

# CENTRAL CONTROL OF THE LOCAL GOVERNMENT SECTOR IN SWEDEN

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## **INTRODUCTION**

Local governments in Sweden are exceptionally big and growing exceptionally rapidly. The paper reviews this expansion and its institutional and financial background. The main emphasis, however, is on an evaluation of credit policy, grant policy, regulations and other means of central government control of local governments. As in the debate about the need to control local government expenditures, the focus here is on overall macro-economic performance.

## **LOCAL GOVERNMENT IN AN EXPANDING PUBLIC SECTOR**

The growth of the public sector as a whole reflects a general increase in service production and consumption, both public and private. In Sweden, many kinds of service production, which in other countries can be privately undertaken, is here publicly provided. Consequently, the public sector has grown more rapidly in Sweden than in other comparative countries.

The share of GNP going to public expenditures has increased as much during the seventies as it did altogether over the two preceding decades (see Table 1). This is more due to a slow increase in GNP during the seventies than to a particularly fast increase in government expenditures.

Whereas local government expenditures increased most rapidly up to 1970, more than doubling their share of GNP, in the seventies it has been central government and the social security sector that have registered the biggest increases.

### **The Role of Local versus Central Government**

As the public sector has grown, the local government sector has acquired a greater importance. The local government share of the total public sector expenditures (excl. social security) increased sharply between 1950 and 1970, from 41.3% to 53.3%. In the seventies the share (see Table 2) has declined somewhat.

**Table 1 Public Sector Expenditures as Shares of GNP**

|                       | 1950 | 1970 | 1980 |
|-----------------------|------|------|------|
| Central government    | 17.6 | 25.4 | 35.3 |
| Local government      | 10.0 | 22.7 | 28.0 |
| Social security funds | 3.7  | 3.8  | 9.5  |
| Total <sup>a</sup>    | 27.1 | 44.8 | 63.1 |

<sup>a</sup> The total excludes transfers within the public sector.

Source: National accounts. Including social security sector.

**Table 2 Local Government Sector Expenditures 1950, 1970 and 1980 as Percentages of Public Sector Expenditures (excl. social security funds)**

|                        | 1950 | 1970 | 1980 |
|------------------------|------|------|------|
| Consumption            | 49.4 | 62.3 | 70.0 |
| Investments            | 73.6 | 78.6 | 74.0 |
| Transfers <sup>a</sup> | 18.7 | 21.5 | 18.1 |
| Total <sup>a</sup>     | 41.3 | 53.3 | 52.0 |

<sup>a</sup> Central government transfers to local governments and vice versa are excluded in total transfers and total expenditures. Interest payments are excluded altogether.

Source: National accounts.

With few exceptions the distribution of responsibilities between levels of government has remained unchanged but typically local government activities have been the most expansive. Notable exceptions are the police, some judiciary, taxing and other administrative tasks, which were centralized, mental hospitals instead being transferred from central government to counties, while responsibility for high schools shifted from central government to municipalities.

Table 3 shows the growth of the various categories of government consumption. It is a matter of interpretation whether those public sector areas where local governments are big have grown faster because of a faster overall local government increase in expenditures or if local governments have had a faster overall increase because those areas where they are big have had a faster growth. The former interpretation could be justified by the idea that local governments have a less restrictive budget constraint compared with central government. The latter interpretation could find support in the fact that income elasticities tend to be higher for typically local government activities.

Whichever of these alternative interpretations is true, it seems that the present role of local governments is a role acquired by disposition rather than by deliberate design. It is a role which has come about by incremental developments rather than by planned changes. Social welfare services, health, culture and recreation, and education are predominantly the responsibility of local governments. They accounted in 1963 for as much as 56% of public consumption. Over the last 15 years these areas have expanded faster than almost all other areas.

**Table 3 Growth of Public Consumption and Local Governments' Share of Public Consumption by Purpose**

|  | Real growth<br>per year | Local govern-<br>ments' share |      |
|--|-------------------------|-------------------------------|------|
|  |                         | 1963                          | 1978 |
| Social welfare<br>services                     | 8.8                     | 87.1                          | 83.2 |
| General research                               | 7.5                     | 0.0                           | 0.0  |
| Health   | 5.3                     | 83.3                          | 94.5 |
| Culture,<br>recreation, a.o.                   | 5.1                     | 85.8                          | 90.8 |
| General administration<br>and external affairs | 4.6                     | 52.1                          | 55.6 |
| Education                                      | 3.9                     | 75.9                          | 86.9 |
| Public safety<br>and order                     | 2.9                     | 69.0                          | 17.8 |
| Housing and community<br>amenities             | 2.4                     | 63.4                          | 60.5 |
| Business promotion                             | 1.4                     | 30.2                          | 33.5 |
| Defence  | 0.0                     | 0.1                           | 0.1  |
| Total  | 5.4                     | 51.8                          | 67.9 |

Source: National accounts.

Again, this is a reflection of the general increase in service production. Local governments are important producers of services going directly to households. This is to some extent in contrast to central government. Central government is less occupied with delivering services to the public and much more with planning and controlling. There are exceptions though, like employment exchange, police, weather forecasts and university education.

Table 3 shows central vs local government shares within different areas. The shares remain reason-

ably stable with exceptions occurring in those areas where transfers of responsibilities have taken place as mentioned above. The large increase in the overall local government share of public consumption has thus not come about by shifting responsibilities to local governments but by a faster growth of those areas with a high local government share.

This overall picture might lead to the erroneous conclusion that local governments are nowadays just as important and powerful as central government in influencing overall economic activity and economic stabilization. That, however, is not true since central government still has the dominant control of the purse. Central government partially finances local governments through grants. When we take these into account we find that central government controls directly and indirectly (through grants) 64.1% of total public sector expenditures (excl. social security sector).

The increase in transfers is something that characterizes the expansion of the public sector on all levels, especially in the last decade (see Table 4). This is an international trend.

To assess the local government sector fully two additions should be made. Firstly, national accounts subtract roughly 2 percentage points from the local government share of GNP, in comparison with local government budgetary expenditures. It is done on the ground that these expenditures are financed by fees and consequently counted as private consumption or intermediary product deliveries to other sectors.

**Table 4      Public Consumption, Investments and  
Transfer Expenditures as Percentages  
of GNP**  
(excl. social security sector)

|             | 1950 | 1970 | 1980 |
|-------------|------|------|------|
| Consumption | 12.4 | 21.5 | 28.8 |
| Investments | 2.1  | 6.6  | 4.3  |
| Transfers   | 7.5  | 11.5 | 24.9 |

Source: National accounts. Transfers from central government to local government, and interest payments excluded.

Secondly, there is a large sector of local government-owned companies, that should be added to the local government sector proper in order to assess the sector to its full proportions. Housing is the main occupation of these companies. Out of local government sector investment, companies make up around 30%. 80% of the company investments are devoted to new housing. In 1979 the turnover of these companies amounted to 16.4% of total expenditures for the local government sector proper. 53% of that turnover was accounted for by housing, the rest by transactions in electricity, gas, sewage, heat, water, transports, etc.

