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Structural Fiscal Rule: A Proposal for Mexico

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January, 2011

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Abstract

Due to the absence of a fiscal reform that increases tax revenues significantly in the near future, Mexico needs to adopt a structural correction in its public finance through the implementation of a rule. This correction will eliminate budget volatility and will give fiscal policy more countercyclical power. Since the structural rule will promote fiscal certainty, the country will reinforce investors' confidence and will strengthen public finances. The rule does not substitute the fiscal reform needed, but it makes the reform less urgent since it introduces a structural discipline in the government expenditure, which also makes the budgeting process more efficient. This paper proposes and evaluates the implementation of such a fiscal rule to the case of Mexico.

JEL: H61, H62, H68.

Keywords: Fiscal policy, public finance, budget equilibrium, federal budget, potential output, structural rule, fiscal reform.

^{*/} The author would like to thank Dr. Lawrence R. Klein (Nobel Laureate in Economics 1980) from the University of Pennsylvania and Dr. Ricardo Ffrench-Davis from the University of Chile for their valuable comments and suggestions to improve this research paper.

1. Overview

In a country where public finance is highly dependent on both the business cycle and the price of a single commodity, fiscal policy becomes remarkably volatile and tends to amplify the ups and downs of the cycle: overheating the economy in booms and deepening the contraction in recessions. To isolate public finance from that volatility, providing more fiscal certainty and ensuring long-term sustainability, fiscal policy should be subject to a structural rule that eliminates its procyclical nature and strengthens its countercyclical power. In fact, fiscal policy should be used to influence the business cycle, not the other way around. In other words, it should be used to moderate the cycle when growth outpaces its potential rate, and it should stimulate growth when it stays below potential. The structural rule is also a powerful fiscal stabilizer and a mechanism to promote a growth path consistent with production capacity. In addition, the rule contributes to control inflation since it promotes growth around potential.

In Mexico, given the political obstacles to implement a profound fiscal reform, the introduction of a structural fiscal rule becomes the option politically feasible to ensure fiscal sustainability and reduce the dependence of fiscal revenues from oil. Additionally, the approval of a fiscal reform in the future could improve the rule's efficiency, since the

reform would expand the structural level of tax collection through the increase of potential GDP.

The fiscal rule would also eliminate the inefficiencies in the design and execution of the federal budget by preventing the country from unexpected and dramatic budget cuts every time that the economy faces internal or external shocks. Hence, the rule can turn itself in a powerful instrument of the country's macroeconomic defense system.

2. Fiscal procyclicality and budget volatility

Over the past three decades, the Mexican economy has reproduced and even amplified the international business cycle, particularly the cycle of the U.S. economy, given the openness process initiated in the decade of the 80s. Due to the existence of macroeconomic imbalances, the country had to implement policy adjustments to correct the disequilibrium. Thus, the traditional recipe always included a currency devaluation accompanied by fiscal and monetary tightening¹. Under these circumstances, the economy not only suffered the negative effects of the external shock but also the demand depression caused by the policy adjustment, consequently resulting in deeper recessions.

Since 1994, with the trade integration with North America, the Mexican economy strengthened its dependence from the U.S. business

¹ An example was the peso crisis at the end of 1994; see Klein and Coutiño (1997).

cycle. During the past two recessions in the U.S. (2001 and 2008-2009), Mexico amplified the economic falls of its main trade partners. Even though monetary policy did not react to those two crises by hiking the interest rate, fiscal policy did tighten in 2001 and ended 2009 cutting the budget twice, after pretending to be stimulative at the beginning of the year. The limited fiscal stimulus in 2009, and the slow monetary relaxation, did not allow the economy to decouple from the U.S. cycle for the first time in decades. However, despite the low counter-cyclical power of fiscal policy, Mexico was able to avoid a deeper contraction but did not escape a fall of 6.5%, while the U.S. only fell 2.4%.

Same way, fiscal procyclicality also works in boom times. In this case, fiscal expenditure expands with higher economic growth, thus additionally fueling the economic expansion. However, given the absence of a rule or commitment, nothing forces the government to save in booms in order to spend in crisis. This raises the need of a stricter fiscal discipline in times of economic expansion to increase the countercyclical power in times of recession.

