What fiscal policy does Spain need? Macroeconomic effects of two alternative scenarios and their implications for European fiscal policy

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1. Introduction and theoretical framework.

Every official document about fiscal policy in Spain, and most orthodox academic papers, begin remembering that Spain had in 2015 the highest public deficit in the Eurozone (-5.1% of GDP, in spite of the strongly restrictive fiscal policy applied by the Spanish authorities between 2010 and 2013). Then, it is argued that Spain has not "fiscal space" and that it should apply resolute actions to assure budget consolidation, setting fiscal deficit under 3% as soon as possible and converging to budgetary equilibrium.

Nevertheless, Spain also had in 2015 the second highest unemployment rate in the Eurozone: 21% of active population, only surpassed by Greece, with a 25%. In spite of current GDP growth, the macroeconomic forecasts do not foresee a rapid reduction in this rate: according to the IMF (2016), it will be 15.6% in 2020. Therefore, a faster fall in the unemployment rate would require more fiscal impulse to sustain higher economic growth rates, and a more expansive fiscal policy should be applied.

This paper address this dilemma, presenting two alternative scenarios for the next years and analyzing their different impact on unemployment and fiscal sustainability. The first one represents a firm compromise with budget consolidation, while in the second one the government uses the fiscal instrument to stimulate domestic demand and assure a GDP growth rate target. The main conclusion we arrive is that the end of fiscal austerity is feasible for Spain, and that a more expansive fiscal policy aimed at a faster reduction in the unemployment rate is perfectly compatible with fiscal finances sustainability. Then, we would recommend the implementation of fiscal policies described by the second scenario.

Although we discuss this problem in the context of the Spanish economy, the paper also raises some more general topics:

▪ We adopt the "functional finance" approach to fiscal policy, in contrast to the "sound finances" approach that characterizes the current policies recommended by the European authorities. According to the sound finances approach, structural budget balances must be assured, and all the decisions regarding public revenue and expenditure are conditioned by this objective. On the contrary, the functional finance perspective implies that "budget deficits are incurred where it is necessary to support aggregate demand, and in effect absorb the excess of private savings over private investment" (Sawyer, 2011).

▪ We also make (partial) use of the notion of the Balanced Budget Multiplier, as a possible alternative to apply more expansive fiscal policies when debt is seen as a constraint (Wren-Lewis, 2011; IMF, 2012a; Ragan, 2013; Karagounis at al., 2015). Considering that Spain has

a lower than average ratio of public revenue over GDP, we think that it has considerable scope to improve tax collection, and we propose as part of the second scenario a combination of discretional increases in both expenditure and revenue to achieve the targeted impulse in GDP and employment with the least possible effect on public debt. This strategy would also allow the extension of some basic services related to the Welfare State or the implementation of very much needed public investment programmes.

- We do not support the idea that a country only has "fiscal space" if some fiscal ratios – specifically, public deficit and debt over GDP ratios- are below some threshold established a priori (-3% and 60% in the case of the Eurozone). The appropriate approach is to consider the effect of different combinations of public revenue and expenditure on the basic macroeconomic variables, and analyse their sustainability. For example, the dynamic evolution of the ratio of public or foreign debt over GDP is much more relevant that the precise fulfillment of predetermined budget targets. Adopting this approach, we conclude that Spain has fiscal space to apply a more expansive fiscal policy than that currently suggested by the European authorities.

- Intentionally, we do not consider here if the alternative we advocate is compatible or not with the strict application of the Stability and Growth Pact, the so-called Six-Pack and Two-Pack, or the Fiscal Compact. Actually, this fiscal rules have "institutionalized" austerity policies in the EU, and a complete compliance with them would substantially reduce the Spanish government's room for manoeuvre. Nevertheless, the analysis of Scenario 2 clearly shows that more expansive fiscal policies are by no means incompatible with the economic principle of fiscal stability in the medium term. A faster reduction in the unemployment rate is possible by changing simultaneously public revenue and expenditure and slowing the pace at which public deficit is reduced, without any increase in the public debt over GDP ratio. The European authorities allowing this delay would be more a political than an economic decision[1], and, in any case, this contradiction between a perfectly viable alternative that would improve the employment situation in the Spanish economy, on the one hand, and the economic policy framework of the EU, on the other, shows the inadequacy of the last, not the economic impossibility of the former. Finally, to be clear, we agree with Sawyer (2013) when he says that the Fiscal Compact, and specifically the structural balance budget objective, should be abandoned, in coherence with the functional finance approach to fiscal policy.

The rest of our paper is organized as follows. We describe very briefly the recent fiscal development in Spain in Section 2. In Section 3, which is the core of the paper, we describe the two alternative scenarios and the Baseline Scenario that we use as a reference for comparison. We also present the methodology and summarize the macroeconomic consequences derived from the implementation of each scenario. Section 4 explores if the balance of payment constraint could hinder the application of expansive fiscal policies. Finally, Section 5 concludes.

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[1] Uxó and Álvarez (2016) present some arguments which could facilitate the implementation of a similar strategy within a flexible interpretation of the current fiscal rules.

2. A brief summary of recent fiscal policy and the application of the Stability and Growth Pact in Spain (2010-2015).

In 2007, before the Great Recession, Spain registered a fiscal surplus of 2% of GDP, and public debt was only 36% of GDP. Nevertheless, mainly as a consequence of the burst of the real estate bubble and the economic crisis itself, but also partially due to the implementation of a fiscal stimulus package in line with the *European Economic Recovery Plan*, fiscal deficit increased substantially after 2008 (it reached -11.1% in 2009, Graph 1), and the European Council decided that an excessive deficit existed in Spain. It established 2013 as the deadline to put an end to this situation.

Between 2010 and 2013, the Spanish authorities applied strong public spending cutbacks and raised some taxes, and the budgetary policy stance became restrictive and procyclical. Graph 2 shows how the cyclically-adjusted fiscal balance[2] increased during these years, and Graph 3 illustrates the negative contribution to GDP growth made by the sum of public consumption and public investment (-1% on average).
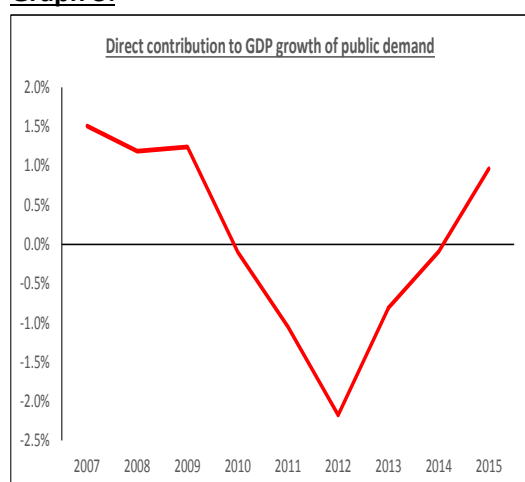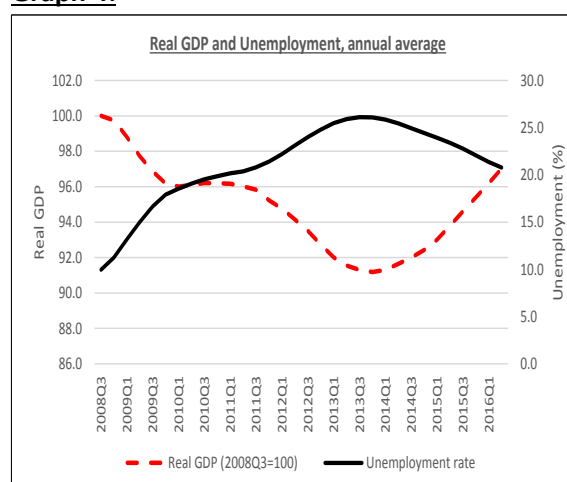
Graph 1:
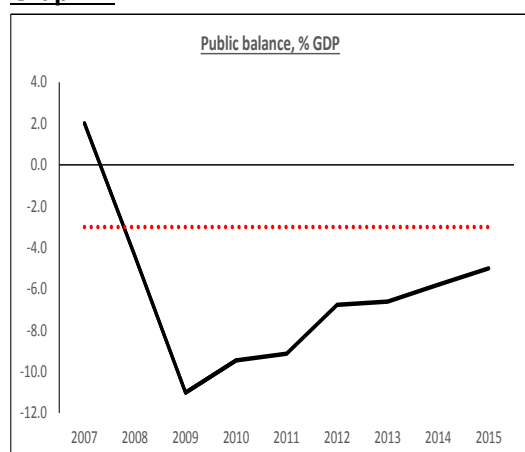
Graph 2:
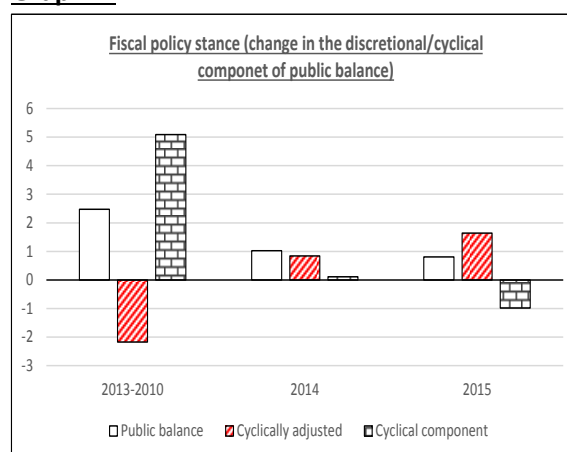
Graph 3:

