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Inequality, Privatization and Democratic Institutions in Developing Countries

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Abstract

According to the existing theoretical literature, there are several channels through which privatization of State-owned enterprises and assets may shape the distribution of income, either increasing or decreasing the level of inequality. Assessing the actual distributional impact of privatization becomes therefore an empirical matter. This paper is a first attempt to empirically investigate the relationship between privatization and income inequality through redistribution, focusing on the role of democratic institutions in developing countries. Using an unbalanced panel of low- and middle-countries in the period 1988-2008, we find that an increase in privatization revenue is negatively and significantly correlated with net-income inequality when democratic institutions are well consolidated. All the robustness checks we perform confirm this finding. Thus, our analysis seems to suggest that, in developing countries, policy makers's choice of implementing divestiture programs while democratizing at the same time may lead to an improvement in income equality.

Keywords: Inequality, Democracy, Privatization, Developing countries

JEL classification: D30, O15, P5

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1 Introduction

Starting in Britain in the early 1980s, privatization of State-Owned Enterprises (SOEs) has occurred in both developed and developing countries, although with national differences in terms of relevance, timing and methods.[1] Since 1977, the estimated proceeds arising from divestiture programs reach US$2 trillion worldwide (Megginson, 2010). In emerging and developing countries, from 1988 to 1993 the value of privatization programs represented between one-third and one-half of the world total (Cook and Kirkpatrick, 1997). At the beginning of the 2000s, these countries further increased the value of their transactions thus becoming the driving forces in global privatization efforts. Moreover, in these countries proceeds from privatization have been a significant share of GDP, reaching, for instance, about 17% in Bolivia in 2007 (World Bank Privatization Database).[2]

The literature has emphasized different reasons behind this privatization trend. Most importantly, governments have been implementing divestiture programs as a mean for reaching positive economic outcomes, among which (i) reducing the national budget deficits and the stock of national debt, (ii) developing financial markets, and (iii) increasing the level of firms' efficiency (IMF, 2011). Moreover, when focusing on developing countries, international forces come to play. More precisely, the decision to implement privatization programs in developing countries has been primarily driven by international emulative diffusion (see Brune et al, 2004; Doyle, 2010) and, above all, by binding and conditional requests from international financial institutions, i.e. IMF and World Bank (see Stallings, 1992). During the 1980s and the 1990s, on average, developing countries showed each year outstanding obligations from IMF and World Bank of respectively 3.1 and 9.2 percent of GDP (see Brune et al, 2004). Such loans, indispensable to these countries for financing their development programs, have often been conditional to the credible commitment on their part to implement specific market friendly reforms, generally starting from privatization of SOEs.[3]

Even if privatization can contribute to improve firms efficiency, may help countries to consolidate their financial performance, and may be the prerequisite to broaden development opportunities, its distributional impact should not be disregarded.[4] This is particularly true for developing countries where, due to governance failures or to historical reasons, income and wealth tend to be more concentrated than in developed countries

[1] From an historical point of view, the first denationalization program after World War II was implemented in Germany by the Adenauer government in the 1960s, but the first relevant privatization program was the one adopted by the Thatcher government (see Megginson and Netter, 2001).

[2] See subsection 3.1 for a basic discussion of World Bank privatization data referred to developing countries (`data.worldbank.org/data-catalog/privatization-database`).

[3] See Williamson (1993) for the inclusion of privatization among the policies in the "Washington consensus" between the US Treasury and the international financial institutions. And see Opper (2004) about the role of IMF and IBRD (International Bank for Reconstruction and Development) loans in explaining the progress in privatization.

[4] Efficiency improvements are more likely to be observed when privatization is implemented together with deregulation or other increasing competition strategies (see Cavaliere and Scabrosetti, 2008, for a survey of the literature on privatization and efficiency).

(Kuznets, 1963).[5]

More specifically, according to the existing theoretical literature on the distributional impact of privatization, privatization-induced changes in market conditions (e.g. in the labor market or in the financial sector) or in the pattern of growth could both increase or decrease income inequality.[6] At the same time, privatization may be related to income equality directly through redistribution. In fact, privatization generates a flow of revenue that could be potentially (at least partially) used for redistributive aims through transfers and public spending programs.

In this paper we posit that a major role in determining the impact of privatization on income distribution through redistribution is played by the democratization process. Thus, we aim at empirically investigate whether a relationship between privatization resources and income inequality exists and whether it may be influenced by the presence of democratic institutions in developing countries. In other words, we want to test whether privatization revenues are related to a reduction in income inequality and whether there is a potential role for democratic institutions in shaping their distributional impact. In particular, we focus on developing countries, which have recently experienced both economic and democratic transitions, although with some differences due to their history, background, institutional, economic and social characteristics.[7] Using an interaction model, we show that an increase in privatization revenues is associated to a reduction in net-income inequality when political institutions are representative, accountable and legitimate. This result is robust to different specifications and potential sources of endogeneity. Thus, the paper shows that in developing countries the policy makers' choice of promoting not only economic but also political freedom seems to be related to an improvement in income distribution.

The paper is organized as follows: the next section contains theoretical considerations and an overview of the literature on the distributional impact of privatization; Section 3 provides a description of the data; Section 4 presents our econometric method, describes our results and contains some robustness checks. Section 5 concludes.

2 Theoretical Considerations and Related Literature

The theoretical literature is inconclusive in determining the distributional impact of privatization, as the same transmission channels may both increase and decrease inequality (see Birdsall and Nellis, 2003; Estrin and Pelletier, 2016).

First of all, the sign of the distributional impact is associated to the way assests'

[5] For instance, the average Gini index, circa 2010, was 30.9 in Europe and Central Asia; 35.5 in South Asia; 36.4 in North Africa and the Middle East; 37.5 in East Asia and Pacific; 43.5 in Sub-Saharan Africa; 43.6 in North America and 47.8 in Latin America and the Caribbean (our computation from UNU-WIDER World Income Inequality Database - WIID).

[6] See Section 2 for a review of the main contributions belonging to this theoretical literature.

[7] As emphasized by a recent and growing literature, democratic and economic transitions are typically related (see among others Giavazzi and Tabellini, 2005; Papaioannou and Siourounis, 2008; Persson and Tabellini, 2007). See also Dinavo (1995) on the impact of privatization on economic development and democracy.

ownership is transferred from the State to private hands (see Megginson, 2010; Piketty, 2014). Allocating public assets only to a subset of individuals (e.g. entrenched political elites or their constituency) has the obvious effect of increasing inequality, as opposed to distributing vouchers to the entire population (see Acemoglu and Robinson, 2012; Nellis, 2006). At the same time, ownership concentration in the hands of few private shareholders is commonly acknowledged to be related to efficiency's improvements, thus generating an equity-efficiency trade-off when designing asset transfer policies (see Estrin, 2002).

