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Working Paper No. 90, April 2004

Published by
The National Institute of Economic Research
Stockholm 2004

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ISSN 1100-7818

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Abstract

In this paper, we discuss a new method for constructing a cyclically adjusted budget balance. We use the method to evaluate the budget balance for Sweden during the period 1991–2005. Traditionally, methods for cyclical adjustment have focused on the output gap. In this paper we also adjust for deviations of tax bases from their trend levels. Furthermore, we adjust for effects of the unemployment gap on government spending. For Sweden, we find that these additional adjustments have a significant impact on the cyclically adjusted budget balance, especially for the periods 1992–1995 and 2000–2001.

Keywords: Fiscal Policy, Cyclically Adjusted Budget Balance.

JEL codes: H30, H61, O47.

1 Introduction

As a consequence of relatively large public sectors in many OECD countries, cyclical fluctuations have a significant impact on general-government net lending in the OECD area. When resource utilization is high so are tax revenues, while government expenditures on such items as labour-market-related transfer payments are low. Under these circumstances, general-government net lending is high in relation to when resource utilization is at a normal level. In order to avoid basing permanent tax cuts or expenditure hikes on levels of saving that are temporarily high because of cyclical factors, it is essential to assess the government's cyclically adjusted budgetary position.

General-government net lending is dependent not only on the state of the economy, but also on rules that are politically decided. For instance, a higher replacement level in the health-insurance system will result in lower net lending in a given economic situation. Figure 1 provides a two-dimensional schematic classification of the factors determining general-government net lending. In the first dimension, the factors are divided into those that describe the economic situation and those related to rules based on political decisions. In the second dimension, there is a division into temporary and permanent factors.

Figure 1 Classification of Factors That Determine Net Lending

	Temporary	Permanent
Economy-dependent	A	C
Policy-dependent	B	D

The division into four quadrants in Figure 1 can be used for various analyses of general-government net lending. Factors that can be linked to the cyclical state of the economy are included in the first column. For example, tax revenues that are temporarily low because of cyclically low employment would be placed in quadrant A, whereas a temporary increase in the volume of labour-market programmes due to political decisions belongs in quadrant B. Permanent factors are placed in the second column. Long-term economic factors such as the level of potential GDP fit in quadrant C, while politically set rules of a permanent nature belong in quadrant D. An example of the latter would be pension benefits in a defined-benefit system.

In this paper, the cyclically adjusted budget balance is defined as the net lending that would have been observed under currently applicable rules with a normal level of resource utilization and a normal composition of GDP. Thus, adjustments are made for factors in quadrant A corresponding to their deviation from cyclically normal, or average, levels. The (implicit) current

rules for taxes and expenditure for each year are assumed to be independent of the cyclical situation. Thus, we do not attempt to adjust for pro- or counter-cyclical discretionary policies (quadrant B).

More precisely, net lending is adjusted for the following three factors in quadrant A:

- The difference between actual output and estimated potential output (the output gap).
- The difference between the actual unemployment rate and the estimated equilibrium unemployment rate (the unemployment gap).
- The deviation of principal tax bases from their normal proportion of GDP (composition effects).

Traditionally, international organizations and national government agencies have constructed cyclically adjusted budget balances (CAB:s) by adjusting actual government net lending for an estimated output gap.¹ Consequently, these measures also adjust for factors in quadrant A, thus answering the question, “What would net lending be if the output gap were zero?”. In contrast to other measures of the CAB, our indicator captures not only the effects of the degree of resource utilization (*i.e.* the output gap and the unemployment gap), but also the relationship of the principal tax bases to GDP. This method was initially proposed by Braconier and Holden (1999). The fact that the composition of GDP varies over the economic cycle is of significance for general-government net lending. This variation in composition is not stable across cycles, however, but depends on the type of shocks that affect the economy. For example, a positive domestic demand shock, driven by household consumption, would contribute to a temporarily high level of general-government net lending since household consumption is subject to relatively heavy taxation. Our indicator of CAB takes these effects into account by adjusting primary revenues for deviations from long-run levels of major tax-bases.

In this paper, we present estimates of the cyclically adjusted budget balance for Sweden during the period 1991 to 2005. The results indicate that the actual budget balance and the cyclically adjusted budget balance diverge during the severe downturn in the early 1990’s as well as during the 2000 boom. Furthermore, we find that our indicator performed in a way significantly different from the OECD’s CAB during parts of the studied period. One principal explanation for this difference is that the composition effects are important and that the OECD indicator fails to adjust for these effects.

The paper is organized as follows: the model is presented in the next section, Section 3 describes data and the results are discussed in Section 4. The paper ends with some concluding remarks.

¹ One example is the OECD. See Van den Noord (2000) for a description.

