Forschungspapiere
Research Papers

PFH | PRIVATE UNIVERSITY of Applied Sciences

No. 2011/01
PFH.FOR.159.1108

Varieties of Capitalism, Governance and Government Spending – A Cross-Section Analysis.

Joachim Ahrens, Rainer Schweickert und Juliane Zenker

PFH Private Hochschule Göttingen

Die Autoren

Joachim Ahrens
studied economics and political science. He earned a doctoral degree and the Habilitation degree at the Department of Economics at the University of Göttingen. Following research affiliations at Harvard University, the Hoover Institution/Stanford University, and the University of California/Berkeley, he worked as an economist at the Asian Development Bank in Manila. In 2003, he accepted a position as Professor of International Political Economy at the European Business School International University. In March 2006, he became Professor of International Economics at the PFH Göttingen.

Contact data: PFH Private University of Applied Sciences Göttingen, Weender Landstr. 3-7, 37073 Göttingen, Germany, ahrens@pfh.de

Dr. Rainer Schweickert
Kiel Institute for the World Economy
Hindenburgufer 66
24105 Kiel

Juliane Zenker
GRK 1666 GlobalFood
Department for Agricultural Economics and Rural Development
Georg-August-Universität Göttingen
Heinrich-Düker-Weg 12, Room 0.126
37073 Göttingen

I. INTRODUCTION

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, increasing public expenditure (Lindauer and Velenchik 1992).

While these explanations are rather unspecific with respect to the nature of the public goods provided, the next wave of contributions argued that, beyond optimal allocation, voters or interest groups demand for redistribution and risk insurance. Looking for a common denominator, demand for redistribution stems from heterogeneity. 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), support the establishment of 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 is far from conclusive. 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. In the same vein, 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.

We argue that the literature on government size suffers from neglecting the role of governance both as a driving and a limiting factor for government spending. More specifically, we argue that demand side arguments have to be complemented by the preference for the mode of governance as analyzed in the rapidly evolving Varieties-of-Capitalism (VoC) literature (see, e.g., Hall and Soskice 2001). While, e.g., inequality may potentially increase the demand for government spending, actual demand depends on the preference for a liberal vs. a coordinated mode of governance. At the same time, supply side effects for government spending, largely neglected by the literature, can be assumed to depend on the related quality of governance because a higher level of government spending depend on the ability to tax which, in turn, depends on the quality of governance.

Hence, we argue that introducing governance arguments into the debate allows for a more comprehensive and consistent categorization of potential determinants of government spending. Because review papers are available (see, e.g., Shelton 2007 and Lindauer and Velenchik 1992), we concentrate in Chapter 2 on providing our governance related demand and supply side arguments. In Chapter 3, we provide econometric evidence for our hypothesis that governance matters. The regression model is similar to the basic panel data specification in Shelton (2007, Table 2). However, we claim that the long-run focus implies to concentrate on cross-country data and we supplement the "traditional" variables by governance variables and regional dummies representing geography in the case of developing countries and preferences for the mode of governance for industrialized countries.

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

II. 1. *The Demand Side: Varieties-of-Capitalism and Preferences for Government Spending*

As described and analyzed by the Varieties-of-Capitalism (VoC) approach (see, e.g., Hall and Soskice 2001), different market regimes, i.e. capitalist variation, are characterized by different institutional matrices in the economy.[1] These institutional environments and

[1] For more literature on the Variety-of-Capitalism approach, see, e.g., Estévez-Abe et al. (2001), Hall and Gingerich

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.

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 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 (see, e.g., 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. 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). 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

(2004), Hall and Thelen (2009), Hancké (1999), Höppner (2005), Streeck (1991).

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, a policy mix that does 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.[2] 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 even though we can expect some reductions in the coming years" (Hall and Gingerich (2004: 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 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

[2] Note in this context that South Korea is also clustered into the CME category. However, the country does not share a generous social protection regime with other CMEs. For the purpose of this paper, we concentrate on the European CMEs as representing a homogenous group with respect to the preference for government spending.

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 (2009:4) 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 or rather substitutes for the more traditional drivers of spending.

II.2. *The Supply Side: 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 preferences are 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.