The labor market is another channel through which privatization may differently affect income distribution. Inequality may increase following workforce redundancies in the privatized firms. Even if such employment cost could be limited to the initial phases of the restructuring process, the effect can be amplified by potential inflow of foreign capital from developed countries following privatization. In fact, as predicted by dependency theory, reliance on foreign capital increases income inequality of a country, for example through the under-absorption of labor and sectoral disparities due to the capital intensity of foreign investments (Evans and Timberlake, 1980). Moreover, privatization may lead to wage inequality between skilled and unskilled labor and to lower social welfare (Chao et al, 2006).

Privatization may potentially influence inequality by boosting the development of the financial sector. By channeling funds to the most productive uses and by extending access to finance (once granted only to entrenched incumbents) to households and small enterprises, inequality should decrease (World Bank, 2016). Nevertheless, improvements in the financial system may also result in channeling more capital to the wealthy and politically connected, hence widening income inequality (see Levine, 2005, and references therein).

Moreover, as already mentioned, privatization is usually part of a broader package of market-friendly reforms intended to curb inefficiencies and to boost economic growth and development (Bennett et al, 2017; De Haan et al, 2006).[8] Some evidence points to a negative relationship between economic freedom and income inequality: given the growth-equity trade-off and the strong positive relationship between growth and economic freedom, any change in the direction of more economic freedom (e.g. privatization of SOEs) would lead to an increase in inequality (see Hall and Lawson, 2014; Okun, 1975; Scully, 2002). Nevertheless, recent evidence points to an inverted-U-shaped relationship between economic freedom and income inequality: once passed the tipping point, any improvements to economic freedom leads to a decrease in income inequality (see Wu and Yao, 2015, for the case of China and Bennett and Vedder, 2013 for the case of US).

Assessing the distributional impact of divestiture programs is moreover complicated by the fact that other reforms, involving for example market competition and regulatory regime, may or may not be carried out at the same time (Birdsall and Nellis, 2005; Florio and Puglisi, 2005).[9] But even when we narrow the focus to the utility sector,

[8] On the relationship between economic freedom and inequality, see Bennett and Nikolaev (2017) and references therein.

[9] For example, in the European Community, the privatization strategy accounts the following steps:

where divestiture procedures generally mean the contemporaneous elimination of illegal or informal connections, improved quality and extended access, and a possible change in prices, it is hard to reach a clear conclusion on the distributional impact of privatization (Estache et al, 2001).

At the same time, privatization may be related to income inequality through redistribution. In fact, privatization generates a revenues flow in the form of privatization proceeds and taxes from the newly (higher) productive private firms that could be (partially) used for redistributive aims. Moreover, privatization sets free public resources for better targeted public spending programs by ceasing costly transfers to inefficient public firms.[10]

We argue that, when looking at the relationship between privatization and income distribution, the role of the democratization process cannot be neglected. As claimed by Acemoglu and Robinson (2006), democratization can be considered as a commitment device to future redistribution from the rich (the elites) to the poor (the citizens).[11] In fact, democratization changes the position and the preferences of the median voter, by enfranchising the poorest segment of the population, and thus moving public policies away from the preferences of the elites. This helps changing the policy agenda by including pro-equity measures such as the provision of public goods especially beneficial for the poor (Aidt et al, 2006; Easterly, 2007).[12] As a consequence, the more unequal the existing income distribution, the stronger will be the corresponding redistributive pressure.[13] Moreover, the free flow of information about the condition of the poor may be embarrassing to a democratic government which does not take into account their needs (Sen, 1981, 1999).[14] All these arguments are consistent with the Meltzer and Richard (1981) model and with the more recent findings of Tan (2011).

Having recently experienced both privatization programs and political transitions to democracy, developing countries are the natural candidate for our analysis. Following Birdsall (1999): "*The risks of privatization arise because developing and transitional economies, almost by definition, are handicapped by relatively weak institutions, less well-established rules of transparency, and often, not only high concentrations of economic and political power but a high correlation between those two areas of power.*" Thus, in this

privatization, regulation, vertical disintegration, and liberalization (Ceriani and Florio, 2011).

[10]Notice that public debt in developing countries is mainly held by public institutions or international organizations and as a consequence the market pressure for debt reduction in these countries is less relevant than in developed economies (World Bank, 2016).

[11]However, it has to be noticed that there is no consensus on the positive relationship between democratization and redistribution neither in the theoretical nor in the empirical literature (see among the others Bennett and Nikolaev, 2016; Fishman et al, 2015; Georgiadis and Manning, 2012; Harms and Zink, 2003; Milanovich, 2000; Ross, 2006; Scervini, 2012).

[12]See also Cutright (1967); Hewitt (1977); Muller (1985, 1988); Stack (1979)

[13]Other contributions on the political mechanism through which greater income inequality leads to greater redistribution can be found in Alesina and Perotti (1996) and Alesina and Perotti (1997). Lindqvist and Östling (2013) study the voters' preferences for redistribution in the light of endogenous identity choices (social classes or ethnic group). They find that social class is more relevant and redistribution is higher in ethnically more homogeneous societies.

[14]On the relationship between democracy, redistributive taxation and the private provision of public goods see also Markussen (2011) and Profeta et al (2013).

paper we want to empirically investigate if there is a relationship between privatization proceeds and income inequality and if the democratization process can play a relevant role in studying this relationship in developing countries.

Our paper is closely related to Ahmad (2017), where the author analyzes the role of political regime (democratic and non-democratic) in assessing the impact of economic freedom on inequality. More precisely, he estimates an inequality model that explicitly captures the interaction between economic freedom and democracy and finds that the increase in inequality following liberalization policies is attenuated when it is implemented in a more democratic political framework. In our paper, by using an interaction model we empirically test the role of democratic institutions in shaping the relationship between privatization, measured as the monetary proceeds from divestiture of SOEs, and income inequality through redistribution in developing countries. Our findings are in line with those of Ahmad (2017) and suggest that the choice of policy makers of both democratize and start economic reforms may lead to an improvement in income equality.

3 Data description

In order to empirically investigate the relationship between privatization and income inequality through redistribution, in the light of democratization process in developing countries, this paper makes use of several data sources, as detailed in the following subsections.