2 *The Model*

The cyclically adjusted budget balance is defined as the level of general government net lending that would be observed under current fiscal rules if resources were fully utilized and GDP had a normal composition. Cyclical adjustment is made for three groups of fiscal variables: taxes, unemployment-related government expenditures and other government expenditures. For these groups we define currently applicable rules as subject to the following conditions:

- Implicit tax rates are independent of the cyclical state of the economy and are measured as actual tax revenue from a certain tax in relation to a relevant tax base.
- Unemployment-related government expenditures in relation to unemployment are independent of the cyclical state of the economy.²
- Other expenditures (in relation to potential GDP) are independent of the cyclical state of the economy.

Given this set of fiscal rules, we then proceed to compute cyclically adjusted revenues and expenditures. The cyclical adjustment entails three components:

- Adjustment due to deviations between actual and potential GDP.
- Adjustments due to deviations between actual and equilibrium unemployment.
- Adjustments due to deviations between actual and normal (trend) tax base as ratios to GDP.

2.1 Revenues

In general, revenues from a certain tax (T_i) can be written as the product of an implicit tax rate (denoted T_i/B_i) and a relevant tax base (B_i). Formally, if there are n different taxes, then

$$T_i = \left(\frac{T_i}{B_i} \right) \cdot B_i, \quad i = 1, 2, \dots, n. \quad (1)$$

Multiplying the right-hand-side of equation (1) by Y/Y , where Y is actual GDP, yields

$$T_i = \left(\frac{T_i}{B_i} \right) \cdot \left(\frac{B_i}{Y} \right) \cdot Y, \quad i = 1, 2, \dots, n. \quad (2)$$

Thus, revenues depend on three variables: the implicit tax rate, the base-to-GDP ratio and GDP. According to equation (2), revenues change when any of the three variables change. We denote these changes as policy-, composition- and level-effects, respectively.

² These expenditures are defined as unemployment-related transfers and expenditure on active labor-market programs.

We divide government revenues into six categories:³

- Direct taxes paid by households, which are proportional to pre-tax household incomes.⁴
- Capital-gains taxes, proportional to (net) capital gains.
- Direct taxes paid by the business sector, proportional to gross profits.⁵
- Social security contributions, proportional to total earnings.
- Indirect taxes, proportional to household consumption.
- Other primary revenues, which are proportional to GDP.

Under currently applicable rules, tax revenues are assumed to be proportional to their respective tax bases. For the last four taxes listed above, this is not a strong assumption. However, for direct taxes on households, the assumption might be controversial, given the progressivity of the tax code. The progressivity facing individual wage-earners does not directly transform into a non-proportional relationship between the tax base and tax revenues, however.⁶ Thus, an elasticity of one could be a fair first approximation.

Applying our definitions of fiscal policy to the expression in equation (2), we compute cyclically adjusted revenues by assuming that $Y = Y^*$ and $B/Y = (B/Y)^*$, where Y^* is potential GDP and $(B/Y)^*$ is the normal (trend) base-to-GDP ratio. Thus, the cyclically adjusted revenue (T^*) for category i is

$$T_i^* = \left(\frac{T_i}{B_i} \right) \left(\frac{B_i}{Y} \right)^* Y^*, \quad i = 1, 2, \dots, 6. \quad (3)$$

Finally, summing all six types of revenue, we obtain an expression for cyclically adjusted total revenue

$$T^* = \sum_{i=1}^6 \frac{T_i}{B_i} \left(\frac{B_i}{Y} \right)^* Y^*. \quad (4)$$

³ This is a modification of the classification made by Braconier & Holden (1999) for improved accuracy.

⁴ Excluding capital-gains taxes.

⁵ Gross profits are defined as GDP (at market prices) minus total earnings.

⁶ One example could be the expansion of household incomes during economic upturns that typically consists of two counteracting effects. Firstly, individuals tend to receive higher wages; thus, in a given progressive tax system, the average tax rate tends to increase as well. Secondly, aggregate earnings increase as more people become employed. Since these individuals typically are taxed at a lower than average rate, their entry into the ranks of the employed will tend to decrease the average tax rate. See Roedseth (1984) and Giorno et al (1995).

