

HACETTEPE UNIVERSITY  
INSTITUTE OF POPULATION STUDIES

**EFFECT OF SURVIVOR'S PENSION ON FEMALE  
EMPLOYMENT**

Glnaz ŐAHİN KESKİN

Supervisor  
Assoc. Prof. Dr. Alanur ŐAVLİN

Department of Demography  
Master's Thesis

Ankara  
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# MAThesis Demography

*by* Gülnaz Keskin

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## SUMMARY

In this thesis, I analyzed risk of being out of employment and risk of employment without social security for women who take survivor's pension from social security coverage in Turkey. The hypothesis of this thesis is that survivor's pension constitutes a barrier to participate in labor or in formal employment for women. The primary data source for empirical analyses is "Income and Living Conditions Survey, 2017" micro data set.

Analyses of this thesis include 26,266 economically active working age women and among them 8,376 single women who could legally receive a survivor's pension. Following the descriptive analysis, multivariate models were established to test the hypothesis. Logistic regression analysis was carried out for the models to determine the variables that affect women's employment.

The first model presents the determinants of participation of women in employment. Then the second model shows the determinants of working with or without social security. The dependent variable of the first model is working or non-working, while the dependent variable of the second model is working with social security or working without social security. Independent variables of the both models are determined into three groups; having or not having a survivor's pension, socio-demographic determinants and income related determinants. Socio-demographic determinants are age, education status, number of children under 5 and region, while income related determinants are household ownership and household income.

Result of the logistic regression analysis shows that survivor's pension as well as the other income related and the socio-demographic determinants other than number of children under 5 are significant for the risk of not working and working without social security.

This thesis shows that women who receive survivor's pension are 0.442 times less likely to work than those who do not receive survivor's pensions and also women who receive a survivor's pension are 0.148 times less likely to work with social security than those who do not receive this pension.

**Key words:** Survivor's benefits, women, employment, social security.

## ÖZET

Bu tezde, Türkiye'de sosyal güvenlik sisteminden ölüm aylığı alan kadınların istihdam dışı kalma ve sosyal güvencesiz çalışma riskini analiz ettim. Tezin hipotezi, ölüm aylıklarının, bu aylığı alan kadınların istihdamına ya da kayıtlı istihdama katılımında engel oluşturduğudur. Bu amaçla, çalışmada “Gelir ve Yaşam Koşulları Araştırması, 2017” mikro veri setini kullandım.

Tezdeki analizler, ekonomik olarak aktif çalışma çağındaki 26.266 kadın arasından yasal olarak ölüm aylığı alabilecek 8.376 bekar kadını kapsamaktadır. Tanımlayıcı analiz sonuçlarını takiben, hipotezleri test etmek için çok değişkenli modeller oluşturulmuştur. Kadınların istihdamını etkileyen değişkenleri belirlemek için lojistik regresyon analizi yapılmıştır.

İlk model; kadınların istihdama katılımlarını belirleyen etkenler, ikinci modelde ise sosyal güvenceli çalışma tercihleri ölçülmüştür. Birinci modelin bağımsız değişkeni çalışma veya çalışmama, ikinci modelin bağımsız değişkeni ise sosyal güvenceli çalışma veya sosyal güvencesiz çalışmadır. Her iki modelde bağımsız değişkenler; ölüm aylığı, sosyo-demografik değişkenler ve gelire ilgili değişkenler olmak üzere üç gruba ayrılmaktadır. Sosyo-demografik değişkenler yaş, eğitim durumu, 5 yaş ve altı çocuk sayısı, ve bölge iken, gelire ilgili değişkenler ise hane geliri ve yaşanılan evin mülkiyetidir.

Yapılan lojistik regresyon analizi sonucuna göre ölüm aylıklarının, gelire ilgili değişkenlerin ve 5 yaş altı çocuk sayısı dışındaki diğer sosyo-demografik değişkenlerin kadınların çalışma ve sosyal güvenceli çalışma tercihlerine etkisinin anlamlı olduğu tespit edilmiştir.

Bu çalışma sonucunda, ölüm aylığı alan kadınların, bu aylığı almayan kadınlara göre 0,442 kat daha az çalıştıkları; ölüm aylığı alan kadınların, bu aylığı almayan kadınlara göre ise 0,148 kat daha az sosyal güvenceli çalıştıkları tespit edilmiştir.

**Anahtar Sözcükler:** Ölüm yardımları, kadın, istihdam, sosyal güvenlik.



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## **ABBREVIATIONS**

<b>BAĞ-KUR</b>	The Social Insurance Institution for Tradesmen and Craftsmen and Other Self-Employed People
<b>ILO</b>	International Labor Organization
<b>SGK</b>	Social Security Institution
<b>SSK</b>	Social Insurance Institution
<b>TURKSTAT</b>	Turkey Statistical Institute

## CHAPTER 1. INTRODUCTION

Female employment in Turkey is lower than the male employment. There are many local and global studies that examine the causes of low female participation into the labour market (Cohen & Bianchi, 1999; Glick & Sahn, 2005; Cristina & Mårinus, 2011; Klasen & Pieters, 2012; Mujahid, 2014; Özer & Biçerli, 2003; Berber & Yılmaz Eser, 2008; Yıldırım & Doğrul, 2008; Kümbetoğlu, User, & Akpınar, 2010; Dayıoğlu & Kırdar, 2010; Üçler & Kızılkaya, 2014; Akgeyik, 2016; Zeren & Kılınç Savrul, 2017; Yılmaz, 2018; Aldan & Öztürk, 2019). However, although there are few studies combining the issue of female employment and social security, there are not any studies in this context that analyses the relation between survivor's pensions and women's employment.

According to the recent statistics released by the Turkey Statistical Institute (TURKSTAT), the female labor participation rate between ages 15-64 is 38.7%, while participation rate of the labor force of men in the same age range is 78.2% in 2019 (TURKSTAT, 2020). In addition, the employment rate is 68.3 % among men and 32.2% among women. Unemployment rates are 12.7% among men and 16.8% among women. From these data, it is seen that female employment is extremely low compared to male employment; however women are not seeking for jobs as much as men in Turkey. Many issues such as education level, age, gender roles, family responsibilities, child care, and social economic status of the spouse has been studied to explain the low level of women employment in literature (Yıldırım & Doğrul, 2008; Özkan & Özkan, 2010 Korkmaz & Korkut, 2012; Karacaoğlan & Ökten, 2015; Akgeyik, 2016; Üçler & Kızılkaya, 2014; Günay & Çelik, 2018; Aldan & Öztürk, 2019).

On the other side, people need to secure themselves against income-reducing cases such as illness, accident, death, old age, unemployment, marriage and birth that they may encounter throughout their lives. The idea of securing the future of men is the basis of the concept of "social security" (Tuncay & Ekmekçi, 2019).

The social security theme took place in many constitutions especially after the World War II, but it was first regulated in the International Declaration of Human

Rights in 1948 as a basic human right in the international arena. Previously, this concept was included in the Atlantic Pact of 1941, the Filadelfiya Declaration of 1944 and the United Nations Treaty of 1945. With the International Labor Convention No. 102 dated 1952, minimum norms of social security were determined (Tuncay & Ekmekçi, 2019).

International Labor Convention No. 102 dated 1952 is a common social policy document that can be applied to all countries, whether advanced, or underdeveloped, and includes general principles of social benefits and social security. The convention includes provisions for illness, maternity, disability, family benefits, unemployment, old age, work accident, occupational disease and death benefits. Countries that have signed the contract commit to at least three risks, one of the three risks must be unemployment, occupational accident and occupational disease, old age, disability or death insurance (Gülmez, 2018).

Convention No. 102 Social Security was first introduced to the history of Turkey in 1971 and through being ratified by law No. 1451 it was adopted in 1974 through a contract with the Council of Ministers. Turkey, as a party to the contract was already implementing risk of seven branches of insurance. Turkey began to implement the unemployment insurance in 1999 and thus not covered by social security today has only been family insurance in the country (Tuncay & Ekmekçi, 2019).

The history of social security in Turkey is parallel with the world's history of social security. Social security institutions in the modern sense was first established after World War 2. In previous periods, foundations and religion-based solidarities served as a kind of social security (SGK, 2020).

Institutional development of the social security system in Turkey has passed an important stage in the establishment of the Pension Fund for civil servants in 1949 with the Law No. 5434. With the Law No. 506, in 1964, the Social Insurance Institution (SSK) for workers and in 1971 with the Law No. 1479, Bağ-Kur was established for tradesmen, artisans and other independent employees, and the scope of the system was expanded further (Alcan & Can, 2018)

In 2006, a reform was made on social security in Turkey to remove the differences between all insurance branches and establish a sustainable insurance system. These institutions were merged under one institution, the Social Security Institution (SGK) in 2006.

Currently, general health insurance and social insurance procedures in Turkey are carried out with regard to Social Insurances and Universal Health Insurance Law numbered 5510.

According to this Law, survivor's pensions are provided from survivor's insurance in order to protect their relatives from economic risk in case of decease of insured holders. According to Social Security Institution data, the total number of people who received survivor pension is 3,576,120 in 2018. When we look at the relation of the people who receive the survivor's pension to deceased insurance holders, it is seen that 2,244,656 of them are wives of insurance holders, 1,056,022 of them are daughters of insurance holders and 31,470 of them are mothers of insurance holders (SGK, 2018).

Just by exploring this recent registration data, it is seen that survivor's pension is a type of revenue mostly taken by women in Turkey. This has been a motivation for studying whether there is a connection between female employment and survivor's pensions. This aspect is a first in the field of study.

There are few studies about the effects of survivor's benefits on women employment in the world and in Turkey. Increases in life expectancy and low labor force participation of women, as well as increases in the burden of social security expenditures to the state budget are among the main interests for this thesis.

The survivor's pension is the primary social insurance benefit linked from death insurance. The survivor's pension is attributed to the remaining right holders in course of the decease of the insured people. In Turkey, women are generally not active employees due to the traditional role of women in social life and low participation in employment, but dependents of the insured men who are their fathers or husbands. Therefore, the majority of survivor's pension receivers are women in



Turkey. The fact that this pension is largely women's pension is another reason why survivor's pension is subject to this thesis.

Income and Living Conditions Survey, 2017 as the primary data source is used in order to answer questions about whether these pensions that women receive turns to an obstacle to their participation in employment, or whether they cause especially daughters and wives to work informally.

Social Security Institution registration system is used as the secondary data source which includes the survivor's pensions and survivor's income payments to survivors in Turkey, in 2018. This data consists of age, sex, relation of deceased insured person, amount of payment, legal status of payment of survivor's benefits in Act 5510, other old age pensions, if any, premium amount paid to the institution, if working, of survivors.

In this thesis, logistic regression analysis is used to measure the impact of survivor's pension on women employment. Two separate regression models include 8,376 unmarried women, who can receive a survivor's pension, are selected among 26,266 women in the economically active age (15-64) from the data of Income and Living Conditions Survey, 2017.

In the first model, the dependent variable is determined as working or non-working status, and in the second model, the dependent variable is determined as working with social security or working without social security. Independent variables of the both models are determined into three groups; having or not having a survivor's pension, socio-demographic determinants and income related determinants. Socio-demographic determinants are age, education status, number of children under 5 and region while income related determinants are homeownership and household income.

The aim of this thesis, discuss risk of be out of employment and risk of employment without social security for women who receive survivor's benefits like survivor's pension or income from social security system. In this study, it is searched whether the survivor's pensions constitute a barrier to participate in labour force for women who receive these benefits from social security system.

The first hypothesis is “Women who receive survivor’s pension has higher risk for not being employed”, the second hypothesis is “Women who receive survivor’s pension has higher risk for working informally”.

In this thesis, there are six chapters. In the first chapter, aim of this thesis and main hypothesises are presented as an introduction.

In the second chapter, the concept of social security, brief history of social security, the development process of this concept in Turkey and the legal regulation of survivor’s pension in Turkey are mentioned.

In the third chapter, there is a literature review describing the general situation of female employment and on literature studies done on this subject in Turkey and studies on the connection between female employment and survivor’s pensions.

In the fourth chapter, data sources and methodology are located.

In the fifth chapter, descriptive statistics from data sources and results of Logistic Regression Analysis are located.

The last chapter includes the conclusion part of the thesis.

## **CHAPTER 2. BACKGROUND ON SOCIAL SECURITY AND SURVIVOR'S INSURANCE**

Social Security; in the strict sense, is the concept that represents an understanding that protects people from the social risks they face, and in a broad sense, all risks that cause people to be in need of whatever the reason (Alper & Arıcı, 2015).

In other words, along with social security guarantee provided by social security in a narrow sense, social security in the broad sense includes the guarantee provided by cash or in-kind income transfers. Narrow sense of social security provides a guarantee against social risks like old age, disability, death, unemployment, illness and occupational accidents defined in the International Labor Organization's social security contracts. Broadly speaking, social security covers a wide range of income transfer practices, including covering basic needs (Alper & Arıcı, 2015).

The social insurance system in the world was first established in Germany in the period of prime minister Bismarck. In the period of Bismarck, who believed that social problems in the country can be solved with a comprehensive social security system, sickness insurance (1883), occupational accident insurance (1884), disability and old age insurances (1889) were adopted. The developments in the area of social insurance in Germany expanded to other European societies. Austria, the country that followed Germany first, enacted occupational accidents in 1887 and sickness insurance laws in 1888. Hungary in 1891; Norway and France in 1894; Finland in 1895; Italy in 1898; Spain in 1900; The Netherlands, Luxembourg and Sweden in 1901 and Belgium followed the German law in 1903, following the first laws of modern social insurance. In England, the Old Age Pension Law came into force in 1908 and the National Insurance Law, which included sickness, disability and unemployment insurance, came into force in 1911 (Dilik, 1988).

Due to the losses in the First World War, 1929 Great Economic Depression, Second World War, their dependents also lost their social and economic power.

These events led to the improvement of the social insurance system (Gümüş, 2010). The foundation of compulsory social insurance concept covering everybody was laid with the report "*Social Insurance and Allied Services*" dated 1942, which was prepared by the British Government by William Henry Beveridge in 1941 on the reconstruction of England (Wolman, 1943). The system depends on the inclusion of all residents in the scope of social insurance with a flat rate of tax and has contributed significantly to the improvement of the understanding of welfare state (Gümüş, 2010).

The concept of social security was first introduced in the United States Social Security Law of 14 August 1935 which included insurance of old age, insurance of unemployment and three aid programs for old people, dependent children and blind people (Altman & Kingson, 2015). It was later used by the Atlantic Pact Convention of 1941 and the International Labor Organization (ILO) at the Philadelphia Conference in 1944 (Ayhan, 2011). In the ILO Convention on the Minimum Norms of Social Security No. 102 dated 1952, the concept of social security has been handled in the broadest way and explained in full detail (Aydın, 1996).

In the ILO Convention No. 102 on the Minimum Norms of Social Security, which is the most important common social policy document that can be implemented by all advanced or underdeveloped, rich or poor countries; risks to be covered by social security systems; illness (medical aid), illness (financial aid), unemployment, old age, disability, work accident and occupational disease, maternity, death and family allowances (ILO, 2011). A government wishing to ratify this agreement must provide assurance against at least three of these risks, but one of the three risks to be accepted must be one of the risks of unemployment, old age, occupational accident and occupational disease, disability or death (Alpar, 2000).

## **2.1. Social Security and Welfare State**

In the modern sense, the foundations of the welfare state are taken in the mid-nineteenth century until the legal arrangements for providing basic education in England. Another starting point for the modern welfare state is the social insurance application opportunity introduced by Bismark in 1883 for the first time. The

common welfare state practices started in Germany in the 19th century then spread to Western Europe, North America and Australia (Özdemir, 2007).

Briggs (2000) identifies the welfare state as an organized force, in which politics and governments are used affectively in order to direct market forces in three dimensions. Firstly, the welfare state guarantees a minimum income, irrespective of the market value of the works or assets of individuals and families. Secondly, it provides a certain degree of assurance by reducing social risks (such as sickness, old age and unemployment) that individuals and families can face, and thus preventing individual or familial crises. Thirdly, and finally, it provides all individuals with the best standards for generally accepted social services, regardless of status or class (Briggs, 1961).

Gümüş (2018) states that the welfare state emerged after the industrial revolution and developed with the aim of alleviating the problems of capitalism. He argues that the practices of each country towards the welfare state are structurally different from each other, and that the implementation time of welfare state practices such as pensions, unemployment insurance and child benefits also vary between countries. He cites that the most important reason for differences in the welfare state policy approaches of the countries is difference in the economic system between countries. He expects that the social regulations in countries that are relatively early industrialized and whose populations are working in the industry will be implemented earlier than those in countries that industrialize later and whose populations mostly live on agriculture. He thinks that such a need must have arisen in order to make social arrangements such as unemployment pension and retirement pension, therefore, such social regulations are not needed in a country where the capitalist production structure has not developed. He also states that the scope of welfare state practices and the periods of their emergence are affected by the unique culture and social structure of each country (Gümüş İ., 2018).

There have been many studies and researches to attempt to classify welfare states, but the most accepted one is Gosta Esping-Andersen's classification. He outlines the basic welfare states distinction in his famous study, *The Three Worlds of*

Welfare Capitalism, in 1990, and expanded his study in his second classic work, *Social Foundation of Postindustrial Economies*, in 1999 (Özdemir, 2005).

Esping-Andersen (1990) classifies states by looking at how their welfare regime practices are shared by the state, market and family in the institutional context. Esping-Andersen (1990) categorizes social states into three groups as Liberal, Social Democratic and Corporatist state regimes based on the role of the state, family and the market in providing welfare (Esping-Andersen, 1990).

In this classification, three main extents are matter in determining systematic comparison of welfare regimes. First one is decommodification level on labor force, which means provision of social requirement by non-market institutions, or by states. The second extent, stratification, which means that classification of beneficiaries in layers. The last extent is the service providers including the state-the market-the family extent (Van Voorhis, 2002).

Esping-Andersen classifies states according to their de-commodification levels. De-commodification degree shows that what to the extent that the benefits and services provided level of without market contribution, and the citizens, themselves, to what extent do they have social rights independent of market forces. In the decommodification concepts, states provides income level protection to the citizens by the social policies implemented, and these protection allows the individuals to stay out the labor market. In this way, for individuals to survive the necessity to sell their labor at any price is decreasing (Van Voorhis, 2002).

The stratification concept means that there are different welfare policies for different classes and occupations. As a result of stratification, distinct social security legislations include the different occupation groups which lead to differences in status and class disagreements (Özdemir, 2005).

Finally, when he classifies the welfare regimes, he assesses who is taking social measures. Although it varies according to the country, it is seen that the private sector (central and local governments) as well as the public sector (market and voluntary organizations) have an important share in the welfare services in most countries (Özdemir, 2005).

Liberal states pay attention to the priority of the market and usually do not care about the family, the conservative states are more concerned with family and local communities. On the other side, social democrats think that both the family and the market will provide insufficient security, they have canalized to collective movement and have given main responsibility to the state (Esping-Andersen, 2002).

Furthermore, policy makers aim to reach three goals, including high level of employment, a high level of equality and a balanced budget. While the social democratic welfare regimes focus on higher employment levels and higher equality levels, the corporatist regimes focus on high equality and budget balance, the liberal approaches focus on the stable budget and high employment degree (Fouarge, 2003).

Esping-Andersen's welfare state classification is classical, however he criticized for being gender-blind and focusing on male side. The person in his regime works for pay except from oldness, sickness and unemployment terms and does not take no responsibility in children care or in elder households care (King, 2002).

In this context, for the first time in a doctrine, Jane Lewis (1992) makes the classification of welfare states considering gender. Lewis (1992) classified how social states integrate gender roles into the field of social policy in the "male breadwinner model" based on the male domination of the family head (Lewis, 1992).

Lewis (1992) conceptualizes how social states integrate gender roles into the field of social policy in the *male breadwinner model* based on the male domination of the family head. Lewis (1992) groups societies according to their closeness to a male-dominated understanding where men bring home bread, women are out of the labor market, are responsible for household chores, care for children and other family members, and access social security rights through their husbands (Orloff, 2002).

In Lewis' (1992) model, countries are classified as social states where *male breadwinner* concept is "strong", "moderate" and "weak". These categories were formed according to the degree of men's participation in housework and the importance given to housework. In this model, England and Ireland are countries where the concept of *male breadwinner* is strong, women are secondary earners, work in low-time and part-time jobs, maternity leaves are only given to women, and

leave periods are short. France, where *male breadwinner* perception is changing, is the country where women's employment and pro-family policies are widespread, child and maternity benefits are provided as financial aid and maternity leave. However, the fact that all assistance for children and elderly care is provided only to the mother is seen as an indication that the patriarchal understanding still continues in that country (Üstek, 2015). Sweden is in the third group, where the concept of the *male breadwinner* is weak. Welfare regime practices are provided by the state equally to both genders, regardless of gender discrimination in this country. Sweden is a country where gender equality is supported and male-dominated understanding is weak, with advanced care services, flexible labor markets, policies that support gender equality, public childcare services, paid maternity leave opportunities for parents (Topgül, 2017).

Orloff (1993) presented another contribution that included gender roles in welfare regimes. Orloff (1993) examines welfare regimes in terms of whether they include regulations that enable women to establish an independent life on their own, improve women's status as a paid or unpaid workforce, and whether access to welfare services is based on the right to citizenship. Orloff (1993) argues that family, state and market relations in the provision of welfare services strengthen women's unequal position in the labor market, and that such gender inequalities should be overcome by state intervention. He states that men get access to welfare services through a paid job, while women get it through a wage-working man through maternity or companion status. In addition, welfare services are provided directly to the wage earner, while women accessing these services indirectly are subject to stricter rules and benefits provided to them are also low. Moreover, as women are responsible for domestic care services, their demand for paid work remains limited (Orloff, 1993).

