Public PAYG Social Security in Turkey: What Has Changed?

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Abstract

With rising sustainability concerns, the public PAYG (pay-as-you-go) social security system of Turkey was subject to major reforms between 1999 and 2008. The reform process was in line with the World Bank (1994) perspective, introduced the private sector to the social security system in Turkey and changed the structure of the public PAYG system. The institutionally fragmented nature of the public PAYG system was unified through the formation of a single institution. There has been an attempt to harmonize the divergent practices of the three public social security institutions. The generosity of the public system was reduced. This manuscript aims to analyze how the core aspects of the public PAYG system has changed. The analysis focuses on two main questions. Firstly, the reform concern was related to the financial sustainability of the system. How have the systems budget aggregates have fared? Secondly, how has the demography of social security changed? One reform concern was to increase retirement ages to address the financial sustainability concerns. After almost two decades, is it possible to see the impact of the increased retirement age in the passive population? Using data from statistic reports by the Social Security Institute, this manuscript presents a descriptive analysis of the stated questions.

Keywords: Social security; Public pensions; Social security reform.

JEL Codes: H55, H75.

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1. Introduction

Regarding social security systems, 1990s was an era of calls for reforms. The call was inspired by demographic dynamics. To see how, consider how a PAYG (pay-as-you-go) public social security system functions. A portion of the population earns income and pays premiums to the system. Another portion of the population is retired and receives benefits, often in the form of pensions. Hence the contribution revenues finance pension expenditures. Should the system run a deficit, it is covered through the government budget, hence often the tax base.

Demography is a crucial aspect of this system. Retired and pension receiving individuals, a.k.a. the passives of the system, are often of advanced age. Whereas the revenue generating contributors, a.k.a. actives, are young. In an ageing population, passives are expected to eventually outweigh actives, implying an adverse impact on the financial sustainability of the public PAYG systems. Such dynamics are identified for many countries in the 1990s and policy implications are heavily debated (Weaver, 1986; Schmahl, 1990; Katz, 1992; World Bank, 1994; Roseveare, Leibfritz, Douglas and Wurzel, 1996; Turner, Giorno, de Serres, Vourc'h and Richardson, 1998). These arguments have formed the foundation for the call for social security system reforms.

While some consider the demographic dynamics a cause for reform, others put forward neoliberal policies as a culprit at least in some countries (Kus, 2006; McCluskey, 2003). Following the end of the Keynesian golden era in the 1970s the world experienced falling profit rates (Summers and Feldstein, 1977; Heap, 1980; Chan-Lee and Sutch, 1985; Michl, 1988; Volscho, 2015;). This is often considered as one of the main reasons for the erosion of welfare practices and the way for social security reforms in the 1990s and 2000s was paved. The welfare reform agenda of the 1990s is therefore regarded by some as a natural extension of the evolution of capitalism.

The main reform agenda put forward in the 1990s was based on the World Bank (1994) perspective. World Bank (1994) report basically introduced the private sector as an actor in social security system design. The solidarity principle of the public PAYG social security was to be supplemented by privately managed and funded systems in which the individuals save for themselves. As a twisted incentive to participate in the private funded systems, the generosity of the public PAYG systems were often reduced. This was the case in Turkey as well (Alper, 2011: 39-40; Arabacı and Alper, 2010: 111).

The changes in the Turkish public PAYG social security system follows closely the World Bank (1994) approach. Retirement age changes were introduced in 1999 to 2002. This was followed by the introduction of a voluntary, privately managed funded pillar in 2003. The fragmented institutional structure of the public PAYG system was unified in 2006, followed by a parametric reform in 2008.

Following the spirit of Alper (2011), the aim of this paper is to examine how the public PAYG social security system of Turkey fared after the reforms. The reform was primarily aimed at fiscal sustainability problems. Hence firstly, the budget items of the system are analyzed. A second main concern was to increase coverage. Thus secondly, the demographic coverage of the system is considered, with a focus on the factors that impact fiscal sustainability.

The rest of the paper is organized as follows: Next section traces the origins of the public PAYG social security system in Turkey. This is followed by a review of the reform with a focus on the public pillar. Next, the budgetary status of the system is analyzed. Following that section is a brief review of the demographic coverage, with an emphasis on sustainability. The paper concludes by highlighting the findings.

2. Public Social Security System in Turkey: Origins and Reform

The institutionalization of the Turkish social security can be identified as a hybrid of the Bismarckian and Beveridgian approaches. The first major step in institutionalization is the foundation of ES (Emekli Sandığı) in 1954. This first institution basically provided short- and long-term insurance for public workers. Following the coup in 1960, the 1961 Constitution identified social security as a right and tasked the state to undertake necessary steps for social security provision. In the 1st Five Year Development Plan covering the 1963-1967 period, the vision to establish a comprehensive social security system was introduced. In 1965 SSK (Sosyal Sigortalar Kurumu) was founded to cover individuals working as labourers.

These institutions did not provide coverage for independent workers, artisans, and the agriculture sector. This was handled as of 1972 by the foundation of Bağ-Kur (Esnaf ve Sanatkarlar ve Diğer Bağımsız Çalışanlar Sosyal Sigortalar Kurumu). In the 1980s, the coverage of this third institution was extended to agricultural workers and those working independently in the agriculture sector.

In early 1990s, the institutional landscape of social security in Turkey consisted of three public institutions formed around five core laws and the regulations related to these laws. This fragmented nature was later identified as one of the reasons for the need for reform in the Turkish social security system. But the main concern regarding the Turkish social security system in the 1990s was financial sustainability.