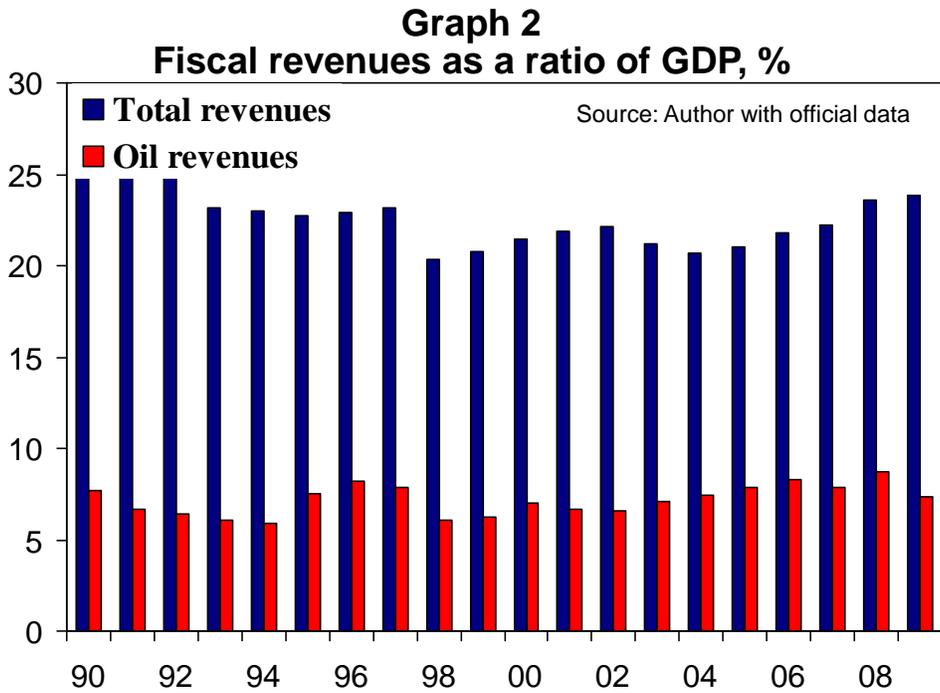
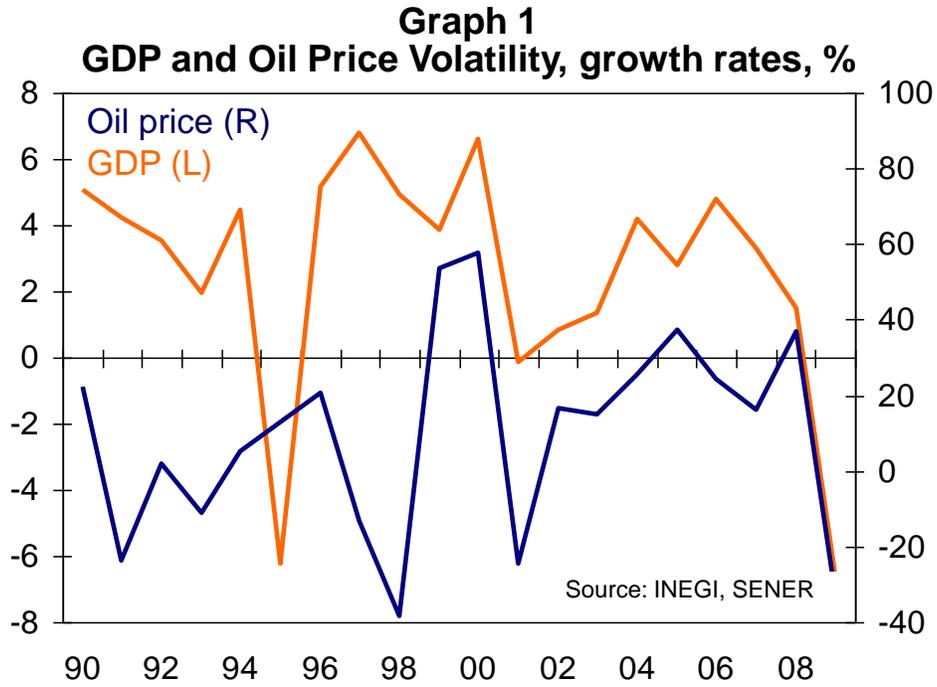
Mexico has shown political difficulties to implement a deep fiscal reform that raises tax collection and reduces fiscal dependence from oil revenues. Given the political rejection to reforms, the introduction

of a structural correction becomes the second-best option to provide public finances with long-term sustainability. As a result, the rule will allow reduce the country-risk level, but will also give fiscal policy high power for growth stabilization. The rule does not mean that fiscal reform becomes unnecessary, but only less urgent.

