IPSE Studies

Cost efficiency Wmo

Factsheet 3 | Accommodation and shelter

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Introduction

This fact sheet presents the results of the analysis of the cost-effectiveness of municipal services in the area of accommodation and shelter under the Social Support Act (in Dutch Wmo). The Wmo focuses on supporting people who are not sufficiently self-reliant or unable to participate adequately in society. Accommodation and shelter facilities mainly consist of sheltered housing and (emergency) shelter.

These facilities are organised at a regional level and purchased by so-called central municipalities (44 in 2022). They receive the funds for this directly. The way in which this purchasing is organised can influence cost-effectiveness. That is why an estimate of the effects of various purchasing characteristics on effectiveness is part of the study.

The fact sheet *Accommodation and shelter* is part of a four-part series on the cost-efficiency of Social Support Act (Wmo) services provided by municipalities The other published factsheets on the Wmo categories are:

- Aids and services;
- Household assistance;
- Support at home.

What is cost-effectiveness?

Here, we are talking about (cost) efficiency, but in fact we are talking about productivity: the ratio between performance and the use of resources. When we compare the performance of organisations, we talk about efficiency. If the efficiency of an organisation – in this case a municipality – is 100%, this means that no other municipality can deliver the same performance with fewer resources.

Suppose that municipality X has an efficiency of 60%, then there is another municipality that delivers the same performance with only 60% of the resources used by municipality X. Municipality X can therefore achieve further cost savings of 40%. Because we are only performing a cross-sectional analysis here, the concepts of productivity and efficiency coincide.

How do we determine cost effectiveness?

Econometric model

We determine the cost-effectiveness of the services using an econometric model (see appendix). This model describes the relationship between the costs incurred by municipalities for services in the area of accommodation and care on the one hand, and the services provided and client and purchasing characteristics on the other.

Purchasing characteristics

By including purchasing characteristics, this model provides insight into the influence of the way in which services are purchased from healthcare providers on cost-effectiveness. Municipalities purchase these services through various forms of outsourcing and procedures and vary in terms of contract types, funding methods, contract duration, degree of cooperation, etc. These different purchasing characteristics can all influence cost-effectiveness.

What data do we use?

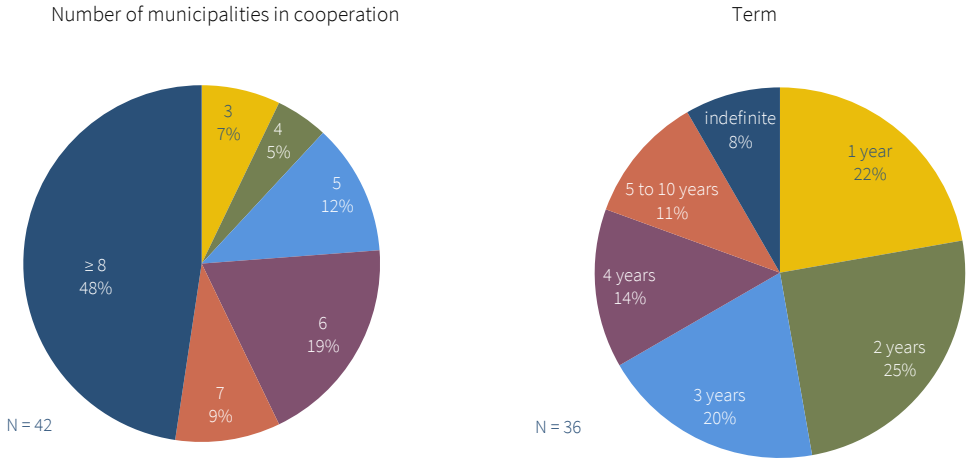
We measure the costs of the services based on the available data from Centraal Bureau voor de Statistiek (CBS) and the data platform *Waarstaatjegemeente*. We use the number of clients using the services or facilities as a measure of performance. We also use personal characteristics of the clients, such as the proportion of clients with a non-Western migration background, the proportion of clients aged 60 and over, and the proportion of clients with an income of less than €30.000 per year. This data has also been collected from the mentioned data sources. Data on purchasing of accommodation and shelter comes from the *Monitor Gemeentelijke Inkoop Sociaal Domein 2022* (Ketenbureau/PPRC). This only concerns purchasing data on sheltered housing and not on social care. However, this type of care is often purchased together with sheltered housing.