It should be noted that the concerns regarding financial sustainability arose in the 1990s. The timing at which this became a policy issue can be observed through the economic planning practices of Turkey. At the core of economic planning are development plans, formulated for five-year intervals starting with the first one spanning the 1963-1967 period and the last one being the 11th and spanning the 2019-2023 period.

The development plans are formulated through reports prepared by specialisation commissions known as Özel İhtisas Komisyon Raporları. These commissions cover a wide range of topics and consist of stakeholders, experts and representatives from relevant public institutions. Reports by these commissions lay the foundation for development plans. A brief review of these commission reports shows how the emphasis regarding social security changes. Part of the 5th plan spanning the 1985-1989 period is the commission report titled "Sosyal Güvenlik, Yararlanılan Haklar Alt Komisyon Raporu" (Social Security, Benefits

Commission Report). Focus is on the existing rights and expansion of these rights and the coverage, rather than financial issues.

The commission report for the 6th plan for the 1990-1994 period is titled “Sosyal Güvenlik ve Sağlık Hizmetlerinin Rasyonalizasyonu” (Rationalisation of the Social Security and Health Services). The report puts forward that policy actions that could cause deficits should be evaded, the excess revenues of the institutions should be directed to options that generate the best returns, participation should be increased, and practices should be harmonised across institutions. With the 7th plan covering the 1996-2000 period do we see a call for reform and a strong emphasis on financial sustainability.

In the 8th plan of the 2001-2005 period, the related commission report titled “Sosyal Güvenlik” (Social Security) includes warnings as to financial problems, points to the need for institutional independence. The commission report for the 9th plan of 2007-2013 points to the deformations in the active passive ratio and the rising deficits. A reform process in line with the World Bank perspective is stated. By the 10th plan of 2014-2018, the commission report titled “Sosyal Güvenlik Sisteminin Sürdürülebilirliği” (Sustainability of the Social Security System) financial sustainability and the reform take a relatively back seat, whereas increasing revenues through higher collection of premiums and reduced informality takes heavier emphasis. By the 11th plan of 2019-2023, the commission report once more returns to emphasising the deficits of the system and the steps to increase revenues.

What is striking in this narrative is that prior to 1990s, Turkish social security institutions ran current surpluses rather than deficits. In relatively older issues of the five-year development plans, one finds discussions related to social security under the title of national saving. Concern is which assets are to be acquired by the accumulated funds and how to use the accumulated funds to support national investment (see, for example, Devlet Planlama Teşkilatı, 1972: 798-799).

What changed in the 1990s to create considerable deficits in the public PAYG social security system of Turkey? If the nature of the population is to eventually age, it is logical to expect a PAYG social security system to eventually run into deficits. The mathematics is deceptively simple: If there are more benefiters than contributors, the system will run a deficit. One other way for this equality to be disrupted is the introduction of popular policies that enhance the generosity of the social security system.

In addition to demographic dynamics, the Turkish system was hit hard by a change in the retirement entitlement age in early 1990s. Law no 3774 of year 1992 eliminated the age criteria to entitlement to retirement. Rather, it introduced the notion of fulfilling a period of contribution payment to the system. If a man pays contributions for 25 years (20 years for a woman), the person is entitled to retirement. This is a serious blow to the active-passive ratio of the system. Assume a man aged 20, entering the labour force after high school at the age of 20. Should this individual have an uninterrupted work life with no gaps in premium payments, he is entitled to retirement at the age of 45. Under the same set of assumptions, the retirement age for a woman would be 40. Let us assume irregularities in the work life and some informality and assume that the required contribution payment of 20 years is lagged by 10 years. This still implies a retirement age of 50 for women and 55 for men. Compared to the more common retirement entitlement ages of 60 to 65, early retirement would obviously be an issue. This was one of the reasons the social security system began to run deficits.

The call for reform was met by the World Bank (1994) perspective. The institutional structure of the Turkish social security system was modified to include, as of 2003, a privately managed, voluntary funded pillar with state matching contributions. The fragmented nature of the public PAYG system was seen as a problem and a unification has been realised by the foundation of SGK (Sosyal Güvenlik Kurumu) in 2006. The public PAYG system was further modified in 2008 by changes in core parameters such as the replacement rate and contribution rate. The retirement age entitlement rules were changed by law 4447 of 1999 and the minimum age criteria was brought back.

