Government Accountability and Development: Evidence from Young Democracies

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Abstract: The countries that had a democratic transition during the late 20th century have different levels of development outcomes. For an explanation, we examine the role of government accountability. Using a panel of 64 young democracies from 1974 to 2010, we provide evidence that the countries with stronger institutions of accountability have lower infant mortality rates, a widely used indicator of development. While this result applies to vertical, horizontal, and social accountability, the latter is relatively more powerful and robust in explaining the variation in infant mortality rates across the countries. This result holds while controlling for country and time fixed effects, and regional health trends, among other factors of development. These findings suggest that policies that improve access to information and specific social accountability policies (e.g., participatory budgeting, and citizen monitoring) may lead to improvements in development outcomes.

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1. Introduction

During the late 20th century, the number of democracies in the world nearly doubled. From 1974 to 1999, over 60 countries had a democratic transition and over 20 countries transitioned to full democratic governments, which has been regarded as the "third wave of democratization" by Samuel Huntington (Huntington, 1991). Democratization is characterized by the decentralization of governance and power, and it has been argued that such political pluralism enhances development through accountability mechanisms such as electoral systems, checks and balances in government, and greater access to information.

While there is an emerging consensus that democracy promotes growth, the

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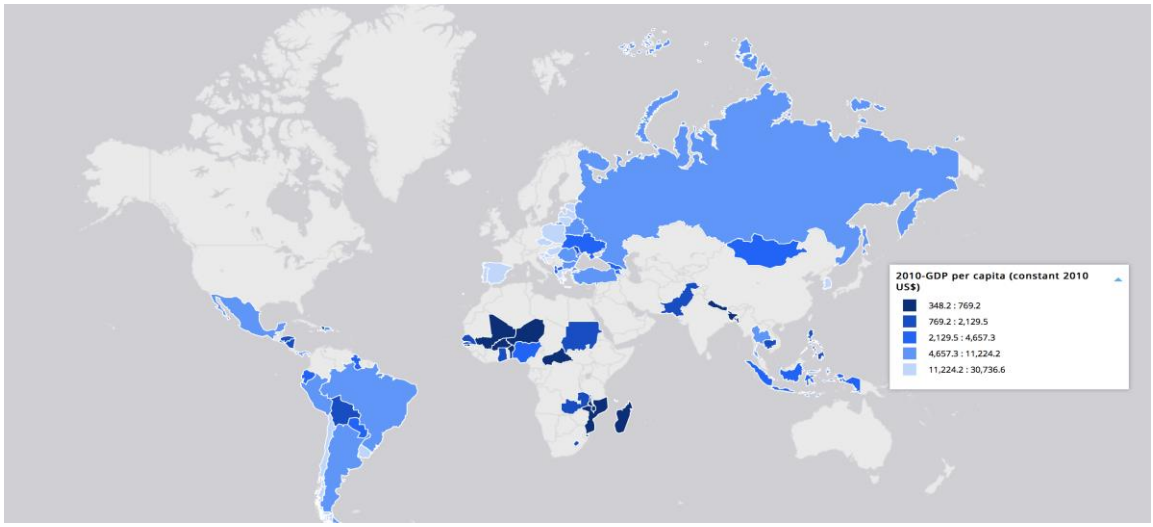
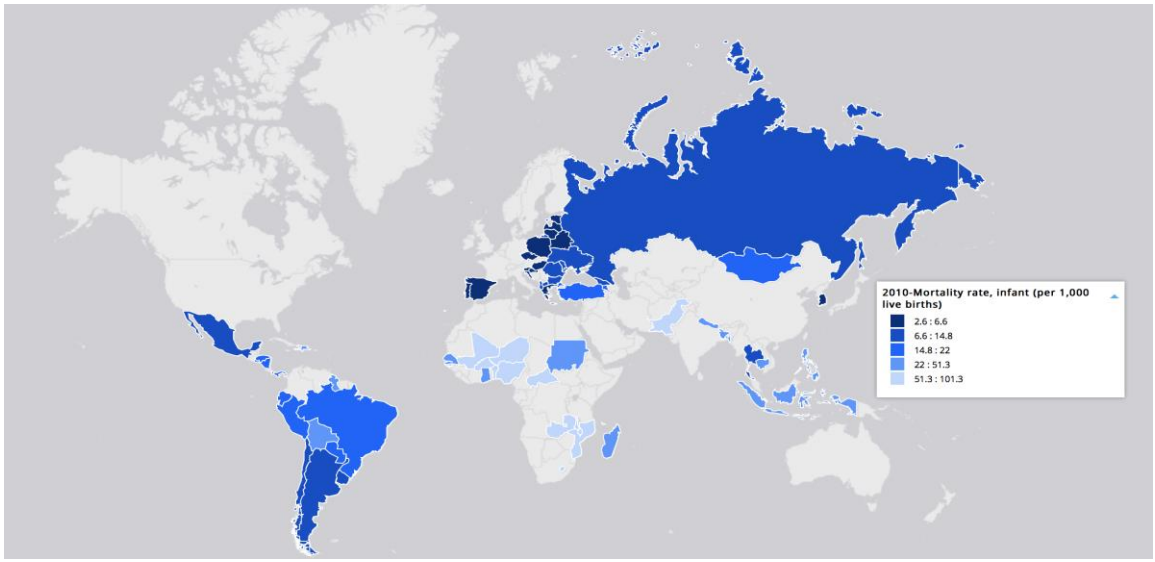
relationship between democracy and development continues to be an ongoing debate (Besley et al., 2006; Ross, 2006; Gerring et al., 2012; Kudamatsu, 2012; Pozuelo et al., 2017; Acemoglu et al., 2019). Today we observe that the countries that had a democratic transition during the late 20th century have different levels of per capita income and development outcomes (Figure 1 and 2). It has been argued that the observed pattern in economic growth can be explained by the differences in the government accountability, which is seen as the constraints on government behaviour to act in accordance with the public good. Government

