JOURNAL OF ECONOMIC DEVELOPMENT 113
Volume 40, Number 1, March 2015

VARIETIES OF CAPITALISM AND GOVERNMENT SPENDING IN DEVELOPED AND DEVELOPING COUNTRIES

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Empirical papers on the size of government suffer from neglecting preferences for government activity as discussed in the literature on varieties of capitalism. Cross-country evidence for a sample of 126 developed and developing countries reveals a global divide. Among developing countries, Asian countries are closer to continental European economies, i.e., they reveal relatively higher levels of spending dependent on the quality of governance. Latin American countries rather tend towards low-spending anglo-saxon economies and spend to stabilize rather than to fight inequality. Considering these preferences, we do not find evidence that open countries spend more in order to buffer macroeconomic risks.

Keywords: Government Size, Political Governance, Economic Systems, Inequality, Openness, Developing Regions
JEL classification: H10, P10, P51

1. INTRODUCTION

Recent contributions to the literature explaining government size argue that, beyond optimal allocation,[1] voters or interest groups demand for redistribution and risk

[*] The authors like to thank the anonymous referee, participants of the ASP 2010/2011 Workshops at IfW Kiel, and participants of the 12th EACES Conference at the University of West Scotland for helpful comments. All remaining errors are our own.

[1] Historically, Wagner's income hypothesis (Wagner, 1890) provides the starting point for a literature on government size that, until today, tends to be biased towards demand side explanations. Refined by Baumol (1967), the income hypothesis states that richer countries tend to spend more on public goods. This is because the demand for public goods increases with the complexity of the economy and a high elasticity of demand. At the same time, technological progress in the provision of public goods is below average. Hence, a rising income level is assumed to generate positive price and demand effects for public goods and, hence,

insurance. Increasing dependency ratios (Heller and Diamond, 1990; Shelton, 2007), a growing majority of the population below average income (Meltzer and Richard, 1981, 1983; Shelton, 2007), or ethnic fractionalization of the population (Alesina *et al*., 2003) help to establish well specified interest groups asking for redistribution via more government spending. In the same vein, the population in open economies is assumed to demand for a higher level of government spending compensating for potential losses due to an unstable external environment (Cameron, 1978; Rodrik, 1998).

However, the empirical evidence on the relevance of allocation, redistribution, and risk insurance driving government spending is far from conclusive. Ram (1987) and Aktiobya *et al*. (2006) do not find support for the income hypothesis. Mulligan *et al*. (2002) find little evidence for income redistribution driving government expenditure, and Easterly and Levine (1997) show that ethnic fragmentation can actually reduce government spending because of a lack of a consensus about the provision of public goods. Alesina and Wacziarg (1998) and Sachs and Warner (1995) argue that the positive correlation between openness and government size may be rather due to the fact that small countries tend to be more open and, at the same time, have to run relatively large governments because they cannot exploit economies of scale. Aghion *et al.* (2009) demonstrate that macroeconomic volatility due to openness depends on the ability to establish well-functioning financial markets in the first place.

A potential shortcoming that may explain the ambiguous empirical results is that, especially from a developing country perspective, the literature on government size suffers from neglecting the role of governance. This is rather surprising because governance issues figure prominently in three related strands of the literature:

- The preference for alternative *modes of governance*, as analyzed in the rapidly evolving Varieties-of-Capitalism (VoC) literature (Hall and Soskice, 2001), implies that actual demand for government spending should depend on the preference for either a liberal or a coordinated mode of governance. This implication and its relevance for developing countries has been neglected in this strand of literature until recently.
- At the same time, the supply side of government spending can be assumed to depend on the *quality of governance*. This literature, so far, concentrates on specific aspects of good governance like the quality of democracy and the choice of a constitutional framework (Persson *et al*., 1997, 2000). Examples of recent extension towards analyzing developing countries are, e.g., Acemoglu and Robinson (2009). However, besides voice and accountability, aspects such as political stability, government effectiveness, quality of regulations, rule of law, and control of corruption are also likely to determine the extent to which elites, politicians, and bureaucrats may "capture" governments.
- Finally, a literature that figures prominently in development economics highlights

increasing public expenditure (Lindauer and Velenchik, 1992).

the importance of the ability to tax for government finance (Bird *et al*., 2004). The ability to tax, a precondition for any demand for government spending to be translated into government spending in the long run, is assumed to depend on the *quality of governance.*

The contribution of our paper is to introduce the insights from these strands of the literature into the analysis of government size in order to show their relevance for developed as well as for developing countries. Because review papers on traditional aspects are available (Shelton, 2007; Lindauer and Velenchik, 1992), we concentrate in Section 2 on providing our governance related demand and supply side arguments. In Section 3, we provide econometric evidence for our hypothesis that governance matters based on cross-country data for 126 countries. Section 4 has our conclusions.

2. GOVERNANCE AS A DETERMINANT OF GOVERNMENT SPENDING– DEMAND AND SUPPLY SIDE CHANNELS

2.1. The Demand Side: Mode of Governance and Preferences for Government Spending

As described and analyzed by the Varieties-of-Capitalism (VoC) approach (Hall and Soskice, 2001), different market regimes, i.e., capitalist variations, are characterized by different institutional matrices in the economy.[2] These institutional environments and arrangements provide incentive structures for the behavior of firms, households and also policymakers. Moreover, these different institutional settings reflect, influenced by distinct incentive patterns, different economic and societal preferences with respect to the role of the government in the economy.

The VoC literature classifies market economies into two polar types of capitalism. In Liberal Market Economies (LMEs), coordination is primarily characterized by price signals and formal contracting in competitive markets. In contrast, Coordinated Market Economies (CMEs) are largely driven by specific non-market institutions which play critical roles and influence processes of strategic interaction. This analytical division is conceived as a bipolar continuum on which countries cluster as follows: CMEs include the Scandinavian countries, Continental European countries and Japan. LMEs comprise the USA, the UK, Ireland, Canada, New Zealand and Australia (Hall and Soskice, 2001).

