

Economic Watch

Spain

Madrid,
March 11, 2013
Economic Analysis

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Budget balance, structural unemployment and fiscal adjustments¹

Introduction

One of the most important questions in the current process of fiscal consolidation in many developed economies concerns the size of the fiscal adjustment and how quickly it is carried out. An excessive fiscal adjustment and/or one which is too fast can have dramatic effects on unemployment and growth, and jeopardize the fiscal adjustment process itself, by prompting a self-destructive fiscal consolidation (e.g., De Long and Summers, 2012). On the other hand, if the adjustment is insufficient and/or is too slow, it can prove to be ineffective and lack credibility by the financial markets, which, which is critical for the public sector capacity to obtain funding and renew its debt maturities. Thus, it is very important **to find the proper balance between growth and efficiency and credibility of the fiscal adjustment**. This balance is even more relevant when the debt to GDP ratio is high and, therefore, there is limited fiscal space.

One of the main factors that determine this credibility is whether the implementation of the fiscal adjustment brings about an effective reduction in the structural budget balance, i.e., the public deficit that exists once the effect of the economic cycle has been adjusted for. The factors which make up this structural balance are both fiscal and economic. In order to correct the structural deficit, permanent budgetary measures need to be applied along with substantial improvements in the management of public administrations' revenues and expenses; but also structural reforms are necessary to increase the potential output of the economy, reducing structural unemployment. Needless to say, the structural deficit cannot be observed, and the fact that all these factors have very different maturity periods makes it difficult to make the aforementioned balance.

The **European Commission has just published its winter forecasts** for 2013, where it has updated its estimates **on structural budget balance**.² As stated above, these figures represent the level of the budget balance that European countries will tend towards as they reach a neutral cyclical situation and reflect the magnitude of the true fiscal adjustment that they will have to undertake in the years to come. These estimates are crucial because they measure the success of the reforms in terms of the efforts that need to be made to reach a balanced structural balance.

Chart 1 shows the estimates of structural deficit for European economies. For ten of these economies, the structural public deficit exceeds 3% of their GDP. Spain is the country with the third highest structural deficit -after Ireland and the UK- in 2012, with 5.9% of GDP. Despite all the problems in the consolidation of its public accounts, Greece has a significantly lower estimated structural deficit, equivalent to half a point of its GDP.

Such a high estimated structural deficit for the Spanish economy is particularly striking considering that the unemployment rate exceeded 26% in the fourth quarter of 2012, which is prima facie evidence of a strong negative cyclical position. Given that the deficit forecast for 2012 estimated by the Commission for this structural component was 7% (very similar to the 6.7% which has just been announced by the Spanish government) and that the estimated one-offs measures represent 1%, this means that the cyclical component of the public deficit only accounts for 2.1 percentage points of GDP. In other words, most of the deficit estimated by the Commission in 2012 is largely due to its structural component.

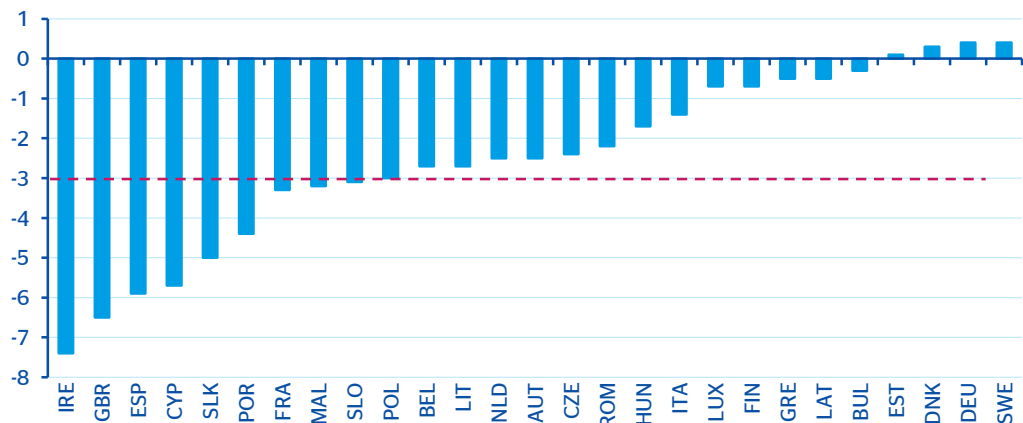
¹ The authors thank the comments and suggestions made by M. Cardoso, A. Díaz, J. R. García, C. Martínez-Mongay, P. Más, V. Pou, J. Sicilia and J. Varela.

² The Commission (http://ec.europa.eu/economy_finance/eu/forecasts/2013_winter_forecast_en.htm) distinguishes between structural deficit and adjusted deficit of the economic cycle depending on whether they include discretionary fiscal adjustment measures with temporary effects. For comparability reasons, along this Economic Watch we use the winter estimates of the European Commission for the budget balance as well as its estimate of the one-offs measures for 2012.

