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Contracting Welfare-to-Work Services: Use and Usefulness

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Abstract

This paper contributes to the broad literature on public services contracting in two ways. First, we provide an empirical analysis of contracting decisions in the provision of welfare-to-work (WTW) services. We estimate both the WTW-contracting decisions of Dutch municipalities and their impact on the performance, measured as the fraction of Social Assistance (SA) recipients. Second, we explicitly model two forms of external provision of WTW services by municipalities: contracting with other municipalities and/or contracting out services to private providers. Our findings suggest that contracting decisions are predominantly driven by cost considerations, both for the decision to contract with other municipalities and the share of contracting out to private providers. Municipalities with low WTW budgets or facing budget constraints are more likely to contract with external parties—presumably this reduces their costs as well as the risk of future cost deficits. We do not find contracting decisions to affect the performance of municipalities, measured as the use, inflow, or outflow out of the SA scheme. From this alone, however, we cannot conclude that the three provision modes are equally cost-effective too, as external provision may be less costly.

Keywords: welfare-to-work, public versus private provision, contracting, effectiveness.
JEL codes: D02, D73, H11, H44, H53, H75, I38, L24

Contents

Summary

Over the years, the number of evaluation studies of welfare-to-work (WTW) policies has increased substantially. Typically, in these studies effectiveness is considered as dependent on instrument types and worker characteristics. Evidence on the organization of programs, however, is scarce—that is, little is known about the role of caseworkers and private WTW providers. Various countries, like the United States, United Kingdom, Australia, and the Netherlands, have switched to systems where a substantial part of public programs' operations have been contracted out to external job training providers, ranging from other governments to private firms. These changes have raised questions as to the optimal allocation of WTW programs to public and private providers. So far, however, the perspective of studies on WTW contracting is on the effectiveness of contracted programs in and of themselves, not as compared to in-house provision.

This paper contributes to the literature on public services contracting in two ways. First, to our knowledge we provide the first empirical analysis of contracting decisions in the provision of WTW services. Heretofore we use both administrative and survey data of Dutch municipalities for 2007 and 2008. We estimate both the contracting decisions of the WTW services of municipalities, as well as their impact on their fractions of Social Assistance (SA) recipients—the underlying idea being that more effective policies would lead to higher SA outflow rates and lower stock levels of SA recipients. As to the contracting model, we use a number of variables that are associated with the contractibility of the SA recipients (i.e., distance to the labor market); the patronage hypothesis (i.e., budget space and budget exhaustion measures); and political preferences (i.e., the fraction of votes for left-wing parties in a municipality). Some of these variables can be used as exclusion restrictions in the second stage of our model, when explaining the relative impact of in-house provision vis-à-vis contracting on the performance of municipalities.

The second innovative feature of this paper relates to the forms the external provision of WTW services by municipalities may have. First, municipalities may decide to contract with other (adjacent)

municipalities, thus attaining scale advantages and the opportunity to provide more specialized services. Second, both municipalities and municipality cooperatives may decide to contract out WTW services to private providers. Thus, the contracting decision a municipality is faced with cannot be characterized as a make or buy decision only. Instead, contracting with adjacent municipalities can be considered as an option that is in between in-house provision by oneself and contracting out—assuming that municipalities joining their efforts have stronger preference for quality than private providers, while providing scale advantages compared to internal provision at the same time. As opposed to that, the joint provision of WTW services may result in a decrease in residual controls for municipalities in WTW policies, as well as coordination and free rider problems between municipalities joining in.

In short, our findings suggest that contracting decisions are predominantly driven by cost considerations, both for the decision to contract with other municipalities and that of contracting out to private providers. Municipalities with low WTW budgets or facing budget constraints are more likely to contract with external parties—this reduces costs and as well as the risk of cost deficits. There is only weak evidence that municipalities increase the share of contracting to private providers if the contractibility of their SA recipients is higher—that is, when clients are easier to place into jobs. Further, municipalities with a high share of votes for left-wing parties are more likely to contract with other municipalities. Finally, we do not find evidence of contracting decisions affecting the performance of municipalities, measured as the use, inflow, or outflow of the SA scheme. This holds both for contracting with other municipalities and contracting out to private providers.

Our results lend credence to the public patronage hypothesis—that is, municipalities seem to respond to budget constraints. As most municipalities experienced budget surpluses in the time period under investigation, one may suspect that municipalities tended to spend too much of their budgets on in-house provision. We do not, however, find any evidence for private provision to be more effective. Essentially, this result can be explained in three ways. First, our contract measures may simply be too global and data size to small to obtain significant estimates. In particular, the impact of WTW spending is only small. So when supposing that changing provision modes can only change the overall effectiveness

of WTW spending to some extent, the coefficient estimates will be even smaller. Second, one should keep in mind that municipalities were committed to private provision of their services only until 2006. After that, the share of in-house provision has increased gradually but still is at a relatively low level. Finally, within the context of the Dutch system, public and private WTW providers are perhaps not that different after all. The majority of private providers in the WTW sector—at least those contracted by municipalities—consist of nonprofit organizations with strong ties to the social assistance desks. These organizations mostly have long-term contracts and were often part of the municipality services in the past.

All in all, our results may suggest that differences in WTW provision modes are not very important—at least when measured in effectiveness. This conclusion, however, would ignore program costs. If the public patronage is important, costs per client are likely to be unnecessarily high. Evidence from the Australian Job Network shows that privatization has led to substantial cost reductions, while maintaining the same level of effectiveness. This calls for further research on the costs attached to the provision of WTW programs.

1. INTRODUCTION[1]

Over the years, the number of evaluation studies of welfare-to-work (WTW) policies has increased substantially. Typically, in these studies effectiveness is considered as dependent on instrument types and worker characteristics (Card, Kluve and Weber, 2009). Evidence on the organization of programs is scarce—that is, little is known about the added value of caseworkers and private WTW providers. In particular, one of the key questions policymakers are currently faced with is whether they should opt for in-house provision or contracted programs. Various countries have switched to systems where a substantial number of public programs have been contracted out to external job training providers, ranging from other governments to private firms. Examples include Struyven and Steurs (2005), who discuss the privatization of WTW services in Australia and the Netherlands, and Heinrich and Choi (2007), who analyze changes in the contracting process of the Wisconsin Works program. These changes have raised questions on the optimal allocation of trajectories to public and private providers. Some countries or states have even witnessed a "contracting back in," as market solutions would not take proper account of the complexity of public services (Hefetz and Warner, 2004). Empirical research is lacking on the determinants of provision modes of WTW services, as well as their impact on performance measures.