Accountability – Investigating government effectiveness, Persson and Tabellini (1999) showed that more competition between policymakers leads to smaller and more efficient governments. Their focus has been on the difference between presidential and parliamentary democracies claiming that the separation of powers (presidential regime)

in comparison with a system of legislative cohesion (parliamentary regime) leads to more effective and, hence, smaller governments. However, their conclusion that the level of political accountability is negatively related to the provision of public goods and social services must not be necessarily restricted to the specific difference analyzed. Political competition most likely varies within the presidential and parliamentary regime types as well. If better governance in terms of accountability has this effect, then, at given preferences, government spending should decline with better governance.

Voice – It has been argued above that inequality implies a preference for redistribution. However, taking into account that the right or ability to vote is restricted in many countries and that, even in advanced democracies, wealthier parts of the population are better represented in the political process, the gap between mean and median income represented by the process of voting will be biased. If better governance in terms of voice matters, then government spending should increase with better governance.

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

Government effectiveness – Given preferences for spending and scarce resources for financing government spending, the structure and quality of government including the organization of both spending and the tax system is crucial for the channeling and usage of revenues. Effective governance, i.e. political commitment and sound political institutions, are 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).

The argument about government effectiveness has a strong link to the second aspect of governance, i.e. its importance for the tax base as a precondition for spending. 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 loose 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).

In addition, the literature has established a fundamental role of institutions in economic development (see, e.g., Acemoglu et al. 2005). Hence, better governance does not only improve taxation given the level of income but also drives 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. As has been established in the literature on taxation in developing countries, income taxation is difficult to establish and even consumption taxation has to consider trade-offs between tax revenues and inequality (Bird 2008: 6 ff.; Ahmad and Stern 2003).

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 of preferences or to lower spending because of more efficient spending. The indirect effect can be assumed to be positive and works through more efficient taxation and a broader tax base due to improved growth. In any case, governance should not only be considered as an additional variable. Some of the effects linked to the level of income - price and demand effects - may indeed constitute supply side governance effects.

Governance effects may also have some implication for the risk insurance argument raised by Rodrik. As, e.g., shown by Aghion et al. (2009), macroeconomic volatility due to openness depend on the (governance related) ability to establish well-functioning financial markets as an alternative to more government spending. Hence, better governed countries are expected to show a weaker link between openness and government spending because risk insurance is provided by private markets.

III. EMPIRICAL EVALUATION

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.[3] As can be seen in Table 1 presenting the variable definitions and sources, there are some exceptions where only single year are available within this period.

[Table 1 about here]

As in most papers in the literature, our dependent variable is the share of general government final consumption expenditure in GDP (GOVEXP). 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, e.g., our variable for unemployment (UNEMPLOY) does not represent the actual demand for transfers due to unemployment but rather inequality leading to a preference for redistribution via the provision of public goods.[4]

[3] As mentioned in the introduction, which is presented in the following, is similar to the basic model developed by Shelton (2007). However, different to Shelton and others we do not use panel data because we are only interested in the long-run relationships explaining the final outcome. The use of panel data would only be justified if explanations referring to the time series dimension of the data set would be included. In addition, a broad country sample including developing countries implies that external and domestic conditions not included in the model are likely to have changed over the last decades.

[4] We also 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 2010) is negative (-0.10).

We apply a range of variables reflecting the traditional literature as well as our arguments on governance presented above. These variables reflect income and size representing basic structural preconditions, distribution, fragmentation, and openness representing demand effects, and governance and resources representing supply conditions. Due to the fact that openness and size are close (negative) correlates, TRADEadj is the residual of the OLS regression of trade on size, i.e., the part of openness not explained by size of a country. This is in order to avoid that openness might be insignificant if included jointly with size variables. Even more importantly, due to the fact that income and governance are close (positive) correlates, GOVNadj is the residual of the OLS regression of governance on income, i.e., the part of governance not explained by the level of income. This allows us to test whether governance complements or substitutes income effects.

Finally, we test whether preferences for government spending are homogeneous across regional groups by implementing regional dummies for CME and LME industrialized countries (rCME, rLME according to the classification in Section 2.1) as well as for Asian, Latin American, African, and non-EU15 European countries (rASIAN, rLATIN, rAFR, rEUnew).

We structure our estimation procedure into two 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. The results for regressions showing significant results for explanatory variables are shown in Table 2.

