The Effect of Legislature Size on Public Spending: A Meta-Analysis*

Huzeyfe Alptekin† Danilo Freire‡ Umberto Mignozzetti§ Catarina Roman¶

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Abstract

In a seminal article, Weingast et al. (1981) argue that there is a positive relationship between legislature size and inefficiency in public expenditures. Their proposition is currently known as the "law of $1/n$" and has been widely cited by scholars in political science and public administration. However, recent studies have questioned the validity of the theory. In this paper, we estimate the first meta-analysis of the relationship between the number of legislators and public spending. Based on a sample of 26 empirical studies, we find little effect of legislature size on government budgets. The available evidence suggests that, if such an effect exists, it is driven by an increase in the upper chamber, but there is considerable heterogeneity in the results. Our meta-regressions also indicate that study coefficients vary significantly according to modelling specifications, such as estimation method or variable selection.

Keywords: distributive politics; law of $1/n$; legislature size; meta-analysis; public spending

JEL Codes: H21; H23; H50; H61

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†Research Associate, Contemporary Brazilian History Research and Documentation Center, School of Social Sciences, Fundação Getulio Vargas, Brazil, huzeyfealptekin@gmail.com.

‡Postdoctoral Research Associate, The Political Theory Project, Brown University, 8 Fones Alley, Providence, RI 02912, danilofreire@gmail.com, http://danilofreire.github.io. Corresponding author.

§Assistant Professor, School of International Relations, Fundação Getulio Vargas, Brazil, umberto.mignozzetti@fgv.br, http://umbertomig.com.

¶Research Associate, School of International Relations, Fundação Getulio Vargas, Brazil, catarinamroman@gmail.com.

1 Introduction

Over the past decades, a large literature has examined the relationship between legislature size and public expenditure. Weingast et al. (1981) provided the general framework to analyse distributive politics. The authors argue that the larger the number of legislative districts (n), the smaller the share of tax burden each one will bear ($1/n$), thus legislators have an incentive to overspend in their districts and transfer the costs to the entire polity. However, recent studies have questioned the validity of the "law of $1/n$", as the theory is currently known. For instance, spending limits, strong executives, and bicameralism may reduce the inefficiency of pork barrel projects (Bradbury and Stephenson 2009; Chen and Malhotra 2007; Primo 2006). Moreover, Primo and Snyder (2008) affirm that, due to spatial spillovers, a collection of small districts can supply public goods more efficiently than the central government. The authors conclude that a "reverse law of $1/n$" may hold, wherein a higher number of legislators in small constituencies decrease the overall public spending.

Our survey of the scholarship confirms this continuum of positive, insignificant, and negative results. Out of the 36 coefficients included in our selected articles, 42% of them are positive and statistically significant, 22% are positive and statistically insignificant, 17% are negative and statistically insignificant, and 19% are negative and statistically significant. Given this diversity of empirical findings, a systematic review of the existing evidence may help us reach a meaningful conclusion about the effect of legislature size on public spending. Meta-analysis is the most appropriate method for this task. Meta-analysis combines the outcomes of multiple studies into a single estimation and allows scholars to draw robust conclusions from the aggregated data (Cooper et al. 2019; Hedges and Olkin 1985). It can also identify potential sources of study heterogeneity, enabling researchers to assess threats to external validity and direct future efforts into more promising areas of academic inquiry (Doucouliagos and Ulubaşoğlu 2008).

In this paper, we conduct the first meta-analysis that tests the generality of the "law of $1/n$". We have selected 26 articles that use quantitative methods to analyse the impact of legislature size over government spending. We run two sets of models: the first group uses only the main estimates of each paper (36), while the second set includes all coefficients reported in our sample (126).[1] Our

[1]Although there are 26 papers in our review, we include 36 coefficients in the restricted sample. This is because 10 articles report separate estimates for the impact of lower and upper house size on government expenditures. In the full model, we added every outcome reported in the paper, regardless of whether the coefficient comes from the main tables or from robustness checks conducted by the original authors. We discuss our sampling process in the Methods section of this paper and in the Supplementary Material.

independent variables consist of three measures, namely the size of the lower chamber (n), its natural logarithm ($\log(n)$), and the number of members in the upper chamber (k). We evaluate their effect upon public expenditure per capita, the natural logarithm of public expenditure per capita, and government expenditure as a percentage of GDP. We then estimate if the results vary according to four potential sources of effect heterogeneity.

