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Hessami, Zohal and Silke, Uebelmesser

University of Mannheim, Department of Economics, University of Munich, Center for Economic Studies

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Empirical determinants of in-kind redistribution:

Partisan biases and the role of inflation

Zohal Hessami^{a,*} and Silke Uebelmesser^b

^a *Department of Economics, University of Mannheim, L13, 15-17, 68131 Mannheim, Germany*

^b *Center for Economic Studies, University of Munich, Schackstr. 4, 80539 Munich, Germany*

Abstract

There is a dearth of research on the determinants of in-kind redistribution. Using dynamic panel data estimations for 32 OECD countries, we show that the in-kind share of social benefits is lower under left-wing governments. This effect is weakened when left-wing governments respond to inflation by increasing the share of in-kind transfers.

Keywords: In-kind redistribution; social benefits; partisan biases; inflation

JEL codes: D78; E31; H42; I38

* Corresponding author: Tel.: +49 621 181 3454, fax: +49 621 181 3451.
E-mail addresses: Zohal.Hessami@uni-mannheim.de, Uebelmesser@lmu.de.

1. Introduction

The theoretical public finance literature offers various explanations why social benefits are provided in-kind rather than in cash even though in-kind transfers create consumption distortions. These arguments mostly draw on paternalism, self-selection, and political economy considerations. In contrast, Currie and Gahvari (2008) point out “the limited empirical evidence that can be brought on” these explanations and state that “the empirical work seems to largely accept the paternalism theory and move on to other questions” (p. 334). Previous studies mainly seek to explain why in-kind benefits exist in the first place, while from an empirical viewpoint the next step is to explain the variation in the choice of redistributive measures across countries and over time.

This paper takes this next step by testing the influence of two variables that have been neglected both in the theoretical and empirical literature on in-kind redistribution. We hypothesize that left-wing governments opt for a smaller in-kind share of social benefits than centrist and right-wing governments because they are more concerned that benefit recipients are stigmatized. In addition, we argue that inflation shifts the choice of redistributive measures towards in-kind benefits when left-wing governments are in power as they want to shield their constituency – typically the poorer sections of society – from inflation.

2. Hypotheses

The existing empirical literature on partisan biases in social policy investigates the influence of government ideology on welfare state size (Allan and Scruggs, 2004). The question whether there are partisan biases in the choice of redistributive measures has so far been ignored. We suspect that there are such biases given that in-kind benefits create welfare stigma¹. Hence, left-wing parties that are interested in protecting their constituency in order to get re-elected are likely to provide a higher share of social benefits in cash than centrist and right-wing governments.

¹ Moffitt (1983) defines welfare stigma as the “disutility arising from (observable) participation in a welfare program” (p. 1023). For example, when poor people pay with food stamps in supermarkets or when they reside in public housing

An explanation for the converse statement (a higher in-kind share of social benefits under centrist and right-wing governments) is that politicians of centrist and right-wing parties may be more prejudiced against and more suspicious about transfer recipients. Some of them even appear to expect benefit recipients to spend transfers on cigarettes and alcohol rather than their childrens' education.² Both lines of reasoning imply:

H1: *Left-wing governments opt for a lower in-kind share of social benefits than centrist and right-wing governments.*

A second hypothesis addresses the question whether governments respond to inflation by changing the relative emphasis placed on in-kind and cash transfers. This conjecture is based on the conventional wisdom that especially the poor are vulnerable to rising prices (Al-Marhubi, 1997; Easterly and Fischer, 2001). A government concerned about benefit recipients may find it difficult to constantly increase the nominal value of cash transfers to keep up with inflation and therefore chooses a higher in-kind share. This implies:

H2: *Left-wing governments raise the in-kind share of social benefits in response to inflation.*

3. Data and methodology

The dynamic panel data estimations for 32 OECD countries over the 1980-2007 period (five-year averages)³ are based on the following specification:

$$\begin{aligned} \text{In-kind benefit share}_{it} = & \alpha_i + \beta \text{In-kind benefit share}_{it-1} + \gamma \text{Left-wing}_{it} + \delta \text{Inflation}_{it} \\ & + \zeta \text{Left-wing}_{it} * \text{Inflation}_{it} + \eta \mathbf{X}_{it} + \mu_i + \varepsilon_{it}, \end{aligned} \quad (1)$$

projects, other people can observe their status as benefit recipients.