Figure 1. GDP Per Capita of Young Democracies, 2010



Source: World Bank 2011

Figure 2. Infant Mortality Rate of Young Democracies, 2010



Source: The World Bank, 2011

accountability fosters transparency and balances the distribution of power in society (Siegle, 2001), which can limit corruption and clientelism in society. Without strong institutions for accountability, policies that are designed to improve development often fail or fail to be implemented, which can slow down growth (Kray et al., 1999; World Bank, 2017).

Thus, perhaps, the feature of democracy that matters for development outcomes is government accountability. There are different types of accountability. Vertical accountability is the *formal* ways that citizens can hold politicians accountable, mainly through elections. Horizontal accountability is the checks and balances within government that help to hold politicians accountable. Social accountability is the informal ways that ordinary citizens can hold government accountable (Malena et al., 2004). If accountability matters for development, can it explain the development outcomes amongst the young democracies? Does one type of accountability have a greater explanatory power than others?

In this paper, we build upon previous studies to examine the impact of overall accountability and the relative impacts of vertical, horizontal, and social accountability on the development outcomes of young democratic countries. Utilizing different data sources, we construct a rich panel dataset on 64 young democracies for the period of 1974 - 2010, suitable

for addressing the preceding questions. Then, using two-way fixed effects models, we find that the young democracies that established stronger institutions of accountability have lower infant mortality rates (IMR), a widely used indicator of development. This result holds for the overall, vertical, horizontal, and social accountability, when their effects are estimated in separate specifications. In addition, we find that when the three types of accountability are considered simultaneously, social accountability is the most powerful and robust determinant of IMR. To further strengthen our conclusion, we repeat our analysis using under-5 mortality rates as the outcome variable, and we find almost identical results.

Our study contributes to the existing literature in the following ways. First, while past studies have examined the effect of democracy on economic growth (e.g., Barro, 1996; Pozuelo et al., 2017; Acemoglu et al., 2019)[1] and development outcomes (Besley et al., 2006; Ross, 2006; Gerring et al., 2012; Kudamatsu, 2012)[2], we focus on a typical feature, but not exnclusive, of democracy, accountability, to study its effects on development outcomes.[3] We show that the young democracies with stronger accountability have better development outcomes, as measured by IMR. In addition, we take one step forward by examining the relative roles of vertical, horizontal, and social accountability and by showing that they reduce IMR. While the roles of accountability and social accountability in reducing IMR across countries have been studied (Lührmann and Mechkova, 2017), to the best of our knowledge, this is first study to examine the relative roles of vertical, horizontal, and social accountability in explaining the variation in IMR among the young democracies.[4] The other

