On the politics of local equalization and grant systems: Criteria objectivity and the strategic use of grants

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Søren Frank Etzerodt
TUM School of Social Sciences & Technology
Technical University of Munich
Soren.etzerodt@tum.de

Niels Jørgen Mau Pedersen
Danish Center for Social Science Research
VIVE
NJMP@vive.dk

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Abstract

We advance the argument that lacking criteria objectivity increases the scope for political-strategic use of interregional grants by allowing tailoring to political interests. Using the Danish 2020 equalization grants reform as a case, we *first* find that several newly introduced special grants are poorly based on criteria objectivity but still substantially impact redistribution. *Second*, these grants correlate with constituencies where the incumbent and parliamentary supporters and the reform coalition are strongly represented *before* the reform. *Third,* leveraging polling station data, we find a strong positive correlation between new non-objective grants and votes for the incumbent and parliamentary supporters in subsequent parliamentary elections. *Fourth*, individual-level survey data suggests non-objective grants may have attracted or kept voters loyal to the incumbent and its parliamentary supporters. We do not find a robust relationship between party support, voting, and changes in grants based on 'objective' criteria strengthening our claim that it is non-objective grants that are subject to political-strategic use. The paper contributes a new argument to literature pointing out importance of objectivity for strategic use of grants, and tests the argument empirically with new data using mixed methods.

Introduction

Local equalization and grants systems in Western democracies channel and redistribute huge amounts of economic resources from central to local governments as well as between local governments. A long-standing tradition in political economy engages with such transfers (Buchanan, 1950; Oates, 1999; Stokes, 2005). Interregional transfers can have a stabilizing effect functioning as insurance against local-specific business cycles, structuring economic and political incentives for local governments, influencing public finance, impacting equity and social cohesion across regions, and ensuring equal financial opportunities between local governments. The latter is especially of interest to scholars of decentralized governments, as inter-regional transfers are a prerequisite for a well-functioning decentralized system. It is also of interest to scholars of distributional politics as interregional transfers are an important institutional arena for the (re)distribution of resources. Fiscal equalization and grants systems represent an important institutionalized system of such inter-regional transfers. With the remarkable 'exceptionalism' of the United States, all developed democracies have well-established and politically entrenched equalization and grants systems at the national or federal level (Béland & Lecours, 2014), although they are structured very differently (Boadway et al, 2007; Brenton, 2020). For good reasons, understanding the political dynamics of equalization and grants systems has been front and center of much political economy research. This paper examines how distributive politics drive reforms of these systems, and how reform changes subsequently influence electoral politics.

An extensive literature shows that grants and equalization schemes can be leveraged strategically to (re)win or reward voter groups in geographically defined constituencies (Cox & McCubbins, 1986; Lindbeck & Weilbull 1987; Brollo et al, 2011; Dahlberg et al., 2002).

As such, some voter groups benefit more from grants, as some local constituencies gain relatively more from grants than others. Distributive politics hence play an important role in understanding grants and equalization systems. According to the mainstream literature, discretionary grants are mainly subject to strategic use, while formula-based grants are not as the latter is expected to suspend the arbitrariness of the grant allocation. The possible strategic use of discretionary grants may seem nearby since the applicants, i.e. the individual local government, may accept allocation criteria could be uncertain or even unknown (Kjærgaard, 2016:62). We, however, argue that formula-based grants may also be subject to strategic use if the criteria objectivity of the formula-based grant is low. We argue this to be the case because grants with a low degree of objectivity increase the scope for politically tailoring grants according to particular partisan interests. By "objectivity", we mean that the grant is both transparent and factually related to recognized needs.

Using the Danish large-scale 2020 equalization and grants reform as a case we analyze how changes in the institutional set-up of the fiscal equalization and grants system increase the room to maneuver strategically, how reforms are driven by distributive politics, and how these reform changes ultimately impact the electorate. We argue that Denmark represents an interesting case for testing our argument as it can be considered a least likely case for our argument in two important respects. First, the literature argues that localism and pork-barrel politics play a minimal role in a multiparty parliamentary system – Denmark represents such a case (Kjærgaard, 2016; Tavits, 2009). Second, if we are correct in highlighting the importance of objectivity for the strategic room to maneuver, Denmark should according to the mainstream literature represent a least likely case as its system builds on a long-institutionalized tradition of formula-based criteria system (Mau Pedersen, 1995). If (criteria) objectivity influences distributive politics in this institutional context, we should expect

criteria objectivity to influence distributive politics in other developed democracies as well.

We first analyze the substantive policy changes of the Danish 2020-reform. Second, we test quantitatively if electoral strategic considerations (i.e. distributional politics) is driving the size of the newly introduced grants. Finally, by leveraging voting station data from 2019 and 2022 and new election survey data from the 2022 parliamentary election, we test in a multi-level design how the newly introduced grants impact voting. We find that several of the newly introduced special grants are poorly based on criteria objectivity but still have a substantial impact on the redistributive consequences of the equalization system. Leveraging election data from the 2019 parliamentary election and the 2020 equalization and grants reform we further find that the size of these new grants is positively correlated with votes for the incumbent, its parliamentary supporting parties, and the reform coalition. Finally, leveraging voting station and survey data from the 2022 parliamentary election we find that these new grants also seem to impact voting: The newly introduced grants with a low degree of criteria objectivity are strongly correlated with votes for the government and especially its parliamentary supporters, while changes in grants based on a high degree of objectivity are not.

These findings challenge past models arguing that pork-barrel politics and clientelism are mainly features of systems with winner-takes-all voting and weak parties (Lancaster & Patterson, 1990; Morgenstern & Swindle, 2005) or developing countries (Kitschelt, 2000). While winner-takes-all voting and weak parties may be sufficient conditions for the presence of clientelist-like policies these institutional features may not be necessary conditions – our paper at least suggests the latter.

The paper contributes three new insights. First, we theorize that formula-based grants can be subject to political-strategic use when criteria objectivity is low. Second, we show empirically how changes in institutions (grants) open up the scope for strategic use of grants when (criteria) objectivity is low. Third, we show empirically that grants with low criteria objectivity is related to voting.

The paper first reviews the literature on the strategic use of grants. It then introduces the main theoretical argument. Next, the article's data is presented. In four steps we then (1) analyze the substantive policy changes in the Danish 2020 equalization and grants reform and the redistributive consequences of different grants; (2) analyze the political strategic considerations behind the introduction of these grants; (3) analyze the electoral consequences of the newly introduced grants with voting station data; (4) analyze the electoral consequences of the newly introduced grants with new individual-level survey data. The last section concludes.

Strategic use of grants

There is a significant body of research in political economy on the strategic use of government grants, also known as 'pork barrel politics' and opportunistic behavior (Arrington, 1969; Bella et al., 2002; Lindbeck et al, 1987; Milligan & Smart, 2005, Stokes, 2009). The strategic use of grants may happen when a central state/federal authority transfers funds to a decentralized level or when distributing funds between local governments. Central to this literature is how the use of grants may be used strategically to increase parties' chances of re-election and political support in general, i.e. a purpose that goes beyond the recognized equalization policy objectives of leveling the economic playing field for local governments.

This is based on the assumption that local decision-makers respond to the grants. Moreover, often it is assumed that local voters understand or are told about grant changes, or at least are receptive (responsive) to the effects of the grant on, among other things, local expenditures and services, as well as local financing (Cox & McCubbins, 1986, Bracco et al, 2015).

The mechanism can be both direct, in the form of payment or 'bribe' for agreeing with the subsidizing politicians, or more indirect, in the form of signaling. A signal is a form of nudging enabling local politicians, through an increased subsidy, to improve the level of local services provided to citizens, who may reward them electorally for what they perceive as good competence (Bracco et al, 2015). In this context, parts of the literature have also addressed the so-called 'flypaper effect'[1] – i.e. whether additional subsidies are 'sticky' and result in increased local consumption or alternatively lower taxes (Bækgaard & Kjærgaard, 2016; Inman, 2008; Lago et al., 2022).

Much of this literature analyses discretionary grants from the central to the local level (Bracco et al, 2015; Brollo & Nannicini, 2011; Dahlberg & Johansson, 2002, Jarocinska, 2022). The motivation for focusing on discretionary grants is that governments or the central authorities are mainly capable of tailoring these types of grants according to their political preferences. In contrast, when using a formula-based grant, it is more difficult to tailor grants according to specific partisan preferences. As Banti (2011: 381) succintly puts it: "*The prevailing assumption is that distributing resources by a formula based on economic and*

[1] The existing literature does not focus much on the motivation itself for investigating and analyzing the topic, but it is regularly stated that the strategic use of subsidies is assumed to have welfare-reducing effects. The phenomenon is thus an expression of prioritizing own welfare (reelection) over the welfare of citizens (Fiorillo & Markaj, 2020). In other words, strategic use may prevent or inhibit subsidies from being used for what may have originally justified them, including internalization of externalities, equalization between the well-off and the less well-off, and inter-jurisdictional efficiency (Bracco et al, 2015, Brollo & Nannincini, 2011, Milligan & Smart, 2005, Dahlberg& Johansson, 2002 and Lindbeck & Weibull, 1987).

welfare variables, will suspend the arbitrariness that allows politically motivated targeting". For this reason, the literature has generally recommended formula-based grants (Bracco et al, 2015; PETFF; 2006; but see Khemani, 2003). In addition, strategic grants can also refer to development grants, tax allocations, equalization grants etc. (Fiorillo & Merkaj, 2020).

Although admittedly crude, two main models can be identified in the literature (Cox & McCubbins, 1986; Lindbeck & Weilbull, 1987)[2]. One prominent model can be referred to as the 'core voter/loyalty model' (Cox & McCubbins, 1986). According to this model, the national party in power tries to support the voter base in jurisdictions where its party is strongly represented and whose preferences are therefore well known. Or put differently, the party assesses the likelihood and certainty of support as highest in these localities. The second and equally prominent model is the 'swing voter model' (Dixit & Londregan, 1996; Dahlberg & Johansson, 2002). According to this model, the party in power seeks to appeal in particular to those jurisdictions where the election is 'close' and where relatively few voters are needed to gain a majority. The logic is that especially in electoral systems with winner-takes-all principles, grants can potentially have an electoral impact in those electoral districts where the election result is difficult to predict. It may thus be strategically more worthwhile to channel funds to swing states relative to areas where the party has a secure majority.

Relevant to these two main models, Cox & McCubbins (1986) point out that the degree of risk aversion of central policymakers also plays a role in the approach chosen. A swing voter approach may be riskier, as relatively small changes in voter turnouts in the undesirable

[2] The literature also engages with a third 'alignment model' (Arulampalam et al., 2009, Solé-Ollé & Sorribas-Navarro, 2008). This model argues that local governments (municipalities) that are politically aligned with central government, are allocated more funds.

direction may significantly affect the outcome.

As a consequence, of the focus on federal states, the literature has paid less attention to how different coalitions affect grants in countries with multi-party and proportional voting systems (Kjærgaard, 2016). However, several studies point to the importance of party composition in a coalition for understanding which parties' interests are served (Budge & Keman, 1990, Bäck et al., 2013), while others point to the ability of all coalition parties to be served (Arulampalam, 2005). A coalition can be understood both as a government coalition (parties in the incumbent government), a parliamentary coalition (a mix of parties in government and not in government but supporting the government), and as a reform coalition (parties supporting a reform regardless of their affiliation to the government) (Häusermann, 2010; Kjærgaard, 2016).