The country's public finances, every year, are mostly determined by the expected economic growth rate and the estimated oil price. As a consequence, the federal budget results affected as soon as any of those two factors change significantly. This makes the federal budget extremely volatile and subject to unexpected cuts every time that the economy suffers a negative shock, thus aggravating the economy's downturn and deteriorating the vicious cycle of “lower spending-poorer growth-deeper fiscal imbalance”.

The evident fiscal instability makes it imperative for the government to break the fiscal dependence from the business cycle and from the volatility of international prices². This can be done by the implementation of a structural rule, which makes the federal budget to be subject to more stable factors, such as the potential growth rate and the long-term price of oil. This way, the rule will eliminate the inefficiencies represented by the stop-and-go process in the economy.

² A conceptual analysis on how to stabilize public finances can be found in Coutiño (2010).



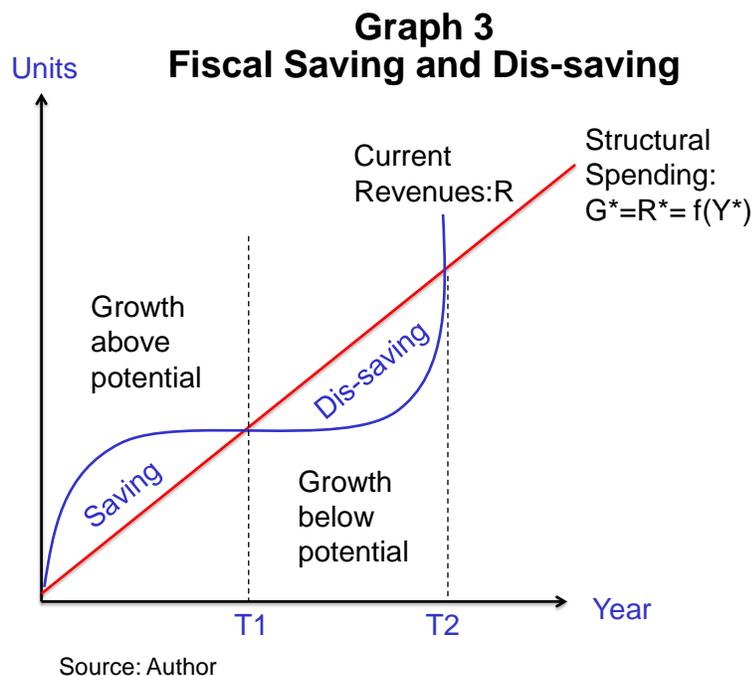
3. The structural rule approach

The structural equilibrium can be defined as the level of spending that matches the level of structural revenues determined by potential GDP, thus resulting in a zero structural balance. Given that potential growth does not change in the short run, since it represents the economy's steady state, then structural revenues also grow at a constant rate. This way, structural fiscal revenues are insulated from the volatility of the business cycle, consequently providing stability to public expenditure.

Obviously, tax revenue is the only component subject to potential growth. The second component, fiscal oil revenues, is strongly subject to oil price volatility. In this case, it is important to compute a structural price for oil, which could be estimated as a long-term average with sufficient history and some futures. Hence, since the structural price is determined mechanically, it will be more stable and will avoid the political manipulation of estimates used in the preparation of the federal budget.

The structural balance rule is an automatic mechanism of fiscal correction, which generates a surplus in times of booms and a compensation of spending in times of downturns. As we can see in graph 3, given that the growth rate of public spending is constant over

time (a function of potential output Y^*), the structural rule automatically generates savings when current economic growth outpaces its potential rate, as in T1 (the current level of fiscal revenues, R , is higher than its structural level, R^*). On the contrary, in T2 a deficit can be cancelled (using savings from the past or new debt) when current economic growth is lower than its potential rate, since current fiscal revenues are lower than its structural level.