### **The Growth of Local Government**

#### Expenditure Trends

Sweden has recently experienced an unprecedented expansion of local governments as percentage of GNP. The growth of GNP has practically ceased from the middle of the 70s, while local governments have continued to expand although at comparatively modest rates from a historical perspective.



Table 5 gives the aggregated growth figures for historical periods. There are some periods with exceptionally high expenditure increases: 1910-30, 1945-50, 1960-70. During these periods expenditures rose in real terms on the average by about 6%. There are, on the other hand, periods which are distinguished by exceptionally low growth: 1935-40, 1970-75. The growth rate was then less than 2% per year. Annual expenditure increases of 3.2%, as in the latest period, is slightly below the average.

**Table 5      Average Yearly Increase in Total Local Government Expenditures, 1900-80**

Constant prices (local government consumption price index)

|           |                  |                  |           |     |
|-----------|------------------|------------------|-----------|-----|
| 1900-1910 | 2.8 <sup>a</sup> |                  | 1950-1955 | 5.3 |
| 1910-1920 | 5.2 <sup>a</sup> | 5.6 <sup>b</sup> | 1955-1960 | 3.8 |
| 1920-1930 | 5.9              |                  | 1960-1965 | 6.0 |
| 1930-1935 | 2.8 <sup>c</sup> |                  | 1965-1970 | 6.5 |
| 1935-1940 | 1.7 <sup>d</sup> |                  | 1970-1975 | 0.9 |
| 1940-1945 | 3.0              |                  | 1975-1980 | 3.2 |
| 1945-1950 | 8.0              |                  |           |     |

<sup>a</sup> Only consumption      <sup>c</sup> 1930-36

<sup>b</sup> 1913-1920              <sup>d</sup> 1934-40

Source: Johansson (1967): Kommunernas finanser (SOS).

During this tremendous expansion the composition of local government activities -- in broad entities -- has changed surprisingly little (see Table 6).

Over this long period the most striking shift of composition is that of health services, which has increased its share continuously and more than

**Table 6 Local Government Expenditures in Different Areas 1913, 1953, 1977 as Percentages of Total Expenditures**

|   | 1913 | 1953 | 1977 |
|---|------|------|------|
| Education   | 20.8 | 22.6 | 17.4 |
| Health  | 10.3 | 16.7 | 23.4 |
| Social welfare services   | 11.7 | 11.4 | 16.8 |
| Public safety and order,<br>administration, com-<br>munity planning | 9.7  | 6.9  | 3.3  |
| Roads   | 9.2  | 7.6  | 6.1  |
| Housing   | 14.5 | 10.0 | 17.2 |
| Fire services   | 1.0  | 1.4  | 0.8  |
| Church  | 7.0  | 5.0  | 2.2  |
| Community amenities<br>and other                                    | 15.8 | 18.4 | 12.8 |

Source: Höök (1962); Kommunernas finanser (SOS).

doubled. This reflects a rapid expansion. A few activities have at the same time been transferred from central government to local government: mental hospitals and district medical care.

Due to the centralization of police, the judiciary and the taxing administration, the share of expenditures going to public safety has decreased sharply.

Underlying the growth of local government expenditures is an increase in income. This accounts for the trend of increasing expenditures. Divergencies from the trend are caused by population changes, urbanization and some other economic circumstances. Educational expenditures depend heavily

on the number of children to be educated. Social welfare depends on unemployment, the number of old people and woman labor force participation ratio. New construction and the flight from the countryside pushes housing expenditures. The increased number of cars and urbanization explain the development of road expenditures. Wages are an important determinant of administrative expenditures. Urbanization determines the expansion of fire services and community amenities (cf. Murray, 1981b).

On the whole, deliberate shifts of responsibilities and reform legislation do not show up in the expenditure data to the extent that might have been expected.

Estimates of the income elasticity give low values, both in cross-section estimates and in time-series. The income elasticity of total municipal expenditures was estimated on a cross-section material in 1975 to 0.36 (Murray, 1981a). On a time-series material extending over the period 1960-77 it was estimated to be 0.68 (Nordström-Ysander, 1985). Since local government expenditures have grown faster than GNP, a lot of room is left for demographic, social and other economic factors.

#### Institutions

In 1862 the general foundations for local governments were created. Since then these institutions have successively been modernized, local governments have been enlarged in size and diminished in numbers, their freedom of action has both been widened in general and tightened by specific legislation regulating various activities.

Today there are 24 counties covering the whole Sweden except the towns of Gothenburg and Malmö, and the island of Gotland. Counties are predominantly occupied with health, hospital and medical services. To an increasing extent they carry out some high school education, some social welfare services, regional planning and, in the case of Stockholm, public transportation. Representatives on the county -- and municipal -- councils are elected in general elections.

Today there remain but 284 municipalities out of 2,500 in 1950. Mergers were forced on the small municipalities, especially in the beginning of the 50s and of the 70s. Municipalities have the main responsibility for community planning, they carry out primary and secondary education, run high schools, old age homes, day-nurseries, pay out housing allowances, relief aid, run athletic grounds, swim baths, museums, concert halls, theatres, are in charge of fire services, parks, roads, water supply, sewage, garbage collection, take care of drug addicts and alcoholics, etc. Three municipalities carry out the functions of county governments as well.

Left to central government are mainly the tasks of the guardian state: defence, diplomacy, police, but also universities, research, etc. Central authorities exercise a great deal of supervision, control and financing of local government activities. They do not interfere so much through detailed regulation as by administering grants, prescribing norms and giving advice.

Parishes today are almost exclusively devoted to religious affairs. Formerly, parishes were in charge of education, libraries and social welfare. Parishes also handle registration of inhabitants.

All three levels of local governments have the full right to tax their constituents. They can, within some loose bounds, borrow money. The right to levy fees on different services is circumscribed by some restrictions.

Of total local government expenditures the municipalities in 1981 accounted for 67.3%, while the corresponding share of the counties was 30.6% leaving 2.2% for the parishes.

#### Regulations

Local governments in Sweden are governed by a general law stating their authority. Municipalities are entitled to deal with affairs of common interest to the inhabitants. They must not deal with affairs that are taken care of by the counties or by the central government. Other laws either limit their authority or extend it explicitly into fields otherwise prohibited by the general law. Some tasks are delegated to local governments on a voluntary basis, other tasks are obligatory. In some instances the central government has explicitly limited the authority of local governments. Tasks are classified into the categories obligatory, voluntary within extended authority, regulated (but still voluntary) within general authority, unregulated within general authority and obligatory within general authority.

It is well within the general authority of local governments to provide education. The local community is free to arrange high school education, but has then to conform to the standards and rules set by the central government. This would fall under regulated general authority.

Those tasks, that from the outset do not fall within the authority of local governments but are based on special laws are here called voluntary within extended authority. An example of such a task is the handing out of housing allowances. The central government has pointed out that this ought to be an important municipal task, although it would not fall within the general authority of a municipality.

Primary and secondary school is the most extensive example of an obligatory task laid on municipalities.

Table 7 gives the relative importance of the various categories of municipal expenditures, including investments, in 1968 and 1977.

