Saving Behaviour in Turkey: Where Are We? And What Can We Do About It?

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1 Introduction

After the tumultuous decade of the 1990s, the Turkish economy evolved dramatically in the 2000s (economic performance recovered significantly, inflation rate plummeted from very high levels to below 10 per cent, fiscal deficits – one of the defining features of the 1990s – have been eliminated, the financial sector has expanded tremendously, social expenditures have dramatically increased, and the current account balance has significantly worsened). This period also witnessed the rapid decline of the Turkish saving rate from well over 20 per cent to below 15 per cent. This caused concern among policymakers and academics in Turkey due to the strong correlation between saving rates and economic growth. Motivated by the perceived importance of saving and the rapid decline of this rate in the 2000s, this study aims to uncover how the Turkish saving rate declined in the first place, determine where this rate is headed in the future, and address what can be done about it.

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Saving is one of the fundamental concepts in economics due to its alleged importance as the source of investment and, hence, productive capital. Saving seems to be correlated strongly with economic growth, and empirical findings indicate, though tentatively, that countries with higher economic growth rates tend to have higher saving rates. However, the direction of causation between saving and economic growth is ambiguous both theoretically and empirically.

Firstly, in the theoretical sense, while neoclassical economists regard saving as a key driver of economic growth and thrift as a valuable trait for the whole economy, on the other hand, Keynesians believe that *more* saving *ceteris paribus* is a drain on effective demand and actually disrupts the economy and paves the way to economic stagnation (Keynes 1936; Modigliani 1986). From a different perspective, while saving is, for the first camp, an exogenous variable affecting the real economy and hence the growth potential, the other camp argues that saving is actually an endogenous variable and its level is determined mainly by income level.

Secondly, in the empirical sense, while some studies report that saving precedes economic growth (e.g. Tang and Tan 2014; Mehta and Rami 2014; Odionye et al. 2016), others consistently find that economic growth precedes saving (e.g. Andrei and Huidumac-Petrescu 2013; Waithima 2008; Odhiambo 2009; Ekinci and Gül 2007). Yet others find a two-way relationship between these variables (e.g. Jouini 2016; Singh 2010; Najarzadeh et al. 2014). Lastly, some studies show one- and two-way relationships between these variables for different countries (e.g. Kónya 2004). However, note that empirical studies have mostly been in favour of the causal relationship running from economic growth to saving (Mohan 2006). Whatever the direction of causation, nevertheless, the strong correlation between these variables highlight the importance of saving in the pursuit of prosperity, and the direction of causation comes into prominence only when deriving policy conclusions regarding saving.

2 Methodology

Aggregate saving is a rather elusive concept both to define and calculate. From the standpoint of individuals, saving is just the money they did not spend from their income in a given period. However, for the whole economy, saving does not mean the money that is not spent, but the money that is not *consumed* for immediate needs, in other words, money that *is* spent on investments that generate future income. That means, in a closed economy, all income is spent *by definition* for either consumption or investment and saving level simply corresponds to investment level.

Therefore, how to demarcate the boundary between consumption and investment is of paramount importance, and the decision regarding this amounts to no less than the decision between what amount is consumed or saved *by definition*. For example, some argue that expenditures on durable goods should be regarded as investment, since these are not perishable goods and can last years and even decades. Others argue the same for education and research and development (R&D) expenditures since these are actually long-term investments that greatly increase the productive capacity of the economy and so cannot be regarded as part of consumption. Yet some advocate that health expenditures too should be considered as investment, since these increase health levels and life expectancy and, hence, productive human capital. In a nutshell, *any* expenditure on goods that are not consumed and exhausted immediately could be regarded as investment and, hence, saving (Reinsdorf 2004; Audenis et al. 2002; Gorman et al. 2013; Orthofer 2015; Rocher and Stierle 2015; Claus and Scobie 2002).

On the other hand, defining and calculating income represents another challenge, mostly for practical reasons on how to calculate the overall income level and how to derive the saving level from that. First of all, higher inflation distorts real income and saving levels for both borrowers and lenders. In an inflationary and high nominal interest rate environment, capital gains of lenders seem higher than the actual level, since capital gains consist of both real interest gains and interest gains for the compensation of the expected inflation rate. The converse holds true for borrowers: their income level seems lower because of interest payments

that stem from the expected inflation rate. Secondly, there is the dilemma of whether rising asset prices should be regarded as capital gains and, hence, income. Under fixed consumption, if these capital gains on paper are assumed to be income, then the overall saving rate of these investors will be higher. On the other hand, if only *realized* capital gains are regarded as income, then the saving rate of the investors will be lower.

