FISCAL POLICY IN A CURRENCY UNION – INSTRUMENTS AND IMPLEMENTATION

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If Sweden becomes member of the European currency union, the conditions for fiscal policy will change. The stabilization policy *objectives* will, however, hardly change with a membership. At the same time it is not clear if the *need* for stabilizing the Swedish economy will increase or decrease. National fiscal policy will, however, have to carry a bigger *burden* than before in stabilization policy as there no longer will exist national monetary and exchange rate policy. Fiscal policy will also be more *effective* in affecting real variables such as production and employment. Counteracting forces such as a flexible exchange rate and a domestic interest rate do not exist any longer. Fiscal policy will, at the same time, meet new and changed formal and economic *restrictions*. As member of the currency union we will face sanctions if our fiscal policy does not keep within the limits for the public sector's net lending and consolidated gross debt that apply within the EU. Increased mobility of tax bases and tax competition are examples of economic restrictions that may become stricter. The fiscal policy *instruments* and *institutions* will need to be reformed. Our conclusion is that fiscal policy will not be very much affected if Sweden becomes a member of the currency union. The pressure, to do what we anyway should do, will increase however. The paper finishes with a fiscal policy agenda with twelve items.

1.   Introduction

We will discuss the conditions for fiscal policy if Sweden becomes a member of the third stage of the Economic and Monetary Union (EMU) in this paper. The third stage means that Sweden becomes a member of the currency union.[1] The alternative to this is a continued regime with a floating exchange rate. This would give room for a national monetary policy.[2]

An often-used motive for joining the currency union is that it will increase economic growth. Three reasons for this would be that transaction costs would decrease, that exchange rate risks would be reduced, and that comparing prices in different countries would become easier. Increased stability in the economic development is another argument for membership in the currency union. But what would really become more stable? Economic fluctuations may affect nominal variables such as prices and nominal wages, but it may also be real variables such as production and employment that are affected. Disturbances can be temporary or more permanent.

The argument about increased stability applies to the whole currency union. It is not certain that the economic development will become more stable in each of the currency union's member countries, especially not in smaller countries. The fluctuations may partly be common for all countries in a currency union, partly specific for the particular member country. It is an open question if the development will become more stable or not, but this notwithstanding there will probably remain some fluctuations. This is an argument for a need for stabilization policy on both union and national level both as regards real and nominal macroeconomic variables. The question is which role a national fiscal policy could have in this context.

An important starting point for the discussion in this paper is that Sweden would be a small member in a big currency union. There is a relatively extensive theoretical literature where the game between two countries in a currency union is studied. The results from these models are more relevant for big members in the currency union. The analogy to the

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[1]   Through out the paper the concept "membership in the monetary union" will be used as a synonym to "membership in the currency union". Even if this usage is somewhat incorrect formally, it is practical and is consistent with established convention.

[2]   The combination of free capital flows, national monetary policy and a fixed exchange rate is not a reasonable option; see, for example, Wyplosz (1997).

small open economy assumption in trade theory is closer for a country of Sweden's size.

The objective of the paper is to give an overview over and contribute some thoughts on fiscal policy. How shall one regard fiscal policy if one cannot pursue national monetary and exchange rate policies? In this context we will discuss the objectives of fiscal policy and also the need for stabilization policy.[3] A membership in the currency union may also affect the effects of fiscal policy. We will discuss the expected effects of fiscal policy on real economic activity in the short and the long run. Fiscal policy may also meet new and changed restrictions at the same time as the fiscal policy instruments and institutions may have to be changed. We will also discuss the available instruments and their precision. One important aspect of fiscal policy is the interaction between the central government and different local government bodies.

The most important issues regarding the stabilization of the Swedish economy are:

> Do we want?
> Do we have to?
> Are we able to?
> Are we allowed to?
> Do we do it in the same way as before?
> Are we capable?

There is a condensed answer to the question how the conditions for Swedish stabilization policy will change with a membership in the European currency union. The stabilization policy objectives will, however, hardly change with a membership. At the same time it is not clear if the need for stabilizing the Swedish economy will increase or decrease. National fiscal policy will, however, have to carry a bigger burden than before in stabilization policy as there no longer will exist national monetary and exchange rate policy. Fiscal policy will also be more effective in affecting real variables such as production and employment. Counteracting forces such as a flexible exchange rate and a domestic interest rate do not exist any longer. Fiscal policy will, at the same time, meet new and changed formal and economic restrictions. As member of the

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[3]   De Grauwe (2000), chapter 9, and Eiffinger and de Haan (2000), chapter 4, are two textbooks that, among other things, discuss national stabilization policy in a currency union. See also Eichengreen (1998).

currency union we will face sanctions if our fiscal policy does not keep within the limits for the public sector's net lending and consolidated gross debt that apply within the EU. Increased mobility of tax bases and tax competition are examples of economic restrictions that may become stricter. Members of the currency union cannot finance deficits by printing money. This is not important, however, in the sense that the Swedish Central Bank Law already today stops that this source of finance is used. The fiscal policy instruments and institutions will need to be reformed.

Our conclusion is that fiscal policy will not be very much affected if Sweden becomes a member of the currency union. The pressure, to do what we anyway should do, will increase however.

This paper has been written in close connection to our work related to the Swedish Official Government report *Stabilization policy in the monetary union*, SOU 2002:16. This official government commission (STEMU), appointed by the Swedish Minister of Finance, presented the report on March 12, 2002.[4] The present paper builds partly on Henry Ohlsson's background study to the report "Fiscal policy in a monetary union" (Ohlsson, 2002).[5] In addition it builds on two parts in the report – section 5.5 on labor market policy and section 5.6 on discretionary fiscal policy instruments. Yngve Lindh has written these sections in the capacity as expert of the commission while in the last part of the work taking part in the commission's secretariat. The text is highly influenced by the discussions in the commission, and follows closely these sections in the report.[6]

The paper is structured as follows: section 2 discusses the objectives of economic policy and if the objectives would change if Sweden became a member of the European currency union. We continue by discussing if the need of stabilization policy will change. We also in this section discuss of fiscal policy can contribute to stabilize the economic development and if the efficiency of fiscal policy in this respect changes with a membership in the currency union. The restrictions that fiscal policy meets now and with a possible membership are the topics of section 3. This concerns both formal

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4   A summary in English can be found at the web page http://finans.regeringen.se/propositionermm/ sou/pdf/emu_summary.pdf.

5   The background study includes a section on the sensitivity of public finances to economic activity and the need of safety margins in public finances that is not included here.

6   The members of the STEMU commission were Bengt K.Å. Johansson (chair), Lars Calmfors, Ingemar Hansson, Nils Lundgren, Inga Persson, and Irma Rosenberg.

restrictions as well as economic. In section 4 we discuss automatic fiscal policy that, in our opinion, is an appropriate system of fiscal policy instruments for normal cyclical fluctuations. If shocks are large there may, in addition, be a need also for discretionary fiscal policy. This is the topic of section 5. Section 6 discusses fiscal policy institutions. The paper concludes in section 7 with a fiscal policy agenda with 12 items.

2.   Objectives, need, and effects

Will the objectives of economic policy change if Sweden joined the currency union?
Will we *want* to stabilize the economic development to the same extent?

Will the need for stabilizing change if Sweden joined the currency union?
Will we *need* to stabilize the economic development to the same extent?

Will the effects of economic policy change if Sweden joined the currency union?
Will we *be able* to stabilize the economic development to the same extent?

It would be clear-cut to answer these questions if we always were in a situation where we want, need, and are able to stabilize the economic developments. Today stabilization is an objective of economic policy. There are also certainly cyclical variations in the economic development. The possible effects of economic policy have been more questioned. The question is how these possible effects may change with a membership in the currency union.

2.1   Objectives

Full employment and stable prices are the two traditional stabilization policy objectives. A stable increase in output can also contribute to reduce the variations in employment. Fast economic growth is also mentioned among the objectives for macroeconomic policy, but this

has more to do with the long-term development of welfare than the need to decrease economic fluctuations. In addition, it is usually a stabilization policy objective to minimize the GDP gap. The GDP gap is the difference between the actual GDP level and the potential level, that usually is defined as the average trend GDP level. At the same time it is possible to argue that a successful stabilization policy also can contribute to increase the potential GDP level in the longer run.

Traditionally, three roles of the public sector are discussed: stabilization, allocation, and distribution. The stabilization policy objectives cannot, however, be regarded in isolation from the other economic policy objectives. It is not possible to disregard that stabilization policy also may affect the extent to which other goals are fulfilled. If, for example, the tax system is changed for allocation reasons, this may also have consequences for stabilization.

- stabilization

  As mentioned before the most important objectives in this area are price stability and full employment. Why is low inflation with small variability desirable? The need for a credible monetary policy has been strongly stressed in recent years. Low inflation is important for prices to be good bearers of information and to avoid undesired redistribution between those who own real assets and those who hold assets yielding low nominal returns.
  Concerning the question why full employment is desirable it is important to stress that employment variations to a very little extent is borne by all via variations in hours worked. Instead the variation almost exclusively comes by variations in the number of employed. This way a few will have to carry the burden, while most are not directly affected. Employment variations are not distributed in an equal way.

- allocation

  In this case it is a question of pursuing policies so that the highest possible economic efficiency is reached. Policy measures used for stabilization reasons may also affect allocation. The design of the tax system is important for stabilization policy, but also for allocation. It may be that tax changes that are desirable from a stabilization policy view may affect allocation negatively because the excess burden of taxation increases.