Therefore, the rule not only generates fiscal certainty but it also promotes a steady growth path, since it states that the level of public expenditure must be consistent with the economy's potential capacity.

Since a structural fiscal equilibrium is reached when the level of public spending equals the level of structural revenues, which depends on the potential output, then the rule's application involves the estimation of some variables and coefficients. The structural fiscal equilibrium is defined as:

$$SFE = YF^* - GF^* = 0 \quad (1)$$

where SFE stands for structural fiscal equilibrium, YF^* is the structural level of fiscal revenues, and GF^* is the structural level of fiscal expenditure. Obviously, the equilibrium states that $SFE=0$, which requires that $YF^*=GF^*$. Hence, regardless the growth rate expected by the government for a current year, the expenditure will always expand at a constant rate determined by the potential growth rate ($\%GDP^*$). This comes from the fact that the structural level of the expenditure is automatically determined by the structural level of revenues.

Total structural revenues have two components, tax collection (Tx) and fiscal revenues from oil (OR). The first depends on economic activity, while the second on the oil market. To compute their structural levels (Tx^* , OR^*) we have to insulate them from the volatility, thus:

$$YF^* = Tx^* + OR^* \quad (2)$$

The structural tax collection can be fairly estimated by the fiscal elasticity applied to the potential output. Fiscal elasticity (ξ_{fp}) is defined as the percentage change in tax revenues ($\%Tx$) generated by the percentage change in output ($\%GDP$):

$$\xi_{fp} = \partial(Tx)/\partial(GDP) = (\%Tx)/(\%GDP) \quad (3)$$

where ∂ is the partial derivative. To compute the growth rate of structural tax revenues ($\%Tx^*$), we multiply the fiscal elasticity by the potential growth rate ($\%GDP^*$):

$$\%Tx^* = \xi_{fp} (\%GDP^*) \quad (4)$$

from here, structural tax revenues grow at a constant rate given by a proportion of the potential growth rate. Having an initial level of structural tax collection, by assuming that GDP grows at its potential rate in a particular year, we can compute the level of structural tax collection for the following year (Tx^*). We thus determine federal tax revenues free of the cyclical volatility.

Regarding the potential output, a fair estimation can be obtained from the use of a Cobb-Douglas production function with technological change³, where the degree of returns to scale does not change the estimated parameters significantly. The potential growth rate obtained

³ For an econometric estimation for Mexico, see Coutiño (2000).

is similar to those computed by the Bank of Mexico⁴, around 3.5%⁵. Moreover, given the disinvestment process suffered by the Mexican economy in the past decade⁶, a potential growth rate of 3% would also be representative.

The second component of total revenues, fiscal oil revenues representing one third of the total, depends on the volume of the country's crude production and international oil prices. Given that production capacity does not change in the short run significantly, then the volume produced and exported can be taken as constant.

Therefore, the volatility in oil revenues is mostly explained by international prices of oil. To reduce the effects of price volatility on fiscal oil revenues, it is necessary to estimate a structural parameter given by the long-term price. The structural oil price can be obtained as the average of prices in the past 20 years adjusted by the average of futures prices in the next 5 years. However, due to volatility in futures prices, since they are subject to daily news and geopolitical events, the inclusion of few years of futures would be enough. This way, the level of fiscal oil revenues are estimated free of price volatility.

⁴ See Banco de Mexico (2000).

⁵ The GDP average growth rate from 1970 to 2009 is exactly 3.5%.

⁶ See Coutiño (2009a), and Coutiño (2009b).