Objectivity and the scope for political-strategic use of grants

By "objectivity", we mean that a grant is transparent and relates to recognized needs. In the case of a specific grant, this means that the data and calculation of the grants must be transparent and replicable, and a plausible link (of causality) between criteria and needs is established (for example via statistical analysis). As such, objectivity relates to the technical aspects of equalization grants and schemes, and not the normative aspects (such as equality and level of redistribution). An 'objective'criteria may not be just or desirable in any normative sense but must fulfill demands of transparency and factuality.

We argue that the degree of criteria objectivity affects the scope for political-strategic use of grants, whether or not the grant is formula-based. Formula-based grants that are based on

technical sound criteria, where it is clear how the grant is distributed (the formula is publicly known), and how the criteria relate to needs should not be subject to political-strategic use, as the institutional mechanism of objectivity makes it difficult to tailor grants according to specific partisan preferences. We, however, argue that formula-based grants do not necessarily meet the requirements of objectivity if the data and formula itself are not documented and the criteria in the formula are not plausibly related to expenditure needs. Such non-objective formula-based grants, we argue, open the room for leveraging grants strategically, as it to a larger extent is possible to tailor grants according to particular partisan preferences. Simply put: By introducing new non-objective grants or strengthening existing non-objective grants, patrons can more easily target clients in specific constituencies. As we describe in more detail in later sections, several of the newly introduced grants in the Danish 2020 reform are formula-based, yet they are based on a low degree of objectivity. The consequence of our objectivity argument is hence that formula-based equalization grants may be subject to political-strategic thinking.

The concept of objectivity is also applied in cross-country and single-country studies (OECD, 2012, 2016, 2020, 2021, Solé-Ollé, 2013, Jarocinska,2022), sometimes with the added requirement of the local governments cannot themselves manipulate the criteria.
The OECD moreover has recommendations for 'good practice' in elaborating grant and cost equalization although they do not specify precisely what is meant by objectivity. In the Nordic countries, a grant is, moreover, said to be ‘objective’ if municipality behavior does not impact the allocation of grants (at least in the short to medium turn), if (regression) analysis indicates a relationship between criteria and needs, and if the data are publicly available (normally via public agencies) (Junghun & Lotz, 2007; Oulasvirta, 1993).

We are, however, not the first to claim that formulae-based grants can be subject to strategic use. Khemani (2003) for example argues that the ability to use formulae-based grants strategically can be circumvented when political agencies as opposed to independent Finance Committees are in charge of policy recommendations[3]. As such, this institutional mechanism can curb political influence. Our theory of criteria (objectivity) fits nicely with Khemani's (2003) argument, and we see the institutional mechanism she presents as one way of achieving objectivity. Media attention and opposition critique (Mehiriz, 2017) may also influence criteria objectivity. However, the crucial factor, we contend, is whether or not the grant criteria are objective. Objectivity may be achieved via different mechanisms and our theory is agnostic about how criteria objectivity is achieved.

Table 1. Grant formality, criterion objectivity and room to maneuver: A framework for analysis

		Grant formality	
		Low (Discretionary grants)	High (Formula-based grants)
Criteria objectivity	Low	Big room to maneuver (Unsystematic discretion)	Some room to maneuver (Unsystematic systematics)
	High	Some room to maneuver (Systematic discretion)	Small room to maneuver (Systematic systematics)

We further make a distinction between formality and objectivity. Discretionary grants have a low formality while formula-based grants have a high formality. Combining formality and objectivity, we obtain a 2x2 framework with predictions about the scope for political-strategic use of grants and equalization schemes (see table 1). In the top left and bottom right

[3] Khemani (2007) moreover finds evidence that governments use indirect and direct financing of deficits depending on political preferences supporting the idea that governments can circumvent formula-based grants via alternative fiscal instruments.

corner, we find the discretionary grants and formula-based grants that the literature generally operates with (discretionary grants with low objectivity and formula-based grants with high objectivity). In this paper, we focus only on formula-based grants with a low/high degree of objectivity, i.e. right-hand side of the table), but the framework also has implications for studies of discretionary grants with varying degrees of objectivity. The framework however says nothing about the extent of the potential political use of the room to maneuver. To explain this, we instead follow the main models in the literature described above.

Based on our theory of criteria objectivity we should hence expect the following:

Proposition 1: Formula-based grants and schemes with a high degree of objectivity will not be subject to political strategic use.

Proposition 2: Formula-based grants and schemes with a low degree of objectivity will be subject to political strategic use.

Data

We base the empirical analyses partly on qualitative secondary sources, and partly on quantitative data on (re)distribution between municipalities from the 2020 equalization reform bill, and new election data from the 2019 and 2022 Danish national elections at the municipality, voting station, and individual level. Data sources, operationalization and descriptive statistics are provided in appendix 1-6.

For the qualitative analysis of the substantive changes of the 2020 equalization reform, we

primarily rely on the legal text from the 2020 reform bill (Ministry of Social Affairs and the Interior, 2020) and the Ministry of Interior's background material for the reform. To track policy changes, we compare changes in the 2020 reform with the annual grant announcement published by the Ministry on 1 July each year. As a supplement, we also use secondary analyses of the principles of the Danish equalization and grants system. All sources are cited in the text.

To quantitatively test the strategic use of equalization schemes and grants, we leverage data from the Ministry of Social Affairs and the Interior, Municipal Key Figures (noegletal. dk), and the Danish Electoral Database on the 98 municipalities. To test the strategic determinants of the reform, the dependent variables measure the change in per capita kroner (DKK) from the respective grants in 2021 (after the 2020 reform is implemented). Positive numbers indicate that a municipality receives more money from the scheme/grant, while negative numbers indicate that the municipality has to contribute. The dependent variables thus measure how much each municipality receives/contributes per capita per scheme/grant.

To measure the "objective" part of the system, we use the changes in the equalization of expenditure needs and tax bases, as well as the overcompensation scheme. This part of the system (called the General System) includes tax bases and expenditure needs and relies on "objective" allocation criteria based on publicly available regression analysis, i.e., a relatively high degree of objectivity (Ministry of Social Affairs and the Interior, 2020: 19, 40). To measure the non-objective schemes/grants, we use changes in the three new specific grants, i.e., the Metropolitan Grant (n=34)[4], Island & Rural Grant (n=98), and Special

[4] The Metropolitian grant is only allocated to the 34 municipalities in the metropolitan area hence the n-value of 34.

Compensation Grant (n=98). We analyze in more detail in later sections why these grants rely on a low degree of objectivity.

To measure distributive politics we use data from the 2019 general election to calculate the share of votes at the municipality level by dividing the number of votes for party x by the number of valid votes in municipality y. We measure (1) the share of votes for the Incumbent (Social Democratic Party), (2) the Incumbent and its parliamentary supporters (Social Democratic Party, Reed-Green Alliance, Green Left, Social Liberal Party, and The Alternative), and (3) the reform coalition (Social Democratic Party, Liberal Party, Green Left, Social Liberal Party, and The Alternative). All data are from the Danish Electoral Database.

To measure swing voters we compute the following variable: $Swing\ voter = \sqrt{(CL_i - CR_i)^2}$, where CL measures the share of votes for center-left bloc (the incumbent and the parliamentary supporters), CR measures the share of votes for the center-right bloc (all other parties), and *i* is the respective municipality. The measure thus indicates the margin between the two blocs. The value 1 for example indicates that there is one percentage point between the two blocs (measured as the share of votes). Lower values (smaller margins) should thus, according to the swing voter model, be correlated with the size of grants.

To test if the newly introduced non-objective grants subsequently impact the electorate, we leverage voting station-level data from the 2022 parliamentary election. The Danish National Election Database contains 1347(1346) voting stations in 2022(2019) with data on votes for the respective parties. The smallest election station has 31 eligible voters whereas the biggest has 22.152. Each voting station refers to a fixed geographical area (based on postal codes)

within voting districts. These geographical areas fit within municipality borders allowing us to leverage a multi-level regression design, where we have voting stations within municipalities.

Furthermore, to measure votes at the polling station level we follow the coding of political constellations above (i.e. incumbent, incumbent & its parliamentary supporters, and reform coalition). We merge the voting station data with the municipality-level reform data using the municipal identifier number by assigning each voting station to a municipality. We have 1345 observations (i.e. voting stations) after merging the data. Due to missingness, we end up with 1330 observations in the full models. The data is from the Danish Electoral Database.

Moreover, to measure votes at the individual level we leverage a new large-n representative national survey consisting of 4.218 respondents. The survey is fielded by YouGov in the aftermath of the Danish national election on November 1. 2022, and respondents are drawn from YouGov's Denmark Panel. To ensure representativity data is weighted by age, gender, education, and residency. Respondents are asked which party they voted for in the 2022 and 2019 national elections allowing us to measure core voters (voters that voted for the same party/coalition in two consecutive elections) as well as vote switchers. This allows us to test to what extent grants may strengthen voter loyalty and attract new voters. We merge the individual-level survey data with the municipal-level data on grants by using respondents' reported municipality of residence.

Empirical analysis

The empirical analysis is structured as follows: First, we analyze the policy content of the 2020 reform focusing on criteria objectivity; Second, the strategic motivations of the reform; Third, the consequence of the reform on voting in the subsequent 2022 national election leveraging voting station data; Fourth, we analyze the reform's impact on voting leveraging individual survey data.

Content of the 2020-reform and lacking criteria objectivity

The Danish welfare state is one of the most decentralized in the world, both in terms of GDP and as a share of public sector expenditures (Ivanyana & Shah, 2012). Danish municipalities moreover provide the majority of welfare-related services (child care, elderly care, primary schools, employment services, etc.). The economic-institutional prerequisite ensuring that municipalities have roughly equal financial opportunities to provide these services is the municipal equalization and grants system (more broadly known as the fiscal equalization system).

Throughout the years, the system has consisted of a *general part* (the 'General System') and a *special part* with special grants and compensation schemes (Etzerodt & Mau Pedersen, 2018). The general – and most significant – part is addressing the main differences between tax bases and expenditure needs and the allocation of the block grant. The special schemes are addressing specific issues that the general system does not address.[5]

[5] Specifically, we include the equalization of tax bases and expenditure needs, the correction for so-called over-compensation schemes, the employment grant (in 2020) and block grants in the general part of the system. All the other 20 schemes are included in the special part, i.e. mainly permanent financing grants, new island and

Over the years, a professional tradition of 'objectivity' in the system has emerged, first and foremost through requirements for the expenditure needs criteria that have been included in the general part. These include requirements that the data stems from a public source (normally Statistics Denmark), and have a sound professional justification relating needs and criteria via arguments of causal relationship including published statistical analysis (Mau Pedersen, 1995, Junghun & Lotz, 2007, Finance Committee, 2012). Moreover, it is also required that the criteria do not depend on the municipalities' own behavior. There has, on the other hand, been no tradition in the special part of the system of formulating similar requirements for criteria objectivity.

In 2020 the system underwent a large-scale reform. The normative policy project was clear: A better balance in municipalities' economic opportunities, including greater redistribution of economic resources between municipalities, which also resulted in a substantial increase in the overall redistribution. The 2020 equalization reform preserved the main principles of objectivity in the general part, but with adjustments of the expenditure needs as well as an increase in the equalization intensity (Blom-Hansen & Mau Pedersen, 2020).

The reform however introduced several special grants that are only poorly justified in the tradition of criteria objectivity. We focus on the arguably most significant new special grants: Metropolitan Grant, Island & Rural Grant, and Special Compensation Grant.

rural municipalities grant, new grant for metropolitan municipalities, new Special Compensation grant, corporate tax equalization, the foreigner's equalization scheme, special compensation, special grants on application and several smaller schemes for transportation to island municipalities, border municipalities, municipalities with residential areas with particularly high crime rates, etc. The breakdown corresponds to that of the Ministry of Social Affairs and the Interior (2020), where Special Compensation Grant (2021) is, however, included under the general part of the system and the Employment Grant (2020) in the general system.