Another contribution to the classification of welfare regimes made by Esping-Andersen is the fourth welfare regime put forward by Leibfried in 1993. Leibfried discovered another type of welfare state that he called the *Latin Rim Countries* located in the south of the European Union (Leibfried, 1993).



The Southern European welfare regime has been extensively studied by Ferrera in 1996. According to Ferrera, in countries included in this regime; while high income is provided to privileged groups included in the formal labor force, the rest of the population is provided with low and irregular income support. Although health services include everyone, health services, as in other social services, are behind the promised standard. Efficiency and waste is common in the provision of health services; The private sector, market and privileges are integrated with public health services. Nepotism or even corruption is observed in the provision of some public services. Governments often experience financial crises due to dynamic transfer spending and inability to collect taxes. The ratio of public debt to national product is higher than other European community countries (Gough, 1996)

According to Ferrera (2000), "Southern Europe" is not only a geographical area, but also countries with structural, political-economic common features. This welfare regime includes fragmented, irregular and weak social assistance. The welfare regime is largely based on family and family ties. Family benefits and support services that are expected to be provided by the state have not developed. Moreover, it transfers care and welfare services to the family, mostly to women (Ferrera, 2000). In this social structure, especially women who are seen as responsible for the care of children and elderly individuals in the family withdraw from the labor market (Moreno, 2006).

Another feature of these countries is that they have a high rate of informal economy. Female employment rates in the labor markets are relatively low compared to the rest of Europe. Also, the rate of unregistered work is higher among women. Low representation of women in the public sphere is also caused by the low participation in the labor force and formal employment. This reinforces the traditional roles of women at home and causes the male-dominated structure to continue and become stronger (Flaquer, 2000).

When it comes to the welfare state model in Turkey; It appears to reflect the characteristics of the Southern European welfare state regime, including Spain, Portugal, Greece and Italy (Gough, 1996). In particular, the registered social security system shows the features of the southern european welfare regime. First of all, in

Turkey, health and pension rights are given to households through registered working family heads. The labor market is an area where informal work, unpaid family work and self-employment are common. Therefore, due to unregistered work, the social security system is insufficient to provide social protection. As social assistance programs are not fully adequate, the family becomes the center of social solidarity and welfare regime practices (Buğra & Keyder, 2006).

The duty of caring for children and other people in need of care in the family is entirely attributed to women (Yaman Öztürk, 2010). Instead of providing care service with institutional structures; Social assistance is offered to women in return for providing care for children, the elderly and people in need of care (Buğra, 2010). Moreover, institutional child care services are insufficient and legal regulations such as non-institutional care services and parental leave are women-centered. This neglects the responsibility of men in childcare and disrupts women's employment (Dedeoğlu & Şahankaya, 2015). In addition, unpaid family labor is very common among women working for their families (Dedeoğlu, 2010).

The role of government in providing welfare services in Turkey is mainly limited to social security and social assistance. The rate of women, whose participation in formal employment is extremely low, in the social security system on their behalf and actively insured is also low. Women are mostly under the umbrella of social security, dependent on men through their fathers or spouses. If their husbands or fathers are also unregistered, these women are completely deprived of social security. Women who do not take part in the social security system face much greater difficulties when they are widowed, abandoned by their spouses or divorced (Özar & Yakut-Çakar, 2015).

According to Özar & Yakut-Çakar (2015), Orloff's criticism about gender discrimination structure of the welfare models, welfare regime in Turkey has expressed that the show itself via implementations expressed above . Özar & Yakut-Çakar (2015) shared the results of the quantitative and qualitative research conducted in 2010 on women whose husbands have been passed away, separated from their spouses or abandoned by their spouses; It reveals that the welfare regime in Turkey is insufficient in providing welfare services to women. Only one third of 1200

women in the research are covered by social security on their behalf or as a dependent of a man. They stated that even women whose husbands died and receive survivor's pension could not escape the risk of poverty due to the insufficient allowances they received (Özar & Yakut-Çakar, 2015).

## 2.2. Social Security In Turkey

Social security in Ottoman; intra-family solidarity was implemented through the aid of religion and aid within professional organizations. The Ottoman society was based on agriculture and had a large family structure, so the elderly, sick and disabled were provided with the necessary care and support by other members of the family. Religious-based charities and foundations helped the poor through zakat, fitrah, charity and donations. In non-agricultural areas where looms and handicrafts were prevalent; assurance against risks such as illness, accident and death was provided by solidarity chests created within existing mandatory associations (guilds). Although an attempt was made to form a union with aid funds established limited to soldiers and officers, there were no institutionalization on behalf of social security in the Ottoman Period and institutionalization was low and narrow (Güvercin, 2004).

During the first Grand National Assembly Government (1921-1923), two laws were enacted to be implemented in the Zonguldak Ereğli Coal region, where the crowd of workers were in very heavy working conditions. The first one was named as "*Zonguldak ve Ereğli Havza-i Fahmiyesinde Mevcut Kömür Tozlarının Amele Menafi-i Umumiyesine olarak Furuhtuna Dair Kanun*" issued in 1921 numbered 114. The second law numbered 151 named as "*Ereğli Havza-i Fahmiyesi Maden Amelesinin Hukukuna Müteallik Kanun*" is considered to be the first social insurance implementation in Turkey because it contains compulsory participation of employees and employers (Şenocak, 2009). The aforementioned funds were unified as Amele Union. This union is regarded as Turkey's first social security institution (SGK, 2020).

The first survivor's insurance law, was released during the first Turkey Grand National Assembly. The name of the law numbered 25 and dated February 28, 1921 is "*Tahir Bey Ailesine Maaş Tahsisi Hakkında Kanun*". This law was issued for

paying pension to his wife and his children due to the martyrdom of Akdağmadeni District Governor Tahir Bey (Güner, 2013).

The social insurance institutions in the modern sense couldn't be established in Turkey until 1945. After Second World War, "The Workers' Insurance Institution Law" numbered 4792 was issued in 1945 and charity and pension funds were combined with this law (SGK, 2020).

In 1950, "Old-age Insurance Law no 5417 was issued, in 1957 Disability, Old-age and Survivor's Insurance Law no 6900 was started to be implemented in country. First law on the survivor's pension came into force in 1957 via this law. Furthermore, 1961 constitution was the first to include the social security in constitutional terminology (SGK, 2020).

When it comes to the history of social security institutions in Turkey, Retirement Fund Law (*Emekli Sandığı*) was established in 1949 for public staff. In 1964, the Social Insurance Law (*SSK*) came into force, which united workers working under different laws. The Social Insurance Institution for Tradesmen and Craftsmen and Other Self-Employed People (*Bağ-Kur*) was established in 1971 for the self employed (SGK, 2020).

Over time, the idea of establishing a new institution has been created in order to connect the social security structure, which has a scattered appearance and is subject to different standards and practices among the working groups, to a common standard and to strengthen it financially (Tuncay & Ekmekçi, 2019). Therefore, different institutions of social security; Retirement Fund (*Emekli Sandığı*), The Social Insurance Institution for Tradesmen and Craftsmen and Other Self-Employed People (*Bağ-Kur*) and Social Insurance Institution (*SSK*) were removed the Law numbered 5502 to end the differences between all insurance branches and establish a unified insurance system which provides standard implementation for all employees. With the aforesaid reform, Social Insurance and Universal Health Insurance Law numbered 5510 was passed into law in 2006 to supply equal, accessible and qualified health services to all citizens, but the Law numbered 5510 entered in force at the

beginning of October 2008 with its all provisions (Tuncay & Ekmekçi, 2019; SGK, 2020).

In summary, the modern sense of social security system in Turkey based on origin of the end of Second World War reflects Bismarckian regime. Turkey has a two-pillar system; the state insurance regime and the private pension regime. Within the framework of the principle of equality, the first pillar of the social security system was gathered under same roof of Social Security Institution in 2006, based on the recommendations of World Bank and International Monetary Fund. On the other side, private pension system in Turkey was started to be implemented in 2003 in order to complete the public insurance structure (Elveren, 2013).

### **2.3. Survivor's Insurance In Turkey**

The purpose of the survivor's insurance is to prevent the right holders to be left behind if the insured dies, and it is one of the long-term types of insurance. Therefore, it provides social security to the dependents of the deceased insured rather than the insured. Benefits from survivor's insurance are survivor's pension, death grant, marriage and funeral allowance (Yorulmaz, 2010).

Social security and pension practices existing in Turkey are carried out according to "Social Insurance and Universal Health Insurance Law number 5510". Survivor's insurance is regulated between Articles 32 and 37 of the Social Insurance and Universal Health Insurance Law number 5510.

The persons who are obliged to be insured according to this Law, is explained in article 4. Insured people are categorized into three groups. The first one includes, workers who are employed by employers under a service contract, emphasized under item (a) of paragraph one of article 4, namely insured (4-1/a) coverage. The second includes, individuals who are working on their own name and account without any employment contract and the village and neighborhood headmen, determined under item (b) of paragraph one of article 4, namely insured (4-1/b) coverage. The last insured category consists of, individuals who are working for public institutions and organizations, determined under item (c) of paragraph one of Article 4, (4-1/c). Additionally, people who do not work under any compulsory insurance, people who

work partially, or people who are employed less than 30 days in a month are considered to be insured under the extent of optional insurance under Article 4, ( 4/1-b).

Survivor's insurance is provided to the dependants of the insured people who died before the beginning of October 2008; according to the provisions of Law No. 506 if they are insured under the extent of (4 /1- a) or according to the provisions of the Law No.1479 if they are insured under the scope of (4/1-b). Survivor's pensions are provided to the dependents of the insured people who passed away after October 2008, related to the provisions of the law numbered 5510. On the other side, according to the laws numbered 506, 1479, 5434, 2925 or 2926, the pensions will continue to be paid and the same laws will be applied to the cases of increasing, decreasing and cutting them (Gökalp Civan, 2019).

Since the subject of the study is the effect of the survivor's pension on the employment of women, the conditions of the survivor's pension which is a benefit from survivor's insurance will be discussed in the next sections.

### **2.3.1. Conditions for Survivor's Pension**

#### **2.3.1.1. Premium and Insurance Period**

Survivor's pension attachment principles are regulated by Law No. 5510 and Regulation on Social Insurance Transactions. According to Article 60 of the Social Insurance Procedures Regulation, survivor's pension is provided to the insurance holders' dependent beneficiaries in the event of the decease of the insured people comes due to a reason other than work accident or occupational disease.

According to Article 32 of Law No. 5510; in order for the beneficiaries to be entitled to survivor's pension, at least 1800 days of old-age, invalidity and survivor's insurance contributions must be paid to the insured people under (4/1-b) and (4/1-c). However, the insurance holders within the scope of (4/1-a) must have been insured for at least 5 years and have a total disability, old age or survivor's insurance premium for a total of 900 days, excluding any borrowing periods.

In addition, in order for the right holders of the insured to be paid pension under the scope of (4/1-b) who works for their own names and accounts, all kinds of debts based on premium or premium must be paid.

### **2.3.1.2. Rights Holders and Conditions for Survivor's Pension**

In the 60th article of the Insurance Transactions Regulation, the right holders who can get a pension are included. According to this provision; the spouse who is legally married to the insured on the date of death, the children of the deceased insured, the mother and father are the beneficiaries who can benefit from the survivor's pension.

The widow(er) of the deceased insured must not get married later in order to receive a survivor's pension. The marriage of the spouse causes the condition of being entitled to the right of receiving pension to be lost, and the widow(er)'s pension is cut. The widow(er)'s work or any income or monthly income from the Social Security Institution does not prevent him/her from receiving a pension. The only condition for the widow(er) to get a survivor's pension as a spouse is that the widow(er) does not marry again.

As for the children who are entitled to the right, the first condition to receive a pension is that they do not work under the Law number 5510 or under a foreign country's legislation and do not receive any income or pension due to their own work. However, in order for daughters to receive pension, they must not be married, they must be divorced or widowed. There is no age limit for daughters. But, the fact that sons are married does not prevent them from getting pension. On the other hand, sons receive a pension until they turn 18, 20 if they have secondary education, and 25 if they have higher education. In addition, with the new regulation made on March 27, 2018, children under the age of 18 were allowed to work within the scope of Law number 5510 article of (4/1-a), without interruption, within the relevant age limits. Furthermore, children who lost at least 60% of their working power by the Institution Health Committee Decision are deemed to be eligible for the pension.

In the event that the deceased insured has a remaining share from the spouse and children, the deceased insured's parents can receive a pension, provided that they do not have income or pensions and have less than the net amount of the minimum wage.

When the insurance holders die as a result of work accidents or occupational diseases, their right holders are paid survivor's income linked from short term insurance branches. In summary, right holders of the insured people who pass away as a result of work accident or occupational disease are paid survivor's income, and in addition, survivor's pension is paid to dependents of the deceased insured. If the insurance holder who has a work accident dies, and there are conditions to get a survivor's pension, then there is a combination of the survivor's pension and the survivor's income. According to the article 54 of the Law numbered 5510, if the income and pensions received by the rights holders are combined, all of the higher and half of the less are paid. When the pension and income are equal, all of the income and half of the pension is paid to the right holders.

### **2.3.1.3. Sharing the Survivor's Pension among Right Holders**

How the survivor's pension will be shared among the beneficiaries is explained in the article 34 of the Law numbered 5510.

The spouse's share is 50 % of the survivor's pension to be allowed. However, this rate is 75% if there is no child to be put on pension and the spouse does not work, does not receive any kind of pension or income due to his/her own insurance status.

The share of each of the children is 25 %. However, this rate is 50 % to children who are the sole dependents receiving pension, the ones who are left both motherless and fatherless due to death of insured person, whose parents do not have marriage tie or whose mothers or fathers are married later on.

In case of a left over share from other rights holders (spouse and children), the insured's mother and father have right to receive totally 25% of the pension.



## **CHAPTER 3. LITERATURE REVIEW**

### **3.1. FEMALE EMPLOYMENT IN TURKEY**

Industrial revolution is seen as a milestone for the historical development of female labor. Before industrial revolution, women did not leave of the traditional roles, in this period it was possible for them to work as paid employees. On the other side, like as Industrial Revolution, World War II and recently accelerating globalisation process as the other milestones for advancements in female employment, had a significant effect on the numbers and statuses of female employment in labor market (Özer & Biçerli, 2003).

Women's roles are seen as secondary roles in labour market nearly all around the world. The secondary roles of women in the labor market are largely related to traditonal division of labor. Although gender-based division of labor is at distinct levels in each society, fundemantally; while jobs such as giving birth and raising children and doing houseworks are basic duties of women in terms of physiological and sociological aspects, the job of making money by working in the market is admitted as the main task of men (Özer & Biçerli, 2003).

There are a number of studies on the structure of women's employment in Turkey, the reasons for the low employment among women and containing policy recommendations on the promotion of female employment in Turkey. One important factor that should be examined in order to understand women's employment in Turkey is the welfare regime applied in the country.

Dedeoğlu (2009) asserted that there is a type of welfare regime named Latin Circle in which social benefits are limited, social rights are weak and restricted. As social services supplied to people are distributed unequally to every citizen and favoritism is seen in distribution of social services, social solidarity is provided with traditional institutions like church or family ties. In this type of societies, women take active role in child caring and elder caring while men bring home the bread (Dedeoğlu, 2009).

According to Dedeoğlu (2009) in the welfare state regime in Turkey, women are accepted as mothers and wives, the employment policies and social policies are too far from bringing women to labor market. Moreover, some regulations encourage women to leave the labor market rather than promoting them to enter the labor market. She addresses that Labor Law includes the regulation within which women have the right to compensation when they quit their jobs for getting married, but men don not the same right. Also, she makes the point that social security system in Turkey contains some regulations which allow women to have survivor's pension along their whole lives without getting married or starting to work formally while men benefit from this pension until age 25, until the end of education. She sees these "rights" as a discrimination between men and women employment in Turkey. She declares that these regulations indicate that women's main roles are accepted as motherhood and being wife in legislation, also these regulations include only social protection of women related to their main roles.

This social security model is seen as patriarchal and it is presumed that women not working should take benefits like healthcare or pension from working statuses of their husbands or fathers. This approval increases the risk of informal working, or unpaid working because of the crowding out effect of Bismarckian regime (Kılıç, 2008).

According to Buğra & Candaş (2011), Turkey is a welfare state that is not uniformly implemented to all citizens, it is just an "eclectic social state" which can be defined as a formal Bismarckian social security regime that was integrated with irregular economy and favoritism. This type of social systems include different types of statuses and preserve formally covered people that earned eligibilities but revert to conservative values and depend on informal ties of assist. Thus, Bismarckian social security system includes the social stratification via benefits that are given to beneficiaries according to the type of their status and fortifies women's dependent position in compliance with the male breadwinner ideology (Buğra & Candaş, 2011).

Economic sector of activity, general economic indicators and household income situation of the country as another factor affecting women's employment in Turkey is encountered.

Özer & Biçerli (2003) conducted a panel data analysis in Turkey to reveal the differences between male and female labor force participation rates and factors which affect the female labor force rates in reference to years between 1988 and 2002 using panel data for household labor surveys in terms of rural and urban. As a result of the study, it is seen that contrary to the theoretical expectations, macro variables such as unemployment rate, inflation rate, wage in manufacturing industries and crude divorce rate are not significant. Whereas; predominantly group-specific variables, in other words, micro variables such as the proportion of unpaid family workers in the female workforce employed, the proportion of housewives in the female workforce, and the rate of retirees in the 12+ age population are significant.

According to Özer & Biçerli (2003) female employment is sensitive to micro, group-specific variables rather than macro variables in Turkey. Although macro variables can effect female employment indirectly, female employment can be considered to be tied to male employment forms and women have difficulty in integration into labor market in Turkey.

Özer & Biçerli's panel data survey (2003) revealed that unpaid family workers rate among active female employees both in rural and urban areas has a positive effect on female labor force participation rate. When unpaid family workers rate increases 1 percent, female labor force participation rate gets between 0.29 percent and 0.18 percent higher according to distinct statistics models. Also, status of housewifery among female labour force affects female labour force participation rate. One percent increase in housewives among female labour force, gives rise to between 0,67 percent and 0,69 percent decrease in female labour force participation rate.

According to the results of Özer & Biçerli's panel data survey (2003) 1 percent increase in retirees in the 12+ population decreases the female labor force participation rate between 1.16 percent and 1.38 percent. Since there are female retirees among the retirees, it can be deduced that the women who have social security do not work after retirement and withdraw from the labor markets.

Also, Berber & Yılmaz Eser (2008) studied the sectoral distribution of women and employment status of women workers in Turkey benefiting household labor survey data of TURKSTAT. At the end of the study, it was shown that women were mostly employed in the agriculture sector and secondly in the service sector between 2000-2005. The proportion of those working in the agricultural sector among the total working women decreased over the years, and the number of women working in the industry and service sector increased. While the proportion of women working in the agriculture sector was 58.9 percent in 2000, it was 51.6 percent in 2005. While the rate of employees in the service sector was 27.3 percent in 2000, it was 33.3 percent in 2005. They suggest that there was a substantial increase in female employment by 2002 after February 2001 economic crisis in Turkey. They think that women took part in employment in 2002 with an increase of over one million in 2002 because of the reason of financial difficulties their families had.

In addition, the rate of women's employment as unpaid family workers declined over the years, while the rate of paid working status increased between the years 2000-2005. In 2005, the rate of employees working as wage earners and casual employees was 43.8 percent, while the ratio of those working as unpaid family workers was 41.7 percent. However, although the number of unpaid family workers among women working in the agricultural sector tends to decline, it is still quite high compared to other sectors. In the same year, 169 thousand of the women working in non-agricultural sectors worked as unpaid family workers, 2 million 317 thousand were paid and worked as a casual employees (Berber & Yılmaz Eser, 2008).

Yıldırım & Doğrul (2008) conducted a study to search for factors affecting female labor force participation decisions in Turkey's urban area related to Household Budget Survey of 2003. According to the results, marital status, education of husband, number of children, economic status of family are the main determinants of non-participation of women in urban Turkey. They declared that risk of non-participation is higher among married women compared to single women. The probability of entering labor force is getting higher as the education level increases. On the other hand, they found that contrary to expectations, age of children does not influence the women's employment decisions. However, the number of children is

one of the negative factors that prevent women from working outside home. Also, the education status of husband is one of the determinants of female economic activity. When the education level of husbands increase, the will of women to enter the working life diminishes. When husbands' income thereby income of household increases, the desire for working among married women decreases. The increase in the annual income of the household, the ownership of the house where the house is located and the increase in the education level of the husband decreases the possibility of women's participation in the labor force. Yıldırım & Doğrul (2008) concluded that women do not participate in the workforce unless their financial condition forces them.

Karacaođlan & Ökten (2015) examined the married women labor force participation preference according to their husband's employment status with the data of 2005-2010 term of Turkish Household Labor Force Survey. In conclusion of this study, women's employment status is shown to be positively affected by their husbands non- voluntary job loss. It is declared that husband's passage from employed status to unemployed status raises the likelihood of wives' employment by four percent. On the other hand, the status of underemployment of husbands is another positive driver on the possibility of wives' labor force participation by seven percentage points.

Zeren & Kılınç Savrul (2017) revealed that economic growth, unemployment level and degree of urbanization can be considered as significant factors impacting female labor participation level in Turkey based on the data between 1991 and 2014 issued by World Bank.

Economic activity in which women are employed is one of the another factor affecting women's employment in Turkey. In the 2010-2017 period, it is seen that the rates of those employed in the agriculture sector have decreased in general, and the employment rates in the service sector have increased. Though the highest rate of employment was in agriculture in 2010 with the rate of 42.4 percent rate, the lowest rate of female employment occurred in industry with 15.9 percent rate. There is a decline trend in employment in agriculture and a rise trend in employment in service sector since 2012. On the other side, in 2017, the female employment was 56.1

percent in service sector with the highest rate, while employment rate in agriculture was at its lowest rate with 28.3 percent. Meanwhile, there were fluctuations in rates of female employment in industry sector between 2010 and 2017 in Turkey (Erdoğan & Yaşar, 2018).