Graph 4:

Source: Eurostat and authors' calculations.

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[2] See Truger (2015) for a discussion of the problems related to the estimation of this concept and the pro-cyclical bias of the methodology used by the European Commission.

Economic authorities argued initially that fiscal consolidation could be "expansive" through some "non-Keynesian effects" on private domestic demand, especially decreasing interest rates or improved confidence. Quite to the contrary, the combination of fiscal austerity and internal/wage devaluation had strong restrictive effects on domestic demand, triggering a second recession with severe effects on employment: real GDP decreased by 5.2% between 2011 and 2013, and the unemployment rate reached a peak of 26.9% in the first quarter of 2013 (Graph 4).

Moreover, Spain failed to cut down public deficit in line with the established targets: while public deficit should have been reduced to -3% by 2013, its actual value was -7%. This does not mean that even further cuts in spending should have been implemented. On the contrary, it can be interpreted as an indication that "austerity does not work": the restrictive effects of austerity policy prevent the very objectives it pursues from being achieved.

In June 2013, arguing "adverse economic circumstances", the European Council set 2016 as the new deadline to reach the -3% threshold, and new annual deficit targets were decided. Specifically, pubic balance should have been -4.2% in 2015. But it actually was -5%. The origin of this new non-fulfilment of fiscal targets, however, is completely different this year. If it was due to the negative effects of restrictive measures and negative growth on tax collecting in 2011-2013, the main reason of having in 2015 a higher deficit than the original target recommended by the European Council was the application of an expansive fiscal stance. This is illustrated by the positive change in the cyclically adjusted balance (Graph 2), and by the fact that public consumption and public investment turned to make a positive contribution to GDP growth of 1% (Graph 3). Indeed, this is one of the main factors explaining the recovery of positive growth rates of GDP in Spain, in addition to various external factors that have provided an important tailwind to the Spanish economy (for example, Quantitative Easing applied by the ECB, oil prices reductions and the exceptional good behaviour of tourism sector).

Then, if the failure of austerity policies to reduce public deficit at the expected pace can be interpreted as an evidence that "austerity does not work", the current boost in economic growth shows that "fiscal policy does matter" and that a more expansive fiscal stance could have positive effects on the high unemployment rate that characterizes the Spanish economy.

This parenthesis in the austerity policy applied by the Spanish authorities might be only temporary. The *Stability Programme* presented by the Spanish government in April 2016 was focused again on budgetary consolidation. And the European Council declared in August 2016 that Spain had not applied effective measures to put an end to excessive deficits, and it is asking for a strict consolidation effort to assure a faster deficit reduction, under the threat of applying economic sanctions if effective action is not taken.

This leads us to think that austerity has not been abandoned, but merely softened or delayed. However, some important problems of the Spanish economy remain unsolved, and it would require more expansive fiscal policies. In spite of current GDP growth, real GDP is still 3% lower than its pre-crisis level and the unemployment rate is very high (20%). Industrial policies and public investment are needed, to change the sectorial specialization of the Spanish economy. And, finally, austerity policies have meant dramatic cuts in some areas such as education or health care.

3. Alternative Scenarios for fiscal policy in Spain: austerity is not inescapable.

We present in this section a discussion of the economic consequences of two alternative and totally opposite fiscal policy strategies for Spain, called "Scenario 1" and "Scenario 2". Both strategies are designed to be applied between 2017 and 2020.

In the first one, the main objective of the authorities is to reduce the fiscal deficit according to the path "recommended" by the European Council (2016) for the years 2016-2018 (-4.6%, -3.1% and -2.2%, respectively), and to converge to structural equilibrium during the years 2019-2020, as the Fiscal Compact requires. The government implements those discretional changes in public expenditure that are required to achieve these aims, without any discretional change in the revenue side[3]. We consider that this scenario would mean a return to austerity, after the last brief period of expansive fiscal policies based on tax reductions.

On the contrary, the second one represents a complete reversal of the current orientation of fiscal policy, in line with the "functional finance" approach. In this scenario, the government sets an annual GDP growth target (3% during the whole period, 2017-2020) and takes discretional actions (regarding both expenditures and taxes) to assure the necessary impulse on aggregate demand. A deficit target is not established a priori. This scenario would mean a true abandonment of austerity policies in Spain.

Following the same approach as Rosnick and Weibstrot (2013) we take the macroeconomic forecasts of the Spanish economy included in the last edition of the *World Economic Outlook* (IMF, 2016) as the "Baseline Scenario", and then we analyse how it would alter as a result of the changes in fiscal policy corresponding to these two scenarios. We do not intend either to validate or refute the likelihood of IMF's projections actually materialising. Rather, our intention is to isolate the changes in the evolution of the Spanish economy that could be attributed exclusively to a change in fiscal policy, maintaining the same assumptions about the rest of the variables affecting the economy.

3.1. Baseline Scenario: IMF forecasts for the Spanish economy (2016-2020).

Table 1 summarises the last IMF's medium-term projections of the GDP growth, the unemployment rate and the main fiscal variables of the Spanish economy for the period 2016-2020, and their actual values in 2015. Graphs 5, 6 and 7 compare the expected evolution of GDP growth, the unemployment rate and the fiscal balance in Spain and the Eurozone. We underline the following information:

- Growth is expected to remain next to 3% in 2016, but it will decrease in 2017-2020, when the average growth rate will be slightly lower than 2%.
- As a consequence of this, and of a faster evolution of apparent labour productivity, the number of employed people will grow at a slower pace than in 2015-2016. In 2020 there

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[3] This strategy is coherent with the last Stability Programmes presented by the Spanish government, where all the expected reduction in the public deficit as a percentage of GDP was the consequence of decreasing public expenditure over GDP ratios.

will be 1.2 million people less working in Spain than in 2008. The unemployment rate will continue decreasing, but it will remains as high as 15.6% at the end of the period.
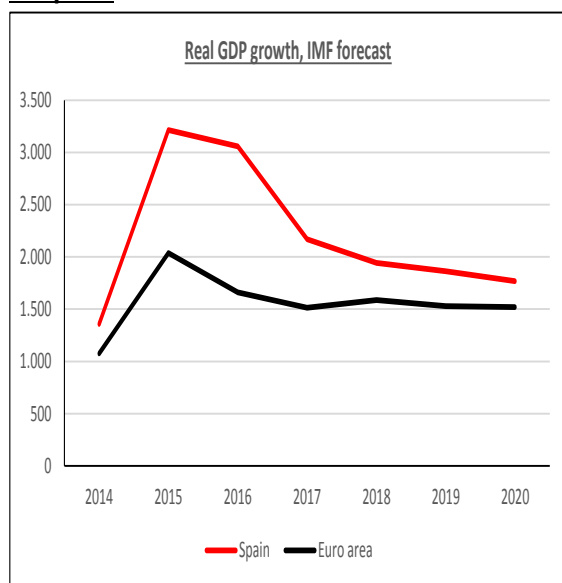
- Regarding fiscal finances, the IMF expects that the fiscal targets currently set for the years 2016 and 2017 will be reached, but not in 2018. Furthermore, structural deficit will not decrease afterwards, but it will be constant and next to 2.5%[4].
- This reduction in the public deficit will take place through a reduction in the public expenditure/GDP ratio, while the ratio between public revenue and GDP will not change significantly between 2016 and 2020.