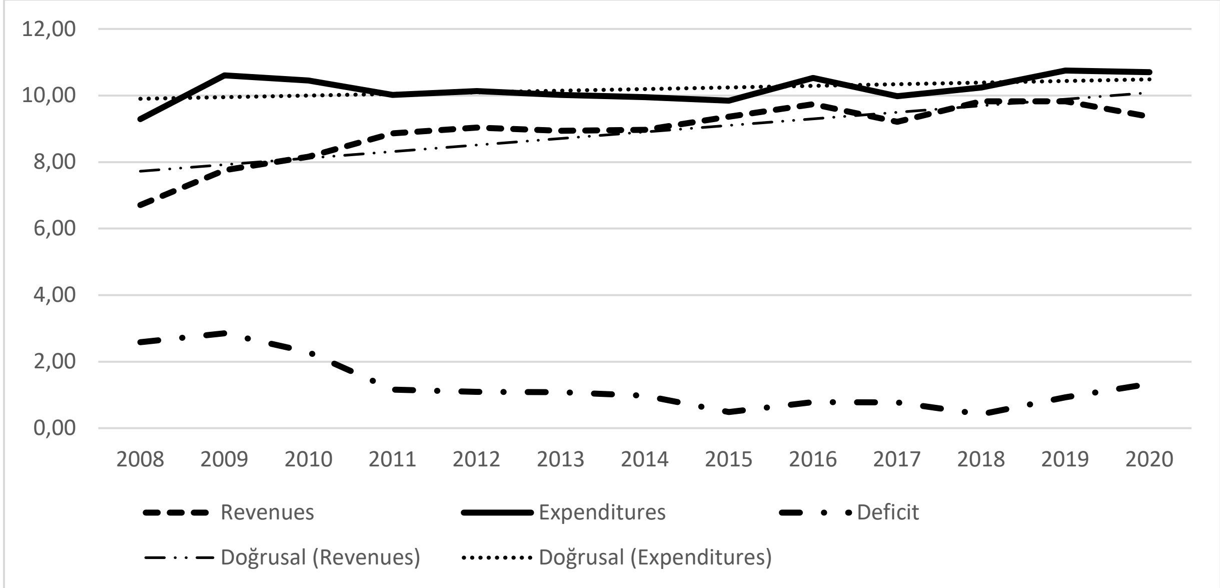
It has been almost two decades since the changes in the retirement age. And one and a half decade has passed since the foundation of a unified social security institution, SGK. It is worthwhile to look back at the data and consider how the systems core variables have changed through time. Especially the financial aggregates are of concern, followed closely by the demographics of the system. Evaluation of the path taken by the Turkish social security system during the last decade and a half is what the next two sections focus on.

3. Social Security Finances

The first step in this narrative is how the revenues and expenditures of the SSI (Social Security Institution, Sosyal Güvenlik Kurumu) have evolved. SSI publicly provides data on revenues and expenditures in the form of Monthly Statistical Bulletins and Statistics Annals. Using annual data from Monthly Statistics Bulletins, Figure 1 has been prepared to observe the dynamics of annual revenues, expenditures, and deficit. Two points can be made from the figure. Between 2008 and 2011 deficits fell, apparently due to a faster increase in revenues. After 2011 the deficits appear to stabilise. The increasing deficits trend of the 1990s appear to be under control. Deficits were 2.58%, 2.85% and 2.29% of GDP in 2008, 2009 and 2010. The ratio is below 1% from 2014 to 2019 and reaches 1.34% in 2020, most probably due to COVID19.

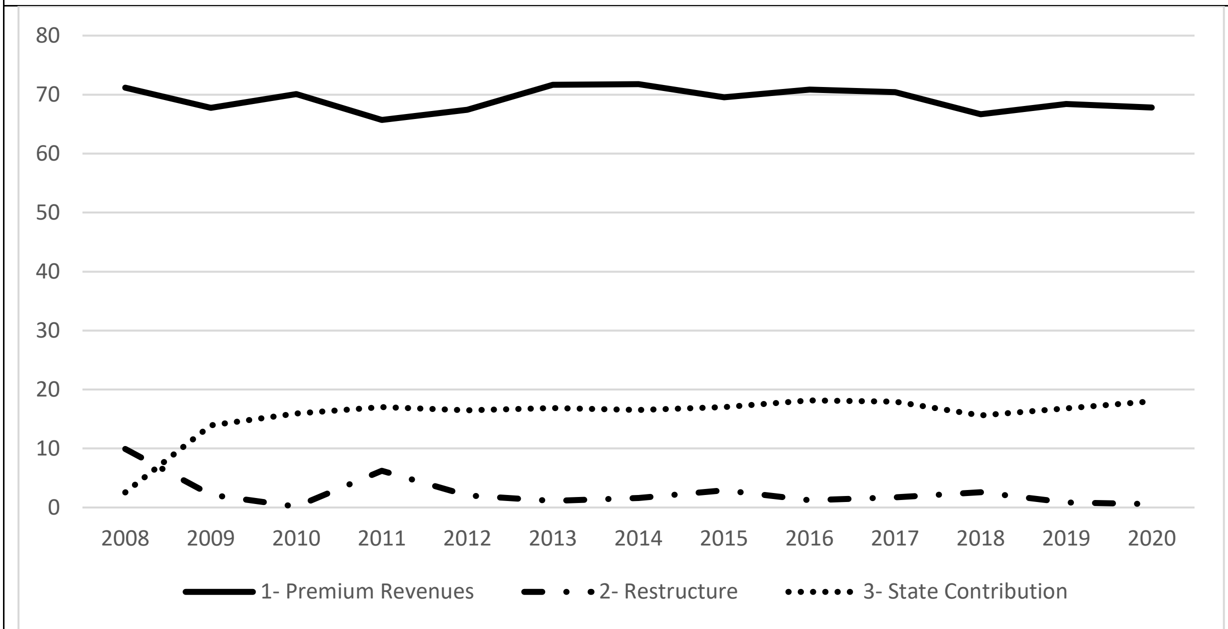
What has changed between 2008 and 2011 in terms of revenues? Figure 2 attempts to shed light, by showing three main items of revenues of SSI: premiums, debt restructuring and state contributions. Premium revenues are the revenue items in the most basic sense of the term in PAYG systems. These do not appear to change much, even appear to have a falling trend. Restructuring refers to debt restructuring. State contributions refer to the obligations of the state to match the contributions paid for disability, old age, and survivor related benefits due to Law no 5510 Article 81. These revenue items, especially debt restructuring, and state contributions appear to explain the story. These two items start at 0.84% of GDP in 2008 and reach 2% in 2011, then fluctuate between 1.60% to 1.90% of GDP till 2020.

