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# Expansion of the Public Sector, the Current Account and the Exchange Rate

by Renate Ohr, Bochum\*

Attributing the foreign trade effects of an expansion in the state budget to a single cause cannot do justice to the multitude of macro-economic interrelationships. Both theory and observation can reveal quite differing links between the public sector financial balance, the balance of payments and the exchange rate. The financing and nature of additional budgetary expenditure and the pattern of private investors' expectations therefore have to be taken into consideration to obtain a clear picture of the possible consequences of budgetary expansion.

The impact of expansionary government budgets on the current account and the exchange rate are generally discussed against the background of the high budget deficits that accompany them. There is a widely held view that an expansion in expenditure financed by borrowing leads to increases in interest rates, inflows of capital, appreciation of the currency and, as a consequence, a deterioration in the current account. According to this view, the expansion of the public sector is made possible by a contraction in the external surplus.

In 1976 and 1977 various international organisations, foremost among them the OECD, expressed the opinion that economically "strong" countries such as the Federal Republic of Germany and Japan, should increase their budget deficit. This would trigger a chain reaction that would reduce their current account surpluses vis-à-vis "weak" countries. More recently, the situation in the USA appears to have confirmed this interpretation, as the budgetary expansion and high budget deficit in that country have been accompanied by a substantial current account deficit.

However, by analysing not only the manner in which such expansion is financed but also the structure of additional expenditure, the links between the state sector and the external sector can be shown to be more diverse. The claim that rising public sector borrowing tends to lead to a deterioration in the current account proves to be too much of a generalisation if a more differentiated view is adopted and can only be sustained in a special set of circumstances.

The considerations below are therefore based on analysis of the following additional aspects:

□ subdivision of the structure of production in the economy into a tradable goods sector and a non-tradable goods sector;

☐ differentiation between three types of public expenditure: public consumption, public investment and state transfers;

☐ inclusion of the savings behaviour of individuals and hence the trend of the private financial surplus or deficit;

☐ the significance of portfolio diversification for international investment decisions;

□ consideration of differing expectations regarding exchange rates, growth and inflation at home and abroad.

If the impact of these factors is taken into consideration, an expansion in the relative size of the public sector can lead to current account surpluses *or* deficits and to appreciation *or* depreciation of the currency, depending on the intensity of the effects. These factors therefore suggest theoretical explanations for the fact that high budget deficits have been accompanied by a favourable external balance in some countries but by a current account deficit elsewhere and for the different ways in which exchange rates have reacted.

## Rising Public Sector Demand, Tradable Goods and Non-tradable Goods

In an open economy, total output can be divided into one sector for non-tradable goods and another for tradable goods. Most services and the provision of

<sup>\*</sup> Ruhr University.

 $<sup>^1\,</sup>$  Cf, OECD: Economic Outlook, 1977. A discussion of this theme is to be found in H. Lehment: Internationale Aspekte der Staatsverschuldung, in: Beihefte der Konjunkturpolitik, No. 27, 1980, pp. 61 ff.

"public goods" count as non-tradables, while all products produced or consumed in the country which can be exported or imported are tradable goods.

An expansion in the relative size of the public sector generally comes about as a result of the state production and consumption of non-tradable goods. If the required factors of production (labour and capital) are drawn from the private sector for non-tradables<sup>2</sup> and if the overall distribution of demand between tradables and non-tradables remains unchanged, the production of private non-tradables will be replaced by the production of public sector non-tradables. The *current account balance is unaffected*.

On the other hand, if factors of production are drawn from both private sectors of the economy,<sup>3</sup> other things being equal, there will be an excess demand for tradables and an excess supply of non-tradables. At a given world market price for tradables (assuming the case of a "small" country), the domestic supply of goods for export declines and the demand for imports rises until the excess demand in this sector has been met. The growing state sector now squeezes out foreign demand or increases the domestic absorption of foreign goods, leading to a *deterioration in the current account*.<sup>4</sup>

If the expansionary budgetary policy is accompanied by measures to stimulate domestic economic activity, additional demand will flow into both sectors. This can be a further cause of a reduction in the external accounts, in that the induced increases in prices and incomes may lead to a further weakening of exports and an increase in imports.