Despite increased international competition due to globalization processes as well as despite domestic adjustment pressure due to demographic changes, there has not been a convergence of different economic regimes towards a universal economic order (Schustereder, 2010). LMEs and CMEs have adjusted, but not converged. Each regime

[2] For more literature on the Variety-of-Capitalism approach, see, e.g., Estévez-Abe *et al*. (2001), Hall and Gingerich (2004), Hall and Thelen (2009), Hancké (1999), Höppner (2005), Streeck (1991).

has largely maintained its peculiarities. This confirms Hall and Soskice's (2001) hypothesis that institutional convergence will be unlikely.

Until recently, the VoC literature suffered from two shortcomings: It has concentrated on advanced economies (especially in an OECD context), and, although pointing at the importance of governance issues, neglected the role of the state. However, there is an increasing number of publications which seek to explain capitalist variations in less developed, emerging, or transition economies within a VoC framework (Ahrens and Jünemann, 2007; Lane and Myant, 2007). In those countries, especially formal institutions tend to change at a broader scale and a faster pace than in the OECD world, and governments have played influential roles in initiating and enforcing formal institutional change.[3] Lewis and Lloyd-Sherlock (2009) find that, for much of the second half of the twentieth century, the economic weight of the state in middle-income Latin American countries (particularly as regards economic outreach and social policy interventions) seemed to approach that of socialist countries in Eastern Europe. At the same time, the overall growth strategies contain a mixture of liberal capitalism as well as an emphasis on state supported late industrialization. Hence, preferences for the mode of governance seem to matter but the policy mix in developing countries may not neatly fit with categorizations established in the VoC discourse.

There are also a few papers which started to focus on the role of the state. Amable and Azizi (2009) and Schustereder (2010) observe that LMEs usually exhibit more limited social protection, while CMEs and particularly social-democratic (Nordic or Scandinavian) welfare regimes are based on governance structures which provide significantly more generous social protection both in kind and monetary terms.

One explanation is provided by a direct link between labour market institutions and the welfare state (Amable and Azizi, 2009). The competitiveness of LMEs relies on activities which require workers to acquire general skills. Because of these non-specific skills, workers are conceived to switch relatively easily between jobs. Hence, there is no specific need for protection. On the contrary, the competitiveness of CMEs is typically based on activities which favour the appropriation of firm -or sector- specific skills. In such an environment, a generous social protection system may act (ex-ante) as an incentive for workers to acquire the needed specific skills. Hence, "LMEs (…) sharpened market mechanisms, while …(CMEs)… tended to cushion citizens against the effects of market adjustment, moving more slowly to make changes to social protection…" (Hall and Gingerich, 2004, p. 36).

There is, however, also an argument which goes well beyond a narrow focus on the welfare system and related spending for social protection. Lijphart (1999) points out that CMEs usually have a consensus-oriented political system, in which large (at times heterogeneous) coalitions ensure government support. Such regimes provide an

[3] In times of major economic reforms, governments may assume an active role with a short-term, visible impact on economic institutions and governance even in advanced economies (Pontusson and Kwon, 2003).

institutional setting in which vested interest groups participate in, or indirectly influence, policy making. Thereby, interest groups help to generate a consensus between firms and unions to generate, extend, or at least maintain a developed welfare regime. On the contrary, LMEs are often based on majoritarian political regimes that favor two-party political competition as well as a pluralism of interest groups, while a relatively powerful government faces fragmented partners in the social realm. Finally, consensus-based systems with proportional representation may be conducive for a political center-left power which may be more inclined to establish and extend a welfare state regime than a centre-right wing political alliance which frequently exists in systems of majoritarian rule.

Amable and Azizi (2009, p. 4) conclude that the "consequences for macroeconomic policy, and more particularly for social policy, can be exemplified by the 'common pool' problem (…). Indeed, in countries with coalition governments, each member of the coalition may be prone to make public expenditures in different areas towards the specific groups which are supportive of its political party. Hence the tendency to 'overspend' and to produce 'excessive' deficits because of the given levels of governments' resources (…)".

The overall conclusion from the discussion of the VoC literature is that governance matters for convergence, but that (i) the institutional setting varies between the prototype CME and LME, that (ii) CME countries can be plausibly assumed to spend more than LMEs because of a preference for government intervention, and that (iii) an expanding literature applies the VoC concept to the developing world without yet having reached definite conclusions supported by quantitative analysis. The interesting question for the empirical evaluation will be if belonging to one or the other group of countries provides a complementary explanation for government spending. If this is the case, similar levels of inequality and risk may lead to different demands for government spending.

2.2. The Supply Side: Quality of Governance as a Precondition for Government Spending

The quality of governance can be expected to affect the supply side of government spending either directly by the way demand is translated into actual spending or indirectly by determining the ability to tax as a precondition for government spending.

Although direct governance effects have not yet been analyzed systematically in this respect, there are some papers addressing individual aspects. Persson *et al*. (1997, 2000) and Persson and Tabellini (1999) showed that more competition between policymakers, as tends to be the case in presidential regimes, leads to smaller and more efficient governments. However, their conclusion that the level of political accountability is negatively related to the provision of public goods and social services may have to be qualified when widening the perspective towards developing countries. Robinson and Torvik (2008) have shown that presidential regimes may be instrumentalized by elites in order to limit the provision of public goods. While the result for government spending

may be similar, a higher level of political accountability would may well imply higher spending given the preferences of the population.

In the same vein, the right or ability to vote is restricted in many countries. Especially in developing and transition countries but also in advanced democracies, elites as the wealthier parts of the population are better represented in the political process (Acemoglu and Robinson, 2009). In this case, the demand for democracy as a means of redistribution via government spending is decreasing for highly unequal societies because the elites stand to lose more compared to an average income distribution.

