Savings in the Lebanese Economy: A Simple Tale from the Post-War 1992-2015 Period

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1. Introduction

Savings has always had a dubious role in economics. Too little of it is bad for long-run growth, and too much of it is detrimental to aggregate demand. But there is no denying its importance to economic fundamentals. Of these fundamentals, perhaps most important is its relation to the current account and the balance of payments position. Another crucial fundamental relates to policies such as taxes and pension systems. And these two fundamentals are of paramount significance to the Lebanese economy, an economy characterized by chronic imbalances in its current account and an increasing need to reform its fiscal and pension schemes.

In this note, we will provide a s+imple, standard framework to understand savings in post-war Lebanon. In section 2 we look at the relation that ties savings to investment and the current account, and find that Lebanese national savings are fairly deficient and contribute greatly to the large and persistent current account deficits. Section 3 investigates the culprit behind deficient savings, and we find that – contrary to general perceptions -- *both* the private and public sectors are responsible, with private savings to GDP averaging less than 14% and revealing an unusually volatile behavior. In section 4 we formulate the determinants of private savings and express it as dependent on policy and non-policy variables. Section 5 provides an analysis of the policies and reforms that could be meaningfully extracted from the determinants of private savings. And in section 6 we conclude the note, stressing the need to focus on those variables that can be deployed to stimulate real economic growth, reform the pension system, and regulate fiscal policies.

2. Savings and the Current Account

The relation between savings and the current account, in addition to investment, is one of the most pertinent in macroeconomics. It can be derived from simple models of national income accounting[2]. Assume that C stands for private and public consumption, I stands for private and public investment, and X and M stand for export and import of goods and services respectively. Then gross domestic product, GDP, satisfies the basic identity:

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[2] For more on the derivation, see IMF (2013).

(1)   GDP = C + I + X - M

Adding net factor income from abroad, NFI, to (1) yields:

(2)   GNP = C + I + X –M + NFI

where GNP is gross national product[3]. GNP stands, of course, to the income that the country's nationals produce, but to get the income that the country's nationals end up with, we need to add to (2) net transfers from abroad, NT[4]:

(3)   GNDI = C + I + X − M + NFI + NT

where GNDI is gross national disposable income. Given that X-M+NFI+NT is equal to the current account, CA, then (3) becomes:

(4)   GNDI - C - I = CA

As important, noting that GNDI-C is simply national savings, S, then (4) transforms to:

(5)   S − I = CA

Equation (5) is the simple but fundamental macroeconomic relation that shows that the excess of national savings over national investment is equivalent to the current account, and vice versa[5]. Perhaps more revealing, (5) can be rewritten as:

(6)   S = I + CA

where (6) indicates that national savings can be used to fund national investments in addition to investments in foreign assets that are equal in magnitude to the current account surplus, and vice versa[6].

Equations (5) and (6) apply quite pertinently to the Lebanese economy. From 1992 to 2015, the current account averaged a deficit of -23.1% (see Table (1)), and was in deficit each and every year. What is interesting is that it has remained continuously in deficit, despite international

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[3] In standard terms, net factor income includes wages, profits, and interest income earned abroad and calculated on net basis, turning GNP into the income earned by nationals, not by domestic residents.

[4] Net transfers could be personal, like remittances from non-residents, or public like foreign grants.

[5] For instance, relatively lower savings -- or higher consumption -- coupled with excessive investment (a negative S-I) translate to higher demand for goods and services, including imports, thus rendering a deficit in the trade account and consequently the current account (a negative CA).

[6] More accurately, the current account is identical to the change in net foreign assets, the latter being positive in the case of CA surplus and negative in the case of CA deficit.

evidence showing that the current account tends to balance in the long run[7]. So whose fault was it in Lebanon? Was it a case of excess investments in an economy re-building after the civil war? Or was it a case of too little savings? And if the latter, who was responsible for the shortage in savings, the public or the private sector?