Of the expenditures of municipalities 41.8% in 1968 and 44.3% in 1977 were obligatory. However,

**Table 7 Central Control of Municipal Expenditures**  
Percent of total expenditures

|                           | Extended authority |                | General authority |                  |                 |
|---------------------------|--------------------|----------------|-------------------|------------------|-----------------|
|                           | Obliga-<br>tory    | Volun-<br>tary | Regu-<br>lated    | Unregu-<br>lated | Obliga-<br>tory |
| 1968                      | 41.8               | 9.9            | 14.6              | 33.2             | 0.5             |
| 1977<br>unchanged<br>laws | 39.5               | 19.9           | 9.6               | 30.4             | 0.6             |
| 1977<br>new laws          | 44.3               | 15.1           | 9.6               | 30.4             | 0.6             |

Source: Murray (1981a).

obligations can be strict as with lower and secondary education or loose as with old age care. In addition there was 24.5% of the expenditures in 1968, and 24.7% in 1977, which were voluntary but regulated in some way or another.

This left 33.2% of the expenditures in 1968, and 30.4% in 1977, in the unregulated category. But even here, there are grants with regulations tied to them. Unregulated activities which are financed by categorical grants amount to close to 40% out of all unregulated activities. This leaves about 20% of total expenditures altogether free from regulations and grant formulas.

Although there are control mechanisms covering 80% of municipal activities, they still leave a lot of freedom to municipalities. They are most often not compelling, and when they are, they do not permit detailed central government interference. Regulation of voluntary activities, on the other hand, is quite often very detailed like prescriptions for day-care centers that receive central government grants.

#### Financing

For the municipalities, taxes account for a stable share slightly over 40% of total external incomes (see Table 8). Central government grants have increased their share. Very recently net borrowing has been much diminished.

Central government grants have, especially in the last decade, increased very rapidly. From 1970 to 1979 categorical grants increased by 16.4% per year. Grants now account for 26.3% of total external incomes. Fees based on costs and related to

**Table 8 Financing of Municipalities and Counties, 1945-1980**  
Percent of total external incomes

| Year                  | Taxes | Central govern-<br>ment grants <sup>a</sup> | Other<br>revenues | Net<br>borrowing |
|-----------------------|-------|---|-------------------|------------------|
| <u>Municipalities</u> |       |   |                   |                  |
| 1945                  | 43.4  | 14.2  | 39.3              | 3.1              |
| 1950                  | 47.9  | 13.6  | 32.2              | 6.4              |
| 1955                  | 45.3  | 17.4  | 30.4              | 7.0              |
| 1960                  | 40.3  | 22.6  | 32.1              | 5.0              |
| 1965                  | 40.4  | 21.3  | 31.1              | 7.2              |
| 1970                  | 42.6  | 22.8  | 29.9              | 4.7              |
| 1975                  | 40.8  | 26.5  | 28.6              | 4.1              |
| 1979                  | 44.0  | 27.6  | 26.5              | 1.9              |
| 1980                  | 42.2  | 26.3  | 30.0              | 1.5              |
| <u>Counties</u>       |       |   |                   |                  |
| 1945                  | 72.0  | 11.4  | 16.2              | 0.4              |
| 1950                  | 75.3  | 8.5   | 15.8              | 0.4              |
| 1955                  | 75.0  | 7.8   | 17.7              | -0.5             |
| 1960                  | 62.3  | 17.0  | 19.5              | 1.2              |
| 1965                  | 67.0  | 14.5  | 16.4              | 2.1              |
| 1970                  | 54.0  | 19.5  | 24.7              | 1.8              |
| 1975                  | 59.4  | 17.6  | 20.2              | 2.8              |
| 1979                  | 65.1  | 15.3  | 19.3              | 0.3              |
| 1980                  | 58.3  | 16.7  | 24.9              | 0.1              |

<sup>a</sup> General and categorical, for investment, consumption and transfers.

Source: Kommunernas finanser, Landstingsförbundet.



commercial activities -- electricity, water, sewage, garbage disposal, etc -- have kept pace while other fees have lagged. Net borrowing is tied to investment activity and as investment has plunged in the last decade, so has net borrowing. Investments are also now financed by tax revenues to almost 50%, as compared to less than 40% in the beginning of the decade.

Counties have a much higher share of tax financing although the share has been shrinking. Only some years back, 75% of total external incomes were tax revenues. Today it varies around 60%. Central government grants have increased their share substantially and now account for 16.7% of total external incomes. Loans play an insignificant role for the counties.

Tax revenues accounted for 75.3% of total external incomes for the parishes in 1979, grants made up 7.8%, other revenues 16.2%, and net borrowing 0.7%.

#### **CONTROLLING LOCAL GOVERNMENTS**

##### **The Increasing Interest in Control**

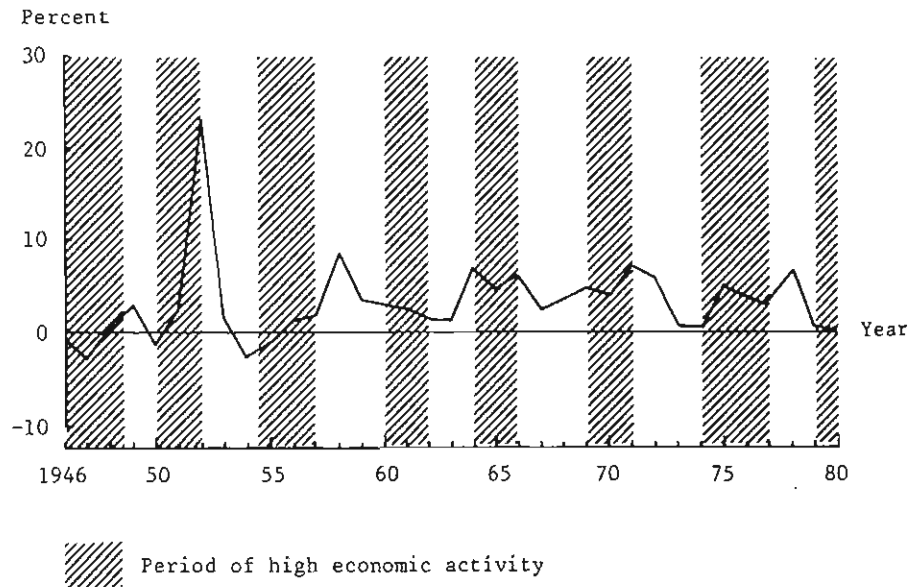
There is in Sweden a very long tradition cherishing local self-government. That means that central government is supposedly barred from interfering with municipalities and counties. However, at the same time regulation is extensively practiced.

Up until the middle sixties there was very little discussion about the role of the local governments in macroeconomic policy. And once the discussion started, it centered on business cycle policies.

Traditionally the responsibility for business cycle management was squarely laid upon the central government. In the late sixties the local government sector received more attention. The question then was: Do municipalities and county governments add to instability or do they help in stabilizing the economy? The verdict for Sweden was that the local government sector on the whole helped to stabilize the economy (Mathiessen, 1971). Mathiessen's judgment was based on aggregate local government consumption and investments.

County and municipal taxes and fees were not included in that judgment. When these are taken into account, the picture is less clear. Figure 1 shows the change in average local government tax rate.

