SOCIAL PROTECTION SYSTEMS

TYING THE KNOTS

Presented Paper

at the Symposium on Social Protection Systems

September 5 & 6, 2016

Institutional factors and people's preferences in social protection*

Presented at the Symposium on

"Social Protection Systems - Tying the Knots"

5-6 September 2016

by

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* We thank Armando Barrientos, Mira Bierbaum, Richard Bluhm, Florence Bonnet, Michael Cichon, Adam Szirmai, Nyasha Tirivayi, and seminar participants at Maastricht Graduate School of Governance - UNU-Merit for helpful comments. The usual disclaimer applies.

Abstract

Social Protection (SP) policies and institutions play multiple roles for the achievement of inclusive development. Over the last decade a paradigm shift took place whereby SP is no longer seen just as a cost for an economy, but instead as a social investment. Still, governments of low and middle-income countries are reluctant to invest in nationally-owned SP systems. Developing countries redistribute only a small share of GDP to households in extreme or persistent poverty. This paper estimates whether and to what extent the level of SP expenditure varies with institutional quality and people's preferences using cross-country panel data.

JEL codes: H11, H53, I38.

Key Words: Developing countries, Institutions, Public policies, Social protection.

Contents

1 Introduction

Although developing countries have shown significant progress in investing in social protection, and the global recognition of the role these programmes play in fostering inclusive development has increased, most of the poor in low and middle-income countries are not covered by any social protection program (Honorati, Gentilini, & Yemtsov, 2015). Given the overwhelming evidence of the positive effects of social protection programs on the reduction of poverty and inequality, the accumulation of human and physical capital and the local and regional spillover effects, to name just a few, the remaining gaps raise the question why countries are not increasing their investments in social protection in order to implement at scale social protection programs that effectively protect the poor and other vulnerable groups against shocks. The existing literature tends to converge on mainly two reasons: the availability of financial resources and political commitment. There is a significant amount of research which focuses on the affordability and financing of social protection programmes in developing countries (Barrientos, 2013; Behrendt, Cichon, Hagemejer, Léger and Pal, 2005). In addition, it is also recognized that the level of social protection expenditure in a country depends, among other factors, on its demography, its governance and the economic and political environment (Cichon, ILO and ISSA, 2004; Wilensky, 1975).

This paper, extending on the work conducted by Delavallade (Delavallade, 2006), contributes to the evidence, which so far is rather limited, on the role that institutions exert in altering the budget allocation of social protection programmes across countries. In addition, inspired by the existing literature on how people's preferences influence Government choices towards redistribution policies (Alesina & La Ferrara, 2005; Duman, 2013), the paper empirically tests the linkages between people's request to Governments to provide for more services and its effect on levels of expenditure in social protection.

The hypothesis advanced is that well-functioning, freely elected and accountable Governments tend to be more perceptive and responsive to their citizens' preferences on redistribution programmes. In addition, a well performing Government can better support the planning and budgeting process which determines the allocation of financial resources to social protection taking into account political and economic considerations. The findings presented in this paper indicate that the functioning of institutions and people's preferences influence the level of social protection expenditure. The results are significant across different measures of social protection and quality of institutions. In addition, indicators for the maturity of social protection systems and the level of government revenues are positive and highly significant. This is in line with the existing literature which affirms a degree of path dependency of social protection expenditure over time and the importance of examining tax policies in conjunction and while designing social protection programmes.

The paper starts by presenting the main definitions used in this analysis and refers to the existing literature introducing a simple conceptual framework. Section 3 describes the specification strategy and the

econometric methods and section 4 the data. Section 5 is dedicated to present the empirical results. Then, section 6 concludes and identifies policy implications.

2 Institutions, people's preferences and social protection

The existing literature does not converge to one single definition on the concept of social protection. The ultimate objective of social protection is to alleviate poverty and provide income security minimizing social risk (Barrientos & Hulme, 2010; Barrientos, Hulme and Shepherd, 2005; Conway, de Haan and Norton, 2000; Holzmann, Sherburne-Benz, Tesliuc and Unit, 2003) and addressing the causes of poverty and not simply its symptoms (World Bank, 2001). Traditionally, social protection is associated with a range of public institutions, rules, and interventions aimed at protecting and preventing individuals and their households from poverty and deprivation (Barrientos et al., 2005). In addition, social protection interventions have a profound impact on income distribution (Cichon et al., 2004) and through the provision of income, allow households to smooth consumption and respond to vulnerabilities and contingencies (Kochar, 1999; Morduch, 1995). By providing income or in-kind support, social protection programmes facilitate access to services (such as health, education and nutrition among others), thereby contributing to the realization of the human right of children and families (UNICEF, 2011) to social protection as established in article 22 of the Universal Declaration of Human Rights signed in 1948. In this context, the concept of social protection has considerably widened from a notion related to policies that attempt to target the poor to a more universal approach based on the concept of human rights (Samson, 2013).

In this paper, the term social protection programmes indicates one or a combination of the following policy instruments which are typically provided by public institutions or mandate to private entities or nongovernmental organizations. The first one is social insurance such as pensions, health, or social transfers to individuals or households who are vulnerable to specific risks, for example unemployment, disabling injury or sickness. This policy instrument is mainly financed by compulsory contributions (or also defined as "contributory") which are normally shared between employers and workers. The second instrument is social assistance (often called safety net) which consists of a minimum income guarantee, a cash or in kind transfer for example to remove financial and income related barriers to access social services or promote income generating activities (Dupper, 2013; Piachaud, 2013). This policy instrument is mainly but not only tax financed ("non-contributory") and is typically designed to relieve poverty and target a specific category of the population including for example income transfers to the elderly or to children.

The term "Institutions" can be interpreted in many different ways and is sometimes used interchangeably with the term "Organizations" (Abah, 2012). This paper refers to "Institutions" as the rules of the game in society as defined by North (North, 1990), making reference to the set of formal legal frameworks such as the laws established in a country and the capacity of the Government to enforce their respect. The term "performance of institutions" is used in this paper to identify the quality of institutions,

such as their functioning[2] or effectiveness (Rueschemeyer & Evans, 1985) and their interactions with the society which characterize a Government (limited to the role of public institutions) in carrying out its activities to achieve a set of goals (McNamara, 1999).

People's preferences can affect and drive the support for income redistribution in the society. Individuals tend to support redistribution programmes either because their situation will be better off after the implementation of the programme or because a redistribution programme conforms with their vision of what constitutes a good policy for society as a whole (Corneo & Grüner, 2002) or match their values and beliefs (Fong, 2001). In this paper, people's preferences are defined as the degree of involvement that people would like the Government to play in providing public services; therefore, having sometime a more dominant role while other times limiting its interventions.

2.1 Social protection programmes: evidence and challenges

Over the last decade the important role that investments in social protection programmes have played to support economic development has been recognized (Morel, Palier and Palme, 2012). In 2015, most countries have social protection systems established by law, albeit in many cases only for a minority of their population (ILO, 2014). According to the World Bank (2015:1), "… every country of the world has at least one social safety net program in place." Governments that decide to implement social protection programmes are called to make choices with respect to the mix and scope of programmes based on the country-specific contexts (Honorati et al., 2015).

The question that has been asked most frequently in recent years is whether and to what extent social protection programmes are effective. The evidence generated in numerous studies across different countries shows the positive impact of these programmes in alleviating poverty, reducing inequality, improving social cohesion and effectively redistributing wealth among the different categories of the population (Jutting & Prizzon, 2013; OECD, 2009). In many countries, flagship programmes, like *Prospera* (previously branded *Oportunidades*) and *Seguro Popular* in Mexico, *Bolsa Familia* in Brazil, the subsidized health insurance scheme in Colombia, the child, old age and invalidity grant system in South Africa, the health insurance scheme in Rwanda have shown the effects of the social protection programmes on poverty and human capital outcomes. More recent studies measured the positive local and regional multiplier effects that each dollar transferred to a poor household can generate (Thome, Filipski, Kagin, Taylor and Davis, 2013), while others estimated the rates of returns to investments in social protection (Mideros, Gassmann and Mohnen, 2015).

Following on from these positive experiences, many other developing countries have either initiated or expanded their investments in social protection. To accompany this process, the international community

[2] A critical and systematic discussion and review of concepts, evidence and measures of State Capacity can be found in (Cingolani, 2013).

has recently stepped up to support the expansion of social protection programmes to address some underlying factors that delay their implementation. The Social Protection Floors Recommendation was adopted in 2012 by the International Labour Conference (ILO, 2012), not the least as a response to the effects of the global financial and economic crisis. The objective of the recommendation is to promote and strengthen national social protection systems and to protect a minimum access to essential services and income security for all people across the life cycle. Recently, the International Labour Organization (ILO) and the World Bank (ILO & World Bank, 2015) have also called on world leaders to promote universal social protection which is a step that further acknowledges and promotes the importance of these programmes.

In Africa alone, the number of cash transfer programmes has increased significantly over the last five years. In 2015, 40 out of 48 countries in the region had an unconditional cash transfer program, which presents a doubling of the number in this short period. Conditional cash transfers have been introduced in 11 countries in Africa over the same period (Honorati et al., 2015). Compared to the beginning of the twentieth century, when a limited number of countries - mostly located in Europe - were starting to build social protection systems, today the majority of the countries in the world have social protection programmes covered by law[3]. However, and mostly in developing countries, the benefits of these programmes do not reach necessarily the targeted population. Some countries in fact may have established the laws to regulate the provision of social protection programmes but may delay their implementation due to lack of financial resources, because of the complex procedures that deter participation or because of the weak institutional capacity in the delivery and administration of the interventions.

Although the benefits of having social protection programmes are evident and efforts to increase them in numbers and scope have been strengthened, the budgets allocated particularly to non-contributory social protection programmes are still relatively constrained especially in developing countries. The global average public investment in social protection according to the ILO was around 9% of GDP in 2011[4] across the world regions (ILO, 2014). According to the data published by ILO (2014), spending on social protection programmes (including health) spans from about 4% of GDP in Sub-Saharan Africa to 27% of GDP in Western Europe. The variation within regions is equally high given the extent and scope of social protection interventions in the different countries.

In order to reach the (old and new) development objectives, developing countries would have to significantly expand investments in social protection. It raises the question why many countries remain rather reluctant to increase the financial allocation which would be needed to significantly increase the

[3] The terms "covered by law", "legal coverage" or "established by law" refer to the legal provision made by the Government to anchor one or a mix of social protection instruments to the national legislation. However, the fact that specific social protection interventions are covered by country laws does not necessarily mean that its benefits reach the targeted population immediately because they still depend on the actual implementation of the interventions.

[4] Including expenditures for public health care, social protection for older persons, social protection for persons of active age and public social protection for children.

coverage of the population. Only an estimated 27% of the global population enjoys access to comprehensive social protection, whereas 73% are covered partially or not at all (ILO, 2014). The decision to establish or expand social protection programmes mainly depends on two elements: fiscal space[5] and political will or Government commitment to support social protection programmes (Barrientos & Hulme, 2010). Despite the fact that social protection programmes constitute an "investment in people" (Cichon, Hagemejer and Woodall, 2006; World Bank, 2001, 2012), the identification of the resources to support their implementation represents a major challenge particularly for developing countries. Governments in countries characterised by high poverty and financial constraints are concerned about the fiscal and political pressure these programmes might generate once they are established. Furthermore, the institutional capacity needed for the implementation and delivery of the interventions frequently poses an additional challenge (Barrientos, Hickey and Nin□ o-Zarazu□ a, 2010).

