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THE MYTH OF THE EXPANSIONARY FISCAL CONTRACTION

by

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THE MYTH OF THE EXPANSIONARY FISCAL CONTRACTION

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Abstract

The expectation view of the expansionary austerity hypothesis predicts that fiscal consolidation, implemented by a tax increase, may signal that tax cuts have to be expected in the future. Consumers respond to the tax cut increase by raising their estimates of their lifetime resources; as a result, they may raise consumption with positive effects on aggregate demand. In this paper, we show that the expectations view of fiscal austerity rests on two fundamental assumptions: The first requires that the horizon index of the consumer has to be infinite (necessary assumption), and the second that his tax expectations have to be elastic in the Hicksian sense (sufficient assumption). Since these assumptions are not satisfied in a world characterized by uncertainty and liquidity constraints, the expansionary effects of fiscal austerity policies (through the expectations channel) fail. Austerity policies are contractionary. The contractionary effects of austerity policies may be offset either by a sharp decline in the interest rates or by a move to a surplus in the balance of payments. We argue that these offsetting factors are of questionable validity in a monetary union.

Keywords: Expansionary fiscal consolidation.

JEL Classification: E62, E65, F32.

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1. Introduction¹

The expansionary austerity hypothesis predicts that a reduction in government spending may lead to higher GDP rates even in the short run. This prediction is different from that of the conventional Keynesian model, according to which a reduction in government spending has contractionary effects on aggregate demand in the short run. The expansionary austerity hypothesis was introduced by Giavazzi and Pagano (1990)², who studied the effects of fiscal consolidation policies in Denmark and Ireland, during the eighties. They found that while most of the European countries went through recession in the early 1980's, Denmark and Ireland experienced economic expansion, after reducing their public spending. The research that followed the Giavazzi and Pagano paper, identified two channels through which fiscal consolidations may stimulate output and employment: labour market, and expectations (Giudice, *et. al.*, 2003; Ardagna, 2004)³. These two channels reflect two different (non-mutually exclusive) views of how fiscal consolidations may stimulate economic activity.

The *first view (labour market view)* stresses the effect of the *composition* of current fiscal policy, i.e., whether the government's deficit is reduced via tax increases or spending cuts. It suggests that a reduction in public spending (especially transfers and government wage bills) renders the labour market more flexible. Economic activity is stimulated via the reduction in the real wage, which is caused by the flexible labour market. This view was defended, among others, by Alesina, *et. al.* (2002) and Ardagna (2004). The *second view (expectations view)*, that forms the subject of this paper, supports that fiscal austerity is expansionary if agents believe that fiscal consolidation today generates a regime that eliminates the need for larger and more painful fiscal adjustments in the future (Blanchard 1990). This belief may generate a positive wealth effect that leads to an increase in aggregate demand. The expectations view was defended (among others) by Blanchard (1990), Bertola and Drazen (1993), Sutherland (1997) and Perotti (1999).

In this paper, we assume that fiscal consolidation policies are implemented via tax increases (Blanchard 1990), and argue that the expansionary fiscal austerity hypothesis (through the expectations channel) is not valid unless the following *two conditions* are satisfied: The *first*, requires that the horizon index of the consumer, denoted by $1/p$ (where p is the myopia coefficient or the probability of death), tends to infinity. This means that the consumer will have to be longer around to enjoy lower taxes. This condition, which is emphasized in the relevant literature, is *necessary* for the validity of the hypothesis, but it is not sufficient. *Sufficiency* requires that *the tax expectations of the consumer* have to be elastic in the Hicksian sense: *a small increase in the present tax rate has to change expected taxes in the*

opposite direction and in greater proportion than the present change. The difference between the present and the future taxation creates the wealth effect that is necessary for the increase in consumption. It is assumed, of course, that the individuals behave according to the principles of the rational expectations theory: this means that they make efficient use of available information and know all about the market they are in.