[Table 2 about here]

As can be seen in eq. (1) to (3), a negative impact of size and a positive impact of the level of income 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, this renders the income effect insignificant and excluding 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 CME term.

In addition to CME and governance, the share of the elderly population and the extent of unemployment 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 industrialized and developing countries. This result is also confirmed when excluding countries which do not report official unemployment.

Adding dummies for LME and regions reveals a negative impact of belonging to either LME or to the group of Latin American countries. These countries tend to spend less independent of other explanations while there is no significant result for Asian and African countries in this first round of estimations. In Appendix Table 1, we show that including income and the adjusted governance term reveals the same results. However, the income term suffers from a rather weak level of significance and is not as robust to variants of the estimation model compared to the additional adjusted governance term. Assuming that our governance variable is a good composite measure of income and governance effect with a strong governance component, we use the unadjusted governance variable in the second round of estimations.

The results of the second round are shown in Table 3. On the basis of the results for the first round, the basic model now includes size, governance, CME, dependency ratio, and unemployment. Again, we test the other variables one-by-one. In addition, we implement cross-terms between GINI and trade variables with regional dummies, income, and governance. As can be seen, the estimates for the basic model remain rather robust when including additional variables. However, most of the variables did not reveal significant impacts when not considering cross-terms. 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 GOVERNANCE variable. The negative sign indicates that less political stability (lower values of PV) leads governments to spend more.

[Table 3 about here]

In addition, implementing cross-terms showed some interesting results. 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 3, using the trade openness variable adjusted by size (TRADEadj) 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.

As can be seen in Table 3 (eq. 5), 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. We challenge this extended basic model by substituting the CME dummy variable by composite dummies testing the hypothesis that developing regions may be similar to CME rather than LME. Again we also test cross-term 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 eq. 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 level 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.

IV. CONCLUSIONS

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 much more 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 African countries in terms of government spending. 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. In the case of (formal) unemployment, the result is even robust to regression variants where low-income countries, which do not report unemployment, were excluded.
- 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. While this result for Latin America fits to the prediction of the traditional literature that more unequal countries spend more, inequality does not provide a robust explanation for government spending in general.
- 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. Again, governance matters, i.e. better governed countries are unlikely to spend more depending on openness. This is consistent with the argument that it is the

low-income countries with a low quality of institutions in the first place that suffer from the risk of openness and the absence of adequate instruments, e.g. financial markets, to cope with these risks.

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.

REFERENCES

Acemoglu, D., S. Johnson, and J.A. Robinson (2005). Institutions as the Fundamental Cause of Lon-Run Growth, in: Ph. Aghion and S. Durlauf (eds.), *Handbook of Economic Growth*. Amsterdam.

Aghion, P., P. Bacchetta, P. Ranciere and K.S. Rogoff (2009). Exchange Rate Volatility and Productivity Growth. The Role of Financial Development, *Journal of Monetary Economics*. 56 (4): 494-513.

Ahmad, E. and N.H. Stern (2003). *Taxation for Developing Countries*, in: H. Chenery and T.N. Srinivasan (eds.), Handbook of Development Economics. Amsterdam.

Ahrens, J. and P. Jünemann (2007). *Transitional Institutions, Institutional Complementarities and Economic Performance in China*. Duisburger Arbeitspapiere zur Ostasienwirtschaft, No. 72.

Akitobya, B., B. Clementsa, S. Gupta and G. Inchaustea (2006). Public spending, voracity, and Wagner's law in developing countries, in: *European Journal of Political Economy*. 22 (4):908-924.

Alesina, A., R. Baqir and W. Easterly (1999). Public goods and ethnic divisions, *Quarterly Journal of Economics*. 114 (4): 1214–1284.

Alesina, A., A. Devleeschauwer, W. Easterly, S. Kurlat and R. Wacziarg (2003). Fractionalization, *Journal of Economic Growth* 8 (2): 155–194.

Alesina, A. and R. Wacziarg (1998). Openness, country size and government, *Journal of Public Economics* 69 (3): 305–321.

Amable, B. and K. Azizi (2009). *Varieties of capitalism and varieties of macroeconomic policy: are some economies more pro-cyclical than others?* APSA 2009 Toronto Meeting Paper (available at SSRN: http://ssrn.com/abstract=1449161).