When taking a broad perspective on the literature on contracting of public services, essentially two strands can be distinguished: analyses of the contracting decision itself, and those addressing the relative performance in the case of in-house vis-à-vis procured services. As to the first, seminal contributions have been made by Hart, Schleifer and Vishny (1997) and Blank (2000). Hart et al. model

[1]The Dutch Council for Work and Income (RWI) is acknowledged for kindly providing access to the Omnibus survey. In particular, Sjaak Koehler from RWI and Riemer Kemper are thanked for helping us to get acquainted with the Omnibus data. Further, we would like to thank Wouter Roorda and Nine de Graaf for providing us with the financial information of municipalities, and Peter Dekker and Annemiek van Vuren for the information of municipality characteristics. Ali Aouragh is thanked for his excellent research assistance, particularly in merging our data sources. Finally, Carolyn Heinrich and Daniel van Vuuren are gratefully acknowledged for useful comments on earlier versions of the paper.

the degree of contractibility to explain the contracting decision in general, whereas Blank places a special interest in social services of the public sector. Lopéz-de-Silanes, Schleifer and Vishny (1997) distinguish three mechanisms driving the contracting decision: efficiency and contractibility arguments, political patronage and budget constraints and ideological motives. Empirical applications on the contracting decision typically include service sectors in which quality can be relatively well observed, such as prisons (Hart et al.); refuse collection (Dijkgraaf, Gradus and Melenberg, 2003); or school cleaning (Christofferson, Paldam and Wuertz, 2007). Also, some studies have been conducted on samples of public services of U.S. municipalities or counties (Lopéz-de-Silanes et al; Brown and Potoski, 2003a, b; Levin and Tadelis, 2007). Most studies confirm the political patronage hypothesis, with more recent ones also finding evidence for the importance of contractibility arguments.

Various papers also address the actual effects of contracting on quality and costs. Domberger and Jensen (1997) present a meta-analysis in which they argue that contracting leads to costs savings of about 20 percent at constant quality levels. Jensen and Stonecash (2004) also find costs savings, but argue that these may be transitory. For the social services sector, again the evidence is scarce. Although currently there are strong debates on the relative efficiency and quality of public and private hospitals or schools, choices are typically made here by individual clients, rather than governments by contracting. As to the provision of WTW services in particular, the perspective of some recent studies is mostly on the effectiveness of contracted programs in and of themselves, and not as compared to in-house provision (Bernard and Wolff, 2008; Winterhager, Heinze and Spermann, 2006). In addition, some studies report improvements in placement rates in case of privatized provision, where payment schemes are related to the performance of providers (Finn, 2008). These studies, however, seem to point to the effectiveness of performance based systems—regardless of whether these apply to private or public providers (see, e.g., Burgess et al., 2004).

This paper contributes to the literature on public services contracting in two ways. First, to our knowledge we provide the first empirical analysis of the use and usefulness of contracting in the provision of WTW services. For this purpose, we merge administrative and survey data of Dutch municipalities for

2007 and 2008. We estimate both the contracting decisions of municipalities, as well as the impact of these decisions on the performance of municipalities, measured as the fraction of their Social Assistance (SA) recipients. As for the contracting model, we use a number of variables that are associated with the contractibility of the social assistance recipients (i.e., distance to the labor market); the patronage hypothesis (i.e., budget space and budget exhaustion measures); and political preferences (i.e., the fraction of votes for left-wing parties in a municipality). Some of these variables can be used as exclusion restrictions in the second stage of our model, when explaining the relative impact of in-house provision vis-à-vis contracting on the performance of municipalities.

The second innovative feature of this paper is related to the forms that the external provision of WTW services by municipalities may have. Essentially, this involves two decisions that both are modeled separately and are not mutually exclusive. First, municipalities may decide to contract with other (adjacent) municipalities, thus attaining scale advantages and the opportunity to provide more specialized services. Second, both municipalities and municipality cooperatives may decide to contract out services to private providers. Thus the contracting decision a municipality is faced with cannot be characterized as a make or buy decision only (Brown and Potoski, 2003b). Instead, contracting with adjacent municipalities can be considered as an option that is in between in-house provision by itself and contracting out—assuming that cooperating municipalities are more likely to have strong preferences for quality than private providers, while providing scale advantages compared to internal provision at the same time. Such scale advantages are not only confined to (lower) production costs, but also in the process of joint contracting to private providers (Brown and Potoski, 2003b). As opposed to that, joint provision of WTW services may result in a decrease in residual controls for municipalities in WTW policies, as well as coordination and free-rider problems between municipalities joining in.

In short, our findings suggest that contracting decisions are predominantly driven by cost considerations, both for the decision to contract with other municipalities and that of contracting out to private providers. Municipalities with low WTW budgets or facing budget constraints are more likely to contract with external parties—this probably reduces their costs and as well as the risk of cost deficits.

There is only weak evidence that municipalities increase the share of contracting to private providers if the contractibility of their SA recipients is higher—that is, when clients are easier to place into jobs. Furthermore, municipalities with a high share of votes for left-wing parties are more likely to contract with other municipalities. Finally, we do not find evidence of contracting decisions affecting the performance of municipalities, measured as the use, inflow, or outflow out of the SA scheme. From this alone, however, we cannot conclude that both the three provision modes are equally efficient as well, as the contract model outcomes suggest that external provision is less costly.

This paper proceeds as follows. Section 2 explains the institutional settings of the Dutch SA scheme, the provision of WTW services, and the data sources that are used for our analysis. In section 3 we present our empirical findings. Section 4 ends with discussion on our results.

2. INSTITUTIONS AND DATA

2.1 Institutional Context

In the Netherlands, unemployed workers may be entitled to benefits either by the unemployment insurance (UI) scheme or by the Social Assistance (SA) scheme. Statutory UI benefits cover 70 percent of the last earned wage, with entitlement periods that are related to individual working experience.[2] The UI scheme is carried out by the (public) social benefit administration. If workers are not or no longer entitled to UI benefits and do not have any partner income or (substantial) private wealth, they are entitled to SA benefits. The level of SA benefits is equal to the social minimum, which is 70 percent of the statutory Minimum Wage for single-person households. The administration of SA benefits is carried out by local municipalities.