[1] Other important studies include Helliwell (1994), Barro (1999), Tavares and Wacziarg (2001), Giavazzi and Tabellini (2005), Rodrik and Wacziarg (2005), Persson and Tabellini (2006), Papaioannou and Siourounis (2008), Bates et al. (2012), and Martin and Wacziarg (2014), among others.
[2] For important studies in the past twenty years, see Boix (2001), Lake and Baum (2001), Gauri and Khaleghian (2002), Ghobarah et al. (2004), McGuire (2004), Shandra et al. (2004), and Brown and Mobarrak (2009).
[3] Siegle (2001) studies the impact of accountability on economic growth.
[4] Lührmann and Mechkova (2017) also estimate the impacts of the three types of accountability on IMR, covering 1961-2006, across 147 democratic and nondemocratic countries. In contrast, we consider 64 countries that had a democratic transition in the late 20th century. In doing so, we estimate the relative roles of different

past studies on the role of social accountability in development are for a specific country (Fox, 2015).[5] Thus, our study constitutes the first comparative analysis of the effect of accountability on IMR amongst young democracies. We first highlight that even among the young democracies, there are significant variations in IMR and under-5 mortality rates, and then show that significant parts of the variabilities can be explained by differences in their levels of overall, vertical, horizontal, and social accountability.

Second, studies on the role of democracy in reducing IMR (Moon and Dixon, 1985; Dasgupta, 1993; Boone 1996; Przeworski et al., 2000; Zweifel and Navia, 2000; Bueno de Mesquita et al., 2003; McGuire, 2001; Siegle et al., 2004; Franco et al., 2005) have been criticized for their lack of accounting for country-specific fixed effects, global health trends, and selection bias (Ross, 2006). Once these shortcomings are corrected, democracy appears to have little to no effect on IMR (Ross, 2006). Our study does not suffer from these methodological limitations. As noted earlier, we look at the role of government accountability instead of democracy *per se*. We estimate both one-way and two-way fixed effects models, controlling both for country and time fixed effects. Time fixed effects, to a degree, also capture global health trends. In all analyses, we lag the independent variables one time period. This separates the dependent variable from the explanatory variables, offering some protection against endogeneity (Gerring, et al. 2012). Also, we directly control for regional health trends by including regional average of IMR. Moreover, we have no selection bias that can exaggerate differences between democracies and nondemocracies. This is because, unlike most previous studies on the effect of democracy in reducing IMR

types accountability in explaining the development outcomes among the countries that are much similar and covering 1974-2010. Also, unlike their study, we model for the fact that it is presumably easier to reduce higher levels of IMR than lower levels. Finally, contrary to their result, we find that social accountability is the most powerful and robust determinant of IMR and under-5 mortality rates.

[5] Fox (2015) provides an excellent meta-analysis of studies on the impacts of social accountability on development. The reviewed studies are country-specific, examining the impacts of social accountability initiatives on education, local government, health, local elections, public works, water, and target food subsidy.

that are based on the set of countries that produce easily available data, we consider almost all the countries that had a democratic transition during the late 20th century. Moreover, while the young democracies differ from each other in unobserved characteristics, such as institutional, historical, and cultural aspects, that also have an impact on IMR, these aspects are captured by country fixed effects.

Third, our finding that the young democracies with stronger institutions of accountability have better development outcomes is not limited to our choice of development outcome, IMR. To further check the robustness of our conclusion, we replicate the analysis using under-5 mortality as the outcome variable, and we find approximately identical results.

The remainder of this paper is organized as follows. In Section 2, we provide theoretical and empirical contexts for our study. In Section 3, we describe our data and empirical strategy. We present the results in Section 4. In Section 5, we provide a comparative analysis of development in Uruguay and Paraguay to generate further insights into our findings. Finally, we conclude in Section 6.