This explains constitutional choices like presidential regimes, which allow for a bias in political representation. As argued by Weingast (2005, p. 105), "…(i)n the early nineteenth century, many Latin American countries adopted the text of the U.S. Constitution. However, Latin America failed to produce a single successful constitution…". In our context this led to the choice of presidential LME regimes without appropriate checks and balances, which often led to military coups if the elites were not able to caputure government and control spending. Hence, whether or not an improved voice of the population and accountability of government is stable and leads to an increase in government spending may depend on the income distribution and the relevance of state caputure by elites.[4]

Given demand for spending and scarce resources for financing expenditures, the structure and the quality of government and the public administration also affect spending and especially taxation. Therefore, they are crucial for the channeling and the usage of revenues. Effective governance, i.e., political commitment and sound political institutions, is the basis for implementing proper reforms to improve the efficiency of the tax system. With rising quality, this will increase the capacity of the state (Bräutigam, 2008).

Of course, government effectiveness and regulatory quality depend on the capability and capacity of the public administration. But the role of the bureaucracy in taxation and spending, and more generally, in affecting regulation and other public policy decisions is a two-edged sword and has been controversially discussed in the literature: On the one hand, traditional public-choice arguments suggest that bureaucracy may breed more bureaucracy, rent seeking and corruption suggesting that it turns into a "grabbing hand" (Brown *et al*., 2008) and spends too much for the 'wrong' purposes.[5]

[4] As an addition complication, it has also been shown (Plümper and Martin, 2003) that autocratic regimes also tend to spend more as an instrument to buy political support. Hence, government spending may be highest in autocratic or complete democracies.

[5] Delavallade (2006) examined the impact of corruption on the allocation and amount of government spending for developing countries. She finds that corruption increases the total amount of the budget, while real public expenditure is reduced. Moreover corruption leads to a decline in the share of education, health and social protection spending in total public expenditure. If better governance in terms of control of

However, public administrations may also prove to be a "helping hand" (ibid.) and efficiency -and growth- enhancing if they are based on transparent and predictable institutions holding bureaucrats accountable for their action and if they are efficiently organized in a meritocratic Weberian-type (Evans and Rauch, 1999; Adler, 1999). In which ways bureaucracies positively or negatively affect regulatory quality as well as taxing capabilities and spending decisions is an empirical question rather than a theoretical one. Since it is not necessarily the size of the bureaucracy which reflects its ability to enforce contracts, to implement antitrust policies, and to enforce bankruptcy rules (Brown *et al*., 2008), empirical investigations need to employ variables which reflect the quality of bureaucratic governance.

The relevance of these arguments in a developing country context are obvious. Bird *et al*. (2004) confirmed that it increases taxpayers' willingness to contribute if they feel they had a meaningful voice influencing the government and perceive a shifted supply of public goods according to their preferences. If, in contrast, corruption is untamed in a state, taxpayers might lose trust in authorities and subsequently their willingness to cooperate will decline. Therefore, the authors stress that improved governance and more legitimated states would serve well in improving adequate tax systems especially in developing countries.

Similarly, Petersen (2008) stressed that modern public management with a clear code of conduct for government officials is a precondition for a corruption free administration. This in turn serves as a supporting environment for implementing modern fiscal policy strategies of budgeting and fiscal planning not only for the purpose of an adequate control of public deficits but also for developing efficient tax systems with the consequential improvement of state capacity. It is evident that the effectiveness of the tax system is especially low in developing countries where tax policy and reform options are limited by economic structure, administrative capacity and political institutions (Bird, 2008).

For the empirical evaluation in this paper it is important to note that governance can be assumed to have a direct and an indirect effect on the supply of public goods. The direction of the direct effect is ambiguous, i.e., better governance can lead to higher spending because of a more effective match supply and demand or to lower spending because of more efficient spending. Arguably, the impact depends on the economic and political background and, hence, most likely differs between developed and developing countries.

The indirect effect can be assumed to be positive and works through more efficient taxation and a broader tax base. Of course, it has to be admitted that issues of taxation and development are hardly to be separated. The literature has established a fundamental role of institutions in economic development (Acemoglu *et al*., 2005). Hence, better governance does not only improve taxation given the level of income but also drives

corruption matters, then real government spending should increase with better governance.

economic development. Higher income, in turn, does not only entail a higher demand for government spending. It also increases the capacity to spend due to a growing and broadening tax base (Bird, 2008; Ahmad and Stern, 2003). Hence, governance may not only constitute an additional variable. To some extent, development related price and demand effects may actually constitute supply side governance effects.

3. EMPIRICAL EVALUATION

The discussion so far revealed that governance aspects are likely to modify demand and for and supply of government activities. Different outcomes could then be consistent with similar structural preconditions like size, income, inequality, and risk. Hence, preferences for specific modes of governance and the quality of governance has to be considered when testing the determinants of government spending. This is especially relevant when looking at a large country sample including developed as well as developing regions.

In our empirical evaluation for a sample of 126 countries, we concentrate on long-run relationships. This implies that we do not include business cycle effects and, hence, do not perform panel estimations. We establish a cross-country sample by averaging data for the period 2003 to 2007 because this can be viewed as a period of a rather stable world market environment without major crises. This is similar to Shelton (2007) who also uses cross-country analysis in order to test for long-run determinants of government spending. We do not use panel data because we are exclusively interested in these long-run relationships between rather stable or time-invariant variables such as governance and belonging to VoC clusters on the one hand and government spending on the other hand. The use of panel data would only be justified if explanations referring to the time series dimension of the data set would be included. Using panel data would allow for short-run fluctuations to drive the significance and sign of coefficients without necessarily reflecting long-run relationships discussed in the literature on mode and quality of governance.