Baumol, W. J. 1967. Macroeconomics of Unbalanced Growth: The Anatomy of Urban Crisis, *American Economic Review* 57 (3): pp. 415-26.

Bird, R. M. (2008). *Tax Challenges Facing Developing Countries*. Georgia State University, International Studies Program Working Paper 08-02.

Bird, R. M., J. Martinez-Vazquez and B. Torgler (2004). *Societal Institutions and Tax Effort in Developing Countries*. Georgia State University, International Studies Program Working Paper 04-06.

Bräutigam, D. A. (2008). Introduction: taxation and state-building in developing countries, in: Bräutigam, D. A., O.-H. Fjeldstad and M. Moore (eds): *Taxation and State-Building in Developing Countries*. Cambridge, MA: Cambridge University Press, pp. 1-33.

Cameron, D. (1978). The expansion of the public economy: a comparative analysis, *American Political Science Review* 72 (4): 1243–1261.

Delavallade, C. (2006). Corruption and distribution of public spending in developing countries, *Journal of Economics and Finance* 30 (2): 222-239.

Easterly, W. and R. Levine (1997). Africa's growth tragedy: policies and ethnic divisions, *Quarterly Journal of Economics* 111 (4): 1203–1250.

Estévez-Abe, M., T. Iversen and D. Soskice (2001). Social Protection and the Formation of Skills: A Reinterpretation of the Welfare State, in: P. Hall and D. Soskice (eds): *Varieties of Capitalism: The Institutional Foundations of Comparative Advantage*. Oxford: Oxford University Press: 145–183.

Fraser Institute (2010). *Economic Freedom of the World 2010 Report* (http://www.freetheworld.com/release.html).

Hall, P. A. and D. W. Gingerich (2004). *Varieties of Capitalism and Institutional Complementarities in the Macroeconomy*. An Empirical Analysis. MPIfG Discussion Paper 04/5, Cologne: Max Planck Institute for the Study of Societies.

Hall, P. A. and D. Soskice (2001). An Introduction to the Varieties of Capitalism, in: P. A. Hall and D. Soskice (eds), *Varieties of Capitalism: The Institutional Foundations of Comparative Advantage*. Oxford/New York: Oxford University Press: 1–68.

Hall, Peter A. and K. Thelen (2009). Institutional Change in Varieties of Capitalism, *Socio-economic Review* 7 (1): 7–34.

Hancké, R. (1999). Varieties of Capitalism Revisited: Globalisation and comparative institutional advantage, *La Lettre de la régulation* 30: 1–4.

Heller, P. and J. Diamond (1990). *International Comparisons of Government Expenditure Revisited: The Developing Countries, 1975-86*. IMF Occasional Paper 69. Washington, D.C.: International Monetary Fund.

Höppner, M. (2005). What Connects Industrial Relations with Corporate Governance? Explaining Complementarity, *Socio-Economic Review* 3 (2): 331–388.

Lane, D. and M. Myant (2007). *Varieties of Capitalism in Post-communist Countries*. Basingstoke: Palgrave.

Lewis, C. M. and P. Lloyd-Sherlock (2009). Social Policy and Economic Development in South America: An Historical Approach to Social Insurance, *Economy and Society* 38 (1): 109-131.

Lijphart, A. (1999). *Patterns of Democracy*. New Haven, CT: Yale University Press.

Lindauer, D. L. and A. D. Velenchik (1992). Government Spending in Developing Countries, *The World Bank Research Observer* 7 (1): 59-78.

Meltzer, A. and S. Richard (1981). A Rational Theory of the Size of Government, *The Journal of Political Economy* 89 (5): 914–927.

Meltzer, A. and S. Richard (1983). Tests of a Rational Theory of the Size of Government, Public Choice 41 (3): 403–418.

Mulligan, C., R. Gil and X. Sala-i-Martin (2002). *Social security and democracy*. NBER working paper 8958.

Persson, T. and G.E. Tabellini (1999). The Size and Scope of Government: Competitive Politics with Rational Politicians, *European Economic Review* 43 (4/6): 699 – 735.

Petersen, H.-G. (2008). *Integration, Decentralization, Taxation, and Revenue Sharing: Good Governance, Sustainable Fiscal Policy and Poverty Reduction as Peace-keeping Strategies*. Finanzwissenschaftliche Diskussionsbeiträge der Universität Potsdam Nr. 57.