Each Government has to make its own choice and decide on the mix of domestic and external sources to support social protection programmes (ILO, 2001; Barrientos, 2007; Barrientos & Hulme, 2010; Hall, 2010), for example, through macroeconomic policy, re-allocating public expenditures, increasing tax revenues, eliminating illicit financial flows, using fiscal and foreign exchange reserves, borrowing or restructuring existing debt, printing money or using international aid (Cichon et al., 2004; Durán-Valverde & Pacheco, 2012; Heller, 2005; Ortiz, Cummins and Karunanethy, 2015). Alternatively, in situations where the level of taxes is already prohibitive, a country could decide to increase tax revenues by improving the efficiency in tax collection or by fighting tax evasion (Ravallion, 2010; Warlters & Auriol, 2005). However, improving efficiency may be a daunting task especially in developing countries. Establishing a functioning and efficient tax administration without staff with the appropriate skills and when money to pay good salaries to tax officers is scarce, is challenging (Evans & Rauch, 1999; Tanzi & Zee, 2001). While developing countries may struggle to find resources to support social protection programmes, rich or fast growing countries are in principle better equipped to find fiscal space to support social welfare and redistribution programmes. At the same time, unexpected events such as the 2008 economic crisis can limit the ability of Governments to find or sustain the financial resources in support of social protection programmes and result in fiscal consolidation. Ortiz and Cummins (2013) projected that 68 developing countries will cut public spending by on average 3.7% of GDP between 2013 and 2015 compared to 26 high-income countries, which are expected to contract by 2.2% of GDP on average (Ortiz & Cummins, 2013). Additional cuts in public expenditure are also forecasted for the period 2016-2020 particularly affecting developing countries (Ortiz, Cummins, Capaldo and Karunanethy, 2015).

In relation to the fiscal affordability argument, simulation exercises conducted for selected low income countries in Africa and Asia have shown how developing countries can initially afford some elements of

[5] Fiscal space defines "…the availability of budgetary room that allows a government to provide resources for a desired purpose without any prejudice to the sustainability of a government's financial position (Heller, 2005)".

social protection programmes (ILO, 2008; Behrendt et al., 2005; Cichon et al., 2004). A basic package of social protection programmes providing old age and disability pensions and child benefits would cost around 2-3% of GDP. Even if social protection programmes can be afforded, every country follows its own political process to make decisions with regards to budgetary allocation (via the budgeting and planning process), on the mix of social protection instruments and on who should receive the benefits (Wildavsky, 1992). Therefore, the second element which is decisive in the decision to allocate budget to social protection is political will, which can be defined as "the determination of an individual or a group of political actors to do and say things that will produce a desired outcome (Manor, 2004)".

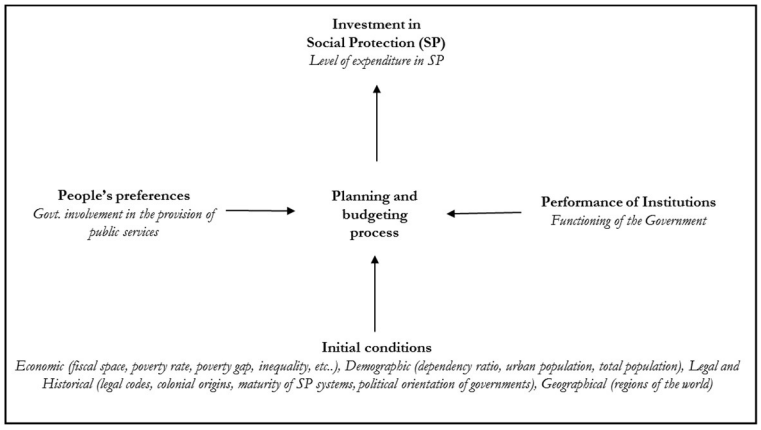
2.2 Conceptual framework

Although fiscal space and political will are key in explaining commitments to social protection, other factors may play a role as well. Institutional factors are expected to explain part of the variation in social protection spending. The functioning of institutions reflects, to a certain degree, the ability of governments to mobilize resources (Caiden & Wildavsky, 1974). Better institutions are generally more efficient in tax collection, which is the main source of finance for social protection programmes. The functioning of institutions also exerts influence through the planning and budgeting process (Wildavsky, 1992), which depends on the country context, fiscal conditions and political and economic considerations (Caiden & Wildavsky, 1974; Thurmaier, 1995; Willoughby, 1993a). The planning and budget preparation in democracies consists of the following stages: i) assessment of overall resource availability and the adoption of aggregate expenditure and revenue targets; ii) disaggregation of aggregate targets into ministry ceilings; iii) preparation and distribution of budget guidelines, including ministry ceilings, and their distribution to spending ministries; iv) preparation of submissions by spending ministries and departments; v) review of submissions by the finance ministry; vi) preparation of draft estimates; vii) submission to and approval by parliament of draft estimates (World Bank, 1998). Although the steps appear to be sequential and distinct, in practice they can overlap. The main weaknesses in the budget preparation highlighted in the literature relate to the difficulties in making macro-economic projections, the lack of independence of the technocrats from the political control, the lack of accurate budget data and information on socio-economic trends (Diamond & Potter, 1999). In a situation of well-functioning institutions, qualified personnel and sufficient capacity of ministries to carry out their own project management, the steps listed above can be executed more efficiently and effectively. At the same time political considerations are essential in the process of resource allocation (Norton & Elson, 2002). Alesina and La Ferrara (Alesina & La Ferrara, 2005) argued that the choice for more redistribution can be affected by voting preferences and public perceptions as to the extent of Government involvement in the provision of public services. Public perceptions of the poor as deserving or not social assistance also affect the support for social protection programmes. According to this view, Government policies and interventions are politically more sustainable if they reflect the society's preferences. People's preferences may therefore explain the level of social protection expenditure and its allocation to programme beneficiaries (i.e. targeted or universal) because of the political

consequences (Pritchett, 2005; Sen, 1995). Moene and Wallerstein (Moene & Wallerstein, 2003) have argued that the degree of targeting of social protection programmes is determined prior to the political choice of the level of funding to be allocated. If the level of spending for social protection programmes is decided under majority rule with voters who are self-interested and respond to targeting, a universal approach will result in a higher guaranteed income level for all. A shift towards a more targeted approach may compromise political support if the middle class does not benefit. The political economy models of targeting are based on the assumption that voters are self-interested. However, this may not be the case when people have a "prospect of upward mobility" (Bénabou & Ok, 2001). The prevalence of self-interested voters is also contested in developing countries. Evidence from Zambia indicates that voters are altruistic and prefer targeted to universal approaches (Schüring & Gassmann, 2012). The more a Government is subject to fiscal constraints, which is the case in most developing countries, the more likely the decision about a specific social protection programme will depend on the political attitude concerning those who deserve support (Graham, 2002; Hickey, 2010).

This paper argues that, in addition to a country's initial conditions such as demographic, economic, legal, political and historical, the quality of institutions plays a role in influencing the allocation of social protection expenditure via the planning and budgeting process. More efficient Governments that are accountable to their citizens are better able to reflect and translate the preferences of their citizens into actual policies and related fiscal allocations. Figure 1 summarizes the arguments outlined above.

Figure 1 Conceptual framework



Changes in the public budget are not merely incremental (Wildavsky, 1964) but show a strong degree of path dependency compared to budget allocations in previous years. In particular, the social protection expenditure reflect people's preferences towards social policies and Government's involvement in the provision of public services and income distribution through more or less well-functioning institutions.

3 Estimation strategy and baseline model

Regression analysis is used to estimate the effects of the main independent variables, controlling for different economic, demographic, legal-historical and geographical factors. The dependent variable and its different measures refer to the year 2011 while the independent and control variables have been lagged by two years for the following reasons. The budget outcome, that is the actual spending in a given year, depends on budgetary decisions made in the previous year, after completion of the planning and budget process. The latter is informed by social and economic indicators that may reflect the situation at the beginning of the budget process. Moreover, the room for budgetary reallocations is generally very limited and new financial resources may not be found quickly. Lagging the independent and control variables does also reduce simultaneity bias.

The following reduced form equation (1) is estimated:

$$SP_{it} = \beta_0 + \beta_1 QI_{it-2} + \beta_2 PP_{it-2} + \boldsymbol{\gamma}' \boldsymbol{E}_{it-2} + \boldsymbol{\delta}' \boldsymbol{D}_{it-2} + \boldsymbol{\theta}' \boldsymbol{LH}_{it-2} + \varepsilon_{it} \qquad (1)$$

The variable SP_{it} measures the level of investment in social protection in country i in year t, which in this case is the year 2011. QI_{it-2} stands for the quality of institutions and PP_{it-2} measures people's preferences, both at time $t-2$. $\boldsymbol{E}_{it-2}$, $\boldsymbol{D}_{it-2}$ and $\boldsymbol{LH}_{it-2}$ are vectors of control variables for past economic performance, demographic characteristics, legal and historical factors respectively, while ε_{it} is the usual error term representing random variation across observations.

GDP per capita (in logarithm) and the level of Government revenues (as a percentage of GDP), which serves as a proxy for fiscal space, are expected to have a positive effect on the allocation of resources to social protection (CIAT, ECLAC, OECD and IDB, 2015). The level of poverty in a country, measured by the poverty rate and the average poverty gap before taxes and transfers, reflects the need for social protection. The higher the extent and depth of poverty, the larger the demand for public support. Yet, high poverty rates are more prevalent in countries with limited economic potential and constrained financial resources. As for the level of inequality, predicting the sign of the coefficient of the Gini coefficient is not straightforward given that it could be influenced by the inequality between classes (Schwabish, Smeeding and Osberg, 2003).

The demographic dependency ratio is expected to contribute positively to the allocation of social protection because the bulk of benefits is in most countries reserved for children and the elderly (ILO, 2013). However, the impact of this variable on total social protection expenditure varies in conjunction with the specific social protection programmes implemented at country level, the employment rates and the demographic dynamics of the population in the country[6]. The share of the urban population in a country

[6] In particular, social protection expenditure is expected to be relatively higher in countries with a larger proportion of pension recipients compared to the number of working-age adults. In the case of countries with social protection programmes that target children or youth, the expenditure on social protection can be affected by fertility, child mortality rates or overall demographic dynamics in a country.

is expected to positively influence total social protection expenditure, particularly because access to health care services is often concentrated in urban areas, especially in developing countries (Scheil-Adlung, 2015). Finally, the maturity of social protection systems is expected to contribute positively to the level of social protection expenditure. Although expenditure on social protection vary across countries, their levels are largely determined by the maturity of the system and path dependency (Cichon et al., 2004).