**Figure 1** Percentage Change in Local Government Tax Rate



The shaded areas are periods of high economic activity as measured by unemployment. The general rule is that large tax increases take place on the verge of, or in the middle of, a period of low economic activity. The timing of tax rate changes, from a business cycle point of view, is thus not very good.

Following this awakened interest a government commission (Government Commission Report (SOU) 1973:43) looked into the matter. The commission advocated among other things that central government subsidies be adjusted according to business cycle needs. They also recommended that delivery of tax receipts to the local government sector should be varied and that local government activities that are financed with fees should not be exempted from turnover tax and price regulation. The need for a more efficient monetary policy was stressed. A more effective machinery for information and consultation between central government and local governments was suggested of as a suitable instrument for improving the coordination.

Few of these tools were however created and used at that time. Variations in central government subsidies were tried once. Payments of tax receipts were forwarded on one occasion -- but this had little to do with business cycle policies. But lately tax receipts have been delayed deliberately to halt local government expansion. In 1981/82 this lowered local government liquidity by 8-9 billions SEK, equivalent to a loss of interest rate incomes of about 1 billion SEK. On one occasion -- the general price freeze in 1980 -- local governments were urged not to increase fees.

On four occasions central government negotiated with the local governments about limits for tax increases (see Table 9). The agreements were in the form of a recommendation about tax rates coupled with a special compensating block grant to municipalities and counties. The agreement was signed by the associations of municipalities and counties respectively. These associations have however no real power over their members. The block grants were paid in advance to all municipalities and counties with no strings attached, not even concerning the tax rate.

During the seventies structural economic problems were added to business cycle problems. Interest became focused on the size of the local government sector. A government commission looked into the problem of the expanding local government sector.

**Table 9**      **Agreements between Central Government and Local Government about Tax Limits and Actual Tax Rate Increases\***

|                      | Agreement           | Tax change<br>Percent |
|----------------------|---------------------|-----------------------|
| 1973-74              | Maximum increase 1% | 0.24                  |
| 1976-77 <sup>a</sup> | Maximum increase 1% | 1.60                  |
| 1978 <sup>b</sup>    | No increase         | 1.83                  |
| 1979-80 <sup>c</sup> | No increase         | 0.36                  |

<sup>a</sup> Block grants of 600 mill. SEK for each year (amounts to 0.5% tax increase).

<sup>b</sup> Block grants of 720 mill. SEK.

<sup>c</sup> 1979 block grants of 878 mill. SEK.

\* The tax is a proportional income-tax. The rate is in percentage points. The change refers to percentage points.

The final report (SOU 1977:78) appeared much too late to deal with the tremendous expansion in relation to GNP, that took place in the seventies.

The commission advocated lessening of strings on specific activities and a tightening of strings on the total volume of local government activities. Regarding investments the commission thought that credit policy and building control (to be defined shortly) was enough. Consumption and transfer expenditures were to be controlled by improved indicative planning and by voluntary agreements. But controlling the total volume of local government spending by agreements applicable to the whole sector causes two interrelated problems. One concerns the necessity to take the needs of individual local governments into consideration; the other has to do with sanctions. The commission did not resolve either of these problems.

In the early eighties a growing central government budget deficit was thought to call for a cut-down in public activities. In order that local governments should bear part of the burden a program for cutting down central government grants was set in motion. Also, the expansionary effects of central government regulations of local government activities were noted. The increase in grants was slowed down to a planned 5.3% per year 1980/81-1984/85 (in real terms this means a decrease of 0.8% per year).

The central government also collects taxes for local governments. In recent years it has withheld part of these local tax receipts. While such an action could be considered an infringement on the self-governing status of local governments, municipalities were payed only 80% of the tax receipts

from business in 1982, counties nothing at all. In 1983 municipalities will receive only 40%. Also municipalities, counties and parishes alike will only receive 99% of the tax receipts from households.

In the following we will take closer look at each of the five main categories of measures used for central control of local government: credit policy, investment control, indicative planning, regulation and grants.

### **Credit Policy**

Local governments today occupy a seemingly insignificant position on the credit market. This has not always been so. Table 10 shows the local government share of total net long-term borrowing.

**Table 10      Local Government Share of Total  
Net Long-Term Borrowing  
Percent**

|      |      |      |     |
|------|------|------|-----|
| 1960 | 4.5  | 1973 | 4.4 |
| 1962 | 12.8 | 1974 | 2.5 |
| 1964 | 15.5 | 1975 | 2.4 |
| 1966 | 10.7 | 1976 | 2.8 |
| 1968 | 6.8  | 1977 | 1.5 |
| 1970 | 7.5  | 1978 | 1.6 |
| 1972 | 6.2  | 1979 | 1.6 |

Source: National Bank.

There are periods of marked local government priority in the beginning of the sixties -- connected with a program for building 1 million flats in 10 years -- and periods of industrial priority due to the need to erase the negative balance of payments during the seventies.

Without going into a detailed description of the Swedish credit market, one can say that the ways to control local government borrowing are of three main kinds:

1. Control of the issuing of local governments' bonds. Large cities issue bonds themselves and a special local government finance institute issues bonds by which credits to local governments are financed. The national bank has complete control of these issues.
2. Control of different state agencies -- pension funds, insurance funds, housing agencies, etc. This concerns long-term borrowing in other forms than bonds. The central government has an almost complete control over this borrowing. This includes borrowing from abroad.
3. General credit market control. By ways of cash and liquidity requirements, interest control and open market operations -- all of a general nature -- the central government, via the national bank, exercises a dominant influence over the credit market. The commercial banks -- except two -- are however privately owned.

To get an idea of the control possibilities let us divide net borrowing into the corresponding three categories (Table 11).

The controllable part made up only 30% of the local government sector net borrowing in 1980. This share has however varied over time.

During a credit squeeze it is likely that the controllable part should be reflecting efforts to limit local government borrowing. A powerful





nalled that it might call for compulsory deposits in the national bank, thereby sterilizing the liquidity.

There is still another link to be considered before we can assess the impact of credit policy on expenditures. That is how expenditure plans are revised as the financial position of local governments changes.

There is no comprehensive study on this matter, only a survey of investment plans from 1970. The credit squeeze caused an estimated decrease of municipal investments of 0.5%, while counties were not affected at all. In comparison, industry decreased its investments by 7%. However, several means were used at the same time -- investment tax, building control -- which makes it difficult to separate the effects.

Evidence seems to indicate that plans are, in the short run, carried out regardless of financial restrictions. Markowski (1975) has analyzed investment plans and found that local governments in the short run -- six months -- carry out their investment plans very consistently, regardless of fiscal policy measures, credit policy and other changes in the economic environment. This is in clear contrast to the business sector, where plans are thoroughly and continuously revised. Only later are local governments' plans revised, but the revision might just as well take place on the revenue side.

Changes in net borrowing from year to year are quite substantial. In 1974 net borrowing of municipalities decreased by 45.3% to be followed by an increase of 137.5%. Of course investments cannot be expected to follow such swings.

The pattern seems to be a 1-2 year lag from changes in net borrowing to investments. But other influences make themselves felt at the same time. Net borrowing seems to be governed by hedging. Due to the structure of interest rates, it is costless or even profitable to hedge money. Therefore any possibility to get long-term loans is exploited. Net borrowing therefore might reflect more of supply conditions than of demand.