By now we have already determined the level of total structural revenues, which allows us to compute the structural expenditure by identity, and consequently the structural balance. From identity (1), the structural expenditure is also determined by the relatively constant growth rate of structural revenues.

$$\%GF^* = \%YF^* \quad (5)$$

4. Beyond the structural equilibrium

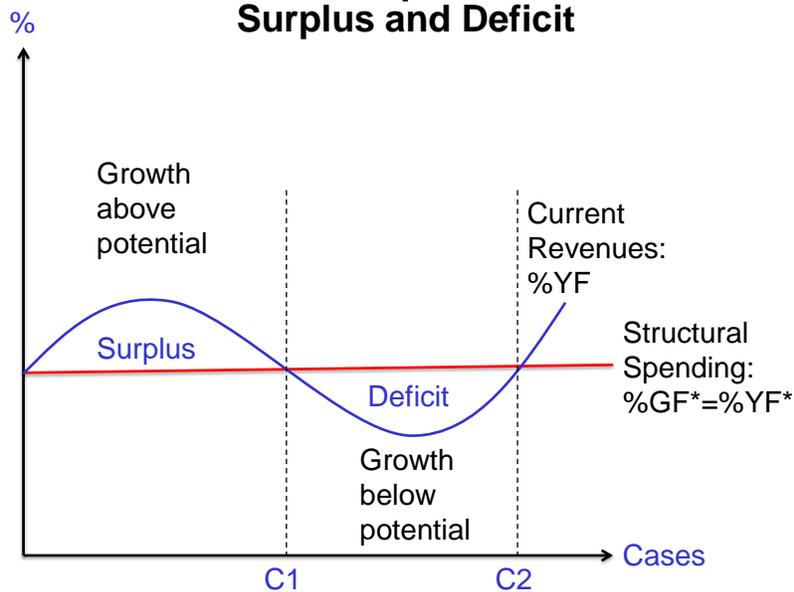
The introduction of the structural rule can be done at any point of the business cycle, with no need of initial conditions in terms of fiscal surplus⁷. Thus, in the first case (C₁) in Graph 4, if current economic growth exceeds the potential growth, then the rule automatically generates a fiscal surplus –since the growth rate of current revenues would be higher than growth of structural spending, which should be saved for the future. In other words:

$$\text{If: } (\%GDP) > (\%GDP^*)$$

then: $(YF) > (GF^*) \Rightarrow FB > 0$, where FB stands for fiscal balance.

⁷ However, as suggested by Ffrench-Davis, it would be more convenient for a government to start the rule during the boom side of the cycle.

**Graph 4
Surplus and Deficit**



Source: Author

On the opposite case (C₂), the rule generates a deficit, but given that there are no initial conditions in terms of savings in the past, then the government will be allowed to issue debt in order to finance the structural level of the expenditure.

If: $(\%GDP) < (\%GDP^*)$

then: $(YF) < (GF^*) \Rightarrow FB < 0$

Also, since the level of spending does not reduce with lower economic growth, then the economy's initial slowdown does not aggravate. This way, fiscal policy acts as a shock absorber, reducing the damage to economic growth. Hence, fiscal surpluses in the future would be used to cancel debt issued in times of low growth, and vice versa, future

deficits can be cancelled by savings generated in the past. This way, the federal budget is maintained unchanged regardless the current economic growth year by year.

The implementation of this rule in Mexico, however, is not free of troubles. Given the amount of restrictions and commitments to which the federal budget is attached, the acceptance of the structural rule will definitely face political resistance. For the rule to be efficient and effective, it must obligate the government to save every surplus generated in booms, which in principle eliminates the distribution of extra revenues to states and municipalities, among other things. Thus, political groups will not be willing to sacrifice the dividends they get from extra revenues of oil, to put them in a stabilization fund.

However, the proposed structural rule is flexible enough to accommodate that kind of political resistance. This implies a sacrifice from all parts, but particularly from the federal government. The solution to the political friction would imply to make the rule stricter rather than flexible. In other words, to accommodate those political demands and even finance social programs (education, poverty and employment), the government could set the rule at a level of a structural surplus of 1% of GDP instead of a structural equilibrium

(zero balance)⁸. This should be accompanied by the government's commitment to saving every surplus in excess of the 1% structural surplus. This way, resources equivalent to the initial 1% structural surplus can be used by the government to accommodate the political demands and social programs, without compromising the goal and efficiency of the rule. It is important to say that the 1% structural surplus, to be distributed politically and socially, would be equivalent to \$10 billion in 2011.