2. Why Government Accountability May Matter for Development?

A government is considered accountable[6] if citizens can determine whether the government is acting in their best interest and sanction it accordingly (Stapenhurst and O'Brien, 2000). The incumbents who satisfy citizens' preferences may remain in office, and those who do not can be removed (Cheibub and Przeworski, 1999). A head of government is accountable if the probability that she survives in office is sensitive to her government's

[6] It has been widely debated *what* accountability is and what *components* make it up. We follow the definition adopted by United Nations Development Program (UNDP), that sees accountability as constraints on government's use of political power to be more responsive to its citizens, in particular, responsive to the needs of the most vulnerable populations (UNDP, 2013).

performance (Cheibub and Przeworski, 1999). The presence of elections alone is not enough for accountability to function properly. Accountability mechanisms are needed.[7]

The theoretical intuition for why government accountability may affect development outcomes can be derived from the Principal-Agent model (Besley, 2006) and from the extension of Meltzer-Richard model, where democracy is seen as a mechanism for redistribution (Meltzer and Richard, 1981). In the principal-agent model, the citizens are viewed as the principal and the government as the agent, where problems arise because of their conflicting interests. The government may act in ways that will benefit its private interests. On the other hand, it is in the interest of citizens that the government acts for the public good. This conflict leads to the problems of adverse selection and moral hazard. The government knows if it will act on behalf of the citizens, or if it will act in accordance with its own private gain. The citizens do not have this information a priori. As a result of this information asymmetry, selection for who will lead the government and who will monitor the government's actions are two dilemmas in the citizens-government relationship (Besley, 2006). Poor selection and limited monitoring of government may lead to opportunistic behaviour, corruption, and susceptibility to the influence of powerful groups (Grossman and Helpman, 2001), resulting in government failure (World Bank, 2016; Acemoglu and Robinson, 2008; Bai and Wei, 2000; Besley and Case, 1995; Murphy et al., 1991, 1993) and poor development outcomes (Kray et al., 1999; Aziz and Sundarasen, 2015). For example, politically connected firms are more likely to receive quotas or other resources. Such firms are more inefficient as they have little incentive to increase their productivity when they have these ties to the government, causing reduced productivity (Khandelwal et al., 2013). Power

[7] Corruption is significantly higher and government performance lower in low-income democracies (Pande, 2011). As a result, elections can be tainted by malpractices and can be captured by elites (Acemoglu et al., 2013).

asymmetries in society leads to clientelism (World Bank, 2017), providing material goods in exchange for political support. Studies have shown that vote buying is associated with the lower provision of broadly delivered pro-poor public services in health and education (Khemani, 2015). Clientelism also weakens enfranchisement, which is associated with lower public investments in social safety nets and antipoverty programs (Anderson et. al., 2015).

Since government accountability is a feature of democracy, further insights on why it may matter for development can be derived from prominent political economy models (Meltzer and Richard, 1981; Ferejohn, 1986; Lake and Baum, 2001, Buenos de Mesquita et al., 2003; Ghorbarah et al., 2004; Acemoglu and Robinson, 2005; Acemoglu and Robinson, 2006; Besley, 2006; Besley et al., 2016), which suggest that democracies produce more public goods and more income redistribution than nondemocracies. With free and fair elections, citizens can vote rent-seeking politicians out of office, which either curbs the opportunistic behaviour of politicians, or leads to the selection of politicians who act in the interest of the public. The threat of not being re-elected reduces rent extraction by politicians.

Recent empirical studies on the relationship between democracy and economic growth find that democracy causes growth (Acemoglu et al., 2019). Gerring et al. (2012) find that the democratic stock over the last century does have a substantial effect on the level of human development. Besley et al. (2006) find a strong correlation between life expectancy and democracy, controlling for the initial level of human capital and political histories. The related studies on the effects of democratic transition find results that are consistent with the findings on the effect of democracy on economic growth and development outcomes (Rodrik and Wacziarg 2005; Mobarak, 2005; Papaioannou and Siourounis, 2008; Kudamatsu, 2012).

