

# INVESTMENT AND THE GOLDEN RULE IN THE EUROPEAN UNION

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## Abstract

We will study in this paper the relation between public investment, public debt and fiscal rules in the European Union countries. The strict fiscal rules imposed by EU have negatively affected the investments. The decline in public investment in European Union is related to the fiscal rules (mainly the deficit rule) included in the Stability and Growth Pact (SGP). There have been made several attempts to amend the SGP in such a way to grant a more flexible treatment to capital expenditure when fixing budgetary targets and ceilings. According to the golden rule of budget deficit, investments can be financed through loans, while current expenditure should be financed from taxes. The golden rule promotes thus intergenerational fairness and contributes to economic growth.

**Keywords:** fiscal rules, public debt, public deficit, Stability and Growth Pact

**JEL Classification:** E62, H60, E60

## 1. Introduction

Public investment in the European Union decreased substantially since the beginning of the economic crisis. In most industrialized countries, public investment has been on average below 5 per cent of GDP during the last thirty years, five times lower compared with private investment.

This fall of public investment is a widespread phenomenon, which characterizes not only EU countries, but also many developed economies. Among the factors which explain the decline of investment are structural changes, a general tendency towards a shrinking government sector, and also the need to adjust public

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expenditure in the face of rising public debts (Oxley and Martin, 1991).

The fall in public investment and the current low interest rate environment have made it necessary to stimulate public investment spending with the purpose to increase short-term demand and raise potential output.

The strong fiscal imbalances experienced by most EU countries after the crisis have determined them to adopt new fiscal rules or to implement stricter rules. The Treaty of Maastricht and the European Stability Pact contain clear rules for public debt and for deficits, limiting public debt to 60% of GDP and deficits to 3% of GDP. Public investments can increase only with the condition of satisfying balanced budget rules. As a result of these rules, public investment decreased throughout the European Union.

There have been expressed opinions that the Maastricht convergence process led to a fall in public investment expenditures in EU countries and that the requirements of budgetary discipline within the SGP may limit seriously investment expenditures in EU countries.

Another plan in order to boost public investment was proposed by president Juncker. Nonetheless, the European Fund for Strategic Investments (EFSI), which is fundamental for the new Investment Plan, continues to neglect the negative effects on investments of the strict fiscal rules imposed within EU during recent years.

In national account statistics, investment is defined as expenditures in fixed assets, that is in items that last for more than one year. The most utilised statistical definition of public investment is the gross fixed capital formation of the general government. Fixed assets are not necessarily physical. Intangible assets, like patents or software, enter in the definition of gross fixed capital formation.

## **2. Literature review**

Public investments represent one of the most important instruments for increasing economic growth. Several studies show that public investments have the potential to boost growth not only on short term, but also on long term (Bom and Ligthart, 2014). Thus, the neglect of public investment will reduce the growth potential of EU economy.

The opinions concerning the relation between public debt - public investments are often divergent. According to some authors (Balassone and Franco, 2000), the obligation to limit the public debt to a certain level has as result a reduction of the public spending for investments. Other studies (Greiner and Fincke, 2009) have shown that a high level of public debt will lead to an increase in demand for public resources necessary for financing the debt service, and this will produce the decrease of the public investments.

Despite the reduction of public investment at the level of European Union countries, existing analyses fail to provide a strong and general indication that public capital is in short supply. Most of the studies analysing the contribution of public capital to production efficiency or growth show that public investment has a positive contribution to countries' productive potential (Easterly, W. and Rebelo, S., 1993).

There are several studies concerning the relationship between public debt, public investment and economic growth.

Peter Diamond (1965) expanded on Samuelson's overlapping generations model to analyse the long term effects of introducing public debt in a neoclassical competitive equilibrium. He did so by introducing production employing a durable capital good into this model. In the model there are used two generations by taking an existing capital stock for granted. Workers work in the first generation and retire in the next generation on capital gains. A constant debt to labour ratio was used in the model because a fixed amount would asymptotically have no effect in a growing economy in the long run. This model was used for showing the possible equilibria and the effects of debt on these equilibria. The Pareto efficient equilibrium was found to be the one in which factors of production, interest on capital and consumption were organized in such a way that interest on capital  $r$  is equal to the natural growth rate of labour  $n$ .

Elmendorf and Mankiw (1999) discuss what they consider the conventional view of the effects of government debt. According to this view, the issuance of government debt stimulates aggregate demand and economic growth in the short run, because it increases disposable income for households, which has as effect the increase of demand for consumption goods and the increase of aggregate demand for goods and services. National income will go up because of this shift in demand, because the increase in aggregate demand affects the utilization of the factors of production through the

Keynesian concepts of wage rigidity and prices. This positive effect will be even bigger if output is less than capacity and if the central bank will not increase the interest rate as an effect of an expansionary policy.

In the long run the higher budget deficit will have as result a decrease in public savings, which will not be compensated by an increase in private savings. As a consequence total investment will be lower, having a negative impact on GDP due to smaller capital stock, higher interest rate, lower labour productivity and wages.

