yaklaşık olarak % 30’u 15 yaş ve altındayken, 65 ve üzeri yaşın payı yaklaşık % 6’dır. Son yıllarda Türkiye’de özellikle doğurganlık hızlarında önemli azalmalar meydana gelmiştir. Buna bağlı olarak, Türkiye’de nüfusun yaş yapısı da değişmektedir. 1970’lerde kadın başına 5 çocuk olan toplam doğurganlık hızı 1990’lı yıllarda 2,65 çocuğa, günümüzde ise 2,26 çocuğa kadar düşmüştür. Bu değişim Türkiye medyan yaşının (ortanca yaş) da yükselmesine neden olmuştur. Türkiye’de 1940-1960 yıllarında genel olarak 19,6 ile 20,3 arasında değişen ortanca yaş, 1970 yılından sonra sürekli olarak artış göstermiştir. 2000 yılında 24,8 olan ortanca yaş, 2018 yılında 32’ye ulaşmıştır. 2018 yılı sonu itibari ile ortanca yaş erkeklerde 31,4 iken, kadınlarda 32,7 olarak belirlenmiştir. Bu değişim Türkiye’de ekonomik ve sosyo-kültürel gelişimin bir sonucu olarak karşımıza çıkmaktadır.

Türkiye’de yaşanan toplumsal gelişim öncelikli olarak kadınların ve erkeklerin eğitim imkanlarının artmasıyla ilişkilidir. Özellikle yüksek öğretim olanaklarının artmış olması, dolayısıyla kadınların iş hayatına daha kolay katılmasına da imkan sağlamıştır. Evlilik yaşlarının ve çocuk sahibi olma yaşlarının daha ileriye ötelenmesi yaş gruplarına göre sahip olunan çocuk sayısının da değişmesine sebep olmuştur.

Anahtar Kelimeler: Nüfus, Doğum Oranları, Sosyo Kültürel Yapı

1. The Course of the Population Development in Turkey (1927 - 2018)

In general, regional changes in the world population are determined by birth, death, and migration rates. According to the 2018 United Nations population data, the world population is 7 billion 633 million. The country with the largest population is China, with a population of 1 billion 415 million. The second country is India with a population of 1 billion 354 million, the third is the United States with a population of 326 million, the fourth is Indonesia with a population of 266 million, and the fifth is Brazil with a population of 210 million. Turkey is the 17th in the world with 82,003,882 people in terms of population.

In our study, the course of the population development in Turkey was discussed in three different periods based on the applied population policies. These periods are the period between 1927 and 1965 during which pronatalist policies were applied, the period between 1965 and 2014 during which antinatalist policies were applied, and the second pronatalist period that started to be implemented after 2014.

1.1. The Population Development in Turkey Between 1927 and 1965

Table 1: Population, Annual Population Growth Rate (%), and Population Density in 1927-1965

Census Year	Population	Annual Population Growth Rate (%)	Population Density
1927	13648270	-	18
1935	16158018	21.10	21
1940	17820950	17.03	23
1945	18790174	10.59	24
1950	20947188	21.73	27
1955	24064763	21.75	31
1960	27754820	28.53	36
1965	31391421	24.62	41

Source: <http://www.tuik.gov.tr>

When the table is examined, the population of the year 1927 is observed to be 13,648,270 people, and the population density is observed to be 18. Approximately 25% of this population is considered as urban and 75% as rural population. In the second census conducted in 1935, our population was determined to be 16,158,018. In this process, there was an increase of 21.10%, in other words, approximately 2.5 million. The population of Turkey continued to increase in the next periods. The population increased by 1.6 million in the years of 1935-1940, by 0.9 million in the years of 1940-45, by 2.1 million in the years of 1945-50, by 3.1 million in the years of 1950-55, and by 3.6 million in the years of 1955-60 and 1960-65.

When the statistical data in the table are evaluated, it is observed that despite the increase in the total population, the population growth rate has relatively decreased, especially in the period between 1935 and 1950. As can be observed, the impact created by the Second World War has affected our country negatively, like all other countries in the world.

Chart1:Total Population (1927-1965)

Chart 2: Population Density (1927-1965)

Chart 3: Annual Population Growth Rate (1927-1965)

From the year of 1927 till the year of 1965, our population generally tends to increase. In the process, there is an exceptional situation for 1945.

The years of the Second World War (1939-1945) is a period during which large population losses were experienced in our country as in the whole world. Due to reasons such as the majority of the male population being on the front line, the disintegration of family unities, the lack of medical care and drug support, the population growth rate decreased. With the disappearance of the possibility of war, the military service returned to normal, and this caused the development of the country's economy and generally a positive change in the population of the country (Bulut, 2000: 25).

As of the 1950s, the ending of the war, the re-establishment of family unities, and the establishment of trust and public order enabled the population to increase. This process was valid not only for Turkey but for all countries involved in the war. As stated in the charts, as of the year of 1955, there has been a significant increase in our population growth rate and consequently our population.