	$S_p - I_p$	BB	CA	I_p	S_p
Table (1) : Savings, Investments, and the Current Account (%GDP)					
1992	-35.1	-14.7	-49.8	27.6	-7.5
1993	-40.2	-8.8	-49.0	26.1	-14.1
1994	-25.1	-19.2	-44.3	19.8	-5.3
1995	-23.5	-18.4	-41.9	19.7	-3.8
1996	-15.4	-21.7	-37.1	20.6	5.2
1997	-1.0	-27.0	-28.0	20.5	19.5
1998	-9.3	-18.1	-27.4	24.8	15.5
1999	-3.1	-15.7	-18.8	24.7	21.6
2000	7.1	-24.2	-17.1	25.5	32.6
2001	-0.7	-18.5	-19.2	24.5	23.8
2002	-1.3	-14.1	-15.4	26.8	25.5
2003	0.1	-13.3	-13.2	25.8	25.9
2004	-6.9	-8.6	-15.5	26.9	20.0
2005	-5.2	-8.4	-13.6	19.0	13.8
2006	3.5	-10.4	-6.9	20.2	23.7
2007	1.1	-10.8	-9.7	25.0	26.1
2008	-0.1	-9.6	-9.7	28.4	28.3
2009	-4.4	-8.2	-12.6	32.2	27.8
2010	-5.8	-7.5	-13.3	26.7	20.9
2011	-9.8	-5.9	-15.7	25.3	15.5
2012	-16.2	-8.9	-24.6	22.5	6.3
2013	-17.5	-8.4	-25.9	22.5	5.0
2014	-19.3	-6.0	-25.3	22.6	3.3
2015	-19.3	-7.4	-18.2	21.0	1.7
Average	**-10.31**	**-13.08**	**-23.10**	**24.12**	**13.81**

Source: IMF. Country Report: Lebanon. Various Years

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[7] Fundamentally, this means that changes in national savings that persist lead to parallel changes in investment; this is known as the Feldstein-Horioka effect (Feldstein and Horioka, 1980). It also implies that national savings that are broadly in line with national investment reduce vulnerability to uncontrollable international capital flows.

3. Private Savings and Budget Deficits

Savings in the national economy is divided between the public and private sector[8]. To assess the behavior of each within the context of the macro-economy, (6) can be reformulated as:

(7) $S_p - I_p + S_g - I_g = CA$

where S_p and I_p are private savings and investment respectively; and, similarly, S_g and I_g are public savings and investment. Since $S_g = T - INT - C_g$, where T is government tax revenues, INT is interest payments on the debt, and C_g is public consumption[9]; and since T - INT - Cg - I_g, where I_g is public investment or capital expenditures, is equal to the budget balance; then we get $S_g - I_g$ as equal to the budget balance, BB. Hence, (7) becomes:

(8) $S_p - I_p + BB = CA$

Equation (8) shows the interesting relation that, even in the case where private savings is in excess of private investment, the current account could be negative if the budget deficit is too large (its absolute value is larger than $S_{p-}I_p$), to generate what is famously known as the "twin deficits". In fact, in the case where private savings is less than private investment, then each of $S_p - I_p$, BB, and CA is negative, and we have what we can aptly call "triple deficits".

More vividly, Table (1) and Figure (1) show the behavior of all these variables as a percentage of GDP from 1992 to 2015 for Lebanon, and they clearly outline the case of "triple deficits". Not only the budget and the current account were in deficit throughout the period, but private savings was below private investments as well. So, as important, the country suffers from a deficiency in both private and public savings. It is customary to blame the government for being profligate, but the Lebanese private sector is not a model of thrift either. In fact, private savings was negative during the early post-war years, reaching -3.8% of GDP in 1995. It recovered and turned positive afterwards, culminating at 32.6% in 2000 as a result of the post-war reconstruction boom. However, it fell thereafter but remained positive, and even got a shot in the arm in the short-lived period of 2006-2009, driven by the Doha Accord and the recovery in the real estate sector. And, not surprisingly, it fell considerably towards the end of the period when the adverse implications of the domestic political paralysis and the war in Syria proved too much to bear. Overall, it averaged 13.81% throughout the period, close to 8% less than the average for a middle-income country[10].