These data have been thoroughly screened for accuracy and completeness. After filtering out municipalities with missing values, 42 of the 44 central municipalities remain for which a reliable analysis is possible. For an overview of the characteristics and an explanation of these, please refer to the appendix. It should be noted that more observations are often available for the individual variables. In principle, all valid observations were taken as the starting point for the individual descriptions.

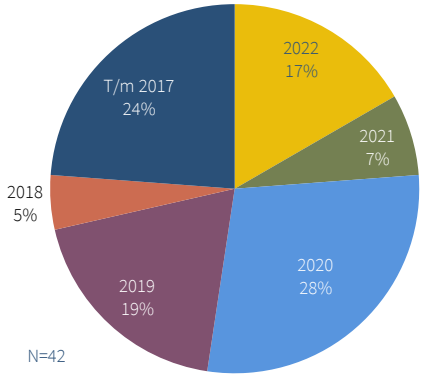
Purchasing Attributes Description

Here we first present a picture of the purchasing of sheltered housing on the basis of eight pie charts, one for each purchasing feature. Based on the data in the source file of het Ketenbureau/PPRC, Figure 1 shows the choices that central municipalities have made within such a purchasing characteristic. In addition to these characteristics, we have added another characteristic that expresses the municipality's effort to manage purchasing: the overhead ratio. This concerns the ratio between the implementation costs and the programme costs (also known as purchasing costs). This varies from a few percent to tens of percents.

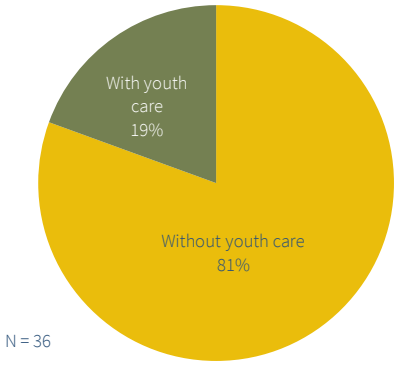
Figure 1 Choices of central municipalities when purchasing residential and reception services by purchasing characteristic in 2022



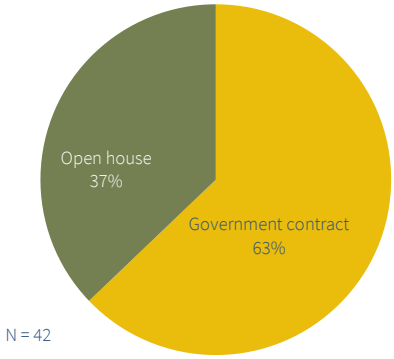
Starting year



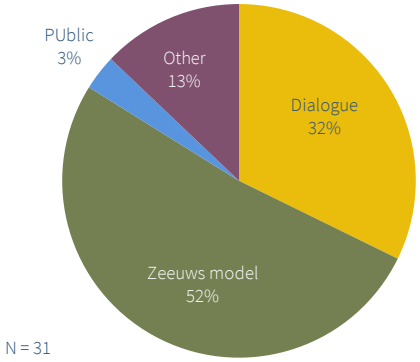
Integrality



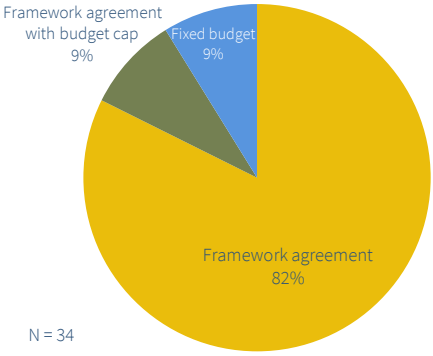
Forms of outsourcing



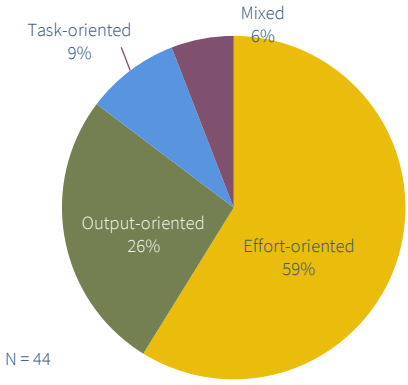
Purchasing procedures



Contract types



Forms of funding



Results of cost efficiency

Scale effects

The analysis shows that there are no clear economies or disadvantages of scale. In other words, larger municipalities do not work more cost-effectively on average than small municipalities (or vice versa). It should be borne in mind, however, that the accommodation and shelter facilities are organised and purchased by relatively large municipalities (central municipalities).

