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Grant design in Denmark. A normative composite index?

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Grant design and possibilities of a normative composite index - some experience from Denmark

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Abstract

The Danish public sector is relatively decentralised, especially on the expenditure side. There are sizeable grants to local authorities, both general grants and various forms of earmarked grants. Grants have become more important for regions including recently also earmarked grants. Also for municipalities grants have become more important but earmarked grants have been reduced somewhat by abolishing reimbursement for most public consumption areas, and by redesigning reimbursement schemes for income transfers. The Central Government sees it as important for local accountability that general grants play a role for e.g. equalisation transfers, macroeconomic regulation and compensation for changed responsibilities. But C. G. also desires via earmarked grants to influence local government's decisions where there are strong merit aspects. At the local level the local authorities' room for manoeuvre, the aspect of documentation of production and the variation of needs also have to be taken into account. This boils down to four crucial factors for C.G. to consider: local discretion, needs variance, measurability of production and merit aspects. The paper attempts to describe these four concerns in a normative composite index to serve as a guide in choosing between using earmarked grants or general grants. The index illustrates the potential for different types of earmarked grants in three situations: grants for eldercare, for growth in hospital production and for municipal expenditures to sickness benefit schemes. Discretion is found crucial to the success of earmarked grants but differences in possibilities of measurement are as equally important to the potential use of earmarked grants. Although documentation and measurement might be developed further in following years the use of earmarked grants must be weighted against the consideration that general grants support a flexible allocation across expenditure functions, making general grants preferable in most cases.

1. Introduction²

The question of how to shape grant systems is a classical one within the field of fiscal federalism. On the one hand different levels of government has a degree of autonomy, but on the other hand the functions delegated to local governments often are more national than local public goods so that the levels must be linked together in a lot of respects, and the economic transfers from the Central Government (C.G) to local governments (l.g.'s) is an important instrument for creating such a link.

The economic transfers are established on the background of the division of responsibilities between the levels, the character of those responsibilities and the characteristics of the specific expenditure areas. Also the development in techniques of data collection and information storage has profound effects for how to design grants. All those circumstances are changing over time and therefore the question of what is the 'best' grant system is more or less permanently on the agenda of public economic policy.

This is also the case in Denmark, which has experienced a whole series of reforms of grant systems since the first comprehensive reform of local government in 1970. Sometimes the change

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of the grant system has been the main focus of the reforms, while at other times it has been a consequence of change of responsibilities or other things.

Section 2 gives a short description of the public sector at different levels in Denmark. Section 3 attempts to identify some trends and developments for grants financing of regions and municipalities. In section 4 the general motives for the Central Government in designing the grant systems are described, and these motives are in section 5 compared to the conditions and preferences of local governments for the use of different kind of grants. In section 6 the variables from the former sections will be summarized in one single composite 'normative' measure or index, and the definition of this measurement made dependent on two different scenarios. Either when the Central Government is to take decision about decentralising new functions, or when the aim of the C. G. is that local government policies should conform better with national priorities so it sees a need for encouraging local government's activities in existing areas. Section 7 attempts to illustrate the possible use of this index for a few selected Danish cases and to evaluate the character and targets of those initiatives. Finally some conclusions will be made in section 8.

The classification of grants to be used in this paper based on the standard CoE/OECD classification but adds some new dimensions:

- a. general grants (=block grants): grants transferred to local governments according to a formula based on objective criteria
 - a.1. general grants – i.e. distributed without conditions of any kind
 - a.2. ring fenced block grants – i.e. general grants distributed with conditions about local activity
- b. earmarked grants: grants transferred to local governments according to activity
 - b.1. reimbursement (matching) grants: a certain percent of l. g. expenditures are reimbursed (so-called open-ended earmarked grant)
 - b.2. activity linked grants
 - b.2.1. stepwise grants for income transfers, i.e. the earmarked grant depends on certain local activities in such a way that the size of the earmarked grant is reduced gradually depending on how well central directions are followed (i.e. if the individual length of the period of transfers to a person exceeds the central guidelines)
 - b.2.2. meter grants, i.e. grants linked to a single – simple - measure of production (e.g. reimbursements with a limit maximum for amount per recipient)
 - b.2.3. production linked grants, i.e. grants linked to a composite measure of production
 - b.2.4. application grants, i.e. grants depending on prior approval (for capital or current spending).

2. The organisation of Danish public sector and fiscal federalism

The financial system of the public sector must be evaluated taking into account things like the size of the sector, the tasks, and how the sector is organised. Denmark has one of the largest public sectors in the world – in relative terms. There are three tiers (and some social security funds of minor importance). They are the Central Government, the regions and the municipalities, the latter two constitute the local governments. *Table 1* gives an impression of the division of tasks between levels of government (i.e. using definitions from the official national accounts). It is obvious that the decentralized sectors are very important. For the social protection and health functions around 90 pct. or more of the expenditures are regional/municipal, but also for education a significant share of the expenditures are municipal. In broad terms it could be said that 'allocation' is a predominantly

local government responsibility, while 'fiscal policy' and 'redistribution' is mainly taken care of by the Central Government³.

Table 1. Public expenditures of government classified by functions, 2007.

	Central governm.	Municipalities	Regions	Social sec. funds	Total public exp.
----- Bn. DKK -----					
1. General public services	86,6	20,7	0,6	-	107,9
2. Defence	26,3	0,2	-	-	26,6
3. Public order and safety	15,5	1,5	-	-	17,1
4. Economic affairs	33,7	21,6	1,5	-	56,7
5. Environmental protection	4,9	4,7	0,4	-	10,0
6. Housing and community amenities	6,1	4,0	0,0	-	10,1
7. Health	0,8	28,3	94,0	-	123,1
8. Recreation, culture and religion	11,8	14,4	0,0	-	26,2
9. Education	68,7	55,9	0,0	-	124,6
10. Social protection	36,8	279,6	6,8	37,2	360,4
Total	291,2	430,9	103,4	37,2	862,7

Source: Data provided by Danmarks Statistik (2009).

The local share of the public sector is very high in Denmark, cf. *table 2*.⁴ In particular expenditures are decentralised more than in most other countries. The data are from 1998/1999 but decentralisation of expenditures has presumably become even stronger since then – data for 2007 are for Denmark shown in brackets. However, when it comes to local taxes decentralisation in Denmark has been reduced in 2007 as a consequence of the 2007 structural reform of the Danish public sector changing the former tax-financed counties into grant-financed regions, cf. later.

Table 2. Municipal¹ expenditures and taxes in selected countries, 1998/1999 (Denmark also 2007).

