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Introduction

In economic policy circles there is a debate on the relative benefits and costs of adopting a “cold turkey” approach to policy-making where all policy changes are made at the same time and at once or, alternatively, of having a more gradual implementation of policy, or sequencing. The general understanding is that sequencing provides a more ordered approach to policy making and gives a breathing space for the economy to adjust against multiple policy shocks. In contrast, the argument for policy concurrence is mostly a political economy argument: undertaking reform policies all at once allows losers from one policy action to be compensated by gains from a different policy action, thus making reform benefits more palpable to the wider society; and, as important, it preempts reform adversaries and denies them the time to group and to formulate a serious opposition to the policy reform agenda.

In the context of Lebanon, and notwithstanding the current dithering of politicians, economic reforms have become increasingly inevitable, even with or without the requisite political will. The day of reckoning with the need for fundamental economic reforms is here and now, as the economy is collapsing and rapidly so. For the Lebanese economy, this means undertaking primarily three essential reforms: fiscal, exchange rate, and banking reforms. Economic theory suggests that we start with fiscal reforms as they would bring stability to public finances and signal good intentions and better governance practices; this is to be followed by exchange rate reforms so as to eliminate overvaluation of the exchange rate, and strengthen competitiveness and productivity in the tradable sector of the economy and consequently the trade account; and then banking reforms and restructurings which should

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come last, as they enhance confidence and bring down interest rates and, more important, allow financial intermediation to allocate funds to the productive, tradable parts of the economy and minimize in the process any misallocation of funds or resources

In this note, we test the desirability of such policy sequencing, and find however that the opposite is true. In accordance with the structure of our model, reform sequencing produces a monthly loss of output of at most 0.1408% over the period of study. For comparison purposes the actual growth rate in output averages a monthly 0.6526% over the whole period. Of course this result depends on the choice of policy instruments, and the magnitude of policy changes. Therefore our result is specific to the assumptions made and should not be hastily generalized to all contexts¹. But it also shows, at least initially, that policy concurrence looks like a more viable reform option for the desperate Lebanese economy.

Analysis

In Azar, Bolbol, and Mouradian (2020)², we have estimated the following IS function for the Lebanese economy (with the sign on top of the independent variable representing the sign of the *expected* relation between the corresponding variable and Y):

$$Y = Y \left(\begin{matrix} + & - & + & + & + & - & + \\ G, T, \Delta Y_{t-1}, Y_f, E, R_d, RM \end{matrix} \right)$$

Where Y is nominal output, G is government expenditures, T is tax revenues, Y_f is foreign income, E is exchange rate of LBP vs. Euro, R is the weighted average of the deposit rate on Lebanese pounds; and RM are remittances. The estimation of the relationship for the Lebanese nominal output Y³ is carried out by robust least squares over the monthly period from March 2008 to November 2018, comprising 129 observations and covering both the boom (2008-2011) and bust (2012-2018) periods before the onset of the crisis in 2019. Robust least squares enable the researcher to take into account the possible presence of outliers in the dependent variable and in the independent variables. The summary of the *actual* estimated results is as follows. A 1% increase in foreign output changes domestic output by 2.652%.

² This naturally implies that our result is not robust if we consider different portfolios of reform and sequencing plans. We have done sensitivity analyses to that purpose and found the implication to be true enough. Results of the analyses are available on request.

³ "An IS-LM-BP Model for Lebanon: A Simple Empirical Analysis", *International Research Journal of Finance and Economics*, Issue 177, January 2020.

⁴ Y is represented by a proxy, which is BDL's coincident indicator converted into nominal terms by multiplying it with Lebanese CPI.

⁵ The reason could be that remittances are used mostly for consumption purposes and they lead to more imported goods and services in the process.

A 1% increase in the Euro exchange rate -- or a 1% depreciation of the Lebanese pound -- changes domestic output by 0.423%. A 1% increase in the deposit rate for Lebanese pounds changes domestic output by -0.462%. A 1% increase in taxes changes domestic output by 0.038%, quite a surprising result but it shows that taxes are under-collected in Lebanon. A 1% increase in government expenditures changes domestic output by 0.075%. A 1% lagged growth rate of domestic output changes domestic output by 0.375% (according to the accelerator principle). Remittances, surprisingly, enter statistically insignificantly, and its estimated effect is quite small⁴. All other variables explain significantly domestic output at the usual marginal significance level of 5%.

Having in hand the above model, we will begin by subjecting the data to two types of policy simulation scenarios. The first scenario involves changing, from the start and at the same time, taxes by +20%, government expenditures by -20%, the euro rate by +20%, and the domestic interest rate by -20%; these represent the concurrent policy reforms. The second scenario is for changing with the same magnitudes both components of fiscal policy at the start, changing one year later the exchange rate for the euro, and changing after two years from the start the domestic interest rate – thus representing the sequenced policy reforms. For each scenario we plug in the changes in the estimated model, and thereby we compare the evolution of domestic output over the whole period, i.e. till November 2018. It is expected that the two scenarios will converge after some time⁵. Three notions need to be considered and can be detected: the first notion is to find out the speed of convergence; the second notion is to find out the policy cost, i.e. how much is the differential cost effect of undertaking reform; and the third notion is to find out the differences in the simulated series, which measures the sequencing cost. In this respect, it is expected that the second scenario, i.e. sequencing or gradualism, is less costly relative to the first scenario. But as a point of fact, the analysis points to the opposite: sequencing is costlier and produces lower output initially and the extent of the differential cost is calculated.