Also, there is an extensive literature on the within-country effects of democracy on economic policy, growth, and development. For example, Besley and Case (1995) find that governors who face term limits, compared to those who can run again, differ in terms of their

economic policy. Madestam et al. (2013) examine the Tea Party movement in the United States and find evidence that political protests may lead to changes in incumbents' policy positions. Fujiwara (2015) studies the introduction of electronic voting in Brazil and finds that it shifted spending towards health care, by effectively enfranchising poorer and less educated voters. Acemoglu et al. (2019) conclude from their findings that citizen protests can play a role in restricting the ability of politically connected firms to capture rents.

2.1. Why Social Accountability May Matter More for Development?

Social accountability relies on civic engagement, in which ordinary citizens and civil society organizations participate directly or indirectly in demanding accountability (Malena et al., 2004). Unlike vertical accountability, it is the informal ways in which citizens can hold their government accountable, with the assistance of media and civil society organizations. It enhances vertical and horizontal accountability (Lührmann and Mechkova, 2020). It can be especially important for countries which have a weak or unresponsive representative government (Fox, 2015). Thus, it may matter more for desirable development outcomes, especially amongst young democracies, which have an environment that is permissive of corruption and where governments are susceptible to influences from powerful groups. As a result, it is difficult to realign the incentives of politicians to match that of the citizens. In this context, social accountability may play a pivotal role, since its mechanisms do not rely solely on changes in the political incentives of leaders in government to trigger better performance (World Bank, 2016). It is a demand-driven, bottom-up accountability of government.

Social accountability can be fostered through direct political participation by citizens, increase in access to information, and by supporting civil society organizations. Policies that increase citizen engagement in politics (e.g., participatory budgeting and monitoring, co-governance, and citizen report cards) are associated with better development outcomes. For example, when citizens were encouraged to participate through discussions and assessment

on public health service providers, it resulted in lower IMR (Björkman and Svensson, 2009). Another example of the effects of community empowerment is the Kecamatan Development Project in Indonesia, which allowed communities to determine how funds targeted to promote development would be spent. The program experienced low levels of corruption and improved the incomes of the participants (Friedman, 2013).

Information also plays a crucial role in promoting social accountability (Pande, 2011). A well-informed electorate in a democracy can explain between one-half and two-thirds of the variance in the levels of governmental performance and corruption (Adsera, 2003). The incentives for government to be responsive are stronger if a state has a more informed and politically active electorate (Besley and Burgess, 2002). In India when voters received pre-election report cards on incumbent's performance and candidate qualifications, there was a significant increase in turnout in treatment slums, a significant decline in vote share for the incumbent who had worse performance relative to the other incumbent, and there was a significant decline in vote buying (Banerjee et al., 2011). In Brazil, making audits publicly available through the media reduced the incumbent's likelihood of being re-elected, compared with the re-election rates of the control group, who only received the audit post-election (Ferraz and Finan, 2011).

Studies document that poor populations are typically less informed and less likely to vote (Verba et al., 1993; Wolfinger and Rosenstone, 1980). Social accountability can help to assuage these effects by empowering the poor (Casey, 2015; Fujiwara and Wantchekon, 2013; Banerjee et al., 2011; Keefer and Khemani, 2005). In India, state governments are more responsive to falls in food production and crop flood damage via public food distribution and calamity relief expenditure where newspaper circulation is higher and electoral accountability greater (Besley and Burgess, 2002).

Civil society organizations may play another important role in promoting social accountability (Collier and Vicente, 2014; Humphreys and Weinstein, 2012). They can assist the media in providing unbiased information and through providing the tools in which citizens can monitor government. For example, Action Aid campaigned against political violence in 12 villages in Nigeria. In addition, it carried out town meetings and distributed information, reducing the politicians' ability to intimidate voters. Consequently, voter turnout increased and the incidence of electoral violence declined (Collier and Vicente, 2014).

Thus, we ask whether government accountability plays an important role in explaining the variations in development outcomes amongst young democracies and whether any specific type of accountability matters more than others.

