

# THE EVIDENCE ON THE SPECIFICS OF PUBLIC SPENDING IN SMALL STATES

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**Abstract** Literature focusing on the small states started to emerge after the World War II. This literature has occasionally stressed the relations among the size of the state and governmental interventionism, exemplifying that small states should be more expensive to run. As rather mixed empirical results tend to be delivered on whether small states should have larger governments, and in order to provide additional empirical evidence, this paper at hand explores how the size of a state relates to the size of the government. Specifically, the study intends to address also the question whether smaller states are different in comparison to larger states regarding the structure and volume of government spending. The findings indicate that scale economies effect can be observed only for governmental consumption spending, but we cannot directly empirically confirm scale effects and the notion on the risk-reducing role of the state for governmental transfer spending.

**Keywords::**

small states, government expenditure, scale effect, vulnerability, analysis of variance.

## 1 Introduction

The number of states (i.e., independent countries) has increased substantially in particular after the World War II, when their number has tripled. This has happened due to the onset of the de-colonization processes and with the start of the Cold War period. This literature has occasionally stressed the relations among the size of the state and governmental interventionism. It can be argued that we are currently living in the era of small states, as more than one third of the existing 215 states around the globe are actually small (see, e.g., Brito, 2015), if we assess the multiple criteria combination. Consequently, small state studies has emerged as a discipline, and this discipline has been initially dominated mainly by the issues of vulnerability and a lack of capacities of small states, although these issues have been gradually replaced by the discussions on the potential opportunities of small states, not just their challenges (see, e.g., Thorhallson, 2019).

This literature has occasionally stressed the relations among the size of the state and governmental interventionism. In this context, e.g., studies are usually assuming and exemplifying that small state should be more expensive to run;

i.e. small states are likely to have large governments due to higher input costs and the lack of economies of scale in providing public goods and services. For example, Alesina and Wacziarg (1998) argued that the size of government correlates negatively with country size and positively with trade openness. They have shown that smaller countries have a larger share of government consumption in GDP, and are more open to trade.

Similarly, Rodrik (1998) has found a strong positive association between openness and government size. He explains this paradox by arguing that government expenditures are used to provide social insurance against the risk of terms of trade shocks that open economies face. This indicates that government consumption and expenditures play a risk-reducing role in economies exposed to a significant amount of external risk. Goldsmith (1999) has justified the observation on the activist government in small states as being a buffer to vulnerability. Some recent studies have tried to put additional evidence on the relations between state size and government size. For instance, Jetter and Parmeter (2015) have pointed out that

economies that are more open not necessarily have bigger governments, but country size may be related to government size, as smaller states should have bigger government, although they admit that using different datasets, timeframes, and sample countries changes conclusions.

Following, in order to provide additional empirical evidence and, simultaneously, utilize the size of states as a variable in comparative institutional analysis, the aim of the paper proposal at hand is to explore how the size of a state relates to the size of the government. Specifically, the study intends to address the question if there is any difference regarding the scope and functions of government between smaller and larger states, i.e., are smaller states different in comparison to larger states regarding the structure and volume of government spending. Thus, the investigation is performed to add up to the empirical evidence, if we can observe any lack of scale and size economies in smaller states, and is there any evidence on increased activities to target vulnerability in those states.

## **2 Theoretical foundations, methodology and data**

The theoretical foundations of the research at hand can be extrapolated from the economics of the state size, which stipulates the trade-off between the benefits of the size versus the costs of heterogeneity of population preferences (Alesina et al., 2005). Namely, the clear benefits of the larger state size are related to larger available domestic market size and thus implicitly less reliance on foreign trade, more diverse industry structure, larger availability of human potential, both in numbers as well as in their diverse capabilities. Moreover, per capita costs of several public goods and services are lower, either because more taxpayers can pay for them, or they have important scale economies or simply because the indivisibility is not implicitly increasing them. In contrast, larger states might experience also some costs that come from the heterogeneity of population, which means that different preferences should be followed, which increases the distributional costs.

The aforementioned and referenced research suggests that relationship between state size and governmental interventionism is rather complex issue, and empirical investigations are warranted. If we would follow assumptions stated above, smaller states should have larger governmental spending, on average at least, in

comparison to larger states. Given the context, this study would like add to the existing research by providing some additional data-based experimental evidence on the relations among state size and government size.