Effects of client characteristics

The statistical analyses show no evidence of a link between costs per unit of service and the client characteristics of non-western migration background, over-60's and low income. However, it is important to make the remark that this is a small sample, which makes it impossible to establish a link due to a lack of sufficient variation in the data.

Purchasing effects

It is also not possible to determine whether there is an effect on costs for most purchasing characteristics. This is only the case with two characteristics. Framework agreements have a negative effect, but with a low statistical significance (17.9%). The only feature with a significant effect is the overhead ratio, which shows a positive effect at a ten per cent level.

Size of purchasing effects: cost efficiency related to purchasing

Figure 2 shows the efficiency scores of 42 central municipalities. These scores are calculated on the basis of the two purchasing characteristics mentioned before.

Figure 2 Cost efficiency of central municipalities related to purchasing, accommodation and shelter (N = 42)

Figure 2 shows that the cost efficiency associated with purchasing varies from 64 to 100%. This means that there are central municipalities that can deliver the same performance with only 64% of the current resources. The average of the cost-effectiveness scores is 81%. This implies that an average municipality can deliver the same performance at 19% lower costs due to changes in purchasing. So this will mainly be about reducing the implementation costs.

Figure 3 shows the efficiency scores of the 42 central municipalities as a histogram, which provides a better insight into the distribution of the scores.

Figure 3 Histogram of cost efficiency of central municipalities related to purchasing, accommodation and shelter (N = 42)

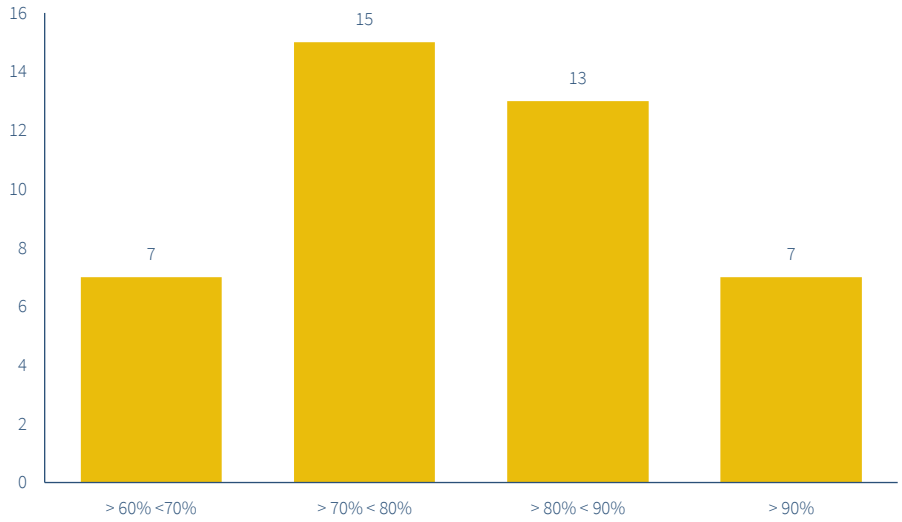


Figure 3 shows that more than half of the central municipalities score well below the average of 81% . Of the 42 central municipalities, 22 have an efficiency score lower than 80%. Significant cost savings seem possible for these municipalities, especially for the 7 municipalities that have a score of less than 70%.

As indicated earlier, we are statistically dealing with margins of uncertainty. The above results can therefore also be formulated a little more precisely. For 59% of the central municipalities, they can improve their cost efficiency in the purchasing process with a certainty of more than 90%.

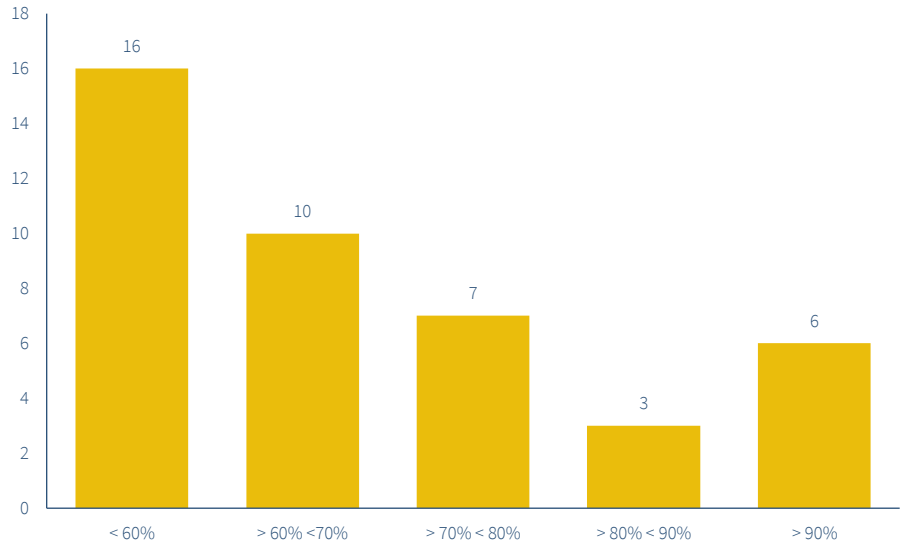
The Effect of Unknowns: Cost Efficiency Not Related to Purchasing