First, and financially most important, the reform replaced parts of the general system by two quite substantial special grants. The previous metropolitan equalization scheme was replaced with the new special grant called the new 'Metropolitan Municipalities Grant' and the previous grant for municipalities outside the metropolitan area with a weak tax base was replaced with another special grant called the new 'Island and Rural Municipalities grant'[6]. For both schemes, the criteria are only (superficially) explained in the legal text, and not documented in supplementary material as is custom (Ministry of Social Affairs and the Interior, 2020). Regarding the requirement for transparency, it is noteworthy that the calculations of the two grants are not documented in the otherwise detailed yearly report on the equalization and grant system from the ministry (see Ministry of the Interior and Housing, 2022). However, according to the legal text, the grants in question were allegedly distributed to so-called vulnerable municipalities that meet one or more criteria, but the calculation and the criteria were not publicly released (Ministry of Social Affairs and the Interior, 2020: 19).

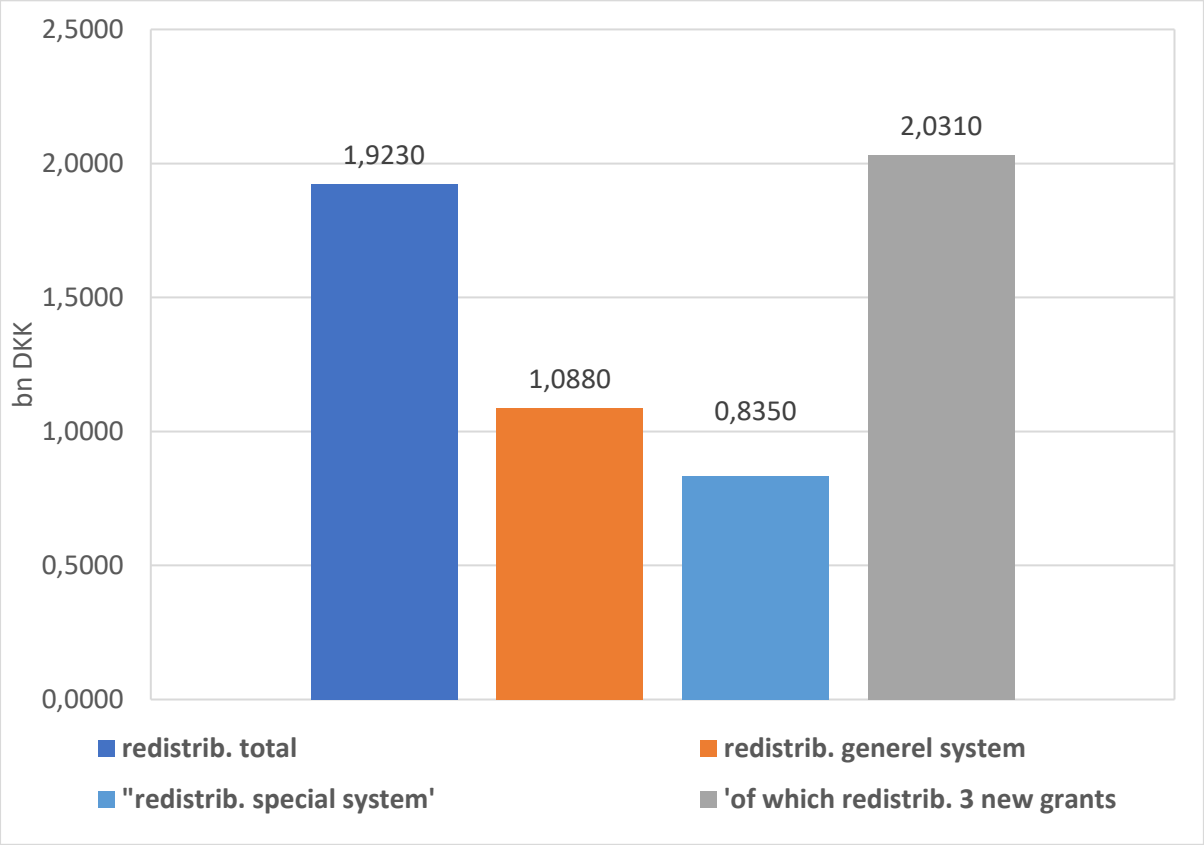
For both schemes, the law also unconventionally explicitly mentions by name the 15 and 34 beneficiary municipalities respectively, with the corresponding distribution factor. The grants are also 'frozen', i.e. unchanged from year to year except for correction for population changes – again without any further justification or documentation. Lastly, there were no attempts to present empirical analyses to show a plausible link between criteria and needs. The two new schemes are therefore not transparent, nor do they meet the requirement of plausibly arguing for a link between criteria and needs. In essence, these two grants are not following the principles of criteria objectivity, although they are formula-based.

[6] Of relative importance, the reform also made permanent the 'extraordinary financing grant' now called 'special financing grant', based on well-known equalization criteria such as tax bases and expenditure needs as well as population. However, this grant can be traced back to 2014 and we do therefore not include it here.

Second, the reform introduced an equally large grant called the Special Compensation Grant. This grant scheme distributes grants to municipalities with the greatest losses from the reform measured by the size of the loss. However, there was not published any detailed calculation or further justification for the grant. The grant may remind of a transitional grant to facilitate the adaption of losses from the reform but in thr latter case the grant is permanent. The newly introduced Special Compensation Grant is hence neither transparent nor possibly related to needs. The mentioned grants are described in detail in Appendix 7.

The importance of all of the newly-introduced special grants and schemes can also be illustrated by their impact on overall redistribution in the fiscal equalization and grants system. To indicate this, we calculate the magnitude of redistribution resulting from the subparts of the 2020 reform. We distinguish between redistribution from the entire system (i.e. all reform changes combined), from the general part, from the special part (including the three new grants), and finally individually from the three abovementioned new grants.

Figure 1. Change in redistribution 2020-2021 after implementation of the reform, bn DKK.



Note: We follow Statistics Denmark (Nørtoft et al., 2022) and calculate redistributive consequences as the sum of negative (corresponding to positive) differences for single municipalities between the actual equalization grants and grants calculated for a 'neutral' situation, i.e. where the considered equalization grant system did not exist but the sum of net grants from the central government to local governments were distributed to municipalities in proportion to their share of inhabitants. See also appendix 8.
Source: Authors' own calculations based on yearly reports on the equalization and grant system from the Ministry, cf. App. 8.

Figure 1 shows the redistribution consequences of the reform and its subparts. It shows that redistribution from the entire system corresponds to around 1.9 bn. DKK , which is equivalent to 10 pct. (from 20 bn. DKK before the reform to 21.9 bn. DKK after the reform). This is a substantial change in redistribution of resources. The increase resulting from the general part of the system accounts for 1.1 bn. DKK with a residual increase for the special part of the system of 0.8 bn. DKK. Finally, the three new grants, accounts for around 2 bn.

DKK, i.e. a very significant part of the increase in redistribution. It further implicates a reduction of the redistributive consequences of other parts of the special part system than the three new grants

Strategic motivations and grant changes

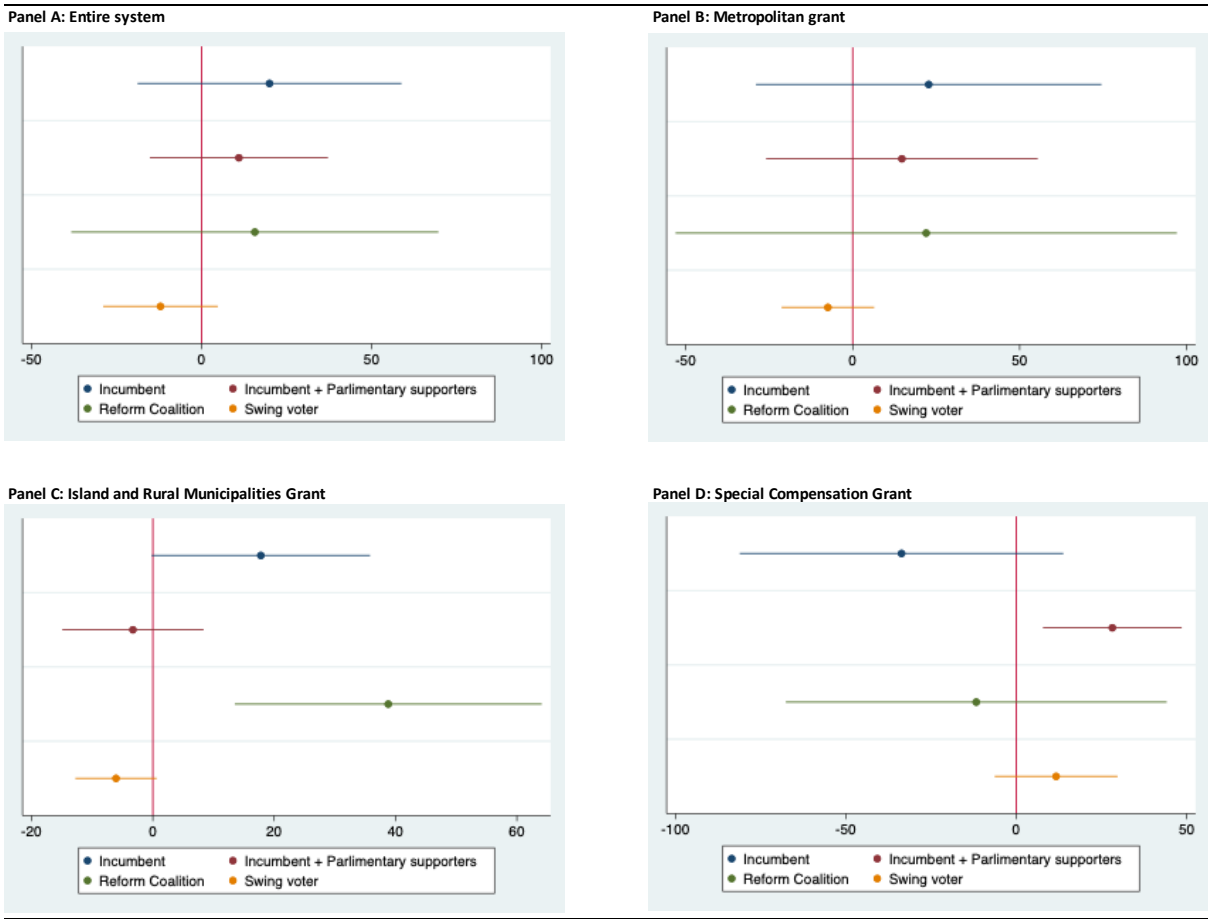
To test the political motives behind the reform we run a set of linear (OLS) regressions with standard errors clustered at the municipality level. We hereby intend to measure the impact of party support for the different political parties/coalitions in the 2019 election (outlined in the data section) showing implementation of grants per capita after the 2020-reform[7]. In all models, we control for several structural conditions which likely impact the allocation of (equalization) grants: Number of inhabitants, population growth, tax base per capita, expenditure needs, the share of elderly (67+ years old), and the share of persons without vocational education. For the sake of simplicity, we only plot the estimate of the political variables of interest below, however, the full regression models are available in Appendix 9-11. Robustness checks are described in the text and available in Appendix 12-13.