2.2 Expenditures

Primary government expenditures are divided into two categories. One is unemployment-related expenditures (transfer payments and expenditure on active labor market programs), which by assumption are proportional to unemployment. Let G_U denote actual total expenditures related to unemployment. Furthermore, denote unemployment and equilibrium unemployment as U and U^* respectively. The cyclically adjusted unemployment-related expenditures (G_U^*) are

$$G_U^* = \frac{G_U}{U} U^*. \quad (5)$$

The other category is general-government consumption and other expenditures, which are assumed to be predetermined and independent of the cyclical state of the economy. These expenditures are unchanged in nominal terms if resource utilization or the composition of GDP changes during a certain year; thus

$$G_O^* = G_O. \quad (6)$$

2.3 The CAB and the Actual Budget Balance

From equations (4)–(6) we can derive the CAB as

$$S^* = \sum_{i=1}^6 \frac{T_i}{B_i} \left(\frac{B_i}{Y} \right)^* Y^* - \frac{G_U}{U} U^* - G_O - rD, \quad (7)$$

where rD denotes (net) interest expenditure.

A corresponding expression for the actual budget balance is given by

$$S = \sum_{i=1}^6 \frac{T_i}{B_i} \left(\frac{B_i}{Y} \right) Y - \frac{G_U}{U} U - G_O - rD. \quad (8)$$

Hence, in order to compute the CAB for a given set of policy rules, we adjust for potential GDP, equilibrium unemployment and the equilibrium composition. Combining equations (7) and (8) yields

$$S - S^* = \sum_{i=1}^6 \frac{T_i}{B_i} \left(Y \left(\frac{B_i}{Y} \right) - Y^* \left(\frac{B_i}{Y} \right)^* \right) - \frac{G_U}{U} (U - U^*). \quad (9)$$

Equation (9) shows that the difference between the actual and the cyclically adjusted budget balance depends on the output gap, the unemployment gap, and deviations of base-to-GDP ratios from their equilibrium levels (the composition effect). Of particular interest is the difference in relation to GDP. In the Appendix we show that this difference can be expressed as

a weighted sum of the output gap, the unemployment gap and composition deviations (measured as the gaps in base-to-GDP ratios), where the weights are equal to expenditure ratios and implicit tax rates,

$$\frac{S}{Y} - \frac{S^*}{Y^*} = \left(\frac{G + rD}{Y} \right) \left(\frac{Y - Y^*}{Y^*} \right) - \frac{G_U / U}{Y^*} (U - U^*) + \sum_{i=1}^6 \frac{T_i}{B_i} \left(\left(\frac{B_i}{Y} \right) - \left(\frac{B_i}{Y} \right)^* \right), \quad (10)$$

with $G = G_o + G_U$. It follows from the first term on the right-hand side of equation (10) that the effect of the output gap is to increase in the size of the public sector as a share of GDP, measured as the expenditure ratio (G/Y). Thus, cyclical fluctuations have a stronger impact on public finances in countries with larger public sector. The second term shows that the effect of the unemployment gap is larger, the larger the unemployment compensation (G_U/U). The third term on the right-hand side shows that the composition effect is stronger for high taxed components.

Regarding the interpretation of the CAB, it is important to note that the implicit tax rates are constructed from observed outcomes. Thus, temporary changes in the tax rate will affect the CAB. A temporary lowering of the tax rate at time t will therefore lead to a fall in the CAB at time t , while the CAB will improve at $t + 1$ when the tax rate is raised again.

The method does not consider adjustments of (net) interest payments. While permanent shifts in the cyclically adjusted balance have cumulative effects on future levels of net lending, our indicator focuses on the level of net lending that would prevail if cyclical effects were removed. If one wants to gauge the long-term budgetary effects of structural changes in revenues and spending, then these cumulative effects should be included.⁷ Another question is whether (net) government interest payments should be cyclically adjusted. As a cyclically adjusted interest rate for government net interest payments is hard to determine, we do not try to address this issue in the current version of the indicator. To the extent that government borrowing and lending are of a fairly long-term nature, the impact is likely to be limited.

3 Data and Construction of Variables

Annual data from 1970 to 2002 are taken from the National Accounts, which are compiled by Statistics Sweden. As mentioned above, total primary revenues are divided into six subgroups: household direct taxes, household capital-gains taxes, business direct taxes, indirect taxes, payroll taxes, and other revenues. Adjustments have been made for non-recurring effects on business

