



CPB Netherlands Bureau for Economic
Policy Analysis

CPB Background Document | 22 September 2015

Indexation schemes of non-earmarked grants in several OECD countries

Kenny Martens
Annette Zeilstra

Contents

1	Introduction—4
2	The indexation schemes in nine OECD countries—6
2.1	Indexation schemes—6
2.1.1	Elaborate system—6
2.1.2	Central government taxes—7
2.1.3	Fixed growth, inflation and no indexation—7
2.2	Demographic changes and macroeconomic shocks—8
2.2.1	Demographic changes—8
2.2.2	Macroeconomic shocks—9
2.3	Timing—10
2.4	Stability and forecastability—12
3	Summary and conclusions—14
4	Appendix A: International Experts (survey participants)—15
5	Appendix B: Grant size—16
6	Appendix C: Indexation Schemes—17
6.1	Belgium—17
6.2	Denmark—19
6.3	Finland—21
6.4	France—23
6.5	The Netherlands—25
6.6	Norway—27
6.7	Portugal—28
6.8	Spain—30
6.9	Sweden—32
7	Appendix D: Expert Survey—34

1 Introduction¹

In the Netherlands, as of 2015, several government tasks in the fields of elderly care, youth care and labour participation (of people with a disability) have been decentralised to the municipalities. Due to these decentralisations, there is a policy debate in the Netherlands concerning the way municipalities are funded. In this context, CPB Netherlands Bureau for Economic Policy Analysis was asked to investigate the current indexation of the largest non-earmarked grant that is allocated from the central government to the municipalities and explore alternative ways of indexation.

The amount of literature on the indexation of non-earmarked grants in various countries is limited. Therefore, and in order to learn from the experiences of other OECD countries, we held a survey among international experts (see list in Appendix A). The information presented here is based on the answers of the respondents, as well as on the literature and information gathered through various other forms of personal communication. Moreover, all survey respondents have been asked to review the final draft of Appendix C of this report and check it for correctness.

The countries from which the results to our survey are included in this report were selected on the basis of several criteria. The main criterion was the share of the largest non-earmarked grant in the total income of their municipalities, as we are mainly interested in countries where municipalities depend to a relatively large extent on non-earmarked grants provided by their central government.² Based on the survey responses, the following OECD countries were analysed: Belgium, Denmark, Finland, France, the Netherlands, Norway, Portugal, Spain and Sweden.

The indexation schemes of the nine selected countries were found to be very heterogeneous. Some countries use an elaborate system in order to determine the size of non-earmarked grants, whereas other countries link the size of these grants to their inflation rate or to their central government tax revenues. One of the countries appeared to apply a fixed growth rate and another uses no indexation scheme.

The various indexation schemes were evaluated on how they account for demographic changes and macroeconomic shocks. The expenditures of most municipalities increase as a result of demographic changes. However, only in about half of the countries, municipalities

¹ We would like to thank Annemieke Righart (Dunfield Editing) for English-language editing the manuscript, the international experts (survey participants, see Appendix A) for filling in the questionnaire, for providing additional information by mail and for their interesting conversations. We are indebted to Ivo Specker (Ministry of the Interior and Kingdom Relations) for kindly bringing us into contact with international experts and for providing useful comments. We are grateful to Bart Borsboom, Johannes Hers, Wim Suyker, Laura van Geest, Jeannette Verbruggen and Wouter Vermeulen (CPB Netherlands Bureau for Economic Policy Analysis) for their willingness to read the manuscript of this report and providing useful feedback.

² The municipalities in all participating countries, except for Portugal, enjoy total freedom in how they spend their non-earmarked grants. In Portugal, although the largest non-earmarked grant is also not tied to any spending programme in particular, their municipalities are obliged to use at least 10% of the grant on capital expenditure.

are compensated for this increase in costs. Moreover, most indexation schemes do not provide municipalities with additional resources in cases of negative macroeconomic shocks, while municipal tax revenues always decrease in such cases.

Finally, information was provided on the timing, stability and forecastability of the non-earmarked grants. These criteria are important because the largest non-earmarked grant forms a substantial share of the income of municipalities.

In most countries, municipalities receive a first estimate of the total size of their non-earmarked grant before the end of July in the year that precedes the year in which these grants are allocated. An updated estimate is usually provided around the end of the year that precedes the year in which the grant is provided to the municipalities. In addition, in some countries, these estimations are modified later on, after new data has been collected. These modifications take place during the year in which the grants are allocated or in the two years thereafter. The stability and forecastability of grants largely depend on the indexation scheme that a country uses.

The outline of the report is as follows. Section 2 briefly discusses the different types of indexation schemes used in the nine OECD countries (Sub-section 2.1), and indicates whether or not these indexation schemes account for demographic changes and/or macroeconomic shocks (Sub-section 2.2). Next, information is given on when the first estimate of the total size of the non-earmarked grant is announced and when the municipalities are informed of the final total size of their grant (Sub-section 2.3). The section ends with an overview of the stability and forecastability of the grants (Sub-section 2.4). Finally, the main results of this research are summarised in Section 3.

The names of the international experts who participated in the survey are listed in Appendix A. Appendix B presents information on the size of the largest non-earmarked grant in each of the nine countries and its share in the total municipal income. A more elaborate description of the indexation schemes of the nine countries is provided in Appendix C. Finally, Appendix D contains the questionnaire as it was sent to the participating international experts.

2 The indexation schemes in nine OECD countries

This section provides a brief overview of the different types of indexation schemes currently used in the selected nine OECD countries (Sub-section 2.1). It also contains information on whether or not the indexation schemes account for demographic changes or macroeconomic shocks (Sub-section 2.2). Finally, information is given on the timing, stability and forecastability of the grants (Sub-sections 2.3 and 2.4).

A more elaborate description of the indexation schemes used in the nine OECD countries is provided in Appendix C.

2.1 Indexation schemes

Table 2.1 provides an overview of the different types of indexation schemes used in the nine OECD countries.

The way grants are indexed was found to vary widely across countries. Five countries use an elaborate system in order to determine the size of their non-earmarked grants. In three countries, these grants are based on their central government's tax revenues, inflation rate or fixed growth rate. One country uses no indexation system to determine the size of its largest non-earmarked grant.

2.1.1 Elaborate system

Denmark, Finland, the Netherlands, Norway and Sweden use an elaborate system to determine the size of their non-earmarked grants. Some of these countries account for the changes in both local tax base and expenditure, whereas others put more emphasis either on cost development (e.g. due to inflation or a higher demand for elderly care) or changes in tax base.

The Danish indexation scheme is an example of a scheme that accounts for changes in both local tax base and costs. The size of the largest non-earmarked grant in Denmark is determined after a process of annual negotiations between the Danish Government and an interest group and member authority representing Danish municipalities. Essentially, the non-earmarked grant closes the gap between the expected amounts in municipal expenditure and revenue. The system is based on the belief that Danish municipalities provide key services, the supply of which should not depend on the state of the economy.

The Finnish system is an example of an indexation scheme that puts more emphasis on cost development. The size of the non-earmarked grant depends on the development of the basic

service price index and on several grant formulas. These grant formulas use several indicators, such as population age structure and morbidity rate, in order to estimate the change in municipal costs. The change in the non-earmarked grant is in proportion to the change in these indicators.³

Finally, Sweden is an example of a country where the size of the non-earmarked grant is mainly based on the size of the municipal tax base. The Swedish non-earmarked grant consists of several components. The largest component is a tax equalisation grant. Municipalities that have a tax base smaller than 115% of the national average tax base are compensated by the central government, whereas municipalities with a tax base larger than 115% pay a fee to the government. The Swedish Government finances the difference between the compensation paid and the fees received.⁴

2.1.2 Central government taxes

The largest non-earmarked grants in Portugal and Spain are based on the level of central government tax revenue. Portugal bases the size of the non-earmarked grant on the revenue from three central government taxes collected two years previous to the year in which the grant was allocated, whereas Spain uses a forecast of the central government tax revenues for the coming year. In both countries, the size of the non-earmarked grant decreases under large negative macroeconomic shocks.

2.1.3 Fixed growth, inflation and no indexation

Belgium has three regions for which three different indexation schemes are used, namely: Brussels-Capital Region, Flanders and Wallonia. Each region has its own municipal fund (which consists of one large non-earmarked grant). The municipal funds of the Brussels-Capital Region and Flanders grow at a fixed annual rate. The region of Flanders has chosen a nominal growth rate of 3.5% and the Brussels-Capital Region uses a growth rate of at least 2%. An advantage of a fixed growth rate, compared to other indexation schemes, is that the grant is more stable and forecastable. The growth rate of the municipal fund of Wallonia is equal to the forecasted inflation rate plus an additional fixed growth rate of 1 percentage point.

Finally, France does not use an indexation scheme for its largest non-earmarked grant, at present. Moreover, this grant will be reduced by 11 billion euros between 2015 and 2017 (3.67 billion euros per year). There is currently no further information on how this grant will develop after 2017.

³ Finland also has a revenue equalisation scheme, though the revenue equalisation grant is relatively small compared to the cost equalisation grant.

⁴ In addition to the tax equalisation grant, Sweden also has a horizontal cost equalisation grant and an adjustment grant that may compensate municipalities for demographic changes.