Delong and Summers (2012) argue that expansionary fiscal policy may be self-financing in the long run in a depressed economy when interest rates are up against the zero lower bound where the central bank is no longer able to perform its stabilizing function because interest rates can't go any lower and there is still a large shortfall in potential output.

Between the papers examining non-linear connections, the paper of Reinhart and Rogoff (2010) is one of the most important. The authors investigated 3,700 annual observations from a database on 20 advanced countries and 24 emerging market economies during 1790–2009. The results of the study are that in the group of advanced economies where the ratio of public debt to GDP was above 90 per cent, median growth (1.9 %) is 0.9–2.0 % points lower over the whole period than in the group of countries with a lower debt burden (with a debt ratio of 0–30, 30–60, and 60–90%). They also found that average growth in economies with higher debt levels is 1.3–2.0 percentage point lower (1.7%). The gap was even wider in the group of emerging economies. For the period 1900–2009, median and average growth (2.9 and 1.0%) was 1.5–1.6 percentage points, and 3.1– 3.3 percentage points lower in countries with a debt/GDP ratio above 90% than in economies with public debt of 0–30, 30–60, and 60–90%. A common feature of the findings across both advanced and emerging economies was that there was a sharp fracture at the 90 per cent threshold and the results suggested a general correlation between growth dynamics and public debt.

Afonso and Gonzales (2011) analysed the influence of the budget components - the categories of expenditure and income on the economic growth in EU 15, during 1971-2006. The study reaches the conclusion that public investments have a positive impact on economic growth.

Checherita and Rother (2010) studied the relationship between public debt and economic growth in the Euro Zone and demonstrated the existence of a non-linear, concave relationship between these two variables, which has the turning point of 90% - 100% of the GDP. The study shows that high levels (over 90% of GDP) and increasing public debt influence economic growth due to the increase of the long term interest rate that has a negative impact on private investments.

### **3. Fiscal rules in the European Union**

Some authors (Blanchard and Giavazzi, 2004) propose to modify the Stability and Growth Pact so as to exclude public investment spending completely from the measure of fiscal deficit that is subject to the rule. These types of arguments start from the idea that the Stability and Growth Pact (or any other similar deficit rule) is intrinsically discriminating against public investment and the only solution would be their exclusion from the fiscal deficit rule in order for public investment to regain their optimal level.

The fiscal rules included in the Stability and Growth Pact have as purpose to ensure an efficient coordination of budgetary policies of different Euro zone countries.

These rules are centred around an objective of structural budgetary balance - MTO (Medium Term Objective) which must be reached and maintained on medium term. This medium term objective must let automatic stabilisers act within the cycle: the real budgetary balance fluctuates depending on the cycle around its fundamental tendency centred on MTO.

The modality of calculus of actual MTO is based on the criterion of public debt sustainability according to which the actualised sum of primary surpluses is superior or equal to the public debt.

Governments make debt for financing public investments projects in addition to private investment, all of which have as result a bigger economic growth. An appropriate deficit and debt levels are also necessary conditions for growth. The following criteria define healthy public finances:

- 1) Comparison between revenue and public expenditure by means of a definition of public deficit, which tends to zero at the optimal level

$$D_t^{PN} = (G_t - T_t) + I_t, I_t = i_t B_{0,t-1} \quad (1)$$

where  $D^{PN}$  is the nominal budget deficit,  $G_t$  is public spending,  $T_t$  is the public income,  $I_t$  is the  $t$  volume of interest paid,  $i_t$  is the nominal effective rate of interest, and  $B_{0,t-1}$  is the total value of domestic public debt from the period 0 to period t-1.

2) Compliance with the inter-temporal budget constraint

$$T(t) + \frac{dB(t)}{dt} = G(t) + r(t)B(t) \quad (2)$$

$$\frac{dB(t)}{dt} = r(t)B(t) + G(t) - T(t) = r(t)B(t) - S(t) \quad (3)$$

where  $t$  represents time,  $r$  is the interest rate and  $S$  describes the primary surplus calculated as difference between primary income and expenses for goods and services without taking into account the payment for interest. The first of the above equations shows that income from taxes and new issued debt instruments must be equal with governmental expenses. The reorganisation of the first relation generates the second which shows that the change in debt is equal with the sum between the payments of interest on existent debt instruments and primary deficit.

3) Following Blanchard (Blanchard et al., 1990), a comparison between the rate of economic growth and the interest rate that is paid for the debt should be considered:

$$db/ds = g + h - t + (r - \theta)b = d + (r - \theta)b \quad (4)$$

where  $b$  is the ratio of real debt on GDP while  $s$  refers to time,  $g$  represents government spending on goods and services,  $h$  refers to transfers,  $t$  is for taxes,  $r$  is the real interest rate and  $\theta$  is the rate of economic growth. Blanchard starts from the supposition that the real interest rate exceeds the growth rate, that is  $r - \theta$  is positive.