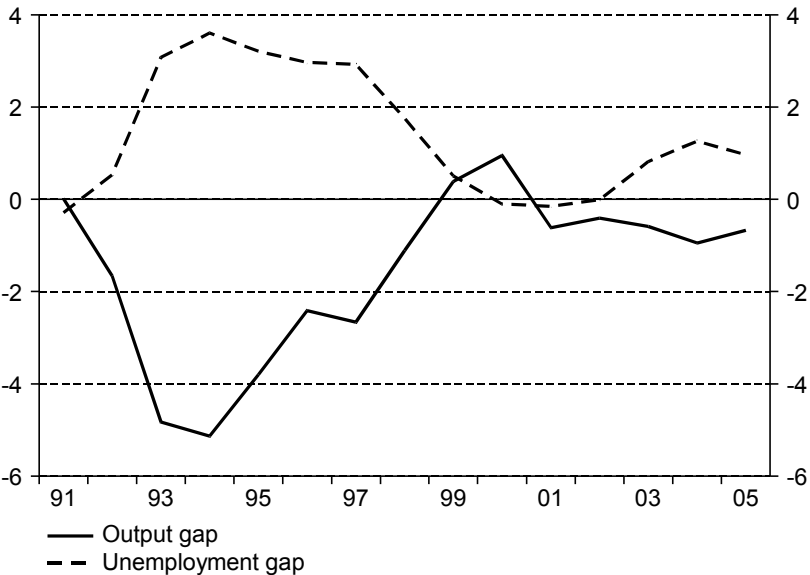
⁷ Braconier and Holden (1999) suggest how such computations could be done.

direct-tax revenue in the form of reimbursement from the SPP insurance company (SEK 10 billion in 2000). Likewise, other revenues were adjusted for revenues from privatization of the real-estate holdings of the National Pension Fund (SEK 19 billion in 1998). The implicit tax rates for Sweden are presented in Table 1 in the Appendix.

Total primary expenditures are divided into two subgroups: unemployment-related expenditures and other primary expenditures. Other expenditures have been adjusted for financial assistance to the banking sector (SEK 65 billion in 1991–1993).

The variables in the second group – represented by the level of potential GDP and the level of equilibrium unemployment – are based on the NIER’s overall assessments, which are published regularly in reports.⁸ The output- and unemployment gaps of Sweden, which show the deviations of GDP and unemployment from their potential levels, are presented in Diagram 1.

Diagram 1 Output Gap and Unemployment Gap
Percent of potential GDP and percentage points



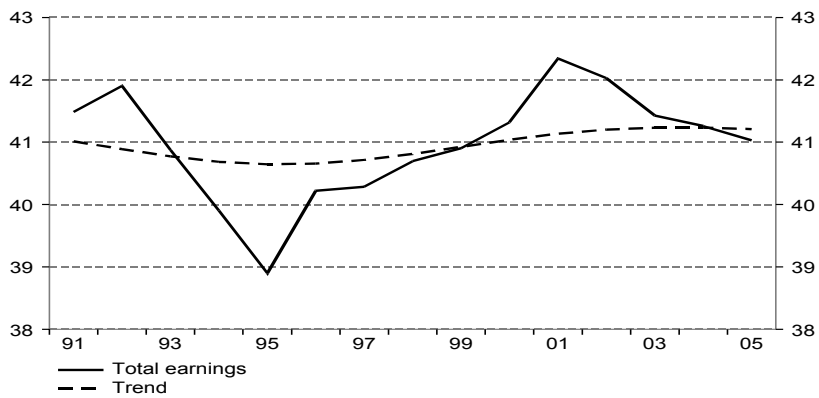
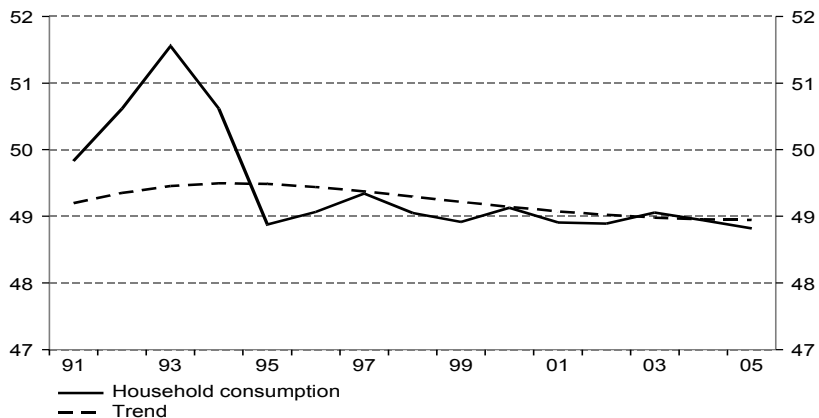
Source: NIER.

Finally, we need to estimate the equilibrium base-to-GDP ratios. Currently, this is done with the help of an HP-filter ($\lambda = 100$).⁹ The time series are extended with NIER’s current forecast to 2005, see *The Swedish Economy – December 2003*. Certain variables are extended to 2010 to reduce end-point problems in the HP-procedure. Diagram 2 shows the original data as well as the filtered series.

⁸ See e.g. *The Swedish Economy, December 2003*.

⁹ There are a number of different ways to measure empirically the effects of the cycle. E.g. the term “normal” level of capacity utilization can mean either a historical average, a forward-looking prediction or some type of mechanical assessment. In the future, these ratios will be based on the NIER’s medium-term projections.