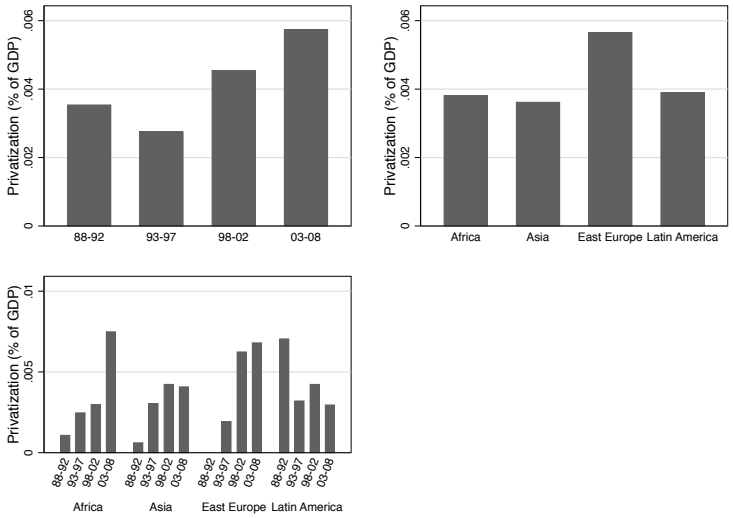
3.1 Privatization data

Privatization data comes from the World Bank Privatization Database, which covers the period 1988-2008 for low- or middle-income countries belonging to the Africa, Asia, Eastern Europe and Latin America regions. The database includes transactions which generate monetary proceeds of at least US$1 million to the government. To allow for international comparability, we normalize privatization revenue as a share of GDP.

As shown in Figure 1, privatization proceeds as a share of GDP are quite stable from 1988 to 1997, while more than doubled starting from the 2000s, when emerging and developing countries became the driving forces in the global privatization process. Looking at the different regions, Eastern European countries show the highest privatization proceeds over GDP, while Asian countries the lowest. The need to conform to the European Union market system as a requirement for accession helps to explain the relevance of privatization revenues in Eastern Europe (Baldwin et al, 1997). On the other hand, for historical reasons related to the role of the government in the post-colonial period, privatization has been very limited in South Asia, while it was more widespread in both East Asia and particularly China (Gupta, 2008). Africa, Asia and Eastern Europe collected most of their privatization revenues in the period from 1998 to 2008. In particular, at the beginning of the 1990s there was in Africa a strong opposition to privatization, from both public sector workers and politicians, which progressively softened mainly because of the need to restore public finances after the fiscal crisis in sub-Saharan countries, and

the reforming pressures from international organizations (Bennell, 1997). On the contrary, Latin America started to collect high resources from divestiture programs since the end of the 1980s, with very low proceeds remaining in the last period under consideration. Chile drove this Latin American privatizations' wave: its divestiture program in its infrastructure sector started at the end of the 1970s and reached the peak during the 1990s.

Figure 1: Privatization proceeds over GDP by region and period.



Source: Authors' elaboration on World Bank Privatization Database

Unfortunately, the World Bank's Privatization Database does not codify in a well defined and homogeneous way SOEs' divestiture methods. As a consequence, although – as mentioned before – different types of privatization could have different distributional effects, independently from the democratization process, in our empirical analysis we cannot address this issue.[15]

3.2 Inequality data

Choosing the data source to measure income inequality is less straightforward. While there are many country specific household surveys that allow computing inequality indices, cross-country comparability is still an open issue. The two main projects aiming at solving this issue are the Lisdatacenter (former Luxembourg Income Study, LIS, 2016),[16] that collects and harmonizes national surveys in order to guarantee the highest level of comparability, and the World Income Inequality Database (WIID) released by

[15] See Brada (1996) for a general classification of privatization methods and for a discussion of those more adopted by developing countries.

[16] `lisdatacenter.org`

UNU-WIDER (UNU-WIDER, 2015), that collects inequality indicators from many different sources, classifying them according to quality, underlying measure (i.e. gross income, net-income, consumption, and so on), unit of analysis, equivalence scale, population and sector coverage (i.e. urban, rural, and so on). The arising trade-off is between highly comparable data on a small set of high-income countries in few years and a wider dataset of barely comparable indicators.

In this paper we choose a third option, namely version 5 of the Standardized WIID (SWIID from now on).[17] SWIID is a project run by Frederick Solt since 2009 (Solt, 2009) that imputes the missing data on inequality from WIID using multiple imputation techniques and validates it using the high quality Lisdatacenter dataset (see Solt, 2016, for more details). The great advantage of SWIID is that it provides an ideally comparable panel of inequality indicators; the drawbacks are that (i) it only provides Gini coefficients (while other datasets also provide quantiles and mean income); and (ii) the statistical analyses must take into account the underlying multiple imputation technique in order to correct for the precision of the estimation of every country/year values.[18]

Table 1 shows the estimated means of the Gini coefficients computed on net-incomes both in the whole sample and in the four regional sub-samples. As expected, inequality results to be much higher than the average in Latin America and much lower than the average in Eastern European countries.

[Table 1 about here]

3.3 Democracy data

Measuring the level of democracy of a country signifies translating a large amount of qualitative characteristics and features of its political system into a one-dimensional numerical scale. This is a very difficult task, usually subject to heroic assumptions and simplifications. Political scientists have proposed several democracy indices, each of them focusing on specific and partly different features of the political system of a country. The most commonly used in the economic literature are the Gastil index, released by the Freedom House (Freedom House, 2016), the Polity2 index, released by the Polity IV project (Marshall et al, 2016), and the Cheibub index (Cheibub et al, 2010). These measures differ at least with respect to the underlying concept of democracy, the nature of the data used to classify political regimes and the type of measurement (Cheibub et al, 2010). However, discussing the merits and the flaws of these democracy indicators is beyond the scope of this paper.

In our baseline model we decided to use the Gastil index of democracy, released by the Freedom House (Freedom House, 2016) on a yearly basis.[19] This index is the average of

[17] See Bennett and Nikolaev (2017) and Bergh and Nilsson (2010) on the reasons that lead to prefer SWIID to the Standardized Income Distribution Database (SIDD) realized by Babones and Alvarez-Rivadulla (2007).

[18] On the possible issues arising from the use of secondary datasets for the analyses of cross-national inequality, see Atkinson and Brandolini (2001).