Thirdly, tax composition constitutes another challenge for the calculation of income level. When calculating disposable income for households, direct taxes are subtracted from the gross income. However, this subtraction is not the case for *indirect* taxes such as a value-added tax (VAT). This creates a problem when comparing household saving rates across countries and time periods. For example, in countries that rely mostly on indirect taxes, households will pay lower income taxes and their income levels will seem higher. However, they will have to spend more because of higher indirect taxes. That means, when calculating their saving rates, their income or expenditure levels will be exaggerated and their saving rate will seem lower than it actually is. Likewise, if the composition of tax revenues changes in a way that lowering or increasing the share of direct taxes in favour of or against indirect taxes over time, then the household saving rate will seem to be declining or increasing, even though there is no change in household saving behaviour.

Fourthly, the health system and social security contribution structure have an important impact on the perceived household saving level. In countries with a more universal health system and inevitably a higher level of social contribution level, household saving rates tend to seem more than what they actually are since both the denominator (net disposable income) and the numerator (expenditure) decline by the same amount, resulting in a seemingly higher saving rate. For example, suppose that net disposable income declines from 100 to 90 units and health expenditure decreases from 85 to 75 units; then the saving rate increases from 15 per cent to 17 per cent, although household health expenditures did not change at all.

All in all, one needs to be very careful when assessing saving behaviour and comparing saving rates across time and space because of these methodological difficulties.

3 Potential Determinants of Saving

Although there is a vast empirical literature on saving behaviour for different time periods and different countries or country groups, no consensus has emerged regarding the main determinants of saving. This is partly due to the chosen estimation technique (cross-sectional or time-series estimation) or the analysed time period or the countries or country groups being examined. For example, demographic variables tend to have more significant effects on saving rates in cross-sectional analyses than in time-series estimations since these variables tend to change very slowly. Moreover, there are some theoretical ambiguities concerning some potential determinants of saving as to their overall effect on saving such as real interest rate. In addition, there are well-known technical and practical drawbacks regarding the estimation of saving rates, as mentioned in the previous section.

The literature shows that there exist several potential determinants of saving in. Of these, income growth and the real interest rate are theoretically ambiguous and empirically inconclusive (Loayza et al. 2000a, b; Edwards 1996). On the other hand, income level, inflation rate, favourable terms of trade, and current account surplus have a positive impact on saving rate theoretically and somewhat empirically. While a higher income level means a higher saving rate due to the Keynesian decreasing marginal propensity to consume (Hondroyiannis 2006; Attanasio et al. 2000), a higher inflation rate prompts saving by increasing uncertainty (Bérubé and Côté 2000; Hüfner and Koske 2010). In addition, favourable terms of trade (Hevia 2010) and a current account surplus (Loayza et al. 2000b) mean higher income levels, so more saving.

Lastly, credit expansion, elderly and youth dependency ratios, social security level, and public saving have a negative effect on saving both theoretically and more or less empirically. While credit expansion prompts households to spend more and save less (Zeldes 1989; Bayoumi 1993), increasing elderly and youth dependency ratios put a downward pressure on the saving rate thanks to the increasing burden on the workforce (Agrawal et al. 2009; Kim and Lee 2008; Li et al. 2007). In addition, a higher social security level tends to decrease saving rates by mitigating

uncertainty (Horioka and Yin 2009; Feldstein 1980). Lastly, there is an apparent trade-off between public and private saving rates, i.e. increasing public saving rates tend to be accompanied by decreasing private saving rates, though this trade-off is by no means perfect (Masson et al. 1998; Matur et al. 2012; Schrooten and Stephan 2002).

4 Stylized Facts Regarding Saving Rates in Turkey

In order to be able to evaluate saving behaviour, one needs to understand how the private saving rate is calculated in Turkey. An economy consists of three major groups: households, firms, and government. While it is relatively easy to calculate the saving rate of the government, the saving rates of households and firms are not easy to determine. In this respect, as in some countries, the private saving rates – the saving rates of households plus firms, in other words, non-government saving rate – is calculated not directly but as a double residual in Turkey, and because of this there is no way to differentiate between savings of households and firms. When calculating private saving, private disposable income is first calculated as a residual by subtracting public disposable income from gross national product (GNP) prior to 1998 or from gross national disposable income (GNDI) since that time. Second, private consumption is also calculated as a residual by subtracting public expenditures (consumption and investment) from gross domestic product (GDP) and then decomposing the remaining part into consumption and investment. In the end, the private saving ratio is obtained as a ratio of two residuals, private consumption and income levels. In addition, relatively reliable and comparable private saving rate figures date back to only 1975, and prior to 1963 it was impossible to calculate this variable since no disposable income or private consumption expenditure data series existed (Uygur 2012; Alkin 1970; DPT 2010).