In addition, an estimate was made of the cost efficiency that cannot be related to procurement characteristics. This so-called imperceptible cost-efficiency is shown in Figure 4. This shows that the scores vary from 30 to 100%. The average of these efficiency scores is 66%.

Figure 4 Non-observable cost-effectiveness of central municipalities in terms of accomodation and shelter (N = 42)

Figure 5 shows the scores as a histogram.

Figure 5 Histogram of imperceptible efficiency of central municipalities in accommodation and shelter (N = 42)



The figures show that the differences in the imperceptible cost-effectiveness are even greater. This is probably mainly about purchasing power of municipalities versus the market power of care providers or administrative relationships within the cooperation. It is also quite conceivable that one individual municipality is 'just' better at the negotiation process than another.

As noted above, due to the small number of observations in the analysis, it is not possible to determine whether many variables have a (significant) effect. This automatically means that these potential effects are reflected in the imperceptible efficiency. These figures can also be distorted by other causes, such as registration errors or accounting corrections and the like. Nevertheless, it is useful to show these figures, because they can be an impulse for a further search for possible improvements.

Results summarized

Effects of scale and client characteristics

No statistical evidence has been found for the existence of scale effects. In other words, the costs per unit of accommodation and shelter services do not depend on the scope of the service. Nor is there statistical evidence for a relationship between the costs per unit of service and client characteristics (non-Western migration background, over 60 or low income).

Purchasing effects

For most purchasing characteristics, no effect on costs can be determined. However, there is statistical evidence that a high overhead ratio contributes to high costs. There is weak statistical evidence that the use of a framework agreement has a negative impact on costs and thus has a positive impact on efficiency.

Efficiency differences related to purchasing

- The cost-effectiveness scores range from 64 to 100%, with an average of 81%.

- More than half of the central municipalities score below average, indicating opportunities for cost savings without a negative effect on performance.
- 59% of the central municipalities can improve their efficiency by optimizing the purchasing process.

Performance differences unrelated to purchasing

- Non-purchasing related cost efficiency ranges between 30%t and 100%, with an average of 66%.
- Differences in imperceptible efficiency between municipalities may be related to differences in negotiation skills and market power between healthcare providers and municipalities.

Small number of sightings

Because accommodation and shelter are carried out by a relatively small number of municipalities, there is a limited number of observations. It concerns only 44 municipalities, the so-called central municipalities, of which 42 can be used for the analysis. This small number limits the ability to provide hard statistical evidence. This does not mean that where there is no statistical evidence to be provided, this does not rule out the possibility of an effect.

Intervision

The results of this study could help municipalities to learn from comparable municipalities (*peers*) and to gain insight into opportunities to increase efficiency through peer review. Which *peers* these are, how they score on cost efficiency and how this is influenced by different purchasing characteristics can be determined for a large number of municipalities on the basis of the research results. The results can be made available upon request.

Appendix

Background

The municipal tasks in the field of social support are broadly regulated in the Social Support Act (WMO)(Staatsblad, 2014), which came into force in 2015. The main objective of the WMO 2015 is to set (new) rules for the municipal support of people who are insufficiently self-reliant or unable to participate sufficiently, especially people with a disability or chronic psychological problems. The goal is to let them live in their own environment for as long as possible. Municipalities must also provide facilities for sheltered housing and arrange social shelter for people who have left their home situation, for example because of domestic violence.

The WMO leaves municipalities relatively free in the way they shape their social support (Ter Haar, 2024). However, this policy freedom is limited by budgetary restrictions. Many municipalities are struggling with deficits due to inadequate government budgets (SCP, 2022). Partly as a result of these shortages, the Ministry of Health, Welfare and Sport (VWS) and the Association of Netherlands Municipalities (VNG) have started a joint research project into the long-term sustainability of the WMO 2015 (House of Commons, 2024).