Table 1: macroeconomic and fiscal variables in the "Baseline Scenario"

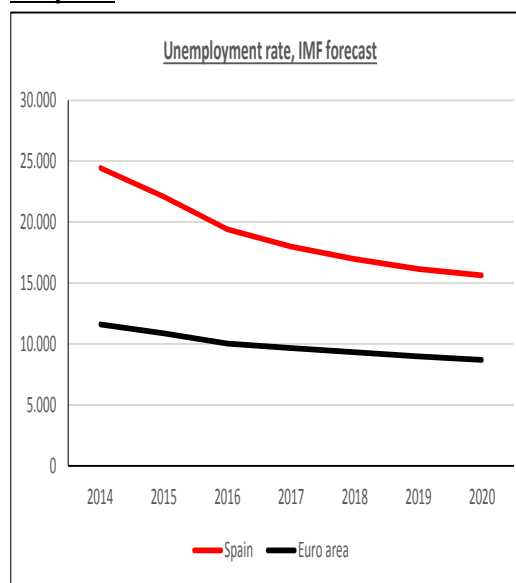|	2015	2016	2017	2018	2019	2020
GDP real growth rate (%)	3.2	3.1	2.2	1.9	1.9	1.8
Unemployment rate (%)	22.1	19.4	18.0	17.0	16.1	15.6
Public balance (% GDP)	-5.1	-4.5	-3.1	-2.7	-2.3	-2.2
Total revenue (%GDP)	38.2	37.4	38.0	38.0	38.0	37.9
Total expenditure (% GDP)	43.3	41.9	41.1	40.7	40.2	40.1
Structural balance (% potential GDP)	-2.8	-2.7	-2.5	-2.4	-2.3	-2.4
Gross debt (% GDP)	99.3	100.1	100.2	100.0	99.2	98.3

Source: IMF (2016).

Graph 5:

Graph 6:

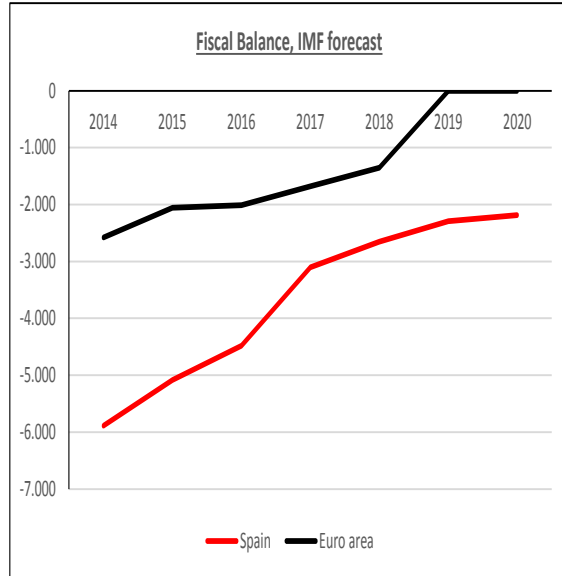*Source: IMF (2016).*

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[4] The structural balance is a very problematic concept, both from a theoretical and an empirical point of view, because it is a non-observable variable whose value rests on the estimation of the potential GDP and the NAIRU. For example, in this forecasts the IMF considers that the output gap will be zero in Spain in 2019, with and unemployment rate of 16%. Nevertheless, we use these figures here because they are included in the Fiscal Compact.

Graph 7:

Fiscal Balance, IMF forecast

Source: IMF (2016).

3.2. *Equations.*

We can carry out most of our calculations with a very simple model, which enables us to analyse the consequences of a change in fiscal policy on the economy (GDP and unemployment rate, specifically) and on public finances.

Firstly, we consider the influence of fiscal policy decisions on national income, compared to the baseline scenario (ΔY)[5]. This will depend on the change in total public expenditure (ΔG) and total revenue (ΔT), and on the multipliers. We call the expenditure multiplier α_G and the tax multiplier α_T:

$$\Delta Y = \alpha_G \Delta G - \alpha_T \Delta T$$

We distinguish now between changes in public revenue or expenditure coming from voluntary decisions adopted by the authorities ("discretional", identified by the superscript D) and due to a variation in the cyclical conditions of the economy and the working of automatic stabilisers ("cyclical", identified by the superscript C). If $\gamma_T > 0$ is a parameter which measures the effect of a change in GDP on public revenue, and $\gamma_G < 0$ the parameter which represents the same effect but on public expenditure:

$$\Delta Y = \alpha_G (\Delta G^D + \Delta G^C) - \alpha_T (\Delta T^D + \Delta T^C)$$

$$\Delta Y = \alpha_G (\Delta G^D + \gamma_G \Delta Y) - \alpha_T (\Delta T^D + \gamma_T \Delta Y)$$

Reorganising the terms:

$$\Delta Y = \frac{\alpha_G}{1 - \alpha_G \gamma_G + \alpha_T \gamma_T} \Delta G^D - \frac{\alpha_T}{1 - \alpha_G \gamma_G + \alpha_T \gamma_T} \Delta T^D$$

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[5] The symbol Δ represents the variation experimented by a variable resulting from the change in fiscal policy compared to the baseline scenario.

Simplified:

$$\Delta Y = \Omega_G \Delta G^D - \Omega_T \Delta T^D \qquad\qquad (1)$$

This first equation tells us how much GDP changes when there is a discretional change in expenditure and revenue. Ω_G and Ω_T are the multipliers that link this *discretional* change in expenditure and revenue to national income, taking into account the effect of automatic stabilisers.

Changes in (nominal) GDP must be translated into changes in employment and in the unemployment rate. In order to do this, we make the assumption that fiscal policy decisions do not modify the evolution of GDP deflator, apparent labour productivity and active population included in the IMF forecasts for the Spanish economy.

The second equation of the model measures the final effect of the change in the fiscal policy on the public budget balance (B), taking into account the full operation of automatic stabilisers:

$$\Delta B = (\Delta T^D - \Delta G^D) + (\Delta T^C - \Delta G^C)$$

$$\Delta B = (\Delta T^D - \Delta G^D) + (\gamma_T - \gamma_G)\Delta Y$$

Replacing ΔY by equation (1) and operating:

$$\Delta B = [1 - (\gamma_T - \gamma_G)\Omega_T]\Delta T^D - [1 - (\gamma_T - \gamma_G)\Omega_G]\Delta G^D \qquad\qquad (2)$$

3.3. *Multipliers and cyclical sensitivity of public revenue and expenditure.*

According to equations (1) and (2), the impact of a change in fiscal policy on income and public balance actually depends to a great extent on two kinds of parameters: on the one hand, the expenditure and revenue multipliers (α_G and α_T) and, on the other, the cyclical sensitivity of expenditure and revenue (γ_G and γ_T).

The empirical literature on fiscal multipliers has increased significantly since the onset of the Great Recession, especially after the recognition by the IMF (2012b) that it had underestimated the value of fiscal multipliers –and, then, the negative impact on the real economy of cuts in public expenditure -. Its main conclusion was that actual multipliers of public deficit could be in the range of 0.9 to 1.7.