Education is one of the main factors affecting female employment. Erdoğan & Yaşar (2018) have revealed that the highest rates of female employment are comprised of university graduated women in Konya-Karaman region, it occurred as 59.7 percent in 2010 and 51.1 percent in 2017 of whole female employment. There is an incline to increase in the level of employment among women, as the level of education increases. The same trend is seen in Turkey's general employment level, too (Erdoğan & Yaşar, 2018).

On the other side, there are more male employees than women employees in almost all education levels except illiterate people in Konya-Karaman and in whole Turkey. Also employment structure of Konya-Karaman corresponds to general employment level of Turkey in accordance with age, education and sector (Erdoğan & Yaşar, 2018).

Akgeyik (2016) emphasizes that among Turkish women employees there is a concentration in the health sector by stating that there are 2.2 working women for every 1 man in the health sector as of 2017. The other sectors women active are particularly agriculture, education, and finance. Part-time working is another feature of female employment in Turkey. Akgeyik (2016) points out that 19 percent of women employees were working in part-time jobs while this rate was 6,5 percent for men, at the end of 2016.

On the other side, Yılmaz (2018), argues that legal regulations for employed women in Turkey are adopted to ensure the balance between work and family life, focusing on maintaining the status quo. Some legal arrangements within the scope of motherhood such as maternity leave, nursing benefits, benefits for temporary incapacity, part-time employment are in force to simplify women's work in market. Nevertheless, these regulations function in favor of the employers rather than employees. Yılmaz (2018) indicates that part-time employment causes the more

working years and more premium days for women to get retired. She regards that the parttime working arrangement is accepted as a means of sustaining the motherhood roles. Also, the employer has the right to employ someone else instead of the woman who is on part-time employment leave. In addition, employers can easily lay off temporary workers so that precarity for all employees is on legal grounds (Yılmaz, 2018).

Agricultural downsizing and urbanization is seen as the main factors of decreasing women employment rates throughout mid of 2000s. Because of the low level of education and deficiency of child care, migrant women who were unpaid employee in rural area, could not find proper jobs in cities (World Bank, 2014).

Turkey until the 2000s was an agricultural country self-sufficient, but in the 2000s a structural transformation of the agricultural sector, which reduced state support for agriculture and began private sector dominance in agriculture. Thus, the share of agriculture in the country's economy and the number of women employed decreased. Since the 1990s, 1.5 million women have been cut off from agriculture and employment (Yaman, 2015). Rural areas have been abandoned due to the agricultural transformation and the lack of employment opportunities in the cities to meet the male and female labor force has been another factor that reduced female employment. Women who migrate to the city assume child and domestic responsibilities and cannot leave the house due to the influence of traditions and family.(Ecevit, 2013). Women who want to work, on the other hand, have to work temporarily in the informal sector or on piecework at home (Koray, 2007). As new living spaces, cities are foreign to women, making it difficult for women to participate in the labor force (Yaman, 2015).

The agriculture sector has a particular importance in female employment, as it is the sector with the highest rate of unregistered employment (Yurdu, 2010). Women usually work as unpaid family workers, even in small family businesses, the land is not their own, generally the land is left as a legacy to boys (Yaman, 2015). According to the newsletter published by TURKSTAT in April 2020: the rate of unregistered employment in agriculture is 82.4%; While this rate is 75% for men, it

is 93.8% for women. In the same period, 95.7% of women working in agriculture work as unpaid family workers.

In Turkey, informal economy is one of main problems that women labor force suffers from. Lordođlu (2005) declares that informal employment is common among women, children and immigrants especially since 1990s in Turkey. Women who constitute an important part of informal employment in Turkey even if they are engaged to any kind of work, it is estimated that they perceive housewifery as their core jobs and this perception increases the informal employment of women in labor statistics. Lordođlu (2005) declares that various data sources claim that the informal employment is approximately half of whole employment in Turkey. According to this claim, Lordođlu (2005) thinks that unregistered employment replaces formal employment and becomes permanent in labor market in Turkey.

Kümbetođlu and others (2010) analyze the findings of field survey that was conducted in northwestern area of Turkey, comparatively more industrialized country sides, İstanbul, Bursa, Kocaeli, Adapazarı and Düzce, with 213 women working in textile, food and service sectors to research on unregistered women's working circumstances. According to the results of this study, Kümbetođlu and others state that most of women started to work at ages 12-15, women were accepting the jobs under minimum wages and without social security because of the male workers' risk of losing their jobs in their families and poverty. The conditions for women in informal economy were lack of social and legal protections, tough working circumstances, low wages, irregular payments, extended and unpaid working schedules, high employee turnover rates, maltreatment and sexual abuses by employers or foremen. Kümbetođlu and others (2010) assert that the prevailing male breadwinner perspective, scarcity of low-cost child care services, changing production nature towards flexibleness, the subcontracting system all play a role in the exposure of Turkish women workers in labor market. The study concludes that women in informal economy in Turkey are not willing to work in illegal and unhealthy working conditions, but unskilled women are forced to accept harsh conditions of work in the presence of unemployment and impoverishment. The labor laws and worker's rights are not constantly enforced to deter employers from making



women work in illegal conditions in Turkey due to the lack of labor organizations. The study addresses that the problem is not only structural but also gender-related. The women are more teachable and are more exposed to abuse, the illegal working circumstances are harder for women than men .

In many studies, education is clearly seen as the most significant factor in economic activity of women in Turkey. Additionally, marriage, fertility, age are other factors have impact on women employment in Turkey.

Though the gender gaps enrollment in primary schooling nearly disappeared via expansion of compulsory education and other structural investments in education through 2000s. There is a decreasing gender gap trend among girls and boys when the education attainment increases. Although the gender gap in employment declined from 2000 to 2012, employment rates of women did not reach the desired level according to international peers such as OECD countries, new European countries (World Bank, 2014).

Korkmaz & Korkut (2012) state that through 1988 and 2010, the most striking fall in women labor force is between ages 15-19 as a result of the extension of education time and dissemination in university education. There have been also increases among age groups 25-29 and 35-39 even though average age of marriage is more frequent in these periods. In addition to these trends, they mention that there is a sudden reduction after age 45 in the rate of economic activity of women in Turkey, also. They touch on the downtrend in female labor force participation between ages 60-64 in comparison to other age groups for various reasons though these ages are economically active years.

According to Korkmaz & Korkut (2012), when marital status is taken into account in Turkey, marriage adversely affects employment decisions of women compared to singleness, divorcement or widowhood in Turkey in reference to labor statistics pertaining to years between 1988 and 2010.

Akgeyik (2016) says that the main factor influencing the female labor force is education level in Turkey. In this study, Akgeyik (2016) analyzed Turkish Statistical Institute's data containing between 2007 and 2016 years. He revealed that there was

a clear increase with 4 percent, reached to 28 percent in female labor in 2008-2010 period while there was an economic recession in 2010 or a slight growth of whole economic condition of Turkey in 2009 . He observed that there was an increase trend in female economic activity in 2011-2016 by 55 percent while male labor force participation rates rose with only 22 percent in the same period.

Akgeyik (2016) emphasizes that as the number of women university graduates increase through 2007 and 2016, the number of female employees increased, also. In this period there was a 3.3 million increase in female labor force and 48 percent of this increase was of women university graduates. Based on the rise in education level of women, labor force participation rate reached 29 percent in 2016 from 19 percent in 2007.

On the other hand, the average age of marriage is another factor affecting women labor. Because of the rise of average marriage age in reference period, women can continue education or enter labor market. Akgeyik (2016) found out that the rise in divorce rates is another factor forcing women to enter the labor force. According to Akgeyik (2016), there is a significant relationship between the number of divorces and labor force participation rate of divorced women. According to this study, the labor force participation rate of divorced women increased from 40.5 percent in 2007 to 51 percent at the end of 2016, while divorce rates increased from 14.5 percent in 2007 to 21 percent at the end of 2016.

On the other hand, in the last year, parallel to the increase in the average age of marriage, the number of births decreased and the age of the mother giving birth also increased. Akgeyik (2016) revealed that there was a decline in women giving birth in 15-19 group and in 20-25 age group between 2007 and 2016 in Turkey. Akgeyik emphasizes that as the increase in average age in motherhood, decline of the number of births in young age, gave rise to an increase of female economic activity. According to Akgeyik (2016), the number of women giving birth in ages 15-24 decreased by 20 percent from 2007 to 2016 while labor force participation rate increased by 27 percent in the same period.

From a different perspective of female employment, Üçler & Kızılkaya (2014) conducted a survey to observe the effects of employment on divorce and fertility among women in Turkey related to 2004-2013 data of TURKSTAT. In the end of the study, they revealed that employment of women increases the divorce rates among whole country according to the analyses of the data. On the other hand, there were some regional differences about this incline. Southeast Anatolia and Northeast Anatolia had a negative relation between employment and divorce among women, while the other regions had positive connection. Despite the regional distinctions, female employment decreases the fertility levels of women in particularly urban areas and in places where nuclear family models are prevalent. Employment of women negatively affects fertility in the Aegean Region, Mediterranean Region, Eastern Marmara, Western Black Sea Region and Middle East Anatolia Region. As the employment rates of women increase in these regions, fertility rates decrease. According to the overall panel of this study, it is shown that women's employment increases divorce and decreases fertility rates.

Dayioğlu & Kırdar conducted a decomposition analysis to reveal the time effect, age and cohort in 2010 according to TURKSTAT's labor force statistics. The results of this survey shows that cohorts who were born after 1970s have lower tendency to have children in comparison to other cohorts between 1945 and 1990 in Turkey. The low fertility levels of women of younger cohorts and negative relationship between the number of children and labor force participation signifies a higher employment rates of women from younger generations in Turkey. They point out that participation rates among women decrease in urban and rural areas by ages. Dayioğlu & Kırdar think that downward trend particularly after age 40 is mostly seen a result of retirement system in Turkey. They underline that low employment level among women after age 40, is a significant factor which contributes to low total women employment rates in consequence of early retirement in Turkey.

After late 2000s, female labor force participation rates have risen in Turkey. Better educated younger generations are utilized in advanced services sector. There has been an increase among middle aged-women because of decreasing family sizes and household relaxation (World Bank, 2014).

Social and cultural values , particularly women's efforts to balance work and family life constitute a barrier in their employment (Karabıyık, 2012).

Özkan & Özkan (2010) conducted a survey to determine the parameters affecting women workers' wages among employers who are selected randomly in Gaziantep. The study concludes that the most effective parameters for determining the wages of workers are the jobs, personal talents, education, seniority; and gender is the first among discriminatory parameters. The writers stress that discrimination faced by women in remuneration is due to the problem of not being a permanent worker in the labor market. So, women with inadequate education just fill the gaps in labor market. This causes women to settle for both low wages and temporary status in the market.

Günay & Çelik (2018) conducted a survey on 389 women in Trabzon, a northern city of Turkey to reveal the reasons behind low participation rates among women in labor force. At the end of this study, gender perception among women is the main indicator of failure to participate in labor force in addition to age, marital status and having children.

Aldan & Öztürk (2019) studied the reasons behind the rapid increase in women's economic activity rates in recent years in Turkey while labor participation rates of women is still quite low according to international standard. They examined TURKSTAT's household budget survey data pertaining to years between 2004 and 2016. According to the result of the study, cohort effect constitutes to two-thirds of the increase in women labor participation rates among women between years 2004 and 2016 in Turkey. The cohort effect is defined in this study as changes in social norms or changes in the institutional structure on women's labor force participation rates. Changes in social values and regulations of retirement ages (Alcan & Can, 2018) are predicted to be indicators of high cohort effect on women employment. The results of the study indicate that the increase in the rate of participation in female labor force will continue due to the fact that younger generations enter the labor market and the retirement age increases. Rise in education level is seen as the second main reason of the increase trend in female employment in that study. However,

there has been no reduction in the negative influence of having children on women's employment, as a result of the study.

Care services for the elderly, children, disabled or those with chronic illnesses are another factor shaping the women's workforce. Who is responsible for care services, the way it is financed, and the level of institutionalization of the services are seen as products of different social policies. In this context, the role in the provision of child and elderly care services in Turkey is limited and maintenance is the responsibility of the family. In the family, this task is offered by a woman at the expense of being excluded from employment (Gökbayrak, 2009). Women who cannot participate in working life or have to leave their jobs due to childbirth or childcare at some point in their lives choose not to work voluntarily or under environmental pressure, especially during the childhood period of their children. To ensure that women can return to work, children should be cared for in a safe environment. For this reason, it should be taken into account that services such as day care homes and nurseries are insufficient and high care fees are required, and these services should be provided free of charge and widely by the state authority in order to encourage women's employment (Hüseyinli & Hüseyinli, 2016). In Turkey, the state should undertake responsibility for the development of child care services, advance professional care, supply direct or indirect cash benefits, regulate maternity and parental leave. Thus, the childcare burden of women will be reduced and women's employment will be facilitated (Kalfa, 2010). As a matter of fact, it is observed that there is a positive relationship between female employment and child care services. In this regard, France and Switzerland are the two countries with high child care services and female employment. (World Bank, 2014).

### **3.2. SOCIAL BENEFITS AND WORK**

The survivor benefits are formed to advocate families when the earner has deceased and spouses and children are not able to work fruitfully. The countries try to review their survivor benefits to keep them sustained and remove their negative economic impact. In a discussion paper called *Rethinking Survivor Benefits* prepared for Social Protection & Labor, World Bank by Estelle James, (2009), survivor

benefits of 39 countries, including low, middle and high income countries, using the OECD database, ILO social security database for North Africa and Latin America and the rest of other countries' national data , are discussed to answer the question, “*are these programs still needed in an era when most women work and fertility rates have fallen and, if so, how should they be designed?*”.

This paper is written to research the questions, “*Is this program a good use of funds? Do net benefits go to the right people? Are the right behaviors encouraged?*”. In Part I writer clarifies the efficacy of the survivor payments in the view of altering demographic variables and labor market activities of men and women (James, 2009).

To avoid poverty and balance the levels of consumption over life and death of wage earners, many advanced countries let widows and widowers to benefit from survivor payments with the same conditions though women dominates over men because women live longer and have less earnings and abilities to pass the income tests that some countries demand, including divorcees and partners, too. These programs make coverage of social security larger through taking a lot of women who are not working in registered economy (James, 2009).

According to James, survivor pension is designed to compensate the income of survivor's after the death of the breadwinner of family and it changes according to countries' social values about family and roles of men and women in labor market. Because these programs may shape the people's behaviors, these systems must be well- organized in the way of penalties and rewards to deter people from shaping their behaviors. If these programs are not well- organized, efficiency of whole economy and justice can decrease, cost of payments can increase and they can cause employment disincentives and unfair income distribution (James, 2009).

In many countries survivor pensions discontinue or are considerably decreased when widows get their own retirement salary or wages. Although governments aim to save the money of national treasury via these offsets, in force young women hesitate to take part in labor force. Because women earn little supplemental net income from work due to high taxation on wages, they get survivor

pension, too. Thus, women's participation in active work and consequently economic output and national employment rates is reduced (James, 2009).

In Nishiyama's (2010) study, a model is adjusted according to 2009 economy of the United States to evaluate the distortion impact of survivor and spousal benefits on married households' labor supplies and the welfare effect of reducing the social insurance expenses of the current social security system in the country.

In the model, households are divided with regards to their marital state, age, wage rate of each partner among the couples, past earnings of each spouse. In each one year period, there are two market wage crises, one for the wife and the other one for the husband, couples make optimal decisions on consumption, hours of work and, try to maximize lifetime utility at the end of the period (Nishiyama, 2010).

In the study, a baseline economy is constructed that is a balanced growth, with the present insurance system benefits of spousal and survivors and the study controls the model economy with the country's present values in terms of pensions of spousal and survivors and workers' own. Afterwards, she removes gradually survivor and spousal benefits of in a 40-year period generation-by- generation with keeping state budget and social security budget separate, accepting payroll taxes at the same rate (Nishiyama, 2010).

In the conclusion of the study, it is shown that the removal of the survivor and spousal benefits will increase the work hours of women in market between 4.3 and 4.9 percent in the long view based on the state's financial attitude: the first assumption is increasing public spending, the second one increasing the lump sum payments, the third one is rising the decreasing the income tax rates. Furthermore, gross domestic product rises between 1.1 and 1.5 percent, while work hours of men increase merely by 0.0 and 0.4 percent. The highest effect is seen in the whole economy when the state drops the income taxes, the smallest one is seen on the condition of raising the transfer expenses (Nishiyama, 2010).

In another study of Estelle James (2010), prepared for World Bank, in 2010, it is pointed out that social security arrangements are distinctly distinguished among women and men merely have any distinct effects on them since they have contrastive

demographic features and social roles. The writer remarks that women in many societies do not benefit proportionately from social security arrangements because of lower wages and shorter working periods but rules of phasing out mostly punish people taking minimum pensions and deter people from working, mostly women. In addition, the long-life expectancy of women is likely to increase their chances of receiving a survivors' pension. However, since these pensions will often be replaced by their own pensions, women's motivation to work reduces.

There have been defined benefit and defined contribution systems applied in social security programs. In the first plan, the pension is calculated according to a formula which is calculated as:

pension = reference wage(w)\*a (rate of accrual per year) \*Y (contribution years).

According to this formula reference wage is taken as the wage of the final year, wage of the last few years or average lifelong wage – the selection varies but countries have begun to choose long-run period since the payments depend on contribution of insured people. In addition, defined benefit programs are called pay-as-you-go (PAYG) systems where existing employees finance retirees and require minimum contributing years (James, 2010).

On the other hand, in the defined contribution plans, social security system is financed by the employee's own premiums. The annual contributions accumulated over the working life of the persons (usually by private companies) are credited and the pensions depend directly on the contribution amounts and the rate of return on investments related to the payment phase and the rules. This means that pensions increase when the person works long years and fall longevity increases, both situations encourage continuation to labor (James, 2010).

The writer addresses that in almost all of the countries that have defined benefit plans, this pension is regarded as a payment to widows because they are dependent on their husbands. She cites that they must select between survivor's pension and their own. In Estonia, widow must select one of the pensions and survivor's pension is reduced against wages. In Poland, survivor's pension is stopped if beneficiaries work or their own pensions are higher than survivor's pension. She



exemplifies that in Belgium, France, Germany and United States survivor's pension is phased out if the survivors work. Also, she mentions that widows can have any other investment, income or inheritance money without losing survivor's pension while they lose survivor's pension when they are employed (James, 2010).

On the other side, in Latin American defined contribution systems, after retirement each spouse must buy a joint annuity or pension which involves widow, too. This extra joint pension diminished pension of husband by between 10 percent and 20 percent related to the size of survivor's payment and the age of woman. The idea behind the regulation is that wives have lower wages and pensions for the use of implied contract between spouses to dedicate time for domestic responsibilities and childcare. This joint pension necessity supports the wife's entitlement after husband's death and inhibits women from falsifying selections about marriage and work. Moreover, wives have the right to keep the benefits of both joint annuity and their own pension. Because husband pays for the joint pension by taking a lower pension, it becomes wives' own assets after the death of the husband so there is no need to trade-off their own pension. This regulation inhibits the taxation of married women who have active participation in the market and encourage women to work. The regulation of joint pension system expands insurance coverage to women who are in informal economy, without imposing a burden on public budget or indirect tax on employment of women (James, 2010).

Some studies put forward that social security regulations may influence labor force participations of women. Munnell and Jivan, in 2005, conducted a study with the nation-wide data of *The Health And Retirement Study(HRS)* which includes 12,600 individuals within 7,600 households. HRS is a survey started in 1992. This survey covers people between ages 51 and 61 and their spouses and is directed every two years via interviewing the target group. According to the this study, writers research on the factors which influence the women over the age of 50 and 60 to work. According to this study, *demographic characteristics* (health status, divorce and age), *financial incentives* (financial wealth, college education, home ownership, and social security spousal benefit) and *family considerations* (children under 14,

number of children, health status of spouse, working status and wage of spouse) influence the women to participate in labor force.

Munnell & Jivan's 2005 study states that married women face higher tax rates than men or single women because of progressive personal income tax. Although the status of women has shifted outstandingly in the last four decades, man is generally considered as the main breadwinner and tax rates is defined by total income of couples. Because the wage of husbands is accepted as primary and the wage of wives as secondary, the wage of women is stacked on the wage of husbands and is taxed at higher rates. The higher tax rates encountered by married women, as well as having lower wages, make little financial incentive for women to work (Munnell & Jivan, 2005).

Although, having active role in employment must increase a person's benefit of social security, married women may not promote their social security welfare. Working women and men are subject to the same treatment in terms of the accrual of earnings in the social security system. However, low-paid or non-working spouses, usually women, receive up to an additional 50 percent based on the wages of the original breadwinner. If the husband's salary is higher than that of a wife, the wife's work does little or no increase in her social security benefits. The authors also emphasize that, although labor force participation of women has risen, two-thirds of women over the age of 62 receive full or partial benefit based on the earnings of their husbands and receive little benefit from their own work (Munnell & Jivan, 2005).

In another study, by Munnell and Soto, in 2005, in United States, with using the data *Health and Retirement Study (HRS)* the same issue is searched. In the United States married women can take their own benefits, spouse's benefit from total PIA of their husbands and survivor's benefit after the decease of their husbands. If married women claim these benefits before the age of normal retirement age or have their own benefits, spouse benefits becomes lower than one half of the husbands PIA. Also, the age at which the deceased worker first had benefits defines the amount of survivor's benefits. On the other side, the study emphasizes that husbands and wives are inclined to harmonize their retirement age and taste their lesiure time together. According to the calculations of authors, couples try to maximize the present value

of benefits from social security, as to wives' relative PIAs and age difference among them. They found that, in most cases, married women have advantages in demanding benefits as early as possible. When women have significant wages, they must demand at their 62, but if their earnings are nearly zero, they should wait for the time of their husband's retirement. In short, social security system in this country encourage women to claim benefits early and joint retirement decision makes women leave from employment at young ages (Munnell & Soto, 2005).