Figure 2 shows the main results. Panel A shows that there is no statistically significant relationship between the political variables and the size of all grant changes (i.e. the entire system) in local constituencies. Moving on to the three new non-objective grants, Panel B first shows the results of the new Metropolitan Grant. When we control for several structural conditions, there is no significant relationship between the political variables and changes in the size of grants. The estimates, however, have the expected direction, and the few

[7] However, given the nature of the design, we do not claim to identify a causal relationship in a strict econometric sense (Wooldridge, 2012). The quantitative empirical analysis thus provides indicative evidence of the relationship between political-strategic factors and changes in grants allocated. The same methodological caveat applies for the subsequent empirical analyses of the electoral impact of the reform changes.

observations (n=34) naturally make it harder to get conventionally acceptable p-values. Panel C further shows the results for new Island & Rural Grant. For this grant, only the share of votes for the reform coalition is positively and statistically significantly correlated with changes in the amount of grants from the scheme. However, the share of votes for the incumbent (Social Democrats) is positive and significant at the 0.1-level. Robustness checks, however, show that it is only the share of votes for the reform coalition that remains systematically statistically significant. Panel D finally shows the results for the Special Compensation Grant showing that the incumbent and its parliamentary supporters seem to gain relative more from this grant. This result is robust to the other specifications. Moreover, appendix 12-13 show that there is no statistically significant relationship between the political variables and changes in the general system that is based on a higher degree of objectivity.

Figure 2. Relationship between political constellations and compensation and grant funds



Note: Controls are included in all models. Circles show estimates, while horizontal lines show a 95% confidence interval. The full models are presented in Appendix 9-11.

All in all, we find little statistical support for the claim that changes in the general (and ”objective”) part of the system are driven by political-strategic motives – the included political-strategic variables certainly do not appear to be systematically correlated with grant allocations. The Special Compensation Grant seems to be particularly beneficial for those municipalities where the incumbent and its parliamentary supporters are well represented. For the new Island and Rural Municipalities Grant, it seems to benefit particularly those municipalities where the reform coalition has its stronghold. We find no significant correlations for the new Metropolitan Grant, however, all coefficients are in the expected direction, and with a n-value of 34 in these models the nonsignificant results are less surprising. These results hence suggest a partisan bias in the allocation of some of the grants

with low objectivity, while there seems to be no political bias in the allocation of grants with a high degree of objectivity.

Grants and voting in the 2022 national election: Voting station level evidence

To test the electoral consequences of the 2020 equalization and grants reform, we run a set of multi-level linear (OLS) regressions with standard errors clustered at the municipality level (Stegmueller, 2011). We measure the impact of the respective grants on support for the different political coalitions at the voting station level. In all models, at the municipality level, we control for the number of inhabitants, tax base per capita, expenditure needs, share of elderly (67+ years old), and share of persons without vocational education. At the voting station level, we further control for adult population size, unemployment, income inequality (80/50-ratio), and votes for the respective political party/coalition in the 2019 election (the latter is done to measure changes in votes). Except for tax base per capita and expenditure needs these controls are frequently used when analyzing electoral behavior in developed democracies. We finally include municipality-fixed effects. We only plot the coefficient for the variables of interest; however, the full models are available in appendix 14-16, and alternative tests and robustness checks are in appendix 19. We focus on the non-objective special grants below and present models for the general scheme in the appendix 19.

Figure 3. Relationship between grants and votes: Voting station evidence 2022

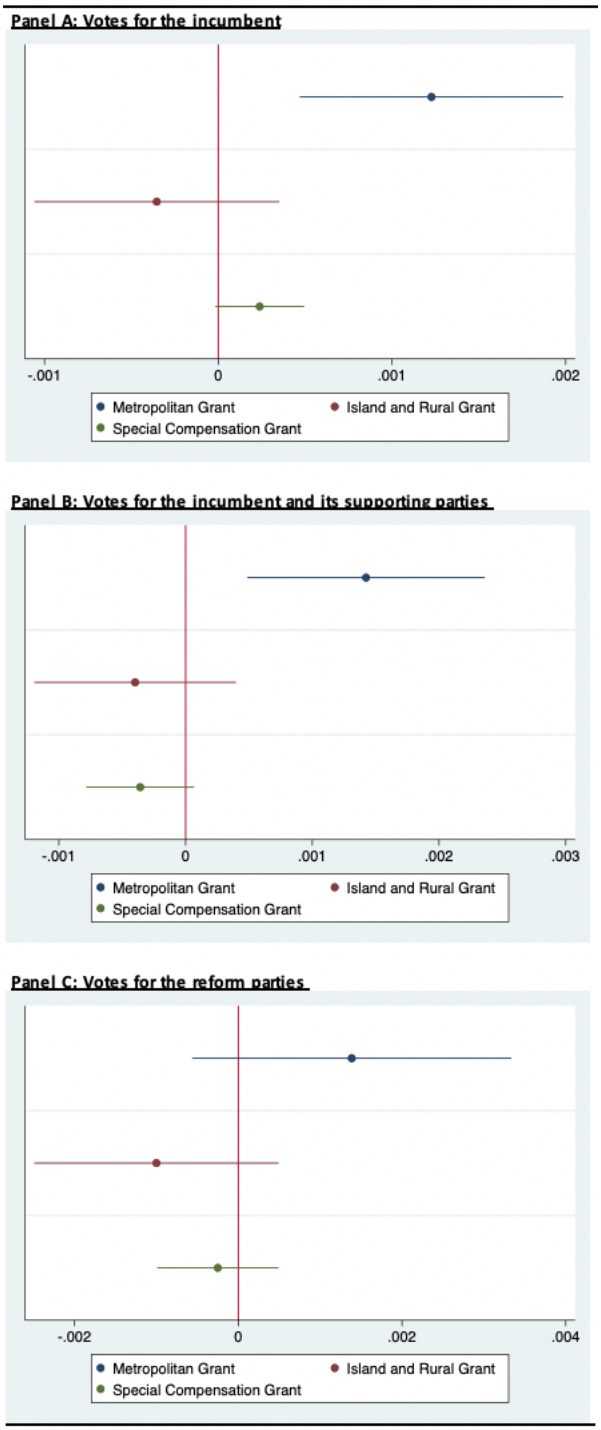


Figure 3 shows the main results from the analysis of the impact of the 2020 equalization and grants reform on votes in the subsequent 2022 national election. Panel A shows that increases in funds from the new Island and Rural Grant is not correlated with votes for the incumbent. The Special Compensation Grant is positively correlated with votes for the incumbent,

although the special compensation grant is only significant at the 0.1-level (p=0,067). The new Metropolitan grant does however seem to increase votes for the incumbent. An increase of 655 DKK (equal to one standard deviation) in the grant increases votes for the incumbent by 0,80 percentage points. Panel B moreover shows that increases in funds from Island and Rural Grant and the Special Compensation Grant are insignificantly correlated with votes for the incumbent, although the special compensation scene is negative and significant at the 0,1-level. The new Metropolitan grant is positively associated with votes for the incumbent and its supporters. An increase of 655 DKK (equal to a standard deviation) in the grant seems to increase votes for the incumbent and its supporters by 0,93 percentage points. These effect sizes seem relatively big. It should be noted that the results of the special compensation scheme are not robust to alternative specifications.

We further test the same models with the incumbent and parliamentary supporters and the reform coalition (see Appendix 15 and 16). These models indicate that all three grants insignificantly correlate with votes for the reform coalition parties. We further test if the results are the same for the Liberal Party (the only opposition party in the reform coalition), and find that they are indicating that the insignificant correlation is primarily driven by the Liberal Party (see appendix 17).

Moreover, since the 2020 reform overall increased the level of transfers from the state to local governments (i.e. many winners, relatively few losers), we also test if our results are driven by this. We do so by running the models on votes for the Conservatives – a party that should not gain electorally from the grants if our expectations are correct. Appendix 18 confirms our expectations.

Furthermore, we test if the sum of the three new specific grants is influencing votes controlling for changes in the general part of the system (the latter should not have any discernable impact when controlling for the relevant structural factors). Appendix 19 indicates that the sum of the three new specific grants is increasing votes for the incumbent and its parliamentary supporters while changes in the general system do not. All in all, these results indicate that the new and non-objective Metropolitan grant is increasing votes for the incumbent and its parliamentary supporters while changes in the general and "objective" parts of the system do not. The special compensation scheme also seem to increase votes for the incumbent, although this finding is less statistically significant.

Grants and voting in the 2022 national election: Individual-level evidence

To test the electoral consequences of the 2020 equalization and grants reform, we moreover leverage new individual survey data. As a supplement to the previous analysis, the individual-level data allows us to address voter movements between the different political blocs. We hence distinguish between core (a core voter is a voter that voted for the same bloc in 2019 and 2022) center-right/left voters and voters that switched from the center-right to the center-left (center-left is equal to the incumbent and its parliamentary supporters). In all models, we run multi-level multinomial logistic regression and control for respondents' age, gender, education, income, unemployment, ruralness, life satisfaction, self-reported health, immigration preferences, redistribution preferences, and European Union preferences.

Table 2 presents the main results from the individual-level analysis. Model 1 in table 2 indicates that the Island & Rural grant is shy of statistically significant (p=0,11) and positively associated with core center-left voters relative to core center-right voters whereas

there is no statistically significant relationship between this grant and voters switching from the center-right bloc to the center-left bloc. Model 2 moreover shows that there is a positive association between the Metropolitical Grant and core center-left voters as well as voters switching from the center-right to the center-left relative to center-right voters. Model 3 finally indicates a positive relation between the Special Compensation Grant and core center-voters, but not to vote switchers. Taken together individual-level evidence suggest that all three grants may have strengthened voter loyalty amongst center-left voters. The Metropolitan grant may even have attracted new voters from the oppositional bloc.

In appendix 20, we furthermore test how the three new specific grants combined impact voting controlling for changes in the general part. This test shows that the three grants combined are statistically and positively correlated with core center-left voters but not vote switchers. The general system and "objective" part of the system is once again insignificantly related to voting behavior.

Table 2. Grants and voting: Individual-level evidence

	1		2		3	
Ref: Core center-right voter	Core center-left voter	Center-right to center-left	Core center-left voter	Center-right to center-left	Core center-left voter	Center-right to center-left
Island & Rural Grant	0.000200	-8.03e-05				
	(0.000126)	(0.000231)				
Metropolitan Grant			0.000473***	0.000599**		
			(0.000164)	(0.000272)		
Special Compensation Grant					0.000129***	-0.000207
					(4.51e-05)	(0.000204)
Constant	0.174	-1.771	1.139	0.905	0.147	-1.809
	(0.800)	(1.203)	(1.418)	(1.716)	(0.790)	(1.208)
No. groups (municipalitites)	97	97	34	34	97	97
Controls	Yes	Yes	Yes	Yes	Yes	Yes
Observations	2,753	2,753	930	930	2,753	2,753

Note: We run the multi-level multinomial models with the gsem function in Stata. *** p<0.01, ** p<0.05, * p<0.1. Municipality clustered standard errors in parentheses. Weights for age, gender, education, and residency, are implemented in all models.

Conclusion and discussion

Local equalization and grants systems in Western democracies channel and redistribute huge amounts of economic resources from central to local governments as well as between local governments. This paper examines how distributive politics drive reforms of these systems, and how reform changes subsequently influence electoral politics. Contrary to the common view in the literature, we argue that formula-based grants may be subject to political-strategic use if the formula is not based on 'objective' criteria. Using Denmark as a least likely case – a parliamentary system with a long tradition of criteria objectivity – we analyze this argument in four steps.