Gechert and Rannenberg (2014) is a very useful attempt to systematize this literature, which has shown a great variation in the results of these estimations. They conduct a meta-regression analysis of 98 empirical studies, controlling for the economic regime (if the economy is in normal, bad or good times) and also for the kind of fiscal impulse applied. The multiplier of public expenditure rises during bad times, mainly because accommodative monetary policies are more likely during economic downturns. Specifically, the multiplier of unspecified government expenditure rises by 0.7 approximately, reaching a value of 1.3. But another important conclusion of their study is that the size of this increase depends on the specific instrument applied in each case. For example, the effect of transfers on the real economy changes much more dramatically than the public investment multiplier. Public transfers turn out to be the most effective expenditure type when the economy is in a downturn, with a multiplier

of 2.3. This might be explained by an increase in the number of liquidity or credit-constrained households when the economy is stagnated. It should also be underlined that the cumulative multiplier of all kinds of government expenditure exceeds one in the lower regime, which means that there is an overall crowding-in effect, not a crowding-out one. Regarding tax multipliers, they are rather small in all regimes (their mean is around half of the mean of public expenditure multipliers) and appear to be almost unaffected by the economic situation.

Martínez and Zubiri (2014) summarize some estimations on the fiscal multiplier in Spain and offer their own calculations of the expenditure and revenue multipliers. They also conclude that expenditure multipliers are considerably larger in recessions than in expansions, and that changes in taxes always have a lower impact on GDP than changes in expenditure. Specifically, their estimated value for the expenditure multiplier is between 1.3 and 1.7.

Concluding, in the current economic situation of Spain –high unemployment, low utilization of productive capacity, very low or negative rates of inflation, and an accommodative monetary policy with near zero interest rates- we can take as given that the expenditure multiplier is higher than 1 and higher than the revenue multiplier, which in turn is lower than 1. Its precise value will depend on different factors, such as the composition of the fiscal impulse. To deliver our analysis, we have considered that the expenditure multiplier is 1.25 and that the tax multiplier is 0.6.

Regarding cyclical sensitivity, the European Commission estimates a one-to-one cyclical reaction of revenue with respect to GDP, such that the public revenue/GDP ratio remains approximately constant along the cycle. In contrast, most public expenditure does not exhibit a cyclical pattern. As a consequence, the ratio between public expenditure and GDP tends to vary anti-cyclically, mostly driven by the cyclical effect on the denominator. Specifically, the European Commission calculates for Spain a revenue cyclical sensitivity (γ_T) of 0.38 and an expenditure cyclical sensitivity (γ_G) of -0.05, giving a total cyclical sensitivity of 0.43 (Mourre et al., 2013, Table 2.4). This means that for each 100 euro increase in GDP, public deficit is automatically reduced by 43 euros.

Using these values for α_G, α_T, γ_G and γ_T, equations (1) and (2) become:

$$\Delta Y = 0.97 \Delta G^D - 0.46 \Delta T^D \qquad\qquad (1)$$

$$\Delta B = 0.80\, \Delta T^D - 0.58 \Delta G^D \qquad\qquad (2)$$

3.4. _Scenario 1: Return to austerity and full compliance with the Fiscal Compact_

According to the IMF forecasts, Spain would reach in 2016 and 2017 the deficit targets proposed by the last EC Recommendation, but not in 2018. Furthermore, public deficit would remain more or less constant during the period 2019-2020, without any expected convergence towards structural equilibrium, as the strict application of Fiscal Compact would require.

In Scenario 1, we suppose that the Spanish government maintains a strong compromise with the fulfilment of these deficit targets, taking the necessary measures to assure it. In coherence with past Stability Programmes, we can also assume that these measures imply public expenditure cutbacks, without changes in the public revenue over GDP ratio relative to the IMF

forecast. The aimed public deficit evolution is shown in Table 2. For the years 2019 and 2020 we have set the same targets that the Spanish Government originally established for the years 2017 and 2018 in its previous Stability Programme.

Table 2: Fiscal balance. IMF's forecasts and targets in Scenario 1

	Baseline (IMF WEO)	Scenario 1
2016	-4.5%	-4.5%
2017	-3.1%	-3.1%
2018	-2.7%	-2.2%
2019	-2.3%	-1.5%
2020	-2.2%	-0.3%

Source: IMF (2016), European Commission (2016) and authors' calculations.

ΔB is the difference between the total (not % GDP) public balance registered once the government has changed its fiscal policy to meet the aforementioned targets, and the public balance forecasted by the IMF. If we call b* the targeted public deficit when it is expressed as a percentage of GDP (for example, -2.2% in 2018), Y* the nominal GDP registered taking into account the consequences of the fiscal policy adopted by the authorities, and Y and B, respectively, the nominal GDP and total public balance forecasted by the IMF for a specific year, we have:

$$\Delta B = b^* Y^* - B = b^*(Y + \Delta Y) - B = b^* Y + b^* \Delta Y - B \tag{3}$$

On the other hand, equation (2) shows the variation in public balance derived from discretional changes in public expenditure and revenue. As $\Delta T^D = 0$, we have:

$$\Delta B = -[1 - (\gamma_T - \gamma_G)\Omega_G]\Delta G^D \tag{2b}$$

As (3) = (2b):

$$b^* Y + b^* \Delta Y - B = -[1 - (\gamma_T - \gamma_G)\Omega_G]\Delta G^D$$

Finally, using equation (1) with $\Delta T^D = 0$, and reorganising, we can calculate the required discretional change in public expenditure (ΔG^D) to reach the targeted deficit (b*) each year:

$$\Delta Y = \Omega_G \Delta G^D \tag{1b}$$

$$\Delta G^D = \frac{B - b^* Y}{1 - \Omega_G(\gamma_T - \gamma_G - b^*)} \tag{4}$$

Table 3 summarises the evolution of GDP growth, unemployment rate and fiscal finances if this Scenario would take place. As a consequence of the strong compromise of the government with the strict fulfilment of the Fiscal Compact in this last case, a very restrictive fiscal policy would be applied, and nominal public expenditure would be frozen between 2017 and 2010, or reduced by 39 Billion € if we compare with the IMF's projections (Graph 8). As a percentage of GDP, public expenditure would have been reduced by 3.6 p.p. in 2020 (Graph 9). Regarding public revenues, its total amount would be lower than currently forecasted by the IMF as a

consequence of lower GDP. Finally, Graph 10 represents the different evolution of public deficit in both scenarios.

**Table 3: macroeconomic and fiscal variables in the "Scenario 1"**

	2015	2016	2017	2018	2019	2020
GDP real growth rate (%)	3.2	3.1	2.2	1.2	1.3	-0.1
Unemployment rate (%)	22.1	19.4	18.0	17.6	17.3	18.3
Public balance (% GDP)	-5.1	-4.5	-3.1	-2.2	-1.5	-0.3
Total revenue (%GDP)	38.2	37.4	38.0	38.0	38.0	37.9
Total expenditure (% GDP)	43.3	41.9	41.1	40.2	39.4	38.2
Gross debt (% GDP)	99.3	100.1	100.2	100.3	99.2	98.2