Diagram 2 Tax Bases
Percent of GDP

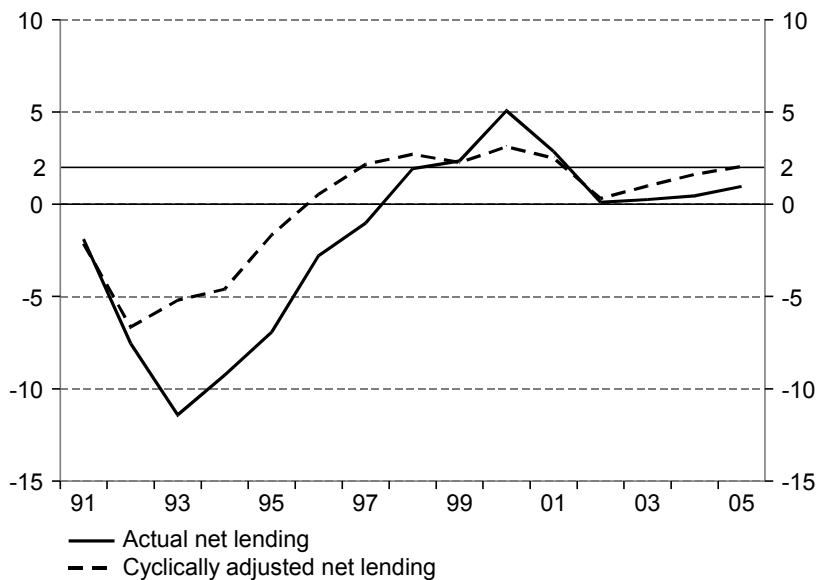


Sources: Statistics Sweden and NIER.

4 Results

The economic crisis in the early 1990's led to a significant decrease in capacity utilization, which is shown by widening output and unemployment gaps (see Diagram 1). After adjustment for these factors and for composition effects, cyclically adjusted net lending was about –5 percent of GDP in 1993; compared to actual net lending of about –12 percent (see Diagram 3). From 1993 until 2000, net lending improved, partly because the output and unemployment gaps were closed and partly because of rules changes that reduced expenditure and increased taxes. The latter measures resulted not only in higher actual net lending, but also in higher cyclically adjusted net lending. Since 2000, actual net lending has decreased considerably more than cyclically adjusted net lending.

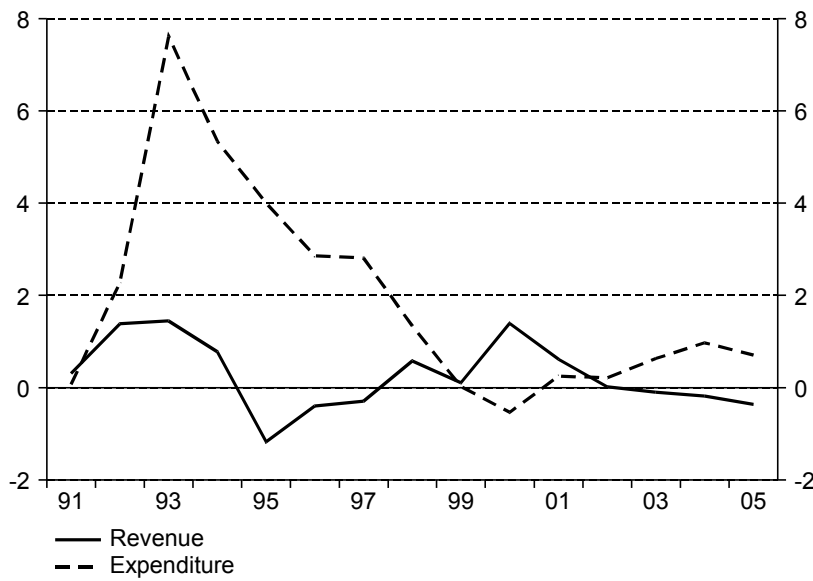
Diagram 3 Actual and Cyclically Adjusted Net Lending
Percent of GDP and percent of potential GDP



Sources: Statistics Sweden and NIER.

In the mid-1990's, actual general-government revenues were lower than cyclically adjusted revenues (see Diagram 4). The gap was about 2 percent of GDP in 1995. Revenues then increased until 2000, owing to rapid growth in total earnings as well as household capital gains.