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[8] In turn, private savings are divided between household and corporate savings. There are, however, no available data for each in Lebanon.
[9] In other words, INT plus C_g are equal to government current expenditures.
[10] See Collins (1991).

Figure (1): "Triple Deficits"
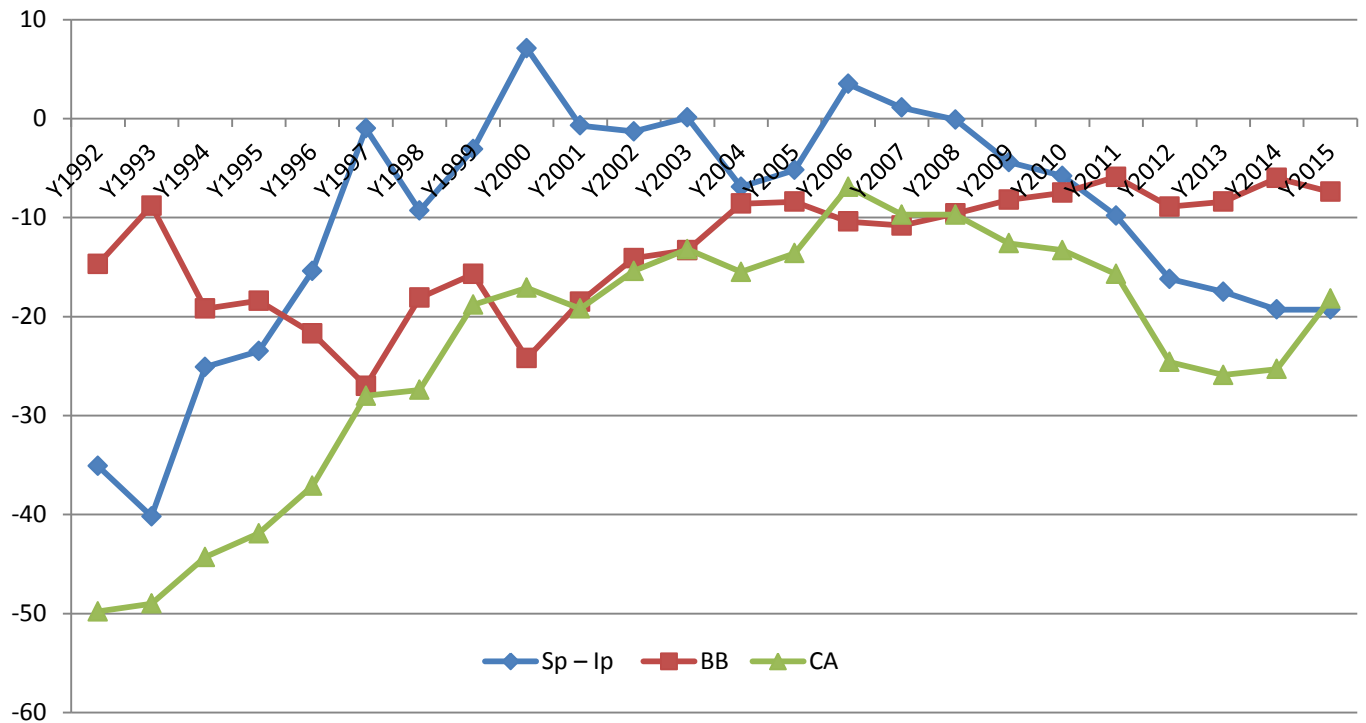
4. Determinants of Private Savings

The Lebanese private sector can't be considered a big investor in a rebuilding economy – private investment averaged a moderate 24% during the period – so the onus of a negative S_p -- I_p is mostly on a relatively low private savings. This, coupled with recurring budget deficits, produced the hemorrhage in the current account, and only occasionally did strong capital inflows allow the country to avert balance of payment problems and to accumulate needed foreign reserves.