The thesis, we are defending in this paper, is that the expansionary effects of fiscal austerity (through the expectations channel), are likely to be very weak or even non-existent, because *uncertainty* and *financial constraints* set limits on the economic horizon and, therefore, invalidate the first hypothesis. But even if we assume that the necessary condition is true, the sufficient condition (elastic tax expectations) may not be fulfilled especially in periods of economic depression. Therefore, fiscal austerity policies are *always* contractionary. These contractionary effects may be offset either by a move to a trade surplus and /or a sharp decline in the interest rates. However, in the case of a monetary union, and assuming perfect capital mobility, these offsetting factors are ineffective. Running a trade surplus is a *beggar thy neighbour* policy while the interest rates are determined in international markets, and therefore cannot be affected by domestic policies.

The remainder of the paper is organized as follows: In the next two sections, we state the necessary and sufficient assumptions for the validity of the expectations view, the factors that invalidate them and render austerity policies contractionary. In the fourth section, we discuss the argument that the negative effects of *austerity policies* may be offset either by a sharp reduction in the interest rates and/or by a move to a surplus position in the balance of payments. In the final section, we conclude.

2. Fundamental assumptions for the validity of the expectations view

The key characteristic of *the expectations view* of fiscal policy is that the non-standard (non-keynesian) effects are explained by the role of current policy in shaping expectations about the future policy stance. These expectations have to be *rational* in the sense that individuals make efficient use of all available information and know all about the market they are in (i.e., they behave according to the “relevant” economic theory). More specifically, *the expectations view* of fiscal consolidation (implemented by a tax increase) may be stated as follows:

Given the government inter-temporal budget constraint, a tax increase today has to be followed by a tax reduction in the future. Rational and forward looking consumers, who optimize their intertemporal consumption function, recognize this and respond to the tax increase, by raising the estimates of their lifetime resources; as a result, they may raise consumption with positive effects on economic activity.

The validity of this proposition rests on two assumptions:

Assumption 1 (necessary): *The horizon index of the consumer $1/p$ has to tend to infinity (implying that the myopia coefficient p must tend to zero).*

The horizon of the consumer has to be long enough so that he will be longer around to enjoy lower taxes. This is the assumption emphasized by most of the current literature. However, this assumption, although necessary, it is *not sufficient*. In fact, under the assumptions that give rise to Ricardian equivalence (one of these assumptions is that the horizon index is infinite), a tax increase today is matched by an *equal tax reduction* in the future. In this case, consumers' lifetime resources are not affected and, therefore, total consumption does not change. Austerity policies have *neutral effects* on consumption and effective demand. The life time resources of the consumer will be affected if the present state of the economy (the present economic situation) justifies a rational belief that a tax increase today will create expectations of a tax reduction in the future, which will be large enough to outweigh the negative effects of the increased taxation on current disposable income. This observation leads to the following assumption:

Assumption 2 (sufficient): *Consumers' tax expectations have to be negative and elastic in the Hicksian sense.*

We define the *elasticity of tax expectations* of a consumer as the ratio of the proportionate change in the expected future taxation to the proportionate change in the current taxation. This definition is similar to that of Hicks (1939) for the elasticity of price expectation. The elasticity of expectations is *positive*, if a change in the present tax rate will change expected tax rates in the same direction; and *negative*, if a change in the present tax rate will change the expected tax rate in the opposite direction. Thus, if the elasticity of expectations is negative and equal to one, an increase in the current tax rate will change the expected future tax rate in the opposite direction and in the same proportion. This corresponds to the Ricardian case, discussed under Assumption 1 above. Assumption 2 states that an increase in the present tax rate has to change the expected future taxes in the *opposite* direction and in a *greater* proportion than the present change. The difference between the present and the expected tax rate will create the positive wealth effect required for the expansion in the consumers' demand. Although the elasticity of expectations is not mentioned, at least explicitly, in the relevant literature (to the best of our knowledge), a number of authors (Blanchard, 1990; Miller et al., 1990; Bertola and Drazen, 1993; Sutherland, 1997; Perotti, 1999) emphasize that private consumption boom can only result if the possible wealth effect,

from the increase in taxation, is *large enough to outweigh the negative effects on current disposable income* (Ardagna, 2004).