	Municipal ¹ expenditures pct. of GDP	Municipal ¹ expenditures pct. of total public expenditures	Municipal ¹ taxes pct. of total tax revenue
----- Pct. -----			
Denmark (2007 in brackets)	31(32)	55(62)	32(24)
Sweden	26	43	31
Finland	20	37	22
Germany	8	18	8
Austria	9	18	10
UK	11	27	4
Netherlands	18	42	6
Belgium	7	15	5
Italy	12	25	12
Spain	6	16	17

¹ »Local governments«, i.e. municipalities and counties /regions. Source: OECD. *National Accounts 1988-1999, vol.2 (2001)*, *Revenue Statistics 1965-1999 (2000)* and Danmarks Statistik. *Statistiske Efterretninger, Offentlige finanser, 2008:25*.

³ Redistribution is here defined as transfers between the rich and the poor. Local governments perform another type of redistribution in favour of families with children and of elderly in need of care.

⁴ See also UNPAN (2004) for an international comparison.

The discrepancy between the share of expenditures and taxes is financed by transfers from the Central Government to the other sectors, cf. *table 3*.

Table 3. Financing tasks of public subsectors, 2007.

	Central government	Municipalities	Regions	Social security funds	Total public expenditures
	----- Bn. DKK -----				
A. Tasks to finance	291,2	430,9	103,4	37,2	862,7
B. Financed by other subsectors	-301,1	183,0	97,8	20,3	
from Central Government	.	204,0	76,8	20,3	301,1
from municipalities	-204,0	.	21,0	-	-183,0
from regions	-76,8	-21,0	.	-	-97,8
from soc. security funds	-20,3	-	-	.	-20,3
C. Financed by private sectors	592,3	247,9	5,6	16,9	862,7
from deficit	-78,5	3,3	0,2	-0,0	-75,1
from sale of goods and services	19,8	24,1	4,7	0,0	48,6
from interest and transfers	47,6	20,7	0,7	0,3	69,3
from taxes	603,4	199,9	-	16,6	819,9
* on production- and import	281,2	19,2	-	-	300,4
* on incomes and property	318,2	180,7	-	-	498,8
* social sec. contributions etc.	4,1	0,0	-	16,6	20,7

Source: Danmarks Statistik: *Statistiske Efterretninger, Offentlige finanser, 2008:25*.

Section “A” shows the distribution of tasks where section “C” describes how the financial burdens are distributed. In other words, since those distributions differ we get the internal economic transfers. The coloured figures, especially the red marked, are the important factors in this paper.

3. Trends and development of transfers to local governments

3.1. Financing regions

As already indicated the regional level – before 2007 the counties – is now financed by grants as different from before when tax financing was the primary revenue source for the counties⁵.

The regions are hereafter financed by grants alone, mostly general grants (type a.1 - around 75 pct.), mainly from the Central Government, but also from 2007 with a small part of the general grants stemming from the municipalities.

The rest of the grants (around 25 pct.) are earmarked grants of the activity related type:

- from 2002 a Central Government financed grant depending on the regional increase in hospital production (a production linked grant, i.e. type b.2.3).
- from 2007 a municipal financed grant related to a range of hospitalizations and health care services for the population of the municipality (a meter grant, i.e. type b.2.2).

⁵ In the early 1990’ies it was even considered, although with most enthusiasm by the counties, to abolish on the whole the block grants and rely only on own taxes. Taxes were apparently seen as “closer to the citizens”. In the end, however, the Central Government was not willing to give up the block grants and thereby, it was found, loose an instrument of financial regulation.

So the weight on grants financing has increased dramatically. Note that this was garnered with central political declarations to create (more) equal access to health services for the population irrespective of geographical location.⁶ There also have been attempts to create new regional earmarked grant schemes which are linked to activity.

3.2. Financing municipalities

For municipalities general grants (a.1) and reimbursement schemes (b.1) have been the traditional way of transferring funds from the Central Government. Activity related schemes, especially application grants (b.2.4) have existed but on a smaller scale.⁷

Table 4. Central Government transfers to municipalities¹.

Transfers:	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008
Share (pct.):													
Reimbursements	55,2	59,8	56,7	51,7	53,8	55,1	49,4	50,5	46,9	45,9	43,0	45,7	44,9
General grants	44,8	40,2	43,3	48,3	46,2	44,9	50,6	49,5	53,1	54,1	57,0	54,3	55,1
Total	100,0	100,0	100,0	100,0	100,0	100,0	100,0	100,0	100,0	100,0	100,0	100,0	100,0
Total in bn.DKK	34,2	35,5	39,7	43,8	43,6	47,3	56,6	58,3	66,3	68,8	75,4	89,8	94,4
Pct. of expenditures ²	19,9	19,6	20,9	21,9	20,7	20,8	23,6	23,2	25,2	25,1	26,5	25,6	26,9

¹1996-2006 municipalities excl. Copenhagen and Frederiksberg. ²Gross expenditures excluding VAT

Note.: Reimbursements and expenditures exclude certain schemes with 100 pct. reimbursement from Central Government, i.e. social age related pensions and child benefits. 2007- and 2008-figures are from budgets.

Source: Indenrigs- og Sundhedsministeriet, Velfærdsministeriet: *Det kommunale budget*.

Table 4 shows that reimbursement schemes (b.1) until about 2004 gradually (although not smoothly) lost ground leading to a rise in the share to general grants, and during the whole period it seems that grants have become more important in financing municipalities.

Table 5. Central Government reimbursement schemes for municipal expenditures, 1985-2010.

Municipal expenditure area	Reimburse-	Reimburse-	Reimburse-	Reimburse-	Public Income-
	ment rates	ment rates	ment rates	ment rates	
	1985	1995	2000	2010	sumpt.
Old age pension (excl. personal suppl.).....	100	100	100	100	+
Early retirement pension (new allotment)	100	50	35	35	+
Child benefits	100	100	100	100	+
Sickness benefits	75	100/50 ¹	100/50/0 ¹	100/65/50/35/0 ¹	+
Housing benefits, elderly persons	75	75	75	75	+
Specialized social expenditures	50 ²	50 ²	50 ²	50/25 ³	+
Unemployment insurance benefits.....	.	.	.	100/75/50 ⁴	+
Cash benefits, rehabilitation benefits.....	50	50	50	65/35 ⁵	+
Welfare benefits to refugees	100	75	+
Housing benefits for households.....	40	40	50	50	+
Care for elderly people.....	50	0	0	0	+
Kindergartens.....	50	0	0	0	+
Home care, nursing care.....	50	0	0	0	+

¹ Reimbursement rates lower the longer the period allowed by the local authority of receiving benefits for a person.