So relieving pressure on the current account requires strengthening private savings and eliminating its volatile behavior, *for a given level of investment*. And to do that, we need to know the determinants of private savings in Lebanon. One way of modeling private savings is to work through the determinants of equation (8). Starting with private investment, the simplest formulation of investment is to assume it a function of the nominal interest rate, i, and the growth rate of real GDP, dy (ala the accelerator theory):

(9) $I_p = f(i, dy)$

As to the current account, we can simply make it dependent on income, Y, and the change in the real exchange rate, de (with e = P/EP^*, where P is the domestic price level, E is the nominal exchange rate or the price of 1 unit of foreign currency in LBP, and P^* is the foreign price level):

(10)   CA = f (Y, de)

Assuming BB is exogenous (predetermined by the political process), we can utilize (9) and (10) to formulate from (8) the determinants of private savings as:

(11) S_p = f (i, dy, Y, de, BB)

Equation (11) is pretty much the standard functional form for private savings in the literature[11]. It depends on non-policy determinants as given by the growth rate of real income, dy, and by the standard of living, Y; and on policy determinants as reflected by the interest rate, i, for monetary policy, by the budget balance, BB, for fiscal policy, and by the change in the real exchange rate, de, for exchange rate or commercial policy.

5. Policy and Reform Implications

We can't do a rigorous estimation of equation (8) because of the short time-series data, but an analysis of the equation can have a lot of bearing on what determines private savings in Lebanon and what are the proper policies and reforms that can enhance it.

We start with interest rates. Since 1997, Lebanon has been following a de facto fixed exchange rate regime vis-à-vis the USD, which garners Lebanese monetary policy to be in line with the US one[12]. This also means that interest rates in Lebanon are mostly determined by US rates plus a risk premium. But though nominal interest rates escape full control in the Lebanese context, real rates don't. In fact, most evidence in developing countries points to a positive relation between real interest rates and private savings, which the Central Bank can induce by seeking lower inflation rates[13]. And the same holds true with respect to exchange rates. Though the nominal exchange rate is fixed, the real exchange rate is not, and can change with changes in Lebanon's inflation rate relative to that of its trading partners. However, the evidence of the effect of real exchange rates on private

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[11]   For a comprehensive survey of the evidence, see Loayza et al (2000).
[12] This is in accordance with the "Impossible Trinity", which states that a country can't have monetary policy independence in the presence of free capital mobility and fixed exchange rates.
[13]   One of the notable exceptions is China, where the relation is negative, implying the higher real rates reduce private savings because of the dominance of the wealth effect over the substitution effect; see Nabar (2011).

savings is largely ambiguous, so policy guidance is of little use here[14]. Notwithstanding this ambiguity, note that a policy of lower (depreciating) real exchange rates from reduced relative inflation rates could *improve* the current account through "expenditure switching", mainly by stimulating exports and discouraging imports since, at an average close to -30% of GDP, trade deficits contribute mightily to current account deficits.

One of the strongest positive effects on private savings is that of real GDP growth, which naturally means that all policies that favor higher and sustained growth should be encouraged[15]. Similarly is the effect of per-capita income[16]. The interesting effect is that of budget balance, where most of the evidence shows that it hardly has an impact at all[17]. However, that does not obviate the need for a reformed fiscal policy in Lebanon, not only to reduce budget deficits so as to increase *national* savings, but also to increase *private* savings through changes in tax instruments. Most salient are reductions in corporate taxes to increase corporate savings[18]; and reductions in interest taxes to increase household savings. The latter is particularly important since changes in nominal interest rates are usually transitory, depending on the stance of monetary policy, whereas changes in interest taxes produce permanent changes in after-tax interest rates. Given the reasonable prevailing tax rates in Lebanon at 15% for corporate and 5% for interest, the sound policy implication is that there should *not* be any attempts at raising them and causing private savings to fall in the process.

It is important to note that, of the non-policy determinants, one crucial variable that is missing from equation (8) is the dependency ratio, which has a negative effect on private savings, with Lebanon's dependency ratio at 35% against an average for middle-income countries of 31%[19]. Of the policy determinants, there are in turn three crucial variables that

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[14] The reason is that, for instance, depreciation in the real exchange rate lowers real wages and hence household savings; whereas, by lowering real wages, it increases corporate profits and hence corporate savings; and, as a result, the balance of the effect becomes ambiguous. See Montiel and Serven (2009).