Historical saving rates in Turkey are shown in Fig. 1. First, the public saving rate was on the order of 5 per cent from 1975 to the late 1980s. It declined rapidly after 1988, reaching zero in 1991 and hovering around

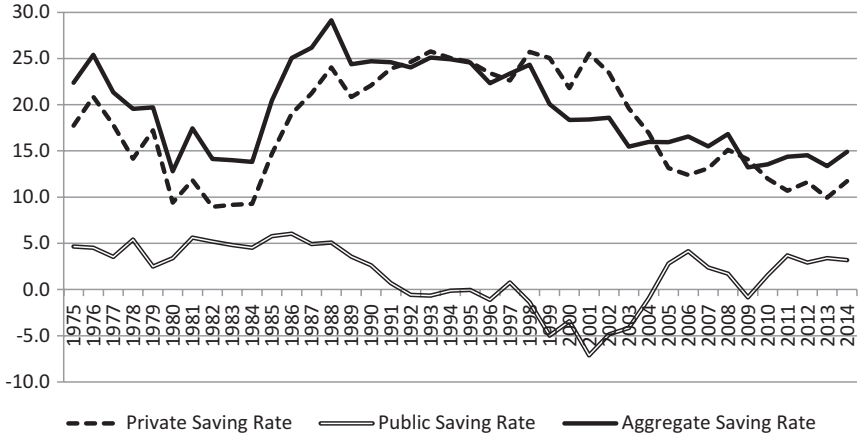

Fig. 1 Saving rates in Turkey (1975–2014) (Source: Ministry of Development of Turkey)

there for half a decade. With the escalating political turmoil and particularly the 28 February *coup d'état* and resulting budget deficits, this ratio began to plummet in 1997, reaching an all-time trough with a 7.1 dissaving ratio in 2001, thanks partly to a devastating financial crisis in that year. However, the public saving ratio quickly recovered in the 2000s thanks to political and economic stability in that period and has been on the order of 3–4 per cent since 2006, except during the 2008–2009 global financial crisis period.

On the other hand, the private saving rate was in a downward trend between 1975 and 1982 and declined from over 20 per cent to below 10 per cent. In the second half of the 1980s this rate began to climb and reached well over 20 per cent and stayed there in the entire decade of the 1990s. However, it plunged after the 2001 financial crisis and hit just 13 per cent from over 25 per cent in just four years. It more or less stabilized after the 2008–2009 global financial crisis at around just over 10 per cent. The aggregate saving rate mostly followed a trajectory over time similar to that of the private saving rate. This ratio was also around well over 20 per cent in the 1990s, only declining rapidly after 1997 to just over 15 per cent in 2003, almost totally thanks to the rapid rise in the public saving rate. After that year, the aggregate saving rate more or less

stabilized at around 14 per cent, except during the 2008–2009 global financial crisis period.

5 Saving Behaviour in Turkey

Several factors account for the substantial decline in the Turkish aggregate saving rate in the late 1990s and first half of the 2000s. The initial decrease in the aggregate saving rate was on the order of 6 percentage points and is explained by the rapid decline of the public saving rate owing to a marked deterioration in public finances in the 1997–2001 period, wherein the private saving rate was relatively stable, hovering around 25 per cent. The second decrease in the aggregate saving rate happened in the 2001–2006 period and was milder (around 2.5 percentage points) compared to the first one. In this period, the public saving rate rose rapidly and the private saving rate plummeted, offsetting each other to a certain extent and limiting the fall in the overall saving rate. This rate fell a little bit further (1–2 percentage points) with the 2008–2009 global financial crisis owing both to a rapid decrease in the public saving rate and a more gradual decrease in the private saving rate. While the public saving rate has more or less reached pre-1988 levels in recent years, the private saving rate has decreased dramatically from around 24 to 12 per cent in the 2000s, due mostly to the rapid decline in the 2001–2006 period.