What is the relationship between budget balance and unemployment? Obviously, cyclical changes in unemployment are associated with cyclical changes in the budget balance. Consequently, as the public deficit converges towards its structural level, when the economy tends towards a neutral cyclical situation, unemployment simultaneously converges towards its structural rate. The public deficit and the unemployment rate can be observed but not their structural components, which have to be estimated, introducing uncertainty in key variables for economic policy in future years.

Chart 1

Structural budget balance in 2012 estimated by the European Commission



Source: European Commission (February 2013)

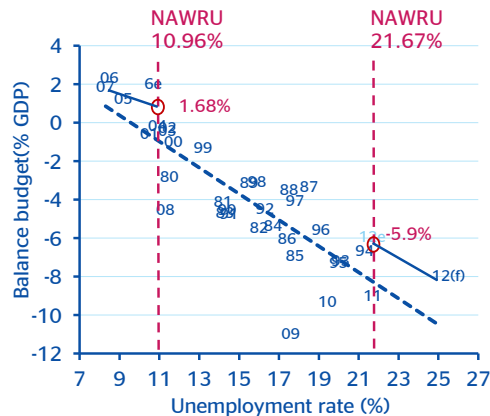
Chart 2 represents the budget balance, as a percentage of GDP, against the unemployment rate, which appears on the horizontal axis. The chart makes it evident that there is a marked negative association between unemployment and the budget deficit (the correlation between the two variables is equal to -0.84 between 1980 and 2012), due to the effects of the automatic stabilizers, present in public balances.³

This chart also displays two vertical lines corresponding to the structural unemployment rates in 2006 and 2012 estimated by the Commission. According to these estimates structural unemployment appears to be highly volatile and **strong procyclical ranging** from 11% (when the current unemployment rate was 8.5%) up to 21.7% (unemployment rate, 25%), almost eleven points of difference in only six years for a statistic that should be otherwise fairly stable. The first reading which can be made of these estimates is that **the Commission considers** that most of the fall in economic activity in Spain in recent years has, in fact, meant a fall in potential GDP, or, to put it another way, **that practically all the unemployment currently observed is of structural nature.**

On top of the vertical lines for the structural unemployment rates for 2006 and 2012, the chart displays the structural budget balance estimated by the Commission for those two years; 1.7% and -5.9% respectively. Given that the nominal budget balance in 2006 was 2.4% of GDP, it can be inferred that the cyclical balance estimated at the highest point of the real estate boom was slightly higher than half a percentage point of GDP. This is again is contradictory with the estimates by some authors (for example, Martinez-Mongay, Maza and Yaniz, 2007) who have found that between two and three points of GDP could be considered to be transitory revenues in those years. Furthermore, if the effect of the cycle on public spending is added, it may be concluded that the cyclical budget balance in 2006 should represent at least between three and four points of GDP.

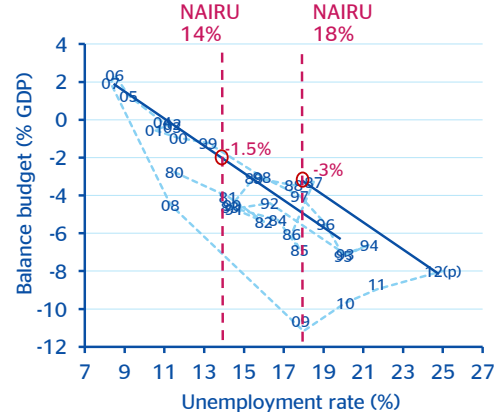
3: Although it is convenient to represent the budget balance as a percentage of trend GDP, the results are not very strongly affected when it is used as an approach to nominal GDP. For example, in 2006 the budget surplus was 2.4% of GDP and 2.5% of trend GDP.

Chart 2

Budget balance of Public Administrations and unemployment rate

Source: European Commission (February 2013)

Chart 3

Budget balance of Public Administrations and unemployment rate

Source: own calculation

A closer look at the numbers in Chart 2 casts additional doubts on the internal consistency of these estimates. In Chart 2, the two lines with a negative slope (solid lines), which project the combination of the budget balance and the unemployment rate in their respective structural rates, measure precisely the sensitivity of the cyclical deficit to the cyclical unemployment estimated by the Commission. For example, in 2012, for each point of cyclical unemployment, the budget balance fell by 0.63 pp, as a result of dividing the cyclical fiscal balance ($-2.1\% = -7\% - 1\% + 5.9\%$), including one-offs, by cyclical unemployment ($3.3\% = 25\% - 21.7\%$). It is important to note, at least for 2012, the sensitivity of the cyclical component of the budget balance to the unemployment rate estimated by the Commission is very closed to the value obtained by directly regressing the total budget balance on the unemployment rate that yields a regression ratio equal to -0.66 to be estimated.⁴