Figure 1: Social Security Institute revenues, expenditures, and deficit, % of GDP, 2008-2020



Source: Author's compilation from SSI Monthly Statistics Bulletins. GDP data is from TURKSTAT, National Accounts.

Figure 2: Social security institute revenues, % of GDP, 2008-2020



Source: Author's compilation from SSI Monthly Statistics Bulletins. GDP data is from TURKSTAT National Accounts.

In order to complete the picture, main expenditure items of SSI are presented in Figure 3. More than 90% of the expenditures of SSI are accounted for by pension payments and health expenditures. Figure 3 shows that these main items are stable, consistent with the observation that fluctuations in SSI deficits are primarily due to the dynamics embedded in the institutions revenues. Especially state contributions provide an important additional revenues source that has contributed to the finances of the SSI.

This, however, opens a new issue. Concern regarding the SSI finances has been the deficit and the sustainability of the deficit. Burden of this deficit on an already resource starved government budget was the policy issue. SSI deficit appears to be under control, though not eliminated. But does this mean that SSI is no more a prime concern for the government budget? Figure 4 has been presented to address this issue.

Figure 4 shows the budgetary transfers to SSI as a percentage of GDP. These transfers have not fallen and appear to be more or less stable around 4% of GDP. But does this imply a stabilization in the financial problems of the social security system? The issue is unfortunately very difficult to asses, due to the nature of the data. Key problem is that the publicly available data on the transfers to SSI from the consolidated budget are not limited to the deficits of SSI. According to the metadata of Social Security Institution Monthly Bulletin, Fiscal Statistics, December 2021, the budget transfers consist of:

i) Supplementary payment transfers: By Law 5454 Article 1 of 2006, recipients of pensions are entitled to supplementary payments covered by the government.

ii) Invoiced payments: These refer to public service-related compensation payments, state match of disability benefits and benefits to veterans. (Readers are invited to read the detailed metadata at the data source for a detailed list of related payments and relevant laws.)

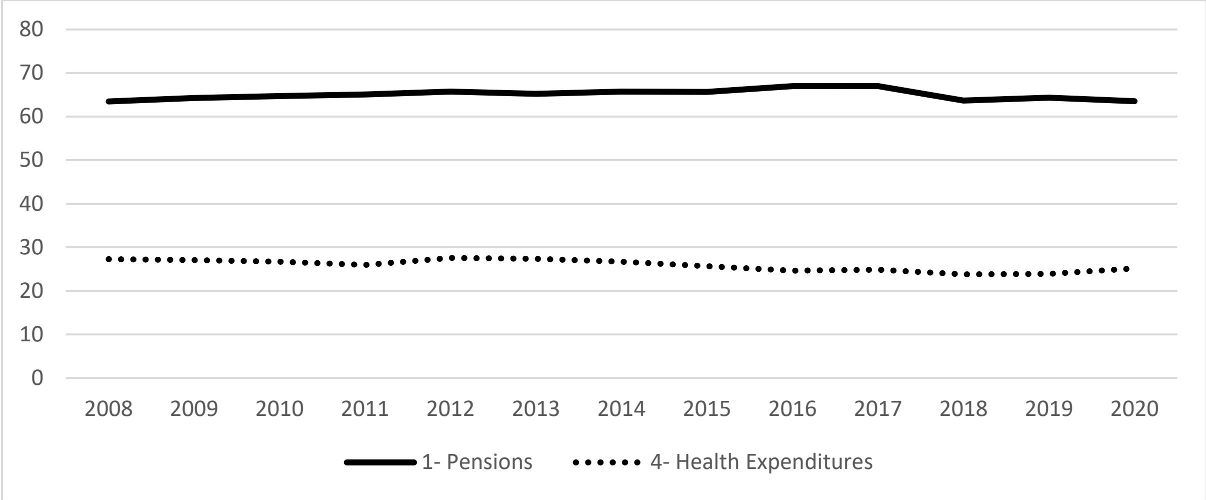
iii) State contributions: State matches 25% of contributions according to Law 5510 Article 81.

iv) Health insurance premiums of those without means: According to Law no 5510 Article 60/1/c Ministry of Family and Social Services covers health premiums for the individuals without material means. Such individuals would include but are not limited to Green Card holders, asylum seekers, children under protection, etc.

v) Incentives: Social security contribution incentives are provided to encourage the formal employment of certain segments of the population or increase investment and employment in certain regions of Turkey. Examples would include incentives for the employment of young workers, contribution matching for companies setting up in regions with development priorities, support for R&D related personnel, etc.