3. Data and Empirical Strategy

3.1. Data

Our data consists of annual observations for the period 1974-2010 on 64 countries that had a democratic transition during the late 20th century.[8]

3.1.1. Measuring Accountability

Our measures of accountability are from Varieties of Democracy (V-Dem).[9] It measures three types of accountability, along with providing an aggregate measure of

[8] The countries included in this study are: Albania, Argentina, Armenia, Bangladesh, Belarus, Benin, Bolivia, Brazil, Bulgaria, Burkina Faso, Cambodia, Central African Republic, Chile, Comoros, Croatia, Czech Republic, Dominican Republic, Ecuador, El Salvador, Estonia, Georgia, Ghana, Greece, Guinea-Bissau, Guyana, Haiti, Honduras, Hungary, Indonesia, Latvia, Lesotho, Lithuania, Macedonia, Madagascar, Malawi, Mali, Mexico, Moldova, Mongolia, Mozambique, Nepal, Nicaragua, Niger, Nigeria, Pakistan, Panama, Paraguay, Peru, Philippines, Poland, Portugal, Romania, Russia, Senegal, Slovenia, South Korea, Spain, Sudan, Taiwan, Thailand, Turkey, Ukraine, Uruguay, Zambia. The countries that have been excluded from the analysis due to a lack of data are Cape Verde, Fiji, Iran, Slovak Republic, Suriname, Sudan.

[9] It is a new approach to conceptualizing and measuring democracy. It provides a multidimensional and disaggregated dataset that reflects the complexity of the concept of democracy as a system of rule that goes beyond the simple presence of elections. The V-Dem project distinguishes between five high-level principles of democracy: electoral, liberal, participatory, deliberative, and egalitarian, and collects data to measure these principles. The Headquarters is based at the V-Dem Institute, the Department of Political Science at the University of Gothenburg, Sweden.

accountability. While these measures are correlated with each other, they capture distinct aspects of governmental accountability (Lührmann and Mechkova, 2020).[10] Vertical accountability has two components: elections and political parties. Elections is a combination of the quality of elections, the percent of the enfranchised population, and whether the chief executive is directly or indirectly elected. Political parties capture the barriers to forming a political party and how independent the opposition party is from the ruling regime. Horizontal accountability captures the extent to which the judiciary, the legislature, and other oversight agencies hold the government to account. Diagonal accountability captures social accountability, covering media freedom, civil society characteristics, freedom of expression, and the degree to which citizens are engaged in politics. Accountability is an aggregate measure of the three sub-types of accountability. Table 1 provides the correlation matrix for the measures of accountability.

Table 1. Pearson correlation coefficient

	Vertical Accountability	Horizontal Accountability	Social Accountability	Accountability
Vertical Accountability	1.000			
Horizontal Accountability	0.754	1.000		
Social Accountability	0.828	0.843	1.000	
Accountability	0.906	0.896	0.973	1.000

3.1.2. Measuring Development

[10] Data on accountability had been limited due to a continued debate on what accountability is and a lack of reliable measures for cross-national research (Lührmann and Mechkova, 2020). Earlier, the only cross-country measure of accountability was the World Bank's Voice and Accountability Index (VAI), available for years starting 1996. VAI has been criticized for conceptual inconsistency and lack of transparency in its creation (Langbein and Knack, 2008; Thomas, 2006). The V-Dem measures of accountability attempts to improve upon the VAI (Lührmann and Mechkova, 2020). It provides data from 1900 to 2017 for virtually every country.

Studies have used measures of economic growth, human development, and social welfare to capture development across countries (Acemoglu et al., 2019; Miller, 2015; Gerring et al., 2012; Kudamastsu, 2012; Ross, 2006). While economic growth is strongly correlated with human development outcomes, it does not necessarily lead to meaningful gains for the population (OECD, 2014). Moreover, the measures of spending from developing countries are unreliable, as social spending may be diverted to rent-seeking activities. Further, countries differ in their ability to translate spending into outcomes, and outcomes are what ultimately matters for development (Miller, 2015). Another problem with development outcomes is data limitations for cross-national comparison. Thus, we use a measure of human development as our outcome variable: IMR.

IMR is considered an ideal indicator of inequality, development, and state effectiveness (Gerring et al., 2012; Ross, 2006). It is highly responsive and sensitive to a wide array of factors, including access to clean water and sanitation, female education and literacy, prenatal health services, caloric intake, and income (Ross, 2006). Therefore, it is a good representation of the well-being of the most impoverished populations. Also, IMR is a more logical choice as an indicator of development since we are interested in how social accountability of government translates into development, capturing a government's responsiveness to the needs of its poor population. IMR data is from the World Bank (2011).