- distribution

  One important motive for public expenditure as well as taxation is to make the distribution in society more equal. The welfare state with extensive public activity and a high tax pressure is an expression for extensive distribution ambitions.

Public activities can be performed on several levels. The question in the fiscal federalism literature is: Who shall do what? Shall all levels take care of all three roles of the public sector? The answer is that stabilization and distribution should be assigned to the central level. Regarding allocation it is a more open question. Many of the tasks can be done on local level. It is here important to remind that what is central level from one perspective (Sweden in a national perspective) can be local level from another (Sweden in a European perspective).

The assignment with stabilization and distribution on the central level and allocation shared by all levels is also in large the responsibility we have today in Sweden. Cangiano and Mottu (1998) notes that this also is the division of responsibility in most existing federations such as USA, Germany, Australia, and Canada. Within the EU it is different, however. The creation of a single market is an example of an allocation measure that is pursued on the highest union level. Harmonization of indirect taxes and corporations taxes is also discussed on union level. Distribution has, on the other hand, been left to the lower national level except structural funds and agricultural policy. Stabilization is assigned both to the union level, in the form of the common monetary policy, and to the national level by the national fiscal policy.

A membership in the currency union can be interpreted in fiscal federalism terms. If Sweden chooses to become a member of the currency union it implies that stabilization partly is moved to the union level. This is particularly true for the price stability objective.

This change raises the question if a policy objective continues to be as important if the main responsibility for achieving the objective and the most important policy tools for reaching it are lost. In other words, are the objectives affected by the possibilities of reaching them? Will price stability become less important on a national level if there no longer exists a national monetary policy to reach the objective?

However, membership in the currency union does not mean that the basic motives for price stability change. The problems that inflation creates

will not change. The problems that unemployment leads to will, in the same way, also stay the same. The objectives of stabilization policy should, therefore, not change.[7]

At the same time, economic policy is pursued in an environment that is far from perfect. It takes time to reach the policy objectives. Sometimes it is not possible to completely achieve what is desired. There are, therefore, clear tradeoffs. In such a situation it is not apparent if the economic policy will be balanced in the same way inside and outside the currency union. It is possible that the balance between different policy objectives should be different if the national fiscal policy follows a common monetary policy instead of if monetary policy and fiscal policy both are pursued on a national level. Inside the monetery union, while price stability is a primary objective at the union level it is possible that real objectives like production and employment will get higher priorities at the national level.

2.2   Need

There have always been disturbances in industrialized economies, this will continue. Economic fluctuations can show up in nominal variables such as prices and nominal wages, but it can also be real variables such as production and employment. Sweden, as other countries, is affected by some disturbances that tend to come in cyclical sequences, other disturbances are more unpredictable. Some disturbances are of demand character and have only temporary effects. Supply disturbances, on the other hand, have more permanent effects.

Price disturbances are stabilized by monetary policy with an inflation target of 2 ± 1 percent in the present Swedish stabilization policy regime. The flexible exchange rate takes care of the external balance. The high tax and expenditure ratios work as automatic stabilizers.

Within the currency union, common price disturbances will be stabilized by a common monetary policy with an inflation target of 0-2 percent within the currency union. If anything this inflation target is

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7   This is underlined by the government's choice of name of the official government committee, "The commission on stabilization policy", if Sweden becomes a member of the currency union.

stricter. It will, however, not stabilize any price disturbances that are specific for Sweden.

In addition, since Sweden only constitutes a small part of the union, there will no longer exist an exchange rate that can counteract export disturbances or wage cost disturbances. If the disturbances are common for all members in the currency union, the need for common stabilization will give rise to a common stabilization policy. The currency union in itself can contribute to more stability. This is one of the advantages with it. This should, among other things, come about by reduced transaction costs, no exchange rate risks in trade with other members in the currency union, and because it will be easier to compare prices in the different member countries (price transparency). The possibilities of a successful stabilization policy should be greater if the basic stability is bigger.

In this context it is an important question how much the Swedish development differs from the common development in the currency union. If the disturbances are specific for Sweden it is possible that there will be a bigger impact on domestic production and employment compared to a situation when the exchange rate is flexible.[8] Membership in the currency union would, in other words, imply that a variability that before appeared in nominal variables instead would appear in real variables. The need for stabilization of real variables would increase in a currency union, as the real activity would start to fluctuate more when there no longer is a national monetary policy and a flexible exchange rate available.

This increased variability can be counteracted by increased migration. Other ways to ensure that Sweden is internationally competitive is to influence the real wage cost development by, for example, more flexible wages, buffer funds, etc.[9] Still there will probably be a need for national stabilization policy. Without monetary and exchange rate policy, fiscal policy remains.

The question is if the flexible exchange rate is stabilizing or in reality destabilizing? Membership in a currency union will imply that disturbances caused by speculative behavior on currency markets can no longer arise. At the same time the type of uncertainty that characterizes fixed exchange rate regimes – the risk that the currency may be devaluated

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[8]   See Bergman (2001) which is an enclosure to the STEMU commission first report SOU2001:62.

[9]   This is the topic of Calmfors (2002), which is a background report to the commission final report.

will not exist. As a member of the currency union there is no longer any currency to devalue.

These questions are important, not to say decisive. There are no simple and clear-cut answers, the conclusions are not apparent.

There exists an extensive theoretical and empirical literature about the determinants of exchange rates. The interest rate parity condition says that we can expect that a change in the exchange rate if the domestic interest rate deviates from that abroad. But the relation between exchange rate and interest rates will no longer be relevant towards the countries in the currency union if Sweden becomes a member.

Purchasing power parity means that the exchange rate would change if there were differences between the domestic price development and the price development abroad. If this in reality would be a decisive determinant of the exchange rate it is apparent that the combination of a membership in the currency union and a faster domestic price increases would create serious problems for production and employment. It is a problem that national fiscal policy would have difficulties in dealing with.

The empirical literature on exchange rates is far from clear in its conclusions. If it were purchasing power parity that ruled we would expect that the real exchange rate would stay constant. Sweden, as most other countries, has, however, experienced large variations in the real exchange rate.

Taylor (1995) writes in a survey article that there are large and persistent movements in exchange rates that cannot be explained by macroeconomic variables such as interest rates and prices. There is a lot supporting the argument that there are speculative forces on the currency markets, forces not based on macroeconomic variables. There exists a discussion about so-called microstructures. Some agents on the currency market may have destabilizing expectations, and others may base their actions on technical analysis rather than macroeconomic variables.

Taylor's conclusion is, however, that macroeconomic variables are important for the determination of exchange rates in the short run, even if they are not the only determinants. At the same time there are studies that show that macroeconomic variables are more important in the medium run. In this context it is interesting to note that there exist studies that real exchange rates vary more when the nominal exchange rate is flexible than when it is fixed.

Thomas (1997) studies if the Swedish exchange rate is stabilizing. The conclusion is that the costs for Sweden from abandoning an own currency are not higher than for the countries already in the currency union, they may even be lower. This presupposes, however, that there is a national stabilization policy. The conclusions in Artis and Ehrmann (2000) are even more far-reaching. They write that the Swedish currency market rather seems to be a source of disturbances than an absorber of disturbances. It seems difficult to unambiguously draw the conclusion that the loss of national monetary policy will lead to more volatile production and employment.

2.3   Effects

The discussion about the roles of the public sector builds on the implicit assumption that economic policy affects the economy. The question if national fiscal policy has any effects is put in focus for members in a currency union when there is a need for national stabilization policy. This must be the case for there to be any point in further discussions. In a next step then the issues are which effects policy has and how big the effects are.

The question if fiscal policy has any stabilizing effect at all has received attention in the economics literature the last decades. An important theoretical result in the literature on ricardian equivalence is that the households' dynastic (altruistic) behavior implies that fiscal policy, in the form of the budget surplus, does not have any effect. The result is, however, built on a number of restrictive assumptions. One of these assumptions is that taxation does not give rise to any excess burdens.

There are several different approaches to empirically test if ricardian equivalence holds. One is to empirically try to show that fiscal policy has effect. This is usually done using macroeconometric methods, mostly with the aid of aggregated time series data. Another approach is to empirically study household behavior. Some studies focus on the question if household consumption behavior is consistent with ricardian equivalence while other papers study if the households behave in an altruistic way. This is usually done my microeconometric analysis of cross section or panel data.

There exists a fundamental problem connected with the identification of the relation between economic activity and fiscal policy. The economic activity affects fiscal policy at the same time as fiscal policy

also affects economic activity. The issue is, therefore, to isolate the possible effects of fiscal policy. A common way is to do this within the framework of vector autoregression models (VAR models). Blanchard and Perotti (1999) is a recent study based on this approach using U.S. data. They find that fiscal policy has effects. Swedish studies in this tradition are Hokkanen and Jansson (1994) and Becker and Paalzow (1996).

Another approach is to compare tax pressure and variations in economic activity across countries. Such studies suggest that high tax countries have smaller variations in the level of economic activity than low tax countries, see Galí (1994) and Fatás and Mihov (2001). Fiscal policy would, in other words, really have a stabilizing effect.