Pontusson, J. and H. Y. Kwon (2003). *Welfare Spending, Government Partisanship, and Varieties of Capitalism*. Paper prepared for the Annual Meeting of the American Political Science Association, Philadelphia, PA, August 28–31, 2003.

Ram, R. (1987). Wagner's Hypothesis in Time-Series and Cross-Section Perspectives: Evidence from 'Real' Data for 115 Countries, *Review of Economics and Statistics* 69 (2): 194-204.

Rodrik, D. (1998). Why do more open economies have bigger governments? *The Journal of Political Economy* 106 (5): 997–1032.

Sachs, J and A. Warner (1995). Economic reform and the process of global integration, *Brookings Papers on Economic Activity* 1: 1–95.

Schustereder, I. (2010). *Welfare State Change in Leading OECD Countries. The Influence of Post-Industrial and Global Economic Developments*. Wiesbaden: Gabler.

Shelton, C. (2007). The Size and Composition of Government Expenditure, *Journal of Public Economics* 91 (11-12): 2230 – 2260.

Streeck, W. (1991). On the Institutional Conditions of Diversified Quality Production, in: Matzner, E. and W. Streeck (eds): Beyond Keynesianism: *The Socio-economics of Production and Full Employment*, London: Edward Elgar: 21–61.

Wagner, A. (1890). *Finanzwissenschaft*, 3rd edition.. Leipzig. (Partly reprinted in
Classics in the Theory of Public Finance (Eds) R.A. Musgrave and A.T. Peacock, MacMillan, London,1958.)

World Bank (2010). *World Development Indicators* (http://data.worldbank.org/data-catalog/world-development-indicators).

Table 1 – Overview of Variables for Cross-Country Regressions

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	ln of total population
GDP	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 2: Governance and Government Size - Basic Model, average 2003-07

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)
_cons	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
t statistics in parentheses									
=* p<0.10	** p<0.05	*** p<0.01							

Table 3: Governance and Government Size - Extended Model, average 2003-07

Dependent Variable: GOVEXP	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)
POP	-0.113	-0.225	-0.182	-0.338	-0.582**	-0.519*	-0.605**	-0.579*	-0.553**	-0.510*	-0.456
	(-0.46)	(-0.91)	(-0.70)	(-1.26)	(-2.11)	(-1.88)	(-2.10)	(-1.97)	(-1.99)	(-1.82)	(-1.63)
GOVN	0.0533**	0.0465**	0.0584***	0.110***	0.115***	0.128***	0.134***	0.130***	0.118***	0.0796**	0.0879**
	(2.57)	(2.17)	(2.69)	(3.11)	(3.33)	(3.76)	(3.80)	(3.65)	(3.39)	(2.02)	(2.48)
rCME	3.325**	3.219**	3.636***	3.361***	3.533***						
	(2.62)	(2.57)	(2.84)	(2.69)	(2.87)						
DEPRATIO65	0.235**	0.244**	0.170*	0.245**	0.172	0.300***	0.314***	0.252**	0.250**	0.138	0.211**
	(2.45)	(2.28)	(1.72)	(2.59)	(1.60)	(2.86)	(2.75)	(2.33)	(2.23)	(1.08)	(2.06)
UNEMPLOY	0.308***	0.287***	0.289***	0.286***	0.237***	0.207***	0.243***	0.248***	0.210***	0.210***	0.215***
	(5.05)	(4.39)	(4.73)	(4.68)	(3.67)	(3.15)	(3.64)	(3.60)	(3.21)	(3.20)	(3.28)
GINI		0.0215			0.0177	-0.00720	0.0000541	0.000683	-0.0036	-0.0158	0.0157
		(0.36)			(0.31)	(-0.13)	(0.00)	(0.01)	(-0.06)	(-0.27)	(0.27)
GIN x LAT		0.323*			0.310*	0.340**	0.362**	0.359**	0.330*	0.333**	0.304*
		(1.92)			(1.85)	(2.04)	(2.10)	(2.06)	(1.98)	(2.00)	(1.85)
rLATIN		-18.27**			-18.14**	-18.40**	-19.46**	-20.26**	-18.34**	-20.49**	-18.54**
		(-2.18)			(-2.16)	(-2.18)	(-2.24)	(-2.31)	(-2.18)	(-2.44)	(-2.25)
TRADEadj			0.0415		0.0398	0.0553*	0.0290	0.0205	0.0483	0.0190	0.0404
			(1.48)		(1.47)	(1.92)	(1.05)	(0.74)	(1.65)	(0.71)	(1.51)
TRADEadj x GOVN			-0.0006*		-0.00*	-0.00**	-0.0005	-0.0004	-0.00**	-0.0004	-0.00*
			(-1.85)		(-1.95)	(-2.26)	(-1.47)	(-1.25)	(-2.04)	(-1.29)	(-1.97)
PV				-0.064*	-0.071**	-0.09***	-0.0737**	-0.0649*	-0.085**	-0.065**	-0.070**
				(-1.96)	(-2.22)	(-2.69)	(-2.22)	(-1.95)	(-2.58)	(-2.03)	(-2.24)
rCMEAFR						2.525***			-0.207		
						(2.81)			(-0.09)		
rCMEAFRASIA							1.483			-6.001**	
							(1.54)			(-2.04)	
rCMEASIA								0.642			-5.63***
								(0.74)			(-2.83)
rCMEAFR x GOVN									0.0405		
									(1.24)		
rCMEAFRASIA x GOVN										0.102***	
										(2.68)	
rCMEASIA x GOVN											0.100***
											(3.46)
_cons	8.560*	10.46**	10.44**	12.36**	17.61***	16.25***	15.79***	16.37***	17.59***	20.96***	17.50***
	(1.85)	(2.07)	(2.19)	(2.49)	(3.22)	(2.98)	(2.80)	(2.88)	(3.17)	(3.63)	(3.26)
N	96	96	95	96	95	95	95	95	95	95	95
adj. R-sq	0.494	0.519	0.511	0.509	0.562	0.561	0.532	0.522	0.563	0.565	0.578