In a study, by Sanchez- Marcos and Bethencourt (2018), which measures the effect of spousal benefit and survivor's pension on female employment in the United States, by using the data from *Integrated Public Use Microdata Series-Current Population Survey (IPUMS-CPS)* which is a sample of the *United States Census Population* and composes unbiased personal and household level statistics. The purpose of the study is to measure the life cycle influence of the present survivor policy on female employment supply. For this reason , they selected a cohort of women ,the group of married women who are aged 60-64 in 2008 and their husbands. In order to obtain life cycle information about these women, they follow them and their husbands back and forth and get statistics related to whole life cycle working profile, income distribution of them and of their husbands, pension benefits and their husbands' pensions. They also calculate the wealth quantities of married households in 2008 according to age groups from the *Survey Income Program Participation (SIPP)* wave core 2008 database which is a longitudinal research and includes the demographic features of every person in households, quantities of income, statement of liabilities and assets. They use RAND HRS Data (version N) to get data on relevant work experience, earnings, state of employment, state of health, state of retirement.

They describe a model economy in which households have two adults and may have two children at a particular time, husbands always work up to retirement age, women decide whether to work or not. Women in the model start living age at 25, have no assets, claim to retire at age 66 and live till age 90. They also calculate the probability of the death of women and their husbands at age 66 to measure the number of widows according to Social Security Administration data related to the

mortality statistics. They accept the retirement age of women as 62, while men get retired at age 62, 63, 64, 65 and 66. From the fertility side, they accept that there are two types of families, first one has its first child when the parents are 20 years old, and the second child comes after 3 years. The second family type has its first child the time ages of parents are 25 years old, and the second child comes into the world 3 years later (Sanchez-Marcos & Bethencourt, 2018).

They again, calculate the employment rates, earnings, wages with regards to data and the model. In the end, they see that their simulations and data are close to each other with regards to the employment rates of women, women's entitlement to social security, wages and earnings statistical distributions, distribution of husbands' pension, pension distribution of women (Sanchez-Marcos & Bethencourt, 2018).

In the United States there have been two types of benefits women receive in addition to individual pension. When the husband claims retirement at the age 65, wives take spousal benefit in the amount of 50 percent of the husbands' pension. If the husbands, the first earners die, wives deserve 100 percent of their husbands' pension as a survivor's pension. Obviously, spouse benefits and survivor benefits work as a minimum wage for second earners, because wives receive an individual pension or spousal and survivor pension which is higher (Sanchez-Marcos & Bethencourt, 2018).

In the next step; they measure the influence of changes on female participation in lifelong employment, using three different insurance practices of social security retirement which are spousal benefits, survivor benefits and the number of periods required to claim pensions. In the first policy, they abolish spousal benefits. In the second policy, they abolish spousal benefits and survivor's pensions. In the third policy, they abolish spousal and survivor's pensions along with extending number of periods required to be entitled to pension from 35 to 40 periods (Sanchez-Marcos & Bethencourt, 2018).

In conclusion, the effects of these policies on women's participation rates are significant mostly after age 40, but also are ample before this age. The biggest effect of the first policy is seen in ages between 45 and 59, in the late middle ages, due to

almost 7 percent increase among each age range. This effect is nearly 5 percent increase in labor participation of women between ages 40 to 44. On the other side, the younger cohorts have medium rise with around 2 percent in consequence of the first policy, but this effect is not slight, too. As it is expected, the second policy has a bigger effect on female labor participation because it eliminates both survivor pension benefits and spousal benefits together. The raise in the participation rate of women older than age 40, is around 13 percent in the mean. Observably, 3 percent increase is also significant at ages between 25 to 29 and about 11 percent increase in women employment between ages 40 and 44. On the whole, the rate of female employment between the ages 25 and 65 is increased by 5 percent due to the implementation of first policy, and 10 percent thanks to the second policy. Lastly, extending the periods to claim pension from 35 to 40 has slight impact on female employment rates with the rate of under 1 percent point though this impact is more noticeable both in the first (25-29) and last years (60-65) of life cycle of women (Sanchez-Marcos & Bethencourt, 2018).

In a study, published in 2017, by Groneck and Wallenius, a dynamic structural life cycle model is developed that includes single and married people to quantify the effect of survivor benefits on women employment with marriage or divorce and survival uncertainty. They test survivor's pension on labor through two steps eliminating spousal benefits and survivor pension benefits or replacing these benefits with a minimum pension payment depend on means test.

In the model they constructed, there are a total of 21 periods, each period comprises of three years, people start life at age 26 and termination term is age of 89, people give decisions concerning the use of goods and services, savings and wage income while they face risks in the matter of marital state, income and, survival. They assume that married women work never, part-time or full-time, and thanks to work women gather experience which influences future wages and benefits from social security positively, men labor full time till at least age 62 and unmarried people work till age 61. Women stop working when their spouses stop working or earlier and ask for benefits from social security when their husbands withdraw from working. After age 71, all of the people in the model get retired, with no change in

marital states except widowhood, over and above widows are always single (Groneck & Wallenius, 2017).

In the data analysis, for assigning the divorce and remarriage possibilities, they used Survey of Income and Program Participation (SIPP) for year 2008 which focuses on 1950-54 cohort maintaining 5,722 observance (Groneck & Wallenius, 2017).

In the end of developing the model, they run two policy changes: first one is removing the spousal and survivor benefits, second one is altering these benefits with a minimum pension based on means test. In the conclusion of abolishing spouse and survivor benefits, they find a major labor effect on married women. Their model predicts 6.4 percent rise in the rate of employment of married women with the absence of these benefits. On the other side, there is a slight negative effect on male employment with 0.1 percent since men prefer retiring earlier when both of the benefits are eliminated in the same time. However, all the whole, total working hours rises by 1.8 percent, too. Likewise, eliminating survivor and spousal income with the minimum pension has a particular effect on women's labor with an increase of 1.8 percent (Groneck & Wallenius, 2017).

There is another study, conducted by Remzi Kaygusuz, named *Social Security and Two-Earner Households*, which focuses on the social security rules and women employment preferences in the United States.

In the United States, pay-as-you-go system in which past earnings turns into a retirement pension with *Primary Insurance Amount*, the mean of past earnings, in retirement level. Though the whole system is progressive for the average earnings in the past is an indicator of future earnings, namely of retirement pensions, spousal benefit and survivor's pensions are an exception of this insight. A married insured person has the right to collect his/her own *Primary Insurance Amount* and the spousal benefit which equals to 50 percent of the spouse's total *Primary Insurance Amount*. In other words, the writer highlights that social security scheme gives right to receive retirement pension to some people who never pay insurance premium. A single –earner household takes the one hundred fifty percent of the breadwinner's

average past earnings after retiring. When the breadwinner passes away, the survivor gets the one hundred percent of the spouse benefit or the owned pension if it is higher. The writer draws attention that, however these incentives support married households, they potent to discourage participation of young secondary earners into employment through appreciating the value of non-working (Kaygusuz, 2015).

In this study, the writer builds a general equilibrium model which includes the distinct generations and participants. In his model, participants are set out as single or married and their status are stable along life cycle. They face the risk of death based on age and gender. The wage profiles of them differ according to education level and their gender. In the model, households make a decision on employment preferences of women. The model is nearly similar to 2000 United States features from the point of wage gap based on gender, insurance premiums, income taxes and married women employment participation rates based on education and, marital status distributions (Kaygusuz, 2015).

In his model, the economy is constructed by overlapping cohorts, a new generation is born in every period, they start life as workers and retire upon legal retirement ages, participants face mortality risks, newborns are assumed as married, survivors are retirees in the same time, skills of participants are stable over life, husbands generally work but wives can be out of employment. He assumed participants live mostly 7 periods and one period is 10 years. First period includes the people ages from 25 to 34, after fourth period they retire. He used 2000 census data and, social security data in this study. He calculates the employment rates of women between ages 25 and 54 to the educational groups (Kaygusuz, 2015).

Kaygusuz (2015) researches the impact of survivor's benefits and spousal benefits, progressive calculation of pensions and presence of a cap on income dependent on social security contributions on women labor participation in that study. When he eliminates these three implementations together in his model, he finds that the highest change is on married female employment rate; it rises by 5.5 percent, while the total output rises by 1.2 percent, capital and labor rise by respectively 2.1 percent and 0.7 percent; the total labor supply and the wage level per unit have very little change. According to the household types, households which

have lowest talent face have the largest decrease by 22.4 percent while the higher type of households' benefits show an increase by 23.2 percent. In the same time, change in labor participation of women range between 2 percent and 10.7 percent increase; it increases relatively to the number of low-skilled women in married households. Furthermore, elimination of three policies made significant changes on welfare, single –earner married households' wages lessen by 1.1 percent, meanwhile two-earner highly talented spouses gets considerable welfare advantages by 1.9 percent (Kaygusuz, 2015).

When he evaluates the impact of survivor's benefits and spousal benefits, with keeping progressive calculation and the cap implementations constant, he observes that the most affected families are single-earner ones. These households lose social security benefits significantly by 25.1 percent but women in these families respond to this change by entering to job market, an increase is seen in employment rate of these women by 11.1 percent. On the other side, rates of employment among women in many other types of households rises by above 5 percent. In brief, the result of the study shows that spousal and survivor's benefit prevents most married women from labor force (Kaygusuz, 2015).

Alper and others (2015) examined the effect of survivors pensions on labor force participation of daughters using the statistics of survivor's pension of SGK and the data obtaining in-dept interviews with women receiving this pension in Bursa, in Turkey. In the end of study they found out that this pension has negative effect on tendency of women employment for the reason that ceasing the pensions by SGK when women start to work formally. Moreover, in this study, they found that women who received this pension were clearly unwilling to work with social security (Alper and others, 2015).



## **CHAPTER 4. DATA AND METHODOLOGY**

### **4.1. DATA SOURCES**

In this chapter, the data that are used to create descriptive statistics and regression model are explained.

The primary data source of this thesis is “Income and Living Conditions Survey, 2017”. In this survey, the total number of sample households is 24.498, while 22.869 of the sample was interviewed. So, the non-response rate was 6.6 percent in whole Turkey. In the survey, 58.888 individuals aged 15 and over were interviewed for a questionnaire and only 144 of them did not answer for distinct reasons. As a result, non-response rate is nearly 0,24 percent individual level in whole country (TURKSTAT, 2017).

There are three questionnaires (1) Personal Register Form, (2) Personal Questionnaire, and (3) Household Questionnaire in Income and Living Conditions Survey Micro Data Set, 2017. Personal Register Form includes basic demographic information and status of membership about each household member. Personal Questionnaire consists of questions addressed to people aged 15 and over in households regarding marital status, health, education, employment and income which was received in the reference year (2016). Household Questionnaire contains questions about dwelling, tenure, number of rooms, heating type, facilities, possessed goods, debts situation and household incomes.

The secondary data source is the Social Security Institution database for the year 2018. This data base includes the number of people who take survivor’s pension and income, by their status in social security system. They may work on service contracting, work on their own name or as civil servants. While using this secondary data source in this thesis, the necessary legal permissions were obtained from Social Security Institution.

The data of Social Security Institution includes survivor’s pensions and survivor’s income payments to people in Turkey, in 2018. This data consists of age, sex, the relation of deceased insured person, amount of payments of survivor’s

pension, amount of payments of survivor's income, legal status of payments of survivor's benefits in Act 5510, presence of other old age pensions, if any, premium amount paid to the institution, if working, of survivors. Among those characteristics age, sex, amount of survivor's pension, amount of survivor's income, relation of the deceased person, legal status of the deceased insured person in social security system alike working on service contracting, working on own name or as a civil servant are used for the descriptive analyses.

The variables used in this thesis, the coding of the variables and their definitions are as follows.

#### **4.1.1. Dependent Variables**

**Employment Status:** Employment status of women between age 15 and 64 in labor market are categorized into three groups as (1) working with social security, (2) working without social security and (3) not working by analyzing the questions "FI190- Registration Status to Social Security Institutions in the Main Job." and "FI010- Self-defined Current Economic Status", "FI020- Worked at Least 1 Hour in Order to Receive Income in Kind or in Cash or had a Job/Business but was not Working during the Previous Week (as an employee, employer, self-employed or unpaid family worker)"

- 1- Working with Social Security: It indicates the women who are working in formal economy. (Question: FI190 =1)
- 2- Working without Social Security: It indicates the women who are working informally. (Question: FI190=2)
- 3- Not Working: The women who are not working registered or unregistered. (Question: FI010>4 or FI020=2)

In the first model, women between ages 15 and 64 in labor market are categorized into two groups as (1) working, (2) not working.

- 0- Not Working: It indicates the women who are not employed in the labor market. (Question: FI010>4 or FI020=2)

- 1- Working: It indicates the women who are employed with social security or without social security in the labor market. (Question:FI190=1 or FI190=2)

In the second model, only working women are selected among women between age 15 and 64, and categorized into two groups as (1) working with social security, (2) working without social security.

- 1- Working with Social Security: It indicates the women who are working in formal economy. (Question: FI190 =1)
- 2- Working without Social Security: It indicates the women who are working informally. (Question: FI190=2)

#### **4.1.2. Independent Variables**

**Education Status:** Education level of women between age 15 and 65 is analyzed by the question “FE030-Highest Education Level (Highest Level Successfully Completed with a Diploma or Certificate)”.

- 1- Illiterate / Literate but not a graduate
- 2- Primary school
- 3- Primary education
- 4- High school
- 5- 2 or 3 year higher education and above

**Age:** Age of women between ages 15 and 65 is defined according to question “FK070-Age (single years of ages as of 2016, December)”. Age groups were created by taking into consideration of the variation of the 2018 women's employment rates.

- 1- 15-19
- 2- 20-24
- 3- 25-49

4- 50-64

**Number of Children:** Number of children age 5 and under of women between ages 15 and 65 via using questions “FK230-Mother ID (If his/her mother is a household member)” and “FK070- Age (single years of ages as of 2016, December). In literature having preschool children is seen as a barrier for women in economically active ages to participate in labor market in countries where childcare is not institutionalized and widespread. Therefore, children under 5 are used for the analysis.

**Survivor's Pension:** Status of receiving or not receiving survivor pension among women between ages 15 and 65 is defined according to the question “FG090-Survivors’ benefits received in 2016 (TRY) (including death grants)”.

0- Not Receiving

1- Receiving

**Household Ownership:** Status of house ownership of women women between ages 15 and 65 is defined according to the question “HH020- Tenure Status”.

1- Owner

2- Tenant / Lodging

3- Not owner but accommodation is provided free

**Household Income (Annual):** Total annual value of the incomes received in 2016 (TRY) by households in which women between ages 15 and 65 live based on the question “HG110- Total Disposable Household Income”.

1- 0-25000

2- 25001-50000

3- 50001and above

**Region:** Statistical regions where women between ages 15 and 65 live in according to the question “HB030-Statistical Regions, Level 1”.

- 1- West
- 2- Central
- 3- South
- 4- North
- 5- East

***Employed Women:*** These women include the women who worked in the reference week (last week) for at least one hour as a regular employee, casual employee, employer, self employed or unpaid family worker and the women who had jobs as self-employed or employers but not at work in the reference week in economically active ages. (Question: FI120-Employment Status in the Main Job.)

***Employment rate:*** Ratio of employed women among the women between ages 15 and 64. (Employed women/Women in 15-64 age)

***Unemployed Women:*** It covers women between ages 15 and 64 who were not employed in any kind of work during the last week (reference week) and used at least one channel for seeking a job during for the last 4 weeks and were ready to start work within 2 weeks. (Question FI040=1, FI050=1)

***Labor Force:*** It covers the total of all employed and unemployed women in active working age.

***Unemployment Rate:*** It is the ratio of unemployed women within the labor force. (Unemployed /Employed + Unemployed)

***Not in Labor Force:*** It covers women not in employed or unemployed in active working ages.

## **4.2. METHODOLOGY**

In this thesis, I look for the answers to two research questions. The first research question is: “Does receiving a survivor’s pension increase the risk of women not being employed?”; the second one is: “Does survivor’s pension increase the risk of women to work informally?” To find out answers for these questions, I

selected women who are in economically active ages (15-64) in the Income and Living Conditions Survey, 2017.

So, the first hypothesis is “Women who receive survivor’s pension has higher risks for not being employed”, the second hypothesis is “Women who receive survivor’s pension has higher risks for working informally”.

For this purpose, 26266 women between the ages 15 and 64, who have data on marital status, health, education, employment and income information, were selected on the Personal Questionnaire of Income and Living Conditions Survey, 2017.

Women who receive or do not receive survival pension are analyzed by their basic characteristics. Then, various descriptive analyzes were carried out according to whether women receive survivor’s pension or not. For this purpose, employment and unemployment rates were calculated for the women receiving pension and those who do not receive this pension. In addition, some crosstabs were taken among variables such as marital status, age, education level, region, status of ownership of house and survivor’s pension.

According to the social security legislation, the first and basic condition for a woman to get a survivor's pension is being single. For this reason, in the next phase of the study, 8376 single-women who are in the position to receive a survivor's pension were selected from among 26266 women aged between 15- 64.

In addition, among the variables stated in the literature that affect women's employment; Logistic Regression Analysis was conducted to measure the effect of the survivor's pension on the employment and unregistered work of the women, which is the main subject of this study, together with the level of education, age, number of pre-school children, income status, region of residence, property ownership of the house. The analysis was carried out in two stages. In the first stage: together with these independent variables, determinants of working status of women are analyzed. In the second stage; excluding non-working women in the sample, only working women were analyzed to determine the odds of working with or without social security.

Analyses show that individual income is highly correlated with survivor's pension. Therefore, instead of the individual income of women, the income of the households that have an impact on working decisions is included in the analysis as an independent variable.

The age variable was determined according to the intervals in which employment was concentrated and not concentrated in Turkey, 2018.

Also, the number of people who benefit survivor's income are relatively lower than people who benefit survivor's pension as shown in previous part of this thesis and the survivors are not mostly conscious of whether their salaries are considered income or pension. The people receiving survivor's income who were interviewed in "Income and Living Conditions Survey, 2017" are most likely to express their income as a survivor's pension. For this reason, I will consider both revenues as survivor's pensions in my thesis.

Logistic Regression Analysis was used to determine the variables that affect working or non-working and working with social security or working without social security. In the first of the two different models, the dependent variable was determined as working or non-working status, and in the second model, the dependent variable was determined as working with social security and working without social security. Independent variables are determined as survivor's pension, age, education status, number of children aged 5 and under, household ownership, household income, region in both models.

Descriptive statistics of the variables included in the analysis are shown as mean  $\pm$  standard deviation for continuous variables and number of persons (N) and percentage (%) for categorical variables.

In this study, statistical analyzes were done using Statistical Package for Social Sciences (SPSS) (Version 21) program. The results of the analysis were evaluated at the level of  $\alpha = 0.05$  significance.

#### **4.2.1. Limitations of the Study**

Before deciding on the analysis to be included in this thesis, several analysis attempts were made. First of all, dependent and independent variables to be included in the analysis were determined. Dependent variables are determined as working with social security, working without social security and not working in three levels. Independent variables are determined as survivor's pension, age, education status, number of children aged 5 and under, household ownership, individual income and region of target women. Dependent variables are determined as working with social security, working without social security and not working in three levels.

In the analysis included in Appendix D, these variables were blank, as the result of the analysis, as the majority of women did not have personal income, and therefore 50.6% of the subpopulations of dependent variables had zero frequencies as a result of the multinomial analysis.

Therefore, in the second analysis trial, household income was included in the analysis instead of women's individual income, as shown in Appendix F. However, as a result of this analysis, 47.5% of the subpopulations of dependent variables had zero frequencies.

In both analysis experiments, the zero frequencies problem could not be solved because the dependent variable has 3 levels and the number of independent variables was large, and the goodness of fit value was found to be less than 0.05.

Therefore, as detailed in the previous section, in order to reveal the hypotheses of the thesis more clearly, the analysis was carried out in two stages by reducing the dependent variable to 2 levels. Since most of the women in the analysis do not have an individual income, the household income variable was included in the analysis.



## CHAPTER 5. RESULTS

This chapter will present the descriptive statistics and result of regression analysis. In the first subchapter, descriptive information is given for survivor's pension and survivor's income receivers of Social Security Institution database for the year 2018 and also descriptive statistics are presented for women in economically active ages (15-64) in Income and Living Conditions Survey, 2017.

In the second subchapter, results of regression analysis of sample of women according to Income and Living Conditions Survey, 2017 are presented.

### 5.1. RESULTS OF DESCRIPTIVE STATISTICS

#### 5.1.1. Descriptive Statistics on Survivor's Pensions of Social Security

##### Institution

This section presents the basic tables on survivor's pensions and survivor's income paid by the Social Security Institution in 2018 by different right holders. Table 6.1.1.1 shows the number of survivor pensioners and income receivers according to distinct status of social security under article 4-1/a (the ones working on the service contact), 4-1/b (the individuals working on their own names and accounts) and 4-1/c (public employees) of Act 5510.

**Table 5.1.1.1.** Distribution of Survivor Pensioners by Status of Pension, 2018

Survivor Pensioners							
Status of Survivor's Pension	Husband	Wife	Son	Daughter	Father	Mother	Total
Worker	35,753	1,240,187	108,804	538,541	2,138	13,043	<b>1,938,466</b>
Self-employed	11,583	645,419	36,564	253,902	313	2,408	<b>950,189</b>
Public Servants	13,244	359,050	26,385	263,579	9,188	16,019	<b>687,465</b>
<b>Total number of pensioners</b>	<b>60,580</b>	<b>2,244,656</b>	<b>171,753</b>	<b>1,056,022</b>	<b>11,639</b>	<b>31,470</b>	<b>3,576,120</b>

Source: Social Security Institution, 2018.