An important reason for why it would be in this way is the private consumption is liquidity constrained. This is the case if, at least, some household simply consume its total income because they cannot use the financial markets to consume other time periods than when they receive their income. Examples of studies in this tradition that use Swedish data are Campbell and Mankiw (1991) and Agell *et al.* (1995). The latter presents empirical results indicating that 10 to 25 percent of the Swedish consumers are liquidity constrained. This proportion may even be higher in recessions.

The empirical literature based on micro data also finds that, although the households seem to have altruistic motives for their actions, the quantitative effects are smaller than what the theoretical models predict. An early study in this tradition is Altonji *et al.* (1997) who use U.S. data. Laitner and Ohlsson (2001) find only weak evidence of altruistic behavior in Swedish data. Laitner (1997) discusses the hypothesis that there may exist big differences between households, some are altruistic while others are not. The empirical results do not support the hypothesis of ricardian equivalence and, therefore, indirectly support that fiscal policy really can affect the economy.

Three tentative conclusions can be drawn from the current international literature on the effects of fiscal policy. In the first place, directions of the effects are those expected, at least in situations when the credibility of the economic policy is high. Higher government consumption and investments as well as lower taxes and more transfers stimulate aggregated demand in the short run. A second conclusion is that variations in government consumption give stronger effects than changes in taxes and transfers. A third tendency is that the effects seem to be smaller compared

to what early Keynesian analysis indicated. Recent studies report multipliers of government consumption of approximately unity. The multipliers seem to be smaller than unity for taxes and transfers. Older studies showed multipliers substantially larger than one.[10]

In addition, for Sweden it is reasonable to believe that fiscal policy becomes more effective in affecting real variables such as production and employment for a member in the currency union.[11] Counteracting forces such as a flexible exchange rate and domestic interest rates do not exist anymore.

3.   Conditions and restrictions

Will the restrictions on economic policy change if Sweden joined the currency union?

Will we *be allowed to* stabilize the economic development to the same extent?

In this section we start by discussing the formal restrictions that a membership in the currency union imply. We then continue by discussing the economic restrictions that will affect Sweden in the currency union.

3.1   Formal restrictions

There are three components that together form the formal restrictions. The first is the procedure when deficits are too large according to the Maastricht Treaty. The second element is the Stability and Growth Pact. Finally there are the general guidelines for economic policy.

The rules in the Stability and Growth Pact stipulate a medium run target for public finances to be in balance or show surplus. The rules apply for all EU countries, also those who are not members of the currency union.

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[10]   See for instance Blanchard and Perotti (1999), Wren-Lewis (2000), and Virén (2001).

[11]   Here we disregard the discussion whether fiscal policy may have non-keynesian effects that would imply that fiscal contraction in some situations could have an expansionary effect.

The Maastricht criteria concerning net lending and gross debt are now the same for Sweden as they would be in a currency union.[12] The most important difference is that countries outside the currency union cannot be subjected to the sanctions in the form of fines etc. that members may experience of the do not comply with the criteria. Countries outside the currency union can only be exposed to the other members peer pressure if they do not comply with the criteria.

The deficit in the public sector's net lending may not, except temporarily, be larger that 3 percent of GDP. The gross debt of the public sector shall be below 60 percent of GDP or by decreasing towards this value at a satisfactory pace. If GDP falls by more than 2 percent during a year net lending may show a bigger deficit than 3 percent. If the fall in GDP is in the interval 0.75-2 percent it is a question judgment if the deficit may be larger than 3 percent.

The most commonly mentioned motive for introducing these criteria has been that they protect from increased inflation risks. The reason is to avoid that the European Central Bank will have to bail out countries that have pursued an irresponsible fiscal policy. Such rescue actions risk to counteract the price stability objective. Another motive for the criteria is the fact that fiscal policy in one country may have external effects on other countries. Fairness is also often mentioned as a motive, the same rule shall apply for all countries regardless of they are big or small, and, therefore, does not have any considerable impact on other members in the currency union.

One might ask how binding these criteria would be in reality. There are rules when exceptions from the criteria allowing larger deficits at deep recessions. It remains to be seen if one really is prepared to use sanctions against a member of the currency union that is not able to fulfill the criteria, see Beetsma (2001). And if there are sanctions the question becomes how long it will take before the sanctions really are put into effect.

The critical fiscal policy variables in the Convergence Program concern the whole public sector and not the central government only. More specifically the program focuses on the public sector's net lending and

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[12]   We take the existence of the criteria as a starting point. A more normative discussion if the criteria are good or not and how the criteria should be designed are beyond the scope of this paper.

consolidated gross debt.[13] Net lending corresponds to the public sector's income minus expenditure on consumption, transfers, and real investment. The consolidated gross debt is the central and local governments outstanding debt in the form of bonds, certificates, loans, and deposits minus the central government's, the local governments', and the social security system's holdings of these financial instruments.

Figure 1 illustrates the convergence rules graphically. The rule that the public sector's net lending always shall be greater that 3 percent of GDP implies that the economy always must be to the right of the vertical line at –3. The rule that the public sector's consolidated gross debt never shall exceed 60 percent of GDP implies that the economy always shall be below the horizontal line at 60. In other words, the allowed area is in the lower right parts of the figure.

The thick solid line in the figure shows the convergence path of the Swedish economy since 1994. The first year the criteria were met literally was 2000, although it was by a thin margin for gross debt. The forecast for the coming years is that net lending will correspond to slightly more than 2 percent of GDP, considerably more than the net lending criterion, while gross debt will not decrease especially much under the 60 percent of GDP. The forecast is that gross debt will be approximately 48 percent of GDP 2004.[14] We will return to this below.

From the figure it is also clear that gross debt as a share of GDP in principle was constant during the second half of the 1990s and this even though net lending was negative. Shouldn't the relationship between net lending and gross debt by perfectly negative so that debt increases when net lending is negative and decreases when net lending is positive? It is possible to show that the change in gross debt as share of GDP can be written as the sum of three components:
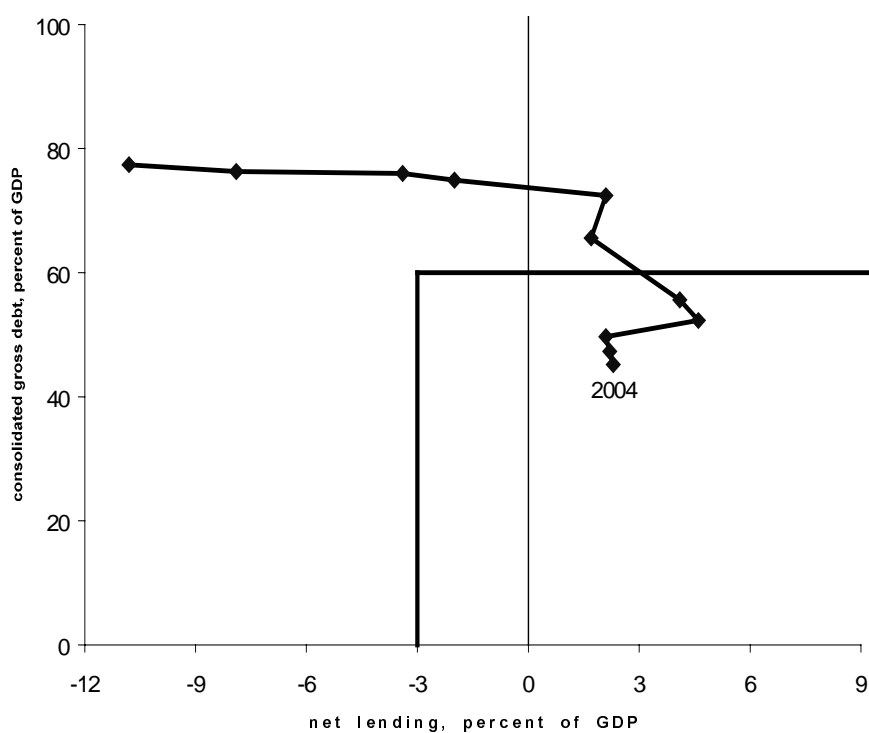
- net lending

  Higher net lending will result in lower gross debt as share of GDP;

- nominal GDP growth

  Higher growth will result in lower gross debt as share of GDP;

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[13]   European Commission (1996) reports the principles for how these variables should be computed.

[14]   Spring Fiscal Policy Bill 2002.

Fig. 1

The convergence path for Sweden, 1994-2004

Data sources. Central government Bill 2000/2001:100, Ministry of Finance (2001).

- changes in holdings of public assets not included in net lending[15]

  Higher holdings of financial assets will result in higher gross debt.

  It is only when nominal GDP does not grow and holdings of financial assets do not change that there is a perfect negative relationship between net lending and gross debt. At the same time it is possible to reduce gross debt even if net lending is negative. This can, for example,

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[15] In European Commission (2000) this component is hidden behind the term "stock-flow adjustment".

happen when nominal GDP grows rapidly. This growth, in turn, can be because of high inflation, which is not desirable, or rapid growth in real GDP, which, of course, also has many more advantages than to reduce gross debt. Another way of reducing gross debt is to sell assets. Decreasing the amount of financial assets has no effect on net lending whereas decreasing real assets has.

It is important to stress that there is a close connection between public debt policy, budget policy, growth policy, and asset policy. The political choices not to sell 3G licenses and only partly privatize Telia, the Swedish public telecommunication company, have as important implications for meeting the convergence criteria as the budget policy. Selling Telia stock affected gross debt, but not net lending. It was viewed as a balance sheet operation, a financial reallocation that did not affect public sector net worth. The funds that a 3G-license auction would have raised would, on the other hand, have affected both net lending and gross debt. The license auction would have been regarded as a real transaction.