[19] Notice that we will check the robustness of our baseline model results with respect to the choice of the democracy in Section 4.1.

two different indicators, one referring to civil liberties, the other to political rights. Each country receives a score on a decreasing scale from 1 (the highest score) to 7 (the lowest score) in both dimensions according to several aspects, such as freedom of expression and belief, rule of law, associational and organizational rights, personal autonomy and individual rights, political pluralism and participation, electoral process, functioning of government. In order to make our results easier to understand, we dichotomize the original Gastil index, thus identifying as democratic those country/years with a Gastil index lower than 4 and as non-democratic the others.[20]

3.4 Control variables

Similarly to previous empirical studies on inequality (see Bergh and Nilsson, 2010), we also include in our baseline empirical analysis the following controls: the log of per-capita GDP because of the relationship between income levels and distributional outcomes (Kuznets, 1955); the share of foreign direct investments over GDP, that according to the dependency theory may increase income inequality in developing countries (ODI, 2004; Wan et al, 2007); the educational attainment for population aged 25 and over to allow for human capital (Krusell et al, 2000; Lindqvist, 2005); the share of population living in urban areas, as a proxy for both economic development and high population heterogeneity, and the dependency ratio, that is the share of population under 15 or above 65 in order not to neglect the relationship between income inequality and demographic changes (Bennett and Nikolaev, 2017; Bergh and Nilsson, 2010).[21] Independent variables come from the World Development Indicators (World Bank), with the only exception of data on human capital that are from Barro and Lee (2013).

Table 2 reports the descriptive statistics for all the country/years included in the baseline model (shown in Table 4). The working dataset consists of an unbalanced panel of 472 observations, including 62 countries observed for about 7.5 points in time. The full list of countries is in Table 3, that also shows the average Gini coefficients and privatization proceeds by country in the main sample.

[Table 2 about here]

[Table 3 about here or in appendix]

4 Method and results

In this section we test the conditional hypothesis described before: in developing countries the relationship between privatization proceeds and income inequality through redistribution may depend on the extent of democratization process. Thus, we estimate the following interaction model:

$$G_{i,t} = \alpha + \beta D_{i,t-3} + \gamma P_{i,t-3} + \delta D_{i,t-3} \times P_{i,t-3} + \zeta X_{i,t-3} + \eta_t + \theta_j + \varepsilon_{i,t} \qquad (1)$$

[20] We thank an anonymous reviewer for suggesting this change.

[21] Notice that in Section 4.1 we will enlarge the set of controls according to the theoretical literature on the distributional impact of privatization.

where G is the Gini coefficient computed on net-income in country i at year t, D is the dichotomized Gastil index of democracy, P is the ratio of revenues from privatization with respect to GDP,[22] X is the set of control variables, η is a set of yearly dummies, and ε is the idiosyncratic error term. We also include region fixed effects (θ_j) to control for time invariant characteristics at regional level. Notice that the inclusion of the multiplicative interaction term allows us to explicitly test our hypothesis on the relationship between income inequality and privatization revenue in the light of democratization process in developing countries (Brambor et al, 2006). Since we expect the relationships between income inequality and our independent variables not to be instantaneous, we use different lags in the regressors. We decided to show the results of our estimates with three lags in explanatory variables and controls. However, as we will better discuss in Section 4.1, our results are virtually unaffected by using different lags.[23] Finally, since the error term might be serially correlated within countries and thus wrongly inflate the precision of our estimates, we always cluster the standard errors at the country level (see Bertrand et al, 2004).[24]

The results of our baseline model are shown in Table 4 and are organized as follows.[25] In the first (unconditional) specification we only consider the democracy measure together with the total amount of privatization proceeds out of GDP, while in the second specification we add the interaction term and in the other specifications we also add control variables.

[Table 4 about here]

The top part of Table 4 shows model parameters, while the bottom part of Table 4 the *marginal effect* of both privatization and democracy on income inequality.[26]

Some caution is needed when interpreting multiplicative interaction models (we refer the reader to Brambor et al (2006), pp. 70–74, for an extensive discussion on this issue). Notice, in fact, that magnitude and significance of the single model parameters associated to the interaction variables have a limited explicative power: in particular, β and γ represent the *marginal effect* on inequality of democratization and privatization for the unique cases in which privatization proceeds and democracy (Gastil dummy) are zero respectively. Magnitude and significance of the coefficient on the interaction term δ are also not helpful in stating whether privatization proceeds have a meaningful conditional *effect* on income inequality (Ai and Norton, 2003). In fact, it is possible for the *marginal*

[22] See Doyle (2010) on the discussion of exogenous determinants of privatization.

[23] Unfortunately, there is no way to run information criterion tests to determine the 'optimal' choice of the lag due to the multiple imputation nature of the SWIID data.

[24] Within-country inequality is a quite persistent variable. This persistence does not allow us to obtain statistically significant estimates when using country fixed effects.

[25] Given that we use the Gini index as dependent variable, a positive (negative) relationship between our explanatory variables means that if they increase then ex post income inequality increases (reduces).

[26] Notice that we compute the *marginal effect* of privatization on ex post income inequality when Gastil dummy is 1, while we compute the *marginal effect* of democratization on ex post income inequality at the mean value of privatization proceeds in our sample.

effect to be significant even if the coefficients of the model parameters are not statistically significant.[27]

Bearing this in mind, our results show that if Gastil dummy is zero, that is if the political system of a country can not be classified as democratic, the relationship between privatization proceeds over GDP and income inequality is sometimes negative and statistically significant. At the same time, the relationship between democracy and income inequality is not statistically significant when privatization revenue over GDP are zero. Moreover, the coefficient of the interaction term is always negative and statistically significant and, mostly relevant, the *marginal effect* of privatization on income inequality is negative and statistically significant. On the contrary, the *marginal effect* of democracy on Gini net is not statistically significant.[28] These findings allow us to state that in developing countries an increase in privatization proceeds is related to a reduction in ex post income inequality especially when democratic institutions are well consolidated.

In order to be able to distinguish between the potentially different role of civil liberties protection and political rights guarantee when we are investigating the relationship between privatization proceeds and net-income inequality, we re-run our regressions by looking at these two different components of the Gastil index. Table 5 shows our results only for the least and for the most demanding specification of Table 4 respectively.[29] Focusing on the parsimonious specification, we find that there is not a statistically significant relationship between democracy and Gini net, neither when we are looking at the civil liberties component nor when we are looking at the political rights component (columns 1 and 3). At the same time, in both cases we find a negative and statistically significant relationship between privatization revenue and Gini net. Moreover, our findings for the most complete specification suggest that only the coefficient of the interaction term between privatization and political rights is negative and statistically significant (columns 2 and 4). On the contrary, the *marginal effect* of privatization, this time respectively computed at the mean value of both civil liberties and political rights indices in our sample, is negative and statistically significant in both cases, meaning that an increase in privatization proceeds is related to a reduction in ex post income inequality when both civil liberties are well protected and political rights are well guaranteed.[30]

Summing up, even if our analysis seems to show that in developing countries the choice of policy makers of both democratize, that is increasing either civil liberties protection or political rights guarantee, and start economic reforms may lead to identify an improvement in income equality.