As in most papers in the literature, our dependent variable is the share of general government final consumption expenditure in GDP (*GOVEXP*; for an overview of variables used in the empirical analysis, see Appendix Tables A1 and A2). Broader measures including transfers (e.g., government size according to the Freedom of the World Index published by the Frazer Institute), have to be based on index data if applied to a broad sample of countries including low income countries. Sticking to actual data and a broad country sample allows for the comparability of our results and avoids the trivial results that demand for more transfers leads to higher transfers. This implies that, in our context, a variable like the unemployment variable does not represent the actual demand for transfers due to unemployment but rather indicates inequality leading to a

preference for redistribution via the provision of public goods.[6]

We test the relevance of the quality of governance by using the broad based measure provided by the World Bank Governance Indicators, which account for voice and accountability, political stability, government effectiveness, quality of regulation, rule of law, and control of corruption. As argued in Section 2.2, we assume that all aspects are important for government spending. Hence, *GOVN* measures governance as an average of the six indicators provided by the World Bank. As shown in Appendix Table A3, the single indicators are highly correlated among each other and with the average value respectively. However, we test for the explanatory power of single governance indicators as well.

In addition, we test whether preferences for the mode of governance impact on government spending. Here we test the homogeneity across regional groups by implementing regional dummies for CME and LME industrialized countries (*rCME*, *rLME* according to the classification in Section 2.1) only. Hence, VoC clusters cover only part of the overall sample. In addition, we test for the homogeneity of Asian, Latin American, and African countries (*rASIAN*, *rLATIN*, *rAFR*). Unfortunately, the literature on preferences for economic systems does not yet provide classifications for developing countries similar to those for developed countries. Hence, we have to assume regional homogeneity in this case testing for homogeneity with developed countries' clusters. Finally, we use cross-terms in order to test whether these variables provide complementary explanations or rather modify the impact of more traditional variables accounting for structural characteristics.

We structure our estimation procedure into three steps. In a first step, we develop the basic model by starting with size and income as the basic structural characteristics of any country and by adding the other explanatory variables one-by-one.[7] The results for regressions showing significant results for explanatory variables are shown in Table 1.[8]

As can be seen in Eqs. (1) to (3), a negative impact of size (*POP*) and a positive impact of the level of income (*GDPpc*) is complemented by a positive impact for CME countries, i.e., CME countries indeed tend to spend more. Interestingly, if we add the governance variable (*GOVN*), this renders the income effect insignificant and excluding

[6] As a consequende we do not expect endogeneity problems. Theoretically, higher government spending may lead to higher unemployment due to higher marginal tax rates. However, the correlation between our variable UNEMPLOY and the top marginal tax rates (as shown in Frazer Institute 2011) is negative (-0.10).

[7] We are well aware that an alternative would be to start with a comprehensive model. However, this is not appropriate in our context because the number of observations is rather limited, the potential list of variables used in the literature rather large, and, as will be shown in the following, significance often depends on including cross-terms. We try to account for potential shortcomings by repeating the one-by-one test on all stages of our empirical modeling.

[8] Descriptive statistics as well as correlations for the variables used for the regressions shown in the output Tables 1 to 3 and A6 respectively are shown in Appendix Tables A4 and A5.

the income variable even improves the explanatory power of the regression. Although this is still far from a precise test of the hypothesis that much of the income effect might actually constitute a governance effect, it underlines the importance of governance as an explanation for government spending. Better governed countries tend to spend more. At the same time, this does not impact on the significance of the *rCME* term.

Table 1. Mode and Quality of Governance as Determinants of Government Spending

Dependent Variable: GOVEXP

	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
POP	-0.772***	-0.583**	-0.582**	-0.603**	-0.0888	-0.566**	-0.635**	-0.469*	-0.575**
	(-2.96)	(-2.24)	(-2.26)	(-2.36)	(-0.35)	(-2.16)	(-2.45)	(-1.78)	(-2.17)
GDPpc	1.067***	0.0194							
	(2.98)	(0.04)							
rCME	4.724***	3.942***	3.945***	2.894**	4.482***	3.616**	3.705***		
	(3.47)	(2.85)	(2.87)	(1.98)	(3.70)	(2.29)	(2.69)		
GOVN		0.0672**	0.0680***	0.0439**	0.0781***	0.0740***	0.0663***	0.109***	0.0923***
		(2.34)	(3.80)	(2.05)	(4.18)	(3.25)	(3.71)	(6.46)	(5.99)
DEPRATIO65				0.217*					
				(1.98)					
UNEMPLOY					0.317***				
					(5.05)				
rLME						-0.749		-2.693*	
						(-0.43)		(-1.73)	
rLATIN							-1.452		-1.775*
							(-1.45)		(-1.74)
Constant	17.68***	20.28***	20.40***	20.29***	8.700*	19.93***	21.65***	17.14***	19.86***
	(3.24)	(3.62)	(4.59)	(4.62)	(1.83)	(4.33)	(4.80)	(3.80)	(4.33)
N	118	116	116	116	96	116	116	116	116
adj. R-sq	0.289	0.317	0.323	0.340	0.466	0.318	0.330	0.292	0.292

Note: *t* statistics in parentheses. Significant at the 10, 5, and 1 percent levels (*, **, ***).
Source: see Tables A1 and A2.

In addition to belonging to the CME group of countries and the quality of governance, most variables mentioned in the literature, e.g., structural preconditions, income distribution, fragmentation, and openness remained insignificant in our basic model. However, the share of the population above 65 (*DEPRATIO65*) and the extent of unemployment (*UNEMPLOY*) appear to be positively related to government expenditure. This suggests that the demand for redistribution actually drives government expenditure.