There is another source of derived demand for loans beside investments demand. That is the need of liquidity. In times of credit restrictions, local governments increase short-term debts. Since these are more costly, they will be substituted by long-term loans when the opportunity arises. At that same time, however, tax rates are also raised to keep up solidity.

The business cycle will then typically develop in the following way. As economic activity picks up, local governments carry out their expenditure plans with increasing difficulty. Credit market restrictions have been set in motion and slowly become effective. Prices rise and undermine liquidity. Tax receipts -- disbursed with a two-year lag -- increase more slowly as a consequence of slow growth in the preceding phase of the business cycle. It is in this situation that local governments accumulate short-term debts. This continues up to a point where tax rate increases become necessary, which often happens to coincide with a downturn of economic activity. Then credit market conditions ease and local governments reconstruct their finances by taking up new long-term loans and preparing for the next round of tight money.

Expenditure plans are changed only slowly and the direction is unknown. It might even be that the credit squeeze forces up tax rates to unintended new levels and that tax rates -- by a ratchet effect -- stay there, giving impetus to an increased local government sector.

Closely related to credit policy measures are the forms of "cash-flow control" inaugurated in the early 80s. Central government has withheld part of local governments' tax receipts. The liquidity of local governments has been influenced by the cash-management of central government.

We cannot yet evaluate these new policies. That local governments have almost halted their expansion by 1983 could also be the result of changing demographic trends, of a cessation of urbanization, etc., i.e. a lagged response to the slow-down of economic growth.

#### **Investment Control**

To strengthen the impact of credit market policy and to influence local government investments in a discriminatory way, building control, investment tax and some other means have from time to time been used.

Building control has as a main purpose to even out fluctuations in the labor market for construction. The control works by way of permits for starting new constructions. It has been used most rigorously in the middle sixties. Then the overriding problem was to provide resources for the house-building program.

It has been pointed out that the time for completion of construction varies a great deal over the business cycle. Thus the effect of start control is to a large extent thwarted (Lundberg, 1953). However, market forces prolong completion times by 90% in boom periods compared to recessions, thereby easing the strain on the building market.

Another drawback is more serious. Completion times are so long that desired effects have to be planned three years ahead. This makes control difficult when construction booms and recessions occur unexpectedly and with "bad timing".

Investment grants have been used in similar ways. Schools (up until 1982) and roads are rather heavily subsidized, which means that few unsubsidized projects are built. In comparison with building control, investment grants have the advantage that there is usually little delay between the grant decision and the construction start. Central government has adjusted total volumes of grants in accordance with business cycle forecasts.

A calculation shows the difficult management problems that are connected with these means of control. The distribution of completion times for school buildings was used to calculate what parts of the change in investments for schools could have resulted from past variations in starting permits (see Table 12).

There has been a study made of the effects of investment tax. It concerns the levy in May 1970-May 1971 (Bertmar, 1972). The technique used is a survey of investment plans. The effect of the 25% tax on 30% of the new investment projects (specific sectors) was an estimated 1% decrease of total municipal investments.

Central government also runs a program of relief works. Central government authorities get special budget allowances to forward planned projects. Local governments get subsidies in order to forward their planned investments.

The rate of change in relief work investments (see Table 13) shows considerable variability, but also shows that relief work has become a permanent part of local government investments.

**Table 12 Calculated Changes in School Investments 1969 Resulting from Changes in Construction Starts Preceding Budget Years**

| Starting period         | Mill. SEK |
|-------------------------|-----------|
| July 1969-December 1969 | - 1.3     |
| July 1968-June 1969     | -71.0     |
| July 1967-June 1968     | +73.9     |
| July 1966-June 1967     | + 9.9     |
| July 1965-June 1966     | + 0.5     |
| July 1965-December 1969 | +12.0     |

**Table 13 Change in Local Governments Nominal Expenditures in Relief Works, per Budgetary Year**

|         |       |         |        |
|---------|-------|---------|--------|
| 1961/62 | - 7.8 | 1971/72 | +326.2 |
| 1962/63 | +63.8 | 1972/73 | +1.5   |
| 1963/64 | +83.6 | 1973/74 | -19.1  |
| 1964/65 | +65.1 | 1974/75 | -35.0  |
| 1965/66 | + 5.8 | 1975/76 | +28.5  |
| 1966/67 | +14.4 | 1976/77 | +30.2  |
| 1967/68 | +13.5 | 1977/78 | +69.2  |
| 1968/69 | +16.9 | 1978/79 | +29.8  |
| 1969/70 | - 7.1 | 1979/80 | -14.2  |
| 1970/71 | + 9.7 | 1980/81 | -21.9  |

This expansion is in line with other unemployment measures. The tremendous expansion makes it difficult to achieve desired expansionary and contractive effects. Relief work subsidies have become a permanently growing part of local government financing. One problem is to know whether subsidized projects really are forwarded or not, or if they are matched by other projects that are simultaneously delayed. Of course, if recipients can count on subsidies, they need not adjust their plans to what is more or less foreseen subsidies. The central government labor market authority has, however, a very detailed knowledge of construction projects, since it is their job to administer building control by giving permits for starting projects. That should help to assure the intended effect of the subsidy.

There is one study in which an attempt has been made to estimate the effects of subsidies on local government relief works (Gramlich-Ysander, 1981). It was estimated that 70 new jobs will be created when 100 are subsidized. The results were however somewhat inconclusive due to shortage of data.

Considering the problems of timing and the small magnitude of the effects of credit policy, building control, investment grants and investment taxes, the close relationship between fluctuations in investments and in policy actions is astonishing. It could be interpreted as reflecting general shortages in the labor market occurring simultaneously with efforts to restrict local government investments. But even this observation would not hold for the 70s, when local government investments were declining.

### Indicative Planning

Since the early 50s central government has presented a document every five years summing up trends in all sectors of the economy and discussing desired and necessary adjustments. From being mere projections these documents have successively come to express politically desired goals of development. The political status of these 5-year plans was strengthened in the 70s.

The planning focuses mainly on a medium-term stabilization perspective. The experience is summarized in Table 14.

**Table 14** Plan and Outcome in Indicative Planning for Local Governments, Change in Percent per Year

| Period  |             | Plan                               | Outcome |
|---------|-------------|------------------------------------|---------|
| 1955-60 | Consumption | 4.0 <sup>a</sup>                   | 3.7     |
|         | Investment  | 2.7 <sup>a</sup> -3.5 <sup>a</sup> | 4.6     |
| 1960-65 | Consumption | 4.5                                | 4.5     |
| 1965-70 | Consumption | 5.0-6.2                            | 8.6     |
|         | Investment  | 5.0 <sup>b</sup>                   | 8.3     |
| 1970-75 | Consumption | 5.2                                | 3.7     |
|         | Investment  | 3.3                                | -4.2    |
| 1975-80 | Consumption | 1.5-3.4                            | 4.2     |
|         | Investment  | -0.4-3.1                           | 2.7     |
| 1980-85 | Consumption | 1.5-3.8                            |         |
|         | Investment  | 1.0-3.0                            |         |

<sup>a</sup> The public sector as a whole.

<sup>b</sup> For public services as a whole (excl. military expenses).