Because of the likely endogeneity of institutions and levels of social protection expenditure, the estimates based on the ordinary least squares (OLS) method could be biased. Using an instrumental variable approach could address the issue of endogeneity. The existing literature on institutions and economic growth (Bluhm & Szirmai, 2012) suggests different instruments for the quality of institutions. In particular, Mauro (Mauro, 1995) uses ethnolinguistic fractionalization to instrument bureaucratic efficiency, Hall and Jones (1999) use the distance from the equator as instrument of social infrastructure, and Acemoglu et al. (2001) adopt the settler mortality to instrument institutions. These choices have been criticised by other authors. For example Acemoglu et al. argue that ethnolinguistic fractionalization is influenced by economic performance (Acemoglu, Johnson, & Robinson, 2000) and therefore is not suited as instrument. Gallup et al. argue that the latitude can affect institutions through climate change and geography (Gallup, Sachs and Mellinger, 1999), and Glaeser et al. (2004) argue that the instrument proposed by Acemoglu et al. (2001) is correlated with current disease environment and human capital which could influence economic performance directly rather than through institutions. Furthermore, measures of openness to trade (Chan, 2002; Frankel, 2004) and human capital have been used as instrumental variable for institutions. The proxy of human capital proposed by Glaeser et al. (average of years of schooling) (Glaeser, La Porta, Lopez-de-Silanes, & Shleifer, 2004) has been tested and rejected as a valid instrument by Acemoglu et al. (Acemoglu, Gallego and Robinson, 2014).

This paper, using the two stages least square (2SLS) regression estimates, tests different instruments for which data is available for the 80 countries selected in this analysis. The results and tests are reported in detail in Table 8 showing that the OLS estimates may be preferred compared to the 2SLS estimates.

4 Data

The data used in this paper draw on different sources. Data on the level of expenditure in social protection are taken from the ILO social protection database, which covers the years 1990-2011[7]. The expenditure data are available for every five years between 1990 and 2005 and yearly for the years 2007 to 2011. In this paper we use the year 2011 for the dependent variable. Data on institutional and governance variables are taken from the Quality of Government Basic Dataset (QOG) (Stefan, Holmberg, Rothstein and Hartmann, 2013), which compiles country level data from individual researchers, from international organizations like the World Bank, the International Monetary Fund and the International Social Security

[7] Data on social protection expenditure are published in table B.12 of the World Social Protection Report 2014-15.

Agency (ISSA), and from private sources like the Freedom House and the Heritage Foundation. Information on people's preferences is taken from the World Values Surveys (WVS), which collect information through interviewing representative national samples of individuals about changing values and their impact on social and political life.[8] The independent and control variables reflect information pertaining to the year 2009[9] (or the closest year available).

Because of the unavailability of data for the dependent and some independent variables (mainly on people's preferences), the estimates presented in this paper are conducted using data from 80 countries: 28 high income countries (HICs) and 52 low and middle-income countries (LICs and MICs), which have been divided in six geographical zones (see Annex 1).

Total social protection expenditure (including administrative costs) is the sum of all existing public social protection programmes including health care expenditure[10]. For the analysis total social protection expenditure is expressed as a percentage of GDP. Alternatively, we exclude health from total social protection expenditure.[11] In the sensitivity analysis, the two indicators are expressed either as a percentage of total Government expenditure or as social protection expenditure per capita in international dollars. Figure 2 shows the levels of total social protection expenditure as a percentage of GDP across geographic regions in 2011. As expected, the highest level of expenditure on social protection is registered in Western Europe and North America. The lowest levels are measured for Sub-Saharan Africa and South East Asia.

A note deserves to be made regarding the limitation of using expenditure as a measure for the dependent variable. The level of total expenditure as such says nothing about the quality of the spending, nor its efficiency. Therefore, by using expenditure it is assumed that social protection expenditure across countries are of equal quality.

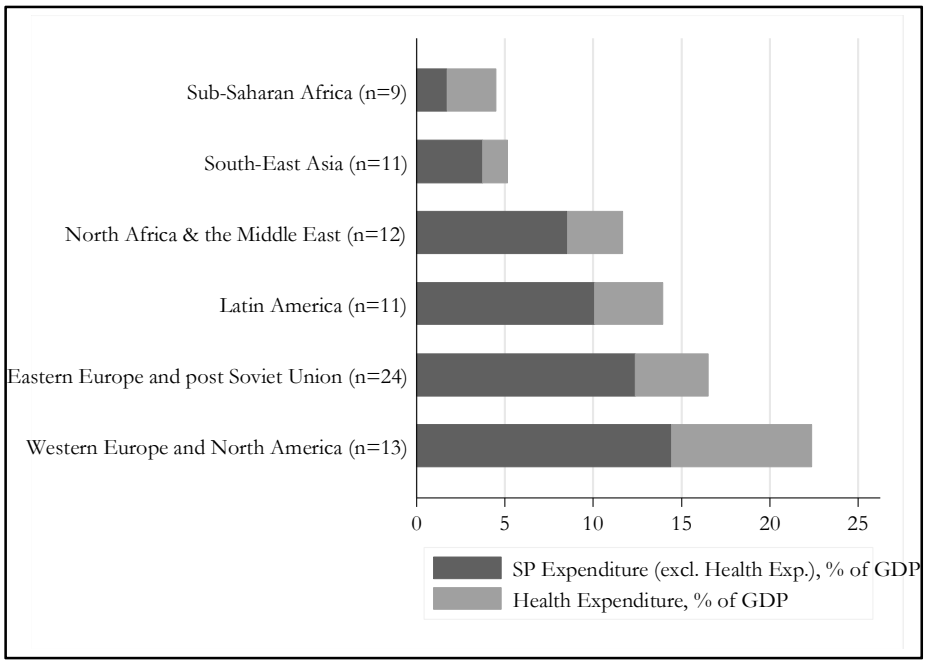
Figure 2 Allocation of expenditure to SP (different compositions) by geographic regions, 2011

[8] The proxy for people's preferences is collected from different waves of the WVS conducted during the period 1990-1994 (wave two - 17 observations); 1995-1999 (wave three - 32 observations); 2000-2004 (wave four - 31 observations); 2005-2009 (wave five - 28 observations); and 2010-2014 (wave six - 52 observations).

[9] Regarding the year from which we have picked the data in the cross-sectional dataset, our first choice was 2009. If data for 2009 were not available, data for 2010 was used. If those for 2010 were not available, we used those for 2008, and if 2008 was lacking, 2011 was used and so forth.

[10] The scope of the indicator corresponds to the scope of the Social Security (Minimum Standards) Convention, 1952 (No.102) which established nine classes of benefits or social protection areas (branches): 1) medical care, 2) sickness benefit, 3) unemployment benefit, 4) old-age benefit, 5) employment injury benefit, 6) family benefit, 7) maternity benefit, 8) invalidity benefit and 9) survivors' benefit, plus other income support and assistance programmes, including conditional cash transfers, available to the poor and not included under the above classes (ILO, 2014).

[11] The ILO dataset contains the following indicators: social protection expenditure, health expenditure and total social protection expenditure. Public social protection spending includes all expenditures financed with resources controlled by the Government (different levels of government and social security funds); such as, among others, social insurance and social assistance payments (OECD, 2007).



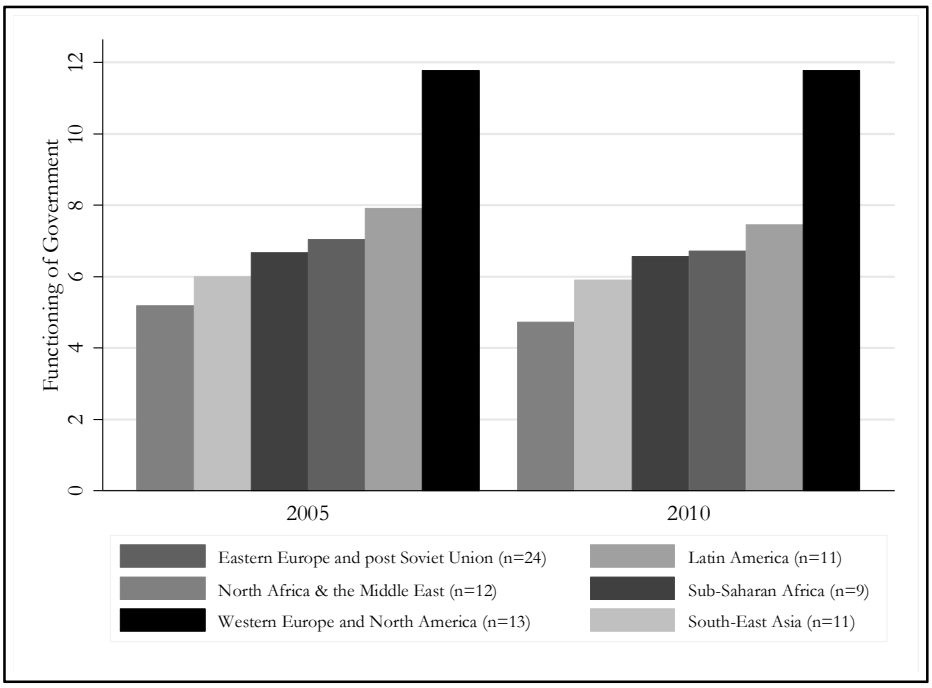
Source: Author's own calculation based on ILO social protection. Population weighted average per region; 80 countries in total.

The variable *functioning of the Government* is used as a proxy for the quality of institutions and is available for the period 2005-2012. The variable examines the extent to which the freely elected head of Government and a national legislative representative determine the policies of the Government, whether the Government is free from pervasive corruption, accountable to the electorate between elections and operates with openness and transparency: countries are graded between 0 (worst) and 12 (best).[12]

Figure 3 shows the average values of the index which measures the functioning of Government across six geographic regions. While geographic disparities are evident, the values for 2010 are almost at the same level as in 2005. This is explained by the fact that changes in institutions are path dependent and evolve slowly over time, with the exception of unexpected events such as revolutions or natural events which may affect substantially the overall status and performance of institutions (Acemoglu & Robinson, 2001).

Figure 3 Trend of functioning of Government by geographic regions, 2005 and 2010

[12] The ratings are based on the subjective assessment of foreign investors and business experts in the respective countries.



Source: Author's own calculation based on Quality of Government Basic Dataset (QOG) (Stefan et al., 2013); 80 countries in total.

Alternative indicators used in the literature to measure the quality of institutions[13] (Adsera, Boix, & Payne, 2003; La Porta, Lopez-de-Silanes, Shleifer, & Vishny, 1998) are taken from the QOG dataset and used to test the robustness of the findings. In particular, the variable *Government effectiveness* which is borrowed by the Worldwide Governance Indicators (WGI) is available for the period 1996-2011 and combines responses on the quality of public service provision, the quality of the bureaucracy, the competence of civil servants and ranges from 0 (weak governance) to 5 (strong governance). Data for the variable *rule of law,* which is also part of the WGI, is available for the period 1996-2011. The values of this indicator also range from 0 (weak) to 5 (strong) and measure to what extent agents have confidence in and abide by the rules of society.[14] The variable *property rights*, which is part of the Heritage Foundation dataset and covers the period 1994-2012, scores the degree to which the laws of a country protect private property rights and the degree to which the government enforces those laws. This indicator is a classic measure used in the literature on institutions and economic growth (Brunetti, Kisunko and Weder, 1998; Brunetti & Weder, 1998; Mauro, 1995) and is also used to measure the quality of Government (La Porta et al., 1999).

[13] The variables used in this paper to measure the performance of institutions are composed indices and have been widely used in the literature. Over the past, these measures have received quite some criticism with respect to their constructs, comparability and methodological shortcomings, thereby questioning their validity (Thomas, 2010; van de Walle, 2006). However, these arguments have been refuted as the critics do not provide evidence of any practical consequences, alternative definitions or failure to meet the criteria of construct validity (Kaufmann, Kraay, & Mastruzzi, 2007, 2010).