There were 3,576,120 people that took survivor's pensions in 2018, according to Social Security Institution statistics. The number of wives and daughters are

relatively higher than other right holders (sons and husbands) in all three statuses of social security. In Turkey, the number of husbands that take survivor's pension is lower than the number of wives because women's participation rates are relatively lower than men's labour participation as shown in Table 5.1.1.1. Therefore, survivor's pension in Turkey appears to be a female pension at the first glance.

**Table 5.1.1.2.** Distribution of Survivor Pensioners by Age, 2018

Survivor Pensioners							
Ages	Husband	Wife	Son	Daughter	Father	Mother	Total
<b>0-18</b>	1	68	108,392	113,367	4	7	<b>221,839</b>
<b>19-25</b>	8	1,254	40,604	98,259	0	3	<b>140,128</b>
<b>26+</b>	60,571	2,243,334	22,757	844,396	11,635	31,460	<b>3,214,153</b>
<b>Total</b>	<b>60,580</b>	<b>2,244,656</b>	<b>171,753</b>	<b>1,056,022</b>	<b>11,639</b>	<b>31,470</b>	<b>3,576,120</b>

Source: Social Security Institution, 2018.

In the distribution of survivor pensioners by the Social Security Institution in 2018, the number of daughters receiving survivor's pension is 1,056,022, the number of sons is 171,753, and the number of wives is 2,244,656 and the number of male spouses is 60,580. Moreover, while the number of mothers who receive this pension is 31,470, the number of fathers is 11,639. Among the survivor pensioners, the weight of the wives and the daughters is much more than that of the husbands and the sons. When we look at the age intervals, we realize that sons leave the pensions at the age of 25 and over, while daughters continue to take pensions or income as shown in Table 5.1.1.2.

**Table 5.1.1.3.** Distribution of Survivor's Income Receivers by Status of Income, 2018

Survivor's Income Receivers							
Status of Survivor's Income	Husband	Wife	Son	Daughter	Father	Mother	Total
Worker	172	45,430	12,254	25,484	2,040	6,793	<b>92,173</b>
Self-employed	6	336	312	372	3	9	<b>1,038</b>
<b>Total number of pensioners</b>	<b>178</b>	<b>45,766</b>	<b>12,566</b>	<b>25,856</b>	<b>2,043</b>	<b>6,802</b>	<b>93,211</b>

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Source: Social Security Institution, 2018.

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Furthermore, when the insurance holders are deceased due to work accident or occupational disease, their right holders are put on survivor's income at the rate of %70 of insurance holders' survivor's income (Act 5510). The number of people survivor's income receiver is shown to be far smaller than survivor pensioners as in Table 5.1.1.3 due to their legal status.

**Table 5.1.1.4.** Distribution of Survivor's Income Receivers by Age, 2018

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<b>Survivor's Income Receivers</b>							
<b>Ages</b>	<b>Husband</b>	<b>Wife</b>	<b>Son</b>	<b>Daughter</b>	<b>Father</b>	<b>Mother</b>	<b>Total</b>
<b>0-18</b>	0	2	9,939	9,984	0	0	<b>19,925</b>
<b>19-25</b>	0	281	2,056	4,599	0	0	<b>6,936</b>
<b>26+</b>	178	45,483	571	11,273	2,043	6,802	<b>66,350</b>
<b>Total</b>	<b>178</b>	<b>45,766</b>	<b>12,566</b>	<b>25,856</b>	<b>2,043</b>	<b>6,802</b>	<b>93,211</b>

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Source: Social Security Institution, 2018.

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As in survivor's pension, the survivor's income is again women's revenue along their lives rather than men's as shown in Table 5.1.1.4.

When we take a look at the data due to age and sex, we realize that there is a tendency to quitting survivor's pension among sons over age twenty five which is the last age pension can be paid for education, while daughters continue to take this salary for longer years along active working periods of their lives. Through young ages till the half of twenties, there is a little change in numbers of sons and daughters receiving survivor's pension, but after completed education age which is defined as twenty five in social security law, young men leaves the pension most probably for starting to work, while daughters do not labor. The number of daughters receiving survivor's pension is 25.856, slightly more than twice the number of sons, which is 12.566. Besides, there is a big difference between numbers of women spouses who take survivor's pension and men spouses who benefit the same pension. So, the number of wives receiving survivor's pension is 45.766 while the number of husbands receiving the same pension is just only 178. This is a significant sign of lower labor force participation among women than men in Turkey's registered employment market.

**Table 5.1.1.5.** Total Value of Survivor's Pension of Women in 15-64 Age

<b>Survivor's pension (Annual) (TRY)</b>	<b>Frequency</b>	<b>Percent</b>	<b>Valid Percent</b>	<b>Cumulative Percent</b>
<b>5001-10000</b>	97,693	5.9	5.9	5.9
<b>10001-15000</b>	431,625	26.3	26.3	32.2
<b>15001-20000</b>	347,270	21.1	21.1	53.3
<b>20001-25000</b>	531,464	32.3	32.3	85.7
<b>25001-30000</b>	170,808	10.4	10.4	96.1
<b>30001 and above</b>	64,797	3.9	3.9	100.0
<b>Total</b>	<b>1,643,657</b>	<b>100.0</b>	<b>100.0</b>	

Source: Social Security Institution, 2018.

When the Social Security Institution's data for 2018 survivor's pension categories are classified, it is seen that 53.3% of women receiving survivor's pension in the age range of 15-64 receive 15,000 liras or less annually as shown in Table 5.1.1.5. In addition, according to the official population figures, women population between the ages 15-64 in 2018 is 27,510,066 (TURKSAT). Thus, according to the social security data of 2018, 5.97% of women age 15-64 are receiving survivor's pension (including survivor's income) as of 2018.

On the other hand, according to data of Income and Living Conditions Survey, 2017, the number of women between the ages 15-64 is 26,266, and the number of women who receive survivor's pension is 1,414, and the rate of women who receive this pension  $((1,414 / 26,266) * 100)$  is 5.38 %. It can be said that the rates of women receiving pension obtained from the two data sets are close to each other. This consistency between official statistics and household survey reveals the representativeness of the survey for survivor's pension holders.

### **5.1.2. Descriptive Statistics on Income and Living Conditions Survey**

This section contains the tables created by using the data of Income and Living Conditions Survey, 2017. According to descriptive statistical analysis, it is seen that most of the women who receive survivor's pensions do not participate in the workforce, have low income, are low educated, and are relatively older than the rest of the group.

**Table 5.1.2.1.** Distribution of Pension Receivers of Women in 15-64 Age by Total Value of Survivor's Pension

<b>Total Value of Survivor's Pension received in 2016</b>	<b>Frequency</b>	<b>Percent</b>	<b>Valid Percent</b>	<b>Cumulative Percent</b>
<b>0</b>	24,852	94.6	94.6	94.6
<b>1-5000</b>	332	1.3	1.3	95.9
<b>5001-20000</b>	1036	3.9	3.9	99.8
<b>20001 and above</b>	46	0.2	0.2	100.0
<b>Total</b>	26,266	100.0	100.0	

According to Income and Living Conditions Survey, 2017, when the survivor's pension is grouped, it is seen that most of the pensions (99.8 %) are below 20,001 liras annually as shown in Table 5.1.2.1. The group, which constitutes the majority of the pension receivers, consists of individuals with an annual pension amount of 5,001-20,000 liras, with a ratio of 73%.

**Table 5.1.2.2.** Distribution of Personal Income of Women in 15-64 Age

<b>Total value of the income received in 2016</b>	<b>Frequency</b>	<b>Percent</b>	<b>Valid Percent</b>	<b>Cumulative Percent</b>
<b>0</b>	16756	63.8	63.8	63.8
<b>1-5000</b>	1972	7.5	7.5	71.3
<b>5001-20000</b>	4764	18.1	18.1	89.4
<b>20001 and above</b>	2774	10.6	10.6	100.0
<b>Total</b>	26266	100.0	100.0	

Moreover, according to the same research data it is seen that 70.8% of the women who receive a survivor's pension have a total annual income of less than 20,000 liras as shown in Table 5.1.2.2.

**Table 5.1.2.3.** Percent Distribution of Personal Income Excluding Survivor's Pension of Women in 15-64 Age by Survivor's Pension

<b>Total value of income (TRY) received in 2016</b>	<b>Survivor's Pension</b>	
	<b>Not Receiving Pension</b>	<b>Receiving Pension</b>
<b>0</b>	67.4	74.7
<b>0-5,000</b>	6.9	8.0
<b>5,001-20,000</b>	15.4	13.9
<b>20,001 and above</b>	10.3	3.5

<b>Total</b>	100.0	100.0
<b>Count</b>	24,852	1,414

In order to understand the general income level of the women survivor's pension receivers, their individual income other than the survivor's pension was also examined. Furthermore, according to the Income and Living Conditions Survey, 2017, 96.6% of the women who receive a survivor's pension have a total annual income of less than 20000 liras excluding the survivor's pension as shown in Table 5.1.2.3.

**Table 5.1.2.4.** Total Value of Household Income of Women in 15-64 Age by Survivor's Pension

<b>Household Income in 2016 (TRY)</b>	<b>Survivor's Pension</b>	
	<b>Not Receiving Pension</b>	<b>Receiving Pension</b>
<b>0-25,000</b>	26.7	40.7
<b>25,001-50,000</b>	43.1	39.8
<b>50,001 and above</b>	30.2	19.5
<b>Total</b>	100.0	100.0
<b>Count</b>	24,852	1,414

In addition, according to the Income and Living Conditions Survey, 2017, It seems that the majority of women who receive survivor's pensions are members of families with lower household income as shown in Table 5.1.2.4.

**Table 5.1.2.5.** Percent Distribution of General Profile of Labour of Women in 15-64 Age by Survivor's Pension

<b>Status of Labour</b>	<b>Survivor's Pension</b>	
	<b>Not Receiving Pension</b>	<b>Receiving Pension</b>
<b>Employed</b>	30.0	16.3
<b>Unemployed</b>	3.0	3.0
<b>Not in Labor Force</b>	67.0	80.7
<b>Total</b>	100.0	100.0
<b>Count</b>	24,852	1,414

According to the data of Income and Living Conditions Survey, 2017, there have been 26266 women between ages 15-64. 1414 women in 15-64 age range receive survivor's pension while 24852 women do not. Employment rate means the

rate of employment within the non-institutional working age population. Based on this definition, employment rate of the data is 29.2% for total women between ages 15-64, 16.3% for women receiving survivor's pension, while 30.0% for women not receiving survivor's pension. The employment rates show that there is a statistically significant difference in women's employment rate between those receiving survivor pension and those not receiving pension.

On the other side, unemployment rate is 9.4% among women in 15-64 age range, while unemployment rate is 15.8% among women receiving survivor's pension in 15-64 age range. Also, this rate is 9.2% among women not receiving survivor's pension. As a result of the calculation of the unemployment rate, there is a statistically significant difference in women's unemployment rate between those receiving survivor's pensions and those not receiving pension, too.

**Table 5.1.2.6.** Percent Distribution of Employment Status of Women in 15-64 Age by Survivor's Pension

<b>Status of Employment</b>	<b>Survivor's Pension</b>	
	<b>Not Receiving Pension</b>	<b>Receiving Pension</b>
<b>Working with Social Security</b>	17.0	3.1
<b>Working without Social Security</b>	13.1	13.2
<b>Not Working</b>	70.0	83.7
<b>Total</b>	100.0	100.0
<b>Count</b>	24,852	1,414

Table 5.1.2.6 shows the registration status of women in 15-64 age range in social security. The unregistered employment rate is 13.2% among women receiving pension and 13.1% for women not receiving the same pension. On the contrary, the rate of registered employment among women receiving survivor's pension is quite low with 17% compared to 3.1% of women receiving no survivor's pension. In addition, the rate of non-employment is 83.7% among women who receive a survivor's pension while it is 70% for women who do not.

**Table 5.1.2.7.** Percent Distribution of Ages of Women in 15-64 Age by Survivor's Pension

Age	Survivor's Pension	
	Not Receiving Pension	Receiving Pension
15-19	12.7	3.8
20-24	10.3	2.8
25-49	54.4	29.5
50-64	22.6	63.9
<b>Total</b>	100.0	100.0
<b>Count</b>	24,852	1,414

A statistically significant difference was found between women receiving survivor's pension and non-receiving women by age. There are serious differences in the 20-49 age range, which is an active working period for women in particular. Moreover, the rate of receiving a survivor's pension increases after the age of 49. We can easily see that women leave labor market after 50 years old and number of women receiving survivor's pension is concentrated in the age range of 50-64 as shown in Table 5.1.2.7.

**Table 5.1.2.8.** Percent Distribution of Children under 5 of Women in 15-64 Age by Survivor's Pension

Number of Children	Survivor's Pension	
	Not Receiving Pension	Receiving Pension
0	78.2	98.2
1	16.2	1.6
2	4.8	0.2
3	0.6	0.0
4	0.1	0.0
<b>Total</b>	100.0	100.0
<b>Count</b>	24,852	1,414

As shown in Table 5.1.2.8, most of women (98.2%) who receives survivor's pension have no children while 21.8% of women who not receiving pension have children under age 5.



**Table 5.1.2.9.** Average Number of Children under 5 of Women in 15-64 Age by Survivor's Pension

Number of children			Statistic	Std. Error
Survivor's Pension	Not Receiving Pension	Mean	0,28	0,004
	Receiving Pension	Std. Deviation	0,586	
	Not Receiving Pension	Mean	0,02	0,004
	Receiving Pension	Std. Deviation	0,154	

Mean of children is  $0,02 \pm 0,004$  among women who receive survivor's pension, while mean of children is  $0,28 \pm 0,004$  among women not receiving this pension.

**Table 5.1.2.10.** Percent Distribution of Education Status of Women in 15-64 Age by Survivor's Pension

Education Status	Survivor's Pension	
	Not Receiving Pension	Receiving Pension
Illiterate / Literate but not a graduate	18.6	29.6
Primary school	31.0	43.7
Primary education	20.0	10.0
High School	16.1	11.2
2 or 3 Year Higher Education and above	14.3	5.5
<b>Total</b>	100.0	100.0
<b>Count</b>	24,852	1,414

The majority of women (73.3 percent) who receive a survivor's pension are at primary and lower education levels as shown in Table 5.1.2.10.

**Table 5.1.2.11.** Percent Distribution of Marital Status of Women in 15-64 Age by Survivor's Pension

Marital Status	Survivor's Pension	
	Not Receiving Pension	Receiving Pension
Married	73.0	1.9
Never married	23.1	19.2
Widowed	0.8	66.9
Divorced	3.0	12.0
<b>Total</b>	100.0	100.0
<b>Count</b>	24,852	1,414

As the first condition for women to be entitled to a survivor's pension is that they are not married, as shown in Table 6.1.2.11, almost all women receiving survivor's pension are never married, divorced or widowed.

**Table 5.1.2.12.** Percent Distribution of Region of Women in 15-64 Age by Survivor's Pension

<b>Region</b>	<b>Survivor's Pension</b>	
	<b>Not Receiving Pension</b>	<b>Receiving Pension</b>
<b>West</b>	36.2	39.3
<b>Central</b>	15.5	16.1
<b>South</b>	11.8	10.9
<b>North</b>	11.7	16.2
<b>East</b>	24.8	17.5
<b>Total</b>	100.0	100.0
<b>Count</b>	24,852	1,414

When women receiving survivor's pension and those who did not were examined according to the region they live in, no significant difference was found between the regions, as shown in Table 5.1.2.12.

**Table 5.1.2.13.** Percent Distribution of Household Ownership of Women in 15-64 Age by Survivor's Pension

<b>Household Ownership</b>	<b>Survivor's Pension</b>	
	<b>Not Receiving Pension</b>	<b>Receiving Pension</b>
<b>Owner</b>	60.7	65.4
<b>Tenant / Lodging</b>	25.3	18.4
<b>Not owner but accommodation is provided free</b>	14.0	16.2
<b>Total</b>	100.0	100.0
<b>Count</b>	24,852	1,414

When women who receive a survivor's pension and women who do not receive a survivor's pension are classified according to the property of the house they live in, it is understood that the majority (81.6%) who have a survivor's pension do not pay rent to the household or the house they live in. On the other hand, it is seen

that women who do not receive a pension are more likely to live in rent than women who receive a pension as shown in Table 5.1.2.13.

**Table 5.1.2.14.** Percent Distribution of Household Size of Women in 15-64 Age by Survivor's Pension

Household size	Survivor's Pension	
	Not Receiving Pension	Receiving Pension
<b>1</b>	1.4	24.2
<b>2</b>	15.8	26.8
<b>3</b>	22.1	18.5
<b>4</b>	25.9	12.3
<b>5 and above</b>	34.8	18.2
<b>Total</b>	100.0	100.0
<b>Count</b>	24,852	1,414

Women who not receiving survivor's pension live in families including 4 and above members with the rate of 60.7%. On the other side, majority of women receiving survivor's pension, with the rate 69.5%, live alone, or with one or two people except themselves.

**Table 5.1.2.15.** Average Size of Household of Women in 15-64 Age by Survivor's Pension

Household size	Statistic			Std. Error
	Survivor's Pension	Not Receiving Pension	Receiving Pension	
		Mean	4.22	0.013
		Std. Deviation	1.973	
		Mean	2.90	0.047
		Std. Deviation	1.783	

Because women who receive survivor's pension are single and therefore women who receive survivor's pension live in smaller families than women who do not receive this pension. The mean of number of households is 4.22 among women not receiving survivor's pension while 2.90 among women receiving survivor's pension.

## 5.2. RESULTS OF REGRESSION

### 5.2.1. Results of First Model of Regression Analyses

In the first model of the analysis, determinants of working status of women are analyzed together with independent variables. For this reason, as the dependent variables; women working with social security and women working without social security are included in the analysis as women who are working, while those who do not work are included as women not working.

As a result of the Logistic Regression Analyses, the effect of variables such as survivor's pension, education status, age, household ownership, household income and region are found to be significant, while the number of children under 5 is insignificant.

**Table 5.2.1.1.** Results of Logistic Regression Analysis of First Model

		B	S.E.	Wald	df	Sig.	Exp(B)	95% C.I.for EXP(B)	
								Lower	Upper
<b>Education Status</b>	Illiterate / Literate but not a graduate			151,568	4	0			
	Primary school (1)	0,227	0,114	3,97	1	0,046	1,255	1,004	1,569
	Primary education (2)	0,125	0,117	1,156	1	0,282	1,134	0,902	1,425
	High school (3)	0,41	0,109	14,048	1	0	1,506	1,216	1,866
	2 or 3 year higher education and above(4)	1,082	0,11	97,536	1	0	2,95	2,38	3,656
<b>Pension</b>	Survivor's Pension (Receiving)	-0,817	0,096	72,426	1	0	0,442	0,366	0,533
<b>Age</b>	Age 15-19			528,218	3	0			
	Age 20-24	1,399	0,099	199,146	1	0	4,051	3,335	4,919
	Age 25-49	2,131	0,097	482,661	1	0	8,426	6,967	10,19
	Age 50-64	1,206	0,127	90,208	1	0	3,339	2,603	4,282
<b>Household Ownership</b>	Owner			40,89	2	0			
	Tenant / Lodging	0,43	0,067	40,818	1	0	1,537	1,347	1,754

	Not owner but accommodation is provided free	0,123	0,091	1,841	1	0,175	1,131	0,947	1,352
	0-25000			126,655	2	0			
<b>Household Income (TRY)</b>	25001-50000	0,473	0,077	37,54	1	0	1,606	1,38	1,868
	50001 and above	0,936	0,084	123,587	1	0	2,55	2,162	3,008
<b>Children</b>	Number of children under 5	-0,286	0,154	3,46	1	0,063	0,751	0,556	1,015
	East			75,439	4	0			
	West	0,551	0,079	48,759	1	0	1,734	1,486	2,024
	Central	0,173	0,098	3,137	1	0,077	1,189	0,982	1,441
<b>Region</b>	South	0,193	0,105	3,368	1	0,066	1,212	0,987	1,489
	North	0,692	0,103	45,506	1	0	1,997	1,634	2,442
	Constant	-3,51	0,137	653,126	1	0	0,03		

a. Variable(s) entered on step 1: Illiterate / Literate \_but\_ not\_a\_ graduate, survivor's\_pension, age \_15-19, owner, 0-25000, number of children age 5\_and\_under, east.

At the end of this analysis, we see that women who receive survivor's pension are 0.442 times less likely to work than those who do not receive survivor's pensions.

Women who are primary school graduates are 1.255 times more likely to work than those who are illiterate or have not finished school. Women who are primary education graduates are 1.134 times more likely to work than the illiterate or non-graduate group. High school graduate women are 1.506 times more likely to work than the illiterate or non-graduate group. Those who graduate 2 or 3 year higher education and above are 2.950 times more likely to work than women who are illiterate or have not finished any school. This result shows that, as the education level of women increases, the probability of working increases.

On the other hand, when it comes to the age criterion of women, women aged between 20-24 are more likely to work more than 4.051 times than women aged between 15-19. Women aged between 25-49 are 8.426 times more likely to work than women aged between 15-19. Women aged between 50-64 are 3.339 times more likely to work than women aged between 15-19. This shows that the probability of

women to work is higher in the age range in which the employment rate of women is intense.

Looking at the results of the analysis in terms of home ownership, women living in a tenant or lodging are 1.537 times more likely to work than women who live in their own homes. Women who do not have a home but accommodate for free are 1.131 times more likely to work than women who have their own homes.