Thus, fiscal policy is sustainable if the real debt does not grow faster than the interest rate (or if the ratio of real debt to GDP does not grow faster than the excess of the interest rate over the growth rate).

#### **4. The golden rule**

In order to support public investment a different fiscal policy would be necessary at the level of the European Union. In this direction, one proposal was the implementation of the golden rule of public investment, as developed by the economist Richard A. Musgrave. This rule states that net public investment (gross public investment minus depreciation), that is increases of the public and/or social capital stock providing future benefits should be financed by debt and consequently excluded from balanced-budget rules.

The golden rule of public sector borrowing states that government borrowing should not exceed public capital formation over the cycle. This rule has been proposed as a way of modifying and loosening the EMU fiscal rules. There have been expressed opinions that the Stability and Growth Pact in its initial version may reduce the public sector's contribution to capital accumulation, while implementation of the golden rule may prevent an investment slowdown in the public sector of EMU member countries. After the change of the Stability and Growth Pact, only public investment can justify the exceeding of the maximum value of annual government budget deficit of 3% of GDP.

According to this rule, net public investment could be financed by government deficits, which promotes intergenerational fairness and economic growth. The investments are financed by future generations through the debt service. If future generations do not contribute to financing investments, this will lead to a disproportionate burden for the present generation, through higher taxes or lower spending, creating incentives for the under-provision of public investment to the detriment of future generations. There is evidence that this under-provision has indeed been characteristic of periods of fiscal contraction – not only during the current crisis, but also in relation to the decline in public investment observed during previous crises (Turrini, 2004).

Usually decisions concerning government investment expenditures are made by trading-off efficiency objectives (how much investment is needed to adapt the supply of infrastructures and other public-purpose capital assets to the needs of the economy) and budgetary objectives (which is the amount of investment expenditure consistent with the target budget balance).

Fiscal rules are used for modelling budgetary objectives, and the desired budget balances are represented as a function of output gaps, debt levels and past budget balances. In such a framework, the presence of the EU fiscal framework is assumed to potentially modify the parameters of the fiscal rules, the reaction of fiscal authorities to output gaps, debt levels and past budgets (Gali and Perotti, 2003).

According to the golden rule, fiscal policy should have as purpose a stable allocation of public sector resources during a business cycle. The increase of government borrowing has as consequence the increase of the real interest rate which results in crowding out investment. Therefore, capital accumulation fails, and this has a negative impact upon economic growth.

The golden rule states that over the economic cycle, the government will borrow only to invest and not to fund current spending. Therefore, over the cycle the current budget must balance or be brought into surplus.

The golden rule allows net borrowing by the government to finance public investment, and current spending to be financed out of current revenues. Temporary net borrowing for cyclical stabilisation purposes could also be allowed, as long as such cyclical fiscal deficits are matched by surpluses in cyclical upturns so that net borrowing for stabilisation purposes averages zero over the entire business cycle.

A possible objection to the adoption of a Golden Rule is that it can undermine debt sustainability. At the moment, the strictest fiscal rule at EU level in normal times is the medium-term objective, i.e. a structural deficit of 0.5 % of GDP or less.

The implementation of the Golden Rule for Public Investment could be realised provided the European Commission and the European Council could use the actual interpretational leeway to change the rules regarding the SGP. There are some elements in EU legislation which can justify the Golden Rule. The Article 126 TFEU indicates the European Commission to 'take into account whether the government deficit exceeds government investment expenditure' within the report on the existence of an excessive deficit. The investment clause in the Stability and Growth Pact introduced in 2013 also permits temporary deviations from structural objectives, complying with some very restrictive conditions. There are also several commonly agreed exceptions (especially in the case of the new debt rule) and unclear specifications (the method to be used for estimating the structural deficit).

Another possibility would be to use the provision concerning a severe downturn in EU in order to allow a deviation from the consolidation mechanisms. Thus an European Investment Programme should be implemented. The Commission has explicitly made a comparison with the 2008 European Economic Recovery Plan to give an example of the potential use of this provision (European Commission, 2015: 17). The utilisation of this provision 'should remain limited to exceptional, carefully circumscribed situations to minimise the risk of moral hazard' (European Commission, 2015:17). It may be sustained that the Euro area is currently in precisely such an exceptional situation after several years of recession.

### **5. Conclusions**

The Golden Rule supports public investment as an essential element of public spending. Unlike the Juncker Plan, it provides a direct boost to public investment on the national level.

The Golden Rule is a fiscal policy tool having as purpose to protect public investment in the medium term and cannot contribute to the economic recovery in EU very quickly. Therefore, besides the application of the rule, it should be necessary a short-term European Investment Programme similar to the European Economic Recovery Plan adopted during the financial crisis.

Such a program could help to increase public investment up to the proposed level with the implementation of the Golden Rule. This program could also contribute to a broader definition of public investment, beyond the mere definition from the national accounts. New investments could include education, but also spending in order to realize some goals from the strategy Europe 2020, like social inclusion and other fields which were affected by the austerity policies. This program and the application of the golden rule could contribute to re-launching the European economy.

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