[2]During the period of investigation the UI benefit period could vary between six months to five years. In order to be eligible for UI, workers should have paid UI premiums for 48 months in the previous 60 months. Until 2007, for workers of 57,5 years and older, the entitlement period in principle was 5 years.

As of 2004, municipalities receive lump sum payments for the number of SA recipients that is determined by the Ministry of Social Affairs and Unemployment. As a result, there are strong incentives for municipalities to lower their number of SA recipients. The lump sum payments are determined by a number of variables that are considered to be exogenous to the municipal policies, such as the population fraction of low incomes, lone-parent households, one-person households, immigrants, and the degree of urbanization.[3] In addition, municipalities receive earmarked budgets for the provision of their WTW services. In contrast to the lump sum financing for SA benefits, these budgets have remained more or less constant for a longer period of time, thus lacking a strong connection to the actual number of SA benefit recipients or exogenous variables driving the SA population size—we discuss this issue in more detail when addressing the data. Since 2006, municipalities can freely decide on the extent to which they spend their WTW budgets on in-house and private provision—as long as they give account to the Ministry that the amounts have actually been spent on WTW services.

2.2 Administrative and Survey Data

Our analysis uses data from three sources. First, administrative data for 2007 and 2008 on the stocks and flows of SA, as well as on the SA benefit and WTW budgets are derived from records of the Ministry of Social Affairs. These data have been merged with information on municipality characteristics from the Central Bureau of Statistics (CBS) and survey data on WTW policies—our second and third sources of information, respectively. Data from CBS include variables determining the lump sum payments to municipalities, as well as some additional characteristics, e.g., on political preferences. Survey data are derived from a recent survey among policy officials at municipalities, set up by the

[3]The complete list of variables in the budgeting formula included: low-income households, lone- parent households, disabled workers, immigrants, low educated, rental houses, number of inhabitants, labor supply, number of jobs in retail and hotel and catering industry, regional job growth, the number of jobs per inhabitant, and the labor participation rate of women.

Council for Work and Income: the Omnibus Survey.[4] This survey comprises two waves (2007 and 2008) with samples of municipalities, aiming to give insight into the way municipalities organize their WTW-policies. From the Omnibus Survey, we extract the shares of in-house and contracted WTW services, as well as dummy indicators showing whether groups of municipalities have joined their WTW policies. Survey questions for these groups of municipalities were filled in by officials of one participating municipality only. Thus, in order to match up with the Omnibus data, the administrative data from the Ministry and CBS had to be aggregated to level of municipalities joining their WTW policies.

Table 1 presents the sample averages and standard deviations of the merged sample, both for the full sample of municipalities and for the sample that participated in the Omnibus Survey. It should be stressed at this point that data of municipalities contracting within each other are aggregated to the level of groups, causing the number of observations of the full sample to be lower than the actual number of municipalities in 2007 and 2008. In particular, in the full sample we have 395 observations in 2007 and 379 observations in 2008, whereas the actual number was 443 in both years. As the number of (observed) municipalities with joined contracts was fairly constant, this means that the average number of municipalities per municipality group has increased in 2008.

When considering the budgeting of municipalities, we see that the average WTW budget per SA client was about 4,000 euros per year. The standard variation in the budgets per client was substantial, amounting to about 2,300 euro.[5] The maximum budgets that could be spent on WTW services by municipalities were substantially higher than the actual spending. Only about 60 percent of the budget was used, with surpluses for a major part being transferred to the next year. This explains why budgets

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[4]In Dutch: "RWI Omnibus enquête." RWI has provided a Web application to extract statistics from the Omnibus Survey at http://rwi.stratusbv.nl/# .

[5]The exact standard deviation of WTW budget per client amounted to 57.7 percent compared to the average budget. This variation is predominantly due to ex ante differences between budgets per client, rather than ex post differences between the actual and budgeted number of SA clients. By contrast, the variation in the average SA benefit budget per client stems only from differences between budgeted and actual SA clients—yielding a standard deviation of 10.8 percent.

Table 1
Sample Statistics of Gross and Selected Sample of Municipalities (2007–2008): Averages and Standard Deviations
(* and * indicate differences between the sample averages with 10% or 1% significance, respectively)

	Gross	Selected
(Aggregate) Municipality observations in sample	774	357
- 2007	395	162
- 2008	379	195
Municipality cooperatives: observations[a]	—	45 (143)
- 2007	—	23 (63)
- 2008	—	22 (80)
Welfare-to-work (WTW) and other expenditures		
WTW expenditures per client (dollars)	\$5,538 (142.0)	\$5,442 (166.7)
WTW expenditures as fraction of (yearly) WTW budget	0.591 (0.010)	0.610 (0.018)
Fraction in-house provision	—	0.262 (0.014)
Fraction private non-profit providers (in 2008)	—	0.503 (0.020)
Fraction private for-profit providers (in 2008)	—	0.220 (0.015)
Lump sum budget for SA (x 1,000,000 euros)	9.952 (1.273)	12.887* (2.374)
Expenditures for SA (x 1,000,000 euros)	10.311 (1.338)	13.432* (2.553)
SA Expenditures / lump sum budget	1.024 (0.004)	1.029 (0.006)
Characteristics of labour supply (fractions)		
Male	0.571 (0.001)	0.572 (0.001)
Disabled	0.048 (0.000)	0.048 (0.001)
Non-native	0.162 (0.002)	0.165 (0.003)
Medium education level	0.451 (0.002)	0.452 (0.002)
High education level	0.297 (0.002)	0.297 (0.003)
15–24 years of age	0.114 (0.000)	0.115* (0.001)
25–34 years of age	0.230 (0.001)	0.229 (0.001)
35–44 years of age	0.286 (0.000)	0.285 (0.001)
45–54 years of age	0.251 (0.001)	0.250 (0.001)
55–65 years of age	0.120 (0.001)	0.120 (0.001)
Size and characteristics municipality population		
Population size	41,487 (2,232)	51,052** (3,864)
Population size, corrected for collaborating municipalities	39,030 (2,191)	45,598** (3,783)
Number of households	18,194 (1,146)	22,493** (1,979)
Fraction one person households	0.283 (0.002)	0.288 (0.004)
Fraction lone parent families	0.054 (0.000)	0.055 (0.001)
Fraction rental houses	0.339 (0.003)	0.347* (0.005)
Fraction subsidized rental houses	0.263 (0.003)	0.270* (0.004)
Fraction of inhabitants in urban environment	0.367 (0.012)	0.408** (0.019)
Fraction votes for left-wing parties	0.367 (0.008)	0.364 (0.012)
Social assistance (SA)		
Fraction SA recipients of population	0.011 (0.000)	0.011* (0.000)
Fraction of yearly outflow out of SA	0.435 (0.005)	0.427* (0.006)
Fraction SA inflow of population	0.003 (0.000)	0.004 (0.000)