Leveraging qualitative and quantitative data from the Danish large-scale 2020 equalization and grants reform we first find that three newly introduced grants do not live up to the principles of criteria objectivity. Moreover, the three new grants contribute significantly to the increase in the overall redistribution of economic resources between local governments. We link these three new grants with distributive politics by showing that constituencies winning from these grants are also well represented prior to the reform by the incumbent government, its parliamentary supporters, and the reform coalition partners. We find little support that this is also the case for changes in the system's general part that are largely based on 'objective' criteria.

Leveraging voting station data from the subsequent 2022 National parliamentary elections, we further link the reform changes with electoral behavior. We find that the new non-objective grants seem to increase votes for the incumbent and especially its parliamentary supporters. We find no such relationship for changes in the ('objective') general system. This suggests that strategically motivated reform changes pay off electorally. As a final test we moreover leverage new individual survey data showing that some of the new grants may have supported voting loyalty as well as attracted new voters to the incumbent and its parliamentary supporters. These findings suggest that politicians – even in a presumably least likely case – can pursue pork-barrel and clientelist-like policies for electoral purposes (Tavits, 2009).

Our findings suggest that politicians can tailor reforms according to specific partisan preferences when reforming local equalization and grants systems – but only to the extent that they manage to circumvent the disciplinary effects of using formula-based schemes. As shown here, replacing previously 'objective' grants with new non-objective grants can be one strategy to achieve this. Introducing brand new non-objective grants or freezing grant criteria could be other potential strategies. These institutional changes relate nicely to theories of gradual institutional change more broadly in comparative political economy (Streeck & Thelen, 2005), and we see a lot of potential for combining institutional theory in the analysis of how the institutional underpinnings of equalization and grants systems are transformed over time and what the distributional implications hereof are.

While clientelist-like policies may strengthen the electoral power of one political coalition over another it also comes with several challenges and disadvantages. One obvious danger is welfare loss, as the funds channeled to the 'friends' are not necessarily channeled to where

they are most efficiently spent. Another drawback is that if this type of strategic policymaking depends on increasing use of non-objective grants, these systems may become unnecessarily complex, and challenge public democratic discussions about these systems. A third potential danger is that the increasing politicization stemming from the use of non-objective grants may challenge the stability of these systems if the distribution of funds is increasingly perceived as unfair and as a battleground for scarce economic resources. Specifically for the Danish case, we do not yet think that the equalization and grants system is a pure playground for politicians. However, with the developments over the past few years, and in particular with the 2020 reform of the system, there is reason to be concerned about the increasing politicization and use of non-objective grants – especially if this trend continues.

References

Ansolabehere, S., Snyder, J. M., Strauss, A. B. and Ting, M. M. (2005): *Voting Weights and Formateur Advantages in the Formation of Coalition Governments*, American Journal of Political Science, 49(3), 550-63.

Arrington, L. James (1969): *The New Deal in the West: A Preliminary Statistical Inquiry.* Pacific Historical Review 38: 311-6.

Arulampalam, W., Dasgupta, S., Dhillon, A. and Dutta, B. (2009): *Electoral goals and center-state transfers: A theoretical model and empirical evidence from India*, Journal of Development Economics, 88(1), 103-19.

Balla, S. J., Lawrence, E. D., Maltzman, F. and Sigelman, L. (2002): *Partisanship, Blame Avoidance, and the Distribution of Legislative Pork*, American Journal of Political Science, 46(3), 515-25.

Beland, Daniel & A. Lecours (2014): *Fiscal federalism and American exceptionalism: why is there no federal equalization system in the United States?* Journal of Public Policy, Vol 34.

Blom-Hansen, J. & Mau Pedersen, N.J (2020): *2020 equalization reform: the traditional dilemmas or breaking with tradition?* Administrative Debat No. 2.

Boadway, R. & A. Shah /2007): *Intergovernmental fiscal transfers Principles and Practice,* The World Bank.

Bracco, M., B.Lockwood, F.Porcelli, M.Redoano (2015) *Intergovernmental grants as signals and the alignment effect: Theory and evidence,* J. of Public Economics, 123.

Brollo, F. and Nannicini, T. (2011): *Tying Your Enemy's Hands in Close Races: The Politics of Federal Transfers in Brazil*, American Political Science Review, *106(*04), 742-61.

Buchanan, J. (1950): *Federalism and Fiscal Equity,* American Economic Review, vol XL.

Budge, I. & Keman, H. (1990): *Parties and Democracy: Coalition formation and government functioning in twenty states.* Oxford: Oxford University Press.

Bäck, Hanna, Debus, Marc & Dumont, Patrick (2010): *Who gets what in coalition governments? Predictors of portfolio allocation in parliamentary democracies.* European Journal of Political Research,

Cox, G. W. and McCubbins, M. D. (1986): *Electoral Politics as a Redistributive Game*, The Journal of Politics, 48(02), 370-89.

Dahlberg, M. and Johansson, E. (2002): *On the vote-purchasing behavior of incumbent governments*, American Political Science Review, 96(1), 27-40.

Banful, Afua Branoah (2011): *Do formula-based intergovernmental transfer mechanisms eliminate politically motivated targeting? Evidence from Ghana*, J.og Development Economics, vol.96.

Den Danske Valgdatabase. https://valgdatabase.dst.dk/

Dixit, A. & J. Londregan (1996): *The Determinants of success of Special Interests in Redistributive Politics,* Journal of Politics, vol. 58.

EPETFF (2006): *Achieving National Purpose: Putting Equalization Back on Track,* Expert Panel on Equalization and Territorial Formula Financing, Canada**.**

Etzerodt, S.F. & Hansen, M.B. (2018): *Municipal alliances' arguments for changes to the municipal equalization system.* Økonomi & Politik, 91, 4, 76-88.

Etzerodt, S.F. & Mau Pedersen, N.J. (2018): *The structure and history of the municipal equalization system,* Samfundsøkonomen, no. 3.

Finance Committee (2012): *Municipal expenditure needs and other equalization issues,* Report No 1533.

Fiorillo, Fabio & Elvina Merkaj (2020): *A comprehensive approach to intergovernmental grants' tactical allocation. Theory and estimation, guidelines,* International Tax and Public Finance (2021), 28: 995-1013.

Inman, R.P. (2008): *The flypaper effect.* NBER Working Papers 14579. National Bureau of Economic Research, Inc. Johansson, E., 1999, Intergo.

Ivanyana, M. & A. Shah (2012): *How close is your government to its people? Worldwide indictors on localization and decentralization,* Economics E-Journal.

Jarocinska, Elena (2022): *Discretionary Grants and Redistributive Politics: Evidence from Spain,* Comparative Economic Studies.

Khemani. S.(2007): *Political Economy and Equalization Transfers,* in J. Martinez-Vasquez and B. Searl (eds.): Fiscal Equalization. Challenges in the Design of Intergovernmental Transfers, Springer, New York.

Kim, Junghun & Jørgen Lotz (eds.)(2007): *Measuring Local Government Expenditure Needs - The Copenhagen Workshop 2007.* The Korea Institute of Public Finance and the Danish Ministry of Social Welfare.

Kitschelt, H. (2000): *Linkages between citizens and politicians in democratic polities*, Comparative Political Studies 33(6/7): 845–879.

Kjærgaard, Marie (2016): *Politics and Intergovernmental Grants,* PhD Dissertation, Department of Political Science, Aarhus University.

Kjærgaard, Marie; Bækgaard, Martin (2016): *Intergovernmental Grants and Public Expenditures: Evidence from a Survey Experiment*, Local government Studies, 42.

Lancaster, T.D. and W.D. Patterson (1990): *Comparative pork barrel politics: perceptions form the West German Bundestag*, Comparative Political Studies 22: 458–477.

Lindbeck, A. and Weibull, J. W. (1987): *Balanced-budget redistribution as the out-come of political competition,* Public Choice, *52*(3), 273-97.

Manuel E. Lago. M.E., S. Lago-Peñas, J. Martinez-Vazquez (2022): *On the Effects of Intergovernmental Grants: A survey,* Andrew Young school of Policy Studies.

Morgenstern, S. and S.M. Swindle (2005): *Are politics local? An analysis of voting patterns in 23 democracies*, Comparative Political Studies 38(2): 143–170.

Mau Pedersen, Niels Jørgen (1995): *Dencentralisering og kommunaløkonomi [Decentralisation & Municipal Economics]*. Jurist- og Økonomiforbundets Forlag.

Mehiriz, Kadour (2017): *The use of intergovernmental grants to municipalities for electoral purposes by subnational governments*, Local Government studies, 43:2.

Milligan, Kevin & Michael Smart (2005): *Regional grants as pork barrel politics,* CESifo Working Paper No. 1453.

Ministry of the Interior and Housing (2022): *Municipal equalization and general grants 2023,* June 2022.

Ministry of Social Affairs and the Interior (2020): *Amending the Act on municipal equalization and general grants to municipalities and various laws,* bill L 196.

Nørtoft, Magnus B., N.J. Mau Pedersen (2022): *Subsidies and equalization more important in almost all municipalities in 2021 than in 2020,* Statistics Denmark. DST-Analyse 2022:5.

Oates, W. E. (1999): *An Essay on Fiscal Federalism',* Journal of Economic Literature, 37(3).

OECD (2012): *Reforming Fiscal Federalism and Local Government. Beyond the zero-Sum Game,* H.Blöchliger & C. Vammale(ed.).

OECD (2013): *Fiscal Federalism 2014. Making decentralisation work,* H. Blöchliger (ed.).

OECD (2016): *OECD Territorial Reviews: Japan 2016,* OECD Publishing, Paris.

OECD (2020) *Synthesising Good Practices in Fiscal Federalism,* OECD Economic Policy Paper, No. 28.

OECD (2021): *Evaluating Fiscal Equalization: Finding the Right Balance,* Sean Dougherty & Kass Forman, OECD Working Papers on Fiscal Federalism No.36

Oulasvirta, Lasse (1997): *Real and perceived effects of changing the grant system from specific to general grants,* Public Choice, 91.

Solé-Ollé, A. and Sorribas-Navarro, P. (2008): *Does Partisan Alignment Affect the Electoral Reward of Intergovernmental Transfers?* Rochester NY: Social Science Research Network.

Solé-Ollé, Albert (2013): *Inter-regional redistribution through infrastructure investment: tactical or programmatic,* Public Choice.

Stegmueller, Daniel (2011): *How Many Countries for Multilevel Modeling? A Comparison of Frequentist and Bayesian Approaches,* American Journal of Political Science 57 (3): 748–61.

Stokes, S.C. (2005): *Perverse accountability: A formal model of machine politics with evidence from Argentina, American Political Science Review* 99 (3): 315–325.

Stokes, S.C. (2009): *Political clientelism.* In *The Oxford handbook of comparative politics*, ed. C. Boix and S.C. Stokes, 604–627. Oxford: Oxford University Press.

Streeck, W. & Thelen, K. (2005): *Introduction: institutional change in advanced political economies*, in W. Streeck, & K. Thelen (Eds.), Beyond continuity: institutional change in advanced political economies (pp. 1-39). Oxford et al.: Univ. Press.

Tavits, M. (2009): *Geographically targeted spending: exploring the electoral strategies of incumbent governments,* European Consortium for Political Research.

Wooldridge, Jeffrey M. (2012): *Introductory Econometrics: A Modern Approach,* 5th Ed. Cengage Learning.

Online appendix

This is the online appendix for the paper “On the politics of local equalization and grant systems: Low criteria objectivity and the strategic use of grants” by Søren Frank Etzerodt & Niels Jørgen Mau Pedersen. All appendixes are cited in the main text, and appendix references are provided below.