Chart 3 displays a calculation of the structural balance of the Spanish economy in 2006 and 2012 using a similar exercise but with two methodological changes with important implications. First, **the structural unemployment rate is estimated following an alternative procedure, in accordance with Okun's Law** (see Ball, Leigh and Loungani, 2013, and Doménech and Gómez, 2005, for the Spanish case). The results for 2006 and 2012 are represented as before by means of two vertical lines for the structural unemployment rates of 14% (2006) and 18% (2012). In contrast with what can be observed in Chart 2, the unemployment rates are now less volatile and procyclical. On the other hand, cyclical unemployment is more persistent, given that it can take a considerable amount of time to reallocate employment between sectors.⁵

Second, **the sensitivity of the cyclical budget balance to cyclical unemployment is re-estimated**, following the procedure described by Corrales, Doménech and Varela (2002), giving a ratio of -0.7, very similar to the regression ratio of the budget balance over the unemployment rate (-0.75).

With this new ratio and the new estimates for structural unemployment in Chart 3 the structural budget balance in these years can be calculated projecting the observed values onto the corresponding structural unemployment vertical lines. In particular, it is now observed that the structural budget balance in 2006 was already in deficit (-1.52 per cent), even though there was a positive balance due to the asset boom effect, largely on revenues. According to this estimate, almost four percentage points of GDP in the budget balance of the public administrations in 2006 could be considered to be cyclical or transitory. By the same token, even taking into account the one-offs measures estimated by the Commission, **when this exercise is performed for 2012, the structural budgetary deficit would be equivalent to**

4: This was not the case in 2006, when the cyclical budget balance was 0.8% and the cyclical employment -2.46%. The slope for that year (-0.33) was half of the slope estimated in 2012., and for the period 1995-2012 has been equal to -0.456.

5: It could be argued that many jobs that have been destroyed are of a permanent nature (for example, in the construction sector). Unless there is a complete hysteresis, the permanent destruction of jobs in certain specific sectors does not necessarily mean that the workers who held these jobs will become permanently unemployed, thus prompting an increase in the structural unemployment rate.

3%, after the fiscal adjustments which have been made in 2010, 2011 and, in particular, in 2012. During those years, a broad series of measures have been implemented with permanent effects on spending and on public revenue such as wage freezes, reduction of public employment, cuts on healthcare, education and other categories of public consumption or a rise in VAT and the elimination of certain bonuses in Corporation Income Tax. Furthermore, although certain measures, such as the increased tax rate on labour income or capital gains, have been announced as transitory, they might in fact become permanent if deemed necessary to achieve the target deficit reduction.

The comparison between results from these two methods highlights the paramount importance **of uncertainties in both, the estimate of structural unemployment** (e.g., Staiger, Stock, and Watson, 1997), similar to that existing with trend GDP (Larch and Turrini, 2009), **and in the sensitivity of the deficit to the economic cycle**.⁶ In light of these uncertainties, the results of this debate can hardly be considered definitive. The three-point difference of GDP in the estimate of the structural budget balance for 2012 is largely due to differences in the structural unemployment rate.

Consequently, there might be scope for qualitative judgments on these matter to come up with a more accurate or consensus view of the Spanish structural budget balance. The question of which method to use, however, may be influenced by the following considerations. First, the fact that for 2006 **the method put forward in this Economic Watch provides results which are more consistent with the existence of an asset boom**, as has been stated above, which is behind the heavy fall in tax collection even at the very onset of the crisis when unemployment had not yet increased much. Proof of the cyclical nature of the fiscal position of 2006 is that between 2007 and 2008 non-financial public revenue fell 4.1 points as percentage of GDP, while the structural unemployment rate estimated by the European Commission would have risen by only 1.4 points, from 11.8 to 13.2 per cent, despite the aforementioned volatility.⁷

Second, because in 2012 an important **labor reform** was carried out. This change in labor laws is being complemented by the announcement of other structural reforms, which if well designed and implemented, should also reduce unemployment. The reforms (in the job market or in the goods and services markets) that reduce structural unemployment have similar effects to those of the fiscal adjustments, with both of them reducing the structural deficit. In terms of charts 2 and 3, it would mean moving towards the left and up, along the line with negative slope which measures the effects of the automatic stabilizers on the budget balance. That is why, in order to guarantee the sustainability of the public balances, it is so important **to combine discretionary fiscal consolidation measures with structural reforms aimed at reducing structural unemployment**.

Third, because **a reasonably high number of the fiscal adjustment measures which have taken place in recent years, and in particular in 2012, can be considered to be genuinely structural**, which can offset the increase in the deficit associated with a higher structural unemployment rate such as that calculated above.