[14] The variable *Government effectiveness* and *Rule of law* have been transformed from the original range from -2.5 (weak) to 2.5 (strong) to a range which goes from 0 to 5 in order to facilitate the interpretation of the estimation results.

The scores of this indicator range from 0 to 100, where 100 represents the maximum degree of protection of property.

The indicator for *people's preferences* measures the extent to which a society wants Government to be involved in the provision of public services, redistribution or the provision of social welfare. The variable has values between 1 and 10 whereby a lower value is associated with the people's preference for less Government involvement[15]. For this variable, the available data closest to the year 2009 have been used.

Control variables account for economic, demographic, legal and historical and geographical factors and have been selected according to economic and statistical criteria in relation to the variable analysed. The control variables are compiled from different sources which have been listed above. The measure for the maturity of the social protection systems has been established using data provided by the ISSA. The variable is constructed by counting the number of years since when the oldest law (legal coverage) on social protection was approved in a country. The term "legal coverage" represents the extent to which social security areas are addressed by the national legislation while the term "effective coverage" represents the extent to which social security areas are actually covered (actual implementation). The control variables are grouped in *Economic factors:* a) GDP per capita based on purchasing power parity (PPP) converted to constant 2005 international dollars; b) government revenue as percentage of total GDP; c) income inequality (pre-taxes and pre-transfers) measured by the Gini coefficient; d) poverty rate and poverty gap according to the international standard (below 1.90 USD PPP per capita per day in constant 2011 international dollars derived from the latest available World Bank PovCal[16] data and limited to low and middle-income countries). *Demographic factors:* a) total age dependency ratio (younger than 15 and older than 65 to the population aged 15-64); b) proportion of the urban population; c) total population. *Legal and historical factors*: a) Country's legal systems; b) Colonial origin c) maturity of social protection system in the country. The descriptive statistics for these variables are reported in Annex 2.

5 Results

Table 1 presents the results of estimating equation 1 for all 80 countries and for the subset of 52 low and middle-income countries using the OLS method and robust standard errors. The sets of control variables are introduced sequentially to test the robustness of the results. The estimates show that the proxies for quality of institutions and people's preferences influence the level of expenditure in social protection. In all the model specifications both variables are significant and positive. An increase in the

[15] World Values Survey, latest available data. Question: Now I'd like you to tell me your views on various issues. How would you place your views on this scale? 10 means you agree completely with the statement on the left; 1 means you agree completely with the statement on the right; and if your views fall somewhere in between, you can choose any number in between. Higher scale: The government should take more responsibility to ensure that everyone is provided for. Lower Scale: People should take more responsibility to provide for themselves. For easier interpretation the variable has been transformed and reversed compared to the original one.

[16] The latest PovCal data are based on estimates of global poverty from 1981 to 2012 based on 2011 purchasing power parity (PPP).

functioning of the government index by one unit is associated with a change in the level of social protection expenditure of 0.73 percent of GDP for all countries and of 0.52 percent in low and middle-income countries (see columns (4) and (8) of Table 1). A unit increase of the index measuring people's preferences changes the level of expenditure of social protection by as much as 1 percent of GDP for all countries and by 1.52 percent in low and middle-income countries.

Holding all other variables constant, one additional year of maturity of the social protection system increases by about 0.1 percentage points the level of expenditure in social protection over GDP. This is in line with the existing literature on path dependency and maturity of social protection systems (Cichon et al., 2004). A significant and positive effect is also associated with the level of government revenues that serves as a proxy for fiscal space. The fact that this variable is significant confirms that the level of social protection spending cannot be considered separately from tax policies (Bastagli, 2015). The wealth effect, measured by the logarithm of per capita GDP, contributes positively to the level of expenditure in model 2 and 6 and is not significant when poverty and inequality controls are included in model 3 and 7. The poverty rate is negatively correlated with social protection expenditure, but an increasing poverty gap is associated with higher social protection expenditure.

The Gini index measures the income inequality and captures the income distribution before taxes and transfers. It affects negatively the level of social protection expenditure among high, low and middle-income countries. While this result may seem counterintuitive, its interpretation can be found in the political economy theories of budget allocations to social protection. Schwabish et al. (2003) found that while inequality between the middle class and the poor has a small positive impact on the level of social spending, inequality between the rich and the middle class has a large and negative impact on social spending. As the "rich" become more distant from the middle and lower classes, they find it easier to opt out of public programs and to buy substitutes for social insurance in the private market. Finally, none of the demographic control variables is significant.

Table 1 Institutions, people's preferences and SP expenditure

Dependent variable	Total SP Expenditure (% of GDP)							
	High, low and middle-income countries				Low and middle-income countries			
	OLS							
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
Functioning of Government	1.513***	0.625***	0.771***	0.731***	0.572**	0.338**	0.496**	0.519**
	(0.181)	(0.175)	(0.208)	(0.225)	(0.273)	(0.161)	(0.186)	(0.213)
People's preferences	2.067***	1.515**	1.033*	1.003*	3.136***	1.706***	1.524**	1.518**
	(0.620)	(0.585)	(0.555)	(0.561)	(0.664)	(0.543)	(0.616)	(0.670)
Maturity of SP Systems		0.099***	0.079***	0.076***		0.037	0.037	0.036
		(0.027)	(0.026)	(0.026)		(0.024)	(0.025)	(0.025)
Government Revenue (% of GDP)		0.176**	0.122**	0.147**		0.319***	0.270***	0.264***
		(0.072)	(0.058)	(0.061)		(0.079)	(0.072)	(0.084)
Log per capita GDP, PPP (2005 constant international $)		1.823**	0.437	0.705		1.320**	0.185	-0.213
		(0.692)	(1.065)	(1.270)		(0.599)	(1.151)	(1.422)
Poverty rate (1.90$/day)			-0.359**	-0.422**			-0.229*	-0.236*
			(0.136)	(0.163)			(0.117)	(0.133)
Poverty gap (1.90$/day)			0.728***	0.766**			0.426*	0.471*
			(0.269)	(0.302)			(0.236)	(0.276)
Gini index			-0.225***	-0.230***			-0.082	-0.078
			(0.066)	(0.070)			(0.075)	(0.076)
Age dependency ratio (total)				0.072				-0.028
				(0.051)				(0.055)
Urban population (% of total)				-0.002				0.005
				(0.041)				(0.042)
Population, total (in millions)				0.002				0.000
				(0.003)				(0.003)
Constant	-10.851**	-28.405***	-1.660	-7.342	-13.837***	-23.780***	-8.355	-3.794
	(4.344)	(5.773)	(10.670)	(12.602)	(4.627)	(4.981)	(9.962)	(12.379)
Observations	80	80	80	80	52	52	52	52
R-squared	0.444	0.715	0.769	0.776	0.271	0.683	0.709	0.712

Robust standard errors in parentheses
*** p<0.01, ** p<0.05, * p<0.1

Note: Social Protection (SP) expenditure refers to the year 2011 or closest year available. All the independent and control variables are lagged 2 years. Additional estimates, which are not reported, have been conducted including the variable Government revenue squared to reflect decreasing investment in social protection. They have produced similar results for the main independent variables.

The estimates for the 52 low and middle-income countries show similar results in terms of significance and signs of the coefficients of the main explanatory variables. The marginal effect of the quality of institutions is 30% lower than for the whole sample whereas the marginal effect of people's preferences is 50% higher in the low and middle-income countries. While the maturity of the social protection system is no longer statistically significant, the fiscal space marginal effect is as expected 80% higher. The coefficients associated with poverty and inequality are significant except for the Gini index in the estimates for low and middle-income countries.

We tested whether there is a synergy between the quality of institutions and people's preferences (see Table 2). The measures for quality of institutions and people's preferences are transformed into binary variables in order to understand potential interaction effects. The variable *functioning of the Government* takes the value *QI=0* (low functioning) for values from zero to six, and *QI=1* (high functioning) for values from seven to twelve. Similarly, the variable *people's preference* has been recoded with *PP=0* for values from 1 to 6.4, and *PP=1* for values higher than 6.4. It is expected that the interaction of better functioning institutions and stronger preferences of the society for Government involvement in the provision of public services is associated with higher levels of social protection expenditure. The results show that a high compared to a low level of functioning of the Government increases significantly the intensity of social protection for all 80 countries selected. In addition, the simultaneous occurrence of high levels for both variables significantly increases by 5 percentage points on average for all countries and by 6 percentage points in low and middle-income countries the level of social protection expenditure over GDP. However, we cannot conclude that there is complementarity in the sense of supermodularity between the two variables (Milgrom & Roberts, 1990).

We have conducted a number of robustness checks. In table 3 we report the results obtained using two definitions of social protection expenditure (with and without health expenditure) and three alternative measures of the quality of institutions (government effectiveness, the rule of law and an index of property rights). The coefficient for the variables measuring the functioning of the Government are significant and positive in all specifications. The variable which captures people's preferences is significant and positive in six out of eight model specifications. The maturity of the systems and the level of government revenues are also highly significant throughout the different models confirming the relevance of long established social protection systems and the availability of fiscal space. The poverty rate and the Gini index continue to have negative and significant coefficients and the poverty gap continues to have positive and significant marginal effect on SP expenditure. Similar but weaker results are presented in Table 4 for the low and middle-income countries. The signs of the marginal effects remain the same but many coefficients are no longer significant, partly because of the lower number of degrees of freedom. Table 5 summarizes additional tests conducted to assess the robustness of the analysis using two alternative measures of social protection expenditure (SP expenditure as a percentage of total government expenditure and the log of SP expenditure per capita). The estimates confirm the positive signs and significance of the variables for the functioning of the Government

and people's preferences irrespective of the different definitions of the dependent variable, exception made for model (5) where the proxy for the quality of institution is not significant. To conclude, the results presented in Table 4 and 5 are robust to changes in definitions of the dependent variable and to different measures of the quality of institutions.

A further extension of the baseline model controls for legal and colonial origins. The countries which have never been colonized show positive and significant coefficients. The hypothesis advanced by Bailey (2004) that countries with French colonial origins tend to be more generous in terms of social protection compared to those that were former British colonies is not supported by the data (see Table 6). The results are robust to the inclusion or not of health expenditure in social protection expenditure for the 52 low and middle-income countries. If legal origins are controlled for and the English Common Law system is used as a baseline, the French legal system and the socialist / communist laws do not seem to influence the level of social protection expenditure. A significant and positive additional level of social protection expenditure can be attributed to legal systems based on the Scandinavian code (using 80 countries) and using social protection expenditure excluding health as the dependent variable (see Table 7). The finding may reflect the relative generosity of social democratic welfare states[17] (Esping-Andersen, 1990). The estimates for the group of low and middle-income countries show positive and weakly significant additional effects for countries that have inherited the French or Socialist legal Codes (see Table 7). Alternatively, controls for Government political orientation have also provided robust estimates for both main independent variables[18].

Finally, Table 8 reports the results using the 2SLS approach instrumenting the variable functioning of the government with different groups of instruments to address issues of endogeneity and reverse causality between the dependent variable and the proxy for the quality of institutions. Models 2, 3, 5 and 6 alternatively use trade freedom[19] and the distance from the equator (latitude) as instruments. Trade freedom seems to be a valid instrument at least on the basis of its significance in the first stage estimate conditional on all other explanatory variables (except the quality of government) but latitude is only a weak instrument. With trade freedom as instrumental variable, the functioning of government is slightly lower for the full sample of all 80 countries and slightly higher for the 52 low and middle-income countries but do not fundamentally change our conclusions. .