Although there are numerous categorizations or classifications of states, small versus large states categorization uses the size of the state as the main criterion, where usually the population size serves as the main input. Thus, states can be accordingly classified into various size-based categories: micro, small, medium- sized, and large states. Specifically, the World Bank stipulates that 1.5 million residents is officially threshold for small states, but this threshold is heavily challenged by some due to the population and globalization shifts, so 10-15 million threshold is nowadays taken as more appropriate (see Pevcin, 2020).

This study takes the state size as an independent variable. The cross-national comparative investigation based on the data for 162 states around the globe to assess the relationships between state size and government size. Since this is explorative study, states are split into several clusters, the first cluster containing countries, which have less than 1.5 million residents, which is corresponds to the strictest, and the World Bank induced definition of small state. The second cluster includes the states, which are considered as small under the extended definition that is they have less than 15 million residents. The third cluster includes the so-called medium-sized states, and since the sampling is global, we consider those the states that have less than 100 million residents, which follows suggestions from the literature on the classification of states. The fourth cluster is formed by states that have more than 100 million residents, and those can be considered as large states.

Specifically, to the first cluster, including states less than 1.5 million residents (the so-called strictly small states), 20 states in the sample can be affiliated to; to the second cluster, including states with less than 15 million residents (the so-called small states), 73 states in the sample can be affiliated to; to the third cluster, including states with less than 100 million residents (the so-called medium-sized states), 55 states in the sample can be affiliated to; and to the fourth cluster, including states with more than 100 million residents (the so-called large states), 14 states in the sample can be affiliated to.

This study is based on the exploratory research, i.e. we are investigating the issue that is not clearly defined and we thus want to give a better understanding of this issue and potential directions for additional future research endeavors (Barbbie, 2007). Taking this into consideration, the potential assumptions are that we would expect to find the scale economies existence for the governmental consumption spending, although we acknowledge the potential counter-effect of emerging innovations in service delivery where tackling of scale issue might be their purpose. For governmental transfer expenditures, we might take the assumption that there is a risk-reducing role attached to them in smaller states, which should be the factor having effect on relatively larger share of transfer spending in GDP in those states. The data for the empirical analysis are taken from the Economic Freedom of the World (2020) dataset.

### 3 Results and discussion

Following table presents the results of the ANOVA single factor approach for governmental consumption expenditures.

**Table 1: Analysis of variance – governmental consumption spending and state size**  
 Source: EFW (2020), own calculations

SUMMARY						
<i>Groups</i>	<i>Count</i>	<i>Sum</i>	<i>Average</i>	<i>Variance</i>		
S.S.S.	20	543,137	27,15685	93,98828		
S.S.	73	1605,281	21,99015	72,8171		
M.S.	55	1057,256	19,22284	55,22105		
L.S.	14	229	16,35714	47,45533		
ANOVA						
<i>Source of Variation</i>	<i>SS</i>	<i>df</i>	<i>MS</i>	<i>F</i>	<i>P-value</i>	<i>F crit</i>
Between Groups	1298,607	3	432,869	6,435524	0,000387	2,661829
Within Groups	10627,46	158	67,26243			
Total	11926,07	161				

The results presented in the table above suggest that there is existence of scale effects in governmental consumption expenditures, as the average share of consumption spending in GDP decreases throughout different size-based clusters of states. The obtained results are aligned with theoretical predictions and assumptions generated, although there are two factors that should be taken into consideration when interpreting the results, i.e. the role of innovations in public service delivery and (usually) different focus of institutions in smaller states.

Namely, some previous research, done e.g. for the cluster of European states only (see Pevcin, 2020), has revealed that the effect of the size of the state does not necessarily favor larger states in respect to the smaller size of government due to the potential scale economies. Small states might overcome the handicaps of their size, and the prime importance in that effort has been in finding ways how to reduce the costs and increase the effectiveness of public goods and services. This has been done through the use of international cooperation to reduce the per-unit costs of physical infrastructure, and through the use of outsourcing of government functions as a means of reducing the costs and improving the quality of some public goods and services. Besides, this has revealed another issue, that sampling itself influences the elaborations on the potential scale effects existence.