3. The validity of the assumptions

The *Assumption 1*, that the horizon index of the consumer tends to infinity, is too extreme to be accepted. Individuals do not live forever. The counter argument here is that since people leave bequests and care about their descendants, they will behave as if life never ends. But even in this case, *uncertainty* and *financial constraints* pose limits on the length of the horizon, undermining the validity of the expansionary austerity hypothesis. These two factors are discussed in turn.

(i) *Uncertainty*. Uncertainty means the future economic environment is not known today. This implies either that the future states of nature are not observable today or, if they are observable, economic agents are unable to assign numerical probabilities on them. Uncertainty undermines the expansionary effects of fiscal contraction in two ways:

First, it sets a limit to the infinite horizon of the consumer. Since the degree of uncertainty is an increasing function of the time horizon (a greater uncertainty exists with regard to a more remote future) it follows that the expectations of the economic agents have to be limited in time by a certain horizon, if the degree of uncertainty they face is to be reduced. This means that the myopia coefficient p has to take a positive value ($p > 0$). But this invalidates the expansionary austerity hypothesis which requires $p=0$.

Second, uncertainty is inconsistent with the rational expectations hypothesis, on which the expansionary austerity hypothesis rests. Uncertainty exists when the economic agent is unable to calculate the numerical values of probabilities of the future states of nature. The formal proposition that underlies the rational expectations hypothesis (Muth, 1961), is that the expected value of a variable is equal to the value predicted by the “relevant” economic theory, plus a random error, the probability of distribution of which is known. Apart from the question relating to the “relevant” economic theory, the assumption that the probability distribution of the random error is known, limits the application of the theory to a world of risk. However, the economic environment is characterized by *uncertainty*, and in this case the only reasonable answer to the question “what tax rates will be in ten years time” is, simply, “I do not know”. As Keynes has remarked (Keynes, 1937a, p. 214), “About these matters there is no scientific basis on which to form any calculable probability whatever”.

In such situations, one might expect consumers to base their behaviour *on what they actually know*, which is their disposable income, without much reference to the uncertain future.

Therefore, a tax increase will reduce the disposable income of the consumer with negative effects on consumption and aggregate demand.

(ii) *Liquidity constraints*. A second factor that poses limits on the horizon of the consumers is the inability of some agents to borrow against future income, perhaps because lenders believe they are unlikely to repay their loans. Therefore, individuals fail to optimize their intertemporal consumption function. To the extent that individuals are denied access to borrowing, their consumption behaviour will be linked to their current disposable income rather than to their future income. Thus, in a liquidity constrained system, the horizons of consumers are limited (by necessity) and therefore the myopia coefficient p takes a value greater than zero ($p > 0$).

One *may be tempted* to assume that the length of the horizon will be extended as the economic system becomes liquidity unconstrained; in the limiting case (no liquidity constraints), and on the assumption that there is no uncertainty, $p=0$ (see, also, Blanchard, 1990). However, given the development of the credit markets, there is *at any given time* a fraction of the total population that is *liquidity constrained*. Even in “normal” times, the credit market is rationed (implying that there is an excess demand for credit at the equilibrium interest rate), due to asymmetric information (Stiglitz and Weiss, 1981). This fraction is more likely to increase during a downturn, when unemployment is high, for two reasons: (a) Credit markets are normally lend against collateral, not just the promise of future repayment; this condition is difficult to be met by unemployed individuals. (b) The uncertainty, that accompanies an economy during a period of economic depression, may lead to a sharp increase in liquidity preference and, hence, to a rise in the interest rate. The rise of the interest rate limits the access of the individuals to the credit markets. Thus, during a downturn, a greater number of individuals are likely to find themselves liquidity constrained.