Table 1 reports the three components' importance for the gross debt's development 1996-2000. The first years net lending contributed to an increase in gross debt, the last years the effect was the opposite. The growth component has decreased gross debt by 2-4 percentage points each of the years. The contribution of the asset component (stock flow adjustments), finally, has varied a lot, from a debt increase of slightly more 2 percentage point 1998 to debt decrease of almost 3 percentage points 2000. The largest gross debt decrease during the five-year period was in 2000, when all three components gave considerable contributions to the gross debt decrease.

Are there big differences between the development for the central government and the development for the entire public sector? And which differences arise when net lending instead of budget balance is used? In national account sense there are obviously important conceptual differences between these variables. As is clear from Table 2, however, the development of the central government budget surplus most years corresponds relatively well with the development of net lending except a difference in levels. The same applies for public sector consolidated gross debt and central government debt that in principle have developed in a similar way most years. One reason to why the differences are not that big is that the local governments now have to meet a requirements to have balance in their economy.

Table 1

Change in gross debt (1996-2000)
(percent of GDP)

	1996	1997	1998	1999	2000
component:					
net lending	3.1	1.6	–2.1	–1.3	–3.7
economic growth	–1.9	–2.8	–3.2	–3.6	–2.9
asset change, excl. real investment	–1.4	–0.3	2.5	–2.0	–3.0
total	–0.2	–1.5	–2.7	–6.9	–9.6

Sources: European Commission (2000), The Swedish Ministry of Finance (2001).

Table 2

Fiscal policy convergence variables (1996-2000)
(percent of GDP)

|	1996	1997	1998	1999	2000
public sector net lending	–3.1	–1.6	2.1	1.3	3.7
central government budget balance	–1.2	–0.3	0.5	4.1	4.9
public sector consolidated gross debt	76.0	74.5	71.8	64.9	56.3
central government debt	80.3	78.5	76.0	68.9	61.2

Sources: The Swedish National Debt Office, The Swedish National Financial Management Authority, Statistics Sweden.

But the effects of fiscal policy do not only concern the surplus. It is also a question of composition and design both concerning revenue and expenditure. In addition, asset changes may have stabilization policy effects, balance sheet changes may be important. The surplus is affected by cyclical effects, but the cyclical surplus or its change does not say how expansive the policy is either.

The cyclical variations also imply that there is a need for safety margins to the Maastricht criteria to be able to meet these criteria also during a recession. Otherwise one may be forced to a procyclical policy with tax increases and expenditure cuts during a recession. The higher tax pressure in a country, the larger will the magnitude of cyclical fluctuations in the surplus be. The safety margins will, therefore, have to be larger in high tax countries compared to low tax countries.

Fig. 2

Central government debt (1950-2000)
(percent of GDP)
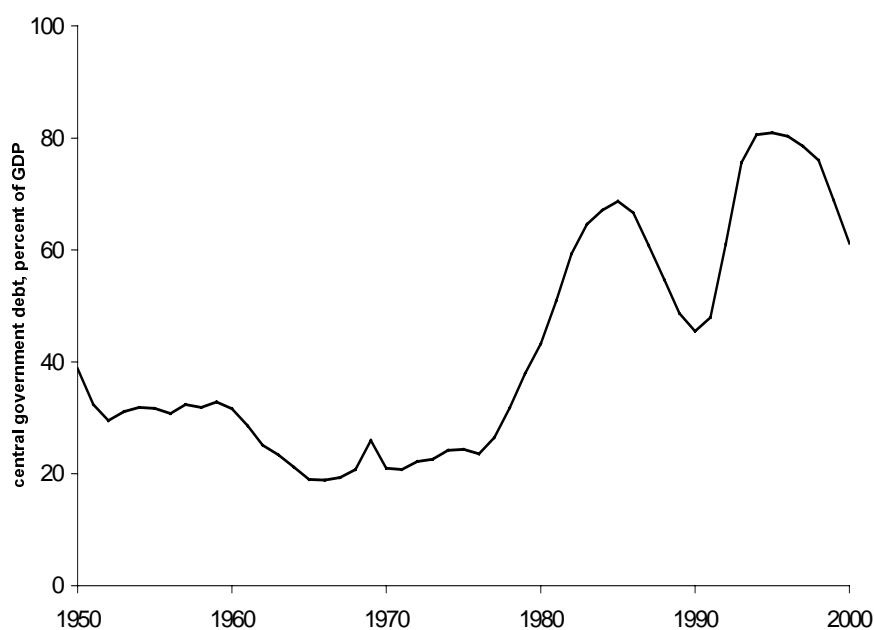
Source: The Swedish National Debt Office.

There is also a need for a safety margin for the gross debt as it also shows cyclical fluctuations. Year 1977 central government debt equaled 26 percent of GDP. Six years later it had increased to 65 percent of GDP, an increase by 39 percentage points. This was repeated in the beginning of the 1990s. Year 1991 central government debt was 48 percent of GDP, three years later 81 percent or 33 percentage points higher. The forecasted margin to the gross debt criterion 2004 is not particularly big in view of this.

Figure 2 reveals that the debt ratio has shown an increasing trend the last decades. At the millenium change the debt ratio was three times higher than during the 1970s. But there has also been a high, and increasing, variability for the debt ratio.

In summary we can conclude that the Maastricht criteria are not neutral. They are not strict for countries with low taxes where public assets also are sold. At the same time it would be wrong to say that the criteria would be impossible to meet if one desires to keep a traditional welfare state.

3.2   Economic restrictions

Will the economic restrictions on economic policy change if Sweden joined the currency union?

The possibility to finance deficits by domestic money creation will disappear. This is not important, however, in the sense that the Swedish Central Bank Law already today does not allow for this source of finance to be used. At the same time, it is always possible to change national laws whereas a membership in a currency union has many consequences that are more or less irreversible.

Fiscal policy will, on the other hand, become more effective. Counteracting forces such as a flexible exchange rate and a domestic interest rate do not exist any longer. At the same time this is a truth that has to be qualified. If fiscal policy becomes too irresponsible to a risk premium may have to be added when financing public debt.

The tax bases have become more internationally mobile during the last years.[16] A membership in the currency union may make the speed of this development become faster. This concerns the basis for corporate taxation and personal capital income taxation in particular. One reason for this is that the exchange rate risk for financial investments abroad will decrease. Tax competition has also increased during recent years. Also within the area may a membership in the currency union speed up the process.

The experience from other federations and monetary unions such as the U.S., Canada, Australia, Germany, and Switzerland is, however, that there does not arise a complete equalization of taxes and public expenditure. In the U.S. there are big differences in tax pressure and public expenditure across states and cities.[17] This seems to be possible to sustain although there is a high degree of mobility in the U.S. economy.

Baldwin and Krugman (2000) point out that it is difficult to find that tax competition has driven down the tax pressure in Europe, on the contrary it seems likely that the tax pressure in European low tax countries is increasing and that the gaps to high tax countries has decreased somewhat. Generous welfare states with high taxes tend to have good infrastructure, well educated and experienced labor force, well organized markets, and are, therefore, attractive for investors. This gives room to have higher taxes to some extent. If taxes, on the other hand, become too high the flows out of human and financial capital of the country may become large and also irreversible. Another aspect of this reasoning is that an important condition for this argument to work is that taxation to a large extent must be based on the utility the tax payer has of the public activities (the benefit principle) rather than the tax payer's ability to pay taxes (the ability to pay principle). For some taxes, however, tax competition does not leave any room to diverge from other countries.

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[16] This is also the topic of an official government commission that currently is working, The commission on the internationalization's importance for Swedish tax bases and future tax structure. A number of papers, commissioned by this commission, were presented at a conference in November 2001. The papers will be published in a future issue of *Swedish Economic Policy Review*.

[17] In Ohlsson (1998) there is a short summary of data showing differences in taxes and expenditure in the U.S.

4.   **Automatic fiscal policy**

Will the fiscal policy instruments have to change if Sweden joined the currency union?

Can we do it *in the same way* as before when stabilizing the economic development?

There are three main types of stabilization policy instruments within the national fiscal policy. First, there are the *automatic stabilizers*. The tax system can be stabilizing even at given tax rates as the tax payments increase during expansions while they decrease during recessions. The unemployment insurance system can, in a corresponding way, be an automatic stabilizer on the expenditure side.

Second, there are stabilization policy instruments that systematically have been used to affect economic activity. The active labor market policy can be seen as a comparatively stable reaction on the labor market situation. The volume of these instruments used is described by reaction functions. The difference compared to automatic stabilizers is that economic policy decisions about the volume of the measures are continuously made. Labor market policy to stabilize employment can be seen as a *semiautomatic stabilizer*. Finally, there are pure *discretionary* instruments that sometimes are used, other times not. For these instruments it is not possible to find a systematic and stable relation to the level of economic activity.