[17] In particular, three ideal types of regimes or welfare states are advanced by Esping Andersen: the Social Democratic (for example Sweden), the Corporatist (such as Germany) and the Liberal (such as the United States) model. The Social Democratic regime is characterized by a high level of benefits and a high guaranteed minimum provided to the population, and it is mainly funded on general taxation. The Corporatist regime shows instead relative high level of benefits, which are mainly funded though contributions. Finally, the Liberal regime shows levels of benefits reduced to a minimum funded by general taxation (Wildeboer Schut, Vrooman, & Beer, 2001).

[18] Tables are not included in the paper but available from the author upon request.

[19] The trade freedom score is based on two inputs: the trade-weighted average tariff rate and non-tariff barriers (NTBs). Weighted average tariffs is a purely quantitative measure and accounts for the basic calculation of the score. The presence of NTBs in a country affects its trade freedom score by incurring a penalty of up to 20 percentage points, or one-fifth of the maximum score. The country's trade freedom ranges between 0 and 100, where 100 represents the maximum degree of trade freedom (Stefan, Holmberg, Rothstein, & Hartmann, 2014).

6 Conclusions

This paper expands on the existing literature on the determinants of social protection by examining whether and to what extent the provision of social protection depends on the quality of institutions and people's preferences using panel data on 80 countries (52 low and middle-income countries and 28 high income countries). The results show that both factors have an impact for all the countries in our sample but also for the group of low and middle-income countries. The estimates are robust to the different definitions of the dependent variables and different measures for the quality of institutions.

These results have implications regarding social protection policies. First, our results suggest that it would be useful to continue enhancing the capacity of institutions and public authorities. This should not only be limited to the provision of technical support, for example to administrators who are expected to execute the social protection policies and to initiate reforms, but also to improve on existing legal frameworks, accountability, transparency, effectiveness, efficiency, equity, inclusiveness, participation and consensus. Some tools suggested by ILO to guide this path are social budgeting, social protection expenditure and performance reviews (SPERs), assist countries in improving their quantitative knowledge base on social protection. A recent report published by the Overseas Development Institute (Greenhill, Carter, Hoy and Manuel, 2015) shows that in order to reach the Sustainable Development Goals greater efforts should be put in investing in social contracts that include social protection, universal access to health and quality of education. While the best source to finance the social contract is domestic, rich countries still need to support the least developed countries and ensure long-term funding and fiscal commitments to those countries which have challenges in finding the resources needed to support, among others, social protection programmes.

The second area of focus is to ensure that people's preferences regarding the involvement of the Government in the provisions of public services are represented. Therefore, advocating for mechanisms and systems allowing people's preferences to be heard is key. This could imply for example a more effective role of the international organizations, academic institutions and think thanks in providing technical assistance to countries to ensure that well-functioning systems are in place that are able to capture and reflect people's preferences and influence social policies.

While supporting these two main areas might be beneficial to boost the level of expenditure in social protection programmes, the specific set of strategies and policy options to use will mainly depend on the specific national contexts.

References

Acemoglu, D., Gallego, F. A., & Robinson, J. A. (2014). Institutions, Human Capital, and Development. *Annual Review of Economics*, *Vol. 6*(No. 1), pp. 875–912.

Acemoglu, D., Johnson, S., & Robinson, J. A. (2000). The Colonial Origins of Comparative Development: An Empirical Investigation. *NBER Working Paper Series*, (w7771).

Acemoglu, D., & Robinson, J. A. (2001). A Theory of Political Transitions. *The American Economic Review*, *Vol. 91*(No. 4), pp. 938–963.

Adsera, A., Boix, C., & Payne, M. (2003). Are You Being Served? Political Accountability and Quality of Government. *Journal of Law, Economics, and Organization*, *Vol. 19*(No. 2), pp. 445–490.

Alesina, A., & La Ferrara, E. (2005). Preferences for Redistribution in the Land of Opportunities. *Journal of Public Economics*, *Vol. 89*(No. 5-6), pp. 897–931.

Bailey, C. (2004). Extending Social Security Coverage in Africa. *ESS Extension of Social Security. International Labour Office, Geneva*, (20).

Barrientos, A. (2007). Financing Social Protection. *Brooks World Poverty Institute Working Paper*, (05).

Barrientos, A. (2013). *Social Assistance in Developing Countries*. Cambridge University Press.

Barrientos, A., Hickey, S., Nin□ o-Zarazu□ a, M., & Hulme, D. (2010). Social Protection in Sub-Saharan Africa. Will the Green Shoots Blossom? *Brooks World Poverty Institute Working Paper*, (116).

Barrientos, A., & Hulme, D. (2010). *Social Protection for the Poor and Poorest. Concepts, Policies and Politics*. Palgrave Studies in Development.

Barrientos, A., Hulme, D., & Shepherd, A. (2005). Can Social Protection Tackle Chronic Poverty? *The European Journal of Development Research*, *Vol. 17*(No. 1), pp. 8–23.

Bastagli, F. (2015). Bringing Taxation into Social Protection Analysis and Planning. *Overseas Development Institute Working Papers*, (421).

Behrendt, C., Cichon, M., Hagemejer, K., Léger, F., & Pal, K. (2005). Can Low Income Countries Afford Basic Social Protection? First Results of a Modelling Exercise. *Issues in Social Protection*, (13).

Bénabou, R., & Ok, E. A. (2001). Social Mobility. *The Quarterly Journal of Economics*, *Vol. 116*(No. 2), pp. 447–487.

Bluhm, R., & Szirmai, A. (2012). Institutions and Long-run Growth Performance: An Analytic Literature Review of the Institutional Determinants of Economic Growth. *UNU-MERIT Working Paper Series*, (033).

Caiden, N., & Wildavsky, A. B. (1974). *Planning and Budgeting in Poor Countries*. New York.

Chan, K. S. (2002). Trade and Bureaucratic Efficiency. *Economic Development and Cultural Change*, *Vol. 50*(No. 3), pp. 735–754.

CIAT, ECLAC, OECD, & IDB. (2015). *Revenue Statistics in Latin America and the Caribbean 2015*. OECD Publishing.

Cichon, M., Hagemejer, K., & Woodall, J. (2006). Changing the Paradigm in Social Security: From Fiscal Burden to Investing in People. *Geneva: International Labour Office.*

Cichon, M., ILO, & ISSA. (2004). *Financing Social Protection*. Geneva: ILO.

Cingolani, L. (2013). *The State of State Capacity: A Review of Concepts, Evidence and Measures*. United Nations University, Maastricht Economic and Social Research and Training Centre on Innovation and Technology.

Conway, T., de Haan, A., & Norton, A. (2000). Social Protection: New Directions of Donor Agencies. Paper for the DFID-ODI Inter-Agency Seminar on Social Protection. Easthamstead Park.

Corneo, G., & Grüner, H. P. (2002). Individual Preferences for Political Redistribution. *Journal of Public Economics*, *Vol. 83*(No. 1), pp. 83–107.

Delavallade, C. (2006). Corruption and Distribution of Public Spending in Developing Countries. *Journal of Economics and Finance*, *Vol. 30*(No. 2), pp. 222–239.

Diamond, J., & Potter, B. H. (1999). *Guidelines for Public Expenditure Management*. International Monetary Fund.

Duman, A. (2013). *Attitudes Towards Hard Work and Redistributive Preferences in Developing Countries, in Katia Bender, Markus Kaltenborn and Christian Pfleider (ed.) Social Protection in Developing Countries: Reforming Systems*. Routledge.

Dupper, O. (2013). *The Role of Law and Legal Institutions in the Reform of Social Protection Systems: Experiences from South Africa, in Katia Bender, Markus Kaltenborn and Christian Pfleider (ed.) Social Protection in Developing Countries: Reforming Systems*. Routledge.

Durán-Valverde, F., & Pacheco, J. F. (2012). Fiscal Space and the Extension of Social Protection: Lessons Learnt from Developing Countries. *ESS Extension of Social Security. International Labour Office, Geneva*, (33).

Esping-Andersen, G. (1990). *The Three Worlds of Welfare Capitalism*. John Wiley & Sons.

Evans, P., & Rauch, J. E. (1999). Bureaucracy and Growth: A Cross-National Analysis of the Effects of "Weberian" State Structures on Economic Growth. *American Sociological Review*, *Vol. 64*(No. 5), pp. 748–765.

Fong, C. (2001). Social Preferences, Self-Interest, and the Demand for Redistribution. *Journal of Public Economics*, *Vol. 82*(No. 2), pp. 225–246.

Frankel, J. A. (2004). The World Trading System and Implications of External Opening. *The Initiative for Policy Dialogue Series*, 180.

Gallup, J. L., Sachs, J. D., & Mellinger, A. D. (1999). Geography and Economic Development. *International Regional Science Review*, *Vol. 22*(No. 2), pp. 179–232.

Glaeser, E. L., La Porta, R., Lopez-de-Silanes, F., & Shleifer, A. (2004). Do Institutions Cause Growth? *Journal of Economic Growth*, *Vol. 9*(No. 3), pp. 271–303.

Greenhill, R., Carter, P., Hoy, C., & Manuel, M. (2015). *Financing the Future. How International Public Finance Should Fund a Global Social Compact to Eradicate Poverty*. Overseas Development Institute.

Hall, D. (2010). *Why We Need Public Spending* (Project Report). Greenwich, UK: University of Greenwich.

Heller, M. P. S. (2005). *Understanding Fiscal Space (EPub)*. International Monetary Fund.

Holzmann, R., Sherburne-Benz, L., Tesliuc, E., & Unit, S. P. (2003). *Social Risk Management: The World Bank's Approach to Social Protection in a Globalizing World*. World Bank Washington, DC.

Honorati, M., Gentilini, U., & Yemtsov, R. G. (2015). *The State of Social Safety Nets 2015*. Washington, D.C. : World Bank Group.

ILO. (2001). *Social Security: Issues, Challenges and Prospects: Sixth Item on the Agenda*. Geneva.

ILO. (2008). Can Low-Income Countries Afford Basic Social Security? *Social Security Policy Briefings*, (3).

ILO. (2012). 101st Session of the International Labour Conference, 30 May - 14 June 2012. International Labour Organization.

ILO. (2013). Employment and Social Protection in the New Demographic Context Fourth Item on the Agenda. International Labour Office.

ILO. (2014). *World Social Protection Report*. International Labour Organization.

ILO, & World Bank. (2015). A Shared Mission for Universal Social Protection, Concept Note.

Jutting, J., & Prizzon, A. (2013). *Social Cohesion, Does it Matter for Growth and Development, in Katia Bender, Markus Kaltenborn and Christian Pfleider (ed.) Social Protection in Developing Countries: Reforming Systems*. Routledge.

Kaufmann, D., Kraay, A., & Mastruzzi, M. (2007). Worldwide Governance Indicators Project: Answering the Critics. *World Bank Policy Research Working Paper*, (4149).

Kaufmann, D., Kraay, A., & Mastruzzi, M. (2010). Response to "What do the Worldwide Governance Indicators Measure?." *European Journal of Development Research*, *Vol. 22*(No. 1), pp. 55–58.