Source: Indicative planning reports, National accounts.

The first efforts seem to have been quite successful. No distinction was made in 1955 between local governments and the rest of the public sector, which indicates that local governments were not considered important and/or special enough to demand closer scrutiny. The 50s were the years of stable economic growth, the GNP growing at a rate of around 3% per year.

The first part of the 60s saw an accelerated economic growth close to 5% per year, which was not foreseen. The latter part was much less stable, growth rates falling slightly, unemployment rising and inflation accelerating. Local government expanded -- with a certain lag -- beyond all expectations.

Rapid growth was not projected for the 70s. Local governments, however, grew at an unexpectedly low rate 1970-75 -- as did the whole economy. Uncertainty is displayed in the plans for 1975-80. Despite the efforts to throw a wide net over the future course of events, the planners were fooled by the local governments, which registered an unforeseen high rate of growth for consumption, coupled with a moderate one for investments. This was an altogether new pattern.

In the 70s central government has tried to implement its medium-term plans through negotiations with local governments concerning local tax rates. As already noted above (cf. Table 9) these negotiations seem to have been successful in 1973-74 but to have failed in 1976-78. This impression could however be misleading. The taxing behavior of the local governments may throughout the period have been determined by economic exigencies and not by agreements. In 1973 and 1974 the local governments



had an unusual high liquidity and consequently had no need to raise taxes. The same was true in 1979 and 1980. In the years in between, liquidity plunged, which called forth tax rate increases.

The verdict would then be that the tax rate agreements have had very little effect. Possibly the block grants used to achieve the agreements may have caused expenditures to rise more than they otherwise would have.

### **Regulations**

Local politicians have often blamed the rapid expansion of local spending on the central government. New regulation, legislation and implicit demands by the central government and its authorities have, according to this view, forced local governments to increase expenditures. Central government has not, until recently, had much sympathy for this view: the local government expansion is instead said to be a consequence of its self-governing status, especially the constitutional right of the local governments to levy taxes.

Only about 40% of the expenditures of municipalities are obligatory. (Cf. Table 7 above.) This does not confirm the view that local government expenditures are governed from above. And there has not been any substantial increase in the obligatory share. The registered increase is moreover due to new legislation shifting day-care centers to this category from voluntary tasks within extended authority. Central government has thus not used its power to increase obligatory activities more than the voluntary ones.

However, regulation might work on expenditures even if the tasks are not obligatory. Voluntary activities within extended authority have expanded twice as fast as the budget as a whole. This could be taken as evidence that municipalities pay loyal attention to central government reform demands. Regulation of general authority activities seems to have had a retarding influence.

Even if central government is made responsible for each and every activity that is in some way regulated -- which would be absurd -- those activities have expanded only slightly more than the completely unregulated activities that expand on the wish of the local governments themselves.

One main problem in the analysis of regulations is that we do not know if regulations really regulate anything. This is contrary to the impact of prices, taxes or fees that directly affect budgetary possibilities. Are the so-called obligatory tasks really obligatory?

In the case of primary and secondary education municipal obligations seem sufficiently well defined for these regulations to be effective. But in the case of old-age homes, obligations are much less precise.

Some efforts to determine the strength in central government regulations have been made. The first (Murray, 1980b) is an analysis of current expenditure differences between municipalities. The basic idea of this study is that if government regulation is comprehensive and effective this will result in small per-capita differences, compared with areas in which there is little or no regulation. It is assumed that government regulation

aims at uniform standards and that these can be measured in current expenditures per capita.

In the cross-section analysis, settlement characteristics were found to have a strong impact on expenditures. This influence was interpreted as an expression both of varying production possibilities and of varying responsibilities. For example: small municipalities with large rural areas may be at a disadvantage in providing general administration and schools. In addition "communalization" of private activities (water, sewage, heat, garbage, roads, etc) has usually not proceeded very far.

Settlement characteristics are represented by the percentage of population living in urban areas, population density per square km and variables representing the type of settlement (big cities, suburbs, cities, regional centers etc. down to villages). Explaining per-capita expenditures with these variables by multiple regression is then synonymous with taking away that part of the variation in expenditures that is due to these circumstances. What is left is interpreted as differences in standard.

Table 15 shows how wide the range is after the effect of the above-mentioned variables has been eliminated. In education, for example, two thirds of the observed per-capita expenditures lie within 15% of the mean. The table also shows the unregulated share for each category of expenditures.

Although the match is not perfect, there is a striking correlation between the unregulated share of expenditures and the variation in standard. Regulation thus has teeth enough to show up in the expenditure patterns.

**Table 15**    **Estimated Variation in Per Capita Expenditures and the Unregulated Part of Expenditures**  
Percent

|  | Coefficient<br>of variation <sup>a</sup> | Unregulated<br>part of ex-<br>penditure <sup>b</sup> |
|--|--|--|
| Harbors, public<br>transportation              | 116                                      | 97.2   |
| Industrial activities                          | 46                                       | 67.9   |
| Town planning, roads<br>parks, sports          | 26                                       | 58.8   |
| Public housing, real-<br>estate administration | 30                                       | 56.9   |
| Central administration                         | 34                                       | 32.2   |
| Education and culture                          | 15                                       | 19.7   |
| Social security and<br>welfare                 | 20                                       | 1.2  |
| Civil defense, fire<br>services                | 21                                       | 0.0  |

<sup>a</sup> Standard deviation as a percent of mean per-capita expenditures, controlling for outside variables.

<sup>b</sup> According to the same classification as in Table 7.

Further evidence along this line from another, similar cross-section study shows that fire services, school buses and housing allowances -- activities that are strongly regulated by central government grant conditions -- do not exhibit any influence from the tax base, political majority or any other variable that could represent economic conditions or preferences. This is contrary to the results obtained for other municipal activities in the same cross-sectional study.

One further observation on regulations is that the long-term expansion in various areas seems to be governed by socio-economic changes rather than by big reforms. The implementation of reforms seems to be such a smooth and slow process that it fits into the general expansion. Reforms take place when "the time is right", which is determined by i.a. the general income level. It is then of subsidiary interest whether new activities are introduced through central government regulation or through voluntary action by local government.

If we choose to follow closely developments in a specific field, we will find that there is a continuous interaction between central and local governments. One example of this is the school meals. At first a few pioneering municipalities -- those with the highest income-levels -- provided school meals. Time then passed and the service was taken up by more and more municipalities. At one stage it was felt to be very unjust that some children should receive free lunch at school while others did not. At that stage regulation, coupled with very favorable categorical grants, was introduced. Later on when free school lunches had become common throughout Sweden, the grant ceased. Today there is no regulation at all.

### **Grants**

Table 16 shows the importance of grants for different categories of activities.

Grants have increased in relation to expenditures, for almost all categories. Of special interest is the fact that the level of central government grants is the same for obligatory tasks as for

voluntary tasks within extended authority and for regulated tasks within general authority. Grants do not seem to work as substitutes for regulations.

Table 17 shows the subsidized share of activities (in terms of financial accounts) within each category.

Activities with grants make up a larger proportion of municipal activities in 1977 than in 1968. The table does not show, however, whether subsidized activities expand faster than other activities or whether new subsidies have been introduced.