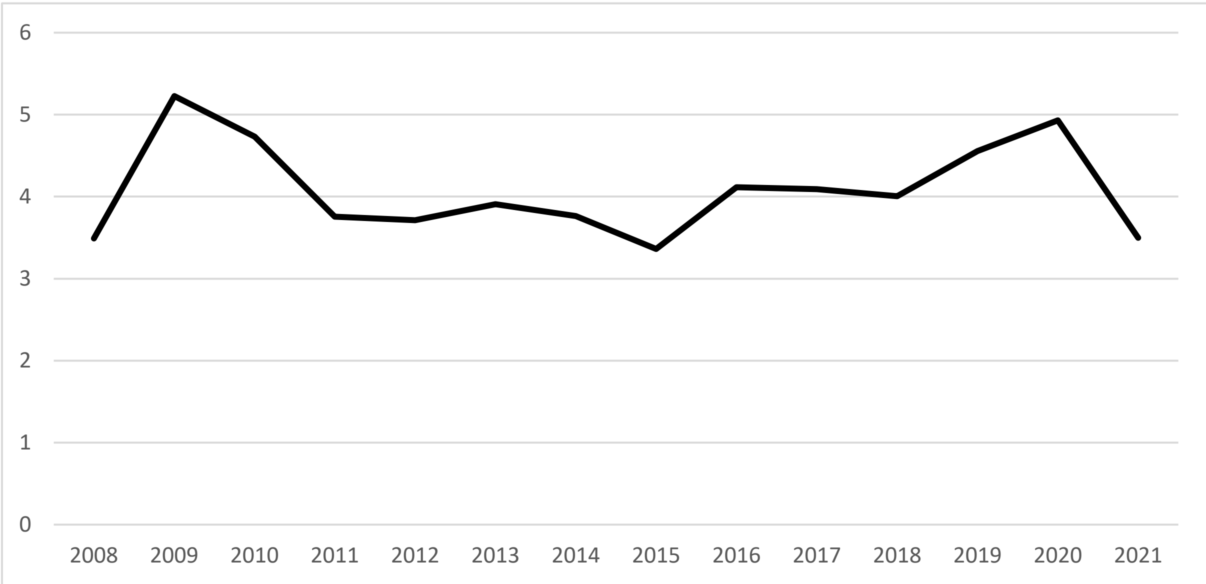
vi) Deficit financing: Transfer from the treasury to cover the deficits of the SSI.

Figure 3: Social security institute expenditures, % of GDP, 2008-2020



Source: Author's compilation from SSI Monthly Statistics Bulletins. GDP data is from TURKSTAT National Accounts.

Figure 4: Budget transfers to SSI, % of GDP, 2008-2021



Source: Based on data from Social Security Institution Monthly Bulletin, Fiscal Statistics, December 2021, Table 31 - Budgetary Transfers to Social Security Institution.

These items show two things: Firstly, SSI is not limited to health and retirement but acts as a channel for multiple welfare systems and, to a certain extent, as an employment and investment incentive mechanism. Secondly, given such diversity in the transfers from the government, it is difficult to isolate the actual deficit caused by the retirement and health related functions of the SSI. The point that can be made at this stage, given the publicly available data, is that transfers from the budget to SSI have not decreased; however, it is not possible to attribute this solely to the mechanisms of a public PAYG pension system.

4. Demography

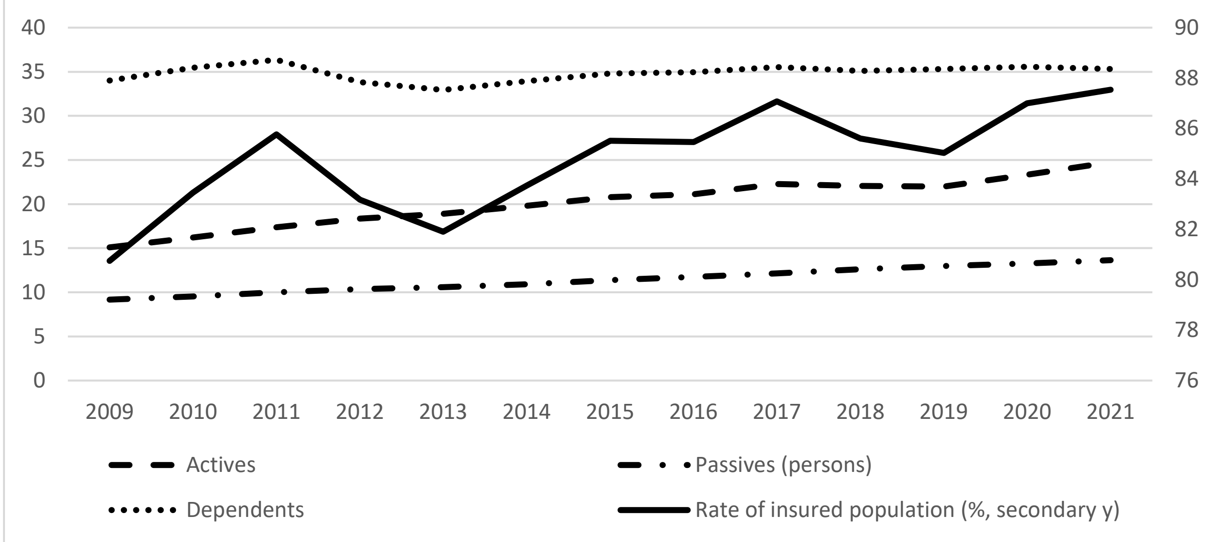
Second key variable to be considered is the demography covered by the SSI. This focus is in relation to the financial sustainability issue. Crucial in PAYG systems is the active passive ratio, i.e. the number of premium paying individuals per pensioners. Consider, first, the share of population covered by the social insurance system. Along this line of investigation Figure 5a is presented, where the actives, passives and the dependents of the system are shown in millions of people and the share of the population insured is shown as a percentage of the total population.