² Mutual reimbursement scheme between counties and municipalities (e.g. counties cover 50 pct. of municipal expenditures).

³ Reimbursement only for expenditures exceeding 1.680.000 DKK (50 %) and 900.000 DKK (25 %).

⁴ Reimbursement rates are lowered the longer the period of receiving unemployment benefits for a person.

⁵ Reimbursement rates depending on 'active' rehabilitations efforts (65%) cf. 'passive' transfers to unemployed people (35%).

⁶ Indenrigsministeriet, 2005

⁷ Indenrigs- og Socialministeriet, 2009b.

4. Types of grants and Central Government's preferences

Central government and Parliament has in a unitary country like Denmark the overall responsibility of designing grant schemes. It is therefore natural to take the Central Government position as the starting point when discussing how to organize grants, i.e. which general motivations are important for the Central Government when deciding between general and earmarked grants?⁸

There are two motives at the agenda for C.G.: supporting accountability at the local level and obtaining influence for the central level. Sadly, however, those motives are often competing when it comes to grant design.

4.1. Accountability at the local level

One view is that Central Government, having the responsibility for the public sector being efficient, needs to support local accountability, and that this concern must be decisive for the design of grants. They must support that local governments in an efficient manner are weighting citizen's preferences against costs, comparing possible production of services in accordance to correct relative prices and using the most technical efficient way of production. With this in mind there normally should be no veil for local governments between cost, demands and methods, and general grants will be the natural choice if some economic transfers to local governments have to be made.

For these purposes the Central Government might even consider to introduce specific subsidies for the most efficient local governments in order to encourage accountability. This is a complicated policy to implement for three reasons.

- *Firstly*, it is difficult to establish a reliable measure of efficiency using parametric or non-parametric techniques. In a Danish setting this has not been possible. The mere fact that the various measurement techniques produce very different results poses a problem to reliability of the measure, cf. Finansieringsudvalget (2004, chp. 20).
- *Secondly*, it is difficult to distinguish between factors which the local government is responsible for and factors which have to do with external conditions.⁹
- *Thirdly*, the use of grants in support the 'successful' local governments' economy may from the political opposition be criticised as punishing the authorities with economic problems who are not inefficient but deprived by other reasons.

The conclusion of the preceding considerations suggests that general grants should be the first choice.

4.2. Influence for the central level – local or central priorities

But another view is that most of the decentralised welfare services are more in the nature of national than of local public goods and sees the benefits of decentralisation to be more in the field of administrative efficiency than in the allocation of resources. This view would require that the grant design supports the central government preferences for allocation.

In this view the Central Government/Parliament has a need to influence the decisions on the local level. The Central Government has a wide range of instruments at hand for this purpose, i.e. legislation, recommendations, agreements – and economic transfers. In the last case earmarked grants linked to the activity will be relevant. There are many examples of such grant designs to induce local authorities to take national priorities into account.

⁸ About transfers serving many purposes see also OECD Network (2006).

⁹ The problem of stimulating or discouraging amalgamation of local governments also links to this question.

For local governments providing services and taxing the broad population, it may seem reasonable to concentrate the effort around the interests of some sort of “median citizen” (median voter). This actually can be seen as an advantage for local government decision making compared to decisions taken by the national Parliament.¹⁰ At the same time the nation expects the local governments – and also the median voter - to take into account that needs differ across the population and no citizen should be left behind. And it cannot be excluded that local governments, when listening to the local electorate, acts contrary to “minorities” in some situations. Use of waiting lists for managing budgets is the archetypical example of that. But the centre does not accept the local use of waiting lists (for health treatment, kindergartens, nursery homes etc.). Earmarked grants can be one instrument of motivating local governments to take into account the national priorities (regulation, of course, is another often used instrument).

In Denmark many schemes of earmarked grants can be understood in that context. For kindergartens and care for senior citizens a reimbursement scheme was established in 1994 offering 30-50 pct. extra reimbursement for municipalities increasing expenditures - especially if their level of expenditures initially were low.¹¹ Later, for kindergartens the municipalities with no waiting list were provided with the possibility of increasing parents’ payments to kindergartens (very much like an earmarked grant). Those measures have been successful in the sense that it has been possible to implement a legal regulation implying that municipalities are now not allowed to use waiting lists as a rationing device for children waiting for kindergarten and being more than ½ year of age.¹² Separate schemes for nursing homes (residential homes) and health services for hospitals also have been implemented, cf. section 7 below.

Other examples are found in the central concern for prevention of certain amenities of national value, e.g. cultural and historical sites, or the national interest in giving the population in less densely populated areas and islands good living conditions, e.g. supporting ferry routes to small islands, have been the argument for earmarked grant schemes. Also treatment of certain vulnerable parts of the population such as refugees and disabled persons has given rise to earmarked schemes in Denmark (cf. separate reimbursement scheme for refugee expenditures mentioned in *table 5* above).

All this may be seen as results from the fact that the Central Government/Parliament might simply have another view than the average local government about what are the most important areas to prioritize. To avoid the risk of appearing too patronising towards local governments the instruments has in some of these cases been different designs of ring fenced block grants (a.2) instead of earmarked grants (maybe with earmarked grants more to be seen as a kind of threat to the local governments if they fail to respond to central level wishes). Examples of this solution are various schemes for financing extra effort for elderly people referred to in section 7.

4.3. Other motives for the Central Government

Besides securing accountability and obtaining influence some other motives exist for Central Government¹³.

¹⁰ With fulfilment of assumption about monotony of preferences on expenditures and taxes it is easier to avoid ‘failures’ in decision making at the local level, e.g. Arrow’s voting paradox (Arrow, 1963). In Denmark a famous example of what ‘inferior’ questions may be influential to the outcome of a Parliamentary decision is the so-called Atom-elections (“Nuclearweapon-election”) in 1988 when the possibility of US ships possibly carrying nuclear weapons when visiting Danish harbours suddenly became a very important question for the general elections to Parliament.

¹¹ Finansieringsudvalget (1998, chp. 6), Mau Pedersen (1995, chp. V).

¹² Larsen et al (2009).

¹³ The next three sections is not an exhaustive list. Also transfer of tax revenues from the central to the local level as well of grants for equalisation could be mentioned, cf. Mau Pedersen (2007).

4.3.1. Macroeconomic regulation of local government finances – countercyclical grants

It can be argued that local government's responsibility of being a stable provider of local public goods to the population requires stable finances. Central Government is expected to protect local governments from the economic consequences of cyclical swings in revenues and expenditures. In Denmark, as in a number of other European countries, this policy has recently resulted in countercyclical regulations of the general grants, and local finances have become part of the automatic stabilisers in the fiscal policy. A share of the general grants in Denmark (the so-called 'balance grants') is by legislation set aside for this purpose so that this has become a legislated fiscal rule for Danish budget policy.