We may, therefore, conclude that p has always a positive value ($p > 0$). The value of p increases during the period of economic depression, when the number of liquidity unconstrained individuals increases, and declines during the periods of economic prosperity (when the number of liquidity constrained individuals declines), but never reaches the value of zero. It is restricted to the range $1 > p > 0$, implying a limited horizon for the consumers. *This violates Assumption 1*. Therefore, consumers are myopic (they base their consumption on their current disposable income). It follows that an increase in the tax rate (by reducing disposable income) will lead to a severe depression.

The *Assumption 2*, referring to the *elasticity of tax expectations*, is also problematic. Expectations are informed predictions of future events that are based on our knowledge of the

present state of the economy. *Therefore, individuals will increase their current spending if the current austerity policies (implemented via a tax increase) justify a rational belief that expected future taxes will be reduced in a greater proportion than the increase in the present tax rate.* However, in a world in which austerity forms the dogma of economic policy (as in the Eurozone⁴), there are few reasons for rational individuals to believe that austerity measures taken today will be followed by measures that are inconsistent with the austerity dogma in the near future. On the contrary, as Boyer (2012, p. 304) notes, “the new demands, expressed by the European Commission, European Central Bank (ECB) and IMF, induce the feeling that these austerity measures will be strengthened from period to period”. This feeling is reinforced in periods of economic depression because the current situation (worsening of the public finance and of the tax base) cannot justify a rational belief that taxes will be reduced in the future. But this means that *the elasticity of tax expectations* is positive and, at least, equal to unity (the expected future change in the tax rate will be *at least equal* to the current change in the tax rate), which violates Assumption 2.

Thus, fiscal austerity policies *are not expansionary*, because the necessary and sufficient conditions for their validity are not satisfied. On the contrary, they have contractionary effects as predicted by the conventional Keynesian models. Being always contractionary, *austerity programs* tend to amplify the negative effects of depression on output and employment, while they prevent the economy from overheating and stabilize the economic system during the periods of economic expansion. As Keynes (1937b) has remarked, “The boom not the slump is the right time for austerity at the Treasury.”

4. Offsetting factors

We have argued in the previous sections that fiscal consolidations are always contractionary. These contractionary effects may be offset either by *a rise in the net exports* or by a *sharp decline in the interest rates*. The importance of these offsetting factors was emphasized by Perotti (2011), who observed that economic expansions that took place after consolidations in Denmark, Sweden, Finland and Ireland, during the eighties, were associated with a sharp reduction in the interest rates or a net export boom⁵. Thus, it was not austerity that was expansionary but the effects of austerity on exports and interest rates. The mechanism that produces these two effects (offsetting factors) is explained:

The *first* of the two offsetting factors may be achieved via the *devaluation* of the national currency. In a currency area (which is an extreme form of a fixed exchange rate regime), this policy tool is not available, and the only alternative, for the country concerned, is *internal devaluation*. It is argued that the larger the fall of domestic demand, the more the imports

will fall and the stronger the improvement of the current account will be (Gros, 2013). This view overlooks not only the fact that improvement in the balance of payments, in the context of monetary union, is a *beggar thy neighbour policy*, but also the possible negative effects of *deflation* on the domestic economy of the country in question:

First, deflation increases the burden of the debt with negative effects on output and employment (Fisher, 1933; Keynes, 1936). If the public debt is large, this becomes a major objection to a deflationary policy. Furthermore, improving competitiveness via deflation (internal devaluation) may, under certain conditions, destabilize the economic system⁶, while in the cases in which stability is preserved, the economy may be trapped at a deflationary equilibrium characterized by declining output and employment (Demopoulos and Yannacopoulos, 2015). Second, deflation, though it may improve the balance of trade, is likely to worsen *the terms of trade* of the deficit country (a fact, emphasized by Keynes (1929) in his exchange with Ohlin (1929) on the transfer problem), with negative effects on its welfare.

The *other offsetting factor* is the decline in the interest rate. In the context of the Keynesian model, and assuming a *closed* system or an economy that controls its own currency, the contraction of economic activity, due to an austerity program, will reduce the demand for money for transaction purposes and, therefore, it will reduce the schedule of liquidity-preference for the community as a whole. This will reduce the interest rate (given the money supply). The decline in the interest rate will partially offset the negative effects of the austerity programs on output and employment, provided that the interest rate is not too low.