Table 2.1 Indexation schemes of nine OECD countries

Country	Indexation	Brief description
Belgium: Brussels-Capital Region	Fixed growth rate	The municipal fund of Brussels-Capital Region has an annual growth rate of at least 2%. This growth rate may be increased by the region, depending on the circumstances.
Belgium: Flanders	Fixed growth rate	The municipal fund of Flanders has a nominal growth rate of 3.5% per year.
Belgium: Wallonia	Inflation	The growth rate of the municipal fund of Wallonia equals the forecasted inflation rate, plus 1 percentage point.
Denmark	Elaborate system	The size of the largest non-earmarked grant is determined following annual negotiations between the central government and an interest group of the Danish municipalities. Factors taken into account during the negotiations include changes in costs and tax base.
Finland	Elaborate system	The development of the Finnish non-earmarked grant depends on a price index of basic services, and on several grant formulas. These formulas consist of multiple indicators, such as the population shares of the elderly and unemployed. The size of the non-earmarked grant changes together with the values of these indicators.
France	No indexation	The largest non-earmarked grant has not been indexed since 2011. The grant will be reduced by 11 billion euros between 2015 and 2017 (3.67 billion euros per year). It is still unclear how the grant will develop after 2017.
The Netherlands	Elaborate system	The size of the largest non-earmarked grant is linked to specific central government expenditures, which are referred to as the 'net corrected central government expenditures'.
Norway	Elaborate system	The central government determines the growth rate of 'free revenues' (non-earmarked grants and tax income). When setting this growth rate, they take into account projected price and wage increases as well as additional costs resulting from demographic changes. The largest non-earmarked grant is equal to the difference between the set level of free revenues and the sum of projected municipal tax income and the size of other non-earmarked grants.
Portugal	Taxes	The largest non-earmarked grant is equal to 19.5% of the average of three central government taxes collected two years previous to the year in which the grant was allocated. These three taxes are: personal income tax, corporate income tax and value-added tax.
Spain	Taxes	The growth rate of the grant is linked to the growth in central government tax revenue.
Sweden	Elaborate system	The grant in Sweden consists of several components. The development of the grant thus depends on how these individual components change over time. The largest component is the size of the municipal tax base.

Source: Questionnaire on non-earmarked grants to municipalities (CPB, 2015)

2.2 Demographic changes and macroeconomic shocks

Table 2.2 indicates if and how the indexation scheme accounts for demographic changes and macroeconomic shocks.⁵ More details are provided further down this section.

2.2.1 Demographic changes

Not all municipalities have expenditures that are sensitive to demographic changes. For example, Spanish municipalities are responsible, among other things, for public lighting,

⁵ An example of a negative macroeconomic shock is the recent financial crisis. A negative macroeconomic shock may decrease municipal tax revenues, while increasing the expenditure on social security benefits. Whether or not a macroeconomic shock affects municipal finances depends on the responsibilities and tax autonomy of a municipality.

waste collection, public cleaning, the sewerage system, drinking water supply, libraries and fire safety.

In contrast, municipalities in Denmark, Finland, Norway, the Netherlands, Sweden and Belgium are, amongst other things, responsible for elderly care.⁶ The extent to which municipalities are compensated via their non-earmarked grants varies between countries. Municipalities in Finland and Norway are automatically compensated for demographic changes. The extent to which Danish municipalities are compensated for demographic changes is decided, each year, during the negotiations between the central government and the interest group that represents the Danish municipalities. Municipalities in the Brussels-Capital Region and in Sweden may also receive compensation as a result of demographic changes.⁷ Municipalities in the Netherlands are not compensated for demographic changes via their largest non-earmarked grant, because their expenditure on elderly care is financed via a separate grant. Municipalities in Flanders and Wallonia (Belgium) do not receive any specific compensation.

2.2.2 Macroeconomic shocks

Municipal tax revenue in all countries decreases under large negative macroeconomic shocks, while in most countries, their expenditure increases.

The effect of a negative macroeconomic shock on non-earmarked grants differs between countries. The size of non-earmarked grants in Portugal and Spain will decrease, because their central government's tax revenues decline unless tax rates are adjusted, drastically. Denmark is the only country in which municipalities are automatically compensated for the effect of a negative macroeconomic shock, via the largest non-earmarked grant.

In Brussels-Capital Region and Sweden, municipalities may receive compensation via their largest non-earmarked grants, depending on government policy.⁸ The Swedish Government can, for example, increase the size of the 'adjustment grant'. This component allows the government to adjust the size of the non-earmarked grant, as was done during the last financial crisis.

⁶ Municipalities in Belgium are indirectly responsible, because they are financial responsible for the public centre of social welfare which, in turn, are responsible for elderly care.

⁷ Swedish municipalities are not always compensated for demographic changes. Whether or not they receive compensation depends on an analysis of the demographic pressure and on the decision of politicians.

⁸ Municipalities in the Netherlands receive a separate grant to finance social security expenditure. The size of this grant depends on the state of the economy and is anti-cyclical.

Table 2.2: Demographic component and macroeconomic shocks

Country	Indexation scheme compensates for demographic changes	Indexation scheme compensates for macroeconomic shocks
Belgium Brussels-Capital Region	No automatic compensation. Municipalities are confronted with higher costs due to population ageing. The grant of Brussels-Capital Region has a flexible indexation with a minimum of 2%.	No automatic compensation. Both the income and expenditure of municipalities are sensitive to shocks. The grant of Brussels-Capital Region has a flexible indexation with a minimum of 2%.
Belgium Flanders	No compensation. Municipalities are confronted with higher costs due to population ageing	No compensation. Both the income and expenditure of municipalities are sensitive to shocks.
Belgium Wallonia	No compensation. Municipalities are confronted with higher costs due to population ageing	No compensation. Both the income and expenditure of municipalities are sensitive to shocks.
Denmark	Compensation may be provided, depending on the outcome of negotiations.	Fully compensated via block grant.
Finland	Compensation is provided; grants are partially determined using indices such as the share of the elderly in the population.	No compensation. The income of municipalities is sensitive to macroeconomic shocks, but their expenditure is not. Municipalities can cope with shocks by lowering their expenditure, increasing their tax rates, or through borrowing.
France	No compensation.	No compensation, though tax revenues decline and some social expenditure increases.
The Netherlands	No specific compensation. The grant increases in line with certain central government expenditure.	No automatic compensation. The expenditure financed by the largest non-earmarked grant is not sensitive to macroeconomic shocks, as social welfare benefits are financed via an earmarked grant.
Norway	Compensation mainly takes place via an increase in the growth of 'free revenues', which is set by the central government. This in turn leads to an increase in the non-earmarked grant.	No automatic compensation for higher expenditure or lower tax income. Nevertheless, the central government can choose to adjust the size of the non-earmarked grant by a discretionary decision.
Portugal	No compensation. Almost no expenditure is sensitive to demographic change.	No Compensation. Expenditure is not sensitive to macroeconomic shocks. However, both the grant and other municipal income decrease under negative shocks.
Spain	No compensation. Development of the non-earmarked grant depends only on central government tax revenues. Municipalities have no expenses that are sensitive to demographic change.	No compensation. Income tends to decrease under negative macroeconomic shocks, but the expenditure remains unchanged.
Sweden	No automatic compensation. Municipalities may receive compensation via the adjustment grant. While cost equalisation can increase the transfer between municipalities, it will not increase the funds provided by the central government.	No automatic compensation. The central government did, however, increase the adjustment grant given to municipalities during the financial crisis.

Source: Questionnaire on non-earmarked grants to municipalities (CPB, 2015)

2.3 Timing

Table 2.3 shows at which time municipalities receive the first estimate of the total size of the largest non-earmarked grant, and when they will be informed about its actual size. In most countries, the first estimate is available at the end of July in the year before the non-earmarked grant is allocated. Municipalities often receive an updated estimate around the end of the year that precedes the year in which the grant is provided. The size of the non-

earmarked grant is often modified after new data has been collected. These modifications take place during the year in which the grant is distributed over the municipalities or in the subsequent two years.

In Spain, the final size of the grant cannot be determined until two years after it was allocated. The reason for this is that the final amount in central government tax revenues of any given year is not known until two years later. In Portugal, although the largest non-earmarked grant there also is based on tax revenues, the final size of the non-earmarked grant can be determined much sooner, because their grant is based on the tax revenues that were collected two years previous to the year in which the grant is allocated.

Table 2.3: Announcement of the first estimate and of the actual total size of the non-earmarked grant.