Following, the table below presents the results of the ANOVA single factor approach for governmental transfer expenditures.

**Table 2: Analysis of variance – governmental transfer spending and state size**  
 Source: EFW (2020), own calculations

SUMMARY						
<i>Groups</i>	<i>Count</i>	<i>Sum</i>	<i>Average</i>	<i>Variance</i>		
S.S.S.	17	135,5911226	7,975948	31,07671		
S.S.	70	679,2107996	9,703011	54,80368		
M.S.	54	389,6461134	7,215669	55,69379		
L.S.	14	111,6266293	7,973331	47,16562		
ANOVA						
<i>Source of Variation</i>	<i>SS</i>	<i>df</i>	<i>MS</i>	<i>F</i>	<i>P-value</i>	<i>F crit</i>
Between Groups	198,9188	3	66,30628	1,276486	0,284566	2,664504
Within Groups	7843,605	151	51,9444			
Total	8042,524	154				

The results suggest that we cannot observe scale effects with transfer spending, and the evidence also suggest that the potential vulnerability effect could not be detected. Namely, there was an explicit assumption that smaller states should have larger transfer expenditures also to deal with potential external shocks, where transfer spending might serve as one of the tools for risk absorption. Yet, the results presented in the table 2 suggest that there are no statistically significant differences regarding governmental expenditures among different size-based clusters of states. Still, by adding a little caution to interpreting the results, this outcome can partially be attributed to the fact that the data are from the period, i.e. 2019, when the majority of states experienced economic boom, which tends to, according to propositions, benefit relatively more to more open economies. Since economic openness is also related to the size of state with negative relationship, this tends to suggest that during the economic boom, smaller states are better off, and they consequently have fewer social problems on average, but this problem explodes during the economic downturn.

## 4 Concluding remarks

The study presented in this short paper intended to address the question if there is any difference regarding the scope and functions of government between smaller and larger states, i.e., are smaller states different in comparison to larger states regarding the structure and volume of government spending. The investigation is performed to add up to the empirical evidence, if we can observe any lack of scale economies in smaller states, and is there any evidence on increased activities of government to target vulnerability in those states. The findings indicate that scale economies effect can be observed only for governmental consumption spending, but we cannot directly empirically confirm the notion on the risk-reducing role of the state, as government transfer spending does not exhibit any statistically significant variations among different clusters of states, although these results might be influenced by the status of global economic conditions. Finally, the comparison of results also indicates that sampling does exhibit effect on the outcomes of empirical research, so additional exercises are welcomed in this context.

## References

- Alesina, A., Wacziarg, R. (1998). Openness, Country Size and the Government. *Journal of Public Economics*, 69, 305-322.
- Alesina, A. et.al. (2005). Trade, Growth and the Size of Countries. In Aghion, P., Durlauf, S. *Handbook of Economic Growth*, North Holland, Amsterdam, 1499-1542.
- Barbbie, E. (2007). *The Practice of Social Research*. 11th Edition. Thompson-Walworth, Belmont.
- Brito, J.A. (2015). *Defining Country Size: A Descriptive Analysis of Small and Large States*. MPRA Paper No. 66149, MPRA, Munich.
- EFW (2020). *Economic Freedom of the World: 2018 Annual Report*. Fraser Institute, Vancouver.
- Goldsmith, A.A. (1999). Africa's Overgrown State Revisited: Bureaucracy and Economic Growth. *World Politics*, 51, 4, 520-546.
- Jetter, M., Parmeter, C.F. (2015). Trade Openness and Bigger Governments: The Role of Country Size Revisited. *European Journal of Political Economy*, 37, 49-63.
- Pevcin, P. (2020). Government size and quality of governance: Does state size matter?. *International Journal of Business and Economic Sciences Applied Research*, 13, 3, 7-14.
- Rodrik, D. (1998). Why do more open economies have bigger governments?. *Journal of Political Economy*, 106, 5, 997-1032.
- Thorhallsson, B. (2019). *Small States and Shelter Theory*. Routledge, Abingdon.