Source: IMF (2016) for 2015-2016, and authors' calculations for 2017-2020.
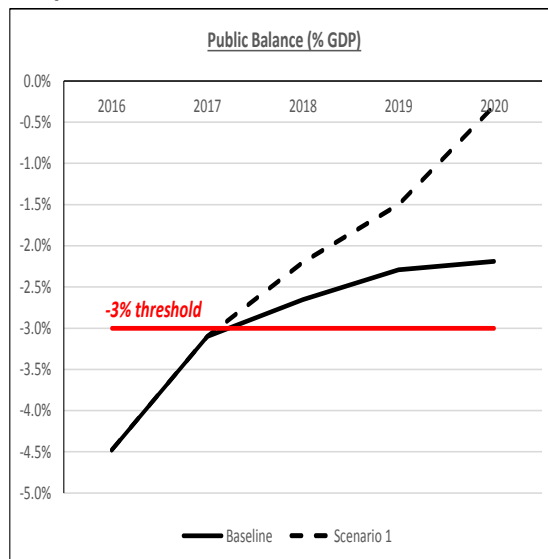
Graph 8:
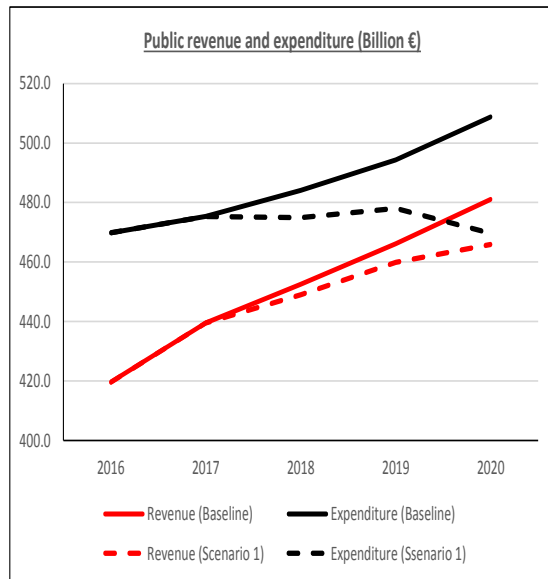
Graph 9:
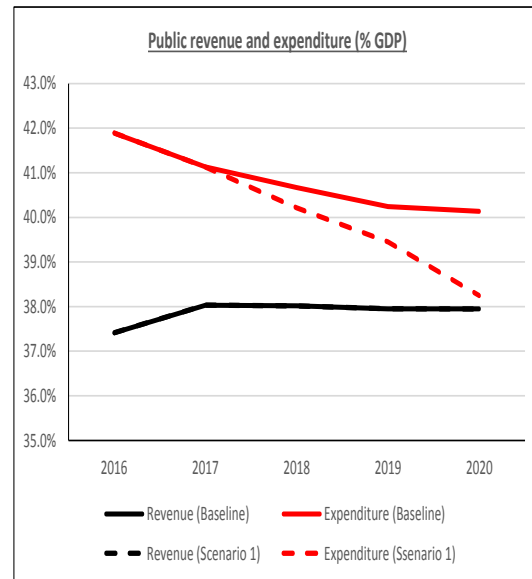
Graph 10:

Source: IMF (2016) and authors' calculations.

3.5. Scenario 2: More expansive fiscal policy to assure a targeted GDP growth (3% annual)

According to the IMF forecasts, the unemployment rate would be 15.6% of active population in 2020, and there would be 19.3 million people employed that year (1.2 million less than at the end of 2008). We find these figures disappointing, so that we present in this second scenario an alternative fiscal policy that it is not focused on deficit reduction, but on assuring a higher GDP growth and creating jobs at a faster pace between 2017 and 2020. This policy requires increased public expenditure, but we show that it is also compatible with sustainable public finances.

Specifically, we have set the objective of maintaining during the whole period an annual GDP growth rate of 3%. This is similar to that registered in 2015 and 2016, while the IMF is currently forecasting a fast deceleration of the Spanish economy. Although it is true that, if it was confirmed, even this lower growth rate (1.9% in 2017-2020) would be higher that the Eurozone average (1.5%), a significant reduction in the extremely high unemployment rates that characterizes the Spanish economy require sustained strong GDP growth during several years.

Once we have set the targeted increase in real GDP (3% each year), we calculate the difference between the nominal GDP registered in this Scenario 2 and the nominal GDP forecasted by the IMF, or Baseline scenario ($\Delta Y = Y^* - Y$).

There are multiple combinations of revenue and expenditure by which this stimulus in aggregate demand might be achieved: only by means of an increase in expenditure, only by tax reductions, by a combination of more expenditure and less taxes, or by an increase in both expenditure and taxes, taking advantage of the fact that the multipliers associated to each instrument are not equal. We advocate here the last of these alternatives, making a (partial) use of the notion of the Balanced Budget Multiplier and proposing simultaneous, although different, increases in taxes and public expenditures. This is due to two complementary reasons. On the one hand, this would permit to achieve the targeted impulse in GDP and employment with the least possible effect on public debt. On the other hand, this proposal would not only provide the needed macroeconomic impulse to the Spanish economy, but it would also improve the funding of fundamental public services and industrial policies. Spanish public revenue in relation to GDP stand at around 9 p.p. below the Eurozone average, provoking a chronic lack of resources to properly finance the development of the welfare state and to implement public investments aimed at structural change (public expenditure as a percentage of GDP is 6 points lower in Spain than in the Eurozone).

As is well known, a Balanced Budget expansion involves a policy whereby the government increases public spending and raises its tax revenues to keep the budget deficit unchanged. As the public spending multiplier is larger than the revenue multiplier, this policy leads to an increase in aggregate demand, and it is a possible alternative when more public indebtedness is seen as a constraint. Nevertheless, our proposal is only a sort of "imperfect" Balanced Budget Expansion, because the required increase in public revenue in order to maintain the public deficit unchanged (relative to the SP) and boost the targeted increase in GDP seems unrealistic.

Specifically, we consider that going from the current 37.4% of GDP to the highest value of this ratio of the last two decades (41% of GDP, reached in 2017) is an achievable objective.

It should be underlined that the increase in the ratio of public revenue over GDP registered in 2017 was the consequence of the expansion of real estate activities and not the result of an efficient tax system. Moreover, the government implemented at the same time permanent reductions in taxation on capital revenue, companies' incomes and wealth, provoking an important loss of tax collection capacity. Once the Great Recession began and the bubble burst, public revenue dropped sharply, and its ratio over GDP diminished by more than 6 p.p., a much higher decrease than in the rest of the European countries. Then, a main component of an alternative fiscal policy for Spain should be a progressive[6] tax reform, to address the chronic problems related to the design and equity of its tax system. A resolute effort to fight tax fraud should be made as well, because another reason explaining the low percentage of Spanish public revenue over national income is the high size of the informal sector (20% of GDP according to Schneider, 2012). This provokes a loss of public revenue near to 6% of GDP (Comité Económico y Social, 2013).

The increase in total revenue (ΔT) derived from the whole change in fiscal policy, considering both the discretional measures adopted by the government and the influence of automatic stabilisers, is the following (t* is the targeted public revenue/GDP ratio for a year[7]):

$$\Delta T = t^* Y^* - T \tag{5}$$

This increase in public revenue is the sum of the effect of the tax reform and the fight against tax fraud, on the one hand, and of the positive impact of the higher GDP growth on tax collection, on the other hand:

$$\Delta T = \Delta T^D + \gamma_T \Delta Y \tag{6}$$

Then, after substituting (5) in (6), the discretional variation in public revenue needed to reach the targeted t* is equal to:

$$\Delta T^D = t^* Y^* - T - \gamma_T \Delta Y \tag{7}$$

Finally, we substitute (7) in the equation (1) of ΔY and we are able to obtain the value of ΔG^D that the government has to implement in order to assure that the economy is growing at a 3% rate, taking into account the restrictive effect of a higher t*:

$$\Delta Y = \Omega_G \Delta G^D - \Omega_T \Delta T^D \tag{1}$$

$$\Delta G^D = \frac{\Delta Y(1 - \Omega_T \gamma_T) + \Omega_T(t^* Y^* - T)}{\Omega_G} \tag{8}$$

---

[6] Godar, Paetz and Truger (2014a, 2014b) provide theoretical and empirical arguments for progressive tax reforms in the current context.

[7] We suppose that the increase in the revenue/GDP ratio takes place progressively during the whole period, from 37.4% in 2016 to 41.0% in 2020. So, t* increases by 0.9 percentage points each year.

**Table 4: macroeconomic and fiscal variables in the "Scenario 2"**

	2015	2016	2017	2018	2019	2020
GDP real growth rate (%)	3.2	3.1	3.0	3.0	3.0	3.0
Unemployment rate (%)	22.1	19.4	17.3	15.4	13.7	12.1
Public balance (% GDP)	-5.1	-4.5	-3.4	-3.1	-2.8	-2.9
Total revenue (%GDP)	38.2	37.4	38.3	39.2	40.1	41.0
Total expenditure (% GDP)	43.3	41.9	41.7	42.3	42.9	43.9
Gross debt (% GDP)	99.3	100.1	99.8	99.0	97.7	96.4

Source: IMF (2016) for 2015-2016, and authors' calculations for 2017-2020.