The financial problems vary from municipality to municipality. This may be related to specific socio-economic and demographic conditions, but also to differences in efficiency. Some municipalities carry out their tasks more efficiently and thus keep costs under control. Research into youth care shows that there are large differences in cost-efficiency between municipalities (Blank, Heezik & Valdmanis, 2023). This suggests that it is possible for some of the municipalities to substantially increase efficiency, creating room to reduce the financial deficits.

Because the same may apply to the Wmo tasks of the municipalities, it has been decided to analyse the cost-effectiveness of the municipal implementation of the Wmo as a follow-up to the youth care study. The method used is in line with the approach of the youth care research, but has been adjusted in a number of parts. We describe this below.

Methodology

We use a cost model to calculate the cost efficiency. A cost model shows the mathematical relationship between the costs on the one hand and the services provided and client characteristics on the other (Blank & Valdmanis, 2019; Fried et al., 2008). In addition, the model contains a component that reflects cost-effectiveness. This concerns the difference in costs between best practice municipalities and other municipalities. This approach is also found in other studies (Alvarez et al., 2006; Blank, Heezik & Blank, 2023; Niaounakis & Blank, 2017). To the mathematical equation, in which the various components are incorporated, we also add a stochastic term for specification and measurement errors. The usual prices for the resources deployed have been omitted here, because we only have cross-sectional data and assume that municipalities are dealing with the same wages and prices. The estimated relationship is as follows:

$$\ln(c) = a_0 + \sum_m b_m \ln(y_m) + \sum_k d_k \ln(z_k) + eff + err \quad (1)$$

Whereby:

c = costs;

y_m = production of service m;

z_k = percentage of deviating costs due to client characteristics;

eff = percentage of extra costs due to inefficiency;

err = specification and measurement error.

a_0, b_m, d_k are the parameters of the model to be estimated. The parameter is the constant. The parameters are elasticities and represent the effect of production growth on the growth of costs.a_0

$$eff = \exp[-\sum_l \theta_l \ln(u_l)] \quad (2)$$

Whereby:

u_l = purchasing characteristic of a municipality;

θ_l = parameters to be estimated.

We use a method that makes a separate estimate for each cluster of comparable municipalities. Large cities such as Amsterdam and Utrecht, for example, do not play a role in the estimate for a small municipality such as Roozendaal (Gld). We distinguish a limited number of clusters based on municipality size.

Advantages of this method are:

- A simple specification will suffice.
- Results are much more accurate than those of one analysis of all municipalities at the same time.

Model reliability testing:

- common tests, such as R2, t-tests, etc.;
- a skew test answers the question of whether there is any more (unobserved) inefficiency;
- different sets of output, client and efficiency indicators have been applied.

This is different from previous studies (Blank & Heezik, 2023; Blank, Heezik & Valdmanis, 2023), using *locally weighted least squares*. In those studies, we included the degree of comparability in the weighting of the estimates. The disadvantage of this method is that it creates a variety of results that actually require a follow-up analysis. The transparency of the results presented here is much greater.

Purchasing characteristics

With equation 2, we calculate the cost-effectiveness of accommodation and shelter that is related to the purchasing characteristics. A large part of the municipal costs for the implementation of the WMO consists of expenditure on (private) providers of social support. When purchasing these services, central municipalities make all kinds of choices that may affect costs and efficiency. For example, they can choose from different forms of outsourcing (Wind & Uenk, 2020). The three most common types of outsourcing are, outsourcing through:

- Subsidy: municipalities provide financial resources to a healthcare provider on the basis of predetermined (but only partially enforceable) subsidy conditions.
- *Open house*: municipalities enter into (enforceable) agreements with all care providers that meet their conditions. Citizens choose their own care provider and there is only delivery when a citizen registers.
- Public procurement/tendering: municipalities select a limited number of healthcare providers on the basis of predetermined (enforceable) conditions.

Various procedures can be followed for outsourcing (Wind & Uenk, 2020), such as:

- classic, legally regulated public tendering procedure: public announcement and selection on the basis of value for money;
- Zeeland model: municipality sets requirements and clients choose their own provider from contracted parties;
- Dialogue-oriented procedure: the municipality and providers discuss conditions in dialogue sessions.

In addition to these choices, there are choices to be made with regard to the contract types and the method of funding when outsourcing social support. In the case of contract forms, municipalities can opt for fixed budgets (lump sum), budget ceilings and framework agreements with or without the interim entry of new providers. In terms of funding, municipalities can opt for effort-based, output-oriented or task-oriented funding or for mixed options. Other purchasing choices made by municipalities are: whether or not to purchase social support integrally with youth care services, whether or not to cooperate with other municipalities and duration of the contracts (Wind & Uenk, 2020).