[27] This happens when the covariance term, which is part of the standard error of the *marginal effect*, is negative.

[28] Notice that for completeness reasons we also show the *marginal effect* of democracy on Gini net even if we are only interested in the theoretically more accurate hypothesis according to which democracy can change the relationship between privatization proceeds and income inequality. In other words, our interpretation on the relationship between democratization and inequality always assume privatization revenue to be constant.

[29] For space reasons, we only show the results for these two specifications. Notice however that our results are the same for all the other specifications of Table 4 and are available upon request.

[30] Even in this case neither the *marginal effect* of civil liberties nor the *marginal effect* of political rights, computed at the mean value of privatization revenue in our sample, are statistically significant.

[Table 5 about here]

4.1 Robustness checks

In this section, we want to check the robustness of our findings by (i) using different democracy measures; (ii) enlarging the set of control variables; and (iii) testing different lags in explanatory variables and controls.

In the first robustness check we ask whether our results can be affected by the choice of the democracy index. In fact, as underlined by Cheibub et al (2010) the different measures of democracy are not interchangeable and, as a consequence, the choice of the index to adopt can matter. Thus, we re-run our regressions by replacing the Gastil dummy with all the democracy measures most commonly used in the economic literature, i.e. the Gastil index itself (not dichotomized), the Cheibud index (Cheibub et al, 2010), and the Polity2 index (both the original one and our dichotomized version) from the Polity IV project (Marshall et al, 2016).[31]

The Cheibub index extends the dichotomous regime classification introduced by Alvarez et al (1996) by classifying a country as a democracy when: the chief executive is chosen by popular election or by a body that was itself popularly elected; the legislature is popularly elected; there is more than one political party competing in the elections; the incumbent is replaced through elections that are organized under the same rules as the ones that brought him to office. Otherwise, the Cheibub index classifies a country as a dictatorship.

The Polity2 index[32] is instead computed as the difference between an indicator of democracy and an indicator of autocracy. It ranges between -10 (autocracy) and 10 (full democracy). Even if the its two constitutive dimensions summarize several characteristics of the political system, the Polity2 index can be mainly referred to the concept of positive political freedom that corresponds to the liberty that citizens can achieve through participation in the political (i.e. in the decision making) process (Berlin, 1969). In dichotomizing the Polity2 index, we define a country as democratic if the index itself is at least equal to 6.

As shown in Table 6, except for the most demanding specification with the Gastil index (column 2), in all the other specifications privatization proceeds over GDP are negatively and significantly related with income inequality when democracy is zero. At the same time, there is not a statistically significant relationship between democracy (whatever measure we use) and income inequality when privatization revenue are zero. The coefficient of the interaction term is always negative and statistically but when we are measuring democracy by using the Cheibub index. Finally, and most importantly, we find that our main result on the *marginal effect* of privatization proceeds on income inequality always holds, meaning that this finding is robust to all these different measures that specifically capture only particular aspects of a multi-dimensional concept such as

[31] Results could also be affected by the thresholds used to dichotomize the ordinal indices. However, we replicate the results by using different thresholds and no significant differences emerge in any of the main specifications.

[32] `www.systemicpeace.org`.

that of democracy. On the contrary, the *marginal effect* of democracy computed at the mean value of privatization proceeds in our sample is never statistically significant.[33]

[Tables 6 about here]

Second, we test the robustness of our results by enlarging the set of control variables. More specifically, we include in our empirical estimates: (i) the employment rate; (ii) the household price index; (iii) the Heritage foundation index of economic freedom and some of its components (see Carter, 2007).[34] In this way we are able to control for most of the different mechanisms underlined by the theoretical literature through which privatization programs can both positively and negatively affect income distribution. In fact, the employment rate and the household price index help us to take into account the potential indirect effects of privatization on inequality through the labor market and the differences in consumption price levels across countries respectively. Moreover, apart from the fact that economic freedom is related not only to effective democracy (Lawson and Clark, 2010) but also to economic growth, looking at its financial, investment and trade freedom components we can explicitly control for market openness.

[Table 7 about here]

Table 7 summarizes our results and is organized as follows: we start with the most demanding specification of Table 4 (that is reported in column 1 of Table 7), then we add one by one each of the above mentioned controls (columns 2-7), while in the last specification we add all these new controls (column 8). Our estimates show that the coefficient of the interaction term is always negative and statistically significant. The same is true for the *marginal effect* of privatization on ex post income inequality computed when Gastil dummy is 1. At the same time, there is a negative and statistically significant relationship between trade freedom and Gini net, while none of the other mechanisms through which privatization should affect income distribution seems instead to be at work in our sample of developing countries.

The last robustness check consists in performing the baseline model as in Table 4 using different lags in our independent variables. The goal is twofold: on the one side, to proxy the timing of privatization on inequality; on the other side, to support the evidence against the presence of reverse causality issues in our estimates (see Bergh and Nilsson, 2010). As for the first, we can observe that the *marginal effect* of privatization on inequality can assume a bell-shaped structure (in absolute value), being low and less significant in the first and last periods, while higher and more significant between 2 and 5/6 lags. Unfortunately, being the panel highly unbalanced, the sample size and the number of countries considered change across lags, making a proper comparison difficult

[33] Even in this case for space reasons we decided to show our findings for only the most parsimonious and the most demanding specifications. However, our results hold in all the other specifications of Table 4 and are available upon request.

[34] Data on employment rate and data on the household price index are taken from Penn World Tables (Feenstra et al, 2013), while data on economic freedom are released by the Heritage foundation (Heritage Foundation, 2016). Notice that the size of our sample reduces when we add these control variables.

to perform. With respect to reverse causality, this is a mild test that there is no reverse causality (i.e. there is no *effect* of inequality on privatization) and that the process is not persistent: in both cases, we should expect the contemporaneous *effects* to be stronger and highly significant, be it due to the *effect* of inequality on privatization or due to the persistence of the two measures.

[Table 8 about here]

5 Conclusions

This paper is a first attempt to empirically investigate the relationship between privatization proceeds and income inequality through redistribution, by exploiting the democratization process in low or middle-income countries belonging to Africa, Asia, Eastern Europe and Latin America regions. In particular, our analysis is devoted to explore whether mature representative political institutions may influence the relationship between privatization revenue and income inequality through redistribution.