While this would have been hardly surprising for a sample of OECD countries, it seems to apply generally for a wide range of developed and developing countries. Adding dummies for LME and developing regions reveals a negative impact of belonging to either LME or to the group of Latin American countries. These countries tend to spend less while there is no significant result for Asian and African countries in this first round of estimations.[9]

In Appendix Table A6, we show that including both income and a governance variable adjusted for income effects reveals significant effects for both the income and the adjusted governance variable as well as similar results with respect to the other explanatory variables. Hence, our model is robust with respect to the choice of the imcom/governance variable. While for theoretical reasons governance is not an alternative variable to income because it includes an income dimension, we were able to show that governance provides a more comprehensive picture if interpreted as a variable moderating income effects according the level of governance different from what would be expected given the level of income. For our purpose it is important to note that governance effects indeed play a significant role and that estimations based on pure income effects might be misspecified. At the same time, it is important to note that the coefficients estimated for *GOVN* should not be interpreted as a pure governance effect independent from the level on income. Assuming that our governance variable is a good composite measure of income and governance effects with a strong governance component moderating the income effect, we use the unadjusted governance variable in the second round of estimations.

The results of the second step are shown in Table 2. On the basis of the results for the first round, the basic model now includes size, governance, CME, dependency ratio, and unemployment as explanatory variables. Again, we test the other variables one-by-one. The estimates for the basic model remain rather robust when including additional variables. Most variables did not reveal significant impacts when cross-terms are not considered. The exception is the variable for political stability and absence of violence (*PV*), one of the six single governance indicators which have been averaged into the *GOVN* variable. For this variable, the coefficient is almost significant (Table 2, Eq. 4) at the 10-percent level so that we keep the variable in our extended model. The negative sign indicates that less political stability (lower values of *PV*) leads governments to spend more, a result which is confirmed in Eqs. 5-8.

[9] We also tried group dummies for transition countries and new EU-member states. However, these dummies did not appear to be significant in any regression.

Table 2. Determinants of Government Spending: Extended Model

Dependent Variable: GOVEXP						Robustness Checks		
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
POP	-0.113	-0.225	-0.182	-0.338	-0.582**	-0.582**	-0.582**	-0.496*
	(-0.46)	(-0.91)	(-0.70)	(-1.26)	(-2.11)	(-2.11)	(-2.11)	(-1.82)
GOVN	0.0533**	0.0465**	0.0584***	0.0913***	0.0956***	0.0956***	0.0956***	0.0870***
	(2.57)	(2.17)	(2.69)	(3.11)	(3.33)	(3.33)	(3.33)	(3.07)
rCME	3.325**	3.219**	3.636***	3.361***	3.533***	3.533***	3.533***	-17.95*
	(2.62)	(2.57)	(2.84)	(2.69)	(2.87)	(2.87)	(2.87)	(-1.82)
DEPRATIO65	0.235**	0.244**	0.170*	0.245**	0.172	0.172	0.172	0.246**
	(2.45)	(2.28)	(1.72)	(2.59)	(1.60)	(1.60)	(1.60)	(2.24)
UNEMPLOY	0.308***	0.287***	0.289***	0.286***	0.237***	0.237***	0.237***	0.232***
	(5.05)	(4.39)	(4.73)	(4.68)	(3.67)	(3.67)	(3.67)	(3.68)
GINI		0.0215			0.0178	0.0178	0.0178	0.0572
		(0.36)			(0.31)	(0.31)	(0.31)	(0.96)
GINI × LAT		0.323*			0.310*	0.310*	0.310*	0.274*
		(1.92)			(1.85)	(1.85)	(1.85)	(1.66)
rLATIN		-18.27**			-18.14**	-18.14**	-18.14**	-16.72**
		(-2.18)			(-2.16)	(-2.16)	(-2.16)	(-2.03)
TRADEadj			0.0415		0.0398	0.0398	0.0398	0.0449*
			(1.48)		(1.47)	(1.47)	(1.47)	(1.69)
TRADEadj ×			-0.0632*		-0.0639*	-0.0639*	-0.0639*	-0.0701**
GOVN			(-1.85)		(-1.95)	(-1.95)	(-1.95)	(-2.18)
PV				-0.0460	-0.0515*	-0.0515*	-0.0515*	-0.0560**
				(-1.63)	(-1.86)	(-1.86)	(-1.86)	(-2.07)
rCME × GOVN								0.243**
								(2.19)
Constant	8.560*	10.46**	10.44**	12.36**	17.61***	17.61***	17.61***	14.80***
	(1.85)	(2.07)	(2.19)	(2.49)	(3.22)	(3.22)	(3.22)	(2.69)
N	96	96	95	96	95	95	95	95
adj. R-sq	0.494	0.519	0.511	0.509	0.562	0.562	0.562	0.581

Note: *t* statistics in parentheses. Significant at the 10, 5, and 1 percent levels (*, **, ***).
Source: *s*ee Tables A1 and A2.

In addition, implementing cross-terms for the distribution or trade variables accounting for an impact of regional dummies, income, and governance revealed some

interesting results.[10] A first interesting result is that, while inequality indicated by a high *GINI* does not determine spending, its cross-term with the regional dummy implies that Latin American countries tend to spend less. This confirms our result on a generally lower level of government spending in Latin America shown in the first round of estimations. However, within the group of Latin American countries, more unequal countries tend to spend more. Hence, the introduction of regional dummies reveals that the argument that higher inequality implies a preference for higher spending is confirmed for the group of Latin American countries only.

A second interesting result refers to the impact of trade openness. The direct test using the standard openness variable does not show significance and, hence, does not support Rodrik's hypothesis that openness representing macroeconomic risks leads to higher spending. As shown in Table 2, using *TRADEadj*, i.e., the residual of openness regressed on country size measure by GDP, reveals results which are at least close to significance or, in one case, significant. More interestingly, however, this impact is moderated by the level of governance. The negative coefficient for the cross-term reveals that openness is likely to require more spending in countries with bad governance in the first place. This is in line with the argument that better governance - mostly in countries with higher income levels - allows for financial markets able to cope with macroeconomic risks.