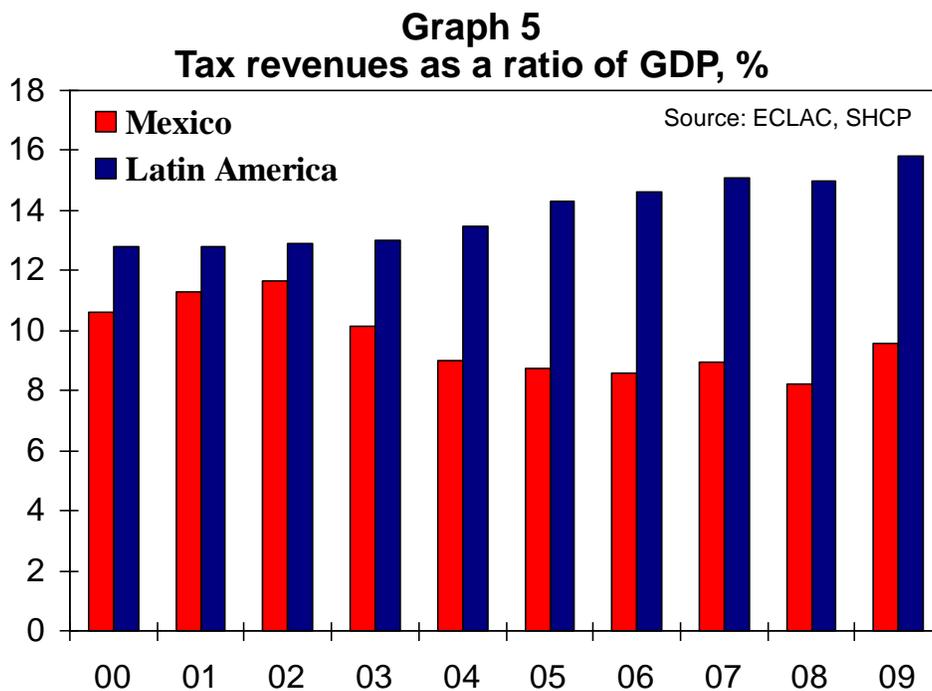
This version of the rule can certainly resolve the political frictions, but will also allow the government to deactivate the complicated distribution process of extra revenues from oil and will eliminate the political manipulation of the estimates for the oil price. In fact, states and municipalities would always receive the same proportion of resources generated by the structural surplus rule, 1% of GDP. In other words, the rule also provides certainty to states governments in terms of the extra revenues to be received every year, regardless the current price of oil in international markets.

5. Concluding remarks

The Mexican fiscal system is one of the weakest in Latin America and among the OECD members, given its low coefficient of tax revenues to

⁸ Chile originally set its rule at 1% structural surplus. See Velasco et al., (2007), and Ffrench-Davis (2010).

output. At the same time, the country faces increasing needs of modernization and social spending. In this sense, the optimal solution would be a profound reform that increases tax collection and makes public spending more efficient. However, the political system seems to be unprepared to approve an ample fiscal reform, as it has been demonstrated by the continuous rejection to any fiscal proposal made in the past ten years.



Mexico has wasted time in the past decade and the fiscal system remains inefficient. Fiscal uncertainty has started to damage the country-risk level, which will impose higher financial costs to the country in case of further fiscal deterioration. Thus, in the absence of a politically-feasible fiscal reform in the short term, the government

should adopt a structural correction and discipline in the exercise of its federal budget, as the one proposed. Such a correction not only solves the fiscal problem from the expenditure side, whose level is attached to structural revenues, but it also insulates the federal budget from the volatility generated by cyclical factors and international oil prices.

Indeed, the introduction of the structural rule would immediately eliminate fiscal uncertainty and would reduce the country-risk level, turning itself in a powerful instrument of stabilization and growth promotion. Even though the rule is not a substitute of the fiscal reform, it makes it less urgent. Likewise, the approval of a profound reform does not substitute the structural rule, it rather complements it. Thus, since the reform will certainly increase the economy's potential capacity, then the structural equilibrium will strengthen and give the fiscal policy a higher countercyclical power.

Finally, given that the structural rule provides fiscal certainty and also the means to automatically correct imbalances, neither the government nor markets would worry about short-term deficits, which would be transitory events by nature. The rule will also represent a significant dividend in terms of efficiency in the budgeting process, since it will eliminate the useless political debate regarding the size of the federal budget.

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