When the effect of the income level of the household in which the probability of working for women is higher, is examined, it is seen that the probability of working increases as the household income increases. Women, who are members of households with annual incomes between 25001 and 50000 Turkish liras, are 1.606 times more likely to work than women living in households with annual income less than 25001 liras. Women with annual incomes of 50001 Turkish liras and above are likely to work 2.550 times more than women with household incomes of less than 25001 liras.

It is seen that the effect of the region on women's work is partial. While women living in the west and north are 1,734 and 1,212 times more likely to work than women living in the east; there is no significant difference between women living in the south or the middle region compared to those living in the east.

### **5.2.2. Results of Second Step of Regression Analyses**

Another hypothesis of the study is that women who receive survivor's pension tend to work more informally than those who do not. In order to test this hypothesis, in the second stage of the analysis, I tested the factors affecting women's registered work with Logistic Regression Analyses. For this, in the second model, I excluded women who do not work from the target group, and included only working women; I've included "working with social security" or "working without social security" analysis with dependent variable.

As a result of the Logistic Regression Analyses, the effect of variables such as survivor's pension, education status, age, household ownership, household income

and region are found to be significant, while the number of children under 5 is insignificant.

**Table 5.2.2.1. Results of Logistic Regression Analysis of Second Model**

		B	S.E.	Wald	df	Sig.	Exp(B)	95% C.I. for EXP(B)	
								Lower	Upper
<b>Education Status</b>	Illiterate / Literate but not a graduate			221,974	4	0			
	Primary school (1)	0,851	0,274	9,683	1	0,002	2,342	1,37	4,004
	Primary education (2)	1,156	0,254	20,78	1	0	3,179	1,933	5,226
	High school (3)	2,05	0,251	66,887	1	0	7,764	4,751	12,689
	2 or 3 year higher education and above(4)	3,329	0,269	152,713	1	0	27,904	16,458	47,311
<b>Pension</b>	Survivor's Pension (Receiving)	-1,908	0,235	65,741	1	0	0,148	0,094	0,235
	Age 15-19			57,03	3	0			
<b>Age</b>	Age 20-24	0,603	0,196	9,48	1	0,002	1,828	1,245	2,684
	Age 25-49	1,118	0,189	35,041	1	0	3,06	2,113	4,432
	Age 50-64	-0,136	0,276	0,245	1	0,621	0,873	0,508	1,498
<b>Household Ownership</b>	Owner			18,8	2	0			
	Tenant / Lodging	0,644	0,149	18,792	1	0	1,905	1,423	2,549
	Not owner but accommodation is provided free	0,25	0,201	1,542	1	0,214	1,284	0,865	1,904
<b>Household Income (TRY)</b>	0-25000			98,463	2	0			
	25001-50000	0,833	0,166	25,039	1	0	2,3	1,66	3,188
	50001 and above	1,84	0,189	95,098	1	0	6,299	4,351	9,118
<b>Children</b>	Number of children under 5	-0,159	0,35	0,208	1	0,649	0,853	0,43	1,692
<b>Region</b>	East			39,862	4	0			
	West	0,739	0,174	17,982	1	0	2,094	1,488	2,946
	Central	0,963	0,231	17,311	1	0	2,62	1,664	4,124
	South	0,325	0,232	1,97	1	0,16	1,384	0,879	2,179
	North	-0,146	0,214	0,463	1	0,496	0,864	0,568	1,315
	Constant	-3,116	0,311	100,129	1	0	0,044		

a. Variable(s) entered on step 1: Illiterate / Literate\_but\_not\_a\_graduate, survivor's\_pension, age\_15-19, owner, 0-25000, number\_of\_children\_age 5\_and\_under, east.

Women with an education level of primary school are 2.342 times more likely to work with social security than those who are illiterate or have not completed a school. Educational status of women who are primary school graduates are 3.179 times more likely to work with social security than those who are illiterate or have not completed a school. The educational status of women who are high school graduates is 7.764 times more likely to work with social security than those who are illiterate or who have not completed a school. Women with an education level of 2 or 3 year higher education and above are 27.904 times more likely to work with social security than those who are illiterate or have not completed a school.

The effect of getting a survivor's pension to work with social security is as follows: women who receive a survivor's pension are 0.148 times less likely to work than those who do not receive a pension.

It increases the probability of women working with social security between the ages 20-24 by 1.828 times compared to the age range of 15-19. The probability of women working with social security between the ages 25-49 is 3.060 times more than in the age range of 15-19. On the other side, there is no significant relationship between being 50-64 ages of women and working with social security.

The household ownership of women has partially affected their social security works. Women living in tenant or lodging are 1,905 times more likely to work with social security than those living in their homes. However, there is no significant difference between women's free accommodation in their home and their social security work.

On the other side, when the income of the household in which the women live is analyzed, it is seen that there is a significant relationship between household income and women's social security work. The women, whose annual household income is between 25,001 and 50,000 Turkish liras, is 2.300 times more likely to work with social security than the woman in households with an annual income below 25,000 Turkish liras. In addition, women living in households with an annual income of 50,001 Turkish liras and more than this amount are 6.299 times more



likely to work with social security than women in households with annual income below 25,000 Turkish liras.

Again, as in the first phase of the analysis, there is no significant relationship between women with children aged 5 and under and possibility of working with social security.

Finally, the relationship between the region where women live and the possibility of working with social security is partially significant. The probability of women living in the west and the middle to work with social security is respectively 2.094 and 2.620 times higher than those living in the east, and there is no significant difference between living in the south or north and living in the east.

## **CHAPTER 6. CONCLUSION AND DISCUSSION**

### **6.1. Conclusion**

Firstly, in this section, the results of the analyzes on whether there is a relationship between the employment status of women and survivor's pension will be mentioned. Then, the hypothesis of the thesis will be discussed and finally the results and reasons will be discussed.

According to the 2018 data of the Social Security Institution, a total of 3,669,331 women are put on pension, including 3,576,120 women on survivor's pension and 93,211 women who receive survivor's income.

When the degree of kinship of the people who put on survivor's pension to the insurance holders who died due to any reason other than occupational accident or occupational disease is examined, it is seen that 2,244,656 wives, 1,056,022 daughters and 171,753 sons and 60,580 husbands receive survivor's pension. The number of people who receive this pension in the status of mother and father are in the lower ranks with 31,470 and 11,639, respectively.

On the other hand, the number of people who receive survivor's income due to the death of their relatives who died consequently of work accidents or occupational diseases is comparatively low to the total number of survivor's pensions. The number of people who receive total survivor's income in 2018 was 93,211. 45,766 of them were wives, 25,856 daughters, 12,566 sons, and only 178 of them were husbands. The mother and father of the deceased insured, who receive this income, was 6,802 and 2,043, respectively.

According to the current legal arrangement, sons benefit from this pension until the end of their education period, while daughters, whatever their ages are, if they are, divorced, widowed or not married and if they are not receiving any income or pension for working under Act 5510, can take this pensions constantly for not participating in labor force all along their lives. In other words, sons who have not completed age 18, the age 20 in case they are receiving education in high school or equivalent, or the age 25 in case they are receiving higher education can put on survivor's pension or income

When we take a look at the data due to age and sex, we realize that there is a tendency to quit the survivor's pension among sons over age twenty five which is the last age pension can be paid for education, while daughters continue to take this salary for longer years along active working period of their lives. Through young ages till the half of twenties, there is a little change in numbers of sons and daughters that are paid survivor's pension, but after they complete education age which is defined as twenty five in social security law, young men leave the pension most probably to start working, while daughters do not work.

Besides, there is a big difference between numbers of women spouses who take survivor's pension and men spouse who benefit the same pension. This is a significant sign of lower labour force participation among women than men in Turkey's registered employment market.

At first glance, these numbers give the impression that this pension is a pension designed for non-working and dependent women. It is thought that the fact that women continue to receive this pension throughout their lives is a kind of women's pension and also acts as a social security for women.

With this background, I used the data of Income and Living Conditions Survey, 2017 in order to answer questions about whether these pensions that women receive are an obstacle to their participation in employment, or whether they cause especially daughters and wives to work informally.

In the axis of "FG090- Survivors' benefits received in 2016 (TRY) (Including death grants)" among the income items in the study, women who received these pensions and who did not receive these pensions were identified. Accordingly, since the aim of the study was to investigate the effect of death pensions on women's employment, the focus was on women in the age of economically active working.

For this reason, 26,266 women who are at the age of active working were selected in the Income and Living Conditions Survey, 2017. It was determined that 1,414 of these women received survivor's pension. The proportion of women who received survivor's pension was 5.38 %.

According to the official population figures for 2018, the number of women aged between 15-64 was 27,510,066, while the number of women receiving the same age group was 1,643,657 according to the social security institution data. The proportion of women who received a widow's orphan's pension was 5.97%.

On the other side, the first hypothesis is “Women who receive survivor’s pension has higher risk for not being employed”, the second hypothesis is “Women who receive survivor’s pension has higher risk for working informally” in this study.

There have been two models which include 8,376 unmarried women, who can receive a survivor’s pension legally, that are selected among 26,266 women in the age of economically active working.

Logistic Regression Analysis was used to determine the variables that affect working or non-working and working with social security or working without social security. In the first of the two different models, the dependent variable was determined as working or non-working status, and in the second model, the dependent variable was determined as working with social security or working without social security. Independent variables are determined as survivor's pension, age, education status, number of children aged 5 and under, household ownership, household income, region of target women in both models.

In the first model, the relationship between women's employment status and independent variables such as survivor’s pension, age, education, household income, number of children under 5, household ownership and the region are measured.

As a result of the Logistic Regression Analysis, the effect of variables such as survivor's pension, education status, age of women, household ownership, household income and region are found to be significant and the number of children age 5 and under is insignificant.

At the end of this analysis, we see that women who receive survivor’s pension are 0.442 times less likely to work than those who do not receive survivor's pensions. This result indicates that, as suggested in the first hypothesis, women who receive survivor’s pension tend to participate less in employment than women who do not receive this pension.

In the second model, only working women were selected and the relationship between their status of working with social security or working without social security and independent variables was measured.

As a result of the Logistic Regression Analysis, the effect of variables such as survivor's pension, education status, age of women, household ownership, household income and region are found to be significant and the number of children under 5 is insignificant, as in the first model.

In the end of Logistic Regression Analysis, the effect of getting a survivor's pension to work with social security is; women who receive a survivor's pension are 0.148 times less likely to work than those who do not receive this pension. After all, women who receive survivor's pension tend to work less formally than women who do not receive this pension, as suggested in the second hypothesis of this thesis.

As a result of the study, it is observed that survivor's pensions adversely affect women's participation in employment and increase the risk of informal working.

## **6.2. Discussion**

In order to understand the social policy practices in a specific country, it is necessary to investigate the welfare regime applied in the country. Turkish social security system is based on the understanding that men work and women are dependent on them, as in *Male Breadwinner Welfare Model*. Typical of this practice is that in the event of the death of the working male family head, the state undertakes the duty of protecting women and daughters through the survivor's pension until they (re)marry or start to work.

Although the conventional system seems to protect women from unemployment and divorce, Kılıç (2008) stated that in most cases it prevents women from participating in the labor force. On the other hand, he stated that although the amount of these aids is small, they give women the chance to divorce in cases of unwanted marriages and quit unsuitable jobs. In addition, a lump-sum payment mechanism, such as dowry assistance, was introduced in order not to force women to work or direct them to unmarried partnerships in order not to break their gender roles

in society (Kılıç, 2008). In addition, within the male-dominated social security concept, survivor's pensions given to sons are the benefits they obtain within the age limits except for disability or during their education life, due to the assumption that men must work.

According to Time Use Statistics (2015), issued by TURKSTAT, the time allocated to housework and family care by women in Turkey is too much than men's. Even if women work, houseworks and care duties are on their shoulders in families. Working women spend almost 5 times more time than men working in household and family care in Turkey.

In the special commission report named "Sustainability of the Social Security System" prepared in 2014 within the scope of the 10th development plan preparation studies; unregistered work is considered as the main reason for the failure to provide the desired premium collection in social security. For this purpose, it was stated that regulations should be made within the scope of social assistance and social security to increase registered employment. In terms of social insurances, cutting the survivor's pension completely if the orphan person receiving start to work, and partially cutting the survivor's pension in the case of the widow(er)'s work are seen as regulations that lead individuals to work informally. In the same report; by setting the poverty line in a standard way, it has been committed to ensure that households with an income below this limit will receive social assistance even if a person works under social security coverage.

As a matter of fact, as a result of this thesis, it was seen that survivor's pension is the only source of income for statistically significant amount of women. Furthermore survivor's pension is low, and those women live in relatively low-income households. In most cases, the amount of pensions is not enough to provide for the livelihood of women, and they are excluded from registered work or employment in order not to lose their only income source. The pensions provided by social insurance to protect widow or orphan women from financial risk appear to be another factor that paves the way for women to be excluded from formal employment or exploited into unregistered employment.

For all these reasons, there is a need for welfare state practices that will encourage women to participate in formal employment and at the same time facilitate their entry into the labor market. Moreover, survivor's pensions, which are a kind of social aid, should not be an obstacle in entering registered employment, and the regulations to be made should reward the work and employment of those who receive this pension.

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## APPENDIX A- QUESTIONNAIRES OF INCOME AND LIVING CONDITIONS SURVEY, 2017

### 1. Structure of the data set, Household, 2017 (Cross-sectional data)

(SILC17\_H)

*The scope of the household data: Comprises the information of the households responded to the questionnaire.*

Name of the variable	Explanation	Length	Labels
HH_ID	Household ID	5	1..24448
HB010	Year of the survey	4	2017
HB030	Statistical Regions, Level 1	3	<u>Code-Name of the region</u> TR1- Istanbul TR2- Batı Marmara TR3- Ege TR4- Doğu Marmara TR5- Batı Anadolu TR6- Akdeniz TR7- Orta Anadolu TR8- Batı Karadeniz TR9- Doğu Karadeniz TRA- Kuzey Doğu Anadolu TRB- Orta Doğu Anadolu TRC- Güney Doğu Anadolu
HB031	Statistical Regions, Level 2	3	<u>Code-Name of the region</u> TR10- Istanbul TR21- Tekirdağ, Edirne, Kırklareli TR22- Balıkesir, Çanakkale TR31- İzmir TR32- Aydın, Denizli, Muğla TR33- Manisa, Afyon, Kütahya, Uşak TR41- Bursa, Eskişehir, Bilecik TR42- Kocaeli, Sakarya, Düzce, Bolu, Yalova TR51- Ankara TR52- Konya, Karaman TR61- Antalya, Isparta, Burdur TR62- Adana, Mersin TR63- Hatay, Kahramanmaraş, Osmaniye TR71- Kırkkale, Aksaray, Niğde, Nevşehir, Kırşehir TR72- Kayseri, Sivas, Yozgat TR81- Zonguldak, Karabük, Bartın TR82- Kastamonu, Çankırı, Sinop TR83- Samsun, Tokat, Çorum, Amasya TR90- Trabzon, Ordu, Giresun, Rize, Artvin, Gümüşhane TRA1- Erzurum, Erzincan, Bayburt TRA2- Ağrı, Kars, Iğdır, Ardahan TRB1- Malatya, Elazığ, Bingöl, Tunceli TRB2- Van, Muş, Bitlis, Hakkâri TRC1- Gaziantep, Adıyaman, Kilis TRC2- Şanlıurfa, Diyarbakır TRC3- Mardin, Batman, Şırnak, Siirt

1. Structure of the data set, Household, 2017 (Cross-sectional data)

(SILC17\_H)

*The scope of the household data: Comprises the information of the households responded to the questionnaire.*

Name of the variable	Explanation	Length	Labels
HB040	Household weight	4,7	Format 4,7
HB050	Household type  *: The codes "1", "2", "3" and "4" will be constructed by using the variables FK070 (age) and FK090 (gender).  **: The code "14" is the sum of the codes "0", "7" and "8".  ***: The code "15" is the sum of the codes "9", "10", "11", "12" and "13".	2	5-Single Person 1- Below 64 years* 2- 65 years and above* 3- Male* 4- Female* 14-Households without dependent children (6+7+8)** 6- 2 adults, no dependent children, both adults below 65 years 7- 2 adults, no dependent children, at least one adult 65 years or more 8- Other households without dependent children 15-Households with dependent children (9+10+11+12+13)*** 9- Single person with dependent children 10- Two adults with one dependent child 11- Two adults with two dependent children 12- Two adults with three or more dependent children 13- Other households with dependent children 16- Others (not possible to determine type)
<b>Dwelling and Housing Conditions</b>			
HH010	Dwelling type	1	1- Detached house 2- Semi-detached or terraced house 3- Apartment (less than 10 flats) 4- Apartment (10 or more flats) 5- Other
HH020	Tenure status	1	1- Owner 2- Tenant 3- Lodging 4- Not owner but accommodation is provided free
HH030	Year of purchasing or possessing of the house	4	1900...2017
HH040	Monthly rental amount paid for the dwelling (TRY) (Dues, fuel expenses and janitor expenses are not included in the rental value.) (where HH020 is "2" or "3" )	6	0.999999
HH050	Average value of monthly expenses (TRY) (Utility bills, fuel expenses, housing services, regular repair and maintenance costs, tax for the dwelling etc.)	6	0.999999
HH060	Number of rooms available to the household (kitchen, bathroom and toilet are excluded)	2	1- 1 2- 2 3- 3 4- 4 5- 5 6- 6 7- 7 8- 8 9- 9 10- 10 or more

1. Structure of the data set, Household, 2017 (Cross-sectional data)

(SILC17\_H)

*The scope of the household data: Comprises the information of the households responded to the questionnaire.*

Name of the variable	Explanation	Length	Labels
HH070	Size of dwelling in squaremeters (m <sup>2</sup> )	3	25...999
HH080	Heating system available in the dwelling	1	1- Stove (Coal, gas, natural gas, electricity, etc.) 2- Radiator (Joint or central heating) 3- Radiator (Heating system for only a flat/combi boiler) 4- Air conditioner 5- Other 6- No heating system
HH090	Type of the fuel mostly used in the dwelling for heating (Households having heating system [HH080="1", "2", "3", "4", "5"])	1	1- Wood 2- Coal 3- Natural gas 4- Fuel-Oil 5- Diesel oil-gasoil 6- Electricity 7- Dried cow dung 8- Other
HH100	BATH or SHOWER in the dwelling	1	1- Yes (For sole use of the household) 2- Yes (Shared) 3- No
HH110	INDOOR FLUSHING TOILET in the dwelling	1	1- Yes (For sole use of the household) 2- Yes (Shared) 3- No
HH120	KITCHEN in the dwelling	1	1- Yes 2- No
HH130	PIPED WATER SYSTEM in the dwelling	1	1- Yes 2- No
HH140	HOT WATER SYSTEM in the dwelling (Central hot water, geysier, water heater, solar energy system etc. )	1	1- Yes 2- No
HH150	TELEPHONE LINE possession of the household	1	1- Yes 2- No, cannot afford 3- No, other reason
HH160	MOBILE PHONE possession of the household	1	1- Yes 2- No, cannot afford 3- No, other reason
HH170	COLOUR TV possession of the household	1	1- Yes 2- No, cannot afford 3- No, other reason
HH180	COMPUTER possession of the household	1	1- Yes 2- No, cannot afford 3- No, other reason
HH190	INTERNET connection possession of the household (HH180 = "1" )	1	1- Yes 2- No, cannot afford 3- No, other reason
HH200	WASHING MACHINE possession of the household	1	1- Yes 2- No, cannot afford 3- No, other reason
HH210	REFRIGERATOR possession of the household	1	1- Yes 2- No, cannot afford 3- No, other reason



1. Structure of the data set, Household, 2017 (Cross-sectional data)

(SILC17\_H)

The scope of the household data: Comprises the information of the households responded to the questionnaire.

Name of the variable	Explanation	Length	Labels
HH220	DISHWASHER possession of the household	1	1- Yes 2- No, cannot afford 3- No, other reason
HH230	AIR CONDITIONER possession of the household	1	1- Yes 2- No, cannot afford 3- No, other reason
HH240	CAR (for private use only) possession of the household	1	1- Yes 2- No, cannot afford 3- No, other reason
<b>Problems with Dwelling or Environment</b>			
HS010	Leaking roof, damp walls or rot in window frames problems	1	1- Yes 2- No
HS020	Heating problems because of insulation	1	1- Yes 2- No
HS030	Problems such as darkness of rooms or lack of day-light	1	1- Yes 2- No
HS040	Noise from neighbours or from street	1	1- Yes 2- No
HS050	Shortage of space in the dwelling	1	1- Yes 2- No
HS060	Pollution, grime or other environmental problems	1	1- Yes 2- No
HS070	Crime, violence or vandalism in the area	1	1- Yes 2- No
<b>Financial Situation</b>			
HE010	Arrears on MORTGAGE, LOAN REPAYMENTS or RENT PAYMENTS in the last 12 months	1	1- Yes (Once) 2- Yes (Twice or more) 3- No 4- There is no such kind of payment
HE020	Arrears on UTILITY BILLS in the last 12 months (Paying through borrowing is considered as paid through own sources )	1	1- Yes (Once) 2- Yes (Twice or more) 3- No 4- There is no such kind of payment
HE030	Arrears on HIRE PURCHASE INSTALMENTS, CREDIT CARDS or OTHER LOAN PAYMENTS in the last 12 months	1	1- Yes (Once) 2- Yes (Twice or more) 3- No 4- There is no such kind of payment
HE040	Ability to MAKE ENDS MEET with total household income	1	1- With a great difficulty 2- With difficulty 3- With some difficulty 4- Fairly easily 5- Easily 6- Very easily
HE050	Lowest monthly income of household to make ends meet	7	1..999999
HE060	Financial burden of the total housing cost (Repayment of an interest for a loan or credit on dwelling for owner occupiers or rent paid for tenants , utility bills, heating expenses, penalties for utility bills, collective expenses of apartment and regular repair and maintenance costs are all covered.)	1	1- A heavy burden 2- A slight burden 3- Not burden at all

1. Structure of the data set, Household, 2017 (Cross-sectional data)

(SILC17\_H)

The scope of the household data: Comprises the information of the households responded to the questionnaire.