**Table 16 Central Government Categorical Grants in Relation to Expenditures**

|      | Extended authority |                | General authority |                  |                 | Total |
|------|--------------------|----------------|-------------------|------------------|-----------------|-------|
|      | Obliga-<br>tory    | Volun-<br>tory | Regu-<br>lated    | Unregu-<br>lated | Obliga-<br>tory |       |
| 1968 | 25.5               | 20.7           | 24.6              | 4.4              | 0.0             | 17.8  |
| 1977 | 28.8               | 26.6           | 28.8              | 1.8              | 0.1             | 20.3  |

**Table 17 Activities Subsidized in Relation to All Activities**  
Percent

|                   | Extended authority |                | General authority |                  |                 | Total |
|-------------------|--------------------|----------------|-------------------|------------------|-----------------|-------|
|                   | Obliga-<br>tory    | Volun-<br>tory | Regu-<br>lated    | Unregu-<br>lated | Obliga-<br>tory |       |
| 1968              | 64.7               | 56.0           | 77.1              | 29.2             | 0.0             | 53.5  |
| 1977              | 79.7               | 74.4           | 55.8              | 38.6             | 1.5             | 63.5  |
| 1977 <sup>a</sup> | 75.5               | 45.2           | 48.5              | 21.8             | 0.0             | 51.4  |

<sup>a</sup> Except newly subsidized activities.

Restricting the comparison to those activities that were subsidized both 1968 and 1977, their share has decreased from 53.5% to 51.4% of total expenditures. This tells us that subsidies do not necessarily have an expansionary effect.

But this concerns only subsidies that are already introduced. Let us look at those activities that became subsidized during the period. In 1968 they made up 8.2% of total expenditures, in 1977 12.1%. Introducing grants thus seems to have a stimulative effect.

This appears intuitively reasonable. When subsidies are introduced, the cost of an activity drops relative to other activities. This could be expected to bring about an increase in the activity.

This effect is well demonstrated in the case of day-care centers. Day-care centers are run by municipalities and subsidized with central government grants. In the early 60s central government introduced a grant per place in a deliberate effort to lower the net cost of day-care centers relative to other forms of child care. There have been no restrictions to the number of places subsidized and no other regulation governing municipalities in this field. Consequently it should here be possible to study the impact of grants on unrestricted local government behavior.

This has been done (Murray, 1981a) over the period 1960-75 for the national aggregate. The study showed i.a. that if net costs per place to a municipality was reduced by 11%, either by grants or by lower prices, the municipal decision-makers could be expected to react by increasing their

desired number of day-care places by 12%.<sup>1</sup> Per-capita income did not seem to have any significant effect on the desired number of day-care places.

Grants may thus have a definite effect, both on demanded quantities of local government goods and on the rate at which they are forthcoming. Construction subsidies influence this rate. Although construction subsidies may be insignificantly small compared to the value of a guaranteed stream of current transfers the above-mentioned study showed them as being rather important in determining the rate of implementation of municipal plans for day-care centers.

The study also showed that the effects of new grants may operate for several years. The impetus of the fast expansion of new categorical subsidies in the 70s can thus be expected to last for some years before it tapers off.

There is one further aspect of grants to be considered. It concerns the question whether grants influence expenditures or expenditures determine grants -- if grants have a pure income effect or a price effect. Block grants are usually thought to have a pure income effect. Consequently we estimate the effect on expenditures per dollar of the granted sum. However, block grants do not drop like manna from heaven -- the central government often uses them to help out the more needy local governments or those with the highest costs. Though there are no formulas, there may be implicit decision-rules which give rise to a correspondence between the granted sum and the expenditures

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<sup>1</sup> The number of places in alternative forms of municipal child-care was used as a measure of unsatisfied municipal demand for day-care centers.



of the local government. If that is the case the price of local government goods is immediately affected. That is, constituents do not have to pay as much on the margin for local government goods as they would have had to do without the grants.

On the other hand categorical or matching grants are usually thought to operate through a change of costs or prices for the local government. But if the total sum of grants is limited or if local government activities are otherwise regulated, the price effect might vanish and we might be back again to a pure income effect.

Some preliminary econometric estimates, carried through by the author, seem however to indicate that in the Swedish case the sum of granted money should be treated as a lump sum addition to local government revenues. Estimates based on this specification show that aggregate municipal current expenditure will increase by 1.32 SEK for each SEK of grant money. A very similar spending propensity was estimated for the counties.

There are also intuitive reasons for not expecting strong substitution effects of categorical grants. In most cases the grants are coupled with regulations and the total amount is also often limited. In 1977 two thirds of the categorical grants subsidized activities that municipalities were obliged to carry out.

That grants should have a pure income effect and no substitution effect seems however paradoxical in view of the strong price or cost effect found in the study of day-care centers.

The existence of market substitution effects in some areas of expenditures despite the predominant income effect of total grants, may be explained in the following manner. The current expenditure budget as a whole could be determined in the first step of the municipal decision process. At this step the sum of grant money (or maybe last year's sum) plays a decisive role. As the allocation to various ends proceeds within the fixed budget, net costs -- influenced by categorical grants -- come into play. In my cross-sectional study of municipalities in 1975 this model of local government budgeting was used (Murray, 1981a).

There is another puzzle in respect to grant effects. It concerns that kind of block grants which is aimed at evening out differences in tax base.

This grant is constructed in a way which should make the amount of the grant endogenous to some extent. The formula for the grant is the local tax rate times a central government addition to the tax base. The idea is that central government should guarantee local governments a certain amount of taxable income per capita. The guarantee varies from one local government to another according to regional policy aims. The granted sum that the individual municipality receives thus varies according to the tax rate decided upon by the local government. If a local government had a zero tax rate there would be no grants at all. As it raises the tax rate it will receive more grant money. The truly exogenous variable is thus the amount of added tax base.

The use of this specification leads however to the puzzling result that the spending propensity is larger when the tax base grows than when grants

are "added" to the tax base. These effects were estimated in a two-equation simultaneous model of municipal expenditures. The propensity to spend out of the tax base was estimated at 0.15, whereas the propensity to spend out of additions to the tax base was only half -- 0.08.

The result is contrary to what could be expected if the local government is thought to disregard the private needs of its constituents. But it may well occur if the local government considers their total well-being, derived both from local government goods and private consumption. As shown in the appendix, the result can be expected as long as the tax base grant takes the form of a fixed additional amount.

However, there is at the same time some evidence indicating the presence in Swedish local government of the so-called "flypaper effect". This name denotes the often observed fact that money given to local government "sticks" to it and stays in its purse instead of being used to add to private consumption possibilities (lower tax rate). This effect implies a disregard of the private needs of local households.

Block grants in Sweden -- or the sum of all grants -- has an effect (per SEK received grant) which has been estimated to be nine times that of household incomes. Consequently, it matters a great deal to local government expenditures if the local government or its constituency receives the money. This seemingly supports a model incorporating a "flypaper effect".