Fourth, given the uncertainty regarding the negative effects of fiscal adjustments on economic activity (see the debate on fiscal multipliers of Blanchard and Leigh, 2013, and Andrés and Doménech, 2013), **it is advisable to be prudent and not carry out fiscal adjustments which could end up being excessive**. According to our calculations, the Spanish economy would need at least between 2 and 3 points of GDP fiscal adjustments in the years to come, in order to reach the budget equilibrium, mandatory after the new Budget Stability and Financial Stability Act, while with the calculations of the Commission the adjustment would be almost two times greater. Thus it is important to be cautious and not to adopt further fiscal measures beyond these three points of GDP, as they can unnecessarily hamper growth, **at least until further information allows a more precise estimate of the structural deficit**. In these circumstances, it appears advisable to continue with **a more gradual process of adjustment which can allow the fiscal adjustments made in recent years to be consolidated**, in order to ensure that they have permanent effects on the public deficit. In this regard, 2013 could be

6: The sensitivity of the deficit to the economic cycle depends on the elasticity of revenues to their respective tax bases, and of the latter to the economic cycle (see Fedelino, Ivanova and Horton, 2009). Even assuming that the elasticity of revenue to tax bases remains constant, the tax bases can vary significantly throughout the course of the economic cycle, as has happened in the case of the Spanish economy.

7: Less than half of this fall in revenue (1.9 points) may be due to the discretionary measures adopted in 2008 (400 euro check, reduction in Corporate Income Tax, VAT refunds, etc.). See Beynet et al (2011).

a year of transition in which it would suffice to apply the fiscal measures already under way, without taking other additional measures, working rather on **the quality of the fiscal adjustment**. For example, with much more selective measures, which might allow improvements on public administrations efficiency, based on items which have lesser short term impact on growth and well-being.

Meanwhile, it is necessary to continue to apply new structural reforms and also **to give time to those that are already under way to do their work**. As a result of these reforms, **for each point of reduction in structural unemployment, we reduce the structural deficit by 0.7 points**, in other words, we save 7bn euros in additional adjustments to comply with mid term fiscal targets. In short, in the mid and long term the increase in potential growth, **the reduction of structural unemployment and the fiscal consolidation are processes that mutually reinforce each other**.

References

- Andrés, J. and R. Doménech (2013): "Fiscal Adjustment and Economic Growth in Europe". *Economic Watch*. BBVA Research.
- Ball, L., D. Leigh and P. Loungani (2013): "Okun's Law: Fit at 50?" NBER Working Paper 18668.
- Beynet, P., A. Fuentes, R. Gillingham and R. Hagemann (2011): "Restoring Fiscal Sustainability in Spain", OECD Economics Department Working Papers, No. 850,
- Blanchard, O. and D. Leigh (2013): "Growth Forecast Errors and Fiscal Multipliers". IMF Working Paper WP/13/1.
- Corrales, F., Doménech, R. and J. Varela (2002): "El Saldo Presupuestario Cíclico y Estructural de la Economía Española". *Hacienda Pública Española*, 1(3), 1-26.
- De la Fuente, A. (2012): "Series Enlazadas de los Principales Agregados Nacionales de la EPA, 1964-2009". Documento de Trabajo Número 12/21. BBVA Research.
- De Long, B. and L. H. Summers (2012): "Fiscal Policy in a Depressed Economy". *Brookings Papers on Economic Activity*, Spring.
- Denis C., Grenouilleau D. McMorro K. and W. Roeger (2006): "Calculating Potential Growth Rates and Output Gaps – A Revised Production Function Approach". European Commission Economic Paper n. 247
- Doménech, R. and V. Gómez (2005): "Ciclo Económico y Desempleo Estructural en la Economía Española". *Investigaciones Económicas*, vol. XXIX (2), 259-288.
- Fedelino, A., A. Ivanova and M. Horton (2009): "Computing Cyclically Adjusted Balances and Automatic Stabilizers". Technical Notes and Manuals. IMF.
- Larch, M., and A. Turrini (2009): "The cyclically-adjusted Budget balance in EU fiscal policy making: A love at first sight turned into a mature relationship". Economic Papers 374. European Commission.
- Martinez-Mongay, C., L. A. Maza Lasierra and J. Yaniz Igal (2007): "Asset Booms and Tax Receipts: The case of Spain, 1995-200". European Economy Economic Papers, Number 293.
- Staiger, D., J. H. Stock and M. W. Watson (1997): "How Precise Are Estimates of the Natural Rate of Unemployment?", in C. D. Romer and D. H. Romer (eds.), *Reducing Inflation: Motivation and Strategy*. University of Chicago Press, 195-246.

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