[a]The numbers between brackets here indicate the total number of municipalities that have joined there WTW efforts (not the number of municipality groups).

were usually not exhausted, only 5 percent of the municipalities used more than their budget. In both years most of the WTW budgets was spent on contracting to private organizations (74 percent on average). Figure 2.1 shows that the distribution of the fractions is skewed to the left, with more than half of the observations being 80 percent or higher. The figure also makes apparent that policy officials that were interviewed mostly reported rounded figures. In our analysis we therefore have to take account of measurement errors in observed WTW fractions—we return to this issue later when discussing the specification of our model. For 2008 only, spending on private contracts can be subdivided in those with private for-profit providers (22 percent) and private nonprofit providers (50 percent). Contracts with private nonprofit providers were usually lengthier than those with those with for-profits. Finally, it should be noted that the sample averages of the lump sum and actual SA benefit spending are substantially higher in the selected sample than in the full sample. This stems from the fact that larger municipalities were more likely to engage in Omnibus Survey.

When comparing the columns of Table 1, it becomes apparent that the characteristics of municipalities are very similar in the full and selected sample. Almost all differentials—if any—seem attributable to the larger population size in the selected (survey) sample. Moreover, note that the incidence of SA is higher in the selected sample, with a lower outflow rate out of the scheme. Apparently this reflects the fact that highly urbanized municipalities have higher unemployment rates. Finally, we have included the fraction of municipality votes for left-wing parties (i.e., socialists, social-democrats, and green parties).[6] As we will argue later on, this variable will be used as an exclusion restriction variable that possibly explains contracting decisions, rather than directly affecting the performance of municipalities.

[6]More specifically, according to our definition left-wing parties include the socialists (SP), social-democrats (PvdA), greens (Groen Links), and social-liberals (D66). Religious parties (CDA, CU and SGP), conservative liberals (VVD) are defined as right-wings parties, whereas votes to smaller local parties are left out.

Figure 1
Distribution of WTW Fractions that are Contracted Out To Private Providers (2007–2008)

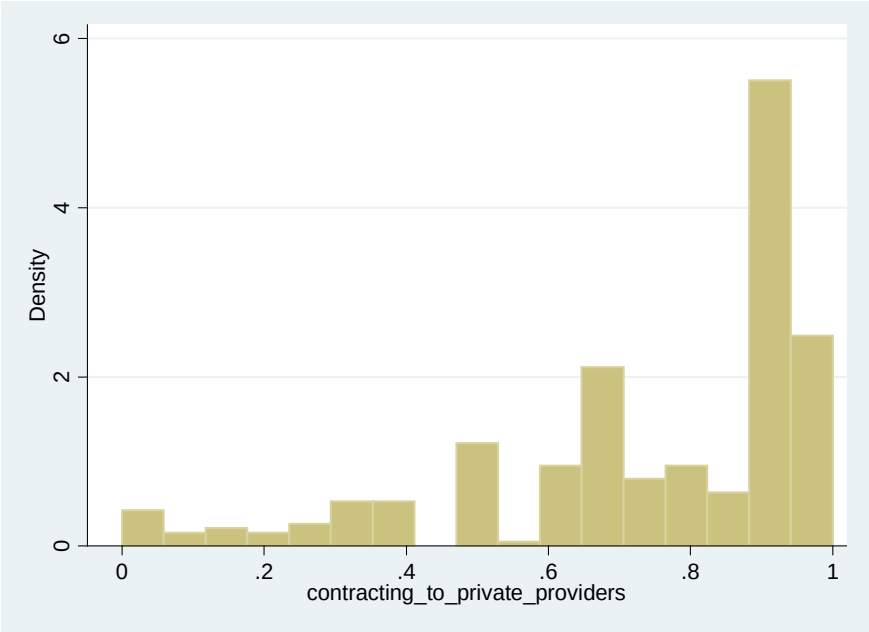

Table 2 presents a transition matrix describing the dynamics of municipalities in the full and selected sample. Note that in this table we use individual municipalities as the unit of analysis (443 in total)—not municipality cooperatives as aggregated observations. In 2007, in the selected sample we have 137 (69 percent) municipalities that organize their WTW service on their own and 63 (31 percent) municipalities that contract with other municipalities. Thus, the response rate is 45 percent. In 2008 the response rate had increased to 57 percent (i.e., 253 municipality observations). Still, in the selected sample only 108 municipalities are observed twice—with both the refreshment sample and attrition in 2008 being substantial (134 and 81 observations, respectively). Apparently survey administrators put more priority on drawing new municipalities into the sample than on keeping in the participating ones.

3. EMPIRICAL ANALYSIS

3.1 Theoretical Considerations

As argued earlier, the literature distinguishes three leading theories of contracting decisions of public services: efficiency arguments, political patronage, and ideology (Lopéz-de-Silanes et al., 1997). Efficiency arguments are associated with the incomplete contracts and asset specificity of services. Within the context of WTW services, the incompleteness of contracts is particularly relevant for hard-to-place SA clients. WTW programs for this group will take a long period and monitoring the effects even longer—if they can be measured at all. In these cases contracting out to external providers may therefore be inefficient. As opposed to that, long-term unemployed clients may need services that are specialized, involving the help of various specialists, like teachers, doctors, and coaches. Contracting with other municipalities may therefore be a way to offer economies of scope, while having less contractibility problems than with private providers.