Since the purpose is counteracting influence from the business cycle and nothing else it seems obvious to use general grants instead of earmarked grants.¹⁴ Regulating general grants may also be an instrument for intentionally macroeconomic policy or control, i.e. making a fiscal stimulus for local government activity, or securing local governments living up to agreements with Central Government.¹⁵

4.3.2. Compensating for change in responsibilities between levels with general grants

A role for the general grants may also be to serve as a compensating mechanism when mandates and responsibilities are changed between the levels - or more generally when the Central Government makes regulations that implies increased or reduces costs for local governments. This kind of compensation is being offered by nearly all European governments (see Council of Europe (2008)), and has a long tradition in Denmark as an integrated part of the negotiation system.¹⁶

Since the Central Government usually takes a lot of initiatives and makes many decisions with consequences for local government's expenditures it has in Denmark been seen as most practical to compensate via the general grants, i.e. without interfering with expenditures on certain areas. This policy is seen as efficient but is rare among other countries, and in nearly all other European countries compensation is made with earmarked grants (Council of Europe (2008)). And also in Denmark this policy may be challenged for more fundamental or far reaching changes, and earmarked grants and/or corrections of the equalisation system may gather more appeal.

4.3.3. Motivating local governments to change production methods – block grants

Finally, the Central Government may find that certain ways of production should be given more or less weight in local governments. Use of IT, contracting out, changing the composition of current versus capital production factors may be on the agenda - or simply finding more effective mechanism of production.

Targeted earmarked grants may appear the ideal instrument, but to avoid accusations of patronising the Central Government tends in Denmark to abstain from proper earmarked grants and prefer to use less forceful instruments instead like negotiated agreements, recommendations etc. Most lately in Denmark a kind of ring fenced block grant schemes has been introduced for encouraging investments on certain areas 'close to the citizens'.¹⁷

¹⁴ The consequence of such a policy *queteris paribus* of course is aggravated swings in Central Government budget balance, e.g. in Denmark 2008-2010 a deterioration of more than 7 pct. of GDP (Finansministeriet (2009), Larsen et al (2009)).

¹⁵ From 2009 a law has been passed in Denmark implying that 1 bn DKK of block grants can be withhold if the sector of local governments do not make their overall budgets in accordance with especially agreed expenditure limits.

¹⁶ In Danish the principle from 1984 has been named "DUT" (Det Udvidede Totalbalanceprincip, i.e. translated 'The Extended Principle of Total Balancing'). See e.g. Sørensen et al (2007).

¹⁷ As part of the governments "Quality reform" a fund of 50 bn. DKK has been established to be used primarily for supporting investments in hospitals, schools etc. for the years 2009-2018. For municipalities the allocations from the fund in 2009 and 2010 will be distributed in accordance with number of inhabitants in the single municipalities, i.e. like

5. Grants in relation to local government conditions

The possible outcomes for the choice of grant design based on the Central Government's preferences discussed in section 4 have in many ways to be qualified taking into account the working conditions and preferences on the local government level.

5.1. Variation and identification of expenditure needs

Traditional equalisation of variation of expenditure needs applies objective factors supposed to mirror the expenditure needs¹⁸. However, identifying such needs is not an easy task and there may be distortion costs related to use of certain objective expenditure needs factors. In this case activity related grants in the form of reimbursement schemes might be considered. This especially is tempting *if* variation in expenditure needs is exceptionally high, *if* it is difficult to find well-functioning expenditure needs factors (often correlated to the first problem), and *if* neutrality towards decision making is not seriously undermined by reimbursements.

For income transfers to households, where measuring out of payments are carefully described by law, this last condition might be met – or at least met to some degree. From the last two columns of *table 5* it actually seems to be the case that the remaining reimbursement schemes in the Danish public sector are put up mostly for income transfers.

5.2. Discretionary power for local governments

Local governments may have discretionary power over their use of inputs, the application of methods of production and over the choice and level of services they want to produce.

The room for manoeuvre for local governments of course can be more or less constrained. For some categories of services the discretionary power of the local authority may – seen on the face of it - seem rather constrained. The municipalities e.g. have to live up to certain legal standards in primary schools, production of health care is regulated in many respects and for social transfers, cf. above, the 'product' may be described in detail by rules. However, the local governments in Denmark nevertheless most often have important degrees of freedom on service levels and standards and how they arrange production. Even for social transfers municipalities will have some options when choosing between types of income transfer or rehabilitations activities (see section 7 below).

Under all circumstances it is very important when assessing the effect of earmarked grants if local governments are able to change anything. Expressed in another way the income and price elasticities must be of some numerical value for earmarked grant to have an effect.

5.3. Measurability

When Central Government wants to influence the decisions of local governments the target most often is the character and volume of production. But do we have a satisfying quantitative measure of production? Or must we rely on measurement of input, i.e. in practise a calculation of the costs involved when producing the relevant service? If the focus of earmarked grants is methods of production we similarly should have good information about that on the Central Government level.

If the Central Government must rely on the traditional cost measurement the expectations of improving e.g. output must be kept at a modest level – unless there is a clear link between costs and output/effects. This is of course the case for income transfers (not taking into account

the general grants. However, the municipalities are told to use at least own finance of the same amount as the allocations or else they have to save the money for subsequent years. See Indenrigs- og Socialministeriet (2009a).

¹⁸ See on methods OECD (2006) and Kim et al (2008).

administrative costs), but not necessarily for e.g. most of the welfare services provided to the population.

6. A normative composite index as a guide to the choice of grant design

6.1. Constructing a composite index

In this section a normative composite index is proposed as guide for grant design.

From the preceding sections the decisive factors are four:

- *local discretion*. Scenario 1: Introducing new financing to cover the costs of decentralisation of new functions without wishing to control the local implementation, i.e. leaving discretionary power to the local governments. This seems best done with the compensation made with general grants. Scenario 2: Changing a financial system because of a need to influence local government behaviour to conform better with national policy. Here earmarked grants seem the best solution, provided that the local governments actually have discretionary power that enables them to react to the grants.
- *expenditure needs variation*. As already described a high level of variation and/or difficulties of identifying relevant objective expenditure needs measures may implicate use of earmarked grants (reimbursements) because general grants will not distribute compensation to those local authorities in need of compensation.
- *measurability*. If certain behaviour is targeted (cf. scenario 2) this behaviour should be measurable for earmarked grants to appear as relevant. And vice versa, poor or lacking methods on measurement should lead to use of general grants.
- *merit aspects*. The existence and intensity of national merit aspects of a decentralised function work in favour of earmarked grants – to represent the national preferences or internalize externalities.