4.1   *Automatic stabilizers*

Many argue that one above all shall let automatic stabilizers operate. The advantage of this is, among other things, that lags regarding observing that there is a need for stabilization policy measures and lags in deciding about measures are avoided. A disadvantage is that this stabilization policy strategy may cause conflicts with the Maastricht criteria if there are not sufficient safety margins in the public finances. In addition, the business cycle is a multidimensional phenomenon. Automatic stabilizers usually only react in one dimension, for example, income or unemployment. There are, however, substantial phase lags between the activity on goods markets and that on the labor market. Automatics in itself is, furthermore, not sufficient. Stabilization policy must also have effect, but we have already discussed this in section 2.

Among the most important items in the central government's revenue side are the value added tax and payroll taxes. The personal income taxes is the main revenue source for the local governments.

The bases for these taxes are broad and reflect the development of economic activity well. The stabilizers could, however, be made more efficient. A faster tax collection is one way of reducing the time lags for these and other taxes. One way of doing this is to change the principles for how preliminary taxes are calculated. Another examples of changes would be that income and corporation taxes can be based on quarter or half year rather that the calendar year as time unit.[18] Realized capital gains could be taxed during the quarter when they arise. The principle of tax at source could be extended to more areas.

There is no direct possibility to affect the bases for these taxes. The tax rates, on the other hand, are direct fiscal policy instrument. There are, however, reasons to be careful in varying tax rates. The literature on tax smoothing argues against varying these over the business cycle. This is an allocation argument that clearly shows that stabilization may be in conflict with allocation. The equilibrium approach to fiscal policy (Barro, 1979) builds on that the agents in the economy optimize over time. Provided that the excess burdens that taxation creates are independent of the business cycle, the excess burdens are minimized if the tax rates are kept constant over time. Slightly simplified it is possible to say that the excess burden of a tax increases by the square of the tax rate. This means that an increase in a tax rate will give a considerably bigger increase in the excess burden than what a corresponding decrease in the tax rate will decrease the excess burden.

There is, however, a trade off between efficiency and stabilization. When disturbances are large there are good reasons to put more emphasis on stabilization.

Unemployment insurance and other passive labor market policy measures are maybe the most distinct automatic stabilizers on the expenditure side of the central government budget.[19] But the active labor

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[18] An example is The Swedish National Board of Student Aid which has half year as the time unit when computing the maximum income students may have without having their student aid reduced.

[19] Ohlsson (1991) study which parts of the central government budget has covaried with economic activity during the period 1970-1988. Labor market policy has been the most clear countercyclical part of the central government expenditure.

market policy has also been countercyclical. It has continuously been made decisions about the volume of the measures as a comparatively stable reaction on the labor market situation (see section 4.2 below).

There are also central government expenditure items with a procyclical development. The health insurance costs have recent years increased during good times. There is a conflict here. On the one hand there are reasons to decrease these variations. At the same time this will make the budget surplus more sensitive to the business cycle as the health insurance costs by being procyclical counteracts the countercyclical items of the central government expenditures. Another aspect on the health insurance is that it because the increased international mobility of tax bases may be necessary to remove the ceilings for the compensation. The same thing may also apply for the pension system and other parts of the social security system.

4.2   Labor market policy – a "semiautomatic" stabilizer"[20]

Labor market policy measures are intermediate policy measures between passive fiscal policy, using automatic stabilizers, and active discretionary fiscal policy. These measures could be viewed as semiautomatic stabilizers, i.e., as intermediate forms in the sense that they continuously demand discretionary decisions, but that these decisions are taken more or less rule based when unemployment varies. It could be described as the policy is implemented in a rather stabile and predictive way according to a reaction function.

Ohlsson (1993) examines the effect lags of job creation measures. The results show that an additional grant affected the number of people in job creation programs during 1½ year, with the strongest effects within one year. The maximum effect occurred after eight months. Ohlsson (1995) studies the effects of labor market policy measures over the business cycle. He finds that the job creation measures had desirable effects on unemployment during the 1970s and 1980s.

Calmfors *et al.* (2002) present results that also include the 1990s. They report results showing a slightly different picture of the effects of labor market policy. It seems difficult to find positive effects on regular

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[20]   This section draws heavily on section 5.5 in the STEMU report.

employment, not including people in labor market policy measures. On the other hand, *job creation measures* seem to have very large crowding-out effects on regular employment. This means that job creation measures have only limited effects on open unemployment. On the contrary, *labor market training* seems not to cause such crowding-out effects on regular employment. Consequently, variations in the volumes of labor market training have desirable effects on open unemployment. However, there are obvious limitations for the size of volumes of labor market training so that their efficiency would not be threatened. The substantial volumes put in place during the crisis in the the first part of the 1990s seem to have lead to that the average affects on incomes and employment for participants in the programs either have been insignificant or possible even negative.

A conclusion is that labor market policy, seen as a form of semi-automatic stabilizers, even in the future should be used as an active stabilization policy instrument also at smaller disturbances. The measures seem to have been implemented timely, although the volumes of the measures became too excessive during the deep crises in the 1990s. It is important that labor market policy measures is not used to such an extent that they become inefficient. Labor market policy measures directed toward stabilization should not be permanent and it must be possible to cut them in periods of economic recovery.

4.3   *Local governments and automatic stabilizers*

Central government grants to local governments is another large item on the expenditure side of the central government budget. Here it is important to note that the Maastricht criteria are for the whole public sector and not only for the central government. This means that the principles for economic interactions between the central government and the other parts of the public sector become central.[21] The question is how central government grants, tax equalization, and collection and payment of local governments' taxes shall be designed to contribute to, or at least not counteract, that the objectives of stabilization policy are fulfilled.[22] The

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[21]   Balassone *et al.* (2002) discuss the interaction between the fiscal rules in the European Union and fiscal decentralization.

[22]   There is a more formal discussion about local government economy in the Appendix.

design of the balance requirement for the local governments is also important for the behavior of local governments.[23]

When studying the stabilization policy effects of the present systems it is initially important to make a distinction between measures concerning the local governments economy that refer to periodized variables and those that do not. The local governments' costs and revenue are periodized and describe the local governments' economy in an accounting sense. The cash flows of local governments consist of unperiodized payments.

The balance requirement for local governments concerns the change in net worth. It is, in other words, an accounting measure on accrual basis and concerns revenue and costs rather than payments. Investments affect the balance requirement by the periodized annual capital costs. Net lending, which is the base for the Maastricht criterion, is, on the other hand, affected by the annual investment expenditure. The balance requirement affects the local government budget. The budgeted revenue must be greater or equal to the budgeted costs. This presupposes, however, that the outcome two years before was not a deficit, if it was the budget must show a surplus to compensate for the previous deficit.

For stabilization policy it is the local governments costs, rather than the revenue, that is the problem. The important thing is how the local governments' revenue and costs affect the behavior of households and firms. The local government income tax works as an automatic stabilizer in the same way as the central government income tax because the tax collection is joint. Crucial here is when the collection is made, when the disposable incomes of private agents decrease, not when the payment from the central governments to the local governments take place. The design of economic interactions between the central government and the local governments may, on the other hand, affects how local government costs evolve. This may be important for stabilization policy.

If the local governments' tax bases decrease temporarily during a year the balance requirement does not call for any immediate measures to be taken. The cost will, however, have to be reduced two years later. The alternative is to increase the local government tax rate two years later. Because of the design of the present central government grant and

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[23]   The commission on local government economic management has recently in its final report SOU 2001:76 suggested a number of changes in the principles for how the local government economy shall be managed.

equalization system, the local government tax rate is the only tool for a local government to affect its own revenue. Regardless of which of the alternatives that is chosen, there will be a contractionary impact on economic activity.

This may not be desirable for several reasons. The fact that the balance requirement concerns costs and revenue on accrual basis makes it difficult for the local governments to reduce costs to any considerable extent by reducing local government investment as only the annual capital costs are included in the balance requirement. Or to put it differently local governments can do what the central government cannot periodize. At the same time this means that it is easier for the central government to use investments as a shock absorber. The probability is therefore high that it is the operating costs that the local governments will reduce.

In addition it may be that the recession that caused the local governments tax base to decrease has changed to an expansion two years later and that a conctractionary policy is desirable at this time. It is, however, dangerous to base stabilization policy on assumptions about stable business cycles both as regards magnitude and periodicity. One should not, in other words, "ride the lags".

Another objection is that it is the central government's, not the local governments', task to pursue stabilization policy. If the central government can contribute to a more stable development in one sector of the economy it should do it.

The tax base should, therefore, not only be equalized between local governments but also over time. Calculating the tax base as an average over the business cycle can do this. This way temporary variations in the tax base will be smoothed, while more permanent trend changes will affect the tax base.

5.   Discretionary fiscal policy and large disturbances[24]

As was discussed above, if disturbances are normal, national stabilization policy should primarily be through automatic stabilizers and labor market policy, which could be viewed as a "semi-automatic"

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[24]   This section draws heavily on section 5.6 in the STEMU report.

stabilizer. Discretionary fiscal policy for stabilization purposes should only be used when there are major imbalances in the total capacity utilization, i.e., at large output gaps.[25] There is a trade off between stabilization and efficiency. Keeping tax rates constant can be desirable from efficiency point of view while stabilization may call for discretionary changes in tax rates. When disturbances are large there are good reasons to put more emphasis on stabilization.

5.1   Desirable characteristics

When choosing fiscal policy instruments for stabilization it is desirable to find instruments with as *general* effects as possible. By a general instrument we mean that the tax base or expenditure base is broad, so that the measure affects a large share of the economy. It is also important that the measure is *temporary,* i.e., that a parliament decision only concerns a limited time period, and *symmetric*, i.e., that tax cuts during bad times are counteracted by corresponding increases during good times.