Aggregate results show that council size has no significant impact on public spending. Both the meta-analyses and the meta-regressions indicate that we cannot generalise either the "law of $1/n$" or the "reverse law of $1/n$". We find stronger evidence in favour of a positive impact of upper house size on public budgets, yet the findings are not consistent in all of our estimations. Our meta-regressions suggest that our study sample has a high level of heterogeneity, and effects may differ substantially according to research design specifications. In summary, our results point out that if legislature size affects government budgets, they do so under specific conditions and are mediated by domestic factors.

2 Methods

We collected the study sample using three criteria. First, the study should cite Weingast et al. (1981) as their work is foundational to the distributive politics literature. Second, the study had to use quantitative methods to estimate the relationship between our variables of interest.[2] Third, the study should be written in the English language. We conducted a primary search using Scopus, Microsoft Academic, and Google Scholar, three large academic databases.[3]

After applying our exclusion criteria, the search produced a dataset of 26 studies as of the 21st of November, 2019. Table 1 contains the full list of articles from which we drew data. A PRISMA[4] flow diagram showing the number of resulting papers after each review step is available in the Supplementary Material.

[2] As meta-analysis requires a single estimate per observation, we excluded articles that use interaction terms or quadratic specifications of our independent variables.

[3] See the Supplementary Material for code.

[4] The Preferred Reporting Items for Systematic Reviews and Meta-Analyses (PRISMA) statement provides a checklist designed to improve the quality and transparency of study selection processes in meta-analyses. For more information on the PRISMA framework, see Liberati et al. (2009).

Table 1: Papers included in the meta-analysis, listed alphabetically by last name

Author(s)	Title	Journal	Year	Country	Method	Electoral System
R. Baqir	Districts, Spillovers, and Government Overspending	Unpub.	1999	USA	OLS	M
R. Baqir	Districting and Government Overspending	JPE	2002	USA	OLS	M
T. Baskaran	Coalition Governments, Cabinet Size, and the Common Pool Problem: Evidence from the German States	EJPE	2013	DEU	IV	NM
T. Bjedov, S. Lapointe & T. Madiès	The Impact of Within-Party and Between-Party Ideological Dispersion on Fiscal Outcomes: Evidence from Swiss Cantonal Parliaments	PC	2014	CHE	Panel	NM
J. Bradbury & M. Crain	Legislative Organization and Government Spending: Cross-Country Evidence	JPubE	2001	Multiple (37)	Panel	NM
J. Bradbury & E. F. Stephenson	Spatially Targeted Government Spending and Heterogeneous Constituent Cost Shares	JPriE	2009	USA	OLS	M
J. Chen & N. Malhotra	The Law of 1/K: The Effect of Chamber Size on Government Spending in Bicameral Legislatures	APSR	2007	USA	OLS	M
G. Crowley	The Law of 1/N Revisited: Distributive Politics, Legislature Size, and the Costs of Collective Action	SEJ	2019	USA	Panel	M