Kochar, A. (1999). Smoothing Consumption by Smoothing Income: Hours-of-Work Responses to Idiosyncratic Agricultural Shocks in Rural India. *The Review of Economics and Statistics*, *Vol. 81*(No. 1), pp. 50–61.

La Porta, R., Lopez-de-Silanes, F., Shleifer, A., & Vishny, R. (1998). The Quality of Government. *NBER Working Paper Series*, (w6727), pp. 221–279.

Manor, J. (2004). *Appendix 3 in "Politicking for the Poor. Final Report to the U.K. Department for International Development"*. Institute of Development Studies, University of Sussex.

Mauro, P. (1995). Corruption and Growth. *The Quarterly Journal of Economics*, *Vol. 110*(No. 3), pp. 681–712.

Mideros, A., Gassmann, F., & Mohnen, P. (2015). Estimation of Rates of Return on Social Protection: Ex Ante Microsimulation of Social Transfers in Cambodia. *Journal of Development Effectiveness*.

Milgrom, P., & Roberts, J. (1990). The Economics of Modern Manufacturing: Technology, Strategy, and Organization. *The American Economic Review*, *Vol. 80*(No. 3), pp. 511–528.

Moene, K. O., & Wallerstein, M. (2003). Targeting and Political Support for Welfare Spending. In *Conflict and Governance* (pp. 33–54). Springer.

Morduch, J. (1995). Income Smoothing and Consumption Smoothing. *The Journal of Economic Perspectives*, *Vol. 9*(No. 3), pp. 103–114.

Morel, N., Palier, B., & Palme, J. (2012). *Towards a Social Investment Welfare State? Ideas, Policies and Challenges*. Bristol: Policy.

Norton, A., & Elson, D. (2002). *What's Behind the Budget?: Politics, Rights and Accountability in the Budget Process*. London: Overseas Development Institute.

OECD. (2007). The Social Expenditure Database: An Interpretive Guide. SOCX 19800-2003. (Version 2007). OECD Publication Service.

OECD. (2009). Promoting Pro-Poor Growth. Social Protection. OECD Publishing.

Ortiz, I., Cummins, M., Capaldo, J., & Karunanethy, K. (2015). The Decade of Adjustment: A Review of Austerity Trends 2010-2020 in 187 Countries. *ESS Extension of Social Security. International Labour Office, Geneva*, (53).

Ortiz, I., Cummins, M., & Karunanethy, K. (2015). Fiscal Space for Social Protection: Options to Expand Social Investments in 187 Countries. *ESS Extension of Social Security. International Labour Office, Geneva*, (48).

Piachaud, D. (2013). Social Protection, Redistribution and Economic Growth. *Development Southern Africa*, *Vol. 30*(No. 1), pp. 24–38.

Pritchett, L. (2005). A Lecture on the Political Economy of Targeted Safety Nets. *World Bank. Social Protection Discussion Paper Series*, (0501).

Ravallion, M. (2010). Do Poorer Countries Have Less Capacity for Redistribution? *Journal of Globalization and Development*, *Vol. 1*(No. 2), pp. 1948–1837.

Rueschemeyer, D., & Evans, P. (1985). *The State and Economic Transformation: Toward an Analysis of the Conditions Underlying Effective Intervention. In Evans, P. B., Rueschemayer, D., and Skocpol, T., editors, Bringing the State Back in.* Cambridge University Press.

Samson, M. (2013). *How are Countries Using Social Protection to Benefit the Poor? in Erik Solheim Development Co-operation Report 2013. (ed.).* Paris: OECD.

Scheil-Adlung, X. (2015). Global Evidence on Inequities in Rural Health Protection. New Data on Rural Deficits in Health Coverage for 174 Countries. ESS Document No. 47. *ESS Extension of Social Security. International Labour Office, Geneva*, (47).

Schüring, E., & Gassmann, F. (2012). Whom to Target - An Obvious Choice? *UNU-MERIT Working Paper Series*, (028).

Schwabish, J. A., Smeeding, T. M., & Osberg, L. (2003). Income Distribution and Social Expenditures: A Cross-National Perspective. *Luxembourg Income Study Working Paper*, (350).

Sen, A. (1995). *Public Spending and the Poor, Dominique van de Walle and Kimberly Nead (ed.)*. World Bank Publications.

Staiger, D., & Stock, J. H. (1997). Instrumental Variables Regression with Weak Instruments. *Econometrica*, *Vol. 65*(No. 3), pp. 557–587.

Stefan, D., Holmberg, S., Rothstein, B., & Hartmann, F. (2013). The Quality of Government Basic Dataset Made from The Quality of Government Dataset, version 15May13. University of Gothenburg: The Quality of Government Institute, http://www.qog.pol.gu.se.

Tanzi, V., & Zee, H. (2001). Tax Policy for Developing Countries. IMF, Economic Issues No. 27.

Thomas, M. A. (2010). What Do the Worldwide Governance Indicators Measure? *European Journal of Development Research*, *Vol. 22*(No. 1), pp. 31–54.

Thome, K., Filipski, M., Kagin, J., Taylor, J. E., & Davis, B. (2013). Agricultural Spillover Effects of Cash Transfers: What Does LEWIE Have to Say? *American Journal of Agricultural Economics*, *Vol. 95*(No. 5), pp. 1338–1344.

Thurmaier, K. (1995). Decisive Decision Making in the Executive Budget Process: Analyzing the Political and Economic Propensities of Central Budget Bureau Analysts. *Public Administration Review*, *Vol. 55*(No. 5), pp. 448–460.

UNICEF. (2011). Social Protection Strategic Framework. Integrated Social Protection Systems: Enhancing equity for children. UNICEF.

Van de Walle, S. (2006). The State of the World's Bureaucracies. *Journal of Comparative Policy Analysis: Research and Practice*, *Vol. 8*(No. 4), pp. 437–448.

Warlters, M., & Auriol, E. (2005). The Marginal Cost of Public Funds in Africa. *World Bank Policy Research Working Paper*, (3679).

Wildavsky, A. (1964). *The Politics of the Budgetary Process*. Boston: Little Brown.

Wildavsky, A. (1992). "Political Implications of Budget Reform:" A Retrospective. *Public Administration Review*, *Vol. 52*(No. 6), pp. 594–599.

Wilensky, H. L. (1975). *The Welfare State and Equality: Structural and Ideological Roots of Public Expenditures.* Berkeley, CA: University of California Press.

Willoughby, K. G. (1993a). *Patterns of Behavior: Factors Influencing the Spending Judgments of Public Budgeters. In Thomas D. Lynch and Lawrence L. Martin (ed.), Handbook of Comparative Public Budgeting and Financial Management.* New York: Marcel Dekker.

World Bank. (1998). *Public Expenditure Management Handbook*. Washington, D.C.: World Bank.

World Bank. (2001). *Social Protection Sector Strategy: From Safety Net to Springboard.* Washington, D.C.: World Bank.

World Bank. (2012). Managing Risk, Promoting Growth: Developing Systems for Social Protection in Africa. Washington, D.C.: World Bank.

Annexes and Tables

Annex 1 List of countries

North Africa & the Middle East	Eastern Europe and post-Soviet Union	Western Europe and North America	Latin America
Algeria	Albania	Australia*	Argentina*
Cyprus*	Armenia	Canada*	Brazil
Egypt	Azerbaijan	Finland*	Chile*
Iran	Belarus	Germany*	Colombia
Israel*	Bosnia and Herzegovina	Italy*	Dominican Republic
Jordan	Bulgaria	Netherlands*	Guatemala
Kuwait*	Croatia*	New Zealand*	Mexico
Morocco	Czech Republic*	Norway*	Peru
Qatar*	Estonia*	Spain*	Trinidad and Tobago
Tunisia	Georgia	Sweden*	Uruguay
Turkey	Hungary*	Switzerland*	Venezuela
Yemen	Kazakhstan	United Kingdom*	
	Kyrgyzstan	United States*	
South-East Asia	Latvia		
Bangladesh	Lithuania	**Sub-Saharan Africa**	
China	Macedonia	Burkina Faso	
India	Moldova	Ethiopia	
Indonesia	Poland*	Ghana	
Japan*	Romania	Mali	
Korea, South*	Russia	Nigeria	
Malaysia	Serbia	South Africa	
Pakistan	Slovakia*	Tanzania	
Philippines	Slovenia*	Uganda	
Thailand	Ukraine	Zambia	
Vietnam			

Source: World Bank Development Reports, 2012.
Note: Table listing the 80 selected countries, 28 of which are high income countries (*) and 52 are low and middle-income countries, which are grouped in six geographical zones.

Annex 2 Descriptive statistics

	Mean	Std. Dev.	Min.	Max.	Obs.
Social protection					
SP Public Exp. (incl. health exp.), % of GDP	13.20	7.66	1.68	29.22	80
SP Public Social Security Exp. (excl. health exp.), % of GDP	9.31	5.95	0.20	22.00	80
Quality of institutions					
Functioning of Government (from 0 to 12)	7.19	3.46	1.00	12.00	80
Government Effectiveness - Estimate (from 0 to 5)	2.75	0.89	1.28	4.73	80
Rule of Law - Estimate (from 0 to 5)	2.65	0.93	0.91	4.47	80
Property Rights (from 0 to 100)	48.88	23.89	0.00	95.00	80
People's preferences					
Government to provide more public services (from 1 to 10)	6.37	0.95	4.70	8.21	80
Economic					
GDP per capita, PPP (2005 constant international $)	14,692.24	13,191.62	866.37	65,894	80
Log GDP per capita, PPP (2005 constant international $)	9.13	1.07	6.76	11.10	80
Government Revenue, % of GDP	25.58	10.53	9.20	57.33	80
Gini Household Gross Income (from 0 to 100%)	37.56	8.00	23.72	63.14	80
Poverty rate at $1.90 a day PPP (2011), % of population[+]	8.19	15.28	0	60.46	80
Poverty gap at $1.90 a day PPP (2011), % of poverty line[+]	2.69	5.69	0	30.1	80
Demographic					
Total age dependency ratio, % of working-age population	53.49	16.43	18.67	105.97	80
Urban population, % of total population	62.30	21.08	13.18	98.41	80
Population, total (in millions)	72.73	200.14	1.09	1331.26	80
Legal and historical					
Maturity of SP Systems (in number of years)	63.80	26.00	7.00	120.00	80
Colonial origin					
7 British (n=17)	0.21	0.41	0	1	80
8 French (n=6)	0.07	0.26	0	1	80
9 Never colonized (n=45)	0.56	0.49	0	1	80
10 Other (Dutch, Portuguese, Spanish, US) (n=12)	0.15	0.36	0	1	80
Legal origin					
11 English Common Law (n=19)	2.24	0.43	0	1	80
12 French Commercial Law (n=29)	0.36	0.48	0	1	80
13 German Commercial Code (n=4)	0.05	0.22	0	1	80
14 Scandinavian Commercial Code (n=3)	0.04	0.20	0	1	80
15 Socialist/Communist Law (n=25)	0.31	0.47	0	1	80
Instruments					
Index for trade freedom (from 0 to 100)	79.06	9.19	50.20	90	80
Latitude (from 0 to 1)	0.37	0.19	0.11	0.71	80

Note: Descriptive statistics related to the 80 selected countries. Social Protection variables are related to the year 2011. Institutions, People's preferences, Economic, Poverty, Demographic, Geographic and Instrument are related to the year 2009. ([+]) Poverty rate and Poverty Gap calculated using World Bank PovCal data; values set to zero for the 28 high-income countries.