Figure 5a shows that the share population under coverage increased from about 80% in 2009 to 87.54% in 2021. The number of dependents does not seem to increase in this period. The increase in coverage appears to come from the increase in both actives and passives. This would imply that the active passive ratio of the system has not changed, an observation confirmed by Figure 5b. As of mid-2000s, the active passive ratio appears to have fluctuated within the 1.80 to 1.95 band. An inquiry into the composition of the active and passive may provide additional insights. To this end, Figure 6 is presented.

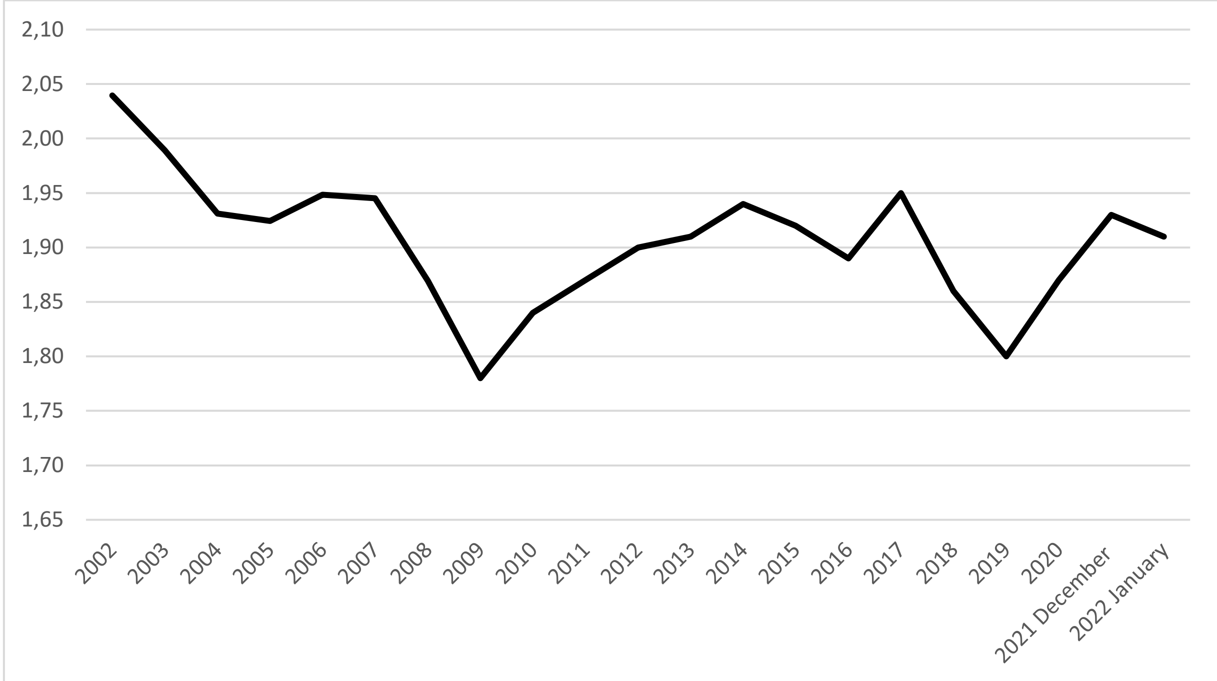
Figure 6 presents the distribution of the actives to various categories. The figure shows that the largest group consists of the individuals that have compulsory insurance, in accordance with Article 4/a, 4/b and 4/c of Law no 5510. The group with the highest increase during the considered period is the interns and trainees. In 2009 only 27 174 individuals of this group are insured. By the end of 2021 this number reaches 1 540 226. The jump is in 2016, when Law no 6764 was introduced. This law obligates social security registration of the vocational program students for work accidents and occupational/work diseases. It should be noted that there is an increase in the number of compulsorily insured individuals as well, increasing from 14 million in 2009 to 22 million in 2021.

Regarding passives, old age pensioners and widows' and orphans' pensioners form most of the passives. In 2009, of the almost 9.2 million passives 6.2 million (68%) are old age pensioners and 2.7 million (30%) are widows and orphan pensioners. By the end of 2021, of the 13.6 million pensioners 9.3 million (68%) are old age pensioners and almost 4.0 million (29%) are widows and orphan pensioners. Hence the visualisation in Figure 7 focuses only on the old age pensioners and widow and orphan pensioners. Figure 7 shows that the number of both old age pensioners and widow and orphan pensioners increase from 2009 to 2021. The lines seem to be parallel, thus it is difficult to determine whether either of these groups has a distinct role in the increase in the number of passives.

Figure 5: Basic demographics of social security



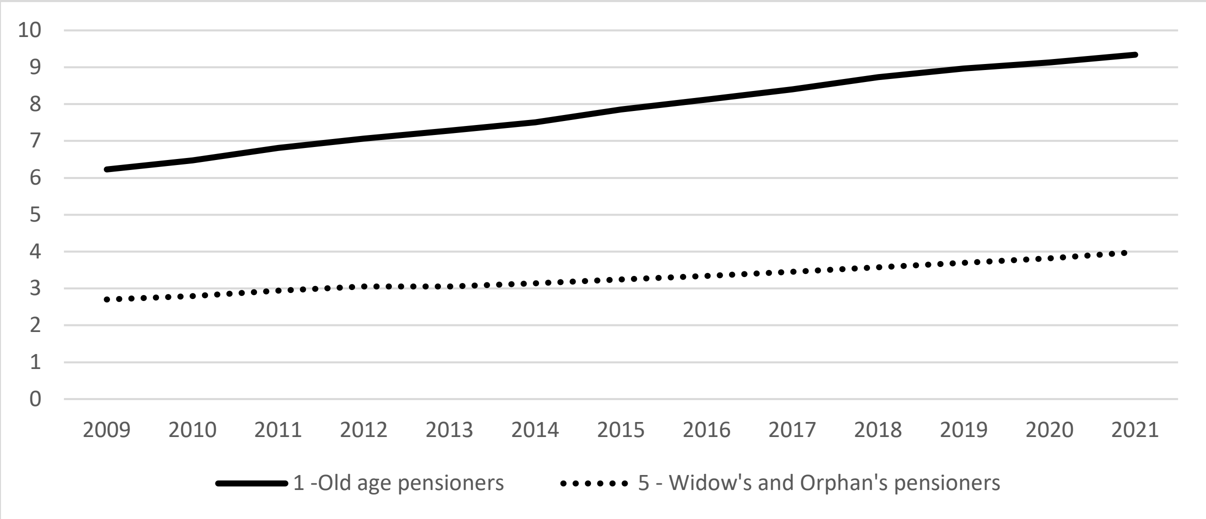
5(a): Population under coverage, 2009 – 2021.