The first notion is found to have a cut-off period on January 2011; see the Figure 1 below. This cutoff is an estimate of the speed of convergence. It takes 35 months for the two scenarios, and series to converge. Initially the sequencing produces less output. However, after January 2011 the differences in the two scenarios are very close to being nil.

⁶ The scenarios will converge because the policy shocks are the same for the two scenarios but they are just delayed in the second scenario. The ultimate effect should be the same after some short convergence time, which is found to be as fast as 6 months from the last change.

The second notion is the policy cost, which can be called an austerity cost, because the reforms are usually painful. This cost is estimated to be a monthly 0.0336% over the whole period. Although this rate is positive it is nevertheless statistically not different from zero. For comparison purposes the actual growth rate in output averages a monthly 0.6526% over the whole period.

The third notion is to identify the cost of sequencing. This is measured by the difference between the growth rate of the output under the concurrent policy, and the growth rate of the output when sequencing is applied. The average difference is a monthly 0.1408% over the whole period. Although this rate is positive it is nevertheless statistically not different from zero.

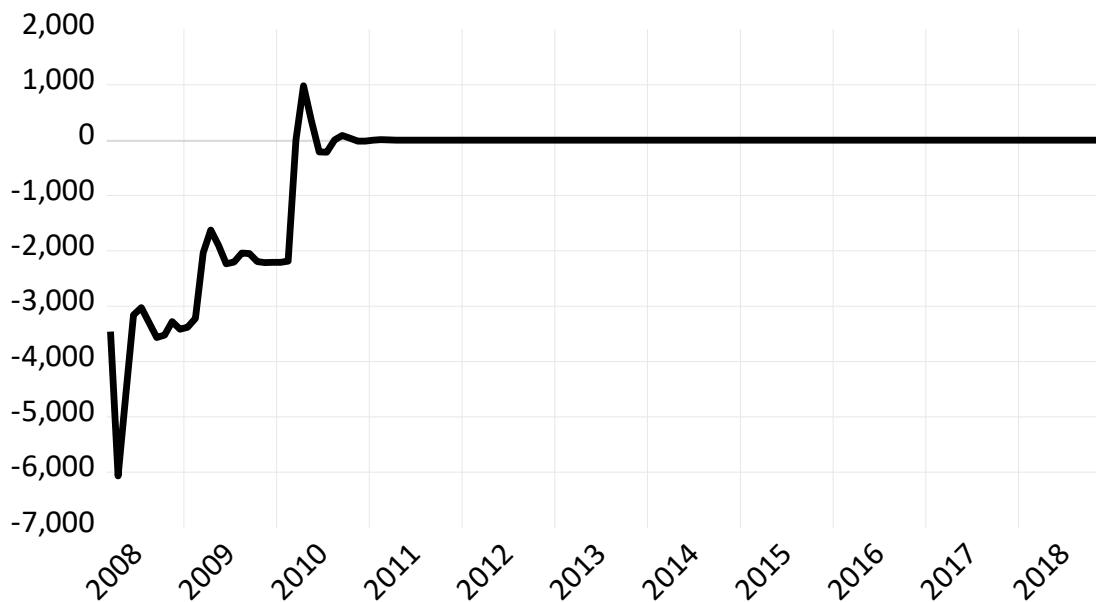


FIGURE 1
SHORTFALL IN OUTPUT

Conclusion

Subject to the limitations given by the type and magnitude of policy changes utilized in the model, and noting that the results depend upon the reform plan and sequencing chosen, we found that, initially, reform sequencing in Lebanon is inferior to reform concurrence. This makes the latter better on economic grounds, besides being more feasible on political economy grounds. We think that the reason for this result arises from the *interdependent* nature of our three reform prongs: fiscal, exchange rate, and banking. Fiscal reforms should ease crowding out and lower interest rates,

while the halt to deficit monetization should increase BDL *independence*. In turn, the depreciation in the exchange rate and the return to a flexible exchange rate regime should add to BDL independence and allow it to have more control over interest rates. So starting these reforms at the same time captures the nuances in their interdependence and seizes their beneficial economic impact, keeping in mind that public governance reforms and banking restructuring could require more prolonged times.

Lastly, two additional concluding remarks are in order. First, the benefits from reform concurrence could be maximized if two things are met: i) a capable policy making team that can efficiently implement the reforms and eliminate any logjams that might arise; ii) a social safety net, however basic, that can minimize any adverse social effects from these reforms, especially the first two. Second, it is interesting to add that international financial institutions, like the IMF and the World Bank who usually underwrite reform programs in crisis countries, favor policy concurrence when the political economy of reforms dictates it⁶ -- as no doubt is the case in Lebanon now with its strong political interest groups -- which makes the results in this note worth considering, especially when the country gets back to its senses and starts its belated and much-needed economic reform program!

⁷ It is crucial note also that, in Lebanon, what makes policy concurrence more feasible is that the *opportunity cost of reforms is now very low* as the economy is in a severe depression and more than a third of the labor force is unemployed.

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