As of the 1950s, a development and an increase took place in Turkey not only in the amount of population but also in many other areas. As of these dates, an intense industrialization movement started, and this prepared the ground for fundamental changes in the distribution of the population within the country. In connection with the industrialization movement, certain centers were identified, and factories were established to serve heavy industry and manufacturing industries in these areas, and various facilities were built to utilize underground and aboveground resources as much as possible. These regions became the centers attracting the population as they naturally provided labor potential.

1.2. The Population Development in Turkey Between 1965 and 2014

After the Second World War, the transition to a multi-party democratic regime resulted in an atmosphere of peace and security, psychological relief, increased national income, improved technology, improved health services, improved nutrition and accommodation conditions, and increased transportation and communication facilities, and these were effective in the increase of the population. Due to these reasons, after the Second World War, especially the 1965 period is one of the turning points for Turkey in terms of population growth.

Table 2: Population Amount in 1965-2014

Census Year	Population	Annual Population Growth Rate (%)	Population Density
1965	31391421	24.62	41
1970	35605176	25.19	46
1975	40347719	25.00	52
1980	44736957	20.65	58
1985	50664458	24.88	65
1990	56473035	21.71	73
2000	67803927	18.28	88
2010	73772988	15.88	96
2014	77695904	13.3	101

Source: <http://www.tuik.gov.tr>

Chart 4: Distribution of the Total Population by Years (1965-2014)

Chart 5: Population Density (1965-2014)

As it is observed in the charts, our population and hence the population density tended to increase continuously between 1965 and 2014.

1.3. The Population Development in Turkey Between 2014 and 2018

Table 3: Total Population in 2014-2018.

Census Year	Population	Annual Population Growth Rate (%)	Population Density
2014	77695904	13.3	101
2015	78741053	13.4	102
2016	79814871	13.5	104
2017	80810525	12.4	105
2018	82003882	14.7	107

Source: <http://www.tuik.gov.tr>

Nowadays, our population is 82 003 882 people, and our population density is 107. During the 53 years between 1965 and 2018, our population increased by approximately 265 %.

Chart 6: Distribution of the Total Population by Years (2014-2018)

Chart 7: Population Density (2014-2018)

Istanbul is the province with the highest arithmetic population density with 2900 people. Kocaeli (528), Izmir (360), Yalova (310) and Gaziantep (297) are the provinces with the highest population density. The province with the lowest population density is Tunceli (12).

2. Factors Affecting Fertility Rate Changes in Turkey

2.1. The Variation of Birth Number and Rate

Table 4: Births by Gender (1935-2016)

	1935	1940	1950	1960	1970	1980	1990	2000	2010	2017
Male	0	0	331729	422105	470535	541853	572603	651432	647859	662928
Female	0	0	291567	388234	485954	518322	543890	615319	613310	628127
Total	0	0	623296	810339	956489	1060175	1116493	1266751	1261169	1291055

Source: It was prepared by using the data retrieved from <http://www.tuik.gov.tr/>

In Turkey, the total number of births increased by 70% between the years 1950-1980, by 19% between the years 1980-2010, and by 2.3% between the years 2010-2017. According to the primary demographic data of TURKSTAT dated 1 February 2019, the crude birth rate, which was 20.3‰ in 2001, decreased to 17.2 ‰ in 2010 and 16.1 ‰ in 2017. Similarly, the overall fertility rate decreased from 82.7 ‰ in 2001 to 72.8‰ in 2010 and 69.5 ‰ in 2017.

Chart 8: Change in the Number of Births in Turkey (1950-2017)

Similarly, changes in the total fertility rate, which represents the average number of children a woman can have depending on the age-specific fertility rate between the age of 15-49 years when a woman is fertile, are similar. Accordingly, it was calculated to be 2.38 in 2001, 2.08 in 2010, and 2.07 in 2017.

Table 5: Births by the Mother's age Group (2001-2017)

Year	Total	<15	15-17	18-19	20-24	25-29	30-34	35-39	40-44	45-49	50+	Not known
2001	1 323 341	2 730	50 848	103 482	436 558	373 702	197 347	113 249	29 676	8 947	2 094	4 708
2005	1 244 041	1 721	34 926	88 579	391 952	367 167	229 505	90 459	30 531	5 544	1 400	2 257
2010	1 261 169	716	29 449	72 735	344 108	396 887	261 678	117 392	24 609	4 132	624	8 839
2017	1 291 055	227	69003		301196	401814	308176	165264	33115	2342	377	9541

Upon examining the table, significant differences in the number of age-specific births as of the years also attract attention. Accordingly, changes in the number of births under the age of 15 and in the age group of 30-34 are the most sensitive breakpoints. Between 2001 and 2017, while there was a 91.4 % decrease in the number of births under the age of 15, an increase of 58.8% occurred in the 30-34 age group. This situation is one of the most important indicators of the increase in the education level, the participation of women in the active working life at a higher rate, and the socio-cultural change experienced in the demographic structure in coordination with these in the last 15 years.

Differences in fertility rates between regions and cities are also a result of economic and socio-cultural differences between regions. The fertility rate is also a value that gives information about the development levels of countries. The lower fertility rate of the developed countries causes the national income per capita to increase at that rate. In developing countries, fertility rates are decreasing with the increase in the education level and inclusion of women in the labor force.