Annex 3 Sources of data

Variable	Countries (Years)	Source
Social protection		
SP Public Exp. (incl. health exp.), % of GDP	188 (1990-2011)*	ILO social protection database, (2014 World Social Protection Report, Table B.12)
SP Public Social Security Exp. (excl. health exp.), % of GDP	188 (1990-2011)*	ILO social protection database, (2014 World Social Protection Report, Table B.12)
Quality of institutions		
Functioning of Government	196 (2005-2012)	Quality of Government Basic Dataset (QOG). Freedom House
Government Effectiveness – Estimate	191 (1996-2011)	QOG dataset. World Bank, Worldwide Governance Indicators (WGI)
Rule of Law – Estimate	193 (1996-2011)	QOG dataset. World Bank - WGI
Property Rights	179 (1994-2012)	QOG dataset. Heritage Foundation
People's preferences		
Government to provide more public services	98 (1990-2014)	World Values Surveys (WVSs). Period 1990-1994 (wave two - 17 observations); 1995-1999 (wave three - 32 observations); 2000-2004 (wave four - 31 observations); 2005-2009 (wave five - 28 observations); and 2010-2014 (wave six - 52 observations).
Economic		
GDP per capita, PPP (2005 constant international $)	181 (1980-2011)	QOG dataset. (World Bank, World Development Indicators (WDI), 2013)
Government Revenue, % of GDP	149 (1990-2011)	QOG dataset. (World Bank, WDI 2013)
Gini Household Gross Income (from 0 to 100%)	152 (1981-2012)	World Bank - PovCal
Poverty rate at $1.90 a day PPP (2011), % of population	152 (1981-2012)	World Bank – PovCal
Poverty gap at $1.90 a day PPP (2011), % of poverty line	152 (1981-2012)	World Bank - PovCal
Demographic		
Total age dependency ratio, % of working-age population	258 (1961-2013)	World Bank – WDI (accessed on 22 July 2014)
Urban population, % of total population	258 (1961-2013)	World Bank – WDI (accessed on 22 July 2014)
Population, total	258 (1961-2013)	World Bank – WDI (accessed on 22 July 2014)
Legal and historical		
Maturity of SP Systems	175 (2009)	Based on International Social Security Agency (ISSA) (Country Profiles). Author's own calculation.
Colonial origin	211 (1946-2012)	QOG dataset. (Hadenius & Teorell, 2005)
Legal origin	211 (1946-2012)	QOG dataset. (La Porta, López-de-Silanes, Shleifer & Vishny, 2009)
Instruments		
Index for trade freedom (from 0 to 100)	180 (1994-2012)	QOG dataset. Heritage Foundation
Latitude (from 0 to 1)	211 (1946-2012)	QOG dataset. (La Porta, López-de-Silanes, Shleifer & Vishny, 2009)

Note: (*) Data available every five years between 1990 and 2005 and yearly for the years 2007 to 2011. For all the variables if data for the year 2009 is not available, the closest year available is chosen.

Table 2 Quality of institutions, people's preferences and SP expenditure: categorical analysis

Dependent variable	Total SP Expenditure (as % of GDP)	
	High, low and middle-income countries	Low and middle-income countries
	OLS	
	(1)	(2)
Maturity of SP Systems	0.083***	0.024
	(0.029)	(0.023)
Government Revenue (% of GDP)	0.149**	0.302***
	(0.062)	(0.084)
Log per capita GDP, PPP (2005 constant intl. $)	1.325	-1.072
	(1.223)	(1.422)
Poverty rate (1.90$/day)	-0.332*	-0.238*
	(0.171)	(0.132)
Poverty gap (1.90$/day)	0.617*	0.487
	(0.339)	(0.305)
Gini index	-0.257***	-0.080
	(0.069)	(0.081)
Age dependency ratio (total)	0.093*	-0.026
	(0.053)	(0.051)
Urban population (% of total)	0.011	0.024
	(0.049)	(0.040)
Population, total (in millions)	0.001	-0.000
	(0.003)	(0.003)
Baseline: 0b.Functioning of Govt.#0.People's preferences		
0.Functioning of Govt.#1.People's preferences	1.863	1.605
	(1.594)	(1.693)
1.Functioning of Govt.#0.People's preferences	4.341**	2.874
	(1.919)	(1.743)
1.Functioning of Govt.#1.People's preferences	5.075**	5.856***
	(1.926)	(2.048)
Constant	-6.113	12.804
	(11.445)	(13.058)
Observations	80	52
R-squared	0.763	0.732

Robust standard errors in parentheses
*** p<0.01, ** p<0.05, * p<0.1

Note: The variable which measures the functioning of the Government has been divided into two levels: "low or 0" (for values from 0 to 6) and "high or 1" (for values from 7 to 12). The proxy for people's preferences has also been divided in two categories: "low or 0" (for values from 1 to 6.4) and "high or 1" (for values from 6.4 to 10) values. The cut-off points for the two levels have been selected by looking at the frequency and distribution of the values of the variables in the selected countries.

Table 3 Different compositions of SP expenditure and quality of institutions

Dependent variable	Total SP Expenditure (as % of GDP)				Total SP Expenditure (excl. Health expenditure) (as % of GDP)			
	High, low and middle-income countries							
	OLS							
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
Functioning of Government	0.731***				0.499***			
	(0.225)				(0.177)			
Government Effectiveness - Estimate		2.212**				1.351*		
		(0.946)				(0.756)		
Rule of Law - Estimate			2.459***				1.501**	
			(0.813)				(0.628)	
Property Rights				0.068**				0.043*
				(0.033)				(0.024)
People's preferences	1.003*	1.047*	1.072*	0.989	1.078**	1.097**	1.112**	1.063**
	(0.561)	(0.590)	(0.573)	(0.595)	(0.461)	(0.472)	(0.468)	(0.478)
Maturity of SP Systems	0.076***	0.103***	0.102***	0.104***	0.055***	0.074***	0.073***	0.074***
	(0.026)	(0.028)	(0.028)	(0.029)	(0.020)	(0.022)	(0.021)	(0.022)
Government Revenue (% of GDP)	0.147**	0.146**	0.122*	0.140**	0.125**	0.123**	0.109**	0.120**
	(0.061)	(0.064)	(0.064)	(0.066)	(0.047)	(0.050)	(0.050)	(0.051)
Log per capita GDP, PPP (2005 constant intl. $)	0.705	1.003	0.784	1.461	0.238	0.579	0.446	0.832
	(1.270)	(1.485)	(1.345)	(1.378)	(0.927)	(1.104)	(1.012)	(1.015)
Poverty rate (1.90$/day)	-0.422**	-0.339*	-0.362**	-0.326*	-0.345***	-0.281*	-0.295**	-0.275*
	(0.163)	(0.186)	(0.175)	(0.177)	(0.124)	(0.147)	(0.139)	(0.139)
Poverty gap (1.90$/day)	0.766**	0.644*	0.651**	0.633**	0.569**	0.472*	0.476**	0.469*
	(0.302)	(0.333)	(0.305)	(0.316)	(0.222)	(0.259)	(0.238)	(0.244)
Gini index	-0.230***	-0.211***	-0.183**	-0.214***	-0.181***	-0.169***	-0.152***	-0.171***
	(0.070)	(0.067)	(0.069)	(0.069)	(0.056)	(0.055)	(0.056)	(0.056)
Age dependency ratio (total)	0.072	0.090	0.076	0.075	0.051	0.065	0.056	0.055
	(0.051)	(0.059)	(0.058)	(0.064)	(0.043)	(0.047)	(0.047)	(0.049)
Urban population (% of total)	-0.002	-0.006	-0.013	-0.013	0.001	-0.001	-0.005	-0.005
	(0.041)	(0.040)	(0.036)	(0.043)	(0.031)	(0.031)	(0.029)	(0.033)
Population, total (in millions)	0.002	0.001	0.001	0.001	0.002	0.001	0.001	0.001
	(0.003)	(0.002)	(0.002)	(0.002)	(0.002)	(0.002)	(0.002)	(0.002)
Constant	-7.342	-14.589	-12.193	-14.228	-4.890	-10.671	-9.212	-10.230
	(12.602)	(13.574)	(12.658)	(13.382)	(9.024)	(10.056)	(9.467)	(9.852)
Observations	80	80	80	80	80	80	80	80
R-squared	0.776	0.752	0.762	0.750	0.759	0.738	0.744	0.737

Robust standard errors in parentheses
*** p<0.01, ** p<0.05, * p<0.1

Table 4 Different compositions of SP expenditure and quality of institutions (LICs and MICs)

Dependent variable	Total SP Expenditure (as % of GDP)				Total SP Expenditure (excl. Health expenditure) (as % of GDP)			
	Low and middle-income countries							
	OLS							
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
Functioning of Government	0.519**				0.319*			
	(0.213)				(0.168)			
Government Effectiveness - Estimate		0.803				0.260		
		(1.321)				(1.022)		
Rule of Law - Estimate			1.708				1.108	
			(1.051)				(0.808)	
Property Rights				0.060				0.037
				(0.040)				(0.029)
People's preferences	1.518**	1.226	1.197*	1.127	1.392***	1.220**	1.192**	1.151**
	(0.670)	(0.758)	(0.702)	(0.698)	(0.483)	(0.545)	(0.508)	(0.513)
Maturity of SP Systems	0.036	0.049*	0.049*	0.044	0.033*	0.042*	0.042*	0.038*
	(0.025)	(0.029)	(0.028)	(0.029)	(0.019)	(0.022)	(0.021)	(0.022)
Government Revenue (% of GDP)	0.264***	0.288***	0.261***	0.291***	0.161**	0.174**	0.158**	0.177**
	(0.084)	(0.095)	(0.093)	(0.094)	(0.064)	(0.071)	(0.069)	(0.069)
Log per capita GDP, PPP (2005 constant intl. $)	-0.213	0.313	0.077	0.213	-0.153	0.249	0.010	0.110
	(1.422)	(1.475)	(1.421)	(1.433)	(1.063)	(1.070)	(1.032)	(1.050)
Poverty rate (1.90$/day)	-0.236*	-0.140	-0.166	-0.155	-0.188*	-0.122	-0.147	-0.138
	(0.133)	(0.133)	(0.127)	(0.122)	(0.111)	(0.114)	(0.109)	(0.106)
Poverty gap (1.90$/day)	0.471*	0.321	0.364	0.386	0.330	0.221	0.268	0.278
	(0.276)	(0.282)	(0.259)	(0.254)	(0.221)	(0.234)	(0.215)	(0.212)
Gini index	-0.078	-0.064	-0.061	-0.077	-0.072	-0.060	-0.063	-0.072
	(0.076)	(0.084)	(0.079)	(0.075)	(0.062)	(0.069)	(0.065)	(0.063)
Age dependency ratio (total)	-0.028	-0.013	-0.022	-0.031	-0.034	-0.025	-0.031	-0.036
	(0.055)	(0.057)	(0.055)	(0.056)	(0.042)	(0.044)	(0.042)	(0.042)
Urban population (% of total)	0.005	0.016	0.015	0.014	0.011	0.017	0.017	0.016
	(0.042)	(0.042)	(0.036)	(0.040)	(0.031)	(0.032)	(0.028)	(0.030)
Population, total (in millions)	0.000	-0.000	-0.001	-0.000	0.000	-0.000	-0.000	-0.000
	(0.003)	(0.002)	(0.002)	(0.002)	(0.002)	(0.001)	(0.001)	(0.002)
Constant	-3.794	-9.094	-7.460	-6.240	-3.000	-6.593	-5.165	-4.511
	(12.379)	(13.337)	(12.801)	(12.583)	(9.607)	(10.046)	(9.562)	(9.586)
Observations	52	52	52	52	52	52	52	52
R-squared	0.712	0.678	0.694	0.691	0.743	0.722	0.734	0.731