Country	Time first estimate is announced	Time actual size is announced
Belgium Brussels-Capital Region	The first estimate is announced between September and October of year t-1.	The final size of the total grant is announced at the final budgetary control of year t (under normal circumstances in March–April year t).
Belgium Flanders	The first estimate is announced between September and October of year t-1.	The final size of the total grant is announced at the budget preparation, which is usually between September and October of year t-1.
Belgium Wallonia	The first estimate is announced between September and October of year t-1.	The final size of the total grant is announced in February of year t+1.
Denmark	The Ministry of Finance and the interest group of Danish municipalities start preparing for the negotiation process in February of year t-1. The first estimate is announced in June of year t-1.	The size of the grant in year t is decided in late June of year t-1. (a)
Finland	The first estimate of the grant of year t is provided by the Association of Finnish Local and Regional Authorities in April of year t-1.	The actual size of the grant of year t is announced in December of year t-1. (b)
France	Announced and actual amounts coincide and are set at predetermined levels for the period up to and including 2017.	Announced and actual amounts coincide and are set at predetermined levels for the period up to and including 2017.
The Netherlands	The first rough estimate of the General Grant is in May of year t-5. A more precise estimate is provided in May of year t-1.	Final size of the General Grant is announced in May of year t+1.
Norway	First indication of the growth in 'free revenues' is in May year t-1.	The actual size is announced when the national budget is presented in October of year t-1. The final budget is approved by parliament by mid December. (c)
Portugal	Estimate of the grant in year t will be announced no later than on 31 August of year t-1.	The actual size of the grant in year t is established in the state budget and is sent to Parliament for approval, at the latest on 15 October of year t-1. Usually the parliament approves this at the end of November of year t-1.
Spain	The first estimate of the grant in year t is provided in July of year t-1.	The actual size of the grant is announced in October of year t-1. (d)
Sweden	The first estimate of the grant in year t is announced in April of year t-1.	Actual size of the grant in year t is announced in September of year t-1.

Source: Questionnaire on non-earmarked grants to municipalities (CPB, 2015)

(a) The final size of the grant is determined in June of year t.

(b) The size of the BSG is adjusted in year t+2 because the final basic service price index of year t is not known until year t+2.

(c) The size of the grant may be revised in May of year t.

(d) Part of the grant (the so-called territorialised shares) of year t is known in year t+2. During year t+2, municipalities receive the difference between the grant allocated in year t and the final amount determined in year t+2.

2.4 Stability and forecastability

The stability and forecastability of the largest non-earmarked grant varies between countries. In some countries, grant development is linked to inflation rate or tax changes. The stability of the grant then depends on how these measures develop over time. In other countries, their largest non-earmark grant grows at a fixed rate, which improves the stability of the grant. However, this stability depends not only on the indexation scheme, as practice has shown that grants have been reduced in several countries (e.g. France and the Netherlands).

In some countries, the forecastability of non-earmarked grants depends on the accuracy of their forecasts (e.g. the Spanish central government tax revenue forecast). Some countries have attempted to increase this forecastability. The Belgian region of Flanders, for example, has chosen a nominal growth rate for their municipal fund of 3.5% per year. One of the reasons for switching to a system of grants growing with this nominal growth rate of 3.5% per year was to increase the stability and forecastability of the grant, while ensuring that the amounts are inflation-proof. A disadvantage of such a mechanism is that the indexation scheme uses a *nominal* growth rate. Therefore the *nominal* growth rate of the grant is stable over time, but this does not mean that the real growth rate is stable. In addition, the scheme does not account for the effects of demographic changes and macroeconomic shocks.

Table 2.4: Stability and forecastability of the non-earmarked grant

Country	Stability	Forecastability
Belgium Brussels-Capital Region	The size of the grant, in general, is stable. The region can choose to modify the growth rate so that it better matches expenditure development.	The size of the grant grows by at least 2% per year. Over the past years, there have been few or no deviations from this growth rate.
Belgium Flanders	The size of the grant is quite stable as it normally grows by 3.5% per year. However, the size of the grant will decrease slightly during 2013–2016, in order to finance an external audit of the local authorities.	The grant grows annually by a fixed percentage. Cuts are announced in advance and can only be realised by a change in legislation. To increase stability and forecastability, the grant now grows by a fixed percentage.
Belgium Wallonia	The stability of the grant depends on the development of the inflation rate.	The forecastability depends on the accuracy of the forecast of the inflation rate in the following year.
Denmark	The size of the grant depends on the state of the economy. The development of the grant acts as an automatic stabiliser.	The size of the grant depends on the outcome of the negotiation process. Usually, the first estimate and the actual size do not differ widely.
Finland	The grant has been rather stable, except for a few cuts since 2012. These cuts are usually announced far in advance.	The size of the grant is determined in December t-1. However, the size of the grant of year t is adjusted later on to account for price changes and deviations between the actual and calculated costs.
France	Between 2004 and 2013, the municipal part of the largest non-earmarked grant grew between +0.1% and +2.7%. The average annual growth rate between 2004 and 2013 was 1.6%. The changes in 2014 and 2015 were respectively -3.2% and -8.3% .	Not applicable. There is no indexation scheme. Announced and actual amounts coincide and are set at a predetermined level.
The Netherlands	Between 2004 and 2014, the General Grant grew between -2.6% and 6.5%.	The estimate given in year t-1 and the final size in year t+1 vary between -3.9 pp* and 2.0 pp for the 2004–2014 period
Norway	Between 2008 and 2014, the level of 'free revenues' grew between 0.0 to 3.0% per year.	Between 2008 and 2014, the national budget growth figures in free revenues differ from the accounting figures by 0.1 to 1.1 percentage points.
Portugal	Between 2010 and 2015, the grant grew between -9.5% and 1.5%.	Forecastability of the grant depends on that of personal income tax, corporate income tax and value-added tax collected in year t-2.
Spain	The stability of the grant depends on the tax developments.	The forecast of the grant of year t depends on the accuracy of the forecast of the central government tax revenues, as made by the Central Tax Agency in July of year t-1.
Sweden	Since the crisis, the size of the grant has not fluctuated by much.	In general, there are small deviations between the first estimate and the actual size of the grant. During the financial crisis fluctuations were larger.

Source: Questionnaire on non-earmarked grants to municipalities (CPB, 2015)
 * pp = percentage point

3 Summary and conclusions

The indexation schemes used in the nine OECD countries differ widely. Most countries have chosen to determine the size of their largest non-earmarked grant using an elaborate system. Other countries are basing their indexation scheme on the inflation rate, the development of central government tax revenues, or on a fixed growth rate, or they do not index their grant.

Almost all municipalities experience an increase in costs due to demographic changes, depending on their tasks. Municipalities in Denmark, Finland, the Netherlands, Norway, Sweden and Belgium are all responsible for elderly care.⁹ Therefore, their expenditure increases as the number of elderly people increases. Municipalities in most of these countries are compensated for an increase in these types of costs.

Moreover, in all countries, municipalities see their local tax revenues drop under large negative macroeconomic shocks. In addition, municipal expenditure in some countries increases as a result of such shocks. However, most indexation schemes do not account for macroeconomic shocks. In Portugal and Spain, the largest non-earmarked grants even decrease as a result. Only in Denmark are municipalities, usually, fully compensated for an increase in expenditure and a decrease in local revenues that result from negative macroeconomic shocks.

In most countries, a first estimate of the total non-earmarked grant is allocated before the end of July – and a final estimate around the end – of the year preceding the year in which the grant is provided. Some countries modify the size of the grant during the year in which the grant is allocated for all the municipalities or in the two years thereafter.

The stability and forecastability of their largest non-earmarked grants varies between countries and depends on the type of indexation scheme that is used. In some countries, the stability of the grant depends on the development of the inflation rate or the central government tax revenues. Countries that apply a fixed growth rate tend to perform well on stability and forecastability. The Belgian region of Flanders is an example of where the largest non-earmarked grant grows conform a fixed growth rate. The disadvantage of such a mechanism is that the indexation scheme does not account for the effects of demographic changes and macroeconomic shocks.

Finally, there seems to be no obvious relationship between the share of the largest non-earmarked grant in the municipal income and the type of indexation scheme. However, its share in the total municipal income tends to be below average for countries that have adopted a fixed growth rate.

⁹ Municipalities in Belgium are indirectly responsible because they are financially responsible for their public centres of social welfare, which, in turn, are responsible for elderly care.

4 Appendix A: International Experts (survey participants)

- B. Coppens, Ministry of Finance, Belgium
- N. J. Mau, Ministry for Economic Affairs and the Interior, Denmark
- J. Lotz, Retired, Denmark
- A. Moisio, VATT Institute for Economic Research, Finland
- J.-F. Juery, France
- H.M. Skarvang, Ministry of Local Government and Modernisation, Norway
- Secretary of State of Local Administration, Portugal
- Office for Economic Policy and International Affairs – Ministry of Finance, Portugal
- J. M. Utande San Juan, (formerly of the) Ministry of Finance and Public Administration, Spain
- E. De Ancos Lumbreras, Ministry of Finance and Public Administration, Spain
- H. Nyström, Ministry of Finance, Sweden

5 Appendix B: Grant size

Table 5.1: Sizes of the largest non-earmarked grants to municipalities, in billion euros.

Country	2012	2013	2014	2015
Belgium Brussels-Capital Region	.	.	0.26	0.27
Belgium Flanders	.	.	2.24	2.32
Belgium Wallonia	.	.	1.11	1.12
Denmark	.	.	10.00	.
Finland	8.49	8.66	8.59	8.45
France (a)	23.7	23.8	23.0	21.1
The Netherlands	15.58	15.09	15.60	14.67
Norway	.	.	.	13.00
Portugal	1.75	1.75	1.70	1.73
Spain	.	.	11.6	.
Sweden	.	6.8	.	.