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Author(s)	Title	Journal	Year	Country	Method	Electoral System
J. Drew & B. Dollery	The Price of Democracy? Political Representation Structure and Per Capita Expenditure in Victorian Local Government	UAR	2017	AUS	Panel	NM
H. A. Erler	Legislative Term Limits and State Spending	PC	2007	USA	Panel	M
N. Fiorino & R. Ricciuti	Legislature Size and Government Spending in Italian Regions: Forecasting the Effects of a Reform	PC	2007	ITA	IV	NM
D. Höhmann	The Effect of Legislature Size on Public Spending: Evidence from a Regression Discontinuity Design	PC	2017	DEU	RDD	NM
A. Kessler	Communication in Federal Politics: Universalism, Policy Uniformity, and the Optimal Allocation of Fiscal Authority	JPE	2014	USA	Panel	M
D. Lee	Supermajority Rule and Bicameral Bargaining	PC	2016	USA	Panel	M
D. Lee & S. Park	Court-Ordered Redistricting and the Law of 1/N	PC	2018	USA	Panel	M
B. Lewis	Legislature Size, Local Government Expenditure and Taxation, and Public Service Access in Indonesia	SCID	2019	IDN	RDD	NM
V. Lledo	Electoral Systems, Legislative Fragmentation and Public Spending: A Comparative Analysis of Brazilian States	Unpub.	2003	BRA	OLS	NM

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Author(s)	Title	Journal	Year	Country	Method	Electoral System
L. MacDonald	The Impact of Government Structure on Local Public Expenditures	PC	2008	USA	OLS	M
B. Maldonado	Legislature, Leaders, and Leviathans: How Constitutional Institutions Affect the Size of Government Spending	SSQ	2013	Multiple (92)	OLS	NM
J. Matsusaka	The Endogeneity of the Initiative: A Comment on Marschall and Ruhil	SPPQ	2005	USA	IV	M
B. Mukherjee	Political Parties and the Size of Government in Multiparty Legislatures: Examining Cross-Country and Panel Data Evidence	CPS	2003	Multiple (110)	Panel	NM
P. Pettersson-Lidbom	Does the Size of the Legislature Affect the Size of Government? Evidence from Two Natural Experiments	JPubE	2012	FIN & SWE	RDD	NM
D. Primo	Stop Us before We Spend Again: Institutional Constraints on Government Spending	E&P	2006	USA	Panel	M
R. Ricciuti	Legislature Size, Bicameralism and Government Spending: Evidence from Democratic Countries	Unpub.	2004	Multiple (75)	OLS	NM
C. Schaltegger & L. Feld	Do Large Cabinets Favor Large Governments? Evidence on the Fiscal Commons Problems for Swiss Cantons	JPubE	2009	CHE	Panel	NM

Table 1: Papers included in the meta-analysis, listed alphabetically by last name

Author(s)	Title	Journal	Year	Country	Method	Electoral System
E. Stein, E. Talvi & A. Grisanti	Institutional Arrangements and Fiscal Performance: The Latin American Experience	Unpub.	1998	Multiple (26)	OLS	NM

Note: Unpub=Unpublished, JPE=Journal of Political Economy, EJPE=European Journal of Political Economy, PC=Public Choice, JPubE=Journal of Public Economics, JPriE=Journal of Private Enterprise, APSR=American Political Science Review, SEJ=Southern Economic Journal, UAR=Urban Affairs Review, SCID=Studies in Comparative International Development, SSQ=Social Science Quarterly, SPPQ=State Politics and Policy Quarterly, CPS=Comparative Political Studies, E&P=Economics and Politics, OLS=Ordinary least squares, IV=Instrumental variables, Panel=Panel data/fixed effects, RDD=Regression discontinuity design, M=Majoritarian, NM=Non-majoritarian (mixed or proportional representation). Country codes follow the ISO 3166-1 alpha-3 international standard.

Most studies focus on the United States (12), but our sample also contains papers on Australia (1), Brazil (1), Germany (2), Indonesia (1), Italy (1), and Switzerland (2). Five articles use cross-national data and analyse from 2 to 110 countries. We also observe that although the "law of $1/n$" was first formulated in 1981, the empirical assessment of the theory only started a few years later, as dates of publishing range from 1998 to 2019.

Regarding the dependent variables included in the sample, 13 studies employ public expenditure per capita, 7 papers use its natural logarithm, and 8 of them analyse the impact of legislature size on public expenditures as a percentage of GDP. This indicates that the area has refined the original formulation of $1/n$ suggested by Weingast et al. (1981) and tested the impact of larger legislatures on different measures of government spending. Our independent variables of interest are n, lower chamber size (21), ($\log(n)$), the natural logarithm of lower chamber size (6), and k, which represents upper chamber size (9).