Diagram 4 Differences Between Actual and Cyclically Adjusted Revenues and Expenditures
Percent of GDP

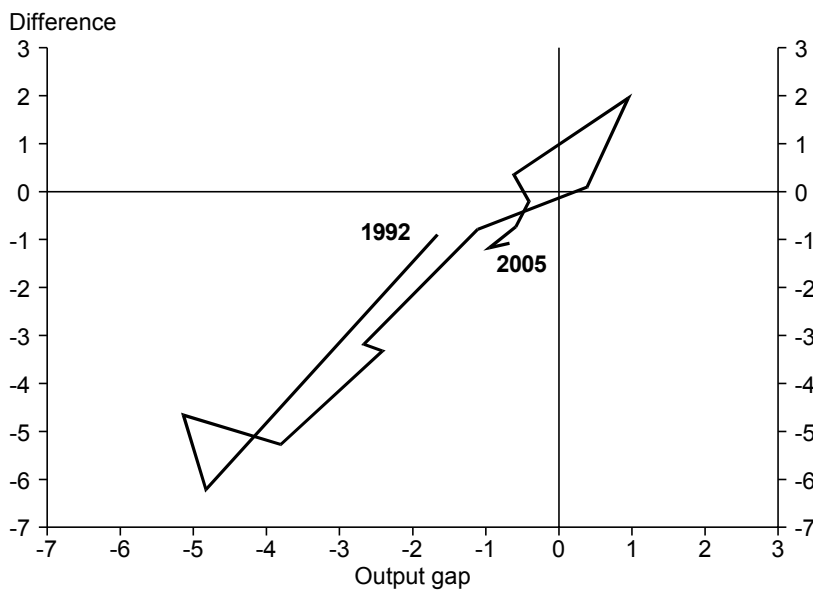


Source: NIER.

For most of the 1990's, actual expenditures were much higher than their cyclically adjusted counterparts, but the difference gradually decreased, primarily because of the diminishing unemployment gap (see Diagrams 1 and 4).

Diagram 5 Difference Between Actual and Cyclically Adjusted Net Lending in Relation to Output Gap, 1992–2005

Percent of GDP and percent of potential GDP

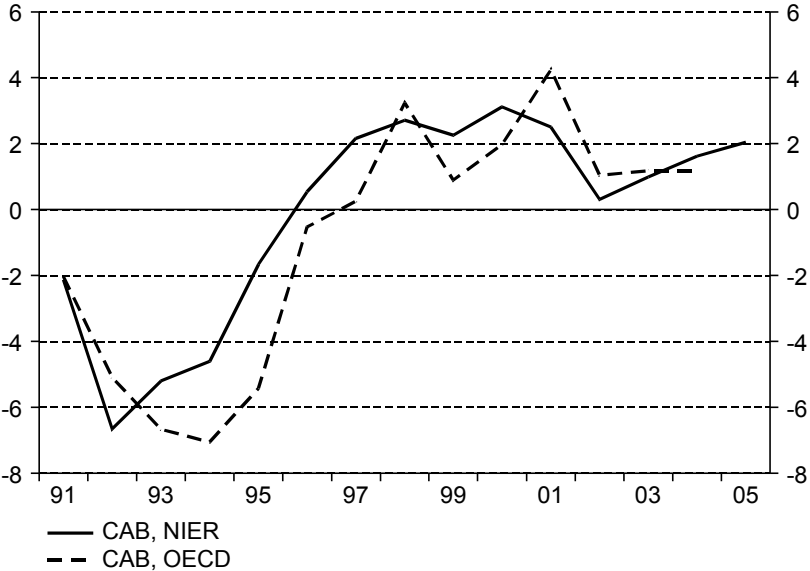


Source: NIER.

As illustrated in Diagram 5, there is a strong correlation between the output gap and the cyclically dependent portion of general-government net lending. This is naturally the case since the cyclical adjustment is based partly on the size of the output gap and the unemployment gap, where the latter is strongly linked to the output gap, according to the so-called Okun’s Law. Relationships of this kind serve as the basis for various ways to calculate cyclically adjusted net lending, such as the OECD’s CAB indicator. As shown in Diagram 5, a rule of thumb like this one can often provide a fair approximation of the more rigorous calculation of cyclical adjustment carried out in this study.

When GDP-composition effects are significant, however, such a simple rule of thumb will yield misleading results. For example, both the output gap and the unemployment gap were close to zero in 2001. A simple rule of thumb would lead to the conclusion that cyclically adjusted net lending was equal to actual net lending. However, as noted above, household income and total earnings were above normal that year, thus temporarily maintaining tax revenue at a higher level. In Diagram 6 we compare our indicator to the OECD’s CAB. Our cyclically adjusted net lending differs significantly from the OECD’s estimate for the period 1993–1997 and is on average 2.1 percentage points higher than the OECD measure during this period. The principal explanation for this difference is the composition effect resulting from unusually high exports in relation to GDP in these years, an effect which is not captured by the OECD indicator.