Source: Questionnaire on non-earmarked grants to municipalities (CPB, 2015)

(a) The size of the non-earmarked grant contains funding for both municipalities and groups of municipalities (so-called 'intercommunalités').

Table 5.2 reports the share of the largest non-earmarked grant as a percentage of the total municipal income. There seems to be no obvious relation between the share of the non-earmarked grant in the total municipal income and the choice of indexation scheme. However, this share tends to be below average for countries that have adopted a fixed growth rate.

Table 5.2: Share of the largest non-earmarked grants as a percentage of total municipal income.

Country	2012	2013	2014	2015
Belgium Brussels-Capital Region (a)	.	.	12.4	.
Belgium Flanders (a)	.	.	17.4	.
Belgium Wallonia (a)	.	.	23.9	.
Denmark	.	.	20.8	.
Finland	18.5	17.8	16.2	17.3
France (b)	18.5	18.3	.	.
The Netherlands (c)	29.2	28.9	32.5	27.4
Norway	.	.	.	30.0
Portugal	22.9	22.2	23.6	23.0
Spain	.	.	18.3	.
Sweden	.	10.2	.	.

Source: Questionnaire on non-earmarked grants to municipalities (CPB, 2015) and, for Denmark, 'Municipalities and Regions – Tasks and Financing, June 2014' by the Ministry for Economic Affairs and the Interior.

(a) Based on sample data. Furthermore, the share of Flanders reflects the share in total expenditure.

(b) The share of the largest non-earmarked grant contains resources for both municipalities and groups of municipalities.

(c) The total municipal income is calculated by adding the resources from the municipal fund, earmarked grants, property tax, charges and other taxes, income from land development and other financial resources. The data on 2012 and 2013 are from the national accounts, whereas data on budgets refer to 2014 and 2015.

6 Appendix C: Indexation Schemes

This appendix presents an extensive description of the different types of indexation schemes used in nine OECD countries.

6.1 Belgium

Belgium is a federal state that consists of three regions¹⁰: Wallonia, Flanders and the Brussels-Capital Region. Local authorities fall under the (budgetary) supervision of the regions. Each region has its own municipal fund, which is a non-earmarked grant allocated to the municipalities. All three municipal funds have different indexation schemes, but all indexation schemes are aimed at making the municipal funds at least inflation-proof. In addition, all indexation schemes aim, in principle, to have the income of municipalities grow in proportion to their expenditures.¹¹

Wallonia: Since 2009¹², the annual growth rate of their municipal fund is equal to the forecast of the inflation rate supplemented by 1 percentage point.¹³ The Federal Planning Bureau is responsible for the forecast of the inflation rate of year t ¹⁴. This forecast is announced in September of year $t-1$. In February of year t , the size of the municipal fund of year t is adjusted in two ways. First, the size of the grant is adjusted using a more recent forecast of the inflation rate of year t . Second, in February of year t , the final inflation rate of year $t-1$ is known. The size of the municipal fund in year $t-1$ is adjusted to this final inflation rate. This alters the municipal fund of year $t-1$, which in turn affects the size of the municipal fund of the year t . Finally, in February of year $t+1$, the municipal fund of year t is adjusted for the final inflation rate of year t .

Flanders: Since 2005, the municipal fund of Flanders has been growing annually by a nominal rate of 3.5%.¹⁵ This growth rate is chosen to ensure that the resources from the municipal fund grow at a rate comparable to the operating costs.¹⁶ During the 2013–2016

¹⁰ Furthermore there is a federal level, three communities and three community commissions.

¹¹ Excluding the growth in expenditure resulting from investment.

¹² Before 2009, the size of the municipal fund of Wallonia was adjusted annually using the inflation rate between July of year $t-2$ and July of year $t-1$.

¹³ The inflation component was overestimated in the budget of 2009. The municipal fund was not indexed in the year 2010 in order to correct for this overestimation.

¹⁴ Note: the inflation forecast is a part of the Economic Budget (macroeconomic forecast) published by the Federal Planning Bureau (in collaboration with the National Accounts Institute).

¹⁵ The municipal fund of Flanders is divided across the municipalities of Flanders and their Public Centres for Social Welfare. Normally, the Public Centres for Social Welfare receive 8% of the part their municipality receives from the municipal fund, whereas the rest of the resources are provided to the municipalities. It is, however, possible to deviate from this 8% in case of an agreement between the individual municipality and their Public Centre for Social Welfare.

¹⁶ The initial indexation scheme foreseen in the 2002 reform of the municipal fund of Flanders was that the municipal fund of year t should increase, starting from 2005, annually with the inflation rate of year t supplemented by a forecast of the real growth in GDP. The original goal was to link the growth rate of the municipal fund to that of the funds provided to the regions. However, this indexation scheme could result in too much uncertainty about next year's budget, especially

period, the municipal fund was reduced each year to finance the external audits of local government.

Brussels-Capital Region: The municipal fund of Brussels-Capital Region grows each year with at least 2%. The Brussels-Capital Region can choose to increase this annual growth rate. In the period from 2006 to 2009, the Brussels-Capital Region decided to increase the growth rate to 3% to better match the increase in Brussels' municipal expenditure.

In addition to these indexation schemes, the regions can adjust the municipal funds, for example, to compensate for regional government policies that affect the municipalities financially.¹⁷ Usually, however, municipalities are compensated for changes in policy or regulations via a separate grant. Likewise, the municipal fund can also be decreased, as was the case in Flanders during the 2013–2016 period.

Demographic changes and macroeconomic shocks

There are three channels through which the municipalities experience an increase in costs related to population ageing. Firstly, municipalities have to pay out pensions to their statutory civil servants. The municipal expenditure on these pensions has risen due to a reform¹⁸ of the pension system in 2011 as well as population ageing.

Secondly, the reform of the pension system also affects other local authorities, such as the Public Centres for Social Welfare (PCSW)¹⁹ and the police districts. The pension costs of these local authorities also will increase due to the reform and due to population ageing. Moreover, municipalities are obliged by law to cover any deficit of their PCSW, police and fire districts via a so-called 'stability grant'. So, if the deficits of these local authorities increase, the stability grant and thus the municipal expenditure increase as well.

Finally, PCSWs, together with the federal government and the communities, are responsible for elderly care. Though all PCSWs are responsible for providing elderly care for the elderly citizens in their municipality, they have some freedom in deciding what goods and services to provide. The local goods most commonly provided by PCSWs are homecare, meal delivery, elderly day care and retirement homes. Due to population ageing, the demand for these goods is increasing. All PCSWs' deficits, including those resulting from increased demand due to population ageing, must be covered by the municipalities via the stability grant.

because the municipal fund is a large part of the total municipal income. Therefore, the region changed the indexation scheme (starting in 2005) to a fixed annual growth rate high enough to make the Fund inflation-proof.

¹⁷ In Wallonia, the region investigates the financial impact on local governments of every policy they make. In case of a negative financial impact, the region compensates the affected local governments. This compensation can be added to the municipal fund, but is usually provided via a separate grant.

¹⁸ The reform of the pension system in 2011 was designed to end the unsustainable increase in pension costs. In order to achieve this, the pension contribution rate of local authorities (including municipalities) was increased. This contribution rate will increase up to 2016 and will become dependent on the costs of population ageing from 2017 onwards. In addition, local authorities have to pay a 'responsibility-contribution' if their pension costs exceed their contributions.

¹⁹ Each municipality has a PCSW.

Both the income and expenditure of the municipalities are sensitive to macroeconomic shocks. A negative macroeconomic shock leads to lower revenues from personal income tax²⁰ and higher welfare expenditure. Welfare costs in Belgium are made by the PCSWs. PCSWs receive a grant from the federal government that covers part of their expenditure on welfare.²¹ They have to finance the remaining part themselves. PCSWs that are unable to cope with higher expenditure due to a negative shock end up in deficit. This deficit in turn is covered by the municipality via a stability grant. Likewise, in case of a positive macroeconomic shock, municipalities fully benefit from the increase in tax revenues and the decrease in social security expenditure.

Though municipalities are faced with rising costs due to population ageing and macroeconomic shocks, they do not automatically receive compensation for these cost increases.

6.2 Denmark

Each year, the municipalities of Denmark receive a non-earmarked grant from the central government. For over 25 years, the size of this non-earmarked grant has been determined after annual negotiations between the Ministry of Finance and Local Government Denmark (LGDK).²² During these negotiations, the central government and LGDK seek agreement on the size of the non-earmarked grant for the following year. The aim of both parties – which is also anticipated under the law – is to ensure that the size of the grant is high enough to cover municipal expenditure and provide local public goods.

The underlying thought of this system is that the Danish municipalities are responsible for a large part of all the tasks in the public sector. They provide key services, the supply of which – for the agreed expenditure level – should not depend on the state of the economy. The Danish municipalities are, for example, responsible for social services, child care, elderly care, health care²³, primary schools, special education and other general services.

The Ministry of Finance and LGDK naturally differ in opinion on the desired size of the non-earmarked grant for the following year. However, in the calculations, the central government's estimates of the expected revenue of the next year are used.²⁴ At the beginning

²⁰ The personal income tax is collected by the federal government and shared between the federal government, regions and communities. The municipalities can, however, set part of the tax rate of the personal income tax. This part is then added to the tax levied by the federal government.