While the public saving rate is determined primarily by the decisions of policymakers, explaining changes in the private saving rate is not an easy task. Why did the private saving rate fall so dramatically in just five years between 2001 and 2006, and why did it remain at those levels afterwards, albeit fluctuating in the 2008–2009 global financial crisis period? There are several possible reasons behind this spectacular decrease, including an increased public saving rate due to the significant recovery in public finances, rapid financialization, a notable decline in the inflation rate, and a steep increase in social expenditures (Tatliyer 2017).

Firstly, the Turkish case confirms the well-documented trade-off between public and private saving rates in the literature, such that while the public saving rate increased markedly between 2001 and 2006, the

private saving rate decreased dramatically. Secondly, credit volume expanded immensely after 2001, increasing consumption and depressing the private saving rate. While the ratio of credit volume to GDP was around 9 per cent in 2002, it skyrocketed to 26 per cent in 2007 and over 70 per cent as of 2015 by accelerating after 2008. In particular, household credit volume to GDP steeply increased from 2 per cent in 2001 to 11 per cent in 2007 and around 19 per cent as of 2015.

Thirdly, the inflation rate decreased dramatically in the 2000s, from well over 50 to below 10 per cent in just a few years as of 2004, and nominal interest rates declined tremendously in the following years, reflecting rapidly diminishing uncertainty regarding the Turkish economy. Theoretically, the higher the uncertainty, the more people, both households and investors, tend to save for precautionary reasons. Therefore, a rapidly decreasing inflation rate should have a downward pressure on the private saving rate if this theoretical insight holds for Turkey. In addition, the almost perfect concurrence of these developments lends further support to this argument.

Fourthly, social expenditures in Turkey greatly expanded in the 2000s. The ratio of social expenditures to GDP was only 8.5 per cent in 2000. This ratio increased to 11.6 per cent in 2007 and 14.3 per cent as of 2014, while the Turkish economy grew by 4.7 per cent annually on average in that period. Numerically, real social expenditures at 2014 prices increased from 95 billion to around a stunning 250 billion Turkish liras, almost tripling in just 14 years. As with a decreasing inflation rate, rapidly increasing social expenditures too should weaken uncertainty and insecurity among households, thereby decreasing the need to save for precautionary reasons and prompting people to spend more.

On the other hand, there are important income- or expenditure-related factors that have a bearing on *the calculated* private saving rate, but not necessarily on *the real* private saving rate (depending on the definition of *saving* that is adopted), including a changed tax structure, increased social security payments and contributions, and a decreased inflation rate through an inflation effect.

Firstly, the ratio of indirect to direct taxes collected was 1.3 in 1990 and stood at 1.5 on average in the 1990s, despite some fluctuations, indicating a more or less stable and relatively fair tax composition. However,

the tax composition has deteriorated markedly in the 2000s, with this ratio increasing from 1.5 to a stunning 2.4 in just six years between 2001 and 2006, which is the same period in which the private saving rate plummeted. Therefore, relying much more heavily on indirect taxes has biased private saving rates downwardly to a marked extent. For example, if this ratio were 1.3 in 2006 as in 1990, then private disposable income *and* private expenditures would be 37.3 billion Turkish liras lower and the private saving rate would be 0.7 percentage points higher, not 12.4 but 13.1 per cent. The effect of the tax structure on the private saving rate has been around 0.7 per cent on average for the entire period between 2000 and 2013, reaching around 1 percentage point as of 2013. Note that this is *a real effect*; private disposable income was indeed not as high as it seems to have been in the 2000s compared to the 1990s, thus, in the same way, the private saving rate was not as low as it seems to have been. Overall, a rapidly changing tax composition accounts for a portion of the decrease in the private saving rate in the 2000s (Fig. 2).

Secondly, in the 1990s, one of the major reasons behind the low and even negative public savings was the expanding wedge between social security contributions and social expenditures, an exemple of the bad governance of the period. In that period, while governments were providing porous and limited social security to the public both quantitatively and qualitatively, a high level of corruption and ineffectiveness in the system resulted in ever-increasing public debts and even monetization of the debt to a significant degree and, hence, among other reasons, a plummeting public saving rate. However, in the 2000s, this outlook rapidly changed and the low efficiency level of the system quickly improved to a marked extent, while the social benefits increased significantly, as mentioned earlier. Therefore, as social security has begun to take root in Turkey, social security contributions have increased dramatically from around 3 per cent in the 1990s to around 7.8 per cent as of 2014. That means for households that they happened to be in a position that they have now been enjoying *more* social benefits in exchange for higher contributions to the system. Therefore, a downward pressure emerged in the 2000s on *both* private disposable income (denominator) and private expenditures (numerator), which meant a downward pressure on the private consumption rate and, consequently, an upward pressure on the