The true model might lie somewhere in between these extremes with private consumption being

taken into account only incompletely. The "fly-paper effect" may not become operative when the grants are formulated as additions to the tax base. From the observations above one can perhaps draw the conclusion that if central government aims at a reduction of tax rates while wanting to limit local government expenditures, grants should be modeled as additions to the tax base rather than as flat sums or block grants. Block grants have however been used on those occasions when agreements on tax rate limitations have been made.

With the impact of grants on local government expenditures in mind, it might be interesting to look more closely at the change in total grants over time. From Table 18 we see that the increases vary a great deal, especially on investment grants. Timing over the business cycle could be better. For example the rapid increase of investment grants in 1969 and 1970 and the decrease in 1979, when there was a downturn of economic activity, seems ill advised in retrospect.

The 70s stand out as an exceptional period with rapidly increasing grants. The increase in local government consumption seems to be related to this increase. If the goal of a 5.3% annual increase 1980-85 is reached, this will mean a drastic decrease in expansion with consequential effects on local government expenditures.

#### **CONCLUSIONS**

Traditionally central government has tried to influence local governments mainly by general economic policy, indicative planning and agreements on tax rates in order to achieve short-run stabiliza-

**Table 18 Central Government Grants to Local Government, 1950-80**  
Annual change, percent

|                    |            | Grants for                                  |                         |
|--------------------|------------|---|-------------------------|
|                    |            | current expenditures,<br>incl. block grants | investment expenditures |
| Economic activity: |            |   |                         |
| <u>High</u>        | <u>Low</u> |   |                         |
| 1950               |            |   |                         |
| 1951               |            | 21.3  | 22.1                    |
|                    | 1952       | 35.3  | 4.8                     |
|                    | 1953       | 4.4   | 58.6                    |
| 1954               |            | 4.7   | 32.6                    |
| 1955               |            | 7.4   | 2.2                     |
| 1956               |            | 15.0  | 16.5                    |
|                    | 1957       | 11.8  | 2.3                     |
|                    | 1958       | 50.5  | 22.0                    |
|                    | 1959       | 10.2  | 16.9                    |
| 1960               |            | 6.9   | 32.4                    |
| 1961               |            | 1.2   | 23.2                    |
|                    | 1962       | 8.2   | 15.2                    |
|                    | 1963       | 8.2   | 15.2                    |
| 1964               |            | 10.5  | 22.5                    |
| 1965               |            | 1.1   | 22.0                    |
|                    | 1966       | 20.6  | 9.0                     |
|                    | 1967       | 46.8  | 18.7                    |
|                    | 1968       | 9.0   | 6.2                     |
| 1969               |            | 12.1  | 16.6                    |
| 1970               |            | 14.8  | 18.7                    |
|                    | 1971       | 4.4   | - 1.0                   |
|                    | 1972       | 24.1  | 51.1                    |
|                    | 1973       | 17.6  | - 6.0                   |
| 1974               |            | 18.0  | 0.8                     |
| 1975               |            | 15.3  | 3.4                     |
| 1976               |            | 16.4  | 13.6                    |
|                    | 1977       | 21.0  | 12.3                    |
|                    | 1978       | 20.5  | -10.0                   |
| 1979               |            | 15.1  | 4.5                     |
| 1980               |            | 13.0  | 8.2                     |

Source: National accounts.

tion goals. However, local governments show a very low sensitivity in regard to credit policy, investment taxes and building control. Indicative planning and agreements have not had any appreciable effect.

Grants constitute an effective, and until now under-utilized, means of control. Central government has used grants in order to influence resource allocation. To a large extent these efforts seem to have been in vain. This is because grants are coupled with regulation, which tends to eliminate any price effect.

So far grants have not been used for what they are good at, namely to influence aggregate local government expenditures and tax rates. At present a change in policy in this respect is under way. Besides general restrictions on grants, measures reducing local government liquidity and incomes have recently been introduced.

Regulations seem to have a substantial effect by equalizing standards between local governments. However, since local government expenditures are determined so much by socio-economic factors it is highly questionable if it is possible to influence the long-term growth and allocation by regulations or indeed by any other means of direct control. The long-term development of local government expenditures is determined by the demand for services and thus by economic development and structural change in the society. As long as the general division of responsibilities is not changed the service expansion will mainly occur within the local government sector.

It has also proven very difficult for the central government to influence the timing of local government expenditures over the business cycle. Central government has lately discovered means to influence income and liquidity of local governments quickly and dramatically. However, the local government response still seems so sluggish that the possibilities of stabilizing demand this way are yet uncertain.

Central government seems however to have a fair chance to steer local government development over a period of four to six years according to macro-economic needs. The medium-term perspective would thus appear to hold most promise for an effective central control of local governments.

**APPENDIX**

A grant addition to the local government tax base can either be in the form of a fixed amount (T) or a fixed multiplier ( $c > 1$ ). The question is how changes in  $c$  or  $T$  affects local government spending compared to changes in the original tax base (Y).

Let us specify the following goal function for the local government:

$$U = \beta_{\lambda} \cdot \log(X_{\lambda} - \bar{X}_{\lambda}) + \beta_p \cdot \log(X_p - \bar{X}_p), \quad (1)$$

where

$X_{\lambda}$  = local government services

$X_p$  = private goods

The budget constraint for the community can be defined in the following manner:

$$Y - X_{\lambda} P_{\lambda} / c - X_p P_p = 0 \quad (2)$$

where

$P_{\lambda}$  = price of local government services

$P_p$  = price of private goods

$$c = \frac{T+Y}{Y}.$$

A tax base dependent grant of the form  $c$  can thus be viewed as a general price subsidy for local government consumption.

Maximizing (1) subject to (2) gives us the familiar expenditure function:



$$X_{\lambda} P_{\lambda} / c = \bar{X}_{\lambda} P_{\lambda} / c + \beta_{\lambda} (Y - \bar{X}_{\lambda} P_{\lambda} / c - \bar{X}_{\rho} P_{\rho}) \quad (3)$$

We now want to compare the effects on local government spending of a change in tax base (dY) with those resulting from tax base dependent grants (dc or dT).

Let us start with the case of grants in the form of c, where c is a constant (>1) when Y changes.

$$\frac{\partial (X_{\lambda} P_{\lambda})}{\partial Y} = \beta_{\lambda} c < \frac{\partial (X_{\lambda} P_{\lambda})}{\partial c} = \beta_{\lambda} (Y - \bar{X}_{\rho} P_{\rho}), \quad (4)$$

where the inequality holds under normal conditions, i.e., as long as c is small compared to the value of local public consumption. What (4) shows is simply that increases in the tax base will only be multiplied by c and will thus normally affect local government spending less than a change in the tax base multiplier, c, which will be blown up by the full amount of the community income.

In the alternative case grants have the form T, where T is a constant when Y changes.

$$\frac{\partial (X_{\lambda} P_{\lambda})}{\partial Y} = \beta_{\lambda} (1 + \bar{X}_{\rho} P_{\rho} T / Y^2) > \frac{\partial (X_{\lambda} P_{\lambda})}{\partial T} = \beta_{\lambda} (1 - \bar{X}_{\lambda} P_{\lambda} / Y), \quad (5)$$

where the inequality will always hold. (5) demonstrates the fact that added taxable incomes, which will increase the consumption possibilities of both households and government, will affect local government spending more than an increased amount of grant which only affects the spending power of government.

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