Graph 11:
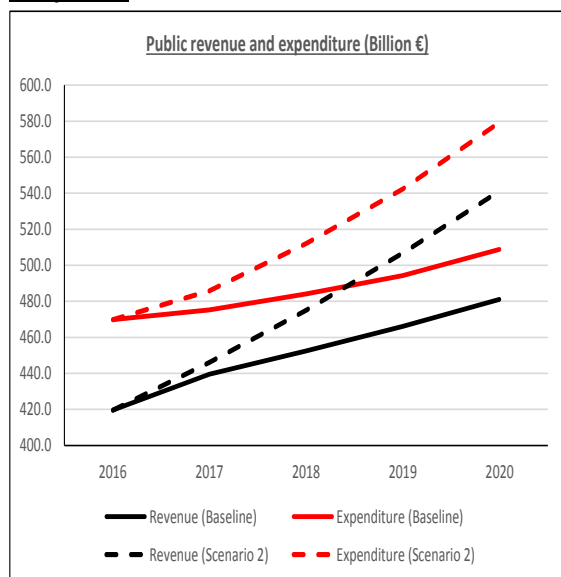
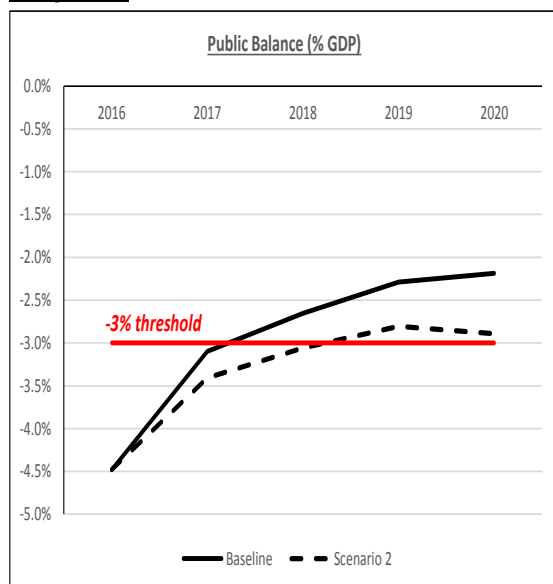**Graph 12:**
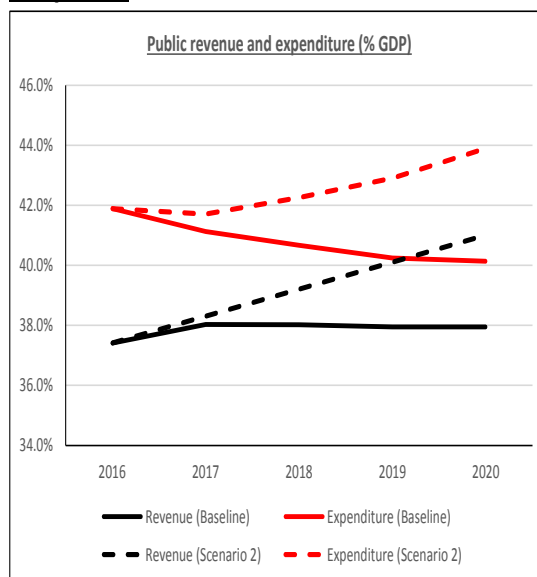
Graph 13:

Source: IMF (2016) and authors' calculations.

Table 4 summarises the evolution of GDP growth, unemployment rate and fiscal finances if this Scenario would take place. As Graph 11 illustrates, the more expansive stance of fiscal policy in this Scenario 2 means an important increase in public expenditure, which in 2020 would be

73 Billion higher than in the Baseline Scenario. We remember here that one of the arguments for a change in Spanish fiscal policy was the need to fund public policies to address some social problems and to foster some structural changes in the Spanish economy. Therefore, just as important as the actual amount involved is ensuring the right distribution: it should prioritise spending that would have a high multiplier effect, a strong social impact and which would evidence a greater ability to stimulate the necessary changes in the Spanish economy.

In terms of the GDP, expenditures would rise by 2 p.p. between 2016 and 2020 in Scenario 2, instead of decreasing by 2 p.p. (Graph 12), and the Spanish economy would converge towards the Eurozone average (46% in 2020). On the contrary, this gap would remain constant in the Baseline Scenario.

This higher increase in public expenditure is partly funded by higher tax revenues, due to the discretional measures adopted by the authorities and to the positive effect of more dynamic GDP. As a consequence, total deficit actually decrease if we compare it with 2016, although at a slower pace than in the Baseline Scenario. Anyway, it would be under the 3% threshold after 2018 (Graph 13).

3.6. _A comparison of the effects of both scenarios on public finances and employment._

Table 5 summarises, in the three scenarios considered, the expected change between 2016 and 2020 in the main economic and fiscal variables. Table 6 and 7 compare the effects of Scenarios 1 and 2 with the Baseline Scenario and with 2016, and finally Table 8 provides the difference between Scenario 2 and Scenario 1. Our main findings are the following:

- The strict fulfilment of the Fiscal Compact and of the precise path of deficit reduction proposed by the European Commission for the next years would have a strong restrictive effect on the Spanish economy, preventing the reduction of its very high unemployment rate. On the contrary, the effect on GDP growth and employment would be positive if the alternative fiscal policy proposed in the Scenario 2 is applied, since expenditure multipliers are greater than revenue multipliers. Specifically, according to our estimations, this fiscal policy might lead to an accumulated increase in real GDP of 4% in 2020 compared to the Baseline Scenario, with an average growth rate of 3% instead of 2%. The unemployment rate would fall to 12% in 2020, 3.6 p.p. below the IMF's forecast, and 7.3 p.p. lower than in 2016.
- In this Scenario 2, the operation of automatic stabilisers would mean new revenue from taxes coupled with less public expenditure, due to higher economic dynamism. Adding this effect to the discretional measures adopted by the government, revenue would increase by 121.6 billion euro if we compare with 2016, and public expenditure by 109.5 billion. This means that public deficit would continue to fall, albeit at a slower rate than in the Baseline Scenario. In 2020, the reduction in deficit would be 12.1 billion (the IMF foresees a reduction of 22.5 billion). As a result, public deficit would be 2.9% of GDP in 2019, while it would be 2.2% in the Baseline Scenario. However, there are no economic reasons to support the idea that this lower deficit and 15.6% unemployment is better than a public deficit of 2.9% and 12% of unemployment.

- All of this means that, although our proposal involves a significant increase in public expenditure, it would be perfectly viable in financial terms. Firstly, through increased revenue stemming from fiscal reform and the fight against fraud. Secondly, because economic growth itself would translate into higher public revenue and lower cyclical expenditure. We calculate that 42% of the discretional expansion in public expenditure is self-financed. Finally, some fiscal space could be gained from postponing the goal of reducing public deficit to 3%.

- Graph 14 illustrates another important difference between Scenario 1 and Scenario 2. While current fiscal policies in Spain are characterized by a low and constant revenue/GDP ratio, and a low and decreasing expenditure/GDP ratio, an alternative fiscal policy should permit an increase in both ratios, converging to the Eurozone average. This would have two positive consequences: to sustain a higher GDP growth, necessary to assure a faster reduction in the unemployment rate; and to allow better public services and the funding of some industrial policies required to change the productive structure of the Spanish economy.

- Regarding public debt, although the total debt figure is higher in Scenario 2, this would also be divided by a bigger nominal GDP, and the public debt burden in GDP would even be a little lower in our scenario than in the Baseline (96% versus 98% in 2020). It is worth mentioning that the strong restrictive fiscal policy applied in Scenario 1 does not mean a lower debt to GDP ratio in 2020 compared to the Baseline Scenario, while the supposed unsustainability of the Spanish public indebtedness is one of the main arguments used to support it (Graph 15).

- We can conclude, then, that the choice lies between prioritising either the rate at which unemployment is reduced or at which public deficit is reduced, as Graph 16 clearly shows.

