

**Comment on Francesco Giavazzi and Marco Pagano:
Non-Keynesian Effects of Fiscal Policy Changes:
International Evidence and the Swedish Experience**

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Can a sharp fiscal contraction be expansionary? According to Francesco Giavazzi and Marco Pagano the answer is yes, at least sometimes. In a situation where the public debt to GDP ratio follows a seemingly unsustainable path, a sizeable and credible fiscal consolidation plan that reduces the risk of very high and disruptive taxes in the future may have beneficial effects on households' perceptions of permanent income, and on investors' assessments of future returns. The authors' well-known previous paper, Giavazzi and Pagano (1990), suggests that this anti-Keynesian view of fiscal consolidation may represent more than a dangerous example of wishful thinking. According to that paper, the Danish fiscal stabilisation in 1983-86, and the Irish one in 1987-89, represent examples of "expansionary fiscal contraction". Both countries slashed public spending on consumption and investment, and Denmark also increased net taxes. But at the same time private consumption and investment boomed, while unemployment fell.¹

The main contribution of the present paper is that it brings in fresh international evidence on the expansionary fiscal contraction hypothesis. It explores the information contained in a cross-section of OECD countries, and it provides a detailed discussion of the recent Swedish experience, involving breakneck government deficits, and the most severe economic downturn since the 1930s. While the authors abstain from

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¹ The Danish and Irish evidence can be read in alternative ways, however. According to Andersen (1994) and Barry and Durkan (1995), the Danish and Irish recoveries should be explained along other lines than expansionary fiscal contraction.

making explicit policy recommendations, their reading of the Swedish case suggests that the fall in economic activity would have been less pronounced if policy makers had opted for a tighter fiscal discipline. The analysis of Giavazzi and Pagano raises a number of interesting questions, but I will concentrate my discussion on issues which seem of particular interest in a Swedish context.

i. Aggregate consumption and current disposable income

The idea that there are instances when forward-looking consumers respond in a favourable way to policies which correct severe fiscal imbalances is natural enough. From the point of view of policy making, however, the problem is one of empirical identification. Under what concrete circumstances is fiscal consolidation likely to be accompanied by a boost to aggregate consumption?

Assume that there are two types of consumers. The first type obeys the logic of the permanent income model, while the second sets spending equal to current disposable income, perhaps because of liquidity constraints or myopic behaviour. If we assume that there is a constant fraction λ of current income consumers in the population, aggregate consumption per capita, C , can be written (I suppress the time index) as

$$C = (1-\lambda)YP + \lambda YD, \quad (1)$$

where YP is the permanent income of permanent income households, and YD is the disposable income of hand-to-mouth consumers. Assume for the sake of argument that public consumption and public investment follow some exogenous sequences. As a consequence, fiscal policy reduces to the choice between raising net taxes today or in the future – today's fiscal contraction spells lower taxes in the future.

My simple point is that the expansionary fiscal contraction hypothesis presupposes that the share of current income consumers is fairly small. When λ is large, equation (1) in effect reduces to an old style Keynesian consumption function, where current disposable income drives aggregate consumption. If this is indeed the case, a current net tax hike is bad for consumption. Does this requirement fit the Swedish case?

Some evidence on the likely magnitude of λ can be gained from the by now fairly substantial literature on the excess sensitivity of aggregate consumption. Jappelli and Pagano (1989) report results, using data for seven countries, suggesting that current disposable income can help to explain consumption in most countries. Sweden, however, stands out as an exception; in spite of the fact that Jappelli and Pagano rely on data for a period when credit market regulations were largely intact, they conclude that λ is not significantly different from zero. Somewhat conflicting evidence is reported in Campbell and Mankiw (1991) and Agell, Berg and Edin (1995). Both studies suggest that λ is significant, but still fairly small (λ lies in an interval between 0.1 and 0.25). My interpretation of the Swedish evidence is that current disposable income is in fact less important for aggregate consumption.² As a consequence, there is no easy, *a priori*, way of dismissing the expansionary fiscal contraction hypothesis by arguing that most consumers consume their disposable income.

A small value of λ implies that a current net tax hike is unlikely to have very strong negative effects on aggregate consumption. But if it is to *increase* consumption, we need some additional assumptions. Under the assumptions that λ is zero, and that all taxes are of the lump-sum variety, Ricardian equivalence must hold. A current fiscal contraction leaves YP , and hence aggregate consumption, unchanged. To escape from the Ricardian straitjacket, Giavazzi and Pagano add a turbo-engine in the form of costly financial collapse of the government.³ If fiscal policy follows an unsustainable path, a current net tax hike may well boost permanent income, as it reduces the risk of costly disruptions at some future date.

Was the Giavazzi-Pagano turbo in operation during the Swedish consumption bust? I must confess that I do not have the slightest idea. The kind of evidence presented is largely circumstantial, and it is open to alternative interpretations.

² However, the results reported in Agell and Berg (1996) are consistent with the idea that current disposable income became more important for consumption during the early 1990s.

³ As discussed by Giavazzi and Pagano, there are alternative ways of rationalising a positive link between current net taxes and permanent income.

2. How do we measure the fiscal stance?

To say something meaningful about the relation between the fiscal stance and aggregate demand in general, and consumption in particular, we need to rearrange the data a bit. A simple correlation between two endogenous variables like aggregate consumption and unadjusted fiscal deficits is not informative about causality. In countries like Sweden, where automatic stabilisers have played an important role, a positive correlation between contemporaneous private demand and fiscal deficits will to a large extent reflect causation running from the former variable to the latter.