The different purchasing choices cause differences in purchasing characteristics between municipalities. The 'overhead ratio' attribute has been added to this, with which we measure the municipality's effort to manage purchasing. The overhead ratio is the ratio between the (netted) implementation costs and the programme costs (purchasing costs).

The box below presents the ten purchasing characteristics that are included in the analysis model.

Purchasing attributes in analytics

1. **Cooperation**: number of municipalities in partnership;
2. **Term**: number of years for which the agreement applies;
3. **Expired contract years**: based on the start year of the agreement;
4. **Type of subcontracting** (type of implementing instrument):
   - '*open house*';
   - other (public contract or subsidy);
5. **Type of purchasing procedure (A):**
   - 'dialogue';
   - other proceedings (mainly open procedures);
6. **Type of purchasing procedure (B):**
   - 'Zeeuws';
   - other proceedings (mainly open procedures);

7. **Contract form**:
   - Framework agreement;
   - framework agreement with budget cap or with fixed budget;
8. **Form of funding**:
   - effort-oriented;
   - other (production- or task-oriented or mixed);
9. **Integrality**:
   - contracts with youth care;
   - contracts not tendered with youth care;
10. **Overhead:**
   - ratio between implementation costs and programme costs.

Statistical description

Table B1 contains a statistical description of the original data as used in the statistical analysis. No selection has yet been made of municipalities that were ultimately included in the analysis. For the analysis, only the data from those municipalities for which none of the variables are missing are used. In the case of the overhead ratio, extreme values are capped. This concerns a limited number of municipalities.

Table B1 Statistical description of all variables used in the model

Variable	Observations	Average	Standard deviation	Minimum	Maximum
Cost	44	39954,040	40626,780	3753,400	233352
Number of clients	42	791,786	880,720	65,000	5315
Proportion of non-western immigrants	42	0,191	0,124	0,048	0,637
Share of over-60s	42	0,046	0,030	0,005	0,117
Share of low income	42	0,614	0,078	0,385	0,835
Number of cooperating municipalities	42	8,167	3,761	3,000	18
Contract duration	44	3,170	1,935	1,000	8
Years in contract	42	3,786	2,113	1,000	8
Instrument (open house=1)	44	0,273	0,451	0,000	1
Procedure (dialoog=1)	44	0,205	0,408	0,000	1
Procedure (Zeeuws=1)	44	0,364	0,487	0,000	1
Contract (framework agreement=1)	44	0,614	0,493	0,000	1
Funding (production-oriented=1)	44	0,455	0,504	0,000	1
Integrality with youth care (yes=1)	44	0,159	0,370	0,000	1
Overhead ratio	44	0,311	0,172	0,010	0,500

Estimation results

Table B2 presents the estimation results of the analysis. The values with a statistical significance of 5% and 10% are indicated by ** and *, respectively.

Table B2 Results summarized: parameter estimates

	Coefficient		Standard deviation	t-value
Constant	-1,059	**	0,146	-7,230
Number of clients	0,923	**	0,070	13,220
Funding (production-oriented = 1)	-0,166		0,122	-1,370
Overhead ratio	0,511	*	0,287	1,780
Number of observations	42			
R2	0,824			
Log likelihood	-16,73			

** p < 0,05; * p< 0,1

Names of the 42 central municipalities in final analysis

Alkmaar	Dordrecht	Nijmegen
Almelo	Ede	Nissewaard
Almere	Eindhoven	Oss
Amersfoort	Enschede	Purmerend
Amsterdam	Gouda	Rotterdam
Apeldoorn	Groningen	's-Gravenhage
Arnhem	Haarlem	's-Hertogenbosch
Assen	Harderwijk	Tilburg
Bergen op Zoom	Helmond	Utrecht
Breda	Hilversum	Venlo
Delft	Hoorn	Vlaardingen
Den Helder	Leeuwarden	Vlissingen
Deventer	Leiden	Zaanstad
Doetinchem	Maastricht	Zwolle

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Colophon

About the study

This factsheet presents results of research that is part of the IPSE Studies research programme 2024-2026 (*Public productivity measured: implementing organisations,municipalities and sectors*). The research programme is subsidised by the Ministry of the Interior and Kingdom Relations (BZK) within the framework of the Knowledge of the Government programme.

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