Taken together, our results show that, in countries where representative political institutions are well mature, an increase in privatization proceeds is correlated with a reduction in income inequality, thus giving empirical evidence to the absence of distributional risks of divestiture programs in developing and transitional economies provided they already transitioned to democracy (Birdsall, 1999).

Our findings, robust to different specifications, measures of democracy, economic controls, and different lags in explanatory variables, seem to suggest that divestiture programs accompanied by or following democratization may have a good chance of being income equalizing.

Some open issues remain. First, finding a clear identification method to address the causal relationship between democratization and privatization. So far, we cannot in fact recommend to pursue democratic transition before privatization, because the latter might be a condition for the former, even if this would increase the benefits of privatization in terms of equality of income. Second, reverse causality needs to be further analyzed: although our time-lags models suggest a clear time trend, we acknowledge that this is only a mild test. Last, it would be interesting to explore *how* privatization and democratization affect inequality, disentangling the effects of different redistribution mechanisms (e.g. transfers in cash, or in kind), addressing differences in access and quality of services provided by SOEs and privatized SOEs, and including different distributional measures (e.g. consumption inequality). Prerequisite to address the aforementioned issues, including implementing more advanced econometric analyses, is getting access to comprehensive, comparable, consistent and retrospective privatization and inequality data that may allow to investigate more precisely how these economic and political mechanisms interact.

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Table 1: Gini coefficients on net-incomes

Area	Obs	Mean	Std. Err.
Africa	98	41.97	2.04
Asia	137	40.58	1.59
Eastern Europe	131	30.79	.70
Latin America	106	48.52	.84
All	472	39.94	1.21

Table 2: Summary Statistics

Varname	Obs	Mean	Std. Dev.	Min	Max
Privatization / GDP	472	.004	.009	0	.112
Gastil index	472	4.480	1.551	1	7
Gastil index (dummy)	472	.568	.496	0	1
Polity2 index	470	3.917	5.912	-7	10
Polity2 index (dummy)	470	.583	.494	0	1
Cheibub index	458	.640	.481	0	1
Gastil index of civil liberties	472	4.347	1.368	1	7
Gastil index of political rights	472	4.612	1.835	1	7
Per capita GDP (Current US$)	472	2406	2157	142.3	13317.73
FDI / GDP	472	.026	.024	-.028	.158
Urbanization	472	53.45	20.29	11.42	92.83
Average years of schooling	472	6.67	2.73	.80	13.08
Dependency ratio	472	64.59	17.02	38.09	109.84
Economic freedom (overall score)	301	58.17	7.13	40.9	75.1
Financial freedom	301	52.39	15.74	10	90
Trade freedom	301	59.17	16.55	0	84
Investment freedom	301	57.97	13.57	30	90
Household price index	465	.381	.141	.136	1.011
Employment rate	465	.389	.073	.248	.591

Table 3: Privatization and Inequality

Country	Obs	Privatization / GDP	Market Gini	Net Gini
Albania	6	1.072%	33.5	31.8
Algeria	3	0.357%	38.2	35.8
Argentina	11	0.723%	46.6	43.9
Armenia	2	0.646%	39.9	36.3
Bangladesh	4	0.010%	41.7	39.0
Barbados	1	0.000%	41.1	38.3
Belize	1	2.536%	57.3	54.2
Bolivia	5	0.699%	56.0	53.9
Brazil	18	0.173%	57.5	50.3
Bulgaria	14	1.187%	31.5	29.7
Cameroon	2	0.603%	45.3	42.2

Chile	10	0.218%	53.6	50.5
China	15	0.145%	45.1	44.6
Colombia	6	0.554%	52.8	51.2
Costa Rica	2	0.099%	45.0	41.5
Cote d'Ivoire	6	0.445%	44.8	42.2
Croatia	10	0.882%	44.2	28.3
Czech Republic	10	0.759%	43.2	24.6
Egypt	9	0.178%	36.0	34.2
Estonia	4	0.744%	48.5	35.3
Ghana	9	0.958%	38.5	36.4
Honduras	4	0.196%	52.0	49.2
Hungary	14	0.725%	50.9	28.8
India	15	0.086%	46.9	47.2
Indonesia	12	0.245%	37.4	35.0
Iran	1	0.093%	42.2	39.6
Jamaica	7	0.554%	48.4	44.7
Jordan	9	1.580%	39.9	38.4
Kazakhstan	4	4.060%	34.3	34.3
Kenya	9	0.277%	54.0	47.6
Lao	2	0.099%	34.9	33.1
Latvia	3	0.624%	53.3	34.1
Lithuania	10	0.718%	51.1	33.5
Malawi	2	0.112%	50.4	48.1
Malaysia	10	0.554%	47.0	43.6
Mexico	11	0.126%	48.5	47.8
Morocco	8	1.864%	42.2	40.0
Mozambique	3	0.221%	43.4	41.6
Nepal	1	0.275%	46.3	43.7
Nicaragua	4	0.306%	53.2	50.1
Pakistan	12	0.289%	34.4	31.4
Panama	5	1.811%	54.1	50.9
Peru	10	0.595%	53.9	53.8
Philippines	13	0.289%	48.1	45.1
Poland	16	0.282%	49.1	30.0
Romania	14	0.804%	39.0	29.7
Russian Federation	14	0.291%	47.8	40.9
Senegal	2	0.457%	41.2	38.6
Slovak Republic	9	0.671%	44.3	26.0
South Africa	7	0.065%	65.0	59.1
Sri Lanka	11	0.300%	40.0	37.2
Tanzania	10	0.175%	38.4	36.6
Thailand	8	0.322%	45.1	41.9
Tunisia	10	0.377%	42.3	39.7
Turkey	16	0.216%	44.4	42.6
Uganda	11	0.216%	42.9	40.0
Ukraine	7	0.878%	31.7	30.9
Uruguay	4	0.473%	51.4	43.0
Venezuela	7	0.261%	45.0	42.3
Viet Nam	2	0.221%	40.8	39.0
Zambia	4	1.931%	55.6	53.3
Zimbabwe	3	0.528%	55.2	52.5

Table 4: Baseline model (Gastil dummy)