Appendix 1. Sources and operationalization of municipal-level variables

Explanatory variables

Variable	Operationalization	Source
Votes for the incumbent	Share of votes for the socialdemocratic party in the 2019 national election. Measured at the municipality-level	The Danish Election Database (Den Danske Valg Database)
Votes for the incumbent and its parliamentary supporters	Share of votes for the socialdemocratic party and its parliamentary supporters (S, Å, Ø, SF og RV) in the 2019 national election. Measured at the municipality-level	The Danish Election Database
Votes for the reform parties	Share of votes for the 2020 grant reform parties (S, Å, SF, RV og V) in the 2019 national election Measured at the municipality-level.	The Danish Election Database
Socialdemocratic/incumbent mayors	Se tekst	Own coding
incumbent and its parliamentary supporters mayors	Se tekst	Own coding
Reform parties mayors	Se tekst	Own coding
Swing voter	$\sqrt{(CL_i - CR_i)^2}$, where CL denotes votes for the center-left parties (i.e. the incumbent and its parliamentary supporters) CR denotes the center-right parties (i.e. the opposition parties), i denotes the municipality.	The Danish Election Database

Control variables (at the municipality-levet)

Variable	Operationalization	Source
Inhabitants	No. of inhabitants as of January 1 2021.	Noegletal.dk, Ministry of Interior & Housing
Population growth	Population growth (2016-2020).	Noegletal.dk
Tax base per capitaBeskatningsgrundlag per indbygger	Municipalitites budgetted tax base for personal income taxes and taxes on public duties (afgiftspligtige grundværdier).	Noegletal.dk
Expenditure need	Kommunens udgiftsbehov i kr. pr. indbygger som det opgøres i forbindelse med den årlige beregning af kommunal udligning og tilskud. En kommunes udgiftsbehov findes som summen af to tal: Det socioøkonomiske udgiftsbehov og det aldersbestemte udgiftsbehov. Kommunens socioøkonomiske udgiftsbehov er bestemt på	Noegletal.dk

	basis af en række socioøkonomiske kriterier. Det beregnede udgiftsbehov for kommunen divideres med indbyggertallet opgjort 1. januar i det pågældende år, dog før 2021 med betalingskommunefolketallet.	
Elderly	Share of 67+ years old.	Noegletal.dk
Individuals without vocational training [Personer uden erhvervsfaglig uddannelse]	Share of 25-64 years old without furhter education [vocational education].	Noegletal.dk

Appendix 2. Sources and operationalization of voting station-level variables

Variable	Operationalization	Source
Votes for incumbent	Same as appendix 1, however, with voting station data	The Danish Election Database/Den Danske Valg Database
Votes for incumbent and its supporters	Same as appendix 1, however, with voting station data	The Danish Election Database/Den Danske Valg Database
Votes for the reform coalition	Same as appendix 1, however, with voting station data	The Danish Election Database/Den Danske Valg Database
Inequality	80-20 income ratio.	The Danish Election Database, based on register data from Statistics Denmark
Unemployment	Percentage unemployed of adult population.	The Danish Election Database, based on register data from Statistics Denmark
Population size	Number of persons age 18+ years old	The Danish Election Database, based on register data from Statistics Denmark

Appendix 3. Sources and operationalization of individual-level variables

Preferences for income inequality:
"To what extent do you agree or disagree with the following statement: "Higher incomes should be taxed higher than is the case today". 1) Completely agree, 2) Somewhat agree, 3) Neither agree nor disagree, 4) Somewhat disagree, 5) Completely disagree.

Preferences for immigration:
"Immigration is a serious threat to our national identity" (split samle50/50) "Immigration is a serious threat to Danish culture" (split samle50/50) (both split sample questions combined to one variable).

Preferences for the European Union
How are your general attitude towards the EU? (1) Very Positive, (2) Predominantly positive, (3) Neutral/neither positive nor negative, (4) Predominantly negative, (5) Very negative.

Preferences for climate tax
A climate fee for air travel should be introduced. 1) Completely agree, 2) partly agree, 3) neither agrees nor disagrees, 4) partly disagree, 5) completely disagree.

Life satisfaction

Self-reported health
How would you say your health is all in all? 1) Exelent, 2) Pretty good, 3) Good, 4) Less than good, 5) Bad

Age
Self-reported age (18-97 years in the sample).

Gender
Woman = 1 & Man = 2.

Unemployed
0=not unemployed. 1 =unemployed. Unemployed includes people on social assistance and unemployment benefits (including job training) as well as people on other social benefits (students, pensioners, parental leave and sick leave)

Personal income
Self-reported personal income in 15 scales ranging from 0-99.999 kr. to 1.000.000 and above.

Educational attainment
Highest educational attainment on the previous scale: 1) Elementary school 2) High school 3) Vocational/professional education 4) Short further education 5) Medium further education 6) Long further education

City Size/type
Self-reported city size or place of residence 1) Copenhagen 2) Aarhus, Aalborg or Odense 3) < 40.000 inhabitants 4) 20-39.999 inhabitants 5) 5.000-19.999 inhabitants 6) 1.000-4.999

inhabitants 7) <1.000 inhabitants 8) Country-side

Appendix 4. Descriptive statistics municipal-level variables

Variable	Obs	Mean	Std. Dev.	Min	Max
socdemfv19	98	27.241	5.658	11.468	39.949
socdemcoalition pct	98	49.118	7.658	30.631	71.295
forligspartier	98	68.49	3.106	59.489	76.94
swingvoter	98	11.49	10.391	.008	44.947
entire system	98	1488.431	1430.168	-1941.194	7227.891
nythovedstat	34	289.964	740.808	-1306.559	1561.308
nytoeogyder	98	330.086	598.772	-87.92	2067.761
saerligkompensation	98	83.492	805.903	-238.746	4969.435
Generellesystem	98	-39.089	919.788	-2977.852	2244.51
Antalindbyggerepr~20	98	59591.378	74539.997	1764	638117
befolkingsvaekst4aar	98	.006	.018	-.034	.059
beskatningprind	98	198.046	40.455	162.851	388.832
ingenerhversud	98	19.266	4.666	7.6	30
elderly	98	20.1	4.142	9	35.5
udgiftsbehov	98	64922.908	4863.321	56143	82154

Appendix 5. Descriptive statistics voting station level variables

Variable	Obs	Mean	Std. Dev.	Min	Max
inequality	1330	1.729	.173	1.328	2.76
unemployment	1330	2.068	1.01	.182	16.176
adultpopulation	1346	7.704	.918	3.434	10.006

Appendix 6. Descriptive statistics individual level variables

Variable	Obs	Mean	Std. Dev.	Min	Max
party vote	3087	1.929	.968	1	3
climate tax	3923	2.284	1.309	1	5
tax high income	3912	2.669	1.299	1	5
immigration threat	3939	2.851	1.437	1	5
eu perceptions	3853	2.763	1.2	1	5
life satisfaction	4162	7.614	2.193	1	11
health	4217	2.934	.968	1	5
city size	4176	3.788	2.191	1	8
age	4217	51.536	17.339	18	93
gender	4217	1.463	.499	1	2
personal income	4217	5.176	3.602	1	13
education	4217	3.392	1.631	1	6
unemployment	4218	.03	.172	0	1

Appendix 7. The three new specific grants from the 2020 equalization reform.
Source: Own elaboration based on Ministry of Social Affairs and the Interior (2020)

a. Island and Rural Municipalities Grant

Total grants 2022: around 1.5 bn.DKK.
Funding: all municipalities contributes in total 1/3, central government 2/3
Distribution mechanism for municipal recipients:

1) municipality must fullfill two conditions concerning typology and tax base per capita. 2) Morover, municipality must meet at least three out of seven criteria on demography, degree of rurality, number of jobs and certain early retirement pensioners etc. Grants are distributed among municipalities according to a corrected number of inhabitants where correction factor varies depending on number of criteria fulfilled.

b. Metropolitan Grant

Total grant 2022: around 0,6 bn.DKK.
Funding: metropolitan municipalities contributes more than 1/2, central government the rest.
Distribution mechanism for municipal recipients:

Same method than for Island and Rural Municipalities Grant including fulfill one out of five criteria. Grants are also here distributed according to a corrected number of inhabitants.

c. Special Compensation Grant

Redistribution grant among all municipalities. Recipients receive in total 1 bn.DKK from contributors.
Distribution mechanism:

1) Recipient: municipalities having a calculated loss from a range of elements of the equalization reform more than 0.15 pct of tax basis if tax base per capita lower than a threshold.
2) Recipient: municipalities having a calculated loss from a range of elements of the equalization reform more than 0.4 pct of tax basis if tax base per capita higher than a threshold.
3) Contributors: Municioalities not included in 1) and 2), according to number of inhabitants.

All grants settled in a, b and c calculated once and for all, for a and b exclusive of changes in number of inhabitants.

Appendix 8. Calculating redistributive changes
Redistribution from equalization and grant system before and after reform calculated for different parts of the system

million DKK	(1)	(2)	(3)
Part of equalization and grant system	**2020**	**2021**	**change**
Total system	19.960	21.883	1.923
General system	18.687	19.775	1,088
Special system (incl. three new grants)	1.273	2,108	0,835
Of which three new grants	-	2.031	2.031

Source: Calcutated from yearly reports from Ministry on grants and equalization for the next budgetary year. Method: Calculated by adding all grants together (net), afterwards comparing the actual distribution of those grants, including negative payments, for each municipality with a 'neutral' net-grants distribution solely according to number of inhabitants. Finally subtracting the last calculated distribution from the actual distribution and adding all positive (as well as negative) differences together measures the amount of redistribution. The redistributive changes for the Special system calculated as the residual redistribution, i.e. redistribution Total minus redistribution General system.

Appendix 9: Regressions models for three specific grants
Regression for New Metropolitan Grant.

VARIABLES	(1) nythovedstat	(2) nythovedstat	(3) nythovedstat	(4) nythovedstat
socdemfv19	22.76			
	(25.43)			
socdemcoalition_pct		14.73		
		(19.99)		
forligspartier			22.00	
			(36.89)	
swingvoter				-7.429
				(6.815)
Antalindbyggerepr1januar20	-0.000110	-0.000704	-0.000386	-0.000137
	(0.000784)	(0.000474)	(0.000536)	(0.000734)
befolkingsvaekst4aar	-4,338	-2,737	-2,685	-3,869
	(3,870)	(3,813)	(3,651)	(4,311)
beskatningprind	-6.804**	-6.723**	-7.744***	-8.084***
	(2.663)	(2.954)	(2.764)	(2.113)
ingenerhversud	13.70	27.92	10.09	7.469
	(32.82)	(36.98)	(33.31)	(30.36)
elderly	5.754	18.13	12.37	1.279
	(29.59)	(38.93)	(28.65)	(29.42)
udgiftsbehov	0.0316	0.0274	0.0474**	0.0559**
	(0.0229)	(0.0240)	(0.0189)	(0.0210)
Constant	-975.1	-1,406	-2,757	-1,388
	(1,126)	(1,581)	(3,224)	(1,223)
Observations	34	34	34	34
R-squared	0.823	0.822	0.821	0.825

*** p<0.01, ** p<0.05, * p<0.1.

Appendix 10
Regression for New Island and Rural Municipalities Grant.