However, if we cap the *TRADEadj* variable to double the size of openness to be expected given the size of the countries our robustness check (Table 2, Eq. 7) shows that the latter result is driven by very small governments (Hongkong, Luxemburg, Singapore) revealing excellent quality of governance. Hence, the outliers confirm the conclusion that extreme openness does not need government insurance in the form of higher spending but rather excellent quality of governance. In addition, neglecting outliers, there is no hint at a positive impact of openness on spending, while the results for the other variables remain rather unaffected by including the outliers.[11, 12]

Finally, a third interesting result is provided by implementing a cross-term between the *rCME* dummy and *GOVN*. Comparing Eq. 5 and 8 reveals that CME countries do not generally spend more than say LME countries but that spending within this group

[10] As can be seen in Table 2 (Eq. 5-8), these effects are also jointly significant and provide a meaningful extension of our basic model. The most interesting result in this context is that the extension of the regression model (re-)establishes the significant negative effect of size.

[11] We also applied the non-adjusted openness measure as well as the openness variable provided by Frazer Institute (2011) adjusting for geographic size and location with no significant results in any regressions. In addition, correcting for geographic size and location defines away the problem that extreme openness implies significant risks. Hence, insignificance would have to be expected in this case.

[12] Eq. 6 in Table 3 also test for a potential outlier problem with respect to the unemployment variable by excluding Balkan and African countries revealing unemployment rates higher than 20 percentage points. As can be seen, the results are unaffected.

strongly increases with the quality of governance. However, the negative coefficient for *rCME* estimated in Eq. 8 implies that the constant term for CME countries would be negative, which, however, is due to the fact that CME countries belong to the higher ranks of governance quality only. Hence, the relationship is not well specified over the whole range of governance outcomes. Still, the assumption that CME countries generally spend more independent of the quality of governance would have to be rejected.

Therefore, in a third step of our estimations, we are interested to see whether or not developing regions are similar to the CME group. Hence, we challenge our extended model by substituting the *rCME* dummy variable by composite dummies representing regional groupings plus CME countries (Table 3). Again we also test cross-terms with governance in order to see whether significance is rather due to a generally different level of spending or if this is related to governance.

Indeed, compared with Table 2 (5) an improved fit of the regression is achieved by assuming that CME and Asia (*rCMEASIA*) do constitute a homogenous group of countries with respect to government spending. In addition, a higher level of spending in these countries is related to the quality of governance. Considering this effect, the general preference for spending seems to be lower than in other countries and is high only for well governed countries. Qualitatively similar results are achieved if African countries enter this grouping (*rCMEAFRASIA*). However, this does not improve the fit of the regressions including *rCME*. Hence, with respect to government spending the preferences seem to differ between CME, Asian, and, to some extent, also African countries on the one side and LME and Latin American countries on the other side. This result clearly supports our hypothesis that the mode of governance matters for government spending.

It is also important to note that these results are economically significant. Based on point estimates for the coefficients shown in Table 3 (6), the group of CME/Asian countries spends more than other countries only for *GOVN* values above 56.3, i.e., if being placed in the upper half of the worldwide distribution of governance qualities. Moving up 10 percentage points would imply an increase of government spending of 1.9 percent of GDP. Concerning the group of Latin American countries, the difference in Gini coefficients between Venezuela (43) and Columbia (58) should account for a difference in spending of about 4.5 percentage points. Because the estimated break-even point where Latin American countries would spend more than others is at a Gini value of 60, all Latin American countries are expected to spend less than others.

Overall, our results confirm that governance actually matters for determining government spending, that openness is not related with higher government spending, and that there is a kind of global divide concerning the preferences for government spending. Within the regional groupings of developing countries, Latin American countries are special in that their preferences are closer to those of LME countries and in that income distribution matters for the level of government spending. This is consistent with the arguments put forward in Section 2.2 on the role of elites capturing governments and curbing the level of government spending.

Table 3. Regional Patterns in Government Spending: Testing for Convergence

Dependent Variable: GOVEXP						
	(1)	(2)	(3)	(4)	(5)	(6)
POP	-0.519*	-0.605**	-0.579*	-0.553**	-0.510*	-0.456
	(-1.88)	(-2.10)	(-1.97)	(-1.99)	(-1.82)	(-1.63)
GOVN	0.107***	0.111***	0.108***	0.0985***	0.0663**	0.0733**
	(3.76)	(3.80)	(3.65)	(3.39)	(2.02)	(2.48)
DEPRATIO65	0.300***	0.314***	0.252**	0.250**	0.138	0.211**
	(2.86)	(2.75)	(2.33)	(2.23)	(1.08)	(2.06)
UNEMPLOY	0.207***	0.243***	0.248***	0.210***	0.210***	0.214***
	(3.15)	(3.64)	(3.60)	(3.21)	(3.20)	(3.28)
GINI	-0.00720	0.0000571	0.000687	-0.00358	-0.0158	0.0157
	(-0.13)	(0.00)	(0.01)	(-0.06)	(-0.27)	(0.27)
GINI × LAT	0.340**	0.362**	0.359**	0.330*	0.333**	0.304*
	(2.04)	(2.10)	(2.06)	(1.98)	(2.00)	(1.85)
rLATIN	-18.39**	-19.46**	-20.26**	-18.34**	-20.49**	-18.54**
	(-2.18)	(-2.24)	(-2.31)	(-2.18)	(-2.44)	(-2.25)
TRADEadj	0.0553*	0.0290	0.0205	0.0483	0.0190	0.0404
	(1.92)	(1.05)	(0.74)	(1.65)	(0.71)	(1.51)
TRADEadj × GOVN	-0.0769**	-0.0488	-0.0422	-0.0703**	-0.0414	-0.0639*
	(-2.25)	(-1.47)	(-1.25)	(-2.04)	(-1.29)	(-1.97)
PV	-0.0669**	-0.0514*	-0.0432	-0.0650**	-0.0520*	-0.0558**
	(-2.33)	(-1.79)	(-1.50)	(-2.27)	(-1.87)	(-2.04)
rCMEAFR	2.525***			-0.208		
	(2.81)			(-0.09)		
rCMEAFRASIA		1.483			-6.001**	
		(1.54)			(-2.04)	
rCMEASIA			0.643			-5.627***
			(0.74)			(-2.83)
CMEAFR × GOVN				0.0405		
				(1.24)		
CMEAFRASIA × GOVN					0.102***	
					(2.68)	
CMEASIA × GOVN						0.100***
						(3.46)
Constant	16.25***	15.79***	16.37***	17.59***	20.96***	17.50***
	(2.98)	(2.80)	(2.88)	(3.17)	(3.63)	(3.26)
N	95	95	95	95	95	95
adj. R-sq	0.561	0.532	0.522	0.563	0.565	0.578