5(b): Active-passive Ratio, 2002 – 2022.

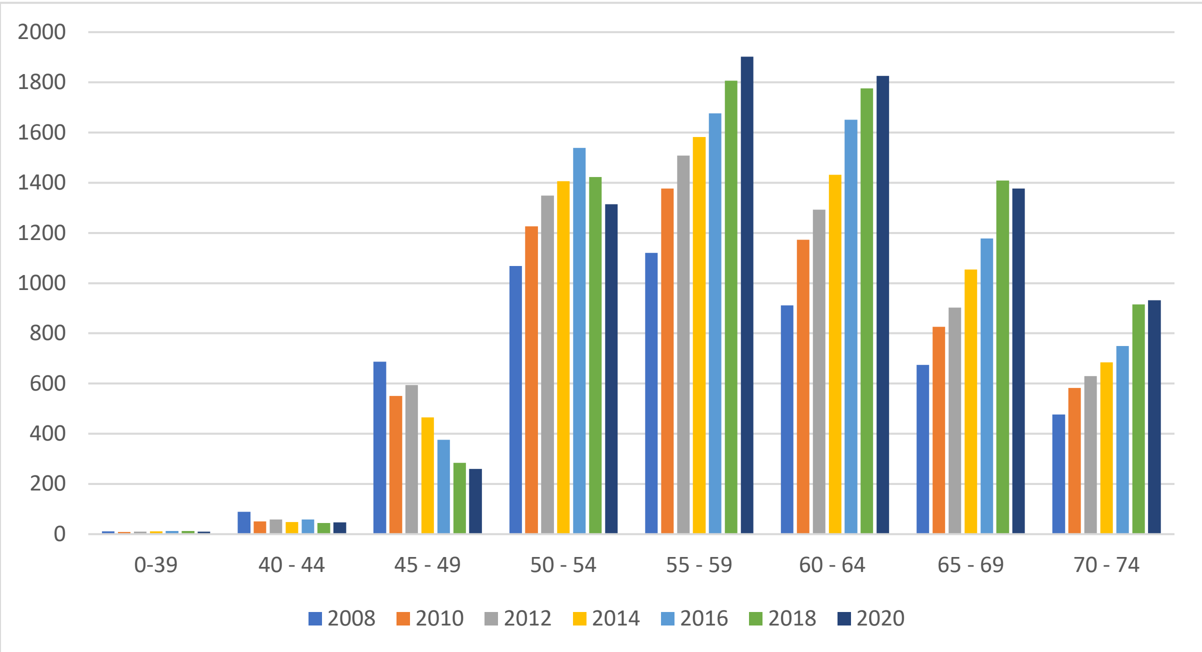
Source: Figure 5(a) is based on data from Social Security Institution Monthly Bulletin, Insured Statistics, December 2021, Table 3 - Social Security Coverage (4/a, 4/b, 4/c). Actives, passives and dependents are millions of people, on the primary y-axis. Rate of insured population is the percentage of total population, shown on the secondary y-axis. Data for Figure 5(b) is compiled from monthly data on social security coverage provided by SSI.

Figure 7: Distribution of Passives, 2009-2021 (million people)



Source: Based on data from Social Security Institution Monthly Bulletin, Insured Statistics, December 2021, Table 3 - Social Security Coverage (4/a, 4/b, 4/c).

Figure 8: Age Distribution of Old Age Pensioners, 2008-2020 (thousand people)



Source: Based on data compiled from Social Security Institution Annual Statistics, 2008-2020.

A final point of inquiry is about the impact of the changes in the retirement entitlement age. To this end, Figure 8 has been prepared. The figure shows the number of old age pensioners for age brackets. The number of pensioners in the 40-44 age group is falling. The growth in the 54-55 age group appears to have stalled. But the number of pensioners in older age groups look to increase, as expected due to the ageing process. This shift in the passive population from relatively lower ages to relatively higher ages is what one would expect to see in response to increasing retirement entitlement age.

The process can also be observed in the weighted average of the individuals retired in a given year. From the Annual Statistics 2008 of SSI, it can be observed that this average for those covered by Article 4a of Law no 5510 is 49. According to the 2012 and 2020 versions of the Annual Statistics, this increases to 51 and to 53 in 2020. For the group covered under Article 4c this weighted average age of retiring reaches 56 in 2020 and was 53 in 2012. Such increases in the age aspect of the passives could lead to reduced social security expenditures and may be a positive signal for the future finances of the social security system.