If the expansion of the public sector results primarily in a reduction in private demand for tradables,<sup>5</sup> the fall in demand in the tradable sector may outweigh the fall in production in that sector (caused by the withdrawal of factors of production), thereby leading to an excess supply of tradable goods. If the surplus is taken up by the world market, there will be an *improvement in the current account*.

# Public Consumption, Investment or Transfer Payments?

The way in which an expansion in the public sector affects supply and demand in the tradable sector, and hence also the external accounts, depends crucially on the *type* of public expenditure that is increasing.<sup>6</sup>

Rising public consumption and additional public sector investment primarily increase the supply of goods and services in the non-tradable goods sector. However, certain investment in infrastructure which has

a complementary impact on the tradable goods sector may constitute an exception. For example, public expenditure to improve the transport network, the sewer systems or electricity supply in countries that are heavily dependent on tourism may promote the tourist trade and hence the export of services. Improved transportation systems also reduce the transport costs element in export prices, so that the country's international competitiveness increases and the current account can improve.

Finally, a distinction should be made between productive and unproductive public sector investment. Productive public sector investment increases the capital stock qualitatively or quantitatively and, provided it is not made entirely at the expense of private investment, may therefore create the necessary conditions for higher productivity and faster growth in private manufacturing. The resulting improvement in international competitiveness may manifest itself in an expansion in exports and in industries producing import substitutes, so that the external accounts may be enhanced in this way too.

If the expansion in government expenditure leads to increased redistribution of income, it will affect only demand, not supply. Depending on who benefits from the additional state transfer payments, it will be accompanied by a greater or lesser growth in import demand and the absorption of exportable goods. The eventual impact on the external accounts will be determined all the more strongly by the manner in which the increase in expenditure is financed and the opposite effects this will have.

The last point underlines the fact that up to now attention has been concentrated mainly on the *real* economic requirements for an improvement or deterioration in the external accounts as a result of an

 $<sup>^2\,</sup>$  For example, if the state assumes responsibility for services that were previously provided by the private sector.

<sup>&</sup>lt;sup>3</sup> For example, if financing by means of borrowing crowds a broad spectrum of domestic investors out of the capital market.

<sup>&</sup>lt;sup>4</sup> However, this tendency is attenuated by a relative fall in prices in the non-tradable sector, which can divert demand to this sector.

<sup>&</sup>lt;sup>5</sup> For example, if the expansion in public sector demand is financed by raising income taxes and as a result there is a reduction in the private consumption of foreign products (such as foreign travel) or in domestic demand for exportable goods. Even if the expansion is financed by borrowing, a similar effect may occur if the demand for imported intermediate products declines as a result of the crowding-out of private investment.

<sup>&</sup>lt;sup>6</sup> Cf. E.-M. Lipp: Steigende Staatsverschuldung in offener Wirtschaft, in: Staatsfinanzierung im Wandel, Berlin 1983, p. 402.

<sup>&</sup>lt;sup>7</sup> Cf. R. Ohr: Staatsverschuldung und Liberalisierung der Weltwirtschaft, in: Sparkasse, Vol. 101, 1984, pp. 441 f.; G. Dieckheuer: Budgetdefizit, Wachstum und Inflation, in: Zeitschrift für die gesamte Staatswissenschaft, 1983, pp. 80 ff.

#### **REPORT**

expansion in the public sector. The question of the *financing* of the additional expenditure and the attendant *monetary* effects of a change in the current account balance have been left largely to one side. The remainder of this article therefore discusses the determination of the public sector's financial surplus or deficit and its relation to the financial balances of the other sectors. It also examines the interdependence that exists under a system of flexible exchange rates between the particular current account balance and the necessarily complementary capital account balance, as well as the behaviour of the exchange rate.

# The Public and Private Sectors' Financial Balances and the Current Account Balance

Clear *ex post relationships* between the financial balances of the private sector (households and firms), the state and the external sector can be deduced from the national accounts. However, analysis of changes in the structure of the balances cannot of itself reveal the causes of those changes. These are the result of the impact of individual micro-economic decisions, which influence one another within a sector and between different sectors.<sup>8</sup>

If increases in public expenditure are not financed by corresponding tax increases, a public sector financial deficit ensues. Assuming stability in the financial balance of the domestic private sector (households' savings less the borrowing requirement of the business sector), this state financial deficit must be reflected in a corresponding rising of the liabilities towards foreign countries (= domestic current account deficit); this is the fiscal approach to the balance of payments theory. It would be premature, however, to conclude that an expansion in public expenditure financed by borrowing could always be regarded as the exogenous cause of a deterioration in the current account. Two arguments militate against such a conclusion:

□ Long-term empirical research shows that one cannot generally assume a constant private sector financial position. This is shown by developments in the Federal Republic of Germany, for example. In the fifties and sixties the private sector's financial deficit steadily declined. The propensity to save rose steadily from a very low initial level, so that by the mid-sixties it outweighed the business sector's perennially high borrowing requirement and the financial deficit gave way to a surplus. In the seventies the surplus grew at a faster

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<sup>&</sup>lt;sup>8</sup> Cf. E. Neuthinger: Bestimmungsgründe und gesamtwirtschaftliche Auswirkungen der staatlichen Kreditfinanzierung in der Bundesrepublik Deutschland seit 1974/75, in: IFO-Studien, Vol. 26, 1980, pp. 259 f.

<sup>&</sup>lt;sup>9</sup> Proponents of assuming a stable financial position are to be found mainly among advocates of monetarist theories.

rate (at times, the propensity to save was close to 15 % and the business sector's borrowing requirement declined as a result of a cutback in investment owing to the recession). In the late seventies and early eighties the propensity to save fell back somewhat and business demand for credit rose, so that the private sector's financial surplus contracted again.<sup>10</sup>

☐ However, even if the public sector's financial balance and the current account of the balance of payments occasionally move in parallel and the private sector's financial balance remains relatively constant, the cause may also be an *exogenous* factor influencing both sectors equally. For example, the severe second oil price shock not only led to an expansion in the public sector's financial deficit in many countries by depressing incomes and tax revenues but also caused a deterioration in the current payments balance by inflating the value of imports.

Nevertheless, a causal relationship between the budget deficit and the current account deficit cannot be entirely ruled out. The combination of the present US budget deficit and the fairly strong investment boom necessitates a volume of credit that far exceeds private saving. The induced capital inflows cover the domestic financial deficit, but under a system of flexible exchange rates this is possible only if the dollar appreciates so strongly that an equally large current account deficit develops.

Here too, however, the rise in the public sector financial deficit has not been *fully* translated into a current account deficit – the private sector's financial balance has also changed. Private saving has risen, so that households' growing financial surplus can finance not only additional private investment but also part of the additional public borrowing.

### Interdependence between Capital and Current Accounts

In a system of flexible exchange rates, the current account can show a surplus (deficit) only if at the same time the capital account registers a correspondingly large deficit (surplus). The effects of growing public expenditure on international capital flows are therefore also of prime importance for the link between an expansion in the public sector and the current account balance.

The following factors that influence the capital account may emerge as a direct or indirect result of an expansion in public expenditure:

☐ an increase in interest rates owing to financing rising public expenditure by borrowing in a tight capital market

or owing to a rise in the demand for money as a result of increasing economic activity;

□ portfolio switching in a context of an increased supply of government securities and hence *wealth*-related capital movements;

□ expectations of an appreciation of the currency in connection with positive expectations concerning domestic economic developments in the light of the growth in the relative size of the public sector;

□ expectations of a depreciation of the currency owing to high and rising public sector indebtedness or to inflationary tendencies due to rising public sector demand;

□ adaptive exchange rate expectations, whereby an exchange rate change (such as one induced by the current account position) triggers the expectation of a partial correction.

The causes of the possible combinations of budget, current account and exchange rate developments stemming from an expansion in the public sector can now be determined from the mix of factors influencing the current *and* capital accounts of the balance of payments.

1. Budget deficit, current account deficit and currency appreciation: A budget deficit occurs in combination with a current account deficit mainly if financing by means of borrowing leads to a sharp rise in interest rates and thus, to an influx of foreign capital. The exchange rate rises, causing a deficit on current account. The appreciation of the currency is one part of the mechanism that creates the real economic conditions for a current account deficit: the profitability of the domestic tradable sector is reduced by the decline in competitiveness caused by the shift in the exchange rate. Resources are therefore shifted to the non-tradable goods sector. The excess demand for tradable goods must be met by imports. 11

This development can be further intensified by expectations of a further appreciation, which add to the attraction of domestic investment created by the interest rate differential. For that to be the case, however, the expansion in government expenditure must be expected to generate a vigorous business recovery and high real yields in the future. Whether such expectations arise, depends in turn on factors such as the nature of the additional spending.