We also coded four moderators that may help us understand the heterogeneity in the reported results. We included them in our meta-regressions alongside an indicator for the type of independent variable used in the original study (n, $\log(n)$, or k). The additional moderators are: 1) publication year; 2) paper publication in an academic journal; 3) electoral system; 4) estimation method. Since the literature on the "law of $1/n$" is notably diverse, we were restricted to include only the moderators that either refer to important theoretical questions, such as the effect of the electoral system on public spending, or to essential characteristics of the publications themselves. Although more moderators exist in the literature (ie., data aggregation level), they do not appear as often as required for the meta-regressions. Table 2 shows the descriptive statistics of the moderator variables.

Table 2: Descriptive Statistics of Moderators

	Main Coefficients N=36	Other Coefficients N=92	All Coefficients N=128
Independent Variables:			
k	9 (25.0%)	29 (31.5%)	38 (29.7%)
n	21 (58.3%)	51 (55.4%)	72 (56.2%)
$\log(n)$	6 (16.7%)	12 (13.0%)	18 (14.1%)
Year	2009 (6.50)	2008 (5.75)	2008 (5.98)
Published work:			
Yes	30 (83.3%)	74 (80.4%)	104 (81.2%)
No	6 (16.7%)	18 (19.6%)	24 (18.8%)
Electoral system:			
Majoritarian	18 (50.0%)	40 (43.5%)	58 (45.3%)
Non-Majoritarian	18 (50.0%)	52 (56.5%)	70 (54.7%)
Estimation method:			
OLS	13 (36.1%)	43 (46.7%)	56 (43.8%)
Panel	17 (47.2%)	40 (43.5%)	57 (44.5%)
IV	3 (8.33%)	3 (3.26%)	6 (4.69%)
RDD	3 (8.33%)	6 (6.52%)	9 (7.03%)

Note: The values for the variable *Year* indicate the mean and the standard deviation, respectively.

Since most selected articles have more than one effect size, the observations in our dataset are not independent. To reduce the impact of multicollinearity, we estimate the models using two sets of study coefficients. The first group includes only the most rigorous model from each paper, that is, those estimated with the largest n, most control variables, and fixed effects if the authors added them. If the article employed a regression discontinuity design, we chose the coefficient from the optimal bandwidth or from the intermediate one. This sample encompasses 36 estimates, as 10 articles analysed two dependent or independent variables of interest (Baqir 1999; Bjedov et al. 2014; Bradbury and Crain 2001; Chen and Malhotra 2007; Crowley 2019; Lee 2016; Lee and Park 2018; Maldonado 2013; Primo 2006; Ricciuti et al. 2003). Our second sample, in contrast, contains all the 126 effect sizes reported in the 26 papers. Here we focus on the results for our restricted sample as we consider them more robust, but the findings are very similar when we use the extended set. We discuss eventual differences in the next section. Please refer to the Supplementary Material for further information about our sampling process and for the complete results.

3 Results

3.1 Binomial Z-Tests

The "law of $1/n$" states that more legislators increase government expenditure. Here we employ three methods to assess the empirical validity of that relationship. First, we run a binomial one-proportion z-test to determine whether the study coefficients have a positive or negative sign. Then, we fit 7 random-effect models using the `meta` (Balduzzi et al. 2019) and the `dmetar` (Harrer et al. 2019) packages for the `R` statistical language (R Core Team 2019). We estimate the true effect size variance (τ^2) with a Restricted Maximum Likelihood Estimator, which the literature considers the most precise for continuous dependent variables (Veroniki et al. 2016). Lastly, we run a series of meta-regressions to test possible sources of result heterogeneity. To recapitulate, our independent variables of interest are lower chamber size (n), the natural logarithm of lower chamber size ($\log(n)$), and upper chamber size (k). The dependent variables are public expenditure per capita, the natural logarithm of public expenditure per capita, and government expenditure as a percentage of GDP. Since the outcomes have different scales, we treat them separately in our models.