Taxes and expenditures do not only have stabilization effects but also affect the distribution between different groups in society and the resource allocation. This is the reason why instruments should be general. However, it is desirable to, as far as possible, separate stabilization policy from distribution policies as well as from allocation policies. The more general fiscal policy instruments are, the smaller is the risk that there will be undesirable effects on distribution and economic efficiency.

Instruments with strong distribution effects are also often difficult to change back to previous levels after economic slowdowns and to use to counteract strong expansions. This is because tax increases or expenditure cuts are needed in both cases and could be difficult to get political support for. If fiscal policy instruments used for stabilization are general, and the distribution effects, therefore, are small, it becomes more likely that it will be possible to use the instruments in a symmetric way over the cycle. If the distribution impact of stabilization policy is small, the decision lags should also be small. In the same way, stabilization policy decisions are easier to make if the impact on economic efficiency is small.

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[25]   The STEMU commission defines large output gaps as gaps at least of the size of 2 percent of GDP.

From a more general point of view, the use of general fiscal policy instruments seems natural. This is because fiscal policy in the monetary union should substitute for national monetary policy, which is general.

The experiences from the 1980s and the beginning of the 1990s illustrate what can happen if fiscal policy is not symmetric. Government debt increased strongly in many countries and in some countries this led to debt crises.[26] Stabilization policies were not implemented in a symmetric way over the cycle. Instead expansionary measures tended to be permanent, while contractionary measures were not implemented early enough or were not strong enough. The result was that the strengthening of fiscal policy in good times did not counter-balance the weakening of public finances during recessions. If the fiscal policy instruments instead had been used in a temporary and symmetric way, the average tax and expenditure levels over the cycle had not changed.

An additional motive for temporary use of stabilization policy instruments is that structural changes in tax and expenditure levels are avoided. Otherwise stabilization policy will cause permanent deviations from decisions the Parliament has taken based on distribution and economic efficiency aspects.

It is not only stabilization policy measures that could effect income distribution and economic efficiency. It could also be the other way around. An example is, for instance, when positive efficiency effects of a certain policy take a long time to materialize (long effect lags). Reforms that are motivated by efficiency effects improving productivity may initially lead to higher unemployment before demand increases and "fills up" the new higher potential level of production.[27]

For this reason it is important to adjust the time of implementation for measures aimed for economic efficiency and distribution according to the expected level of economic activity. Structural reforms could in such a way be used for stabilization. However, such a policy would put great demands on knowledge about the structure and dynamics of the economy.

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[26] For the Swedish development see, for instance, Lindh and Ohlsson (2000).

[27] This mechanism seems relevant to explain why Margaret Thatcher's reforms in the 1980s did not give positive effect until the 1990s, see Nickel and Van Ours (2000) and Calmfors (2002). It is also reasonable to believe that the positive efficiency effects of the Swedish tax reform in the first years of the 1990s came several years later.

Parallel to that, structurally motivated changes in instruments implemented at the wrong points in time from a stabilization policy perspective could aggravate macroeconomic shocks. A Swedish example is the time sequence of credit market deregulation (1985), deregulation of the foreign exchange market (1989), and the tax reform (1991). The time sequence between these reforms probably contributed to the overheating in the late 1980s and to the deep recession during the first years of the 1990s.

5.2   Fiscal policy instruments

We discuss different specific tax and expenditure instruments in this subsection. For each type of instrument, first, the channels through which *temporary* changes of the instrument affect the activity level in the economy are discussed. We then assess how suitable each instrument is as stabilization policy instrument. The discussed instruments are: personal income taxes and transfers, value added taxes, payroll taxes, internal exchange rate changes, public consumption, and public investment. Some special Swedish innovations will be briefly touched upon, for example the investment fund system. Taxes on capital incomes, real property, wealth, inheritance, gifts, corporation taxes, and taxes on specific goods seem for different reasons be less suitable to use to stabilize. Hence, they are not dealt with.

5.2.1 Personal income taxes and transfers

Changes in personal income taxes and transfers affect the households' disposable incomes. It is more difficult to assess how changes in disposable incomes in turn affect private consumption expenditures. One research result is that changes in disposable incomes in the short run do not fully lead to changes in consumption (compare the discussion in section 2.3). The households' possibilities to redistribute their consumption over time via the credit market are, among other things, of vital importance for the size of the effect. Empirical research for Sweden points to that 10-25 percent of the households, and possible somewhat more in recessions, are credit rationed.[28] That means that they have difficulties to get loans at the credit market against future incomes. For these households there are

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[28]   See Agell *et al.* (1995).

probably strong correlations between disposable income and consumption. For remaining households the correlation is probably weaker.

It is reasonable to assess that temporary changes in income taxes and transfers give weaker effects on aggregated demand then temporary changes of the same size of public consumption or public investments.[29]

Changes in income taxes and transfers can also affect labor supply. However, in a recession a tax cut will probably have only marginal effects, since in such situations employment is in the first place decided from the demand side.

Temporary changes in income taxes appear to be a possible stabilization policy instrument because a change in income taxes affects a large part of the economy. A possible method would be to impose an extra proportional tax,[30] a *stabilization tax* paid as a certain percent of the taxable income, equal for all, in strong overheated situations. In a corresponding way a special *stabilization tax reduction* could be given in recessions. Such changes would have relatively small distribution effects. Changes in income taxes that considerable change the progressivity should not be used for stabilization, because that would imply substantial redistribution effects, and could complicate the decision process.

A problem with variations of income taxes for the aim of stabilizing the cycle is that the effects on consumption via disposable incomes may be small when the tax change is temporary. Another problem is that increases in income taxes can, because of restrictions on retroactive taxation, only take place at turn of the year. This could contribute to long time lags.

Changes in transfers to households have similar economic effects as changes in income taxes. However, in general transfers should not to be used as stabilization instruments, because they usually concern specific groups in society and get proportionately large effects on the income distribution. This would probably make it especially difficult to decrease transfers when the cycle needs to be dampened.

However, it should be observed that also the value of transfers in the Swedish system is affected when general variations in the income taxes are

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[29]   As a consequence a *balanced budget change* gives effects on aggregated demand. If for instance public consumption and taxes are increased to the same amount, so that the budget balance does not change, demand will be stimulated.

[30]   Collected by the central government.

used as a stabilization instrument. The reason is that most transfers in Sweden are taxed in the same way as taxable incomes. Hence, changes in the income tax rate will in this way affect the size of transfers net of taxes.

5.2.2 Value added taxes

Variations in the value added tax, for instance a few percentage points around its normal value, can reallocate household consumption over time.[31] A temporary increase of the tax rate could reduce consumption temporary when there is a threat of economic overheating. Correspondingly, a temporary cut of the tax rate during a recession could give a temporary higher consumption. The effects on the income distribution of changes in the value-added tax would be rather small.

The tax base of the value added tax consists mainly of consumption expenditures. Temporary tax changes affect both goods and services gross as well as net prices. How much gross and net prices will change is dependent on how the burden of the tax is distributed between firms and consumers. How a general change in the value added tax would affect the aggregated price level, i.e., the size of the change in CPI, will also depend on the distribution of the tax burden.

The effect on consumption of a value added tax change originates partly through changes of relative prices between consumption in different periods and partly through the change in real disposable incomes when the aggregated price level is changed.

Variations in the value added tax is associated with certain problems. When households get to know about for instance a planned tax cut, they will decrease their consumption up to the time point the change will come into force. Further, households will advance consumption just before the tax cut come to an end, so that consumption decreases temporarily after the tax has been increased again. For the purpose to mitigate the first effect a temporary change in value added tax should be carried out rapidly after a decision.

Another problem connected to variations in the value added tax is that temporary large difference in tax rates compared to other countries could lead to trade over country boarders for the purpose to use the

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[31]   In Sweden the normal tax rate is 25 percent of consumption expenditures.

possibilities of tax arbitrage. An administrative problem is the costs associated to changes of price tags.

There are reasons to believe that changes in the value added tax would get large effects on construction of dwellings. The reason is that this is regarded as similar to final consumption in Sweden. Hence, tax changes will fully affect costs.

Concerning value-added tax there exist certain EU-rules. However, these rules do not constitute obstacles for variations in the tax rate motivated by stabilization policy motives. The most important rule is that the normal tax rate must exceed 15 percent. Further, exceptions for certain types of goods are permitted. Member countries can chose maximum two reduced tax rates in between 5 and 15 percent. In the Swedish case there exists lower tax rates on books and foodstuffs, amounting to 6 and 12 percent, respectively. In the first place, variations in the normal tax rate would be recommended as a stabilization policy instrument.

5.2.3 Payroll taxes

Statutory payroll taxes paid by employers are charged on the wage sum and currently amounts to approximately 33 percent in Sweden. The immediate effect of a change of the tax rate is that firms' wage costs will be changed proportionally. Empirical studies show that the effect on wage costs still is substantial in between one to two years.[32] This depends on that nominal wages are rigid in the short term. Obviously, there exist possibilities during a couple of years to affect domestic production and employment by the means of temporary changes in payroll taxes.

A temporary increase in payroll taxes will increase firms' wage costs and will in an overheated situation contribute to moderate employment and production. In a recession a temporary cut of payroll taxes could in a corresponding way stimulate firms to sustain employment and counteract reductions in production.