Name of the variable	Explanation	Length	Labels
HE070	Financial burden of the repayment of debts from hire purchases or loans excluding housing costs	1	1- A heavy burden 2- A slight burden 3- Not burden at all 4- There is no such kind of repayment
HE080	Can your household afford paying for a week's annual (seven days) holiday away from home for all household members together or separately? (Holiday villages, hotel, guest houses, summer house, timeshare/relative house, governmental camps are included.)	1	1- Yes 2- No
HE090	Can your household afford to cost of meal with meat, chicken or fish every second day? (Vegetarian equivalent)	1	1- Yes 2- No
HE100	Can your household afford an unexpected required expense (approximately 625 Turkish Lira) and pay through its own resources? ("Yes" for the expenditures by borrowing money)	1	1- Yes 2- No
HE110	Can your household afford to keep its home adequately warm?	1	1- Yes 2- No
<b>Material Deprivation</b>			
HE120	Do you renew your worn-out or old furniture (bed, couch, dresser, closet) ? (Second-hand furniture can be taken into account) (* Not in need of, not want to have and other reasons)	1	1- Yes 2- No- Financial difficulty 3- No- Other reasons*
<b>Income</b>			
HG010	Annual rental value of the dwelling according to current market prices (Tenure status is "owner" or "other" (i.e. HG020 = "1" or "4")	9.2	0..999999.99
HG020	Income received by household members aged under 15 during 2016 (TRY)	9.2	0..999999.99
HG030N	Children related allowances in cash received during 2016 (TRY)	9.2	0..999999.99
HG030A	Value of children related allowances in kind received during 2016 (TRY)	9.2	0..999999.99
HG040	Housing allowances received during 2016 (TRY)	9.2	0..999999.99
HG050N	Other social allowances in cash received in 2016 (TRY)	9.2	0..999999.99
HG050A	Value of other social allowances in kind received in 2016 (TRY)	9.2	0..999999.99
HG060N	Regular allowances in cash received from other households or persons in 2016 (TRY)	9.2	0..999999.99
HG060A	Value of regular allowances in kind received from other households or persons in 2016 (Excluding alimony) (TRY)	9.2	0..999999.99
HG065N	Alimonies received in 2016 (TRY)	9.2	0..999999.99
HG070	Income received from rental of assets or lands in 2016 (TRY)	9.2	0..999999.99
HG080	Property income received in 2016 (TRY)	9.2	0..999999.99

1. Structure of the data set, Household, 2017 (Cross-sectional data)

(SILC17\_H)

The scope of the household data: Comprises the information of the households responded to the questionnaire.

Name of the variable	Explanation	Length	Labels
HG085	Market value of animal or vegetable products not regarded as an agricultural activity, produced just for own consumption of household in 2016 (TRY)	9.2	0..999999.99
HG090N	Regular allowances in cash paid to other households or persons in 2016 (Excluding alimony) (TRY)	9.2	0..999999.99
HG090A	Value of regular allowances in kind paid to other households or persons in 2016 (TRY)	9.2	0..999999.99
HG095N	Alimonies paid in 2016 (TRY)	9.2	0..999999.99
HG100	Regular taxes paid in 2016 (including tax for the dwelling, motor vehicles tax and regularly paid wealth tax) (TRY) (Excluding income tax)	9.2	0..999999.99
HG103	Social insurance contributions paid in 2016 (TRY)	9.2	0..999999.99
HG105	Imputed annual income for individuals not responded to the questionnaire	9.2	-999999..999999
HG110	Total disposable household income (FG010 + FG020 + FG030 + FG040 + FG070 + FG080 + FG085 + FG090 + FG100 + FG110 + FG120 + HG010 + HG020 + HG030N + HG030A + HG040 + HG050N + HG050A + HG060N + HG060A + HG065N + HG070 + HG080 + HG085 + HG105 - HG090N - HG090A - HG095N - HG100 - HG103)	9.2	0..999999.99

## 2. Structure of the data set, Personal Register, 2017 (Cross-sectional data)

(SILC17\_PR)

*The scope of the personal register data: Comprises the basic information of all member of the household*

Name of the variable	Explanation	Length	Labels
HH_ID	Household ID	5	1...24498
PERS_ID	Personal ID (Household ID + Personal number/line number)	7	
FK010	Year of the survey	4	2017
FK050	Personal weight	4.7	Format 4.7
FK070	Age (as of 2016, December)	2	-1..114
FK080	Year of birth	4	1900...2017
FK090	Gender	1	1- Male 2- Female
FK095	Household respondent	2	1- Household respondent 2- Spouse 3- Son/Daughter 4- Father/Mother 5- Sibling 6- Father-in-law/Mother-in-law 7- Son-in-law/Daughter-in-law 8- Grandson/Granddaughter 9- Other Relatives 10- Non-kins/ Not relatives
FK210	Self-defined current activity status	1	1- At work 2- Looking for a job 3- In retirement/Early retirement or has given up business 4- Other inactive person
FK220	Father ID (if his/her father is a household member)	7	Personal ID (PERS_ID) of the person who is his/her father
FK230	Mother ID (if his/her mother is a household member)	7	Personal ID (PERS_ID) of the person who is his/her mother
FK240	Spouse ID (if his/her spouse is a household member)	7	Personal ID (PERS_ID) of the person who is his/her spouse

## 3. Structure of the data set, Personal, 2017 (Cross-sectional data)

(Persons aged 15 and above)

(SILC17\_P)

*The scope of the household data: Comprises the basic, education, labour, health and income information of the household members aged 15 and above.*

Name of the variable	Explanation	Length	Labels
HH_ID	Household ID	5	1...24498
PERS_ID	Personal ID (Household ID + Personal number/line number)	7	
FB010	Year of the survey	4	2017
FB030	Personal weight	4	Format 4.7
FB100	Marital status	1	1- Married 2- Never married 3- Widowed 4- Divorced
FB110	Legal marriage status [FB100="1", "5"]	1	1- Yes 2- No
<b>Education</b>			
FE010	Current education activity	1	1- Yes 2- No
FE020	Education level currently attended [FE010="1"]	1	1- Primary school 2- Secondary and vocational secondary school 3- High school 4- Vocational or technical high school 5- 2 or 3 year higher education 6- Faculty 7- Master 8- Doctorate
FE030	Highest education level attained (Highest level successfully completed with a diploma or certificate)	1	0- Illiterate 1- Literate but not a graduate 2- Primary school 3- Primary education 4- Secondary and vocational secondary school 5- High school 6- Vocational or technical high school 7- 2 or 3 year higher education 8- Faculty 9- Master 10- Doctorate
FE040	Year when highest level of education attained [FE030="2", "3", "4", "5", "6", "7", "8", "9", "10"]	4	1900..2017
<b>Health</b>			
FS010	General health status	1	1- Very good 2- Good 3- Fair 4- Bad 5- Very bad
FS020	Suffer from any a chronic (long-standing) illness or condition (Diabetes, hypertension, asthma, renal failure, rheumatic diseases, etc.)	1	1- Yes 2- No
FS030	Limitation in daily activities because of any physical or psychological health problems ongoing for at least 6 months	1	1- Yes, strongly limited 2- Yes, limited 3- No, not limited

### 3. Structure of the data set, Personal, 2017 (Cross-sectional data)

(Persons aged 15 and above)

(SILC17\_P)

The scope of the household data: Comprises the basic, education, labour, health and income information of the household members aged 15 and above.

Name of the variable	Explanation	Length	Labels
F0050	Unmet need for medical examination or treatment during the last 12 months	1	1- Yes, at least one occasion 2- No, not at all 3- No, not needed
F0060	Main reason for unmet need for medical examination or treatment [F0060="1"]	1	1- Financial difficulty / Could not afford to (too expensive or not covered by insurance fund) 2- Could not take time because of work, care for children or for others 3- Too far to travel to healthcare organization/no means of transportation 4- Fear of surgical operation / treatment 5- Giving too late time for appointment 6- Wanted to wait and see if problem got better on its own 7- Didn't know any good doctor or specialist 8- Other
F0070	Unmet need for dental examination or treatment during the last 12 months	1	1- Yes, at least one occasion 2- No, not at all 3- No, not needed
F0080	Main reason for unmet need for dental examination or treatment [F0070="1"]	1	1- Financial difficulty / Could not afford to (too expensive or not covered by insurance fund) 2- Could not take time because of work, care for children or for others 3- Too far to travel to healthcare organization/no means of transportation 4- Fear of surgical operation / treatment 5- Giving too late time for appointment 6- Wanted to wait and see if problem got better on its own 7- Didn't know any good doctor or specialist 8- Other
<b>Material Deprivation</b>			
FY020	Can you replace worn-out clothes by some new (not second-hand) ones?	1	1- Yes 2- No - cannot afford it 3- No - other reason
FY030	Do you have two pairs of shoes in a good condition that are suitable for daily activities?	1	1- Yes 2- No - cannot afford it 3- No - other reason
FY050	Get-together with friends/family (relatives) for a drink/meal at least once a month	1	1- Yes 2- No - cannot afford it 3- No - other reason
FY060	Do you regularly participate in a leisure activity (that costs money) such as sports, cinema, concerts?	1	1- Yes 2- No - cannot afford it 3- No - other reason
FY070	Do you spend a small amount of money most weeks on yourself, for your own pleasure (buying/doing something for yourself)?	1	1- Yes 2- No - cannot afford it 3- No - other reason
FY080	Internet connection for personal use at home (The internet access can be via smartphone (e.g. BlackBerry/Phone), other wireless handheld device (tablet, etc. ...), video games console, laptop, desktop computer, TV etc.)	1	1- Yes 2- No - cannot afford it 3- No - other reason
<b>Labour</b>			
FD10	Self-defined current economic status  (*) Unpaid family workers are included	1	1- Employee (working full-time) 2- Employee (working part-time) 3- Self-employed (*) (working full-time) 4- Self-employed (*) (working part-time) 5- Looking for a job 6- Pupil, student or unpaid work experience 7- In retirement or in early retirement or has given up business 8- Old, permanently disabled and/or unfit to work 9- Fulfilling domestic tasks and care responsibilities 10- Other inactive person

### 3. Structure of the data set, Personal, 2017 (Cross-sectional data)

(Persons aged 15 and above)

(SILC17\_P)

The scope of the household data: Comprises the basic, education, labour, health and income information of the household members aged 15 and above.

Name of the variable	Explanation	Length	Labels
F020	Worked at least 1 hour in order to receive income in kind or in cash or had a job/business but was not working during the previous week (as an employee, employer, self-employed or unpaid family worker)	1	1- Yes 2- No
F030	Has ever worked in a job or business to receive income in cash or in kind (for the ones who are not currently working) [F010>"4" and F020="2"]	1	1- Yes 2- No
F040	Actively looking for a job in last 4 weeks [F010>"2" and F020 = "2"]	1	1- Yes 2- No
F050	Available for work (able to start working) within 2 weeks in case of a job opportunity [F010>"4" and F020="2"]	1	1- Yes 2- No
F060	Last method used for looking for a job in last 4 weeks [F010>"4" and F020="2" and F040="1"]	2	1- Turkish Employment Office or private employment agencies 2- Apply to employer directly 3- Ask friends, relatives or other contacts 4- Apply for job advertisements in newspapers, journals or Internet 5- Attempt to set up own business 6- Took a recruitment test or examination or attend an interview 7- Awaited the results of the job applications 8- Admitted to the labor brokers 9- Did nothing 10- Other
<b>Last Job</b>			
F070	Employment status in the last job (Actually working members of corporations or co-operatives are considered as "employee") [F010>"4" and F020="2" and F030="1"]	1	1- Regular employee 2- Casual employee 3- Employer 4- Self-employed 5- Unpaid family worker
F080	Occupation code of the last job (ISCO-08) [F010>"4" and F020 = "2" and F030 = "1"]	1	1- Managers 2- Professionals 3- Technicians and associate professionals 4- Clerical support workers 5- Service and sales workers 6- Skilled agricultural, forestry and fishery workers 7- Craft and related trades workers 8- Plant and machine operators, and assemblers 9- Elementary occupations
F090	Year when the last job was left [F010>"4" and F020="2" and F030="1"]	4	1900...2017
F100	Number of months spent at last work in 2016 [F010>"2" and F020="2" and F030="1" and F090>=2016]	2	0...12



### 3. Structure of the data set, Personal, 2017 (Cross-sectional data)

(Persons aged 15 and above)

(SILC17\_P)

The scope of the household data: Comprises the basic, education, labour, health and income information of the household members aged 15 and above.

Name of the variable	Explanation	Length	Labels
F1110	Net annual income in cash or in kind received from last job in 2016 (TRY) [F1010="4" and F1020="2" and F1030="1" and F1100="0"]	6	-999999...999999
<b>Main Job</b>			
F1120	Employment status in the main job (Actually working members of corporations or co-operatives are considered as 'employee') F1020="17"	1	1- Regular employee 2- Casual employee 3- Employer 4- Self-employed 5- Unpaid family worker
F1130	Occupation code of the main job (ISCO-08) [F1010="6" or F1020="17"]	1	1- Managers 2- Professionals 3- Technicians and associate professionals 4- Clerical support workers 5- Service and sales workers 6- Skilled agricultural and fishery workers 7- Crafts and related trades workers 8- Plant and machine operators and assemblers 9- Elementary occupations
F1140	The economic activity code of the local unit of the main job (NACE REV 2) [F1010="6" or F1020="17"]	2	01- Agriculture, forestry, hunting and fishing 02- Mining and quarrying 03- Manufacturing 04- Electricity, gas, steam, water supply, sewerage etc. 05- Construction 06- Wholesale and retail trade 07- Transportation and storage 08- Accommodation and food service activities 09- Information and communication 10- Financial and insurance activities 11- Real estate activities 12- Professional, scientific and technical activities 13- Administrative and support service activities 14- Public administration and defence 15- Education 16- Human health and social work activities 17- Arts, entertainment and recreation 18- Other social, community and personal service activities
F1150	Total number of hours usually worked in main job (the regularly paid extra working hours of employees are included.)	2	1..99
F1160	Total number of hours usually worked in additional job jobs [F1010="6" or F1020="17" and the ones who have additional job jobs]	2	1..99
F1170	Reason for working less than 30 hours [F1160=F1160>30]	1	1- Housework, looking after children or other persons 2- Undergoing education or training 3- Personal illness or disability 4- Other family and personal reasons 5- Cannot find a fulltime job or work 6- The nature of the business 7- Do not want to work more hours 8- Number of hours are considered as a full-time job 9- Other

### 3. Structure of the data set, Personal, 2017 (Cross-sectional data)

(Persons aged 15 and above)

(SILC17\_P)

The scope of the household data: Comprises the basic, education, labour, health and income information of the household members aged 15 and above.

Name of the variable	Explanation	Length	Labels
F1180	Number of persons working at the local unit [F1010<="5" or F1020 =*1']	1	1- 10 persons and less 2- Between 11 and 19 persons 3- Between 20 and 49 persons 4- 50 persons and more 5- Do not know but less than 11 persons 6- Do not know but more than 10 persons
F1190	Registration status to social security institutions in the main job [F1010<="5" or F1020=*1']	1	1- Registered 2- Not registered
F1210	Type of contract of employees in the main job [F1010<="5" or F1020=*1' and (F1120=*1' or F1120=*2')]	1	1- Permanent job/work contract of unlimited duration 2- Temporary job/work contract of limited duration 3- Work occasionally without contract 4- Temporary work held by students, pupils, etc. in the vacation time
F1220	Managerial position of employee in the main job [F1010<="5" or F1020=*1' and (F1120=*1' or F1120=*2')]	1	1- Yes 2- No
F1240	Number of months spent in the main job in 2016 [F1010<="5" or F1020=*1' and the ones who started to work before '2016']	2	1..12
F1250	Net annual income in cash or in kind received from main job in 2016 (TRY) [F1010<="5" or F1020=*1' and the ones who started to work before '2016']	6	-999999..999999
<b>Working History</b>			
F1260	Number of months spent at full-time work in 2016	2	0..12
F1270	Number of months spent at part-time work in 2016	2	0..12
F1280	Number of months spent in unemployment in 2016	2	0..12
F1290	Number of months spent in retirement or early retirement in 2016	2	0..12
F1300	Number of months spent studying in 2016	2	0..12
F1310	Number of months spent in other inactivity (such as domestic tasks, care responsibilities, old/disabled/unfit to work, compulsory military service etc.)	2	0..12
F1320	When began first regular job (AGE) (Temporary part-time works held by students are excluded, unpaid family workers are included.) [F1010<="5" or F1020=*1' or F1030=*1'] and F1210<="4']	2	8..99
F1330	Number of years spent in paid work (YEAR) [F1010<="5" or F1020=*1' or F1030=*1'] and F1210<="4']	2	0..99
<b>2016 Personal Income</b>			
FG010	Total ANNUAL net employee cash or near cash income received in 2016 (TRY)	9.2	0..999999
FG020	Total ANNUAL net employee cash or near cash income received in 2016 (TRY)	9.2	0..999999
FG030	Total ANNUAL net self-employment income in cash received in 2016 (TRY)	9.2	-999999..999999

**3. Structure of the data set, Personal, 2017 (Cross-sectional data)**  
**(Persons aged 15 and above)**  
**(SILC17\_P)**

*The scope of the household data: Comprises the basic, education, labour, health and income information of the household members aged 15 and above.*

Name of the variable	Explanation	Length	Labels
FG040	Total ANNUAL net self-employment income in kind received in 2016 (TRY)	9.2	0..999999
FG070	Unemployment benefits received in 2016 (TRY) (Including severances)	9.2	0..999999
FG080	Old-age benefits received in 2016 (TRY)	9.2	0..999999
FG085	Retirement grants received in 2016 (TRY)	9.2	0..999999
FG090	Survivors' benefits received in 2016 (TRY) (Including death grants)	9.2	0..999999
FG100	Sickness benefits received in 2016 (TRY)	9.2	0..999999
FG110	Disability benefits (including ghazi and honor pensions) received in 2016 (TRY)	9.2	0..999999
FG120	Education-related allowances received in 2016 (TRY)	9.2	0..999999
FG130	Voluntary retirement premiums paid in 2016 (TRY)	9.2	0..999999
FG140	Total value of the incomes received in 2016 (TRY) (FG010 + FG020 + FG030 + FG040 + FG070 + FG080 + FG085 + FG090 + FG100 + FG110 + FG120)	9.2	-999999..999999

**APPENDIX B- STEPS OF LOGISTIC REGRESSION ANALYSIS OF FIRST MODEL**

Case Processing Summary			
Unweighted Cases <sup>a</sup>		N	Percent
Selected Cases	Included in Analysis	8376	100,0
	Missing Cases	0	0,0
	Total	8376	100,0
Unselected Cases		0	0,0
Total		8376	100,0

a. If weight is in effect, see classification table for the total number of cases.

Dependent Variable Encoding	
Original Value	Internal Value
Not Working	0
Working	1



Categorical Variables Codings						
		Frequency	Parameter coding			
			(1)	(2)	(3)	(4)
Region	West	2859	1,000	0,000	0,000	0,000
	Central	1252	0,000	1,000	0,000	0,000
	South	988	0,000	0,000	1,000	0,000
	North	944	0,000	0,000	0,000	1,000
	East	2333	0,000	0,000	0,000	0,000
Education status	Illiterate / Literate but not a graduate	1172	0,000	0,000	0,000	0,000
	Primary school	1154	1,000	0,000	0,000	0,000
	Primary education	2919	0,000	1,000	0,000	0,000
	High school	1697	0,000	0,000	1,000	0,000
	2 or 3 year higher education and above	1434	0,000	0,000	0,000	1,000
	Age	15-19	3008	0,000	0,000	0,000
20-24		1501	1,000	0,000	0,000	
25-49		2456	0,000	1,000	0,000	
50-64		1411	0,000	0,000	1,000	
Household Income (TRY)	0-25000	2415	0,000	0,000		
	25001-50000	3573	1,000	0,000		
	50001 ve üstü	2388	0,000	1,000		
Household Ownership	Owner	5237	0,000	0,000		
	Tenant / Lodging	2021	1,000	0,000		
	Not owner but accommodation is provided free	1118	0,000	1,000		

Classification Table <sup>a,b</sup>					
		Predicted			Percentage Correct
		employment_status			
Observed		Not Working	Working		
Step 0	Not employment_status	6140	0	100,0	
	Working	2236	0	0,0	
	Overall Percentage			73,3	

a. Constant is included in the model.

b. The cut value is ,500

Variables in the Equation							
		B	S.E.	Wald	df	Sig.	Exp(B)
Step 0	Constant	-1,010	,025	1672,489	1	0,000	,364

Variables not in the Equation					
		Score	df	Sig.	
Step 0	Variables	education_status	1211,408	4	,000
		education_status(1)	4,642	1	,031
		education_status(2)	430,442	1	,000
		education_status(3)	12,695	1	,000
		education_status(4)	1033,150	1	,000
		survivor's_pension	94,524	1	,000
		age	1264,334	3	,000
		age(1)	88,782	1	,000
		age(2)	862,774	1	,000
		age(3)	83,752	1	,000
		household_ownership	61,218	2	,000
		household_ownership(1)	58,498	1	,000
		household_ownership(2)	10,898	1	,001
		household_income	392,666	2	,000
		household_income(1)	6,443	1	,011
		household_income(2)	319,126	1	,000
		children_under_5	,056	1	,812
		region	182,501	4	,000
		region(1)	119,422	1	,000
		region(2)	3,301	1	,069
		region(3)	3,592	1	,058
		region(4)	10,760	1	,001
		Overall Statistics	1994,037	17	0,000

Omnibus Tests of Model Coefficients				
		Chi-square	df	Sig.
Step 1	Step	2070,800	17	0,000
	Block	2070,800	17	0,000
	Model	2070,800	17	0,000

Model Summary			
Step	-2 Log likelihood	Cox & Snell R Square	Nagelkerke R Square
1	7648,791 <sup>a</sup>	,219	,319

a. Estimation terminated at iteration number 5 because parameter estimates changed by less than ,001.