²¹ PCSWs are, in general, compensated by the federal government for 50% of their expenditure on welfare. However, this percentage can be increased up to 65%, depending on the number of people that receive welfare benefits.

²² LGDK is an interest group for municipalities. Although membership is voluntary, all municipalities are members of LGDK. The mission of LGDK is to safeguard the common interest of the municipalities and to provide them with advice and consultancy services. In addition, LGDK represents its members during the annual negotiations with the Ministry of Finance.

²³ Municipalities are responsible for prevention, care, outpatient convalescent care, dental care, home care and social psychiatry.

²⁴ The estimates of the expected revenues are made by the Ministry of Finance, partly in collaboration with the Ministry of the Interior. The estimated income tax revenue, which is the main part, is covered by a central government guarantee, i.e.

of the negotiations, both the central government and LGDK have their own estimates on the level of expenditure, and during the negotiation process, the difference between these estimates becomes smaller until a consensus is reached in the spring. Essentially, the non-earmarked grant closes the gap between expected expenditure and expected revenues.²⁵

In practice, this means that the size of the non-earmarked grant in the upcoming year depends on the following factors:

- the size of the non-earmarked grant in the previous year, excluding one-time adjustments;
- full compensation for higher expenditure due to expected changes in wages and prices;
- an adjustment to account for new regulations with financial consequences for municipalities and for changes in the tasks of municipalities, e.g. due to decentralisation.²⁶
- compensation for the change in local tax revenue resulting from a change in tax base. A lower/higher tax base results, *ceteris paribus*, in a higher/lower grant.
- full compensation for changes in the expenditure on certain social transfers.²⁷ In addition, the grant may compensate municipalities for any other type of expenditure if this is agreed upon during the negotiations between the central government and the LGDK.

$$\text{Grant}_{t+1} = \text{Grant}_t + \text{price\&wage correction}_{t+1} + \text{known changes in legislation}_{t+1} - \text{changes in expected revenue}_{t+1} + \text{expected change in certain social transfer expenditure municipalities}_{t+1} + \text{agreed change in other expected expenditure}_{t+1}$$

Next to the indexation scheme described above, the central government always has the possibility to change the size of the non-earmarked grant via a discretionary decision. For example, if for some reason the central government wants to increase the liquidity of the municipal sector.

Demographic changes and macroeconomic shocks

Whether or not municipalities receive compensation for population ageing depends on the negotiation process. Municipalities do not automatically receive compensation for an increase in the elderly population, but factors such as the increase in the demand for certain

the central government takes responsibility for estimation errors. The LGDK does not make independent revenue estimates.

²⁵ When estimating the amount in local tax revenues, the tax rates are held constant. Therefore, no compensation is made for a reduction in the tax rate. Furthermore, the central government has introduced a tax penalty in order to avoid that the tax rates increase too much. The penalty amount depends on the additional revenues generated from increasing the tax rate above a certain threshold. The penalty consists of an individual and a collective part. The collective penalty is subtracted from the non-earmarked grant.

²⁶ During the negotiation process, the discussion usually focuses on five or six pieces of legislation. By discussing multiple pieces of legislations as part of a total sum, it is less clear which municipalities benefit from the new legislation and which are affected negatively.

²⁷ Main examples of social transfers that are compensated via the non-earmarked grant are early retirement, cash and unemployment benefit payments. A main factor behind the changes in such expenditure is the overall activity level of the national economy, i.e. outside the control of local governments.

services due to a rising number of elderly people and their health improvements are taken into account during the negotiations.

The municipalities are compensated for macroeconomic shocks. If their tax base decreases as a result of a negative macroeconomic shock, the size of the grant, *ceteris paribus*, will be increased. Municipalities are also compensated for a higher expenditure on social transfers resulting from a negative macroeconomic shock. The development of the non-earmarked grant thus acts as an automatic stabiliser.

6.3 Finland

The Basic Service Grant (BSG) is the largest grant provided to municipalities which they can spend at their own discretion. The BSG is a non-earmarked grant and is provided by the central government to finance municipalities so that they can offer a minimum standard of basic services. Municipalities are responsible for providing all 'basic services' (i.e. all health care, social welfare, culture and most educational services).

The underlying thought of the indexation scheme of the BSG is to compensate municipalities for cost increases. The development of the total macro size of the BSG over time depends on:

1. The basic service price index. This index indicates how the municipal expenditure (on basic services) develops over time as a result of price changes.
2. The development of the 'calculatory costs'. In 2015, municipalities received about 25% of the calculatory costs (discussed below) via the BSG.²⁸ However, the Ministry of Finance is free to modify the compensation rate of 25%. In the past, the unit prices used to define the calculatory costs would be re-estimated once every four years, but since 2015 this is done on an annual basis.
3. In addition to the indexation of the grant described above, the development of calculatory costs and actual expenditure are verified according to a certain mechanism. If the actual costs exceed the calculatory costs,²⁹ the central government provides compensation by increasing the total grant by about 30% of the amount of this differences.³⁰ Note that this compensation affects the total size of the grant. Municipalities are not compensated individually if they have relatively high actual costs compared to the calculatory costs.³¹
4. Discretionary decision by the Ministry of Finance. The adjustments of the BSG described under points 1 to 3. are not always followed automatically. The central government can make ad-hoc adjustments, e.g. to moderate the increase in the BSG. The central government can also cut the grants, as it has done and will do for the years 2012 through to 2017.

²⁸ The self-financing share of municipalities of basic services is 75%.

²⁹ Only services for which municipalities receive grants are taken into consideration when compensating for the difference between the calculatory costs and the actual costs per capita.

³⁰ For example, in 2015, the verification takes place for 2013, and that year's compensation rate of 30.96% will be used.

³¹ However, the formulas used to define the grant cover the differences between municipalities.

Basic service price index

At time t , the latest confirmed basic service price index is the one for year $t-2$. The grant of year t is based on the development of the basic service price index in year $t-2$ and is later adjusted by a correction factor in order to take into account the difference between the index of year $t-2$ and the final value of the basic service index of year t known in year $t+2$.

Calculatory costs

The calculatory costs per capita are estimated via grant formulas.³² For example, there is a specific grant formula that aims to capture the change in health care costs resulting from a change in demand. This formula uses indicators for population age structure, morbidity rate and remoteness of the municipality to estimate the calculatory costs per capita, whereas the welfare services grant formula is based on indicators such as the share of elderly, children and unemployed. Moreover, the BSG also depends on a grant formula for several educational services. Each of the indicators in a grant formula is awarded a certain weight, based on a regression analysis.³³

Decentralisation, demographic changes and macroeconomic shocks

Since 2015, municipalities are fully compensated for costs associated with decentralised tasks.³⁴ If the task is part of the basic services, then the additional resources are added to the BSG. Likewise, a reduction in basic-services-related tasks leads to a smaller BSG.

Municipalities implicitly receive compensation for coping with demographic changes. The BSG is adjusted for price developments and for the development of the calculatory costs per capita. If the calculatory costs per capita increase as a result of demographic changes, then the grant is adjusted upwards.

Finally, there is no automatic compensation for macroeconomic shocks. The income of municipalities is sensitive to macroeconomic shocks. A large share of the municipal income comes from tax revenues, the income tax being the most important one.³⁵ Furthermore, the size of the BSG turns out to be pro-cyclical, as well. Grants have been increased in 'good years' and cut in years of downturn. However, the municipal expenditure that is financed by the BSG is not sensitive to macroeconomic shocks, because the Finnish social security is completely financed by the state. Municipalities can cope with macroeconomic shocks by lowering their expenditure, raising tax rates or by borrowing.

Revenue equalisation

The system described above is meant to equalise cost disparities between municipalities. In addition, Finland also has a separate tax base equalisation scheme.³⁶ However, the size of the

³² The calculatory costs per capita for year t are based on estimations using data on the previous two years. The calculatory costs per capita are estimated on an annual basis and are not adjusted afterwards.

³³ The calculatory cost are also used for allocating financial resources to individual municipalities.

³⁴ Municipalities also receive compensation if central government policy influences municipal tax revenues.

³⁵ The share of municipalities in the corporate tax revenue, however, is adjusted counter-cyclically.

³⁶ Municipalities whose per capita tax base is lower than 91.8% of the average per capita tax base receive a supplement to their cost equalisation grant. The supplement given to municipalities equals the difference between their tax base and 91.8% of the national average tax base, both multiplied by the national average tax rate. At the same time, municipalities

tax base equalisation grant is relatively small compared to the cost equalisation grant. Until 2015, tax base equalisation was totally funded by the municipalities; those that had a calculatory per capita tax revenue above the threshold (91.8% of the average per capita tax base) faced a reduction in their BSG grant. The municipalities that were below the threshold were paid a higher BSG. Since 2015, the threshold has changed and the system has been altered slightly, so that part of the tax base equalisation is now funded by central government. The part of the tax equalisation grant financed by the central government was, however, subtracted from the BSG. Therefore, the grant system as a whole puts slightly less weight on cost equalisation and slightly more weight on tax base equalisation.