² To give an example, in 2008 Philipp Missfelder, chairman of the youth organization of the conservative German CDU, argued that an increase in cash benefits would give a boost to liquor and cigarette sales (<http://www.zeit.de/online/2009/08/missfelder-tabak-hartz-4>).

³ Five-year averages reduce measurement error and allow us to take into account that changes in the political choices of redistributive measures take some time to show effect. The first and the last period comprise four years.

where α_i (with $i = 1, 2, 3, \dots, 32$)⁴ and μ_t (with $t = 1, 2, \dots, 6$) are the country and time fixed effects. ε_{it} is the error term.

For the dependent variable, we use data on in-kind shares of social expenditures from the OECD SOCX Database.⁵ In order to account for the persistence of the dependent variable and to capture dynamic effects, we include a lagged dependent variable.

To test hypothesis 1, our estimations rely on a measure for the ideology of the chief executive's party by Beck et al. (2001). This widely used index classifies governments as right-wing, centrist or left-wing in terms of economic policy as follows: "Right: for parties that are defined as conservative, Christian democratic, or right-wing; left: for parties that are defined as communist, socialist, social democratic, or left-wing; center for parties that are defined as centrist or when party position can best be described as centrist (e.g. party advocates strengthening private enterprise in a social-liberal context)." (Keefer, 2010).

Since centrist parties are rare and we do not have any priors regarding differences in the choice of redistributive measures between right-wing and centrist parties, we use them jointly as the reference category. This means that the explanatory variable *Left-wing*_{it} is 1 for left-wing governments and 0 otherwise. One robustness check tests for potential differences by adding a *Centrist*_{it} dummy. To test hypothesis 2, we include inflation rates from the OECD Key Economic Indicators and their interaction with government ideology.⁶

The vector of control variables \mathbf{X}_{it} contains five variables. First, we include the total volume of social expenditures. We expect a negative relationship between welfare state size and in-kind redistribution if governments cover the most basic needs such as housing, health care and food with in-kind transfers to ensure the survival of recipients. With a growing welfare state, the government provides additional benefits in cash. Second, the estimations control for real GDP per capita (in

⁴ Switzerland and Germany are the two OECD countries that are not included for reasons of data availability.

⁵ Social expenditure data from the OECD comprise expenditures in the following domains: old age, health, incapacity, family, unemployment, survivors, and housing. For further information see OECD (2011).

⁶ In line with Baskaran (2012), we transform the inflation rate to $p = [\text{inflation rate}/(1 + \text{inflation rate})]$ to address the fact that some countries have very large inflation rates during the sample period, which may unduly influence the estimates.

thousands) based on Bearnse et al.'s (2000) argument that poor countries rely more strongly on in-kind redistribution.⁷ Third, we include a measure of openness (trade/GDP) as previous studies have emphasized the role of globalization for social policy, especially regarding the insurance function of the welfare state (Rodrik, 1998). Fourth, \mathbf{X}_{it} includes unemployment rates since unemployment benefits are exclusively paid in cash. Finally, we use a measure of population density (inhabitants/km²) to account for the fact that the degree of social cohesion may affect social policy.⁸

We estimate equation (1) using the system GMM estimator which performs better in the case of a persistent dependent variable than the difference GMM estimator (see Arellano and Bover, 1995; Blundell and Bond, 1998). The OLS estimator is ill-suited since the simultaneous inclusion of a lagged dependent variable and fixed effects gives rise to biases (Nickell, 1981) when T is smaller than 30 (Judson and Owen, 1999).

4. Results

Table 1 reports the estimation results. Models (1) to (3) are the baseline estimations where the main explanatory variables that we are interested in are included successively. Models (4) to (6) represent three robustness checks that in turn use lag restrictions to address the “too many instruments problem” (Roodman, 2009), that treat our main explanatory variables as endogenous and that add a centrist government dummy to test for differences within the group of non-left-wing parties. The highly significant lagged dependent variable points towards persistence in the dependent variable that justifies our dynamic specification and the use of the system GMM estimator. The high p-values for the Hansen *J*-statistic indicate that the instruments are valid. Finally, as expected there is first-order autocorrelation and no evidence for second-order autocorrelation.

⁷ Bearnse et al.'s (2000) model assumes that poor countries differ from rich countries in terms of a less productive tax collection technology leading to a low quality of public service. Since this may induce top-income earners in poor countries to opt out of the public service, the median voter pre-emptively allocates a larger share of the public budget to in-kind redistribution rather than redistribution in cash.