Dep.var:: Gini net	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
	b/se	b/se	b/se	b/se	b/se	b/se	b/se	b/se
Gastil (dummy) index	2.144	2.714	2.693	2.830	2.705	2.684	2.711	2.863*
	1.834	1.843	1.777	1.893	1.830	1.728	1.822	1.710
Privatization / GDP	-84.419**	-42.062	-43.065	-52.993*	-47.131	-50.374	-43.208	-58.008*
	35.844	29.002	29.530	26.484	30.660	32.292	29.304	30.169
Gastil index (dummy) X Privatization / GDP	.	-165.171**	-164.864**	-192.873***	-160.064**	-169.944**	-163.680**	-181.298***
	.	75.485	75.125	68.607	71.785	80.163	73.567	66.135
Per-capita GDP (in log)	.	.	0.109	.	.	.	.	-0.619
	.	.	0.926	.	.	.	.	1.016
FDI / GDP	.	.	.	18.224	.	.	.	11.202
	.	.	.	26.612	.	.	.	27.532
Urbanization	.	.	.	.	0.020	.	.	0.024
	.	.	.	.	0.043	.	.	0.052
Average education	.	.	.	.	.	0.434	.	0.417
	.	.	.	.	.	0.551	.	0.538
Dependency ratio	.	.	.	.	.	.	-0.018	-0.011
	.	.	.	.	.	.	0.069	0.065
Constant	41.246***	41.024***	40.343***	40.973***	40.398***	39.735***	42.708***	43.904***
	3.532	3.547	6.418	3.551	3.793	3.585	7.292	9.456
Year FE	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Region FE	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Marginal effect of privatization in democracies	-84.419	-207.233	-207.930	-245.867	-207.195	-220.318	-206.888	-239.306
se	35.844	79.643	81.115	67.856	78.919	86.332	79.007	65.415
p-value	0.022	0.012	0.013	0.001	0.011	0.013	0.011	0.001
Marginal effect of Gastil index (dummy)	2.144	1.723	1.704	1.673	1.746	1.665	1.729	1.776
se	1.834	1.815	1.763	1.811	1.806	1.709	1.810	1.648
p-value	0.247	0.346	0.338	0.359	0.338	0.334	0.343	0.286
Model F-test	7.913	11.782	11.262	10.698	10.883	9.295	12.409	9.485
p-value	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Obs.	472	472	472	472	472	472	472	472
Countries	62	62	62	62	62	62	62	62

Note: *** $p \leq 1\%$, ** $p \leq 5\%$, * $p \leq 10\%$. Standard errors clustered at country level. All explanatory variables are 3-periods lagged.

Table 5: Robustness checks: Civil liberties and Political rights

Dep.var.: Gini net	(1)	(2)	(3)	(4)
	b/se	b/se	b/se	b/se
Gastil index of civil liberties	0.282	0.377	.	.
	0.942	0.919	.	.
Privatization / GDP	-93.641***	59.782	-91.050**	21.615
	34.253	104.554	35.524	65.503
Gastil index X Privatization / GDP	.	-42.400	.	.
	.	27.973	.	.
Gastil index of political rights	.	.	0.440	0.608
	.	.	0.639	0.621
Gastil index X Privatization / GDP	.	.	.	-35.757**
	.	.	.	17.051
Per-capita GDP (in log)	.	-0.460	.	-0.700
	.	1.017	.	0.978
FDI / GDP	.	5.317	.	10.131
	.	28.257	.	28.463
Urbanization	.	0.020	.	0.025
	.	0.052	.	0.053
Average education	.	0.399	.	0.376
	.	0.574	.	0.552
Dependency ratio	.	-0.010	.	-0.020
	.	0.073	.	0.071
Constant	40.655***	42.239***	40.250***	43.953***
	4.804	9.772	3.914	9.654
Year FE	Yes	Yes	Yes	Yes
Region FE	Yes	Yes	Yes	Yes
Marginal effect of privatization	-93.641	-130.661	-91.050	-146.941
se	34.253	41.457	35.524	41.053
p-value	0.008	0.003	0.013	0.001
Marginal effect of civil liberties	0.282	0.147	0.440	0.414
se	0.942	0.901	0.639	0.598
p-value	0.766	0.871	0.493	0.491
Model F-test	8.618	7.998	7.971	8.509
p-value	0.000	0.000	0.000	0.000
Obs.	472	472	472	472
Countries	62	62	62	62

Note: *** $p \leq 1\%$, ** $p \leq 5\%$, * $p \leq 10\%$. Standard errors clustered at country level. All explanatory variables are 3-periods lagged.

Table 6: Robustness checks: Democracy indices

Dep.var:: Gini net	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
	b/se	b/se	b/se	b/se	b/se	b/se	b/se	b/se
Privatization / GDP	-92.442**	45.395	-76.180***	-74.258**	-83.673**	-56.455*	-82.843**	-106.110***
	35.033	81.955	28.316	36.140	36.615	33.044	37.631	32.412
Gastil index	0.437	0.594	.	.	.	.	.	.
	0.829	0.811	.	.	.	.	.	.
Gastil index X Privatization / GDP	.	-40.520*	.	.	.	.	.	.
	.	21.724	.	.	.	.	.	.
Cheibub index	.	.	-0.245	0.566	.	.	.	.
	.	.	1.519	1.623	.	.	.	.
Cheibub index X Privatization / GDP	.	.	.	-84.743	.	.	.	.
	.	.	.	54.767	.	.	.	.
Polity IV index (dummy)	.	.	.	.	1.881	2.790	.	.
	.	.	.	.	1.909	1.933	.	.
Polity IV index (dummy) X Privatization / GDP	.	.	.	.	.	-184.669***	.	.
	.	.	.	.	.	66.882	.	.
Polity IV index	.	.	.	.	.	.	0.220	0.269
	.	.	.	.	.	.	0.186	0.175
Polity IV index X Privatization / GDP	.	.	.	.	.	.	.	-12.236**
	.	.	.	.	.	.	.	5.249
Per-capita GDP (in log)	.	-0.629	.	0.274	.	-0.482	.	-0.616
	.	0.994	.	0.915	.	1.009	.	1.001
FDI / GDP	.	8.165	.	25.259	.	12.487	.	12.909
	.	28.566	.	22.575	.	28.163	.	26.898
Urbanization	.	0.023	.	-0.019	.	0.006	.	0.015
	.	0.052	.	0.045	.	0.055	.	0.056
Average education	.	0.377	.	0.323	.	0.476	.	0.383
	.	0.558	.	0.588	.	0.546	.	0.547
Dependency ratio	.	-0.017	.	0.002	.	-0.021	.	-0.025
	.	0.073	.	0.067	.	0.065	.	0.070
Constant	40.178***	43.218***	41.626***	39.248***	41.689***	44.689***	42.340***	46.795***
	4.376	9.708	3.548	9.349	3.553	9.332	3.702	9.630
Year FE	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Region FE	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Marginal effect of privatization	-92.442	-131.312	-76.180	-159.001	-83.673	-241.123	-82.843	-147.475
se	35.033	38.528	28.316	43.012	36.615	62.481	37.631	39.313
p-value	0.011	0.001	0.009	0.000	0.026	0.000	0.032	0.000
Marginal effect of democracy (any index)	0.437	0.351	-0.245	0.058	1.881	1.682	0.220	0.196
se	0.829	0.786	1.519	1.542	1.909	1.849	0.186	0.169
p-value	0.600	0.657	0.872	0.970	0.329	0.367	0.241	0.250
Model F-test	8.162	8.413	12.378	11.288	8.232	8.833	8.319	9.109
p-value	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Obs.	472	472	458	458	470	470	470	470
Countries	62	62	61	61	60	60	60	60

Note: *** $p \leq 1\%$, ** $p \leq 5\%$, * $p \leq 10\%$. Standard errors clustered at country level. All explanatory variables are 3-periods lagged. Marginal effect of privatization is computer at the mean value of continuous democracy indices (Gastil index and Polity IV index) and at 1 for dichotomous democracy indices.