Diagram 6 Cyclically Adjusted Net Lending, NIER vs. OECD
Percent of GDP

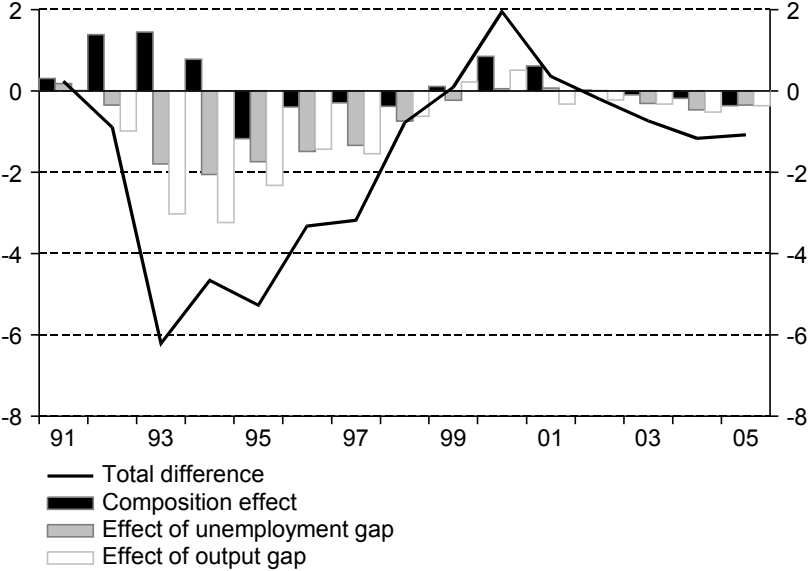


Source: NIER and OECD.

Finally, Diagram 7 shows how cyclical adjustment can be divided between composition effects and the effects of the unemployment and output gaps. For example, the output and

unemployment gaps were important components during 1993–1998, while the composition effect was substantial during 1992–1995 and 2000–2001.

Diagram 7 Difference Between Actual and Cyclically Adjusted Net Lending
Percent of GDP



Note: The total difference consists of the composition effect, the effect of the unemployment gap, the effect of the output gap, and nonrecurring effects.
Source: NIER.

5 Concluding Remarks

This paper presents a new method for adjusting government net lending for cyclical factors. The method adjusts for the output gap, the unemployment gap and deviations in the major tax bases from their equilibrium levels.

We apply the method to Swedish data for the period 1991–2005 and compare and explain our results with reference to actual net lending as well as to the OECD’s indicator of cyclically adjusted net lending. Though largely consistent with the OECD indicator, the results differ substantially for some years, owing to the properties of our more refined indicator. The target for general-government net lending set by the Swedish parliament is 2 percent over a business cycle. From this perspective, the CAB is a natural instrument for gauging whether fiscal policy is in line with the target. Our method shows that the CAB on average is 1.2 percent of GDP for the years 2002–2005, compared to (forecasted) actual net lending of 0.4. All factors considered, the fiscal contraction that is predicted for 2004 and 2005 in Sweden is consistent with a continued focus on the medium-term target for net lending.

The current stabilization regime in Sweden is based on an inflation-targeting central bank and a floating exchange rate. In this regime, there is little scope for fiscal policy to stabilize the economy. Hence, fiscal policy should focus on medium and long-term targets, for which our CAB would seem a natural indicator. Potentially, fiscal policy could be used in extreme situations where monetary policy has little leverage.

In a regime with a fixed exchange rate, however, an active countercyclical fiscal policy could play a more prominent role in stabilizing the economy. Under such circumstances, the CAB would be low in an economic downturn and correspondingly higher when the economy is at a peak. Therefore, in a balanced assessment of fiscal policy from a short-term as well as a medium-term perspective, it would then be even more appropriate to use the CAB as one tool of analysis.

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Appendix

We show here how the total difference between the actual and cyclically adjusted budget balance can be written as the sum of three components: the effect of the output gap (OE), the effect of the unemployment gap (UE), and the composition effect (CE), that is,

$$\frac{S}{Y} - \frac{S^*}{Y^*} = OE + UE + CE,$$

where the components are defined below. The total difference can be written as

$$\frac{S}{Y} - \frac{S^*}{Y^*} = \frac{S - S^*}{Y^*} - \frac{S}{Y} \left(\frac{Y - Y^*}{Y^*} \right),$$

where the second term on the right-hand side represents the direct effect of the output gap on the budget-balance ratio (shown by the deviation in the denominator). The first term is given by equation (9), rewritten as

$$\frac{S - S^*}{Y^*} = \sum_{i=1}^6 \frac{T_i}{B_i} \left(\frac{Y}{Y^*} \left(\frac{B_i}{Y} \right) - \left(\frac{B_i}{Y} \right)^* \right) - \frac{G_U/U}{Y^*} (U - U^*). \quad (9)$$