The effects following temporary changes in payroll taxes resemble those of temporary exchange rate variations. At a payroll tax cut domestic firms' wage costs decreases relatively those abroad. Accordingly, domestic

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[32] An overview over the factors deciding wage costs, among them the effects of payroll taxes, is given in Calmfors and Uddén Sonnegård (2001).

production will turn more competitive and demand shifts from foreign to domestic production (an expenditure shift). In this way, variations in payroll taxes could to some extent substitute variations in the exchange rate no longer possible inside the currency union. Cuts in the payroll taxes should in the first place be used in situations when the position of the domestic cycle diverges substantially from that in the rest of the currency union. In such cases changes in Swedish payroll taxes should appear as acceptable from the point of view of other countries in the union.

Variations in payroll taxes also lead to changes in demand on the one hand by a change in the price level and on the other hand by effects on firms' profits.

5.2.4 Internal exchange rate variation[33]

Variations in payroll taxes can be combined with other tax and expenditure changes in such a way that the budget surplus does not change. In the literature this is called *internal exchange rate change.* Inasmuch as the discussion usually refers to a cut in payroll taxes it is most often named an *internal devaluation.* A compensating change can be carried out in personal income taxes, value-added taxes, employees' contributions to the social security system, or in transfers to households. The aim of an internal exchange rate change, in contrast to an unfinanced change in payroll taxes, is only a shift of demand between foreign and domestic production and that the effects on aggregated demand are small. Budget neutrality makes this instrument particularly attractive if the aim is to achieve a temporary cost cut in a situation when a weakening of the budget surplus is not desirable.

The parallel between internal and external exchange rate variations appears most clearly when a cut in payroll taxes is financed by an increase in value-added taxes. The direct effect on households will be price increases as in the case of a devaluation. For domestically produced goods and services decreased payroll taxes and higher value-added tax will counteract each other, but for imported goods the increase in payroll taxes will lead to higher prices.

However, it should be noticed that temporary value added taxes could lead to a redistribution of consumption in the way it was discussed

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[33]   The discussion in this part draws strongly on Calmfors (1998).

above. Above that, problems with trade over the frontiers could constitute a problem. Financing decreased payroll taxes by employees' social security contributions or by income taxes are probably better alternatives.

5.2.5 *Government consumption and government investments*

Changes in public consumption and investment have direct and proportionately large effect on aggregated demand. Government demand constitutes a variety of activities of different character. A major part of public consumption is managed by local governments and consists for instance of primary and secondary education, health care and elderly care. Such activities are rather difficult to vary according to macroeconomic developments, but variations with a few percentage points could, at large shocks, be motivated from a socioeconomic point of view. A possible method is to generally increase and cut, respectively, the appropriations for central government consumption and investment as well as central government grants to local governments in around laid down normal levels. Central and local government authorities could with such a method be expected, at least, to partly use variations in appropriations to vary consumption and investment.

Government investments demand extended planning periods. Hence, they could be difficult to use for stabilization. However, the timing of already planned investments can to some extent be adjusted to the cycle. Examples are maintenance of infrastructure, repair works, and reconstructions. A precondition for these types of investments is a "planning reserve" of such projects.

5.2.6 *Measures directed towards private investments*

Another method to affect aggregated demand is to stimulate or dampen private investments. The aim would be to reallocate investments over time in a contracyclical way.

Investment funds were introduced in Sweden 1955 and came to an end 1991.The profound aim of these funds were to smooth the business cycle by stimulating firms to fund parts of their profits during good years

and use these funds for investment in slumps. Firms were given incentives to use the system by reductions in the corporate tax system.[34]

In the 1950s and 1960s the system seems to have functioned rather well. Results in Taylor (1982) indicate that the investment fond system contributed to smooth the cyclical fluctuations in Swedish investment during this period. Taylor draws the conclusion that a system of this type could play an important role, especially in situations when monetary policy primarily is not used for the aim to stabilize the cycle.

In the 1970s the authorities used the system to generally stimulate growth in the industry sector by permitting firms to more or less constantly use the funds. As a permanent measure, the investment funds loss their effect as a stabilization tool and they also had some adverse effects on economic efficiency, for instance by favoring already established firms. The experiences from this system illustrate the importance of a temporary use of stabilization policy measures. It seem not advisable to introduce investment funds of this type again.

5.2.7 Measures directed towards construction

Investments in construction varies to a large extend over time and are strongly tied to domestic activity. A possible stabilization instrument is to introduce an extra tax on new constructions and reconstructions in good times and corresponding subsidies in slumps. To get most possible coverage and to avoid distortions between sectors the tax and subsidy, respectively, should include all types of taxable real estates, i.e. different types of dwelling as well as industry buildings.

5.3 Summary

Discretionary fiscal policy instruments to be used to counteract large disturbances should, as far as possible, be general, temporary, and symmetric. For central government there are strong reasons to choose a few fiscal policy measures suitable for stabilization in advance. The aim is to shorten decision lags for discretionary actions. This is done by specifying in advance which instruments are believed to have stabilization

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[34]   For deeper discussions of the investment fund system and its effects, see Södersten (1989) and Agell *et al.* (1995).

effects, are not controversial from a distributive point of view, and do not have large effects on economic efficiency. The ex ante chosen instruments can be used separately or in combinations. The choice of instrument, or combination of instruments, should be dependent on the type of disturbance. The size of the contractionary or expansionary measure should be proportional to the size of the disturbance. Parliamentary decision about stabilization measures should concern a limited time period. If conditions change, the time period could, of course, be prolonged or shortened.

The following measures could be used in the first place:

1. A proportional *temporary change in income taxes*, equal for all, calculated as a certain share of taxable income. A variation of the tax rate by +/– 2 percentage points corresponds to an effect on general government net lending by SEK 25 billions (EUR 2.8 billions).[35]

2. Variations of *value-added taxes*, in the first place around the normal tax rate of 25 percent. If the tax rate is changed by +/– 2 percentage points it corresponds to an effect on net lending SEK 11 billions (EUR 1.2 billions). If all value-added tax rates are changed with the same amount the effect is approximately SEK 14 billions (EUR 1.6 billions).

3. Variations in *statutory pay-roll taxes paid by employers*. If the tax rate is changed +/– 2 percentage points it corresponds to an effect on net lending of approximately SEK 9 billions (EUR 1.0 billions).

4. Variations in *central government grants to local governments*. A change of +/– 2 percent of local governments expenditure corresponds to SEK 10 billions (EUR 1.1 billions).

5. Variations in the *appropriations to central government consumption and investment*. If the appropriation level is adjusted by +/– 2 percent it will correspond, at full effect on activities, to an effect on net lending by SEK 4 billions (EUR 0.4 billions).

6. Temporary *taxes/subsidies on new constructions and reconstruction of real estate.* A tax or subsidy rate 5 percent of the construction cost corresponds to an effect on net lending of SEK 7 billions (EUR 0.8 billions).

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[35]   At the SEK/Euro rate prevailing in March 2002.

7. *Internal exchange rate change,* for the purpose to bring about a
    temporary cost change in situations when it is not possible or desirable
    to change general government net lending.

6.   Fiscal policy institutions

Will the fiscal policy institutions have to change if Sweden joined
the currency union?

Will we *be capable* to stabilize the economic development to the
same extent?

Fiscal policy has the potential of contributing in stabilizing
economic activity. But this also puts demands on the political system. It is
not possible in the long run to have an expansionary policy during
recessions without having a contractionary policy during good times.

This moves the issue of political institutions on the agenda. There
are those who argue that the lack of policy institutions is not a serious
problem. Wittman (1989), for example, claims that political markets are
perfect, that politics work without problems. Others argue that there exist
problems both in the short run, for example in the form of political
business cycles, and the longer run. The question is if there is a need for
policy institutions to contribute to strengthen policy.

Policy institutions, as the reformed budget process and the system
with expenditure ceilings, have been important elements in the restoration
of the public finances in Sweden. Both tax and expenditure ratios have
decreased substantially during the last years and the ceilings have been
respected without changes others than of technical reasons. At the same
time there are signs that the efficiency of these measures could weaken in
the future if the policy institutions not are further developed. An example is
the budget margin under the expenditure ceilings, which was supposed to
vary with the economic activity, but has been used almost completely for
expenditure reforms recent years.[36] Other examples in the same spirit are
the increased use of targeted tax decreases (tax expenditures) to circumvent
the expenditure ceilings.

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[36]   See Heeringa and Lindh (2001) for a discussion about expenditure ceilings in the Netherlands and
       Sweden, especially in a stabilisation policy context.

Expenditure ceilings and other elements in the budget process are self-imposed restrictions. For restrictions to be sustainable in the long run there must be a division between those who decide about the restrictions and those for whom the restrictions apply. There is indeed a certain kind of division today in the Swedish system, parliament decides about the expenditure ceilings that concern the governments use of funds, but this has not protected the budget margins from being used. There is also a division in the interaction between the central government and the local governments. There exists a constitutional independence for local governments in Sweden. But at the same the central government sets a number of restrictions on the actions of local governments.

A conclusion from the Swedish experience is that self-imposed restrictions as the budget margin risk to become less efficient over time.[37] Also the ceilings in themselves have problems. There is also a risk that the real effects decrease over time as the knowledge how to circumvent the restrictions has increased. We see this in the forms of more tax expenditures, more fixing, more inclusions and exclusions, new terms, postponements, and things brought forward. These phenomena taken together create the foundation for less efficiency.