6.4 France

The largest non-earmarked grant is called the 'global operating grant'. In French it is called the 'dotation générale de fonctionnement' (DGF). The DGF is allocated across all local governments (i.e. municipalities, 'groups of municipalities', districts and regions) and for 2015 amounted to 36.6 billion euros. The part of the DGF grant that is allocated to the municipalities and groups of municipalities is known as the 'DGF block communal' and amounted to 21.1 billion euros in 2015. In general, the indexation of the DGF block communal follows the same pattern as the DGF.

Since 2011, the DGF is no longer indexed, but its exact size is determined each year and mentioned in the finance law. The size of the DGF was frozen from 2011 up to 2013. In 2014, for the first time in French modern history, the DGF was reduced by 1.5 billion euros and the French government announced that it would be reduced further by another 11 billion euros between 2015 and 2017 (3.67 billion euros per year).³⁷ To date, no information has been available on the development of the DGF after 2017. The only known fact is that the size of the DGF for any year t after 2017 has to be mentioned specifically in the finance law for year t .³⁸ Thus, the historical scheme of indexation has been completely abandoned.

Municipalities are fully compensated in case of a decentralisation of tasks. This compensation, however, is not added to the DGF. Furthermore, new subsidies can be provided to municipalities if decisions of the central government increase the costs incurred by them. Whether or not municipalities receive additional funds, depends on the outcome of negotiations between the government and representatives of municipalities.

with a per capita tax base larger than 91.8% of the national average, pay a fee. The fee equals 37% of the additional benefit a municipality has from having a per capita tax basis larger than 91.8% of the average per capita tax basis (again supposing that the average tax rate is levied).

³⁷ These cuts in the DGF lead to a decrease in the size of the DGF block communal. The DGF block communal was decreased in 2014 by 0.8 billion euros and will be decreased annually by approximately 2.1 billion, during the period 2015 to 2017.

³⁸ The finance law for year t is in general enacted in December of year $t-1$.

History of the indexation scheme before 2011

Before 1967, municipalities received their income via a local tax based on retail sales. From 1967 to 1979, municipalities were funded via an operating grant based on wage tax.

In 1979, the DGF was created. The size of the DGF was 16.45% of the value-added tax (VAT) revenues that were collected by the central government. The DGF was distributed across municipalities according to various criteria (e.g. inhabitants, area, and tax revenues).

As of 1990, the DGF was indexed to inflation and a fraction of GDP growth, because the growth in VAT revenues was too volatile and high. Nevertheless, even with that new indexation, the growth rate of the DGF remained too high.

The Finance Act of 1996 contained a three-year pact to improve financial stability. In line with this pact, the DGF was indexed to inflation for the next 3 years (1996–1999).

From 1999 to 2007, the DGF was again indexed to inflation and a fraction of the GDP growth rate of the previous year. In 1999, this fraction was 20%, in 2000 it became 25% and from 2001 to 2007 it was 33%.

As of 2008, the DGF growth rate has been capped more strongly with a ‘pact of stability’ between the national and local governments. The DGF was being based on a forecast of the inflation rate of one year into the future. The DGF was not changed later on if the actual inflation deviated from the forecast.

Demographic changes and macroeconomic shocks

The DGF is not adjusted in order to account for increasing costs due to demographic changes such as population ageing. However, municipal expenditure is slightly sensitive to demographic changes.³⁹ French municipalities are, among other things, responsible for the construction and maintenance of roads, water supply, building and maintenance of cultural and sporting facilities, the construction and maintenance of primary schools, waste collection, public parks and for issuing building permits. A decrease in the number of children results in lower municipal expenditure. The sensitivity of the municipal expenditure to demographic changes, however, is lower than that of the districts.⁴⁰

Moreover, the indexation scheme does not compensate municipalities in case of a negative macroeconomic shock, although this would have a negative impact on their financial situation (e.g. tax revenues would decline and some social expenditure would increase, such as that on social housing, subsidies to charities, municipal job centres, the cost of tax exemptions and a variety of grants for deprived people).

³⁹ The expenditure of municipalities is also sensitive to population growth. A higher population growth requires the municipalities to invest more in local goods such as infrastructure or water supply.

⁴⁰ Districts (‘départements’) have a social expenditure that is sensitive to population ageing. In 2013, the districts and the central government debated about the decrease in revenues of the districts while at the same time their expenditure tended to increase. As a result, the central government allowed the local assemblies to increase local tax rates and further supported the districts via new subsidies.

6.5 The Netherlands

The so-called 'General Grant' is the largest non-earmarked grant given by the central government to the municipalities and, in 2015, amounted to 14.7 billion euros. The General Grant aims to fund municipalities and to equalise differences in costs and local tax bases between municipalities. The General Grant is the largest component of the municipal fund. In addition to the General Grant, the municipal fund consists of grants related to, for example, recently decentralised tasks (i.e. integration grants and decentralisation grants). Municipalities do not have spending restrictions on resources provided via the General Grant.

Dutch municipalities have a low tax capacity and are therefore largely dependent on grants provided by the central government. The size of the General Grant changes from year to year at the same rate as central government expenditure in certain areas.⁴¹ The political reasoning behind this indexation scheme is that central and local governments each take their share in good and in bad times.

Brief history of the Dutch indexation scheme⁴²

Before 1960, the size of the municipal fund, broadly speaking, equalled a certain percentage of several central government taxes. From 1960 to 1994, the annual growth of the municipal fund consisted of a 'volume growth' and a 'nominal growth'. The nominal growth consisted of a price compensation and wage compensation.⁴³ The underlying thought was that the development of the central government expenditure and that of the municipal fund should be in proportion to each other.⁴⁴ Initially, the volume growth overall depended on the volume growth trend of the central government taxes.

During the period from 1960 to 1994, the volume growth rate was modified over the years. As a result of a slowing economy and several budget cuts, the municipal fund became subject to a series of decreases, from 1973 onwards. Eventually, the volume growth rate was set to 1% in 1982. The volume growth rate of 1% was maintained until the system changed in 1995 to the current system. The amounts in price compensation and wage compensation changed over the years, as well. The biggest change occurred in 1988 when both price and wage compensation were set to follow the nominal development of the total government consumption.

⁴¹ Moreover, some integration and decentralisation grants have the same indexation mechanism as the General Grant, whereas others have their own indexation mechanism.

⁴² The majority of this section is based on Verhagen, A.J.W.M., 2015, *Conceptrapport Geschiedenis van de normering*, Den Haag.

⁴³ Initially, there was no clear set of rules to determine when municipalities would receive price compensation and how much municipalities would be compensated. In addition to the volume growth and nominal growth, the municipal fund was also adjusted for other changes.

⁴⁴ A proportional ratio between the development of central government expenditure and the development of the municipal fund was found to be 'reasonable'. Next to the 'proportionality principle', there was also a link between the central government budget and the size of the municipal fund.

As of 1995, the current system was adopted and the development of the municipal fund was linked to the 'net corrected central government expenditure' (NCCGE). The NCCGE is calculated by subtracting the non-tax-related revenues of the central government and several correction posts⁴⁵ from the gross central government expenditure.

In the years after 2008, central government expenditure rose in reaction to the financial crisis. This would have increased the municipal fund, as its size depends on the NCCGE. However, central and local governments agreed on a fixed total (nominal) growth rate of 5.88% in 2009 and 0.48% in 2010 and 2011.

From 2012 onwards, the municipal fund has again been linked to the NCCGE. However, incidental cuts to the General Grant are made by the central government.

Demographic changes and macroeconomic shocks

Dutch municipalities are responsible for a wide variety of tasks. They are, for example, responsible for social security, elderly care, construction of school buildings for primary and secondary education, road construction and maintenance, youth care, and for assisting the unemployed in their job search.

The General Grant does not explicitly compensate municipalities for demographic changes. The grant grows in line with the NCCGE. Municipalities receive no further compensation via the General Grant if the growth in the NCCGE deviates from the growth in the municipal expenditure on services (e.g. in case the central government expenditure is less/more sensitive to demographic changes).⁴⁶

The main Dutch municipal income comes from property tax revenues. Municipalities do not levy a personal income tax. Nevertheless, in case of a large negative macroeconomic shock, such as the financial crisis, local tax revenues of municipalities can decline.⁴⁷ At the same time, municipal expenditure may increase (e.g. on poverty prevention). Note that municipalities are responsible for social welfare benefits, as well. However, these types of expenditure are financed through a block grant. The size of this block grant is counter-cyclically adjusted. Therefore, municipalities do receive compensation for macroeconomic shocks, but this compensation is not made via the General Grant.

⁴⁵ Examples of correction posts are EU-related expenditure and support for developing countries. The reason is that the required growth of the municipal fund is thought to be more aligned with the NCCGE than the gross central government expenditure.

⁴⁶ A large part of the municipal expenditure on elderly care, however, is financed via an integration grant and the so-called 'social fund'. Both the integration grant and the social fund have their own indexation scheme. The indexation scheme of the integration grant depends, to some extent, on the amount of people over the age of 75 who still live independently. However, the integration grant may be added to the General Grant in the near future and the social fund is expected to become an integrated part of the General Grant in 2018. When this happens, both parts will grow in line with the NCCGE.

⁴⁷ Do note that property tax revenues make up less than 10% of the income of municipalities.