The binomial z-test evaluates whether the coefficient of our independent variables are positive or negative. The null hypothesis here states that the sign of the coefficient is equally likely to be positive or negative. We start with n, lower house size. Our results indicate that there is no correlation between the number of legislators in the lower house and public expenditure (successes = 10, trials = 21, $p_{success} = 0.476$, 95% CI = [0.257; 0.702], p-value = 1). Note that the "law of $1/n$" suggests that there is a positive association between both. The binomial test for $\log(n)$ also shows a non-statistically significant result (successes = 5, trials = 6, $p_{success} = 0.833$, 95% CI = [0.359; 0.996], p-value = 0.219). In contrast, we find a positive result for the number of legislators in the upper house (k), which is in line with the mainstream literature (successes = 8, trials = 9, $p_{success} = 0.889$, 95% CI = [0.518; 0.997], p-value = 0.039).

3.2 Meta-Analysis

We then proceed to the meta-analysis. We matched the house size variables with our measures of government spending and created a theoretical 3×3 matrix. Out of the 9 possible variable combinations, we found only 7 in the article pool. Our sample includes no papers that analyse the relationships between $\log(n)$, and public expenditure per capita and between k and the logarithm of public expenditure per capita.

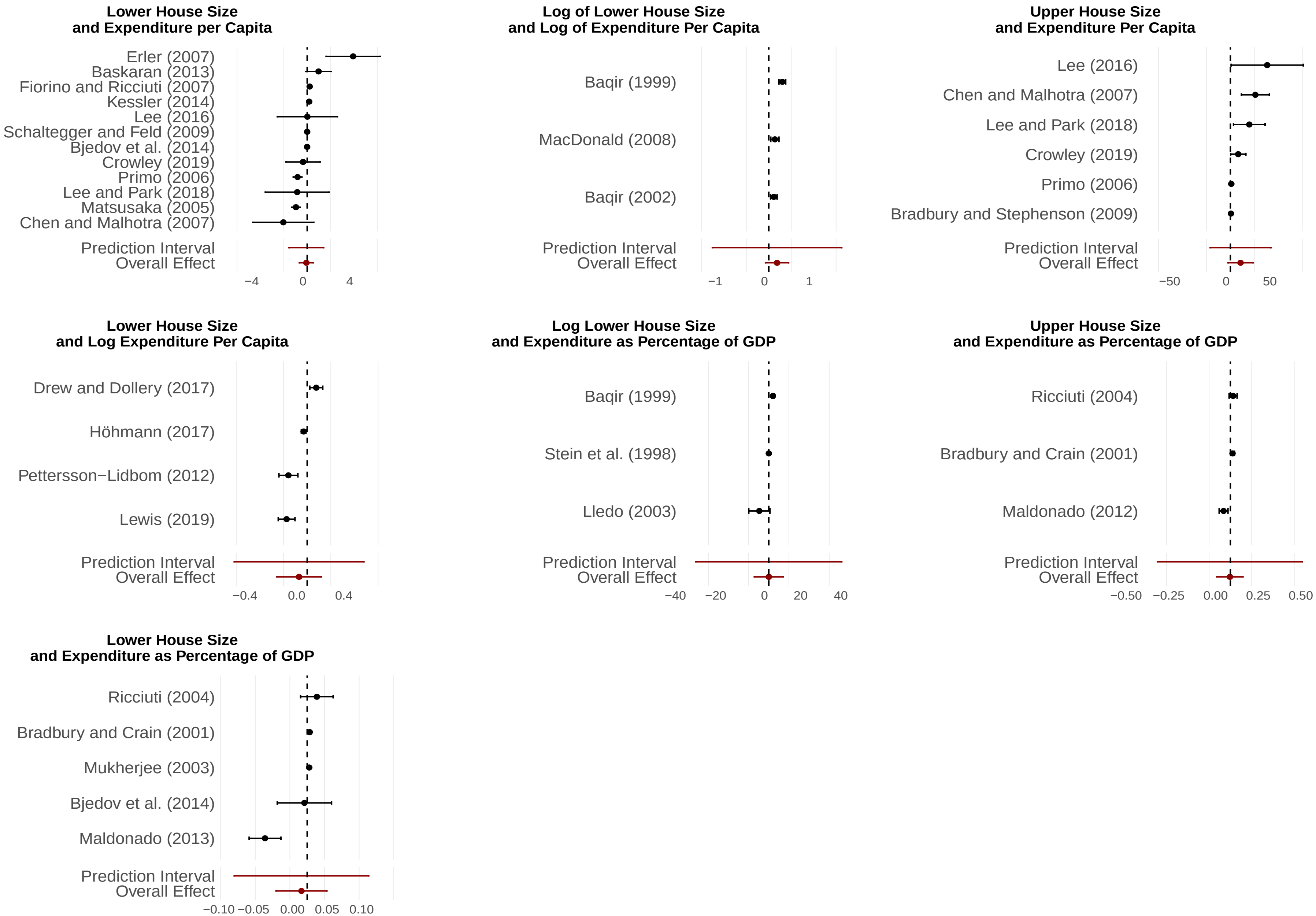
Figure 1 shows the forest plots for our restricted sample, the one which includes only the main 36 coefficients for the 26 selected papers. On the left side of the plots are the name of the study authors and the paper publication year. For unpublished studies, we included the first year the paper was available online. The bars in the middle show the reported effect sizes and the vertical lines indicate their average, weighted by standard errors. The length of the lines represent the precision of the estimates. The red line at the bottom of the figures displays the aggregate coefficients plus their respective confidence intervals.