So all in all we get two indexes – illustrated by *figure 1* and *figure 2*. The area inside the rectangle is meant to illustrate the value of the index, i.e. the potential for earmarked grants vs. general grants: A low area and a low value of the index points at using general grants, a large area and high index value points at the use of earmarked grants.

Examples of normative composite index:

Figure 1. Compensation of costs of local gov. for delegation a new function. Scenario 1.

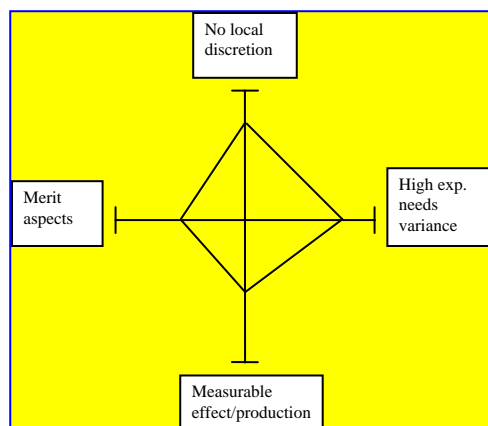
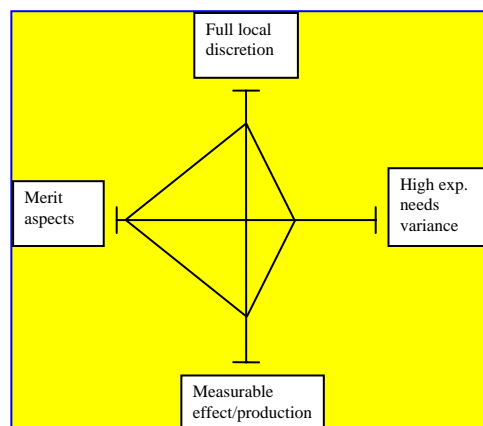


Figure 2. Need to influence local government behaviour. Scenario 2.



The purpose of such an index of course is to indicate the potential of a certain grant scheme against a given target in one measure. The weakness obviously is the estimations of the value of the factors.

7. Relevant Danish cases

7.1. Grants to support care for the elderly¹⁹

Care for elderly people has for a long range of years drawn special attention in the Danish Parliament. Since municipalities are responsible for those services and with relatively few legal regulations, i.e. high level of discretion, it might have seemed obvious for the central level to use grants schemes in an attempt to upgrade these activities. In the period 1998-2007 three such attempts have been made. First, in 1998, a grants scheme was approved for initiatives to improve care for the elderly. The grant required prior application, i.e. b.2.4 type of grant, and was only given for one year. Later, more permanent grants increases were implemented in two steps: 'grant a' and 'grant b':

a. Description

Grant a: General grants for old age care combined with collective agreement with the municipal associations – and later general grant

In 2001 the Parliament decided to increase the general grant by ½ bn. DKK for 2002 and the following years in order to increase spending on old age care. The instrument of control this time was – for the first year - an agreement with the local government association that they would insure that the members would spend the increased grants as desired. The grant was distributed according to the number of elderly people living within the municipal borders, i.e. a general grant type a.1.

Grant b: Earmarked matching grants requiring prior approval – and later general grant

In 2005 Parliament decided again to improve care for the elderly. A sum of another ½ bn. DKK was reserved in the finance bill for 2006. The grant scheme was prolonged for the following years.

For 2006 the municipalities were asked to apply for the funds in the Ministry of Social Affairs describing the projects they wanted to have financed, i.e. a type b.2.4 grant. It was a condition that the results and effect could be documented, and the applications were carefully validated.

For 2007 the control of the activity in municipalities were loosened and an authority only had to confirm that it would use at least its share of the increase of the general grant for elderly care, i.e. a type b.2 grant. The grant was distributed according to the number of elderly. From 2008 and onwards the grant scheme was changed into a general grant with no obligations for the municipalities of documentation of the use for elderly care, i.e. return to type a.1 grant.

b. Evaluation – composite index for earmarked grants (b.1)

The four dimensions can be characterized:

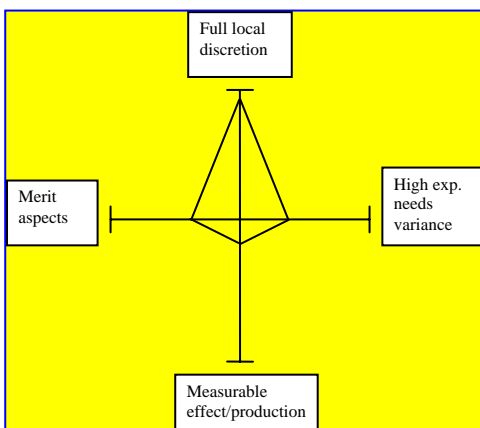
- *local discretion*. This is a scenario 2-situation since the central level wants to influence the municipal spending on elderly care. For elderly care municipalities have very wide degrees of freedom, e.g. to choose between different ways to arrange the services for the elderly people, and they certainly have – within budgetary limits – possibilities to increase the service level.

¹⁹ This section 7.1 and 7.2 below are partly based on a paper from Jørgen Lotz (2008).

- *expenditure needs variation*. Even though the elderly share of population differs between the municipalities the variation is rather modest.
- *measurability*. In Denmark a long range of key factors have been developed to measure certain aspects of the quality of elderly care including surveys of satisfaction among the elderly. But no single measure of production exists other than total costs.
- *merit aspects*. It seems difficult for the central level to argue about intense merit aspects in elderly care as a standard local public good. However, elderly care is increasingly becoming a national concern, TV spots on fails in service for elderly in 'remote' regions cause problems for the government. Also waiting lists for residential homes are criticised – although they are handled in a separate scheme.

The composite index may then look like this, i.e. a low potential for this type of earmarked grants (b.1), cf. *figure 3*. However, if merit aspects are increasingly brought on the national agenda this may change.