6.6 Norway

The central government determines the amount of 'free revenues' (i.e. non-earmarked grants plus tax income) they will allocate to municipalities in year t based on the amount of 'free revenues' in year $t-1$. This amount is increased to cover higher costs due to the expected growth in prices and wages from year $t-1$ to year t , and an additional increase to cover only increases in costs caused by demographic changes, such as population ageing, and any pension costs that exceed the average wage increase. Next, the growth of the largest non-earmarked grant⁴⁸ is equal to the growth of the 'free revenues' minus the expected growth of tax revenues minus the growth of the other non-earmarked grants.

In other words:

Size of the largest non-earmarked grant in year $t = \text{level of free revenues of year } t \text{ (including price and wage adjustments and adjustment for demographic changes)} - \text{estimation}^{49} \text{ of local tax revenues year } t - \text{amount of other non-earmarked grants year } t.$

The central government can influence tax revenues by setting the maximum municipal tax rate on income and wealth. During the last 30 years, not a single municipality has deviated from this maximum tax rate.⁵⁰ Currently, the central government ensures that tax revenues make up 40% of total revenues of the municipal sector as a whole (i.e. municipalities and counties).

In addition to the system described above, municipalities also receive compensation if the central government decentralises tasks or when the municipalities experience more costs due to changes in laws and regulations. This compensation can either be given as an earmarked grant or as a non-earmarked grant. At the same time, the size of the largest non-earmarked grant can be reduced in case the central government's policy reduces municipal costs.

Demographic changes and macroeconomic shocks

Norwegian municipalities are responsible for child care, primary and lower secondary education, elderly care, primary health care and social services. Their expenses are thus sensitive to both population ageing and macroeconomic shocks. Municipalities are compensated for cost increases due to demographic changes (e.g. population ageing).⁵¹ Normally, the expected increase in these costs is covered by the growth in free revenues.

⁴⁸ The largest non-earmarked grant is allocated to municipalities as a per capita grant and is adjusted for both cost equalisation and revenue equalisation.

⁴⁹ The Ministry of Finance provides the estimation of the municipal tax revenue.

⁵⁰ Both general income and wealth are taxed against a flat rate. The income tax revenue is shared between the municipalities, counties and the central government, whereas the revenue from the wealth tax is divided over the municipalities and central government.

⁵¹ First, a projection of population numbers is made for each age group and this forecast is then multiplied with the actual historical costs made for that age group. The demographic costs in a given year are the sum of expenses for all the age groups.

Municipalities are not compensated for expenditure increases (e.g. on social services) due to macroeconomic shocks. On the income side, municipalities do not automatically receive additional funds when the macroeconomic shock is unexpected. The final size of the largest non-earmarked grant is announced in December $t-1$. The central government has followed a practice, at least over the past two decades, of the level of free revenues in the revised budget in May in year t (incl. new tax income estimates) being the basis for the calculation of the growth in free revenues in year $t+1$. The municipalities will have to cover losses from lower tax revenues in the period from January to May. If the municipal tax bases continue to drop throughout the year (from May to December) this will not affect the level of free revenues in year $t+1$.

When the level of free revenues is set, maximum tax rates are set by the central government in order to achieve the goal that tax revenues should make up 40% of total revenues (including not only free revenues but also earmarked grants, fees and charges and other revenues). If tax revenues are projected to drop, normally, the tax rate is increased in order to achieve the goal of 40%. The largest non-earmarked grant is then set as the residual of the level of free revenues and the projected tax revenues.

The size of the largest non-earmarked grant is not automatically adjusted afterwards, but the budget may be revised in May. For example, if the tax revenue level estimated in December $t-1$ was far off from the actual tax revenues in year t , municipalities are not automatically compensated. Thus, an unexpected macroeconomic shock that lowers municipal tax revenues during year t will have no influence on the grant of year t .

The central government can, however, also choose to adjust the size of the largest non-earmarked grant by a discretionary decision. For example, in 2015, the central government decided to increase the grant because, during the year, the actual tax revenues were lower than expected. Nevertheless, the main idea is that municipalities keep any surpluses from 'good years' and use these as a buffer to cover losses in 'bad years'. In addition, municipalities are expected to adjust their level of expenditure to their income.

6.7 Portugal

The largest non-earmarked grant given to the municipalities is from the Financial Equilibrium Fund (FEF). The FEF grant consists of two equally large components: the Municipal General Fund (MGF) and the Municipal Cohesion Fund (MCF). The MGF ensures that municipalities receive sufficient funds to fulfil their tasks, whereas the MCF corrects differences between municipal expenditure needs and municipal tax capacity.

Conform the Local Finance Law of 2013, the size of the FEF grant is equal to 19.5%⁵² of the average revenues from the personal income tax (IRS), the corporate income tax (IRC) and the

⁵² From 2001 to 2013, municipalities received 25.3% of these taxes. However, in order to meet budgetary targets, the central government reduced this percentage to 19.5%.

value added tax (IVA) collected in year $t-2$.⁵³ Municipalities receive 19.25% of the average tax revenues from these three state taxes, whereas the remaining 0.25% is granted to inter-municipal entities.⁵⁴ Furthermore, there is no component that compensates municipalities for any inflation between year $t-2$ and year t . The formula that determines the FEF grant is:

$$\text{FEF Grant year } t = 0.195 * \text{average tax revenue from IRS, IRC and IVA year } t-2$$

The development of the FEF grant thus only depends on the development of three central government taxes.

The development of the amount in financial resources received by *individual* municipalities from the FEF grant is subject to a floor and a ceiling. These constraints prevent that large fluctuations in this amount occur between year t and year $t+1$.⁵⁵ According to Local Finance Law, the sum of the FEF grant and that of the Municipal Social Fund (MSF)⁵⁶ cannot decrease by more than 5%, in case a municipality has had a local tax collection per capita that is larger than 1.25 times the national average for three consecutive years. The sum of the FEF and MSF grants cannot decrease by more than 2.5%, in case municipal tax revenues per capita have been smaller than 1.25 the national average during the previous three years.

In addition, the sum of the FEF and MSF grants is not allowed to increase by more than 5% in any given year. This mechanism is aimed at the financial resources provided to individual municipalities and, in general, has no implications for the development of the total size of the FEF grant. The reason for this is that the compensation received by municipalities is financed by reducing the grants received by other municipalities whose transfer exceeds their minimum guaranteed value.⁵⁷

However, this mechanism can affect the total size of the FEF grant in case of a large negative macroeconomic shock. If, for example, the calculated transfer of every municipality turns out to be lower than their guaranteed value, then the FEF grant is adjusted in a way that each municipality still receives its minimum guaranteed value.⁵⁸

Moreover, the central government can modify the FEF grant by discretionary decision in case temporary or emergency measures are required. An example is the reduction in the FEF grant during 2011 to 2014 in order to meet the fiscal consolidation objective of the structural adjustment programme for Portugal.

⁵³ In other words, the size of the FEF grant is the sum of the three central government taxes (IRS, IRC and IVA) divided by 3 and then multiplied by 0.195.

⁵⁴ The underlying thought of this mechanism is that the allocation of public resources between the state and local authorities should be equitable and stable and that there exists financial coordination between them (e.g. in order to meet budgetary targets).

⁵⁵ Note that even though the tax base fluctuates over time as a result of the economic cycle, the tax revenues collected by the central government may be stable over time if tax rates are adjusted.

⁵⁶ The Municipal Social Fund is a fund that consists of an earmarked grant.

⁵⁷ This is done by proportionally deducting the difference between the calculated transfers and the guaranteed minimum amounts.

⁵⁸ As stated earlier, this minimum guaranteed value is dependent on the development of the FEF and MSF grants.

Decentralisation of tasks does not lead to an increase in the FEF grant, but is usually compensated via an earmarked grant that is added to the MSF.

Demographic changes and macroeconomic shocks

The indexation mechanism does not compensate municipalities for changes in demographic composition. The largest part of the expenditure of Portuguese municipalities is not sensitive to demographic changes. The only channel through which the municipality is affected by population ageing is via its expenditure on pensions for civil servants. Municipalities are responsible for co-financing these pensions but are not compensated for this.⁵⁹ Other responsibilities of Portuguese municipalities are urban waste disposal, water supply, drainage network, parks and gardens, social and cultural facilities, primary schools⁶⁰ and the municipal road network.⁶¹

Furthermore, Portuguese municipalities have no expenditure that is sensitive to macroeconomic shocks. However, their revenues are. The indexation scheme contains no compensation mechanism in case municipal revenues are reduced. In Portugal, both the central government and the local authorities share the burden of macroeconomic shocks.

6.8 Spain

The main funding received by Spanish municipalities from the central government is the so-called 'Municipalities' sharing in central taxes' (MSCT). The development of the largest non-earmarked grant depends on the development of central government taxes, as will be discussed in more detail below. Currently, the MSCT represents about 20% of the total local government income.⁶² Furthermore, the size of the grant may be altered if a redistribution of tasks between levels of government takes place.

The current indexation scheme has been in force since 2002, and makes a distinction between large and small municipalities. Municipalities with a population of more than 75,000 and municipalities that are administratively different from other municipalities – for instance because they are the provincial capital – are identified as 'large' municipalities. Those with a population of under 75,000, and that do not have a particular distinction, are known as 'small' municipalities.⁶³

⁵⁹ In case of insufficient funding to cover the expenditure on pensions for municipal civil servants, the state may increase their transfers to the pension systems.