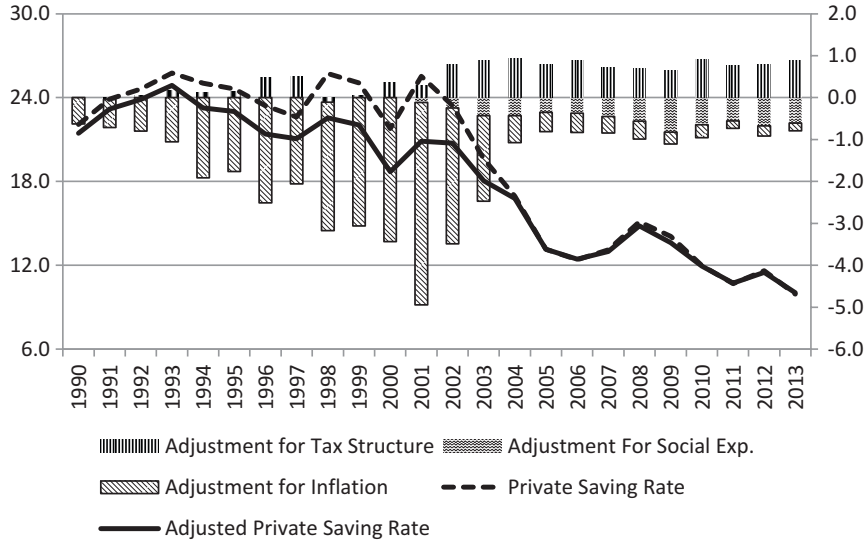

Fig. 2 Adjusted and original private saving rates (1990–2013) (Note: the adjusted private saving rate denotes the private saving rate plus adjustments for tax structure, social expenditures, and inflation. While the *left side* of the vertical axis in the left is for original and adjusted private saving rate figures, the *right side* of the vertical axis is for the adjustments. The base year for the calculation of the adjustments for the tax structure and inflation is the beginning year, 1990. However, it is 2000 for social expenditures because the Turkish Statistical Institute has been publishing social expenditures series only since that year. The tax-structure-adjusted private saving rate was calculated as 1 minus the tax-structure-adjusted private consumption rate (the ratio of private expenditures plus extra collected indirect taxes in excess of 1.3 times collected direct taxes in a given year to private disposable income plus the extra collected indirect taxes in the same year). The social-expenditure-adjusted private saving rate was calculated as 1 minus social-expenditure-adjusted private consumption rate (the ratio of private expenditures plus extra social expenditures in excess of the 2000 level to private disposable income plus extra collected social contributions in excess of the 2000 level). Lastly, the inflation-adjusted private saving rate was calculated as 1 minus the inflation-adjusted private consumption rate (which was calculated by subtracting the realized inflation part of the interest payments made by the government from private disposable income). We are subtracting interest payments from income. The wedge between the original and adjusted private saving rates expands as the inflation effect strengthens in the second half of the 1990s; however, in the 2000s this effect dwindles substantially. While all three of these factors affect the *calculated* private saving rate, only the effect of inflation has an impact on the public saving rate. Therefore, the aggregate saving rate is also affected owing to the other two effects. However, these two effects cancel each other out almost completely, thereby exerting a negligible effect on the aggregate saving rate. Source: Ministry of Development of Turkey, Turkish Statistical Institute, and the author's own calculations)

private saving rate, owing to the fact that if both the denominator and numerator decrease by the same amount, then the overall rate too decreases *mathematically.* As a result, the effect of social expenditures on the private saving rate stood at around 0.5 percentage points on average. That means the social-expenditure-adjusted private saving rate was actually lower by some 0.5 percentage points in the last decade.