The first column of the graph reports the results for n, lower chamber size. In the first model, which correlates n and expenditure per capita, we find a standardised mean difference (SMD) of -0.070 and a standard error of 0.273 (studies = 12, 95% CI = [-0.671; 0.531], p-value = 0.803, prediction interval = [-1.55; 1.41]). Therefore, we cannot reject the null hypothesis that the effect size is zero. The I^2 statistic, which quantifies the degree of heterogeneity among studies, is equal to 94.7%. I^2 values above 75% indicate very high study heterogeneity (Higgins et al. 2019).

We see similar results when we compare n with log expenditure per capita. In this model, the average effect size is -0.07 and the standard deviation is 0.059 (studies = 4, 95% CI = [-0.256; 0.119], p-value = 0.328, prediction interval = [-0.618; 0.481]; I^2 = 92.5%). The coefficient is statistically indistinguishable from zero.

In our restricted sample, larger lower house size also does not increase government spending as a percentage of GDP (studies = 5, SMD = -0.008, SE = 0.013, 95% CI = [-0.045; 0.0285], p-value = 0.567, prediction interval = [-0.105; 0.089], I^2 = 87.1%). We find a positive effect in our extended sample and the coefficient is statistically significant at the 10% level (coefficients = 21, SMD = 0.008, SE = 0.004, 95% CI = [-0.000; 0.016], p-value = 0.058, prediction interval = [-0.026; 0.042], I^2 = 98.5%). The result supports the "law of $1/n$", but the evidence is moderate as the prediction interval include zero.

Figure 1: Forest Plots for the Relationship between Legislature Size and Government Spending (Reduced Sample)



Next, we present the meta-analyses using log(n), the logarithm of lower house size, as the main explanatory variable. We start with the relationship between log(n) and the logarithm of expenditure per capita. The result is positive and statistically significant at 10%, but the prediction interval encompasses zero (studies = 3, SMD = 0.184, SE = 0.06, 95% CI = [-0.0738; 0.4425], p-value = 0.0916, prediction interval = [-1.258; 1.627], I^2 = 85.9%). Although the coefficient has the predicted sign, we should interpret the finding with caution as it does not replicate in our sample of 126 effect sizes.