VARIABLES	(1) nytoeogyder	(2) nytoeogyder	(3) nytoeogyder	(4) nytoeogyder
socdemfv19	17.80*			
	(9.071)			
socdemcoalition_pct		-3.284		
		(5.869)		
forligspartier			38.80***	
			(12.74)	
swingvoter				-6.069*
				(3.373)
Antalindbyggerepr1januar20	0.00111*	0.000927*	0.00107*	0.00114**
	(0.000561)	(0.000486)	(0.000543)	(0.000543)
befolkingsvaekst4aar	-12,229***	-11,263***	-10,527***	-11,642***
	(2,937)	(2,900)	(3,010)	(2,889)
beskatningprind	-5.380***	-6.876***	-4.362***	-6.183***
	(1.602)	(1.475)	(1.623)	(1.473)
ingenerhversud	-42.72***	-45.33***	-31.59**	-41.60***
	(13.76)	(14.41)	(14.30)	(14.03)
elderly	75.97***	74.81***	79.85***	72.31***
	(12.93)	(14.17)	(12.61)	(12.95)
udgiftsbehov	0.0199*	0.0312***	0.0274***	0.0329***
	(0.0104)	(0.0107)	(0.00915)	(0.00899)
Constant	-1,081	-789.9	-4,239***	-1,161
	(757.3)	(768.2)	(1,365)	(753.0)
Observations	98	98	98	98
R-squared	0.656	0.646	0.672	0.653

*** p<0.01, ** p<0.05, * p<0.1.

Appendix 11

Regressions for Special Compensation Grant.

VARIABLES	(1) saerligkompensation	(2) saerligkompensation	(3) saerligkompensation	(4) saerligkompensation
socdemfv19	-33.67			
	(23.93)			
socdemcoalition_pct		28.19***		
		(10.26)		
forligspartier			-11.75	
			(28.16)	
swingvoter				11.69
				(9.085)
Antalindbyggerepr1januar20	-0.00123	-0.00132	-0.000834	-0.00131
	(0.00111)	(0.00105)	(0.00104)	(0.00119)
befolkingsvaekst4aar	8,179	4,162	6,650	7,070
	(6,257)	(6,391)	(7,027)	(6,748)
beskatningprind	3.011	6.314	4.967	4.508
	(4.006)	(3.822)	(4.866)	(3.561)
ingenerhversud	77.69	92.53*	76.11	75.50
	(47.71)	(52.77)	(56.53)	(50.87)
Elderly	-52.82*	-40.87	-54.47*	-45.77
	(30.71)	(28.21)	(32.02)	(29.04)
udgiftsbehov	0.0694*	0.0284	0.0540*	0.0448
	(0.0371)	(0.0270)	(0.0322)	(0.0307)
Constant	-4,511**	-5,304**	-3,960	-4,348**
	(1,871)	(2,023)	(3,367)	(1,925)
Observations	98	98	98	98
R-squared	0.261	0.284	0.240	0.255

*** p<0.01, ** p<0.05, * p<0.1.

Appendix 12
Robustness check: Testing significant models against competing explanation

VARIABLES	(1) Generelle system	(2) SÃ¦rlig kompensation	(3) Ny Ã˜-og Yderkommune	(4) Ny Ã˜-og Yderkommune
socdemfv19	44.31		13.84	
	(30.31)		(10.35)	
socdemcoalition_pct		31.58***		
		(10.33)		
forligspartier				35.84**
				(14.05)
swingvoter	-14.44	15.05*	-3.602	-2.527
	(12.80)	(7.945)	(3.819)	(3.790)
Antalindbyggerepr1januar20	0.000531	-0.00208*	0.00122**	0.00117**
	(0.00116)	(0.00122)	(0.000576)	(0.000568)
befolkingsvaekst4aar	-4,810	3,951	-12,117***	-10,629***
	(6,756)	(6,543)	(2,923)	(3,010)
beskatningprind	0.260	4.842	-5.328***	-4.289**
	(4.943)	(3.614)	(1.588)	(1.636)
ingenerhversud	13.01	88.50*	-41.64***	-31.59**
	(54.44)	(52.43)	(13.87)	(14.46)
elderly	-36.53	-29.56	73.69***	77.93***
	(29.40)	(25.53)	(13.11)	(13.08)
udgiftsbehov	-0.0577	0.0139	0.0245**	0.0294***
	(0.0382)	(0.0267)	(0.0115)	(0.00933)
Constant	3,092	-4,510**	-1,223	-4,118***
	(1,875)	(1,842)	(757.8)	(1,420)
Observations	98	98	98	98
R-squared	0.158	0.311	0.658	0.674

*** p<0.01, ** p<0.05, * p<0.1.

Appendix 13 Testing against competing explanation + jackknife

VARIABLES	(1) Generelle system	(2) SÃ¦rlig kompensation	(3) SÃ¦rlig kompensation	(4) Ny Ã˜-og Yderkommune
socdemfv19	44.31			13.84
	(38.19)			(10.93)
Swingvoter	-14.44	15.05	10.83	-3.602
	(14.63)	(9.210)	(9.337)	(4.120)
Antalindbyggerepr1januar20	0.000531	-0.00208	-0.00153	0.00122
	(0.00136)	(0.00189)	(0.00220)	(0.00120)
befolkingsvaekst4aar	-4,810	3,951	6,631	-12,117***
	(8,191)	(7,915)	(8,059)	(3,336)
beskatningprind	0.260	4.842	5.617	-5.328***
	(6.429)	(4.349)	(4.349)	(1.847)
ingenerhversud	13.01	88.50	82.40	-41.64***
	(66.96)	(63.39)	(61.92)	(15.57)
elderly	-36.53	-29.56	-47.39	73.69***
	(34.55)	(29.77)	(33.37)	(15.44)
udgiftsbehov	-0.0577	0.0139	0.0396	0.0245*
	(0.0482)	(0.0313)	(0.0347)	(0.0126)
socdemcoalition_pct		31.58**		
		(12.06)		
parlamentariskbormester			299.9*	
			(154.7)	
forligspartier				
Constant	3,092	-4,510**	-4,457**	-1,223
	(2,019)	(2,082)	(2,193)	(868.2)
Observations	98	98	98	98
R-squared	0.158	0.311	0.287	0.658

*** p<0.01, ** p<0.05, * p<0.1.

Appendix 14

Votes for incumbent

VARIABLES	(1) Incumbent	(2) Incumbent	(3) Incumbent
nythovedstat	0.00123***		
	(0.000387)		
nytoeogyder		-0.000354	
		(0.000360)	
saerligkompensation			0.000239*
			(0.000130)
Antalindbyggerepr1januar20	-1.49e-07	-2.50e-06*	-2.69e-06**
	(1.18e-06)	(1.45e-06)	(1.30e-06)
Elderly	0.0682	0.00485	-0.0145
	(0.0421)	(0.0557)	(0.0433)
Inequality	-0.0270	1.471***	1.460***
	(0.483)	(0.412)	(0.413)
Unemployment	-0.0725	-0.374**	-0.381**
	(0.0798)	(0.154)	(0.153)
adultpopulation	0.0986	0.283	0.282
	(0.226)	(0.176)	(0.176)
beskatningprind	0.00230	-0.00918*	-0.00857
	(0.00501)	(0.00550)	(0.00564)
ingenerhversud	-0.0446	-0.114***	-0.125***
	(0.0550)	(0.0438)	(0.0458)
udgiftsbehov	-4.15e-05	0.000151***	0.000130***
	(4.95e-05)	(3.28e-05)	(3.49e-05)
socdemvotes_2019	1.018***	0.946***	0.947***
	(0.0266)	(0.0308)	(0.0308)
socdemcoalition_2019			
Constant	2.597	-6.511**	-4.713*
	(3.259)	(2.663)	(2.561)
Observations	307	1,330	1,330
Number of kommunenr	34	98	98

*** p<0.01, ** p<0.05, * p<0.1.

Note: (1) New Metropolitan Grant, (2) New Islands and Rural Municipalities Grant, (3) Special Compensation Grant.

Appendix 15

Votes for the incumbent and its parliamentary supporters

VARIABLES	(1) Incumbent + supporters	(2) Incumbent + supporters	(3) Incumbent + supporters
nythovedstat	0.00142***		
	(0.000478)		
nytoeogyder		-0.000398	
		(0.000406)	
saerligkompensation			-0.000359*
			(0.000217)
Antalindbyggerepr1januar20	1.72e-06*	1.22e-07	-4.49e-07
	(1.00e-06)	(1.68e-06)	(1.46e-06)
elderly	0.216***	0.223***	0.164***
	(0.0646)	(0.0666)	(0.0496)
inequality	-0.274	1.459***	1.317**
	(0.542)	(0.520)	(0.527)
unemployment	-1.746***	-1.045***	-1.046***
	(0.220)	(0.170)	(0.172)
adultpopulation	-0.155	0.204	0.222*
	(0.180)	(0.133)	(0.132)
beskatningprind	-0.00932	-0.0268***	-0.0226***
	(0.00692)	(0.00596)	(0.00642)
ingenerhversud	0.0148	-0.109	-0.0778
	(0.0868)	(0.0669)	(0.0693)
udgiftsbehov	-0.000116**	4.84e-05	5.37e-05
	(5.51e-05)	(4.28e-05)	(3.99e-05)
socdemvotes_2019			
socdemcoalition_2019	0.986***	0.909***	0.914***
	(0.0291)	(0.0182)	(0.0184)
Constant	6.634*	-1.061	-1.896
	(3.393)	(3.027)	(2.847)
Observations	307	1,330	1,330
Number of kommunenr	34	98	98

*** p<0.01, ** p<0.05, * p<0.1.

Note: (1) New Metropolitan Grant, (2) New Islands and Rural Municipalities Grant, (3) Special Compensation Grant.

Appendix 16

Votes for the reform coalition

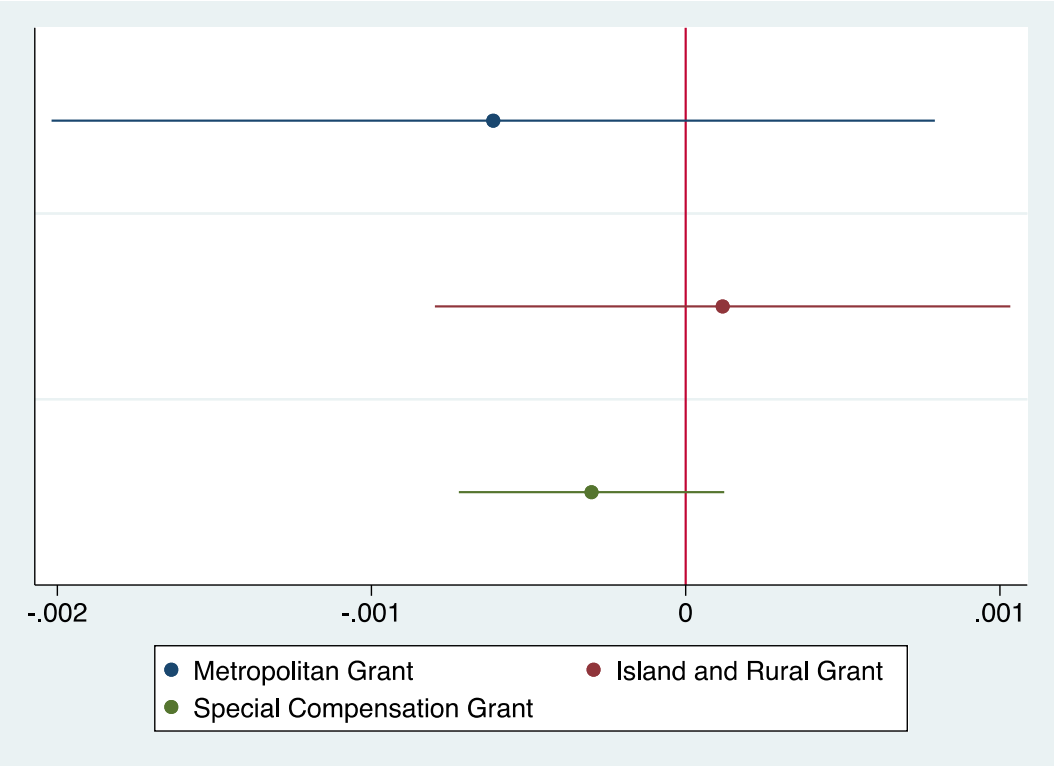
VARIABLES	(1) reformcoalition_2022	(2) reformcoalition_2022	(3) reformcoalition_2022
nythovedstat	0.00139		
	(0.000995)		
nytoeogyder		-0.001000	
		(0.000761)	
saerligkompensation			-0.000250
			(0.000378)
Antalindbyggerepr1januar20	-2.89e-06	-5.02e-07	-1.57e-06
	(3.15e-06)	(2.83e-06)	(2.73e-06)
elderly	-0.0141	0.0755	-0.0341
	(0.225)	(0.116)	(0.109)
inequality	2.059*	3.322***	3.272***
	(1.165)	(0.691)	(0.696)
unemployment	-0.116	-0.201	-0.199
	(0.263)	(0.140)	(0.140)
adultpopulation	0.784***	1.497***	1.516***
	(0.270)	(0.219)	(0.221)
beskatningprind	-0.0389**	-0.0330***	-0.0272**
	(0.0192)	(0.0121)	(0.0128)
ingenerhversud	-0.448**	-0.209*	-0.185
	(0.192)	(0.107)	(0.118)
udgiftsbehov	0.000206	0.000186***	0.000172**
	(0.000131)	(6.53e-05)	(6.86e-05)
reformcoalition_2019	0.691***	0.503***	0.500***
	(0.207)	(0.0400)	(0.0398)
Constant	2.535	1.047	2.435
	(19.41)	(5.696)	(6.015)
Observations	307	1,330	1,330
Number of kommunenr	34	98	98