Thirdly, inflation plays a distinct, albeit indirect, role in affecting the *calculated* or *perceived* saving rate, apart from its role in prompting households to save more owing to higher uncertainty. Theoretically, the nominal interest consists of two parts, the real interest rate and expected inflation rate. That means realized nominal interest income consists of two parts, real interest income and realized inflation rate. However, not real but nominal interest income counts as capital income. Thus, while the income level of lenders seems higher than it actually is, borrowers face the opposite situation: Their income level seems lower than it is in reality. However, for the whole economy this does not constitute a problem: These two distortionary effects cancel each other out, and overall the saving rate does not change in the end. Yet, if lenders and borrowers are different in nature from a saving behaviour perspective, then the inflation effect looms large. Firstly, if a country is a net borrower in a local currency from abroad, then its overall saving rate seems higher than what it actually is. However, Turkish net foreign debt did not change significantly, though there were some fluctuations, in the 1990s and 2000s. Therefore, the inflation effect is negligible in that dimension. Secondly, if the government is a net borrower chiefly from private individuals in a highly inflationary environment, then while the overall saving rate stands still, the private saving rate seems higher and the public saving rate seems lower than what they actually are. The inflation effect in this dimension is sizeable in Turkey, since both net public debt and the inflation rate were very high in the 1990s compared to the very low levels seen in the 2000s. Numerically, the ratio of net public debt to GDP plummeted from 80 per cent in 2001 to the historically low level of 37 per cent as of 2015. Moreover, the inflation rate was some 77 per cent on average, while the public borrowing rate was roughly 109 per cent in the 1990s. Both rates declined dramatically in the 2000s, eventually falling below 10 per cent. Thus, the inflation effect greatly diminished as the ratio of net

public debt to GDP, the inflation rate, and the nominal interest rate plummeted. Therefore, the high level of private and low level of public saving in the 1990s emanates partly from that inflation effect. Consequently, the private saving rate was roughly 3.5 percentage points higher than what it actually was between 1998 and 2002 thanks to the inflation effect at its height. This difference diminished rapidly to only 0.4 percentage points on average between 2004 and 2013, eventually reaching a mere 0.2 percentage points in 2013.

Taken all together, one-third of the decrease in the private saving rate for the periods 2001–2006 and 2001–2013 becomes spurious mostly thanks to the inflation effect since the effects of the changed tax structure and social expenditure pattern on the private saving rate in the 2000s roughly cancel each other out.

6 Different Definitions of Saving

On the other hand, as mentioned earlier, there is no standard agreed-upon definition of *saving*. In this sense, some expenditures can be regarded as investments, not consumption, on the grounds that these expenditures are made not for immediate consumption but for future benefits that will emerge, such as expenditures for education, health, durable goods, and R&D. Therefore, two kinds of saving definitions emerge. Narrowly defined, the saving ratio is the officially calculated rate, while broadly defined the saving ratio corresponds to the saving ratio in which expenditures on education, health, R&D, and even (partly) durable goods are treated as investments.

In fact, expenditures in these categories have expanded tremendously in the 2000s, reflecting the increasingly stronger Turkish economy. Firstly, while education expenditures had been around 2.5 per cent of GDP in the 1990s, it increased significantly in the 2000s, averaging roughly 3.7 per cent and reaching over 4 per cent in 2013. Moreover, the ratio of private education expenditures to GDP first declined and then slightly increased by 0.3 percentage points in the 2000s. Overall, if education expenditures are regarded as expenditures, then the overall saving rate increases by around 4 per cent from 13.4 to around 17.4 per cent as of

2013, and the difference between aggregate saving rates in the 1990s and 2000s diminishes by around 1.5 percentage points.

Secondly, overall health expenditures increased significantly in the 2000s, rising from 3.5 to 4.2 per cent of GDP, a 20 per cent increase in just 14 years between 2000 and 2014. On the other hand, the ratio of private health expenditures to GDP first stagnated and then slightly declined by some 0.1 percentage points in the 2000s, owing to the introduction of near-universal health coverage. Overall, if one regards health expenditures as investments, then the overall saving rate increased by around 4.4 per cent in the 2000s, while the difference between aggregate saving rates in the 1990s and 2000s decreased by some 0.7 percentage points.

Thirdly, the ratio of durable goods consumption to GDP increased significantly, from around 12 per cent on average in the 1990s to some 16 per cent in the 2000s, reaching a stunning 20 per cent in 2014. When the depreciation of durable goods is taken into account, the contribution of durable goods consumption to the overall and private saving rates were around 9 percentage points on average in the 1990s and 14 percentage points between 2004 and 2014. This means that the difference between aggregate saving rates in the 1990s and 2000s diminished by some 5 percentage points under this extended definition of saving.

Lastly, the ratio of R&D expenditures to GDP was around a mere 0.5 per cent in the 1990s. Though not sufficient, this ratio increased steadily in the 2000s, averaging some 0.8 per cent between 2005 and 2013 and reaching around 1 per cent as of 2013. If R&D expenditures are regarded as investments, then the difference in the overall saving rate between the 1990s and 2000s dwindled by another 0.3 percentage points.