In our data there are various municipality variables characterizing the composition and therefore also the contractibility and asset specificity of WTW services for SA recipients. For instance, the reintegration of lone parents may require expensive, specialized services. As to the complete set of

Table 2
Transition Matrix of Municipalities: In and Out of the Sample, and Contracting With Other Municipalities or Not

2008 → 2007 ↓	In Sample, No Contracting	In Sample, Contracting	Not In Sample	Total
In sample, no contracting	80	5	52	137
In sample, contracting	6	28	29	63
Not in sample	87	47	109	243
Total	173	80	190	443

explanatory variables in our data, however, it is impossible to conduct an overall test on the (net) importance of contractibility and asset specificity aspects. We therefore propose the expected share of SA recipients of the total municipality population—as used in the lump sum budgeting formula—as an overall proxy for the contractibility of SA recipients. This seems a fair assumption to make, as municipalities with a higher faction of SA recipients usually are associated with a high share of long-term benefit recipients as well.

As a second explanation for public contracting decisions, political patronage arguments may well be relevant for WTW provision too. Municipality workers may favor in-house provision to protect jobs. Local politicians mostly want to avoid the opposition of their civil servants and may use in-house provision as a way to achieve their own interests. Lopéz-de-Silanes et al. (1997) even state that budget constraints for politicians are necessary to prevent the provision of services to become fully public. Budget constraints may therefore play an important role in curbing in-house provision. Moreover, if municipalities' in-house provision tends to be too extensive, we may expect the effectiveness of WTW services to be lower too. As for the financial and budgeting information on municipalities, two variables may be of particular interest here. If public patronage is important, the budget per client is likely to restrain in-house provision. Similarly, if budgets are exhausted we may expect municipalities to be more likely to switch to contracting with neighboring municipalities or contracting out to private providers.

Finally, ideological arguments stress voter preferences on the provision of services. Typically, left-wing parties favor the in-house provision of services, and the so called "publicness" of WTW services seems no exception to this. Therefore, as a proxy for this we use the share of left-wing votes in the municipality.

3.2 Empirical implementation

The Contracting Decisions

Our empirical analysis on the use and usefulness of contracting modes can be characterized as a two-stage model. In the first stage, we specify the two contracting options that require a different way of

modeling. In particular, the decision to contract with other municipalities is a discrete choice. Instead, the share of WTW budgets that is contracted out to private providers is a continuous variable. For the first decision, indicated by the dummy value C_{join} , we thus adopt a (nonlinear) Probit specification, whereas the contracting out share, C_{out}, is specified in a linear model—see equations (1) and (2):

$$(1) \qquad \Pr (C_{join,it} = 1) = \Phi (X_{it} a_{join})$$

$$(2) \qquad C_{out,it} = X_{it} a_{out} + \varepsilon_{it} ,$$

with municipality index i ($i = 1,..I$) and year t ($t = 2007,2008$). Φ represents the cumulative standard normal distribution function, $\boldsymbol{X}$ is a matrix representing the municipality characteristics, a_{join} and a_{out} describe the effects of $\boldsymbol{X}$ on the respective decision processes and ε is an error term that is identically and independently distributed with variance σ_{ε}^2. We initially assume that the (unobserved) residual term in equation (1) and ε are uncorrelated. Under this assumption both equations can be estimated separately. As argued in the previous subsection, $\boldsymbol{X}$ includes proxies for the contractibility of SA clients, the budgeting process and political preferences of the municipalities. Equation (1) can be estimated by Maximum Likelihood, allowing for clustering effects at the level of municipalities. Likewise, as such effects may also apply to the contracting out decision, clustering for municipalities is needed when estimating equation (2) by OLS or robust GLS.

Obviously, the assumption that both contracting decisions are uncorrelated may be restrictive. For instance, joining WTW budgets with municipalities may decrease the need of contracting out to private providers. To test for such substitution (or complementary) effect, we can easily exploit coefficient estimates from the equations. In particular, from the coefficient estimates of a_{join} we can derive estimates for the Mills ratios (or: truncated moments) for yearly municipality observations with $C_{join} = 0$ and $C_{join} = 1$, respectively. Next, the correlation estimate of the Mills ratios with the estimated values of ε provides us with an estimate of the correlation between both contracting modes.

Effectiveness of Contracting Modes: Two Research Strategies

As to the impact of contracting modes on the effectiveness of WTW-services, the performance of municipalities can be measured by multiple performance outcomes. Obviously, as the primary goal of WTW services entails the reintegration of SA clients, we are interested in the impact on outflow rates out of the scheme.[7] In addition, if WTW policies also increase the durability of new jobs, this will lead to a reduced inflow in the SA scheme. In our empirical analysis we will therefore investigate the effect of contracting modes on (log) percentage of SA recipients of the municipality population—essentially representing the combined effect of inflow and outflow responses—as well as the outflow and inflow rates. As a benchmark model that explains the percentage of SA recipients (*SA*) we have

$$(3) \qquad \ln(SA_{it}) = b_{join}\, C_{join,\,it} + b_{in}\, WTW_{in,\,it} + b_{out}\, WTW_{out,\,it} + X_{it}\, b + \eta_{it}$$

with η as a residual term that is identically and independently distributed with mean zero an variance σ_{η}^{2}. Further, b_{join} , b_{in} and b_{out} describe the effects of contracting with other municipalities, the WTW spending that has been provided in-house (WTW_{in}) and the WTW spending that has been contracted out to private providers (WTW_{out}). b describes the effects of the municipality characteristics $\boldsymbol{X}$. *SA* represents the percentage of municipality inhabitants between the ages of 15 and 65 that receives SA benefits. Similar to the equations (1) and (2), note that equation (3) is estimated while allowing for municipality-specific clustering effects.

Apparently, both contracting modes in equation (3) may be associated with endogeneity problems. For instance, with lump sum budgeting of SA benefits, successful municipalities with low SA incidence rates will have a surplus on their budgets for their benefits. This may discourage these municipalities to contract out or to join their efforts with other municipalities. In both cases the effect of

[7]This measure also captures scheme outflow due to the start of old-age pensions or other reasons other than reintegration, but we may expect the size of it to be unrelated to WTW policies.

the contracting modes will be underestimated as a result of this. To take such endogeneity effects into account, we use two separate research designs for the two respective contracting modes. These designs follow from the types of data we have on contracting modes, which is discrete for the decision of contracting with other municipalities and continuous for the contracting out decision.