 $<sup>^{10}</sup>$  On the development of the private sector's financial balance in the Federal Republic of Germany, see E. N e u t h i n g e r, op. cit.

<sup>&</sup>lt;sup>11</sup> Cf. W. M. Corden: Protection, the exchange rate, and macroeconomic policy, in: Finance & Development, Vol. 22, No. 2, 1985, p. 17.

2. Budget deficit, current account surplus and currency depreciation: In many cases, however, interest rates do not rise significantly despite substantial new public sector borrowing, since the state merely absorbs a private sector financial surplus that came about quite independently.12 If that is the case, the wealth effects of rising state borrowing may be the dominant influence on the capital account; the financing of higher public expenditure by issuing government securities creates an imbalance in the portfolios of private domestic investors. The distribution of total wealth between domestic and foreign investments shifts in favour of domestic securities. However, if the preference structure has not changed accordingly, investors will wish to maintain the previous structure of their assets and will therefore also increase their demand for foreign securities. 13 This leads to a deficit on capital account and a tendency for the currency to depreciate.

Capital outflows can be further reinforced by expectations of depreciation, for example if the high level of public sector debt and the expansion in the public sector are seen as a threat to the growth of the market economy.

Depreciation reduces real domestic income and depresses domestic demand for tradables to the extent that a budget deficit can generate an improvement in the current account.

- 3. Budget deficit, current account surplus and currency appreciation: A current account surplus combined with a budget deficit must not necessarily lead to depreciation of the currency, however. An expansion in the public sector that primarily benefits productive state investment or encourages private investment, for example, may bring a pronounced improvement in overall productivity and hence in international competitiveness. This may trigger an improvement in the current account that induces a tendency towards currency appreciation. concomitant deficit on capital account may be caused by expectations of an exchange rate correction (devaluation) in the wake of a current appreciation.
- 4. Budget deficit, current account deficit and currency depreciation: Accordingly, a current account deficit in conjunction with an expansion in the public sector financed by borrowing must not necessarily be the

consequence of currency appreciation. A current account deficit can also come about if growing public expenditure induces a strong economic recovery accompanied by marked increases in prices and incomes. Export opportunities are then reduced and the demand for imports rises, causing a deterioration in the current account and a consequent tendency for the currency to depreciate.

### **Dollar Depreciation owing to US Budget Deficit?**

The foregoing remarks show that attributing the foreign trade effects of an expansion in the state budget to a single cause cannot do justice to the multitude of macro-economic interrelationships. Both theory and observation can reveal quite differing links between the public sector financial balance, the current account and the exchange rate. The financing and nature of additional budgetary expenditure and the pattern of private investors' expectations therefore have to be taken into consideration to obtain a clear picture of the possible consequences of budgetary expansion.

For example, the large US budget deficit, which generated a steadily growing current account deficit and a massive appreciation of the dollar until February 1985, might sooner or later be the indirect cause of a decline in the dollar exchange rate and an improvement in the current account. The longer the rapid growth in public sector borrowing continues, the more pronounced the attendant adverse effects, and the need to reduce the deficit is obvious. The stimuli to growth become weaker and expectations of higher taxes or reduced expenditure in the future undermine confidence in the American economy. The fear of an eventual slide in the dollar exchange rate leads to declining dollar investment and hence actually induces a depreciation of the currency.

The decline in private investment and the increase in precautionary saving can permit an increasing proportion of the budget deficit to be financed from domestic sources. The capital account surplus will be reduced and the current account can recover thanks to the lower value of the dollar.

Loss of confidence and adverse expectations as a result of excessively high public sector indebtedness (particularly in combination with high external borrowing) can therefore cause the private financial surplus to rise and the demand for tradables to fall, so that the US budget deficit can also lead to a depreciation of the dollar and an improvement in the current account. The sharp decline in the dollar exchange rate in recent months may be a sign that this is beginning to happen.

 $<sup>^{12}\,</sup>$  For example, this was true of the Federal Republic of Germany until the end of the seventies. Cf. R. L e n k: Konjunkturelle Wirkungen der Staatsverschuldung, in: IFO-Studien, Vol. 26, 1980, pp. 224 ff.

 $<sup>^{13}\,</sup>$  Cf. inter alia E.-M. Lípp, op. cit., pp. 406 f.