Table 7: Robustness checks: Economic controls

Dep.var.: Gini net	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
	b/se	b/se	b/se	b/se	b/se	b/se	b/se	b/se
Gastil democracy (dummy)	2.292	2.272	2.496	2.434	2.342	2.353	2.604	2.702
	2.028	2.015	2.049	2.011	1.938	1.969	1.905	1.749
Privatization / GDP	-39.048	-21.060	-28.590	-39.014	-38.932	-35.890	-43.406	-11.258
	51.637	49.471	53.598	51.423	51.430	50.901	50.906	53.113
Democracy dummy X Privatization / GDP	-152.591**	-158.195**	-168.517**	-171.270**	-149.911**	-158.498**	-166.204**	-173.045**
	75.596	75.767	78.241	81.688	72.119	74.680	78.776	82.093
Employment rate	.	9.547	.	.	.	.	.	14.339
	.	15.221	.	.	.	.	.	12.818
Household price index	.	.	-6.352	.	.	.	.	-5.090
	.	.	8.448	.	.	.	.	8.756
Economic freedom	.	.	.	-0.105	.	.	.	0.040
	.	.	.	0.107	.	.	.	0.142
Finacial freedom	.	.	.	.	-0.082*	.	.	-0.084
	.	.	.	.	0.046	.	.	0.052
Investment freedom	.	.	.	.	.	-0.024	.	0.023
	.	.	.	.	.	0.050	.	0.065
Trade freedom	.	.	.	.	.	.	-0.083*	-0.090*
	.	.	.	.	.	.	0.043	0.048
FDI / GDP	-4.796	-11.707	-3.949	1.753	4.301	-3.644	-5.761	-9.860
	30.979	30.679	30.734	30.927	30.360	30.954	29.667	31.671
Per-capita GDP (in log)	-1.155	-0.754	-0.397	-0.605	-0.385	-0.981	-0.659	1.004
	1.166	1.170	1.746	1.225	1.230	1.115	1.107	1.700
Urbanization	0.010	0.019	0.011	0.004	0.010	0.012	0.008	0.025
	0.057	0.056	0.056	0.055	0.054	0.057	0.053	0.050
Average education	0.643	0.631	0.620	0.740	0.818	0.632	0.818	0.949
	0.644	0.639	0.642	0.655	0.621	0.646	0.631	0.644
Dependency ratio	-0.074	-0.037	-0.044	-0.054	-0.035	-0.066	-0.048	0.057
	0.075	0.089	0.088	0.069	0.068	0.074	0.070	0.087
Constant	53.291***	43.692**	47.803***	53.553***	48.157***	52.865***	50.820***	26.864
	11.009	17.669	14.490	10.998	10.732	10.817	10.213	18.325
Year FE	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Region FE	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Marginal effect of privatization in democracies	-191.639	-179.256	-197.107	-210.284	-188.843	-194.388	-209.611	-184.303
se	64.125	67.160	64.068	73.125	59.071	63.869	68.679	72.477
p-value	0.004	0.010	0.003	0.006	0.002	0.004	0.004	0.014
Marginal effect of Gastil index (dummy)	1.443	1.392	1.559	1.481	1.508	1.472	1.680	1.740
se	1.876	1.896	1.878	1.854	1.791	1.849	1.753	1.643
p-value	0.445	0.466	0.410	0.428	0.403	0.430	0.342	0.294
Model F-test	9.642	10.742	9.926	11.507	11.545	9.088	8.536	15.950
p-value	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Obs.	297	297	297	297	297	297	297	297
Countries	55	55	55	55	55	55	55	55

Note: *** $p \leq 1\%$, ** $p \leq 5\%$, * $p \leq 10\%$. Standard errors clustered at country level. All explanatory variables are 3-periods lagged.

Table 8: Robustness checks: Lags

Dep.var.: Gini net	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)
	b/se	b/se	b/se	b/se	b/se	b/se	b/se	b/se	b/se	b/se
Lags	0	1	2	3	4	5	6	7	8	9
Gastil index (dummy)	-0.109	0.939	0.981	1.868	1.112	1.023	1.292	0.029	-0.247	-1.447
	2.128	2.310	2.333	2.154	2.448	2.496	2.484	2.711	2.670	2.785
Privatization / GDP	-24.374	34.767	-15.770	-15.213	5.317	-33.843	-10.913	25.430	-2.301	-65.300
	47.394	64.089	48.869	40.280	66.985	47.209	44.702	79.432	83.329	46.232
Gastil index X Privatization / GDP	-152.312	-312.738***	-200.145*	-416.106***	-234.696*	-256.002**	-403.529***	-323.421**	-218.083	-121.894
	112.212	111.370	118.367	106.673	136.951	110.274	114.130	137.920	137.124	146.485
Year FE	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Marginal effect of privatization in democracies	-107.482	-135.877	-124.979	-242.259	-122.744	-173.529	-231.096	-151.043	-121.296	-131.811
se	59.850	63.752	66.969	63.365	80.287	72.242	71.876	85.575	80.779	87.672
p-value	0.077	0.037	0.067	0.000	0.132	0.020	0.002	0.084	0.140	0.140
Model F-test	2.082	2.610	1.919	3.463	2.165	3.765	3.236	3.168	2.292	2.508
p-value	0.016	0.003	0.029	0.000	0.014	0.000	0.001	0.001	0.016	0.011
Obs.	472	411	413	472	377	335	303	262	232	204
Countries	62	59	59	62	56	56	54	46	48	45

Note: *** $p \leq 1\%$, ** $p \leq 5\%$, * $p \leq 10\%$. Standard errors clustered at country level.