First, as the decision to join WTW efforts is discrete, we estimate equation (3) in a two-stage treatment selection model, using the Mills ratio estimates resulting from equation (1) of the contract joining decision to control for any endogeneity effects. In this setting $\boldsymbol{X}$ provides us with two variables that can be used as exclusion restrictions—that is, variables that are assumed not to affect the SA percentage of municipalities directly and therefore can be excluded from the second estimation stage as explanatory variables. These variables are the WTW expenditures as a fraction of the (total) budget and the fraction of votes of left-wing parties in a municipality.[8]

Our second research design takes advantage of the longitudinal aspect of the data by estimating equation (3) with municipality fixed effects. Thus, the assumption would be that unobserved municipality characteristics that determine the SA percentage and contracting modes are constant over time. For the identification of the coefficient variable of joining contracting such an approach is not likely to work, as the number of municipalities that have switched from contracting by itself to contracting with other municipalities (or reverse) is very limited. For the share of WTW budgets that has been contracted out, this approach is better suited.

3.3 Contracting With Other Municipalities

Table 3 presents the marginal coefficient estimates from Probit (and Logit) regressions on the occurrence of municipalities contracting with other municipalities—i.e., equation (1). The picture that

[8]Similarly, these variables can in principle be used as instruments in a two-stage regression for the contracting out equation as well, provided they meet the usual instrument validity requirements. As we will show later on, this is not the case.

Table 3
Coefficient Estimates for Probability Models of Contracting with Other Municipalities (Marginal effects; st. errors in parentheses; * and ** denote significance at 10% and 1%, respectively)

	Probit Model (i)		Probit Model (ii)		Logit Model	
Expected fraction of SA recipients			0.396	(0.218)*	0.284	(0.193)
WTW expenditures per client (x1,000 euro)	-0.054	(0.014)**	-0.051	(0.015)**	-0.041	(0.010)**
WTW expenditures as fraction of WTW budget	0.095	(0.042)**	0.088	(0.040)**	0.065*	(0.029)*
Characteristics population (fractions)						
Male	0.888	(0.748)	0.578	(0.686)	0.447	(0.556)
Disabled	0.654	(0.811)	0.204	(0.712)	0.118	(0.571)
Non-native	-0.392	(0.201)**	-0.361	(0.188)*	-0.261	(0.149)*
Medium education	-0.654	(0.462)	-0.640	(0.489)	-0.482	(0.353)
High education	-0.368	(0.281)	-0.286	(0.278)	-0.246	(0.218)
25–34 years of age	0.354	(0.756)	-0.001	(0.727)	0.052	(0.575)
35–44 years of age	0.161	(0.743)	-0.008	(0.694)	0.023	(0.559)
45–54 years of age	0.507	(0.707)	0.332	(0.649)	0.236	(0.506
55–65 years of age	-0.279	(0.874)	-0.147	(0.785)	-0.136	(0.622)
Log population size, corrected[a]	-0.032	(0.018)*	-0.035	(0.018)*	-0.026	(0.015)*
Household characteristics (fractions)						
One person households	0.077	(0.192)	-0.202	(0.234)	-0.117	(0.177)
Lone parent families	0.311	(1.262)	-1.250	(1.420)	-0.840	(1.159)
Rental houses	-0.007	(0.206)	-0.029	(0.189)	0.004	(0.147)
Subsidized rental houses	0.039	(0.176)	0.002	(0.159)	-0.007	(0.116)
In urban environment	0.013	(0.041)	0.032	(0.040)	0.022	(0.034)
Fraction votes for left-wing parties	0.131	(0.068)**	0.121	(0.066)**	0.084	(0.049)*
Year = 2008	-0.013	(0.016)	-0.009	(0.015)	-0.009	(0.012)
Observations	332		332		332	
Log likelihood	-81.8		-80.2		-78.6	

[a]Note that we include the average population size per municipality group that cooperates, as we model the choice of individual municipalities to join their WTW policies.

emerges is roughly similar for both specifications, with most coefficient estimates being insignificant. To start with, smaller municipalities are more likely to contract with other municipalities. This confirms the asset specificity hypothesis—with municipalities being more likely to contract if the gains from specialization are large. Evidence favoring the contractibility hypothesis, however, is weak. When using the expected fraction of SA recipients as an overall proxy for the level of difficulty of reintegrating clients, the estimated coefficient value has the expected (positive) sign but is borderline significant only.

By contrast, we do find evidence for the public patronage hypothesis in our data. In particular, municipalities with tight budgets are more likely to contract with other municipalities. An increase of the WTW expenditure per client with 1,000 euros leads to a 5 percentage-point lower probability of contracting with other municipalities. Similarly, the isolated effect of budget tightness for the (40) municipality observations with deficits on the contracting probability is about 7 percentage-point—as compared to the average probability. These findings suggest that WTW costs are expected to be lower or less uncertain if WTW services are provided jointly. Interestingly, we also find evidence for municipalities with many left-wing voters being more eager to contract with other municipalities. It may be that these municipalities have more trust in joining their efforts with other municipalities than right wing politicians do, rather than fearing free-rider problems that come with it.

3.4 Contracting Out to Private Providers

Table 4 shows the coefficient estimates for models explaining the share of WTW services that is contracted out to private providers (see equation [2]). In the survey data on contracted shares, rounded figures are well overrepresented. Next to the standard (linear) OLS specification (in the first column), we therefore have conducted ordered Probit and Logit regressions as well—thus taking into account

Table 4
Coefficient estimates of model variants explaining the contracted share of WTW services (standard errors in parentheses; * and ** denote significance at 10% and 1%, respectively)