As can be seen in Fig. 3, BDASR+D was around 40 per cent in the 1990s and declined significantly from 40.9 per cent to 32.5 per cent between 1998 and 2003; however, the ratio then recovered quickly and increased to some 39 per cent in 2013, reaching the levels attained in the 1990s. On the other hand, the course of BDASR largely resembles that of NDASR, though the decrease in BDASR was only 31 and 29 per cent respectively for the periods 1998–2003 and 1998–2013, compared to 58 and 45 per cent decreases in NDASR for the same periods respectively. Consequently, the decrease in BDASR was around one-half that of

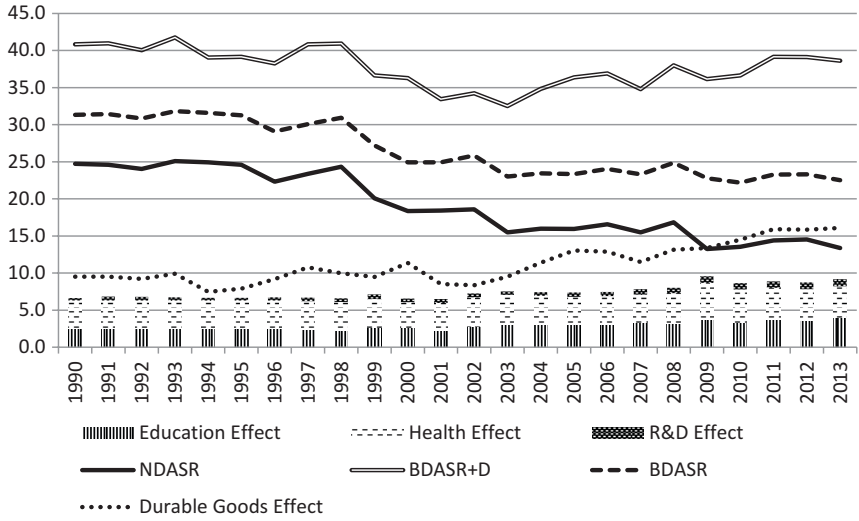

Fig. 3 Narrowly and broadly defined saving ratios (1990–2013) (Note: While NDASR denotes narrowly defined aggregate saving rate, BDASR designates broadly defined aggregate saving rate with education, health, and R&D effects. Lastly, BDASR+D denotes BDASR plus durable goods effect. While BDASR+D has returned roughly to the levels seen in the 1990s in recent years, BDASR declined in the late 1990s and in the early 2000s, as did NDASR, though much less pronouncedly. In the end, while NDASR was below 15 per cent, BDASR stood at 22.5 per cent, and BDASR+D was nearly 40 per cent in the 1990s. On the other hand, education data start in 1997 and health data in 2000. Because of this, the corresponding series were constructed through extrapolation using averages of the next five years for the entire missing period. In addition, there are no direct data for the share of the durable goods in GDP after 2006. Because of this, the series from 1990 to 2006 were extrapolated for the 2007–2013 period using the durable goods expenditure share in household consumption expenditures multiplied by household final consumption share in GDP as a proxy; using this method, the durable goods expenditure share in the overall economy was obtained. Source: Ministry of Development of Turkey, Turkish Statistical Institute, and the author's own calculations)

NDASR for the period 1998–2003 and one-third that for the period 1998–2013.

When all these figures are taken together, it becomes obvious that the rapid decrease in the private and aggregate saving rates in the 2000s cannot be attributed to only increases in perishable consumption. On the

contrary, a sizeable portion of the decrease could be accounted for by the significant increase in education and health expenditures, which are both very important for society as a whole as well as for the economy and can easily be regarded as investments. On the other hand, while one-third of the decrease in the private saving rate in the 2000s relative to the 1990s is spurious, the bulk of the decrease in the remaining two-thirds can be attributed to the rapid increase in expenditures on durable goods, which can partly be regarded as investment.

7 Where Are We and What Can We Do About It?

Although the definition of saving seems straightforward, as stated by Crossley et al. (2010, 36), 'there is no single "correct" definition of saving', and the definition of saving simply changes as 'the issue under investigation' changes and dictates its own terms. For example, education expenditures can easily be regarded as saving from the standpoint of policymakers and people who are trying to increase their human capital; however, it also can be regarded as sheer consumption for financial and affordability reasons in the short run. Therefore, policy conclusions regarding saving will largely be contingent upon the circumstances and priorities, such as financing and the need for development.