However, the interest rate channel is totally ineffective in the case of a small *open economy*, operating in a fixed exchange rate regime and under perfect capital mobility. In this case, the money supply is totally endogenous and the domestic interest rate of the small open economy cannot diverge from the international interest rate. In the context of an IS-LM model, this means that the LM curve is a horizontal straight line, at the international interest rate, reflecting the fact that the money supply is fully endogenous (Dornbusch, 1980, pp. 179-180, Figure 10.2). Since under fixed exchange rates, perfect capital mobility, and small country conditions, fiscal policy is very effective in changing output (according to the well-known prediction of the Fleming-Mundell model), it follows that a fiscal contraction will lead the economy to an equilibrium characterized by a lower income and unchanged interest rates. In fact, the IS curve of this economy is given by the equation:

$$y = E(i^*, y) + B(y)$$

where, y denotes the aggregate spending by domestic residents, and B the trade balance (Dornbusch, 1980). E is a function of the international interest rate and real income, while trade balance is a function of real income. The IS curve has a negative slope, because at a given output, a lower interest rate increases domestic demand, and creates an excess demand condition. Therefore, an increase in output is required to restore equilibrium. Trade balance is deteriorated as we move down along the IS curve, because the increase in demand increases imports relative to the given level of exports. The equilibrium of the system occurs at the point A at which the LM and IS curves cross (Figure 1). The equilibrium output, corresponding to A is the y_0 .

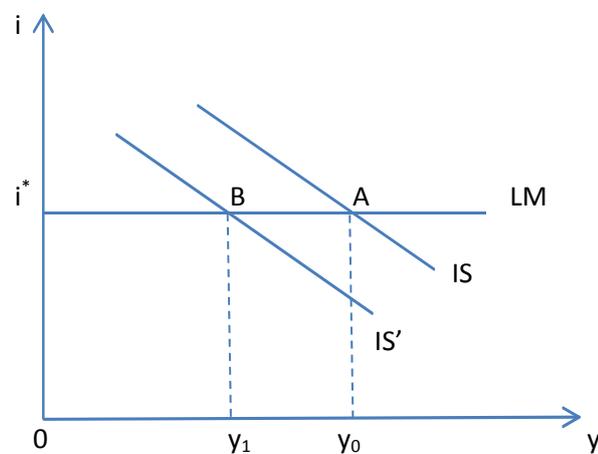


Figure 1

Consider now a real contraction caused by an *austerity program* (Demopoulos and Yannacopoulos, 2012). Austerity policies shift the IS curve to the left from its original position. The new IS curve is the IS' , and the new equilibrium point is at B , which is compatible both with equilibrium in the money market, and the new equilibrium in the balance of payments. In fact, the contraction of economic activity, due to the austerity program, tends to reduce the domestic interest rate i below the level of the international interest rate i^* , as the transaction demand for money declines relative to the prevailing money stock. By the assumption of perfect capital mobility, the difference between the domestic and the international interest rate will generate a capital outflow that worsens the balance of payments of the country. Since the money supply is endogenous, a deficit in the balance of payments will lead to an outflow of the common currency that puts an upward pressure on the domestic interest rate. This outflow will continue until the domestic money supply is equalized with money demand at the international interest rate i^* . The level of income

corresponding at the equilibrium point B is lower compared with the level of income corresponding to the equilibrium point A. Hence, fiscal austerity is contractionary.

This seems to be the situation in the crisis- hit Eurozone countries. In 2014, all these countries (that took the medicine of austerity) were running a current account balance or even surplus, but their unemployment remained between high and very high levels, while their GDP per head seemed stuck below the 2007 levels (Wolf, 2015, pp. 361-365).