⁸ Sources: Penn World Tables, OECD Macro Trade Indicators and Economic Outlook, and World Development Indicators

Table 1. System GMM estimations

<i>Dependent variable:</i>	Baseline estimations			Robustness checks		
<i>In-kind benefit share</i>	(1)	(2)	(3)	(4)	(5)	(6)
Lagged dependent variable	0.942*** (14.393)	0.956*** (14.934)	0.954*** (15.168)	1.012*** (16.261)	0.994*** (21.353)	0.972*** (20.062)
Left-wing government	-0.292 (-0.568)		-4.951** (-1.976)	-5.244* (-1.756)	-10.068** (-2.452)	-5.354** (-2.163)
Inflation rate		-1.126 (-1.169)	-1.498** (-1.984)	-2.189*** (-2.937)	-4.314** (-2.310)	-1.533** (-2.176)
Left-wing government *Inflation rate			6.191* (1.872)	6.771* (1.712)	12.415** (2.415)	6.413** (1.966)
Centrist government						5.280 (0.685)
Centrist government *Inflation rate						-9.105 (-0.857)
Social expenditures/GDP	-0.006 (-0.113)	-0.003 (-0.071)	0.003 (0.068)	0.051 (0.886)	0.026 (0.454)	-0.005 (-0.120)
Real GDP per capita	0.018 (0.506)	0.012 (0.346)	0.024 (0.694)	0.030 (0.850)	0.020 (0.547)	0.031 (0.892)
Openness	0.003 (0.383)	0.004 (0.644)	0.003 (0.499)	0.004 (0.565)	0.006 (0.860)	0.007 (1.208)
Unemployment rate	0.081 (0.992)	0.085 (1.065)	0.079 (1.061)	0.076 (0.915)	0.077 (0.987)	0.052 (0.701)
Population density	-0.002 (-0.817)	-0.002 (-1.209)	-0.002 (-1.311)	-0.004 (-1.641)	-0.005** (-1.969)	-0.003* (-1.802)
Observations	120	123	120	120	120	120
Hansen J-test (p-value)	0.448	0.446	0.478	0.281	0.598	0.226
AR(1)-test (p-value)	0.026	0.024	0.037	0.034	0.036	0.052
AR(2)-test (p-value)	0.918	0.762	0.847	0.885	0.791	0.802
Instruments	21	21	23	17	29	25

a. Hypothesis tests based on heteroscedasticity-robust standard errors

b. Stars indicate significance at 10% (*), 5% (**), 1% (***)

c. z-statistics in parentheses

d. Inflation rate rescaled as $p = [\text{Inflation}/(1 + \text{Inflation})]$

e. Left-wing and centrist government measure the share of years that left-wing or centrist parties were in power in each five-year period

f. Model (4) uses a lag restriction; model (5) additionally treats the three covariates of interest as endogenous; model (6) includes the centrist government dummy and its interaction with inflation

From the baseline estimations we can infer that when included separately neither the left-wing government dummy nor the inflation rate have a significant influence on the share of in-kind redistribution. However, in the complete specification of model (3), the coefficients for the base effects and the interaction term are significant at the 5 and 10 percent level, respectively. With zero inflation, the negative left-wing government coefficient implies that left-wing governments put a stronger emphasis on cash benefits than non-left-wing governments as argued in hypothesis 1. In addition, right-wing and centrist governments respond to inflation by decreasing the in-kind share of social benefits. In the absence of appropriate inflation-indexation of benefits this would imply a cut in real social expenditures under non-left-wing governments. Finally, the positive interaction term suggests that left-wing governments react to inflation by increasing the share of in-kind benefits which confirms our second hypothesis.

The first robustness check re-estimates model (3) using only the first lags as instruments. The results are virtually unchanged except that the inflation coefficient is now even significant at the 1 percent level. Model (5) additionally treats the three explanatory variables of interest as endogenous. Again, the results are qualitatively the same as in the baseline. Finally, model (6) extends model (3) by including a centrist dummy and its interaction with the inflation rate. Both are insignificant, while the results for the other covariates are unchanged.

5. Conclusion

This paper addresses the dearth of research on the determinants of in-kind redistribution by testing the influence of partisan biases and inflation. Based on system GMM estimations, we find that left-wing governments exhibit a stronger preference for cash transfers than right-wing and centrist governments. In addition, our results suggest that inflation plays a critical role in this relationship.

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