Robust standard errors in parentheses
*** p<0.01, ** p<0.05, * p<0.1

Table 5 Different measures of SP expenditure (including health expenditure)

Dependent variable	Total SP Expenditure (as % of GDP)	Total SP Exp. (as % of General Govt. total Exp.)	Log. total SP Public Exp. per capita	Total SP Expenditure (as % of GDP)	Total SP Exp. (as % of General Govt. total Exp.)	Log. total SP Public Exp. per capita
	High, low and middle-income countries			Low and middle-income countries		
	OLS					
	(1)	(2)	(3)	(4)	(5)	(6)
Functioning of Government	0.731***	0.016**	0.064**	0.519**	0.012	0.046*
	(0.225)	(0.006)	(0.024)	(0.213)	(0.008)	(0.024)
People's preferences	1.003*	0.038***	0.192***	1.518**	0.054***	0.247***
	(0.561)	(0.013)	(0.066)	(0.670)	(0.020)	(0.088)
Maturity of SP Systems	0.076***	0.001*	0.009***	0.036	0.000	0.005*
	(0.026)	(0.001)	(0.003)	(0.025)	(0.001)	(0.003)
Government Revenue (% of GDP)	0.147**		0.010*	0.264***		0.022**
	(0.061)		(0.005)	(0.084)		(0.009)
Log per capita GDP, PPP (2005 constant intl. $)	0.705	0.006	0.992***	-0.213	0.010	1.011***
	(1.270)	(0.029)	(0.127)	(1.422)	(0.037)	(0.143)
Poverty rate (1.90$/day)	-0.422**	-0.009**	-0.055***	-0.236*	-0.005	-0.033**
	(0.163)	(0.004)	(0.018)	(0.133)	(0.004)	(0.015)
Poverty gap (1.90$/day)	0.766**	0.015*	0.106***	0.471*	0.010	0.075**
	(0.302)	(0.008)	(0.035)	(0.276)	(0.008)	(0.034)
Gini index	-0.230***	-0.002	-0.013*	-0.078	0.000	-0.002
	(0.070)	(0.001)	(0.006)	(0.076)	(0.002)	(0.008)
Age dependency ratio (total)	0.072	0.000	0.001	-0.028	-0.002	-0.008
	(0.051)	(0.001)	(0.005)	(0.055)	(0.002)	(0.006)
Urban population (% of total)	-0.002	0.000	-0.001	0.005	0.000	-0.001
	(0.041)	(0.001)	(0.004)	(0.042)	(0.001)	(0.004)
Population, total (in millions)	0.002	-0.000	0.000	0.000	-0.000	-0.000
	(0.003)	(0.000)	(0.000)	(0.003)	(0.000)	(0.000)
Constant	-7.342	-0.065	-3.808***	-3.794	-0.109	-4.311***
	(12.602)	(0.289)	(1.243)	(12.379)	(0.346)	(1.371)
Observations	80	80	80	52	52	52
R-squared	0.776	0.639	0.947	0.712	0.517	0.929

Robust standard errors in parentheses
*** p<0.01, ** p<0.05, * p<0.1

Table 6 Different compositions of SP expenditure: controls for colonial origins

Dependent variable	Total SP Expenditure (as % of GDP)	SP Expenditure (excl. Health Exp.) (as % of GDP)
	Low and middle-income countries	
	OLS	
	(3)	(4)
Functioning of Government	0.370**	0.198
	(0.170)	(0.135)
People's preferences	1.443**	1.451***
	(0.703)	(0.534)
Maturity of SP Systems	0.025	0.027
	(0.019)	(0.017)
Government Revenue (% of GDP)	0.374***	0.250***
	(0.065)	(0.052)
Log per capita GDP, PPP (2005 constant intl. $)	0.071	0.040
	(1.033)	(0.779)
Poverty rate (1.90$/day)	-0.064	-0.071
	(0.117)	(0.100)
Poverty gap (1.90$/day)	0.175	0.153
	(0.216)	(0.180)
Gini index	-0.015	-0.045
	(0.071)	(0.057)
Age dependency ratio (total)	0.015	-0.012
	(0.057)	(0.044)
Urban population (% of total)	0.006	0.000
	(0.036)	(0.029)
Population, total (in millions)	0.001	0.000
	(0.002)	(0.002)
Baseline: Former British colonies		
Never colonized	4.270***	2.858***
	(1.159)	(1.004)
Former French colonies	-1.374	-1.250
	(1.594)	(1.335)
Others colonies	2.796	2.906*
	(1.883)	(1.475)
Constant	-14.951	-10.166
	(9.594)	(7.662)
Observations	52	52
R-squared	0.796	0.813

Robust standard errors in parentheses
*** p<0.01, ** p<0.05, * p<0.1

Table 7 Different compositions of SP expenditure: controls for legal origins

Dependent variable	Total SP Expenditure (as % of GDP)	SP Expenditure (excl. Health Exp.) (as % of GDP)	Total SP Expenditure (as % of GDP)	SP Expenditure (excl. Health Exp.) (as % of GDP)
	High, low and middle-income countries		Low and middle-income countries	
	OLS			
	(1)	(2)	(3)	(4)
Functioning of Government	0.690***	0.485***	0.586***	0.386**
	(0.233)	(0.179)	(0.199)	(0.158)
People's preferences	1.016*	1.124**	1.290*	1.238**
	(0.556)	(0.455)	(0.653)	(0.463)
Maturity of SP Systems	0.078***	0.056***	0.023	0.024
	(0.028)	(0.020)	(0.022)	(0.018)
Government Revenue (% of GDP)	0.146**	0.114**	0.282***	0.170***
	(0.065)	(0.049)	(0.071)	(0.059)
Log per capita GDP, PPP (2005 constant intl. $)	0.652	0.274	0.353	0.258
	(1.323)	(0.971)	(1.288)	(0.976)
Poverty rate (1.90$/day)	-0.382**	-0.312**	-0.178	-0.155
	(0.162)	(0.125)	(0.144)	(0.119)
Poverty gap (1.90$/day)	0.672**	0.507**	0.389	0.305
	(0.304)	(0.225)	(0.292)	(0.235)
Gini index	-0.179**	-0.133**	-0.042	-0.047
	(0.069)	(0.053)	(0.079)	(0.060)
Age dependency ratio (total)	0.070	0.043	0.001	-0.021
	(0.062)	(0.051)	(0.069)	(0.054)
Urban population (% of total)	-0.004	-0.006	-0.003	-0.001
	(0.042)	(0.032)	(0.042)	(0.032)
Population, total (in millions)	0.002	0.002	0.001	0.001
	(0.003)	(0.002)	(0.002)	(0.002)
Legal origins. Baseline: English Common Law				
French Commercial Code	0.214	0.694	1.970	1.897*
	(1.332)	(1.069)	(1.319)	(1.070)
Socialist/Communist Laws	1.039	1.190	3.663**	2.818**
	(1.588)	(1.290)	(1.534)	(1.216)
German Commercial Code	2.001	1.662		
	(2.473)	(2.231)		
Scandinavian Commercial Code	4.338	4.781*		
	(3.007)	(2.673)		
Constant	-9.200	-7.131	-12.398	-8.751
	(13.337)	(9.604)	(12.453)	(9.775)
Observations	80	80	52	52
R-squared	0.786	0.777	0.743	0.771

Robust standard errors in parentheses
*** p<0.01, ** p<0.05, * p<0.1

Table 8 Instrumenting the quality of institutions

Dependent variable	Total SP Expenditure (as % of GDP)					
	High, low and middle-income countries			Low and middle-income countries		
	OLS	2SLS	2SLS	OLS	2SLS	2SLS
	(1)	(2)	(3)	(4)	(5)	(6)
Functioning of Government	0.731***	0.510	2.852**	0.519**	0.692*	3.182
	(0.225)	(0.420)	(1.382)	(0.213)	(0.399)	(3.673)
People's preferences	1.003*	0.968	1.338	1.518**	1.606**	2.869
	(0.561)	(0.581)	(0.905)	(0.670)	(0.697)	(2.429)
Maturity of SP Systems	0.076***	0.087**	-0.027	0.036	0.031	-0.034
	(0.026)	(0.035)	(0.071)	(0.025)	(0.028)	(0.105)
Government Revenue (% of GDP)	0.147**	0.144**	0.176**	0.264***	0.257***	0.158
	(0.061)	(0.063)	(0.080)	(0.084)	(0.083)	(0.214)
Log per capita GDP, PPP (2005 constant intl. $)	0.705	1.368	-5.675	-0.213	-0.477	-4.278
	(1.270)	(1.680)	(4.212)	(1.422)	(1.519)	(5.524)
Poverty rate (1.90$/day)	-0.422**	-0.367*	-0.948**	-0.236*	-0.276*	-0.849
	(0.163)	(0.186)	(0.395)	(0.133)	(0.151)	(0.844)
Poverty gap (1.90$/day)	0.766**	0.670*	1.684**	0.471*	0.541*	1.548
	(0.302)	(0.336)	(0.771)	(0.276)	(0.309)	(1.534)
Gini index	-0.230***	-0.230***	-0.232**	-0.078	-0.087	-0.228
	(0.070)	(0.070)	(0.100)	(0.076)	(0.082)	(0.295)
Age dependency ratio (total)	0.072	0.084	-0.047	-0.028	-0.032	-0.095
	(0.051)	(0.057)	(0.111)	(0.055)	(0.058)	(0.137)
Urban population (% of total)	-0.002	-0.003	0.003	0.005	0.002	-0.042
	(0.041)	(0.042)	(0.054)	(0.042)	(0.042)	(0.102)
Population, total (in millions)	0.002	0.002	0.007	0.000	0.000	0.004
	(0.003)	(0.003)	(0.007)	(0.003)	(0.003)	(0.010)
Constant	-7.342	-12.991	46.970	-3.794	-1.650	29.230
	(12.602)	(15.979)	(36.381)	(12.379)	(13.297)	(46.047)
Observations	80	80	80	52	52	52
R-squared	0.776	0.772	0.410	0.712	0.708	-
	First Stage estimates and IV statistics					
Trade Freedom		0.135***			0.129***	
		(0.029)			(0.026)	
Latitude			3.487			1.814
			(2.038)			(2.572)
F-test for weak identification		21.23	2.93		24.22	0.681

Robust standard errors in parentheses
*** p<0.01, ** p<0.05, * p<0.1

Note: Functioning of the government is the variable instrumented. Trade freedom and latitude are the instruments introduced once at a time in model 2, 3, 5 and 6: F statistics are used to test the weak identification. According to Staiger and Stock (Staiger & Stock, 1997) a value of the F-statistic higher than 10 means that weak identification is not a matter of concern.