⁶⁰ Excluding teachers' salary payments.

⁶¹ Nevertheless, in February 2015, the central government approved a legal framework by which tasks in areas such as education, health care, social security and culture will be decentralised to municipalities and inter-municipal entities in the future. The resources for these newly decentralised tasks are provided as an earmarked grant via the MSF.

⁶² The total income is excluding financial revenues such as loans.

⁶³ Additionally, there is a separate system for so-called 'tourist municipalities'. This system is not discussed here, since it concerns a relatively small group of municipalities.

Large municipalities

The MSCT grant that large municipalities receive in year t consists of two components: the ‘territorialized’ share and the Complementary Fund.⁶⁴

First, the territorialized share depends on the revenue from three central government taxes: personal income tax, VAT, and the EU harmonised excise duty. Municipalities receive 1.2561% of personal income tax revenues, 2.3266% of VAT revenues and 2.9220% of the revenue from the EU harmonised excise duty. The development of the territorialized share thus depends on the development of these three taxes over time.

The second component is the complementary fund. The complementary fund was first added in 2004 (the base year). The size of the complementary fund in the base year was equal to the difference between the territorialized share of the base year and the size of the non-earmarked grant to large municipalities in 2003, multiplied by an index that reflected the growth in National Tax Revenue (NTR)⁶⁵ between 2003 and 2004. The complementary fund develops over time with a rate equal to the change in the NTR, excluding the part allocated to the regions. The NTR is composed of all central government taxes.

During year t , municipalities receive a monthly territorialized share, based on a forecast of the NTR by the Central Tax Agency. The final amount of the territorialized share for year t is known in the year $t+2$. The difference between the amount paid in year t and the final amount as calculated in year $t+2$ is transferred to municipalities in year $t+2$. Thus, each municipality receives monthly financial resources for year t and the resultant amount of the final settlement over year $t-2$.

Small municipalities

For small municipalities, the size of the largest non-earmarked grant is annually updated by the index that reflects the growth in the NTR.⁶⁶

Demographic changes and macroeconomic shocks

Since the development of the largest non-earmarked grant is related to the NTR, municipalities share the risk of higher and lower tax revenues of the central government. This also implies that the size of the grant is sensitive to macroeconomic shocks. At the same time, the municipal expenditure is not influenced in case of a negative macroeconomic shock, nor by demographic pressure. The reason for this is that municipalities do not have any task that is influenced by these events. Spanish municipalities are mainly responsible for public lighting, waste collection, public cleaning, sewerage system, drinking water supply, libraries and fire safety.

⁶⁴ In total the territorialized share represents approximately 1,5% of the total income of municipalities.

⁶⁵ Excluding the growth in personal income tax, VAT and excise taxes allocated to the regions.

⁶⁶ The resources of the non-earmarked grant are divided across the municipalities via a scheme that accounts for differences in costs between municipalities.

6.9 Sweden

The total size of the non-earmarked grant in Sweden is not annually adjusted conform a predetermined formula. Swedish municipalities receive financial resources from the central government via a non-earmarked grant that consist of an income equalisation grant, a structural grant and an adjustment grant. In brief, the size of the largest non-earmarked grant depends on local tax bases, political considerations and the 'Local Government Financing Principle'.

The size of the equalisation grant depends on the local tax capacity of municipalities. Municipalities whose tax base is lower than 115% of the national average tax base receive a compensation based on a formula consisting of the national average and the municipal tax base, the national average tax rate and county-level tax rate, and a compensation rate of 95%.⁶⁷

Municipalities whose tax base is higher than 115% of the national average tax base pay a fee based on a formula using the national average tax rate and county-level tax rate, and a paying rate of 85%.

Note that the income equalisation grant is mainly financed by the central government, since the fees paid by municipalities are far less than the compensation provided by the central government.

The structural grant is a small component of the non-earmarked grant and consists of parts of the previous equalisation system.

The last component is an adjustment grant. The adjustment grant allows the central government to make adjustments based on the demographic and economic changes based on forecasts carried out by the Ministry of Finance. The demographic pressure is calculated by using a forecast of the number of people in different age groups (5-year classes) made by Statistics Sweden. For each class, the estimate is multiplied by the historical average level of public consumption of that class. The government can increase or decrease the total size of the non-earmarked grant if this is deemed necessary by politicians. This was, for example, the case during the last financial crisis when the central government increased the size of the adjustment grant.

Another factor that influences the size of the adjustment grant is the Local Government Financing Principle that stems from 1993. In this unofficial agreement, the central government agreed to compensate the municipalities financially in case the central government undertakes a policy that directly influences the operations of the municipalities (e.g. the decentralisation of tasks or limiting the local tax autonomy). These additional funds are, normally, added to the adjustment grant.

⁶⁷ Note that the division of tasks between municipalities and counties differs between counties.

In addition to the resources provided by the central government, there is a horizontal cost equalisation grant, which is annually updated by Statistics Sweden. The horizontal cost equalisation grant intends to even out structural differences in costs of mandatory tasks between municipalities. Municipalities whose average structural costs per capita are lower than the national average pay a fee in order to compensate municipalities that face an average structural cost per capita that is higher than the national average. Thus, the Swedish equalisation system does account for differences in costs between municipalities.

Demographic changes and macroeconomic shocks

Swedish municipalities are, among other things, responsible for kindergartens, primary and secondary education, elderly care, waste management, fire department, public libraries and social services.⁶⁸ The total size of the grant can change via the adjustment grant due to demographic changes.

Furthermore, Swedish municipalities have a large tax autonomy and a large part of their incomes consists of local taxes.⁶⁹ Therefore, the income of Swedish municipalities is sensitive to macroeconomic shocks. The total size of the grant is not automatically adjusted to address such shocks. Nevertheless, the central government can choose to increase the size of the non-earmarked grant via the adjustment grant. This was done during the last financial crisis when additional funds were, mostly temporary, added to the non-earmarked grant.

⁶⁸ In addition, Swedish municipalities can also voluntarily take on tasks in areas such as culture, leisure, energy supply and housing.

⁶⁹ The local income tax is the most important source of tax revenues.

7 Appendix D: Expert Survey

Several expert surveys were created for the purpose of this research. The questionnaire sent to most international experts is provided below. In addition, some experts received a follow-up questionnaire and some international experts were also contacted by phone. Finally, all consulted international experts were asked to read through Appendix C in order to check whether the system of their country was correctly documented.

Questionnaire concerning non-earmarked grants to municipalities

Financing of municipalities:

- 1a) What is the size of the largest general grant, given to municipalities, expressed in billions euros?
- 1b) What is the share of the largest general grant, given to the municipalities, as a percentage of municipalities' total income?

Indexation of the largest general grant:

- 2a) What was the underlying thought behind the current indexation scheme (i.e. the mechanism that determines how the general grant develops over time)? For example, does the central government aim to compensate municipalities for increases in their costs? Or does the central government link the growth of municipalities' expenditures to the growth in e.g. central government expenditures?
- 2b) Please describe the current indexation scheme of the grant. For example, does the total macro size of the general grant (i.e. the total grant to municipalities) in year $t+1$ depend on the size in year t and a correction for increases in wages and prices or other costs?
- 2c) Could you indicate if forecasts of, for example, expenditures or revenues are used for determining the development of the general grant over time? And if so, who is responsible for making those forecasts (e.g. an independent institute or the government)?
- 2d) Are there other factors, in addition to those mentioned at point 2b and 2c, that influence the size of the general grant (e.g. decentralisation of tasks, changes in regulation)?
- 2e) Does the indexation scheme compensate municipalities for increases in costs as a result of an ageing population, such as expenses on (elderly) care or pensions of civil servants who work for municipalities? If this is not the case and the total macro size of the grant is not adjusted, then how do municipalities cope with these increased expenses?

Please indicate in case municipalities do not have to finance any costs dependent on an ageing population such as (elderly) care and pensions.

- 2f) Does the indexation scheme compensate municipalities for macroeconomic shocks (e.g. increased social security expenditures or decreased tax revenues)? If this is not the case and the total macro size of the grant is not adjusted, then how do municipalities cope with negative shocks?

Please indicate in case there are no budgetary effects of macroeconomic shocks for municipalities.

Timing:

- 3a) At what moment do municipalities know the first estimate of the size of the grant of year t ?
- 3b) At what moment do municipalities know the actual size of the grant of year t ?

Stability/forecastability:

- 4) Could you provide some information on how stable the size of the grant is over time?
- 5) Could you provide some information on the forecastability of the grant?

Spending of the grant:

- 6) How free are municipalities in deciding on how to spend their share of the general grant? Do they enjoy total freedom, or is part of the general grant tied to specific spending programs?

Thank you/contact information:

- 7) Thank you very much for kindly answering our questions. Could you perhaps, if you are so inclined, provide us with your contact information (name, e-mail address/telephone number) in case we have questions regarding your answers?

Publisher:

CPB Netherlands Bureau for Economic Policy Analysis

P.O. Box 80510 | 2508 GM The Hague

T +31 70 3383 380

info@cpb.nl | www.cpb.nl

September 2015