*** p<0.01, ** p<0.05, * p<0.1.
Note: (1) New Metropolitan Grant, (2) New Islands and Rural Municipalities Grant, (3) Special Compensation Grant.

Appendix 17.
Votes for the Liberal Party (Venstre)

The Liberal Party underwent massive party organization change between 2019 and 2022 as its previous party leader (Lars Løkke) and the party's second in charge (Inge Støjberg) each created a new party – both of which got elected into parliament in the 2022 election. The Liberal Party hence split up into three parties between the election in 2019 and 2022. For this reason, we also control for votes for these two new parties in the 2022 election.

Coefficient plot



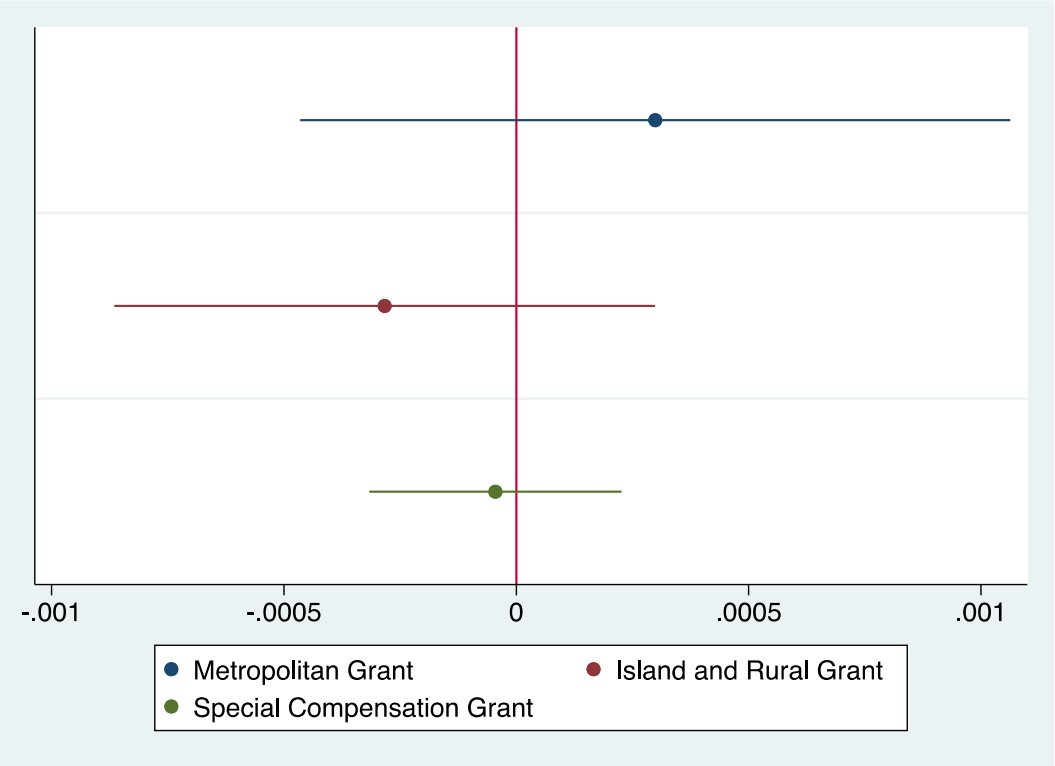
Regression output

VARIABLES	(1) venstre_2022	(2) venstre_2022	(3) venstre_2022
Nythovedstat	-0.000612		
	(0.000717)		
nytoeogyder		0.000118	
		(0.000467)	
saerligkompensation			-0.000300
			(0.000215)
inequality	-0.180	-0.528	-0.535
	(0.534)	(0.362)	(0.360)
unemployment	-0.146	0.0158	0.0186
	(0.117)	(0.122)	(0.121)
Antalindbyggerepr1januar20	-1.55e-06	-9.18e-07	-1.01e-06

	(1.28e-06)	(2.05e-06)	(1.92e-06)
beskatningprind	0.0143**	0.0256***	0.0264***
	(0.00583)	(0.00612)	(0.00597)
ingenerhversud	0.0702	0.194***	0.211***
	(0.107)	(0.0719)	(0.0767)
elderly	-0.0123	-0.0651	-0.0724
	(0.0628)	(0.0843)	(0.0715)
udgiftsbehov	-2.74e-05	-0.000109***	-9.02e-05**
	(5.37e-05)	(4.23e-05)	(4.46e-05)
danmarksdemokraterne_2022	-0.260***	-0.325***	-0.326***
	(0.0479)	(0.0366)	(0.0367)
moderaterne_2022	-0.278***	-0.532***	-0.530***
	(0.0704)	(0.0823)	(0.0823)
venstre_2019	0.591***	0.646***	0.645***
	(0.0354)	(0.0232)	(0.0230)
Constant	2.494	6.336*	4.856
	(3.753)	(3.450)	(3.488)
Observations	307	1,330	1,330
Number of kommunenr	34	98	98

*** p<0.01, ** p<0.05, * p<0.1.
Note: (1) New Metropolitan Grant, (2) New Islands and Rural Municipalities Grant, (3) Special Compensation Grant.

Appendix 18. Votes for the Conservatives



VARIABLES	(1) conservatives_2022	(2) conservatives_2022	(3) conservatives_2022
nythovedstat	0.000263		
	(0.000380)		
nytoeogyder		-0.000219	
		(0.000304)	
saerligkompensation			-6.78e-05
			(0.000146)
inequality	0.0406	0.180	0.174
	(0.219)	(0.158)	(0.158)
unemployment	-0.0692	-0.0459	-0.0456
	(0.0864)	(0.0299)	(0.0301)
adultpopulation	0.339***	0.196***	0.198***
	(0.106)	(0.0454)	(0.0454)
Antalindbyggerepr1januar20	-9.81e-07	7.14e-07	4.82e-07
	(1.04e-06)	(1.13e-06)	(1.06e-06)
beskatningprind	0.00670	-0.00133	4.39e-05
	(0.00456)	(0.00630)	(0.00537)
ingenerhversud	-0.0142	-0.00126	0.00507
	(0.0537)	(0.0525)	(0.0543)
elderly	-0.0766*	0.0668	0.0430
	(0.0452)	(0.0846)	(0.0714)
udgiftsbehov	-7.82e-06	-2.82e-05	-3.08e-05

	(3.80e-05)	(2.58e-05)	(2.55e-05)
conservatives_2019	0.575***	0.565***	0.565***
	(0.0334)	(0.0424)	(0.0425)
Constant	-0.639	0.719	0.918
	(2.712)	(1.937)	(1.980)
Observations	307	1,330	1,330
Number of kommunenr	34	98	98

*** p<0.01, ** p<0.05, * p<0.1.
Note: (1) New Metropolitan Grant, (2) New Islands and Rural Municipalities Grant, (3) Special Compensation Grant.

Appendix 19. Change in general system and specific grants (combined) and votes

	(1)	(2)	(3)	(4)
VARIABLES	socdemvotes_2022	socdemcoalition_2022	reformcoalition_2022	socdemvotes_2022
Generelle system	-8.38e-05	0.000333*	3.97e-05	0.000194
	(0.000137)	(0.000194)	(0.000329)	(0.000204)
specific_grants_total				0.000433**
				(0.000196)
Antalindbyggerepr1januar20	-2.89e-06**	1.62e-06	-1.39e-06	-2.18e-06*
	(1.33e-06)	(1.41e-06)	(2.79e-06)	(1.29e-06)
Elderly	-0.0306	0.198***	-0.0180	-0.0185
	(0.0418)	(0.0556)	(0.100)	(0.0419)
Inequality	1.447***	1.327**	3.284***	1.454***
	(0.412)	(0.526)	(0.696)	(0.413)
unemployment	-0.376**	-1.057***	-0.203	-0.388**
	(0.153)	(0.172)	(0.139)	(0.153)
adultpopulation	0.288	0.218*	1.511***	0.282
	(0.176)	(0.132)	(0.221)	(0.176)
beskatningprind	-0.00785	-0.0150***	-0.0282**	-0.00520
	(0.00577)	(0.00425)	(0.0129)	(0.00569)
ingenerhversud	-0.110**		-0.201*	-0.136***
	(0.0461)		(0.108)	(0.0462)
Udgiftsbehov	0.000138***	2.33e-05	0.000161**	0.000103***
	(3.41e-05)	(4.18e-05)	(6.77e-05)	(3.85e-05)
socdemvotes_2019	0.946***			0.945***
	(0.0308)			(0.0308)
socdemcoalition_2019		0.914***		
		(0.0179)		
reformcoalition_2019			0.500***	
			(0.0399)	
Constant	-5.361**	-3.703	3.346	-3.510
	(2.570)	(3.070)	(5.852)	(2.662)
Observations	1,330	1,330	1,330	1,330
Number of kommunenr	98	98	98	98

*** p<0.01, ** p<0.05, * p<0.1.

Appendix 20. The three specific grants combined, the general system, and votes (individual-level)

Ref: Core center-right voter	(1) Core center-left voter	(2) Center-right to center-left
Specific grants (total)	0.000160***	4.54e-06
	(5.91e-05)	(0.000125)
General system	7.14e-05	0.000165
	(7.24e-05)	(0.000195)
Constant	0.325	-1.685
	(0.869)	(1.188)
No. groups (municipalitites)	97	97
Controls	Yes	Yes
Observations	2,746	2,746

Note: The multi-level multinomial models are run with the gsem function in Stata. *** p<0.01, ** p<0.05, * p<0.1. Municipality clustered standard errors in parentheses. Weights for age, gender, education, and residency are implemented in all models.