Table 5: Main economic and fiscal variables in 2016 and 2020, three scenarios

	2016 (IMF WEO)		2020					
			Baseline (IMF WEO)		Scenario 1: Fiscal Compact		Scenario 2: 3% GDP growth	
	Billion€	%GDP	Billion€	%GDP	Billion€	%GDP	Billion€	%GDP
Revenue	419.6	37.4%	481.1	37.9%	465.9	37.9%	541.1	41.0%
Expenditure	469.8	41.9%	508.8	40.1%	469.6	38.2%	579.3	43.9%
Fiscal Balance	-50.2	-4.5%	-27.7	-2.2%	-3.7	-0.3%	-38.2	-2.9%
Public Debt	1122.4	100.1%	1245.7	98.3%	1206.1	98.2%	1272.7	96.4%
Av. GDP growth (2017-2020)			2.0%		1.5%		3.0%	
Unemployment Rate	19.4%		15.6%		18.3%		12.1%	
Employment (Million)	18391.0		19279.8		18658.8		20087.1	

Source: IMF (2016) and authors' calculations.

Table 6: Comparison with Baseline Scenario in 2020

| | Differences with Baseline (2020) | | | |
| | Scenario 1: Fiscal Compact | | Scenario 2: 3% GDP growth | |
	Billion€	%GDP	Billion€	%GDP
Revenue	-15.2	0.0%	60.0	3.1%
Expenditure	-39.2	-1.9%	70.4	3.8%
Fiscal Balance	24.1	1.9%	-10.4	-0.7%
Public Debt	-39.6	0.0%	27.1	-1.8%
Av. GDP growth (2017-2020)	-0.5%		1.0%	
Unemployment Rate	2.7%		-3.5%	
Employment (Million)	-621.0		807.2	

Source: IMF (2016) and authors' calculations.

Table 7: Comparison between 2020 and 2016, Scenario 1 and Scenario 2

| | Differences between 2020 and 2016 | | | |
| | Scenario 1: Fiscal Compact | | Scenario 2: 3% GDP growth | |
	Billion€	%GDP	Billion€	%GDP
Revenue	46.4	0.5%	121.6	3.6%
Expenditure	-0.2	-3.6%	109.5	2.0%
Fiscal Balance	46.5	4.2%	12.1	1.6%
Public Debt	83.7	-1.9%	150.3	-3.6%
Av. GDP growth (2017-2020)				
Unemployment Rate	-1.1%		-7.3%	
Employment (Million)	267.8		1696.1	

Source: IMF (2016) and authors' calculations.

**Table 8: Comparison between Scenario 2 and Scenario 1, 2020**

| | Differences between Scenario 2 and Scenario 1 (2020) | |
	Billion€	%GDP
Revenue	75.2	3.1%
Expenditure	109.7	5.6%
Fiscal Balance	-34.5	-2.6%
Public Debt	66.7	-1.8%
Av. GDP growth (2017-2020)	1.5%	
Unemployment Rate	-6.3%	
Employment (Million)	1428.3	

Source: IMF (2016) and authors' calculations.

Graph 14:

Public revenue and expenditure (% GDP)
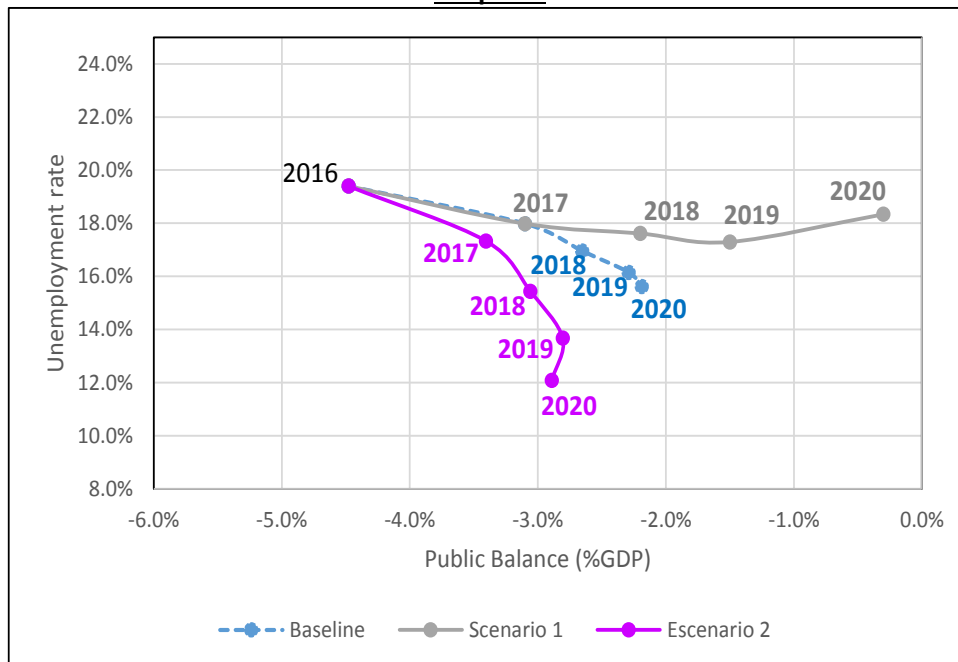
Graph 15:

Public debt (% GDP)
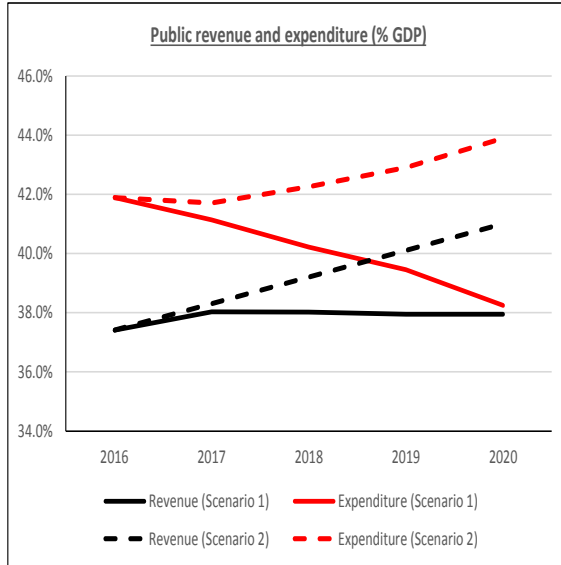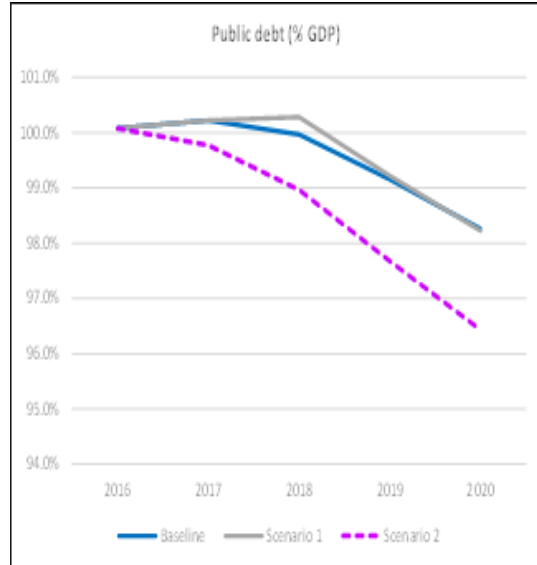
Source: IMF (2016) and authors' calculations.

Graph 16

Source: IMF (2016) and authors' calculations.

4. Could the external constraint prevent the application of a more expansive fiscal policy?

A higher economic growth in Spain than the European average during several years is necessary for reducing the Spanish unemployment rate as fast as possible, but it will probably be translated into a deterioration in the current account balance as well. This arises some concerns on the possible limits of "one country Keynesianism", whose potential relevance is highlighted by the current account imbalances registered within the European Monetary Union between 2000 and 2007. Those (unsustainable) imbalances were mostly related to persistent differences in the growth rates of its members, and they can be considered as one of the main

18

causes of the current crisis and its severity (Uxó, Paúl and Febrero, 2011). Will Spain suffer similar current account deficits as a consequence of the fiscal strategy described by Scenario 2, accumulating again unsustainable levels of external debt, and provoking the need for new adjustments sooner or later?