5. Conclusion

This paper presents a brief review of how key variables of the Turkish social security system evolved after the foundation of the SSI in 2006 and the parametric reform in 2008. Main focus is on the budget of the social security system. Demographic changes are also considered to the extent that they are relevant.

In the 1990s Turkish social security system began to display deficits and the system was reformed. Recent data suggests that the current deficit problem is under control. There is a decrease in deficits between 2008-2011. This appears to be primarily due to the revenue dynamics. State contributions appear to play an especially important role. However, budget transfers from the government to the SSI do not decrease. But it should be noted that these transfers include a diverse set of elements including welfare and extending to employment and investment incentives. Hence it is not possible to isolate the pure deficit of SSI, where purity is taken to mean deficit due to pension provision.

Regarding the demographic aspect of the social security system: The coverage keeps increasing. Both actives and passives of the system increase. Compulsorily insured coverage has increased from 14 million in 2009 to 22 million by the end of 2021. A key mechanism is activated in 2016, when social security registration of vocational school students became obligatory during their internships. This group's share increases rapidly and considerably. The number of passives is also increasing. Majority of pensioners are old age or widow and orphan pensioners, with old age pensioners being the dominant group.

Increases in retirement entitlement age appear to have created the desired result. The old age pensioners' demography is shifting to higher age groups. The weighted average age of retirement is increasing, albeit slowly, due to the discrete increases in retirement entitlement ages.

The system's financial and demographic issues appear to be under control. However, a keen eye needs to be kept on how coverage and financial balance evolves. Turkish social security system will introduce further increases in retirement entitlement age; this is already embedded in the legislation and will be relevant in the 2030s. This will help further ease demographic pressures. Still, a vigilant watch must be kept on the demography. If the aim of financial sustainability is to be maintained, policy actions that could enable early retirement should be avoided.

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References

Alper, Y. (2011). Sosyal güvenlik reformu ve finansmanla ilgili beklentiler. *Sosyal Güvenlik Dergisi*. 1(1): 7-47.

Arabacı, R. Y. and Alper, Y. (2010). Sosyal güvenlik reformunun etkisi: Yoksulluk yaratan bir sosyel güvenlik sistemi. *Amme İdaresi Dergisi*. 43(2): 101-117.

Chan-Lee, J. and H. Sutch (1985), "Profits and Rates of Return in OECD Countries", OECD Economics Department Working Papers, No. 20, OECD Publishing, Paris, https://doi.org/10.1787/468348310348.

Devlet Planlama Teşkilatı (1972). Üçüncü Kalkınma Planı 1973-1977. Devlet Planlama Teşkilatı, Ankara. Address: https://www.sbb.gov.tr/wp-content/uploads/2021/12/Ucuncu_Bes_Yillik_Kalkinma_Plani-1973-1977.pdf Access Date: 1 April 2022.

Heap, S. H. (1980). World profitability crisis in the 1970s: Some empirical evidence. *Capital & Class*. 4(3), 66–84. https://doi.org/10.1177/030981688001200105

Katz, S. (1992). Alarmist demography: Power, knowledge, and the elderly population. *Journal of Aging Studies*. 6(3): 203-225. https://doi.org/10.1016/0890-4065(92)90001-M

Kus, B. (2006). Neoliberalism, institutional change and the welfare state: The case of Britain and France. *International Journal of Comparative Sociology*. 47(6), 488–525. https://doi.org/10.1177/0020715206070268

McCluskey, Martha T. (2003). Efficiency and social citizenship: Challenging the neoliberal attack on the welfare state," *Indiana Law Journal*. 78(2). Address: https://www.repository.law.indiana.edu/ilj/vol78/iss2/4 Access date: 15/04/2020.

Michl, T. R. (1988). Why is the rate of profit still falling? The Jerome Levy Economics Institute Working Paper No. 7, Available at SSRN: https://ssrn.com/abstract=191174 or http://dx.doi.org/10.2139/ssrn.191174

Roseveare, D., Leibfritz, W., Douglas, F., and Wurzel, E. (1996). Ageing populations, pension systems and government budgets: Simulations for 20 OECD countries", OECD Economics Department Working Papers, No. 168, OECD Publishing, Paris. https://doi.org/10.1787/463240307711

Schmahl, W. (1990). Demographic change and social security: Some elements of a complex relationship. *Journal of Population Economics*. 3(3): 159-177. https://www.jstor.org/stable/20007316

Summers, L and Feldstein, M. S. (1977). Is the rate of profit falling? Brookings Papers on Economic Activity. 1. https://www.brookings.edu/bpea-articles/is-the-rate-of-profit-falling/

Turner, D., Giorno, C., de Serres, A., Vourc'h, A. and Richardson, P. (1998). The macroeconomic implications of ageing in a global context. OECD Economics Department Working Papers, No. 193, OECD Publishing, Paris, https://doi.org/10.1787/502646045314

Volscho, T. (2017). The revenge of the capitalist class: Crisis, the legitimacy of capitalism and the restoration of finance from the 1970s to present. *Critical Sociology*. 43(2), 249–266. https://doi.org/10.1177/0896920515589003

Weaver, C. L. (1986). Social security in aging societies. *Population and Development Review*. 12, 273–294. https://doi.org/10.2307/2807911

World Bank (1994). Averting the Old Age Crisis: Policies to Protect the Old and Promote Growth. https://doi.org/10.1596/0-8213-2970-7 World Bank. Washington DC.