Our model that correlates log(n) with public expenditures as a percentage of GDP fails to reach conventional levels of statistical significance (studies = 3, SMD = 0.0203, SE = 1.677, 95% CI = [-7.196; 7.237], p-value = 0.991, prediction interval = [-36.206; 36.246], I^2 = 96.1%). The extended sample also gives us a null result.

The third set of models uses k, upper house size, as the main independent variable. We find a positive correlation between k and expenditure per capita and the coefficient is significant at a 10% level (studies = 6, SMD = 10.613, SE = 5.148, 95% CI = [-2.621; 23.848], p-value = 0.094, prediction interval = [-21.130; 42.357], I^2 = 79.4%). But as with the other models, the prediction interval again includes zero. When we run the same analysis in the extended sample, we also see a significant coefficient yet a prediction interval that contains zero (coefficients = 24, SMD = 7.216, SE = 1.342, 95% CI = [4.440; 9.992], p-value < 0.0001, prediction interval = [-1.222; 15.654], I^2 = 77.7%).

Our last estimation analyses the relationship between k and government spending as a percentage of GDP. The coefficient is not statistically significant, indicating a null effect (studies = 3, SMD = -0.003, SE =, 95% CI = [-0.079; 0.074], p-value = 0.891, prediction interval = [-0.428; 0.423], I^2 = 85.8%). The result is very similar in the extended sample.

In a nutshell, we find only weak evidence in favour of the "law of $1/n$". While some models do show a positive and statistically significant result, none of the prediction intervals are totally positive or negative. The studies also have considerable heterogeneity, what indicates that the original coefficients do not point consistently towards the same direction.

3.3 Meta-Regressions

In this section, we run a series of meta-regressions with 5 covariates that may account for differences across the selected papers. The first variable indicates whether the study uses n, log(n) or k as its main explanatory variable. The second variable shows the study publication year, which we included to capture temporal variation in the study coefficients. We also add a dummy variable to assess whether published articles report effect sizes that are higher or lower than those from working papers. The fourth variable measures whether studies focusing on non-majoritarian electoral systems report coefficients that are smaller or larger than those from majoritarian countries. Our last covariate is a categorical variable indicating the statistical procedure used in the original models (panel data, instrumental variables, OLS, or regression discontinuity design).

Table 3 presents the meta-regression results for our restricted and extended samples. Each column represents one of the three measures of public spending we discuss in this paper. To reduce the risk of false positives in our analyses, we use permutation tests to calculate significance levels for the meta-regressions (Higgins and Thompson 2004).

Table 3: Meta Regression Results

	Expenditure Per Capita		Log Expenditure Per Capita		Gov. Spending % GDP	
	Restricted	Extended	Restricted	Extended	Restricted	Extended
Independent Variable: N	-2.307	-5.347	-0.280	-0.0577	-0.009	0.003
	(1.490)†	(0.929)***	(0.162)	(0.073)	(0.005)†	(0.005)
Independent Variable: log(N)					-0.011	0.002
					(0.001)	(0.014)
Year	0.059	0.152	0.004	0.004	-0.000	-0.000
	(0.101)	(0.078)*	(0.013)	(0.006)	(0.001)	(0.001)
Published: No			0.200	0.103	0.0625	0.060
			(0.127)	(0.065)	(0.014)*	(0.016)*
Non-Majoritarian (PR & Mixed)	0.428	0.985			-2.055	-2.169
	(0.827)	(0.723)†			(0.283)**	(0.166)***
Method: Panel	1.203	-0.135	0.188	-0.252	0.055	0.058
	(1.575)	(0.797)	(0.093)	(0.068)***	(0.013)*	(0.017)*
Method: IV	1.317	0.186				
	(1.807)	(0.802)				
Method: RDD				-0.285		
				(0.062)***		
Intercept	-117.987	-300.789	-7.363	-8.296	2.851	2.507
	(203.717)	(157.555)*	(25.458)	(12.037)	(1.778)	(2.467)†

Note: The restricted and extended samples include 36 and 126 study coefficients, respectively. We report the results from the permutation tests. Reference categories: Independent Variable = k; Published = Yes; Non-Majoritarian (PR & Mixed) = $Majoritarian$; Method = OLS. Significance codes: *** $p < 0.001$; ** $p < 0.01$; * $p < 0.05$; † $p < 0.1$.