Which types of new institutions could contribute to strengthen fiscal policy? Two alternatives have been discussed in the literature. One possibility is to create a fiscal policy board to which some stabilization policy decisions are delegated. The analogy to an independent central bank is close. An alternative is to create a fiscal policy council with advisory and supervising duties. Such a council can state both what is good accounting and what is good economics.

7.   Concluding remarks

If Sweden becomes member of the European currency union, the conditions for fiscal policy will change. The general stabilization policy *objectives* regarding inflation, employment, and output will, however, hardly change with a membership. At the same time it is not clear if the *need* for stabilizing the Swedish economy will increase or decrease.

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[37] Restrictions may also have more direct economic consequences. Binding nominal expenditure ceilings makes the expenditure ratio to vary in a countercyclical way, and this even though the expenditure policy is not countercyclical in itself.

National fiscal policy will, however, have to carry a bigger *burden* than before in stabilization policy as there no longer will exist national monetary and exchange rate policy. Fiscal policy will also be more *effective* in affecting real variables such as production and employment. Counteracting forces such as a flexible exchange rate and a domestic interest rate do not exist any longer. Fiscal policy will, at the same time, meet new and changed formal and economic *restrictions*. As member of the currency union we will face sanctions if our fiscal policy does not keep within the limits for the public sector's net lending and consolidated gross debt that apply within the EU. Increased mobility of tax bases and tax competition are examples of economic restrictions that may become stricter. The fiscal policy *instruments* and *institutions* will need to be reformed.

Our conclusion is that fiscal policy will not be very much affected if Sweden becomes a member of the monetary union. The pressure, to do what we anyway should do, will increase however. The fiscal policy agenda can be summarized in twelve items.

1. The short run budget policy should be countercyclical in the sense that automatic stabilizers are allowed to operate. The automatic stabilizers can to some extent be complemented by discretionary measures if the disturbances are large. The policy must also be symmetric in the sense that surpluses during good times should be so large that they counteract deficits during bas times and contribute to keep the debt ratio on a sustainable path in the longer run.

2. The time lags of the different fiscal policy instruments should be decreased so that the automatic stabilizers will become more efficient. This way the stabilizing effect can be increased without increasing the sensitivity of the budget to economic activity. Tax collection can be made faster. One way of doing this is to change the principles for how preliminary taxes are calculated. Other examples of changes would, for example, that realized capital gains would be taxed during the quarter when they arise, that the principle of tax at source is extended to more areas, and that income and corporation taxes can be based on quarter or half year rather that the calendar year as time unit.

3. The time lags of the fiscal policy decisions should be shortened. The central government should be able to quickly increase expenditure in carefully defined situations, related to large output gaps or large deviations of actual unemployment from the equilibrium level, and

within carefully predetermined amounts (an amount decided by parliament that may not be exceeded). This applies in particular for labor market policy measures when unemployment increases rapidly.

4. The authorities should select a small number of appropriate fiscal policy measures in advance for use as economic stabilizers during major macroeconomic shocks. These tools should, as far as possible, be general and only have small effects on distribution and allocation. The objective is to shorten the decision lags. The measures should be adjusted to the type of shock and should be intended only for a limited time period fixed in advance. If Sweden becomes a member of the currency union, the choice of measures of this nature can be justified by the need to replace a national monetary policy that in itself constitutes a general instrument.

5. Fiscal policy should not be paralyzed by the criteria for public sector net lending. The levels and composition of revenue and expenditure are as important for the stabilizing effects of fiscal policy. The balanced budget multiplier is not dead. Internal exchange rate adjustments are examples of this.

6. The medium term budget policy should aim at net lending target to be reached over a business cycle. The target should give a safety margin big enough so that net lending always fulfills the Maastricht criterion. The size of the safety margin depends on how sensitive the budget is to economic activity. This sensitivity depends, in turn, on the design of the tax system and the level of taxes. It is difficult to imagine that it would be sustainable in the very long run to have positive medium run net lending targets. This sets limits for the design of the tax system and the level of taxes. The demographic changes that can be expected the coming decades, however, imply that a positive net lending target seems reasonable at least in the coming decade.

7. There is a great need for a clear policy regarding public sector assets, both financial assets and real assets – buildings and equipment. The optimal size of the public capital stock is an important question. Has public investment been large enough? The development of asset values must be seen in light of the Maastricht criterion for gross debt as the changes in assets is one of the factors behind the development of gross debt.

8. There is also a need for a safety margin for the consolidated gross debt. If net lending varies with activity it is also vary likely that gross debt also will fluctuate.

9. It is possible to have higher taxes than abroad without having tax bases to disappear provided that the services that the public sector provides, financed by the tax revenue, are considered as good value and of good quality. There is a need for quality control. Taxation will have to be based more on the benefit principle for taxation, less on the ability to pay principle.

10. Economic growth mitigates most restrictions that the economic policy meets. In particular this means that economic growth makes it easier for national fiscal policy in a currency union to meet the convergence criteria for net lending and gross debt. If people get more and better tools and better knowledge how to use these tools the economy will grow. Education and equipment investments are maybe not the most spectacular in the growth discussion both are still among the things that in the long run have proven to be among the variables that have the most positive effects on economic growth.

11. The Maastricht criteria concern the entire public sector and not only the central government. This means that the principles for economic interactions between the central government and other parts of the public sector become central. Collection and payment of local government taxes, central government grants, and the tax equalization system together with the balance requirement for local governments must be designed in a way that local government expenditure contributes to, or at least do not counteract, the stabilization policy. The tax base should therefore not only be equalized between local governments but also over time. Calculating the tax base as an average over the business cycle can do this.

12. The political systems ability to fiscal discipline has been questioned. Expenditure ceilings and other self-imposed restrictions in the budget process can be seen as attempts to give increased strength to fiscal policy. It is important to assure that the present restrictions can continue to contribute to fiscal discipline. If not, they will have to be adjusted and strengthened.

APPENDIX

LOCAL GOVERNMENT EXPENDITURE

The tax base of the local governments consists of earnings including taxable transfers. The actual tax income year t can on an accrual basis be written $\tau_t y_t$ where τ_t is the tax rate and y_t is the tax base. All amounts are in SEK per inhabitant. Tax income year t that is budgeted year $t–1$ can be written $\tau_t E_{t–1} y_t$. $E_{t–1}$ denotes that the budget is a forecast made year $t–1$ and $E_{t–1} y_t$ is the tax base year t that is expected year $t–1$.

The central government collects the taxes for the local governments. In a cash flow sense the central government transfers collected taxes to the local governments according to a forecast of the tax base and a comparison between outcome and forecast two years before. We can write this as:

$$TP_t = \tau_t E_{t-1} y_t + \tau_{t-2}(y_{t-2} - E_{t-3} y_{t-2}). \qquad (1)$$

The last two terms in (1) is the difference between actual and expected tax base two years before.

There exists an extensive central government grant and equalization system for the local governments. The most important parts of this system are income equalization, cost equalization, and general central government grants. The income equalization guarantees all local governments the same tax base regardless of the actual tax base of the local government. The local governments with a large tax base pay a fee, those with a low tax base receive a grant. Total fees correspond to total grants.[38]

The cost equalization shall equalize structural differences in needs and costs. Costs that depend of differences, fees, and efficiency shall, on the other hand, not be equalized. The general central government grant has two parts. In addition to a lump sum, identical for all inhabitants, the local government receives a grant based on how many inhabitants there are in the local government in five different age groups (7-15, 16-18, 65-74, 75-84, and 85 years and older).

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[38]   The income equalization has two parts. In addition to the regular equalization, there is from 2001 adjusted income equalization for the local governments where the average tax rate in the county is more than 95 percent of the own tax rate.

The local governments are required not to report any economic deficits. The balance requirement is on accrual basis, not cash flow basis. It is, in other words, a question of periodized incomes and expenditures.[39] In addition the balance requirement is for the budget, the local governments may not budget a deficit. If the actual outcome has been a deficit, this must be counteracted by budgeting a surplus within two years. We can write the balance requirement as:

$$E_{t-1}R_t - E_{t-1}C_t \geq \max\{0, C_{t-2} - R_{t-2}\}, \tag{2}$$

where R_t is local government revenue year t and C_t is costs the same year. Equation (2) says that the local governments budgeted income must be at least as high as budgeted costs. The exception is if the actual outcome two years before has shown to be a deficit. In this case the budgeted income will have to exceed the budgeted costs with an amount corresponding to the deficit. Because of the design of the central government grants and equalization system, the tax rate is the only instrument available for the local government to affect income.

For the budgeted costs this implies that the following inequality must be fulfilled:

$$E_{t-1}C_t \leq \min\{E_{t-1}R_t, E_{t-1}R_t - (C_{t-2} - R_{t-2})\}. \tag{3}$$

In the normal case the balance requirement implies that budgeted costs shall be lower or equal to budgeted revenue. But if the local government has experienced a deficit two years before the budgeted costs, for given budgeted income, will have to be reduced. As we are dealing with costs on accrual basis, it is not possible to reduce costs to any large extent by reducing investments, as only the capital costs are included in the balance requirement.

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[39]   We should, therefore, in fact use the terms costs and benefits.

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