[15] The ingredients for good and sustained growth are well-known in the literature: more capital, through higher fixed investments; better capital, through quality labor and technology; and superior institutions, through decent and clean governance. The first two broaden and deepen capital, while the third improves its operating environment.

[16] See Loayza et al (2000).

[17] The effect is largely the failure of the Ricardian Equivalence theory to hold, a theory which states that budget *deficits* will generate *more* private savings because both households and corporates will save more now so as to pay for the higher taxes needed to cover the deficit in the future.

[18] Note that this aspect of fiscal policy could call also for higher dividend taxes in order to reduce the distribution of dividends and increase retained earnings and consequently corporate savings.

[19] For those below 15-years old; see CIA (2016). It is Interesting to note that another important non-policy determinant is income distribution, but its impact on private savings is ambiguous. This is because, in the case of an unequal distribution of income, most of the income will be in the hands of rich households who tend to save *more*, however that leaves the economy with reduced effective aggregate demand that *lowers* corporate profits and savings; hence, the ambiguous effect.

are missing[20]. The first is pension systems, where fully-funded pension schemes or mandatory retirement programs are known to increase private savings but pay-as-you-go or defined-benefits pension systems do not – no doubt an area of reform that is badly needed for the defunct defined-benefits, pay-as-you-go pension systems in Lebanon. The second is capital account liberalization which tends to lower private savings since the latter could be partially substituted for or replaced by foreign savings or borrowings. However, there is little room for policy action here to *restrict* capital movements, since a free capital account has been a defining feature of the Lebanese economy since independence. The third is liquidity constraints which have the effect of increasing private savings by making credit difficult to get hold of; in the Lebanese context, this means that reckless and too-permissive credit policies and availability should be curtailed.

6. Conclusion

The feeble structure of Lebanese savings has been examined by linking it to Investment, the current account, and the budget balance. Moreover, private savings have been noted to be equally deficient in relation to public dissaving, leading to the formation of a "triple deficit" alongside the current account and the budget balance. These imbalances are not allowed to continue because, if they persist, they could have severe adverse effects on the country's external position, especially when capital inflows are not forthcoming.

The determinants of private savings have been attributed to policy and non-policy variables. In turn, these policies have been analyzed to highlight the potential of bringing in the required level of sustainable change to the country's economic imbalances. More specifically, and after discounting monetary policy due to constraints on both the nominal interest rate and the fixed exchange rate to the USD – though not on real rates because of changes in relative inflation rates -- fiscal policy seems to provide room for reform to improve both national and private savings. In this regard, tax measures ought to be focused at generating sustainable government revenues *without* adversely affecting the private sector's contribution to savings, that are diminished by levying higher corporate and interest taxes on deposits. Additionally, fiscal reforms need to be introduced to stem tax evasion and induce better collection. At the same time, adopting transparent regulatory policies such as accountability will curb corruption and shore up finances.

A further policy-driven measure should aim at replacing the pay as you go/defined benefits pension system by mandatory retirement programs which have proven to increase private savings. Incidentally, a similar measure will contribute to the revival of local capital markets by instigating private pension funds to invest in local financial instruments. In parallel, it will

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[20] See Loayza et al (2000).

incentivize employers as well as employees to increase savings and to invest in similar funds and assets.

As for the most prominent determinant of savings, this goes to the macro/industrial policy of maintaining high real GDP growth. Its viability rests on encouraging capital investments -- rather than on short-run, arbitrary, or opportunistic projects -- that will produce large multiplier results deemed sustainable in the medium-to long-run. Of course, such initiatives need to be undertaken in a transparent governance environment and supporting business climate to ensure their long-term outcomes.

On a final note, the 2012-2015 period in Table (1) reflects a period of low private savings and increasing "triple deficit" indicators that are reminiscent of the early 1990s era when Lebanon had emerged from its 15 year-old civil war. And given the current challenging political and economic scene that is weighing heavily on all facets of Lebanese life, policy makers need to be seen as holding firmly the helm, lest the situation gets out of steer and becomes unsustainable.

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