The composition effect (CE) is defined as the difference between the actual and cyclically adjusted budget balances as if $Y = Y^*$ and $U = U^*$ from equation (9),

$$CE = \left. \frac{S - S^*}{Y^*} \right|_{Y^*, U^*} = \sum_{i=1}^6 \frac{T_i}{B_i} \left(\left(\frac{B_i}{Y} \right) - \left(\frac{B_i}{Y} \right)^* \right).$$

The effect of the unemployment gap (UE) is defined as the difference between the actual and cyclically adjusted budget balances as if $Y = Y^*$ and $(B_i/Y) = (B_i/Y)^*$ from equation (9),

$$UE = \left. \frac{S - S^*}{Y^*} \right|_{Y^*, \left(\frac{B_i}{Y} \right)^*} = - \frac{G_U/U}{Y^*} (U - U^*).$$

The effect of the output gap (OE) is defined as the difference between the actual and cyclically adjusted budget balances that is not explained by either the unemployment gap or the composition of GDP.

$$\begin{aligned} OE &= \frac{S}{Y} - \frac{S^*}{Y^*} - CE - UE \\ &= \sum_{i=1}^6 \frac{T_i}{B_i} \left(\frac{Y}{Y^*} \left(\frac{B_i}{Y} \right) - \left(\frac{B_i}{Y} \right)^* \right) - \frac{S}{Y} \left(\frac{Y - Y^*}{Y^*} \right) - \sum_{i=1}^6 \frac{T_i}{B_i} \left(\left(\frac{B_i}{Y} \right) - \left(\frac{B_i}{Y} \right)^* \right) \\ &= \left(\frac{T - S}{Y} \right) \left(\frac{Y - Y^*}{Y^*} \right) \\ &= \left(\frac{G + rD}{Y} \right) \left(\frac{Y - Y^*}{Y^*} \right), \end{aligned}$$

where $T = \sum_{i=1}^6 T_i$ and $G = G_O + G_U$.

Table 1 Difference Between Actual and Cyclically Adjusted Net Lending
Percent of GDP and percent of potential GDP

	2000	2001	2002	2003	2004	2005
Actual net lending	5.1	2.9	0.1	0.3	0.4	1.0
Cyclically adjusted net lending	3.1	2.5	0.3	1.0	1.6	2.0
Total difference	2.0	0.4	-0.2	-0.7	-1.2	-1.1
of which:						
Effect of output gap ¹	0.5	-0.3	-0.2	-0.3	-0.5	-0.4
Effect of unemployment gap ²	0.1	0.1	0.0	-0.3	-0.5	-0.4
Composition effect ³	0.8	0.6	0.0	-0.1	-0.2	-0.4
Non-recurring effect	0.5					
1) Output gap	1.0	-0.6	-0.4	-0.6	-0.9	-0.7
Weight %	53.2	53.5	55.0	55.3	54.8	54.0
2) Unemployment gap	-0.1	-0.2	0.0	0.8	1.3	1.0
Weight %	-48.2	-45.4	-44.1	-38.4	-36.9	-36.5
3) Composition (Tax bases):						
Household consumption, % of GDP	49.1	48.9	48.9	49.1	48.9	48.8
Deviation from trend	0.0	-0.2	-0.1	0.1	0.0	-0.1
Weight % (Indirect taxes)	28.9	29.1	29.7	30.1	29.6	29.3
1 – Total earnings ("Profit share")	58.7	57.7	58.0	58.6	58.7	59.0
Deviation from trend	-0.3	-1.2	-0.8	-0.2	0.0	0.2
Weight % (Business taxes)	5.6	5.2	4.4	4.0	4.0	4.0
Total earnings, % of GDP	41.3	42.3	42.0	41.4	41.3	41.0
Deviation from trend	0.3	1.2	0.8	0.2	0.0	-0.2
Weight % (Payroll taxes)	41.5	41.5	41.7	42.2	41.9	41.8
Pre-tax income, % of GDP	69.4	70.7	69.7	69.1	68.6	67.9
Deviation from trend	-0.5	1.1	0.3	-0.2	-0.5	-1.0
Weight % (Household taxes)	24.6	23.4	22.3	23.6	23.8	24.2
Capital gains, % of GDP	5.8	2.8	1.7	1.8	2.0	2.2
Deviation from trend	2.9	-0.1	-1.0	-0.5	-0.2	0.0
Weight % (Capital-gains taxes)	30.0	30.0	30.0	30.0	30.0	30.0

Note: Weights are equal to implicit expenditure shares and implicit tax rates (tax revenue/tax base)
The composite effect is given by the sum of the products of the weight and tax-base deviations from trend.
Source: NIER.

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