Figure 3. Composite index for earmarked grants for care for senior citizens

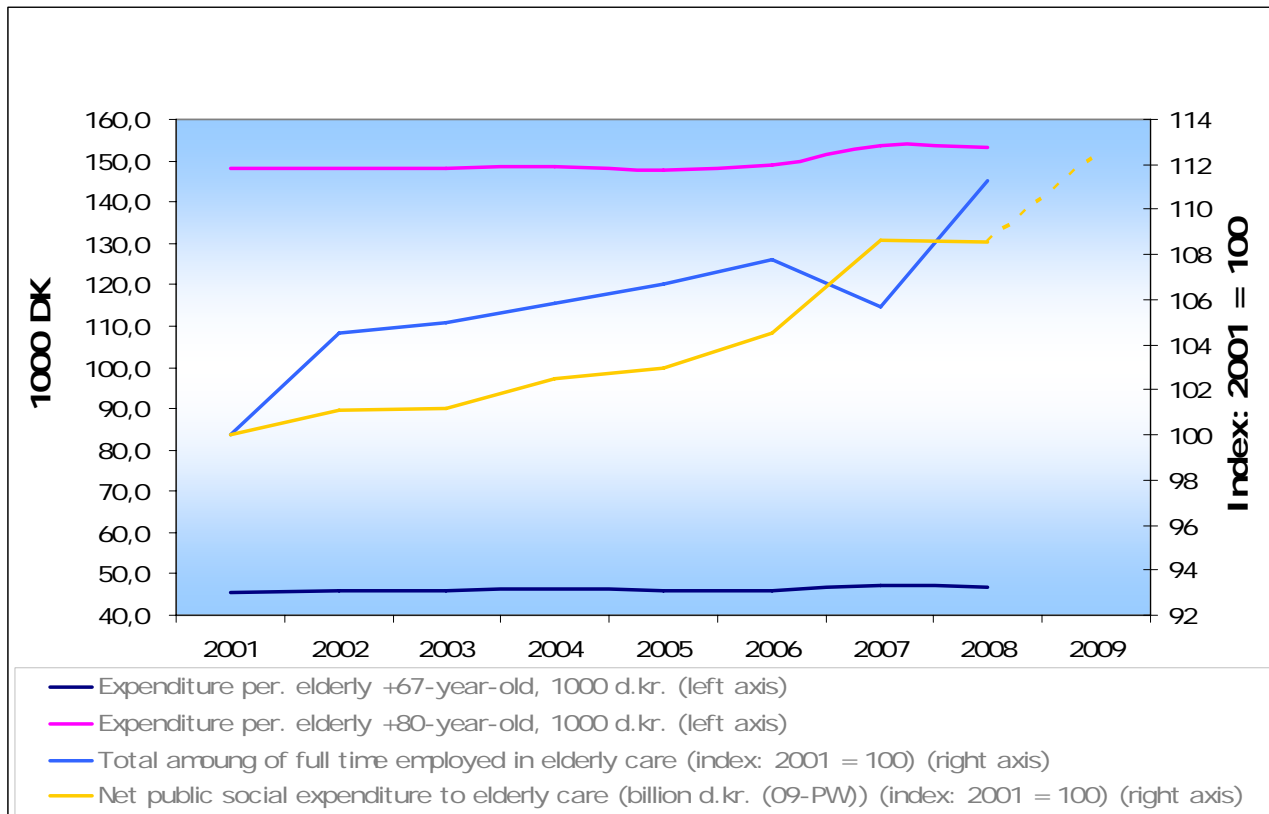


c. Evaluation – fulfilment of targets?

For the grant a-scheme there was a public debate in 2004 about the extra grant - had it resulted in a corresponding increase in spending on old age care or was the money swallowed up by more administration? The government made quite complicated analyses including new detailed questionnaire to all municipalities on their spending the preceding years. The investigation into this question was able to verify that only ¼ of the grant was used for administration. The government managed to convince Parliament that the money was spend as intended and only then did the political debate stop.

For neither grant a- nor grant b-scheme there still is a quantitative evaluation of effect. *Figure 4* shows the development in expenditures and in one of the inputs – labour force. It seems clear that real expenditures as well as number of employees have been increasing over the years – 1½-2 pct. per year – which are relatively high growth rates compared to real growth of municipal expenditures as a whole. So in that respect the target has been fulfilled. However, when it comes to expenditure per elderly person the level is almost unchanged – indicating that expenditures and demography has been growing in the same speed. If that would have been different without the extra earmarked/general grants is hard to say.

Figure 4. Indicators of development – elderly care



Source: Ministry of the Interior and Social Affairs, 2009.

7.2. Grants to support growth in hospital output

a. Description

In 2002 a new grant was introduced to encourage an increase in the capacity of the hospital sector. Counties (now regions) are responsible for running public hospitals, cf. above. Hospital production is measured by DRG (Diagnosis Related Groupings) values for the different hospital treatments adding up to the total costs for all treatments performed in a year. With the DRG measure this grant is a type b.2.3 grant – production linked grant.

The counties were assumed to increase their production by 1½ pct. in productivity gain, but when this was exceeded they earned a share of the grant. So in this sense the grant was marginal and dead weight losses were avoided.

Proportional shares of the grant were distributed on account by the beginning of the year to each county in order to supply them with liquidity to finance increased production. The grant was closed-ended, no county could earn more than the initial share. Three counties (out of 13 units) failed to earn their full share. They lost half of the difference but were allowed to transfer the other half for use the following year.

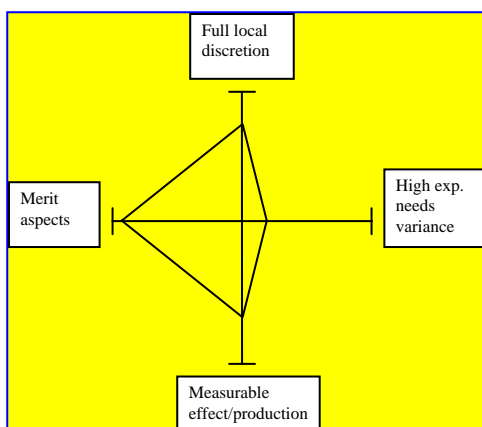
b. Evaluation – composite index for earmarked grants (b.2.3)

The four dimensions can be characterized:

- *local discretion*. This is also a scenario 2-situation since the central level wants to influence positively the activity level for counties/regions concerning hospital output. The relevant local authorities have discretion about the level of hospital output, or to choose between higher standards of hospital services, administration etc. or higher level of production measured in DRG.
- *expenditure needs variation*. The variation in expenditure needs between counties/regions are modest.
- *measurability*. Since the introduction of DRG measures in the Danish hospital sector it has been possible to record a measure of production.
- *merit aspects*. The total level of health care services have in recent years been a high priority to the Central Government which seems to indicate national merit aspects. Like for eldercare waiting lists are also handled in a separate scheme ('behandlingsgaranti'), but lowering waiting lists are never the less a very important side-effect of boosting production.