5. Concluding remarks

The following conclusions are drawn from our analysis:

First, the assumptions on which the expansionary austerity hypothesis is based, namely, those of infinite horizons and elastic tax expectations, are unlikely to conform to the real world. *Uncertainty* and *liquidity constraints* set limits to the time-horizon of the consumers, and, therefore, invalidate the first hypothesis. Thus, economic agents base their consumption decisions on their current disposable income than on their future income. Therefore, fiscal restrictions will lead to a decline in output and employments, which may be too severe if these policies are adopted during a period of economic depression. The second key assumption is also invalidated in a world in which *austerity policies* form the dogma of economic policies, as in the Eurozone: measures taken today will be followed by measures that are inconsistent with the austerity dogma in the near future. Hence, the necessary and sufficient conditions for the validity of the expansionary austerity hypothesis break down. Austerity policies are contractionary.

Secondly, the contractionary effects of the austerity policies may be offset either by a reduction in the interest rate, or through a positive effect in the balance of payments. *These two offsetting channels* are of limited validity for a small open economy, member of a currency area: In fact, the members of the currency area have to rely on deflation (internal devaluation) in order to improve their balance of payments. But deflation may have some negative effects on the domestic economy of the member country: it increases the burden of the debt; it may destabilize the economic system; it may worsen the terms of trade of the member country. The other offsetting factor, the reduction in the interest rate, is effective in an open system or in an economy that controls its own money supply, but it is totally ineffective for a member of a monetary union. Under fixed exchange rates and free capital mobility, the LM curve of a small open economy is perfectly elastic at the world interest rate. In this case, a restrictive fiscal policy reduces income and employment, without affecting the interest rate.

Notes

1. This is an extended and updated version of the authors' paper, "Conditions that may invalidate the prediction of the expansionary austerity policies" (2015b).

2. Giavazzi and Pagano (1990) draw their inspiration from the views expressed (during the early eighties) by the German Council of Economic Advisors report. According to these views, reducing public spending can increase growth by improving expectations (Blyth, 2013).

3. The empirical literature does not provide a clear evidence in support of the expansionary austerity hypothesis. Giavazzi and Pagano (1990, 1996) show that fiscal consolidations are sometimes correlated with an expansion on private consumption within one year. Alesina and Perotti (1997) and Alesina and Ardagna (2010) find that fiscal consolidations are correlated with rapid growth, particularly if implemented by reducing public expenditures rather than by raising taxes. Finally, Alesina (2010, p.3) insists that many sharp reductions of budget deficits have been accompanied by "sustained growth rather than recession even in the short-run." These results are not accepted by all. In the *World Economic Outlook* (2010), the IMF emphasizes that austerity programs are contractionary in the short run, though they may be expansionary in the long run. Similar results have been reached by Guajardo, Leigh and Pescatori (2011) who found that fiscal consolidations are contractionary even in economies with high perceived sovereign default risk. They also found that the decline in private consumption and investment is mitigated by a rise in exports associated with a fall in the value of the domestic currency. However, they add that this offsetting channel is less potent with economies with pegged exchange rates (Guajardo, Leigh and Pescatori, 2011, p. 29). Perotti (2011), an earlier supporter of the expansionary austerity hypothesis, doubts the applicability of it under present circumstances. Finally, in two recent publications Blanchard and Leigh (2013) and the *World Economic Outlook* (2012), by the IMF, argued that, in advanced economies, stronger planned fiscal consolidations have been associated with lower growth than expected.

4. "The dogma of expansionary austerity conquered Europe as completely as the Holy Inquisition conquered Spain" (with apologies to J.M. Keynes (1936, p. 32)).

5. The importance of the monetary policy is emphasized by Alesina and Ardagna (1998, p.6): "A discussion of expansionary effects of fiscal policy, however, has to take into account what happens to monetary policy. Even in the most standard Keynesian model, a fiscal contraction can be expansionary or neutral, if it is accompanied by a sufficiently lax monetary policy, which in a small open economy may take the form of a devaluation. Therefore, the monetary stance is critical for our discussion."

6. In the words of Paul De Grauwe (2011, p.9), “The path towards recovery for members of a monetary union is likely to be crisis prone.”

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