The first two models show the results for public expenditure per capita. In both the restricted and the extended samples, we find that models that use n as an independent variable tend to detect significantly smaller effects when compared to k. This suggests that an additional member in the lower house has a smaller impact on public spending than a member in the upper house. Moreover, the results for the extended sample point out that recent studies find larger effects than older ones, and that changing the electoral rules from majoritarian to non-majoritarian increases the effects of legislature size on per capita expenditure.

The third and fourth columns use the logarithm of expenditure per capita as the dependent variable. No covariate is statistically significant in our smaller sample, but two moderators are negatively associated with the outcome in our larger study pool. They both refer to estimation methods. Studies that employ panel/fixed effects or regression discontinuity designs (RDDs) have lower coefficients for log expenditure per capita if we take OLS as the reference category.

Several variables are statistically significant in the last set of meta-regressions. The dependent variable is public expenditures as a percentage of GDP. In our restricted sample, we see that studies with n as an independent variable have lower coefficients than those that analyse k, what is consistent with our previous models. Both models also show that unpublished papers tend to have higher coefficients than published papers. Regarding the electoral systems, see that passing from majoritarian to non-majoritarian decrease overall levels of public spending. Finally, we find that models estimated with panel data have larger values than those modelled with OLS.

Overall, our results suggest that study coefficients are highly sensitive to research design choices. The same statistical methods or study samples may produce different outcomes depending on the response variables scholars decide to analyse. Moreover, we find evidence that results vary considerably if the study employs different measures of legislature size. The impact of factors such as the electoral system or year of publication also appear to be conditional on the selected model.

4 Discussion

In this article, we assess the empirical validity of the "law of $1/n$". Based on a sample of 26 recent publications on the topic, our meta-analyses show that there is little evidence that an increase in the number of legislators has a significant effect on public expenditures. If such effect exists, it is likely driven by an increase in k, the size of the upper legislature, as suggested by several studies in the literature (e.g., Baqir 2002; Bradbury and Crain 2001; Bradbury and Stephenson 2003; Chen and Malhotra 2007; Gilligan and Matsusaka 2001; Primo 2006). We find no robust evidence for the "reverse law of $1/n$", which posits that larger legislatures lead to lower government spending. One possible explanation is that the two logics are balancing each other, thus leading us to a null impact of legislature size on public expenditure.

The meta-regressions indicate that study characteristics have a large influence on reported results. It is unclear whether factors such as the electoral system or the level of data aggregation, both believed to moderate the relationship between legislature size and public expenditure (Primo and Snyder 2008; Baqir 2002; Bradbury and Stephenson 2003), have a substantial impact on the estimates. We find conflicting evidence for the former and no support for the latter. Moreover, different statistical techniques produce distinctive results, which authors should bear in mind.

Our analyses suggest three areas for further research. First, our study sample did not include articles that evaluate the association between the $\log(n)$ and public expenditure per capita or between k and log expenditure per capita. New work on that area might clarify some of the inconsistencies we find here. Second, despite the inclusion of several moderators in our models, aggregate results still show considerable heterogeneity. That is, much of the disparities among studies are yet to be explained. Domestic factors such as party dynamics or gerrymandering (Lee 2015; Mukherjee 2003; Gilligan and Matsusaka 2006) may prove useful in this regard. Finally, we highlight the need for more evidence in favour or against the "law of $1/n$" to inform general public policies. The available empirical evidence points out that contextual variables may either amplify or reduce the impact of larger legislatures on government budgets. They should be taken into account if policy-makers want to reach an optimal balance between sound fiscal policy and the demands for increased political representation.

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