There is a negative relationship between education and fertility. As the level of education increases, fertility rates decrease. This situation can be considered as an indicator explaining the secure link between education and fertility.

In Turkey, women living in cities are more educated than women living in rural areas. Thirty-five percent of women living in cities are at least high school graduates; however, this ratio is only 13 percent among women living in rural areas. While 21 percent of women living in rural areas have not received any education, this ratio is 10 percent among women living in cities. The education levels of women living in the Southeast Anatolia, Middle East Anatolia, and Northeast Anatolia regions are the lowest.

One of the significant reasons that direct the woman's fertility is the time she spends on the child. Women's participation in the labor force reduces the time they will spare for children or causes the idea that they will miss some opportunities due to this time, and these are effective in the desire to have children and determining the number of children. In fact, nowadays, the development of services such as nursery and kindergarten facilitates childcare. This situation is expected to reduce the impact of the woman's desire to work on fertility.

Labor force participation rates of women and men in Turkey are decreasing. In the late 1980s, the labor force participation rate, which was 81 percent for men and 34 percent for women, declined in 2008 to 70 percent for men and 25 percent for women. The prolonged stay of women in education and migration from rural to urban areas were effective in this decrease. The inability of the labor force coming with migration in meeting the conditions of employment in urban areas is one of the essential reasons for the decrease in labor force participation rates.

Upon examining the distribution of labor force by sectors, it is observed that it shifted from an economic structure dominated by the agricultural sector to an economic structure dominated by the industry and service sector over the years. In 1955, 82% of the labor force was observed to be employed in the agricultural sector, and 18 % in the industrial sector. The share of the labor force in the agricultural sector is observed to decrease over time, and its share in the industry and service sector is observed to increase. In the same period, the labor force employed in the agricultural sector is observed to decrease to 61%, and 27 % of the labor force is observed to be employed in the industrial sector.

The change in the labor force between sectors shows parallelism with the urbanization process in Turkey. The labor force needed by the industrial and service sectors found in urban areas is provided from among those who become unemployed in rural areas due to a variety of reasons such as mechanization in agriculture.

Unemployment shows its impact on fertility depending on its being short or long term. Short-term unemployment is a convenient and cheap time to have children. At the same time, long-term unemployment makes it risky for women to leave the work to have children by making their participation in the labor force difficult. On the other hand, since unemployment will negatively affect the income status of families, it will also have a negative impact on fertility, when the expenses of the child are also considered.

The income per capita in Turkey steadily increases except for stagnation in the times of crisis. While the national income per capita was below \$ 1000 in the early 1960s, it has increased to \$ 13,500 nowadays. The steady increase in the national income per capita is a result of export-based economic policies implemented, especially in the 1960s. Despite the increase in the income per capita, the distribution of welfare cannot reach broad segments likewise.

Poverty is a condition when people are deprived of the income to meet their most basic needs. However, which needs of individuals are going to be accepted as basic needs varies depending on the individual, society, and time. Generally, poverty is defined in two different ways according to the scope

of the needs to be met: absolute poverty and relative poverty. Absolute poverty is a condition when the household income is below the necessary level which the household or individuals need to maintain their physical lives (food poverty and non-food poverty), while relative poverty is a condition when the level of welfare of individuals or households is below a certain ratio of the average welfare level of the society.

Conclusion

Socio-economic factors, such as education, urbanization, participation in the labor force, income level per capita, and changes in income distribution, show their indirect impact on fertility level and pattern through demographic determinants, such as the age of first marriage, the use of contraceptive methods and voluntary miscarriage, breastfeeding period, postpartum temporary infertility, which have a direct impact on fertility level and pattern.

Demographic studies carried out in Turkey in the last 40 years indicate that nearly all women marry by the end of the reproductive age. This case shows that marriage is a universal phenomenon, which is accepted in all social groups in Turkey. Considering the fact that the divorce rate is below 1 percent, it can be said very easily that marriage is a lifelong institutional structure for a woman in Turkey. The fact that almost all births in Turkey occur in marriage shows that there is a close relationship, especially between women's age of first marriage and fertility levels and patterns. The fact that the period between the age of first marriage and the age of first birth in Turkey has remained at the level of 1.6 years without showing much change for many years indicates that a stereotyped demographic behavior has been formed in Turkey in this sense.

In Turkey, the age pattern of fertility also changes. Demographic studies conducted before the Turkey Demographic and Health Survey (TDHS)-2008 show that traditionally, the age-specific fertility rate is the highest in the range of 20-24 years. Considering that the age of first marriage is below 20 and just above, it is a normal situation that the highest age-specific fertility rate is between the age of 20-24. The TDHS-2008 results show that the age range with the highest age-specific fertility rate has shifted to the 25-29 age group. This situation is the result of the increase in the age of first marriage, termination of pregnancy, or the use of contraceptive methods.

Age-specific fertility rates also vary by regions. Throughout Turkey and in all regions except the Eastern Anatolia Region, the 25-29 age group has the highest age-specific fertility rate, while in the Eastern Anatolia Region, the 20-24 age group has the highest age-specific fertility rate.

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