	(i) Linear Model (benchmark)		(ii) Ordered Probit		(iii) Ordered Logit	
Expected fraction SA recipients	-0.240	(0.363)	-0.946	(1.505)	-0.746	(2.574)
WTW expenditures per client (x1,000 euro)	-0.019	(0.007)**	-0.000	(0.000)*	-0.000	(0.000)*
WTW spending as fraction of WTW budget	-0.002	(0.041)	-0.039	(0.181)	-0.067	(0.298)
Characteristics population (fractions)						
Male	1.365	(1.505)	8.140	(6.107)	15.96	(10.54)
Disabled	0.281	(1.514)	-1.808	(6.679)	-3.151	(11.25)
Non-native	-0.115	(0.278)	-0.658	(1.306)	-1.134	(2.176)
Medium education	0.320	(0.777)	0.214	(3.705)	-1.035	(6.165)
High education	0.037	(0.574)	0.458	(2.562)	0.896	(4.303)
25–34 years of age	-1.871	(1.681)	-8.000	(6.838)	-17.44	(11.74)
35–44 years of age	-1.461	(1.411)	-5.590	(6.793)	-11.37	(11.34)
45–54 years of age	-2.548	(1.550)	-8.967	(5.972)	-15.85	(10.30)
55–65 years of age	-3.616	(1.606)**	-12.665	(7.609)*	-25.67	(12.68)*
Log population size	-0.021	(0.026)	-0.178	(0.114)	-0.278	(0.194)
Household characteristics (fractions)						
One person households	0.067	(0.400)	-0.437	(1.776)	-1.670	(2.951)
Lone parent families	4.959	(2.861)*	18.109	(10.62)*	28.56	(18.98)
Rental houses	0.545	(0.383)	3.349	(1.900)*	5.789	(3.236)*
Subsidized rental houses	-0.996	(0.362)**	-5.406	(1.817)**	-9.717	(3.136)**
Inhabitants in urban environment	0.077	(0.073)	0.383	(0.311)	0.757	(0.535)
Fraction votes for left-wing parties	-0.035	(0.094)	-0.003	(0.387)	0.128	(0.666)
Year = 2008	-0.007	(0.030)	-0.196	(0.142)	-0.379	(0.245)
Observations	300		300		300	
Log Likelihood			-465.0		-463.8	
(pseudo-) R-squared	0.099		0.036		0.038	

measurement errors.[9] When comparing the three specifications, we find the estimation results to be quite similar. Similar to the contracting model with other municipalities, the vast majority of coefficient estimates is insignificant. The evidence points to the public patronage hypothesis only, with high WTW budgets being associated with a lower share of contracting to private providers. Further, the share of contracting is found to increase with respect to the fraction of lone-parent families. This may be due to asset specificity which is particularly high for this group and therefore cannot be provided in-house. Contracting out is less likely if the share of older workers in the working population is high. A possible explanation for this is that older workers are often exempted from WTW programs.

As we find both contracting decisions to be driven by budget considerations, the question arises whether the two can be considered as substitute provision modes. In particular, if both forms of external provision contribute to cost reductions, this may hold for other (unobserved) cost drivers as well. We tested for this along the lines as explained in the previous subsection, yielding an estimated correlation coefficient equal to 0.104 (0.226). From this we conclude that both contracting decisions are made on different grounds—at least to the extent that these are unobserved. Stated differently, the extent of contracting out to private providers is not (systematically) different for municipalities that have joined other municipalities.

Effectiveness of Contracting Modes

Table 5 shows coefficient estimates of equation (3), explaining the log value of SA recipient fractions in municipalities. As becomes apparent from the table, both the two-stage selection model and the model with municipality fixed effects are estimated to take account of potential endogeneity problems—e.g., stemming from the fact that municipalities with high SA incidence are more likely to contract with other municipalities. The table clearly shows that the most important variable in explaining

[9]In the ordered regressions, we used five categories for the observed fractions, each with equal support size (of 20 percentage points).

Table 5
Estimation Coefficients on Log Value of SA Percentage
(Standard errors in parentheses).

	OLS		Treatment Selection Model: Contracting With Other Municipalities		Municipality Fixed Effects	
Municipality contracting with other municipalities	-0.043	(0.041)	0.078	(0.070)	-0.142	(0.108)
WTW expenditures: public (x1,000 euro)	-0.016	(0.002)**	-0.014	(0.004)*	-0.019	(0.009)*
WTW expenditures: private (x1,000 euro)	-0.016	(0.005)**	-0.013	(0.005)**	-0.020	(0.008)*
Expected fraction SA recipients, log value	0.944	(0.032)**	0.930	(0.027)**	0.214	(0.145)
Characteristics population (fractions)						
Fraction male	-0.620	(0.565)	-0.742	(0.649)	-1.052	(1.026)
Fraction disabled	1.065	(0.874)	1.285	(0.759)*	2.904	(1.209)
Fraction non-native	-0.205	(0.167)	-0.237	(0.142)*	0.312	(1.152)
Fraction medium educ.	-0.132	(0.413)	-0.173	(0.403)	0.226	(0.959)
Fraction high education	-0.177	(0.308)	-0.200	(0.276)	1.551	(1.328)
25–34 years of age	-0.418	(0.728)	-0.562	(0.737)	-1.271	(1.426)
35–44 years of age	-0.547	(0.588)	-0.611	(0.731)	-2.291	(1.470)
45–54 years of age	-0.680	(0.676)	-1.111	(0.731)*	-1.230	(1.613)
55–65 years of age	-0.179	(0.676)	-0.419	(0.821)	-3.582	(1.467)*
Log population size	0.001	(0.033)	-0.036	(0.050)	0.593	(0.283)*
Log population size, corrected	-0.005	(0.034)	0.029	(0.051)	-0.087	(0.081)
Household characteristics (fractions)						
One person households	-0.058	(0.161)	0.001	(0.178)	-2.075	(3.156)
Lone parent families	-0.939	(1.059)	-0.459	(1.108)	-5.490	(9.389)
Rental houses	0.600	(0.256)**	0.616	(0.199)**	0.303	(0.495)
Subsidized rental houses	-0.151	(0.290)	-0.128	(0.193)	1.770	(1.602)
Inhabitants in urban environment	-0.042	(0.041)	-0.038	(0.034)	-0.232	(0.389)
Year = 2008	0.030	(0.014)*	0.033	(0.016)*	-0.008	(0.043)
Mills ratio			-0.058	(0.026)**		
Observations	321		300		321	
R-squared	0.968				0.690	

the SA rates is the expected fraction of recipients that follows from the budgeting formula. Except for the fixed effects model, the estimated elasticity for this variable is close to one, suggesting that it is a good proxy for the actual SA percentage, with only little explanatory room left for any other municipality characteristics we observe.[10]

When turning to the parameters describing the provision of WTW services, the first thing to note is that the effect of contracting with other municipalities is insignificant for all specifications. For the fixed effects specification this is not surprising, as we observe only 11 municipalities that have switched from contracting by oneself to contracting with other municipalities, or reverse. For the selection model for the contracting decision with other municipalities, where we exploit the two variables as exclusion restrictions, the efficiency of our estimates seems far more acceptable, but results are still insignificant (i.e., second column of Table 5). Further, we find a negative correlation between contracting decision and SA fraction, suggesting that municipalities with better SA performance are more likely to join with other municipalities.