To remedy this problem, and arrive at a measure of discretionary fiscal policy actions, Giavazzi and Pagano exploit data on cyclically adjusted (structural) fiscal deficits. Their cross-country study of private consumption uses OECD data on structural deficits to identify episodes of large and persistent fiscal laxitude. A main finding from their Swedish case study is that the large negative errors in the aggregate consumption function in the early 1990s coincide with a rapid deterioration of conventional estimates of the structural fiscal balance.

There are many ways of measuring the structural deficit, and each one has its own pros and cons. In view of the many difficulties involved, it is perfectly understandable that Giavazzi and Pagano rely on easily available time series. However, these measures of cyclically adjusted deficits are very imperfect indicators of discretionary fiscal policy actions in Sweden.⁴ A first basic observation is that the OECD figures for the structural deficit of the public sector tracks the business cycle to a surprising extent.⁵ After 1976, when the economy went into a fairly deep recession, the structural deficit went deep into the red. After 1985, when many markets began to show signs of overheating, the structural deficit improved rapidly. Between 1990 and 1993, when several adverse macroeconomic shocks hit the economy, the cyclically adjusted primary balance fell by 10 percentage points of potential GDP. This roller coaster pattern, tracking the business cycle, is not what one would expect from a structural deficit.

Taken at face value, these figures suggest that the early 1990s was a period characterised by discretionary fiscal policy activism on a very large

⁴ To what extent the OECD figures on structural deficits are a more reliable indicator of discretionary policy in other countries is an open question.

⁵ See OECD (1994), p. 19.

scale. This also seems to be the interpretation adopted by Giavazzi and Pagano. My own reading of recent fiscal history, however, is that the magnitudes are much more modest. The single most important discretionary policy change in the early 1990s was the major tax reform implemented in 1990–91. Although the reform was expected to be fully financed, a recent evaluation indicates that it was underfinanced, on a yearly basis, by an amount corresponding to between 2 and 2.5 percent of GDP (see Agell, Englund and Södersten 1995). Other, much smaller, effects on the revenue side stem from the fact that some temporary tax hikes were cancelled in 1991. On the expenditure side, there were costs due to the bailout of insolvent banks. Whether these costs should be classified as discretionary or rule based is a philosophical question — presumably, governments in many countries follow the sensible rule of implementing emergency measures that prevent a breakdown of the financial system.

My conclusion is that available data on the structural deficit very much exaggerate the extent of expansionary fiscal policy actions during the years of the Swedish consumption bust. Most, perhaps as much as 3/4, of the deficit should be explained in terms of passive adjustments to the drop in the activity level.⁶ The aim of the OECD's calculations of the cyclically adjusted deficit is to give a measure of the government's budget balance as it would have been if the economy had operated at a normal rate of factor utilisation. Two basic assumptions are involved. The first concerns the size of the output gap between potential and actual GDP, and the second the sensitivity of government revenues and expenditures to variations in the gap. To a large extent, the sharp increase in the cyclically adjusted deficit between 1990–93 reported by the OECD reflects downward revisions of potential GDP growth, rather than changes in tax-transfer laws.

The ambiguities surrounding the measurement of discretionary policy action imply that the econometrician will have a hard time finding truly exogenous right-hand side variables in a consumption regression. It is not clear, however, that they matter very much for the expansionary fiscal contraction hypothesis. When the deficit is galloping, consumers may not bother about the fingerprint concerning deficit decomposition. Even if most of the deficit was caused by the recession, fiscal policy may have had non-Keynesian effects if consumers were sufficiently worried about the future debt burden.

⁶ See e.g. Ohlsson and Vredin (1994).

3. Residuals in the Swedish consumption function

Should we test the expansionary fiscal contraction hypothesis using international cross-section data, or confine the analysis to data from individual countries? Giavazzi and Pagano try out both approaches. However, problems of data comparability and availability imply that their international consumption study has to leave out potentially important wealth effects. From this perspective, I believe that case studies using consistent and comprehensive data sets for individual countries are more informative.

Like many other students of the Swedish consumption function, Giavazzi and Pagano report large negative errors in the consumption function in 1992–93.⁷ After controlling for changes in labour earnings and nonhuman wealth, a large fraction of the observed fall in consumption remains unexplained. Giavazzi and Pagano interpret this as an indication of the contractionary effects of expectational deficit dynamics.

My main complaint is that Giavazzi and Pagano pay too little attention to the alternatives. There are other ways of interpreting aggregate Swedish consumption data, and other ways of rationalising the residuals. After 1991 the macroeconomic environment changed drastically, including much higher real after-tax interest rates, and a substantial depreciation of the real exchange rate. One possibility, much emphasised in the popular debate, is that the sharp fall in consumption simply reflects an adjustment to an environment with much higher unemployment. Between 1990–93, open unemployment rose from 1.6 percent to 8.2 percent. It is quite conceivable that a large part of the consumption bust reflects a contemporaneous level adjustment to increased earnings uncertainty. When consumers are prudent, increased earnings uncertainty boosts precautionary savings, which implies a drop in current consumption.⁸

⁷ See also Agell, Berg and Edin (1995).

⁸ The simulations reported by Caballero (1991) indicate that small changes in perceived earnings uncertainty can have strong effects on current consumption. Barot (1995) reported results indicating that the errors in the aggregate Swedish consumption function in 1992–93 disappear when current unemployment is included among the explanatory variables. However, as Barot did not control for reverse causation, the role of unemployment in the bust years is still an unsettled issue.

4. Conclusions

Giavazzi and Pagano have written a very interesting paper on an important policy issue. I am not convinced, however, that the Swedish experience in the early 1990s provides an example of contractionary fiscal expansion. The macroeconomic turmoil of the early 1990s implies that there is very little independent variation in important macroeconomic time series. In such a situation, it is bound to be hard to discriminate between alternative models.

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