The composite index may then look like this, i.e. a rather high potential for this type of earmarked grants (b.2.3), cf. figure 5:

Figure 5. Composite index for earmarked grant for (growth) in hospital output



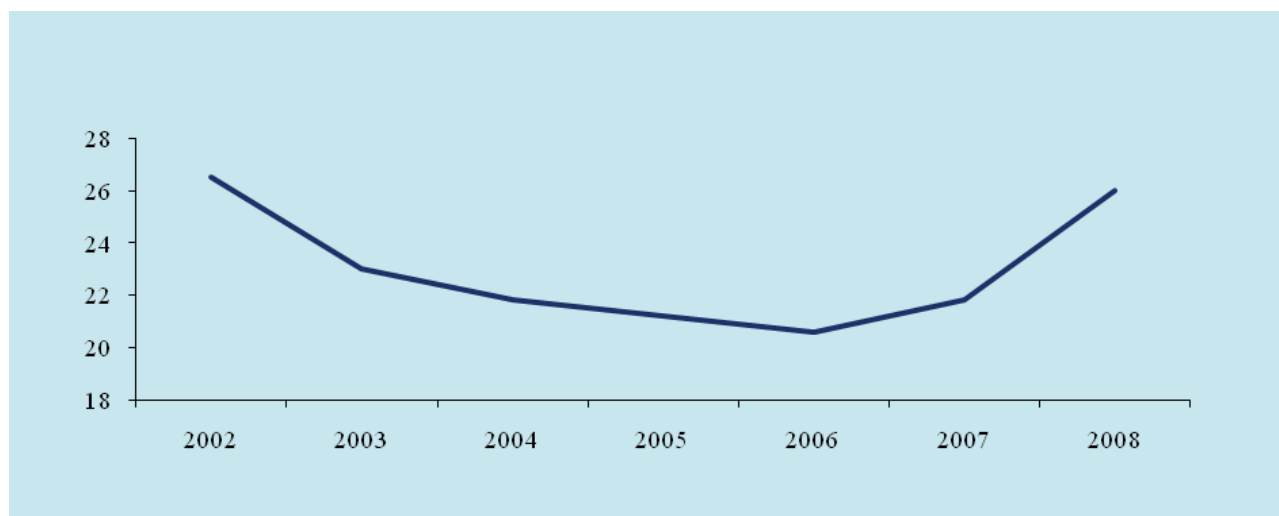
c. Evaluation – fulfilment of targets

The scheme was criticised because there was initially considerable administrative problems and delays before the Ministry could announce the annual baselines. It also had to be taken into account that some sort of systematic imbalance in measurement occurs since the registration of 'expensive' DRG diagnosis seems to be increasing from year to year – named "DRG creep".

However, the conclusion is that the results of this new grant have been visible and generally recognised. The number of treatments increased in e.g. 2002 by 11 pct. and by 2½ pct. in 2003 and waiting times for treatment began to fall fulfilling the main objective of the grant. It has been discussed what the more permanent effect of the scheme would be – will it only be possible to increase growth rate in the beginning ending up with only maintaining the production at the now higher level (expressed by the then Minister of Health: "to accelerate the car and then keep the speed").

Figure 6 shows the waiting lists figures. The reduction from 2002 to 2006 is significant and the increase in 2007 has some technical explanations. The marked increase in waiting weeks in 2008 is due to a major strike on hospitals including nurses and other kinds of health workers.

Figure 6. Waiting lists for public hospital, 2002-2008, weeks.



Source: Sundhedsstyrelsens venteinfo.dk.

Note.: Expected length of waiting periods, i.e. maximum waiting period for 'the next patient with no special complications' reported from public hospitals. Average of 18 different diagnosis.

7.3. Reduced reimbursement rates for long periods of sickness benefits

a. Description

In Denmark employees receive during sick absence either normal wages or sickness benefits. The first three weeks of absence are financed by the employers, but after three weeks sick benefits take over. The sickness benefits are costs for the municipalities but they have their expenditures reimbursed (more or less) by the Central Government.

In the 1980'ies most reimbursement rates of municipal expenditures for income transfers were harmonized at 50 pct. But in the last 10-15 years some reimbursement rates have been reduced to encourage municipal preventive efforts like activating programs, jobtraining activities, fast rehabilitation etc. It is becoming a type b.2.1 transfer, where the *design* of the earmarked grant is the instrument. Reimbursement of sickness benefits illustrates this. The reimbursement rate for those municipal expenditures was initially 100 pct. (in the 1980'ies – see *table 5*). Since then the reimbursement rate has been differentiated depending on the length so that the rate is reduced to zero when the sickness period extends more than one year. The philosophy could be that when the period of sickness is that long it becomes in itself a social problem – not 'only' a health problem – and the municipal authority must very seriously consider other initiatives, e.g. activating schemes, cash benefits or even early retirement – or of course intensifying the activities to bring the person into job again. In the latest years the system has been refined with gradually reduction of reimbursement rates with length of sickness period and higher reimbursement when the municipality runs 'activating' activities towards the person receiving sickness benefits. However, it should be stressed that the situation at the same time is regulated by law, implying that e.g. a sickness benefit period cannot without certain exclusions be extended longer than 52 weeks. So two set of 'regulations' are in force: legal and economic.

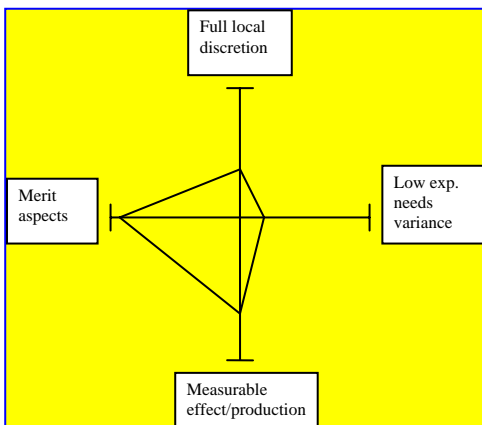
b. Evaluation – composite index of earmarked grants (b.2.1)

The four dimensions can be characterized:

- *local discretion*. Also this is a kind of scenario 2-situation. The central level apparently wants to support the decision making of the municipality. It should be noticed that the discretionary power is limited for the local authority since the level and conditions for paying sickness benefits to persons are fixed in detail by the law – and therefore to a wide extent in the hands of the person. But still the role of the municipal authority has been underlined, e.g. use of frequent talks/meetings with the person receiving sickness benefits and offering different alternative activities.
- *expenditure needs variation*. The variation in expenditure needs between counties/regions is quite important since some areas suffers significantly more from sickness absenteeism than others.
- *measurability*. The extend of sickness benefit weeks is a very relevant measure of ‘production’ since lowering this is the obvious target. The drawback of this measure of course is that it is not only the municipality that influence the sickness pattern.
- *merit aspects*. The level of sickness if very important to the society as a whole, not only because of expenditures but also because lost working hours caused by sickness reduces production. The case for decentralizing has to compete with national interests.