t statistics in parentheses = * p<0.10 ; ** p<0.05; *** p<0.01

APPENDIX

Appendix Table 1: Governance and Government Size - Alternative Basic Model, average 2003-07

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)
_cons	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

t statistics in parentheses = * p<0.10 ; ** p<0.05; *** p<0.01

PFH Forschungspapiere
PFH Research Papers

2008/01 **Ahrens, Joachim**
Transition towards a Social Market Economy: Limits and Opportunities.

2008/02 **Schlosser, Martin**
Standarddeckende Patente als strategisches Instrument.

2008/03 **Pomfret, Richard**
Turkmenistan after Turkmenbashi.

2009/01 **Spechler, Martin and Spechler, Dina**
Is Russia Winning in Central Asia?

2009/02 **Melnykovska, Inna and Schweickert, Rainer**
Analyzing Bottlenecks for Institutional Development in Central Asia – Is it Oil, Aid, or Geography?

2009/03 **Ahrens, Joachim and Jünemann, Patrick**
Adaptive efficiency and pragmatic flexibility: characteristics of institutional change in capitalism, Chinese-style

2009/04 **Schlossstein, Dominik F.**
Adaptive Efficiency: Can it Explain Institutional Change in Korea's Upstream Innovation Governance?

2009/05 **Riekhof, Hans-Christian, Schäfers, Tobias und Teuber, Sebastian**
Nischenartikel – Wachstumstreiber für den Versandhandel?

2009/06 **Riekhof, Hans-Christian, Schäfers, Tobias und Eiben, Immo**
Behavioral Targeting – ein effizienter Einsatz des Online-Werbebudgets?

2009/07 **Ahrens, Joachim**
The politico-institutional foundation of economic transition in Central Asia: Lessons from China

2009/08 **Riekhof, Hans-Christian und Lohaus, Benedikt**
Wertschöpfende Pricing-Prozesse. Eine empirische Untersuchung der Pricing-Praxis.

2010/01 **Riekhof, Hans-Christian und Werner, Franziska:**
Pricing-Prozesse bei Herstellern von Fast Moving Consumer Goods

2011/01 **Joachim Ahrens, Rainer Schweickert und Juliane Zenker**
Varieties of Capitalism, Governance and Government Spending – A Cross-Section Analysis