Therefore, although the Turkish aggregate saving rate plummeted in the late 1990s and in the early 2000s, and has not recovered fully since then, roughly one-half of the fall in the aggregate saving rate in the 2000s can be attributed to the rapid increase in education and health expenditures, which can easily be regarded as investments under broader definitions of saving. Nevertheless, the other half is still an important matter to be dealt with, not to mention there is no unique definition of saving to which everyone subscribes. In addition, one-third of the decrease in the private saving rate in the 2000s is spurious, and the other two-thirds are mostly associated with durable goods consumption, though counting durable goods as investment has its downsides as well as upsides.

Moreover, it is hard to argue that the factors behind the decrease in the saving rate in the 2000s represent generally negative developments. Actually, except for the rapid expansion of credit volumes, other proposed reasons are rather positive developments *in nature*, i.e. decreased inflation rate, expanded social expenditures, and increased public saving.

Therefore, as stressed earlier, the saving rate figure results from a myriad of economic processes, and it is an end product of the real economy. Because of this, any attempt to increase the saving rate *directly* will have numerous unexpected and possibly undesirable consequences. Moreover, empirical evidence in the literature is tilted towards a causality running from economic growth to saving, though there is no consensus on that. Therefore, when all things are considered, rather than trying to increase the saving rate *per se*, one could argue that it would make more sense to focus on economic growth and development, not just because higher income levels will free up more savings and investment, but also because trying to increase savings directly can have detrimental effects on both levels of private consumption, which is the backbone of the real economy with around a 60 per cent share in GDP, and investments on education, R&D, health, and the like, which are of paramount importance for the future trajectory of the economy.

On the other hand, while financial deepening can have a considerably positive impact on the real economy, rapid credit expansion and deteriorating credit composition, i.e. higher share of credit directed to unproductive areas, can significantly harm the economy. In this sense, in an empirical study, Cecchetti and Kharroubi (2015) conclude that

> the faster the financial sector expands, the slower the real economy grows … [and] financial growth disproportionately harms industries *the less tangible their assets or the more R&D intensive* they are. [Italics added]

Therefore, limiting credit expansion and, maybe more importantly, improving credit composition by directing much more credit to productive industries away from unproductive ones and the bubble-prone housing sector with smart financial policies is of paramount importance. Such a policy will have the potential to create two desirable outcomes: on the

one hand, it will induce households to save more, for *the betterment of the economy*, and on the other hand, it will increase the productivity level of the entire economy, greatly contributing to economic growth and income levels and, hence, the saving rate.

A desirable and enhanced credit composition can be achieved through several policies, such as developing Islamic financial instruments and creating wealth and pension funds, among others. Islamic finance, which has the built-in advantage of being *directly* connected to the real economy, offers important opportunities in this regard. Developing carefully designed financial instruments via financial engineering within the tradition of Islamic finance can contribute greatly to the real economy and improve credit composition to a remarkable extent. Moreover, wealth and pension funds, which can be founded and run by either state or state-sponsored private enterprises, have the potential to channel funds to much-needed projects and industries much more directly and swiftly and for a much longer period than the traditional banking industry is willing to do. The Turkish state, actually, took important *preliminary* steps in this direction by founding the Turkish Wealth Fund, whose portfolio value reached USD 160 billion within just six months after its creation in August 2016, and by introducing a mandatory pension fund, BES (Bireysel Emeklilik Sistemi, or Individual Pension System), with the option of opting-out in January 2017.

Another factor presumably contributing to the decreasing saving rate in the 2000s is the global liquidity abundance, first in the early 2000s and then in the aftermath of the global financial crisis of 2008–2009, which almost perfectly overlaps with the decreasing saving rates in Turkey. Actually, this abundance of liquidity is one of the major factors of the rapid credit expansion in Turkey in the 2000s, among other reasons. In addition, it is now perfectly clear that the total elimination of barriers to international capital flows resulted in a much less stable global economy with numerous financial crisis.

In this regard, capital controls, which had been an integral part of the global financial structure under the Bretton Woods system and which was abandoned almost totally in the neoliberal era, has made a curious comeback in the wake of the global financial crisis. Several mainstream economists began to question the existing financial structure and address the

possible benefits of some sort of capital controls. Shockingly, even the International Monetary Fund, once an ardent promoter of unfettered financial markets, has begun to advocate some sort of capital controls, among numerous others (Ostry et al. 2016; Magud et al. 2011; Kim and Doo Yong Yang 2012). Thus, implementing some sort of capital controls can mitigate both financial instability in an era of very high current account deficits and unproductive credit expansion in Turkey. In the end, the saving rate would be affected rather positively, both directly and indirectly.

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