The composite index may then look like this, i.e. a middle potential for this type of earmarked grants (b.2.1), cf. *figure 7*. Note that we have to change the scale of the need variance dimension since introducing stepwise grants in practise here means *lowering* grants/reimbursements (depending on some conditions).

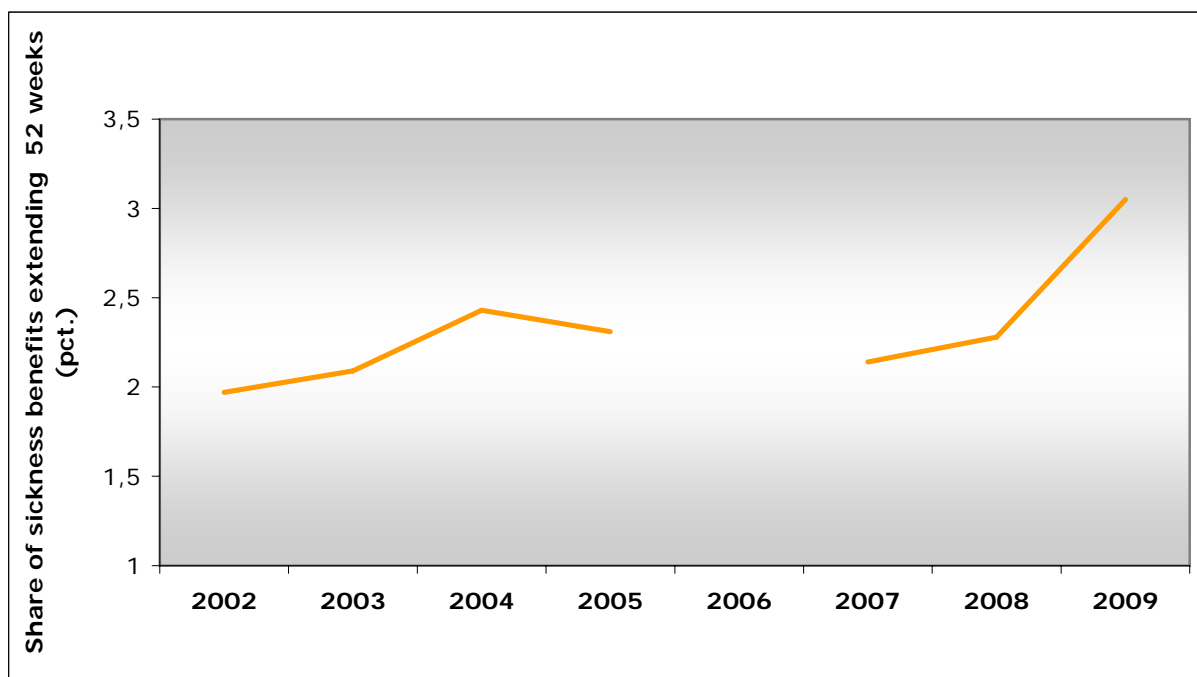
Figure 7. Composite index for ‘designed’ earmarked grant for sickness benefit weeks



c. Evaluation – fulfilment of targets

Has the frequency of long periods of sickness benefits been reduced? The figures for the latest years cannot confirm this, cf. *figure 8*. However, it is of course not possible based on such few figures to say anything certain about this.

Figure 8. Sickness benefit weeks for sickness periods of more than one year.



Source: Danmarks Statistik, DST, September 2009. Data for 2006 is missing (before structural reform).

As a matter of fact the situation is quite complex which *table 6* indicates. This table shows the causes of prolongation of sickness periods more than 1 year. It is evident that some of the explanations for prolonged sickness benefit periods are to some degree “in the hands” of the local authority while others are not. This stresses if not else the complexity of designing earmarked grants.

Table 6. Prolonged sickness benefit schemes for single persons, June 2004-June 2008. Pct.

Causes:	04/05	05/06	06/07	07/08
Prolonged due to rehabilitation	31,9	28,1	25,2	26,7
Registered working accident	2,3	3,1	3,3	3,6
Early retirement application being considered	16,5	16,0	14,2	13,4
Receiving treatment/waiting	12,1	12,2	13,0	13,2
Waiting for treatment on public hospital	0,4	0,4	0,3	0,6
Health recovery not possible	1,8	1,8	2,0	1,9
New period of sickness	0,6	0,6	0,6	0,7
Clarification	34,3	37,8	41,3	39,9
Total	100,0	100,0	100,0	100,0
Number of prolonged individual cases	19.000	18.300	17.600	23.500

Kilde: KMDs sygedagpengeregister.

8. Concluding remarks

Many aspects have to be taken into account when grant schemes are designed. Often decisions about mandates, grants and equalisation have to be taken simultaneously.

This is the conditions to public decision making, but it is useful to consider systematically which factors are in play. Four such factors have been identified as local government's discretion, needs variation, measurability of production and national merit aspects. To secure that none of those aspects are forgotten they can experimentally be summarized in a kind of normative composite index.

As always in the social sciences it is difficult to estimate the effect of e.g. earmarked grants. If the effect is dubious the administrative and distorting costs should be weighed out against the advantages of general grants leaving real costs more visible to the local authorities.

Recently a new generation of grant schemes have been developed, focusing on the production and effects of the programs instead of costs. For such 'intelligent systems of grants' it is a very decisive fact if production can be measured. So measurability might become the key to a development of such schemes in the future.

In Denmark the measurement of health service production has made great progress in the last 10 years, and the earmarked grants for stimulating growth of wished production exactly make use of the progress on this area.

Also in other areas production and quality measures are in focus in the Danish landscape of local governments' output, e.g. on education, kindergartens and elderly care. But it is obvious that the production of elderly care is difficult to quantify, and the results of better education may be seen only after a number of years. Instead other measures have been discussed, e.g. certification of institutions, accrediting, new methods of bookkeeping etc.²⁰ But we still need to be so convincing as to overcome the reluctance of the organisations of local governments to embrace such new methods.

So the bottom line is that general grants still seem to be preferable in most cases. They support allocations across the various expenditure mandates, allocations that the local governments both have the possibility to perform and an own interest in.

²⁰ The Danish so-called 'Kvalitetsreform' (Quality reform) also includes initiatives to improve measurement, cf. Regeringen (2007).

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