Hosmer and Lemeshow Test			
Step	Chi-square	df	Sig.
1	31,401	8	,000

Contingency Table for Hosmer and Lemeshow Test						
		employment_status = Not Working		employment_status = Working		Total
		Observed	Expected	Observed	Expected	
Step 1	1	883	897,019	54	39,981	937
	2	747	766,044	72	52,956	819
	3	756	762,133	80	73,867	836
	4	758	750,062	91	98,938	849
	5	735	720,609	122	136,391	857
	6	651	647,823	190	193,177	841
	7	604	566,416	237	274,584	841
	8	481	474,474	357	363,526	838
	9	366	363,040	472	474,960	838
	10	159	192,380	561	527,620	720

Classification Table <sup>a</sup>					
			Predicted		
			employment_status		Percentage Correct
Observed		Not Working	Working		
Step 1	Employment status	Not Working	5654	486	92,1
		Working	1231	1005	44,9
	Overall Percentage				79,5

a. The cut value is ,500

**APPENDIX C- STEPS OF LOGISTIC REGRESSION ANALYSIS OF SECOND MODEL**

<b>Case Processing Summary</b>			
Unweighted Cases <sup>a</sup>		N	Percent
Selected Cases	Included in Analysis	2236	100,0
	Missing Cases	0	0,0
	Total	2236	100,0
Unselected Cases		0	0,0
Total		2236	100,0

a. If weight is in effect, see classification table for the total number of cases.

<b>Dependent Variable Encoding</b>	
Original Value	Internal Value
Working without Social Security	0
Working with Social Security	1

<b>Categorical Variables Codings</b>						
		Frequency	Parameter coding			
			(1)	(2)	(3)	(4)
Region	West	973	1,000	0,000	0,000	0,000
	Central	308	0,000	1,000	0,000	0,000
	South	239	0,000	0,000	1,000	0,000
	North	294	0,000	0,000	0,000	1,000
	East	422	0,000	0,000	0,000	0,000
Education status	Illiterate / Literate but not a graduate	195	0,000	0,000	0,000	0,000
	Primary school	278	1,000	0,000	0,000	0,000
	Primary education	379	0,000	1,000	0,000	0,000
	High school	511	0,000	0,000	1,000	0,000
	2 or 3 year higher education and above	873	0,000	0,000	0,000	1,000
Age	15-19	254	0,000	0,000	0,000	
	20-24	547	1,000	0,000	0,000	
	25-49	1197	0,000	1,000	0,000	

Household Income (TRY)	50-64	238	0,000	0,000	1,000	
	0-25000	369	0,000	0,000		
	25001-50000	903	1,000	0,000		
	50001 ve üstü	964	0,000	1,000		
Household Ownership	Owner	1311	0,000	0,000		
	Tenant / Lodging	672	1,000	0,000		
	Not owner but accommodation is provided free	253	0,000	1,000		

Classification Table <sup>a,b</sup>				
Observed		Predicted		
		EMPLOYMENT STATUS		Percentage Correct
		Working without Social Security	Working with Social Security	
Step 0	Working without Social Security	0	684	0,0
	Working with Social Security	0	1552	100,0
	Overall Percentage			69,4

a. Constant is included in the model.  
b. The cut value is ,500

Variables in the Equation							
		B	S.E.	Wald	df	Sig.	Exp(B)
Step 0	Constant	,819	,046	318,718	1	,000	2,269

Variables not in the Equation					
			Score	df	Sig.
Step 0	Variables	education_status	728,205	4	,000
		education_status(1)	174,454	1	,000
		education_status(2)	59,506	1	,000
		education_status(3)	21,393	1	,000
		education_status(4)	420,808	1	,000
		survivor's pension	305,549	1	,000
		age	301,548	3	,000
		age(1)	24,466	1	,000
		age(2)	97,247	1	,000
		age(3)	188,239	1	,000
		household_ownership	34,085	2	,000
		household_ownership(1)	33,206	1	,000
		household_ownership(2)	5,112	1	,024
		household_income	316,620	2	,000
		household_income(1)	28,195	1	,000
		household_income(2)	244,972	1	,000
		children_under_5	1,094	1	,296
		region	121,720	4	,000
		region(1)	54,357	1	,000
		region(2)	19,569	1	,000
		region(3)	1,743	1	,187
		region(4)	46,231	1	,000
		Overall Statistics	967,533	17	,000

Omnibus Tests of Model Coefficients				
		Chi-square	df	Sig.
Step 1	Step	1103,911	17	,000
	Block	1103,911	17	,000
	Model	1103,911	17	,000

Model Summary			
Step	-2 Log likelihood	Cox & Snell R Square	Nagelkerke R Square
1	1649,873 <sup>a</sup>	,390	,550

a. Estimation terminated at iteration number 6 because parameter estimates changed by less than ,001.

Hosmer and Lemeshow Test			
Step	Chi-square	df	Sig.
1	6,363	8	,607

Contingency Table for Hosmer and Lemeshow Test						
		EMPLOYMENT STATUS = Working without Social Security		EMPLOYMENT STATUS = Working with Social Security		Total
		Observed	Expected	Observed	Expected	
Step 1	1	206	207,501	17	15,499	223
	2	171	166,763	55	59,237	226
	3	113	118,700	112	106,300	225
	4	82	78,192	141	144,808	223
	5	49	46,700	174	176,300	223
	6	27	29,107	196	193,893	223
	7	12	17,543	217	211,457	229
	8	15	10,236	208	212,764	223
	9	6	5,219	181	181,781	187
	10	3	4,039	251	249,961	254

Classification Table <sup>a</sup>				
Observed		Predicted		
		EMPLOYMENT STATUS		Percentage Correct
		Working without Social Security	Working with Social Security	
Step 1	Working without Social Security	460	224	67,3
	Working with Social Security	134	1418	91,4
	Overall Percentage			84,0

a. The cut value is ,500

**APPENDIX D- RESULTS OF ANALYSIS IN WHICH THE DEPENDENT VARIABLE HAS 3 LEVELS WITH PERSONAL INCOME**

Parameter Estimates											
EMPLOYMENT STATUS <sup>a</sup>		B	Std. Error	Wald	df	Sig.	Exp(B)	95% Confidence Interval for Exp(B)			
								Lower Bound	Upper Bound		
Working with Social Security		Intercept	-1,258	,305	17,042	1	,000				
	Children	Number of children under 5	-,057	,285	,040	1	,842	,945	,541	1,651	
	Education status		Illiterate / Literate but not a graduate	-1,986	,223	78,991	1	,000	,137	,089	,213
			Primary school	-1,068	,180	35,401	1	,000	,344	,242	,489
			Primary education	-1,042	,148	49,670	1	,000	,353	,264	,471
			High school	-,700	,125	31,478	1	,000	,497	,389	,634
			2 or 3 year higher education and above	0 <sup>b</sup>			0				
	Survivor's Pension		Not Receiving	1,280	,208	37,995	1	,000	3,595	2,393	5,401
			Receiving	0 <sup>b</sup>			0				
	Age		15-19	1,925	,232	68,865	1	,000	6,856	4,351	10,803
			20-24	2,820	,206	187,793	1	,000	16,771	11,205	25,102
			25-49	2,681	,184	212,648	1	,000	14,596	10,180	20,928
			50-64	0 <sup>b</sup>			0				
	Household Ownership		Owner	,089	,147	,366	1	,545	1,093	,819	1,458
			Tenant / Lodging	,297	,159	3,486	1	,062	1,346	,985	1,839
			Not owner but accommodation is provided free	0 <sup>b</sup>			0				
	Personal Income Excluding Survivor's Pension (TRY)		0	-5,629	,189	884,120	1	,000	,004	,002	,005
			1-5000	-3,745	,194	370,969	1	,000	,024	,016	,035
			5001-20000	-1,609	,163	97,288	1	,000	,200	,145	,275
			20001 and above	0 <sup>b</sup>			0				
	Region		West	,548	,130	17,894	1	,000	1,730	1,342	2,229
			Central	,386	,161	5,761	1	,016	1,471	1,073	2,017
			South	-,096	,173	,308	1	,579	,908	,647	1,275
			North	,571	,176	10,483	1	,001	1,770	1,253	2,501
			East	0 <sup>b</sup>			0				
	Working		Intercept	-1,629	,299	29,627	1	,000			



without Social Security	Children	Number of children under 5	-,018	,210	,008	1	,930	,982	,651	1,482	
	Education Status	Illiterate / Literate but not a graduate	1,314	,194	45,949	1	,000	3,720	2,545	5,440	
		Primary school	1,367	,196	48,706	1	,000	3,924	2,673	5,760	
		Primary education	,907	,193	22,100	1	,000	2,476	1,697	3,614	
		High school	,529	,189	7,859	1	,005	1,697	1,172	2,456	
		2 or 3 year higher education and above	0 <sup>b</sup>			0					
	Survivor's Pension	Not Receiving	-,296	,122	5,912	1	,015	,744	,586	,944	
		Receiving	0 <sup>b</sup>			0					
	Age	15-19	,074	,179	,171	1	,679	1,077	,758	1,529	
		20-24	,933	,172	29,392	1	,000	2,541	1,814	3,560	
		25-49	,785	,127	38,248	1	,000	2,193	1,710	2,812	
		50-64	0 <sup>b</sup>			0					
	Household Ownership	Owner	,102	,129	,630	1	,427	1,108	,860	1,426	
		Tenant / Lodging	-,018	,150	,015	1	,902	,982	,732	1,316	
		Not owner but accommodation is provided free	0 <sup>b</sup>			0					
	Personal Income Excluding Survivor's Pension (TRY)	0	-2,478	,230	115,579	1	,000	,084	,053	,132	
		1-5000	-,934	,239	15,248	1	,000	,393	,246	,628	
		5001-20000	-,349	,226	2,389	1	,122	,705	,453	1,098	
		20001 and above	0 <sup>b</sup>			0					
	Region	West	-,119	,120	,995	1	,318	,887	,702	1,122	
		Central	-,455	,164	7,663	1	,006	,635	,460	,876	
		South	-,163	,153	1,144	1	,285	,849	,630	1,146	
		North	,724	,136	28,381	1	,000	2,063	1,580	2,693	
		East	0 <sup>b</sup>			0					
	a. The reference category is: Not Working.										
	b. This parameter is set to zero because it is redundant.										

## APPENDIX E- RESULTS OF ANALYSIS IN WHICH THE DEPENDENT VARIABLE HAS 3 LEVELS WITH HOUSEHOLD INCOME

Parameter Estimates							
EMPLOYMENT STATUS <sup>a</sup>	B	Std. Error	Wald	df	Sig.	Exp(B)	95% Confidence

								Interval for Exp(B)		
								Lower Bound	Upper Bound	
Working with Social Security		Intercept	- 2,474	,254	94,732	1	,000			
	Children	Number of children under 5	-,286	,210	1,855	1	,173	,751	,497 1,134	
	Education status	Illiterate / Literate but not a graduate	- 2,552	,197	167,169	1	,000	,078	,053	,115
		Primary school	- 1,536	,141	119,004	1	,000	,215	,163	,284
		Primary education	- 1,310	,116	126,784	1	,000	,270	,215	,339
		High school	-,779	,091	72,815	1	,000	,459	,384	,549
		2 or 3 year higher education and above	0 <sup>b</sup>			0				
	Survivor's Pension	Not Receiving	1,946	,177	121,215	1	,000	6,998	4,949	9,895
		Receiving	0 <sup>b</sup>			0				
	Age	15-19	- 1,247	,186	44,862	1	,000	,287	,200	,414
		20-24	,503	,159	9,932	1	,002	1,653	1,209	2,260
		25-49	1,475	,150	96,621	1	,000	4,371	3,257	5,866
		50-64	0 <sup>b</sup>			0				
	Household Ownership	Owner	-,251	,120	4,345	1	,037	,778	,615	,985
		Tenant / Lodging	,477	,127	14,060	1	,000	1,611	1,255	2,066
		Not owner but accommodation is provided free	0 <sup>b</sup>			0				
	Household Income	0-25000	- 1,582	,117	183,095	1	,000	,206	,163	,259
		25001-50000	-,780	,079	97,595	1	,000	,458	,393	,535
		50001 and above	0 <sup>b</sup>			0				
	Region	West	,833	,102	67,218	1	,000	2,300	1,885	2,807
		Central	,492	,123	16,043	1	,000	1,636	1,286	2,082
		South	,246	,137	3,231	1	,072	1,278	,978	1,671
		North	,510	,140	13,332	1	,000	1,665	1,267	2,190
East		0 <sup>b</sup>			0					
Working without Social Security		Intercept	- 3,275	,258	161,082	1	,000			
	Children	Number of children under 5	-,177	,203	,758	1	,384	,838	,562 1,248	
	Education status	Illiterate / Literate but not a graduate	,997	,185	28,975	1	,000	2,709	1,885	3,895
		Primary school	1,065	,187	32,503	1	,000	2,902	2,012	4,185
		Primary education	,621	,186	11,139	1	,001	1,860	1,292	2,678
		High school	,444	,182	5,991	1	,014	1,560	1,093	2,226
		2 or 3 year higher education and above	0 <sup>b</sup>			0				
	Survivor's	Not Receiving	,127	,117	1,174	1	,279	1,135	,903	1,427

Pension	Receiving	0 <sup>b</sup>			0				
Age	15-19	-,765	,170	20,174	1	,000	,465	,333	,650
	20-24	,328	,164	3,988	1	,046	1,388	1,006	1,916
	25-49	,563	,122	21,286	1	,000	1,756	1,382	2,230
	50-64	0 <sup>b</sup>			0				
Household Ownership	Owner	,036	,125	,082	1	,774	1,037	,811	1,324
	Tenant / Lodging	,053	,143	,136	1	,712	1,054	,797	1,395
	Not owner but accommodation is provided free	0 <sup>b</sup>			0				
Household Income	0-25000	-,017	,125	,018	1	,894	,983	,769	1,258
	25001-50000	,260	,113	5,276	1	,022	1,297	1,039	1,619
	50001 and above	0 <sup>b</sup>			0				
Region	West	,197	,114	2,963	1	,085	1,217	,973	1,523
	Central	-,338	,159	4,547	1	,033	,713	,523	,973
	South	,159	,145	1,204	1	,273	1,172	,882	1,558
	North	,812	,129	39,717	1	,000	2,253	1,750	2,900
	East	0 <sup>b</sup>			0				
<b>a. The reference category is: Not Working.</b>									

**APPENDIX F- ARTICLES OF THE SURVIVOR INSURANCE OF THE SOCIAL INSURANCE AND GENERAL HEALTH INSURANCE LAW NO 5510.**

**Rights granted from survivors insurance and conditions to benefit**

ARTICLE 32 - Following are the rights granted from the survivors insurance:

- a) Putting on survivors' pension.
- b) Making single payment to the survivors of the deceased.
- c) Granting marriage support to daughters receiving pension<sup>4</sup>.
- d) Granting funeral benefit.

(Amended second paragraph: 17/4/2008 - 5754/20th Art.) The survivors pension shall be payable to the right holders of the deceased insurance holder;

<sup>4</sup> The expression "spouse and children" present in this item of Article 4 of Law Number 5754 dated 17/20/2008 is amended as "daughters" and is applied to the text.

a) if minimum 1800 days of invalidity, old - age and survivors premiums are notified or if, excluding any kind of debt periods, there is an insurance status of minimum 5 years and totally 900 days of invalidity, old - age and survivors premiums are paid for the insurance holders under item (a) of paragraph one of Article 4,

b) if the individual was suffered from accident due to reasons laid down in Article 47, was receiving invalidity, duty disability or old - age pension or had the right to receive invalidity, duty disability or old - age pension but the transactions were not completed,

c) if the invalidity, duty disability or old - age pensions were terminated due to the fact that the individual had started to work under insurance,

upon request of their right holders. However, in order to put on the right holders of individuals who are deemed to be insurance holder as per item (b) of paragraph one of Article 4 on pension, it is obligatory that the entire premium or any kind of debts related premiums, including the universal health insurance of the deceased insurance holder, should not be present or should be paid.

#### **Calculation of the pension to be paid from survivors insurance**

ARTICLE 33 - In case of death of the insurance holder, for calculating the pension to be paid to the right holders;

a) invalidity, duty disability or old - age pension received by or right granted to the insurance holder,

b) the pension to be determined in accordance with Articles 27 and 30, based on the date of decease of the insurance holder, whose pension is terminated due to starting to work under insurance after he/she was put on invalidity or old - age pension,

c) if the number of paid premium days of the insurance holder who have paid invalidity, old - age or survivors insurance premiums under item (a) of second paragraph of Article 32 is under 9000, then the pension calculated over 9000 days as

per the provisions of Article 29, and if this figure is equal to or greater than 9000 days, then the pension calculated over the total number of paid premium days,

shall be taken as basis. (Appended sentence: 17/4/2008 - 5754/66th Art.) However, the 9000 premium days shall be applied as 7200 premium days for the insurance holders under item (a) of paragraph one of Article 4.

Separate for insurance holders under items (a), (b) and (c) of paragraph one of Article 4, and Article 5; in case of decease of the insurance holders, the amounts to be calculated without applying the increments in that year as of the January of the year in which the pensions paid each year from survivors insurance on file basis shall not be less than the lowest old - age pension, paid from the old - age insurance separately for the said insurance holders at the final payment month of the previous year. If the insurance holder was granted with the right to be put on pension deeming to be disabled in need of permanent care of another person, then this shall not be considered in applying items (a) and (b) of paragraph one.

#### **Dividing survivors pension between right holders**

ARTICLE 34 - Of the pension to be calculated for the deceased insurance holder in accordance with Article 33;

a) (Amended: 17/4/2008 - 5754/21st Art.) 50% shall be payable to the widow spouse; and 75% to the childless widow spouse, who is put on pension, in case such individual is not put on income or pension due to not working under this Law, excluding items (a), (b) and (e) of paragraph one of Article 5, or under legislation of a foreign country or due to her own insurance status,

b) (Amended: 17/4/2008 - 5754/21st Art.) Among the children, who are not put on income or pension due to not working under this Law, excluding items (a), (b) and (e) of paragraph one of Article 5, or under legislation of a foreign country or due to their own insurance status;

1) the ones who have completed the age of 18, the age of 20 in case receiving education in high school or equivalent, or the age of 25 in case receiving higher education; or

2) the ones who are found to be disabled by losing minimum 60% of working power based on Institution Health Committee decision; or

3) the daughters, whatever the ages are, not married, divorced or widow, shall receive 25% each.

c) 50% to each of the children stated in item (b), who are left both motherless and fatherless or suffer such status at a later date due to death of insurance holder, whose mothers and fathers or whose do not have marriage connection in between or whose fathers and mothers have marriage connection in between at the time of decease but mother or father is married later on and the ones who are the sole right holders receiving pension,

d) (Amended: 17/4/2008 - 5754/21st Art.) If there are shares left over from the right owner spouse and children, 25% totally to mother and father, provided that the figure is less than the net amount of the minimum wage of the income obtained from any kind of earning and revenue and that they are not put on income and/or pension excluding the income and pension rights granted because of other children; if the mother and father is over 65 years of age, then totally 25%, under the above conditions, without considering the left over share,

shall be payable as pension. (Amended: 21/3/2018-7103/66 md.) While the salary of the holder children receiving survivor's pension in case they work subject to long-term insurance branches, the holder children who did not turn 18 years of age, 20 years of age in case they receive education at high school and its equivalent education and 25 years of age in case they receive higher education, their survivor's pension is not deducted if they are insured under 4/a.

Children adopted, recognized or lineage connection is corrected or fatherhood is ruled on, and the children of the insurance holder born after decease shall benefit from the pension under the abovementioned principles.

The total of the pensions payable to the right holders cannot exceed the amount of the pension of an insurance holder. If necessary, proportional reductions shall be applied to the pensions of the right holders in order to observe this limit.

### **Starting, termination and repayment of pensions of right holders**

ARTICLE 35 - The pension to be paid to the right holders of the insurance holder from survivors insurance shall start at the beginning of the month following;

a) the date of decease of the insurance holder,

b) in case the right holder status is qualified after the date of decease, then the date of qualification.

Pensions payable to the right holders shall be terminated at the beginning of the payment period following the date on which the conditions stipulated in Article 34 are not present anymore.

However, the fact that the students stated in items (d) and (e) of paragraph three of Article 4 of this Law are deemed to be insurance holders shall not entail termination of the pensions.

In case the condition causing termination of pension is not present anymore, then the individual shall again be put on pension from the beginning of the month following the date of application, provided that the conditions stipulated in Article 34 are preserved. (Abrogated final sentence: 17/4/2008 - 5754/67th Art.)

Among the children whose pensions are terminated pursuant to this Article, the ones who are found to be disabled by losing minimum 60% of working power based on Institution Health Committee decision shall be put on pension, if they fulfil the conditions stipulated in Article 34, from the beginning of the month following the date of report used as basis in determining the invalidity status, provided that the provision of Article 94 is preserved.

The re - paid pension shall be determined by applying the increments, in accordance with paragraph two of Article 55, for the period from the date of termination up to the re - payment of the pension.

### **Marriage and funeral benefit**

ARTICLE 37 - (Amended: 17/4/2008 - 5754/23rd Art.)