Note: *t* statistics in parentheses. Significant at the 10, 5, and 1 percent levels (*, **, ***).

Source: see Tables A1 and A2.

4. CONCLUSIONS

The empirical evaluation in this paper provides a first attempt to introduce governance aspects into the literature on government spending. While eclectic evidence is available on the variety of single transmission channels, we concentrate on a first comprehensive assessment, i.e., a bird's eyes view on the relationship between governance and government spending.

The results of the cross-country regressions reveal that governance issues, largely neglected in the traditional literature on government size, actually matter. Governance provides a comprehensive and robust measure for development characteristics determining government spending. In addition, Coordinated Market Economies (CMEs) have been shown to form a homogenous group with Asian, and to some extent, African countries. However, these countries do not generally spend more, as is usually assumed for CMEs compared to Liberal Market Economies (LMEs). Spending within this group increases with better governance only. This also supports our basic hypothesis that governance matters for determining government spending.

There are some additional insights from the comprehensive empirical model including governance issues:

- Distributional issues still matter and are relevant for all countries. This implies that, for OECD countries, belonging to the CME group matters but does not substitute for the impact of higher unemployment or dependency ratios. Perhaps even more surprising, this applies to the developing countries as well.
- While Latin American countries seem to "belong" to the LME rather than to the CME group, they are also different with respect to the role of inequality. Inequality as a determinant of government spending matters for this group of countries only. The LME-type of inequality dependent mode of governance fits well to the predictions and the eclectic evidence provided by papers on state capture by elites in Latin American countries.
- With respect to the volatility argument introduced by Rodrik when arguing that open countries spend more, the results indicate that this is generally not the case. Governance matters again because extremely open countries seem to protect themselves rather by a higher quality of governance than by increasing government spending.

All in all, the results support our argument that (i) demand side explanations for government spending should be complemented by considering preferences for government intervention discussed in the literature on Varieties of Capitalism (VoC) and that (ii) supply side explanations have to be given more weight with the quality of governance influencing how preferences are channeled into spending and how the ability to spend increases with economic development.

An interesting result for developing countries is that Latin American countries are outstanding in two respects: income distribution clearly matters for spending and this is the only developing region in which countries seem to tend rather to the LME than to the CME mode of governance. For Latin America, these results support theoretical models

and eclectic evidence on state capture by elites.

APPENDIX

Table A1. Definition of All Variables used for Regression Analysis

Variable	Category	Description
GOVEXP	Endogenous	General Government Final Consumption Expenditure (percent of GDP).
GDPpc	Income	ln of GDP per capita, PPP (constant 2005 international $)
POP	Size	on of Population, total
GDPjpc	Size	ln of GDP per capita, PPP (constant 2005 international $)
DEPRATIO14	Distribution	Population ages 0-14 (percent of total population).
DEPRATIO65	Distribution	Population ages 65 and above (percent of total population).
GINI	Distribution	Gini Index
UNEMPLOY	Distribution	Unemployment (percent of labor force).
TRANSUBS	Distribution	Fraser index 1B/Fraser Index 1: Transfers over total government size
EDUEXP	Distribution	Public spending on education, total (percent of government expenditure).
HEALTHEXP	Distribution	Health expenditure, public (percent of government expenditure).
INTMIGR	Fragmentation	International migrant stock (percent of population).
FRACTIONAL	Fragmentation	Average of the indicators of religious, ethnic and language fractionalization.
GOVN	Governance	Average of six World Governance Indicators: Voice and Accountability (VA), Political Stability and Absence of Violence (PV), Government Effectiveness (GE), Regulatory Quality (RQ), Rule of Law (RL), and Control of Corruption (CC).
GOVNadj	Governance	Residual of GOVERNANCE regressed on GDPpc.
PROPRIGHTS	Governance	Fraser Index 2 - Property Rights and Legal System.
REGULATION	Governance	Fraser Index 5 - Regulation of Credit, Labor, and Business.
OPEN	Openness	Fraser Index 4 - Index of freedom to trade internationally.
TRADE	Openness	Total trade in goods and services (percent of GDP).
TRADEadj	Openness	Residual of TRADE regressed on GDP.
ToTA	Openness	Terms of trade adjustment (constant LCU) divided by GDP (constant LCU).

Notes: Period Averages for 2003-07; most recent data for GINI and FRACTIONAL.

Source: World Development Indicators (World Bank, 2010) except for FRACTIONAL (Alesina *et al*., 2003) and TRANSSUBS, PROPRIGHTS, REGULATION, and OPEN (Fraser Institute, 2010).