As for the contracting decision to private providers, the interesting result emerges that the effectiveness of in-house and contracted expenditures are both significant and virtually equal to each other.[11] In particular, we find estimated coefficient values to range from—0.020 to—0.013, meaning that an increase in the WTW budget per client decreases the number of SA recipients with 2.0 percent to 1.3 percent, respectively. So benefit savings are small, regardless of the provision mode that is used.[12] Unfortunately, we do not have any variables in our sample that are important in explaining the in-house and external fraction of WTW spending and can be used for IV regressions. As has become apparent from

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[10]We also estimated model versions were the budgeted SA rate excluded. This yielded coefficient variables of the other variables with higher significance, but lower overall explanatory power. Moreover, we did not obtain results for the contracting variable coefficients that were different.

[11]To avoid any endogeneity problems here, we first recalculated the WTW budget per client by dividing through the expected (budgeted) number of SA recipients—not the observed numbers.

[12]As a result, SA benefit savings will amount to 20 percent to 35 percent of the additional WTW spending of an extra euro.

Table 4, both the indicator for budget tightness and the fraction of left-wing voters would be too weak to use as valid instruments. Still, the overall picture that emerges from the OLS and FE estimates is that the impact is fairly robust.

Table 6 presents estimated coefficients for the effect of the contracting variables on the log values of the fraction of SA recipients, the inflow rate, and the outflow rate as variables that are to be explained. Again we find municipality groups that contract with each other perform similarly as those who do not. As to the amount of WTW spending that is in-house and external, the estimated effectiveness is (statistically) equal in all specifications. The evidence is strongest that the WTW spending increases SA outflow rates. Here, the obtained coefficients are quite similar to studies on job training effectiveness. In particular, recent work of Groot et al. (2008) finds the impact of job training programs for SA recipients in the Netherlands to amount to 2.5 percentage points—compared to an average outflow rate of 17.3 percent. When taking the same average outflow rate as a point of reference, our estimates would imply an increase of the outflow rate of between 0.6 to 0.9 percentage points—which is roughly three times smaller in size—but this difference can be well explained by the fact that the costs per program were around 3,000 euro in the other study.

4. DISCUSSION

Similar to earlier research and for different public services, our estimation results lend credence to public patronage. Municipalities respond to budget constraints, particularly when these are tighter. This applies to the decision to contract with other municipalities and, to a lesser extent, to that of contracting out to private providers. As most municipalities had quite large budgets in the time period under investigation, one may suspect that too much of their budgets were spent on in-house provision. But when considering our estimation results on the performance of municipalities, we do not find any evidence of private provision being more effective. Instead, it seems the effectiveness of internal and external WTW spending is remarkably similar. The most optimistic view on these results would be that municipalities

Table 6
Coefficient Estimates of the Effect of Contracting on Incidence, Inflow and Outflow Out of SA

	OLS	Selection Model	Municipality Fixed Effects
Log Fraction of SA recipients			
Municipalities contracting with other municipalities	0.044 (0.073)	0.103 (0.067)	-0.113 (0.110)
WTW expenditures: public (x1,000 euro)	-0.016 (0.002)**	-0.014 (0.004)**	-0.019 (0.008)*
WTW expenditures: private (x1,000 euro)	-0.016 (0.005)**	-0.013 (0.005)**	-0.020 (0.009)*
Log inflow rate into SA			
Municipalities contracting with other municipalities	0.064 (0.098)	0.221 (0.164)	-0.215 (0.272)
WTW expenditures: public (x1,000 euro)	-0.003 (0.006)	0.001 (0.008)	-0.054 (0.022)*
WTW expenditures: private (x1,000 euro)	-0.001 (0.011)	0.004 (0.012)	-0.037 (0.019)*
Log outflow rate out of SA			
Municipalities contracting with other municipalities	0.097 (0.080)	0.108 (0.142)	0.304 (0.364)
WTW expenditures: public (x1,000 euro)	0.035 (0.004)**	0.036 (0.007)**	0.055 (0.030)*
WTW expenditures: private (x1,000 euro)	0.044 (0.010)**	0.044 (0.010)**	0.053 (0.026)*

optimize their contracting decisions, with effectiveness being equal at the margin. At the same time, however, there are three other interpretations that tend to be more pessimistic.

The first interpretation is that our contract measures are simply too global and our data size too small to obtain significant estimates. Compared to the estimate that is obtained from the budgeting formula, the impact of WTW spending on the percentage of SA recipients is only small (but significant). So when supposing that changing provision modes can only change effectiveness to some extent, the coefficient estimates will be even smaller. With more precise data that are measured at the level of individual clients within municipalities and with different providers, obtaining significant estimates is more likely.

Second, one should also keep in mind the institutional context of the Dutch municipalities prior to 2007. From 2002 to 2006, private provision of WTW services by municipalities was compulsory. As of 2006, the share of in-house provision has increased gradually but still is at a relatively low level. One may not expect that municipalities have reached the extent of in-house provision they prefer, thus curbing inefficiencies that may result from public patronage.

Third, it should be noted that public and private WTW providers are perhaps not that different after all. The majority of private providers in the WTW sector—at least those contracted by municipalities—consist of nonprofit organizations with strong ties to the social assistance desks. These organizations have long-term contracts and are often were a department of the municipality services. This may explain why differences are hard to detect.

All in all, our results suggest that differences in WTW provision modes are not very important—at least when measured in effectiveness. This conclusion would ignore, however, the cost efficiency of the programs. If the public patronage hypothesis holds, costs per client are likely to be (or will be) unnecessarily high. Evidence from the Australian Job Network shows that privatization has led to substantial cost reductions, while maintaining the same level of effectiveness (Finn, 2008). This calls for further research on the costs attached to the provision of WTW programs.

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