To answer this question properly, it is necessary to take into account that: a) Spain presents a current account surplus, which provides some space to apply a more expansive fiscal policy without being constrained by the balance of payments; b) precisely as a consequence of higher growth rates, the stabilisation of the net foreign debt-GDP ratio can be compatible with a lower external surplus, or even a deficit if it does not exceeds certain threshold.

The Spanish current account balance has radically changed during the last years, from a strong deficit in 2007 (-9.6% of GDP) to a surplus equivalent to 1.4% of GDP in 2015. This adjustment stems mainly from a much lower deficit in the trade balance of goods, and it is the consequence of several causes: some increases in price-competitiveness, the collapse of domestic demand until 2013, the fall in energy prices, the excellent behaviour of tourism, lower interest payments, or the diversification of the geographical distribution of Spanish exports. Taking into account the surplus of the capital balance (0.5%), the Spanish economy presented a net lending position equivalent to 1.9% of GDP in 2015

The IMF forecasts that the current account will even be higher between 2016 and 2020 (1.8% of GDP on average). As a consequence, the Net International Investment Position (NIIP, -91% of GDP in 2015) should be dropping, both in nominal terms and as a percentage of GDP[8].

The Spanish economy is characterized by a high income elasticity, mainly because of its dependence on imported energy, its structural specialization, and the high import content of its exports. The estimated value of this elasticity is between 1.5 and 2.0 (see, for example, Orsini, 2015; BBVA Research, 2013; or IMF, 2015). Then, the higher growth derived from a more expansive fiscal policy would have a negative impact on the external sector, due to the increase in imports of goods and services[9]. Nevertheless, using a value of 1.75 for this elasticity, we estimate that the Spanish economy would still register a current account surplus in 2020 (0.8% instead of 1.8% foreseen by the IMF, Graph 17), and this ratio would be compatible with an improvement in the NIIP/GDP ratio.

The evolution of the NIIP/GDP ratio depends on the joint current plus capital account balances (EB, expressed as a % of GDP) and the nominal rate of growth (g):

$$\left(\frac{NIIP}{GDP}\right)_t = \frac{\left(\frac{NIIP}{GDP}\right)_{t-1}}{(1+g)} + EB \qquad (9)$$

As the external balance forecasted by the IMF is a surplus, the net external debt ratio will be decreasing in the next years in the Baseline Scenario, reaching a value next to -67% of GDP in 2020. The application of our proposed fiscal policy would mean a lower external surplus, but a higher average nominal growth as well. Therefore, net external debt would also be decreasing in the Scenario 2, and it would mean in 2020 the same percentage over GDP than with the IMF forecasts (Graph 18).

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[8] The evolution of NIIP is not only determined by the net lending/borrowing position of the economy, but also by some valuation effects. However, as we are mainly interested in analysing the change in the NIIP derived from our expansive fiscal policy proposal, we will not take them into account here.
[9] We assume that the rest of the sub-balances remain unchanged.

Graph 17:

Current account (% GDP)

Graph 18:

Net International Investment Posistion (% GDP)
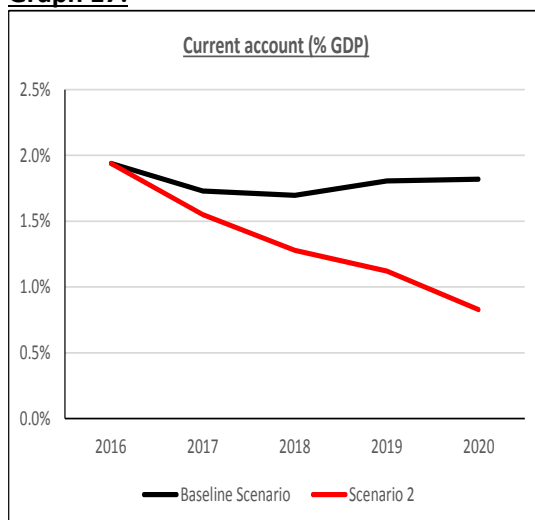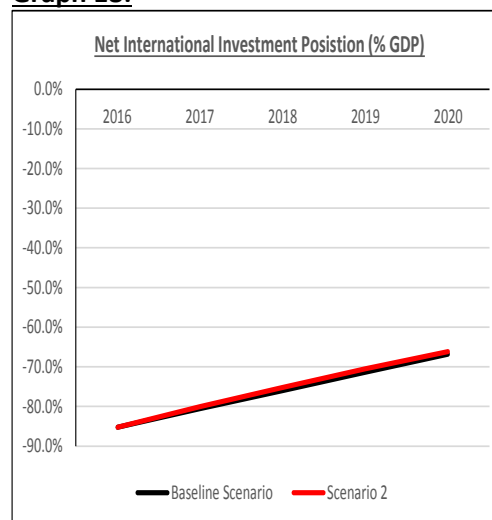
Source: IMF (2016) and authors' calculations.

5. Conclusions.

Frequently, austerity policies are presented as unavoidable, and the proposals for a more expansive fiscal policy focused on employment creation and other social and structural objectives are defined as "wishful thinking". This paper proves, on the contrary, that an alternative plan to austerity can be not only expansionary –with a faster reduction in unemployment– but also fully compatible with fiscal sustainability.

We take the last IMF's forecasting of the Spanish economy as a Baseline Scenario, and simulate two alternative scenarios: Scenario 1 represents a strict application of European fiscal rules, while Scenario 2 is focused on assuring an annual 3% GDP growth in the years 2017-2020. This second alternative, whose application we advocate, is based on a "functional finance" approach to fiscal policy and makes a (partial) use of the idea of Balanced Budget Expansion. The two main components of this plan are a progressive fiscal reform to increase public revenue over GDP, and a simultaneous increase in the ratio of public expenditure over GDP.

We are interested in the comparison between the outcomes of these two alternative fiscal policies in terms of economic growth, unemployment and public deficit and debt, and we carry out this exercise with a very simple model whose results are only conditioned by two pairs of parameters, the multipliers and the cyclical sensitivity of public revenue and public expenditure. We have obtained the following conclusions:

1. The strict fulfilment of the European fiscal rules would have a strong restrictive effect on the Spanish economy, preventing the reduction of its very high unemployment rate. On the contrary, the effect on GDP growth and employment would be positive if the alternative fiscal policy proposed in the Scenario 2 is applied, and the unemployment rate would fall to 12% in 2020, 3.6 p.p. below the IMF's forecast, and 7.3 p.p. lower than in 2016.
2. Although this proposal involves a significant increase in public expenditure, it would be perfectly viable in financial terms, through: increased revenues stemming from fiscal reform and the fight against fraud; higher public revenue and lower cyclical expenditure coming

from the expansive effect of the discretional increase in public expenditure (42% of it is self-financed); and fiscal space gained from postponing the goal of reducing public deficit to 3%.

3. Public deficit would continue to fall, albeit at a slower rate than forecast by the IMF. However, there are no economic reasons to support the idea that lower deficit and higher unemployment is better than the contrary, especially when the public debt burden in GDP would be nearly the same. It is worth underlining that the last is also true for the Scenario 1: the lower deficit is not translated into lower debt to GDP ratios, because the restrictive effects of this restrictive fiscal police reduce the denominator as well.

4. Higher growth would also mean some deterioration in the current account surplus that the IMF is forecasting for the Spanish economy during the next four years. Nevertheless, net external debt, expressed as a percentage of GDP, would continue decreasing at a similar pace in the Scenario 2 than in the Baseline Scenario. Anyway, the Spanish authorities should take some measures for securing external sustainability in a context of high growth, especially considering that the Spanish economy has a historically high dependency on imports and that the income elasticity of imports is clearly above the Eurozone average. Transforming the productive structure is necessary to avoid the "balance of payments constraint". This means, for example, bending the productive structure towards high value added sectors, increasing exports and reducing this imports dependency (especially energy).

Economic policy usually implies the need of setting some priorities between different objectives. In this case, the choice lies between prioritising either the rate at which unemployment is reduced or at which public deficit is reduced.

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