Table A2. Definition for VoC and Regional Dummy Variables

rCME	rLME	rLatin	rASIA	rAFRICA
= 1 for	*= 1 for*	*= 1 for*	*= 1 for*	*= 1 for*
Austria	Australia	Argentina	Armenia	Algeria
Belgium	Canada	Belize	Azerbaijan	Benin
Denmark	Hong Kong SAR, China	Bolivia	Bangladesh	Botswana
Finland	Ireland	Brazil	China	Burkina Faso
France	Israel	Chile	India	Burundi
Germany	New Zealand	Colombia	Indonesia	Cameroon
Greece	Singapore	Costa Rica	Iran, Islamic Rep.	African Republic
Italy	Switzerland	Dominican Republic	Jordan	Chad
Japan	United Kingdom	Ecuador	Kazakhstan	Congo, Dem. Rep.
Luxembourg	United States	El Salvador	Korea, Rep.	Congo, Rep.
Netherlands		Guatemala	Kyrgyz Republic	Cote d'Ivoire
Norway		Guyana	Malaysia	Egypt, Arab Rep.
Portugal		Haiti	Mongolia	Ethiopia
Spain		Honduras	Nepal	Gabon
Sweden		Jamaica	Pakistan	Ghana
		Mexico	Papua New Guinea	Guinea-Bissau
		Nicaragua	Philippines	Kenya
		Panama	Russian Federation	Lesotho
		Paraguay	Sri Lanka	Madagascar
		Peru	Thailand	Malawi
		Trinidad and Tobago	Turkey	Mali
		Uruguay	Vietnam	Mauritania
		Venezuela, RB		Morocco
				Mozambique
				Namibia
				Niger
				Nigeria
				Rwanda
				Senegal
				Sierra Leone
				South Africa
				Tanzania
				Togo
				Tunisia

	Uganda
	Zambia
	Zimbabwe

Note: Value of Dummy is 0 for all other countries in the sample

Source: Own definition, see text.

Table A3. Correlation Coefficients for Governance Average and Single Variables

	GOVN	CC	GE	PV	RL	RQ	VA
GOVN	1.00						
CC	0.9740	1.00					
GE	0.9715	0.9557	1.00				
PV	0.9024	0.8406	0.8220	1.00			
RL	0.9790	0.9682	0.9593	0.8623	1.00		
RQ	0.9673	0.9380	0.9580	0.8192	0.9409	1.00	
VA	0.9198	0.8592	0.8532	0.8183	0.8599	0.8701	1.00

Note: For the definition of variables, see Table A1.

Table A4. Descriptive Statistics for Variables Used for Final Version of Regression Analysis

Variable	Obs	Mean	Std. Dev.	Min	Max
GOVEXP	118	15.02	5.08	5.50	26.46
GOVN	124	50.01	26.40	3.45	98.92
GOVNadj	124	0.00	14.30	-43.81	27.13
POL STAB	124	44.59	26.89	1.35	99.42
GDPpc	126	8.62	1.35	5.27	11.14
POP	126	16.36	1.50	12.58	20.99
DEPRATIO65	126	8.16	5.31	1.94	19.90
UNEMPLOY	100	9.29	6.52	1.34	36.42
GINI	126	40.23	9.41	16.83	74.33
TRADEadj	120	0.00	56.68	-73.40	330.55

Note: For the definition of variables, see Table A1.

Table A5. Correlation of Variables for Regression Analysis

	GOVEXP	GOVN	GOVNadj	POLSTAB	GDPpc	POP	DEPR-O65	UNEMPLOY	GINI	TRADEadj
GOVEXP	1									
GOVN	0.5190	1								
GOVNadj	0.3052	0.5416	1							
POL STAB	0.4187	0.9024	0.5754	1						
GDPpc	0.4343	0.8406	-0.0000	0.7027	1					
POP	-0.2390	-0.1240	-0.1363	-0.2868	-0.0646	1				
DEPRATIO65	0.5217	0.7197	0.1649	0.6369	0.7479	-0.0566	1			
UNEMPLOY	0.3352	-0.1500	-0.1698	-0.1614	-0.0636	-0.2805	-0.0457	1		
GINI	-0.2048	-0.3423	-0.1526	-0.3238	-0.3106	-0.0771	-0.5530	0.1905	1	
TRADEadj	0.0904	0.3490	0.0967	0.3847	0.3683	-0.3111	0.1180	-0.1170	-0.1275	1

Note: For the definition of variables, see Table A1.

Table A6. Mode and Quality of Governance as Determinants of Government Spending: Robustness Check

Dependent Variable: GOVEXP							
	(1)	(2)	(3)	(4)	(5)	(6)	(7)
POP	-0.583**	-0.592**	-0.102	-0.567**	-0.648**	-0.476*	-0.597**
	(-2.24)	(-2.31)	(-0.40)	(-2.15)	(-2.47)	(-1.79)	(-2.23)
GDPpc	1.117***	0.503	1.395***	1.227***	1.168***	1.853***	1.632***
	(3.19)	(1.12)	(3.64)	(2.83)	(3.35)	(5.49)	(5.29)
rCME	3.942***	2.804*	4.415***	3.600**	3.641**		
	(2.85)	(1.91)	(3.61)	(2.25)	(2.62)		
GOVNadj	0.0672**	0.0582**	0.0668**	0.0721**	0.0558*	0.101***	0.0749**
	(2.34)	(2.04)	(2.33)	(2.33)	(1.89)	(3.55)	(2.55)
DEPRATIO65		0.251**					
		(2.11)					
UNEMPLOY			0.314***				
			(4.97)				
rLME				-0.768		-2.734*	
				(-0.43)		(-1.74)	
rLATIN					-1.581		-1.972*
					(-1.51)		(-1.86)
Constant	14.19**	17.73***	0.782	13.08**	15.13***	6.744	10.80**
	(2.62)	(3.17)	(0.13)	(2.18)	(2.79)	(1.25)	(2.04)
N	116	116	96	116	116	116	116
Adj. R-sq	0.317	0.338	0.462	0.312	0.325	0.287	0.289

Note: t statistics in parentheses. Significant at the 10, 5, and 1 percent levels (*, **, ***)

Source: see Tables A1 and A2.

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Received August 12, 2013, Revised August 25, 2014, Accepted January 29, 2015.