3.1.3. Control Variables

For our control variables, and their justification, we rely on previous studies. We control for the regional average of the IMR for the same year, excluding the country itself (Miller, 2015), which captures distinct regional characteristics, as well as shocks specific to the time and the region (e.g., the diffusion of medical innovations). The other variables are commonly used controls, which have been lagged by one year. *Foreign Aid* is official development assistance as a percentage of the gross national income, and it has been obtained

from the World Bank (2011). It could be associated with both IMR and levels of government accountability. *GDP per capita,* measured in real 2000 dollars, and e*conomic growth rate* capture economic development. *Resource Dependence* is the fuel and metal revenues as a percentage of GDP and data has been obtained from Haber and Menaldo (2011). *Economic Inequality*, measured as the Gini coefficient and the data has been collected from Galbraith and Kum (2003), UNU-WIDER (2005), and World Bank (2011). *Communist* is a dummy variable that takes the value of 1 if the country is communist and otherwise it takes the value of 0. The data is from Miller (2015). *Trade Liberalization,* measured as the imports of goods as a percentage of GDP, is from the World Bank and the OECD. These economic variables are all very plausibly correlated with both government accountability and development outcomes, and so they must be controlled for as potential confounders.

Other factors that can affect the capacity of the government to deliver public services are *Population,* obtained from Heston and Summers (2011); *Urbanization,* measured as the percentage living in cities of 100,000+, obtained from Barbieri and Keshk (2012); ethnolinguistic fractionalization (ELF) is from Roeder (2001); and *Political Violence*, which is measured on a 0-10 scale of domestic civil and ethnic violence, is from Marshall (2010). We also include *Electoral Regime,* which takes the value of 1 if the regime held elections, and otherwise it takes the value of 0. This is meant to account for the argument that elections in their own right are associated with better development outcomes (Lührmann and Mechkova, 2017). Finally, we include country and year fixed effects. Country fixed effects account for all characteristics specific to each country, that are stable over time. Year fixed effects control for any shocks that are specific to that year that would affect all the countries. This could include, for example, global health trends (Ross, 2006). Table 2 shows the descriptive statistics of the variables.

Table 2. Descriptive Statistics

Variable	N	Mean	Std. Dev	Min	Max
Infant Mortality Rate (ln)	2,290	3.641	0.929	0.832	5.189
Under-5 Mortality Rate (ln)	2,320	3.957	1.050	1.064	5.838
Vertical Accountability	2,368	0.624	0.264	0.072	0.958
Horizontal Accountability	2,352	0.502	0.298	0.027	0.984
Social Accountability	2,368	0.605	0.307	0.022	0.981
Accountability	2,352	0.589	0.296	0.044	0.974
Trade Liberalization	1,920	35.80	19.203	2.982	152.80
Electoral Regime	2,368	0.678	0.467	0	1
Economic Growth	2,350	1.510	5.580	-40.781	41.05
ELF	2,212	0.457	0.276	0.003	0.874
Foreign Aid	2,183	5.634	9.475	0	81.29
Political Violence	2,235	0.632	1.618	0	9
Resource Dependence	2,102	4.833	8.463	0	100
Communist	2,366	0.132	0.339	0	1
Urbanization	2,169	24.575	14.192	0	75.39
GDP per Capita (ln)	2,366	8.162	0.973	5.559	10.12
Population (ln)	2,302	9.491	1.460	5.608	12.38
Economic Inequality	1,866	41.249	9.325	18.649	64.30
Infant Mortality, Regional Average (ln)	2,290	3.723	0.670	1.520	4.897
Under-5 Mortality, Regional Average (ln)	2,320	4.041	0.773	1.693	5.351

3.2. Empirical Strategy

We adopt the following regression model:

$$IMR_{it} = \beta * Accountability_{it} + \pi * Controls_{it} + \mu_i + \delta_t + \epsilon_{it} \quad (1)$$

where *i* and *t* denote country and year, respectively. *Accountability* represents different measures of accountability. *Controls* is the vector of variables as described earlier, which have been lagged by one year. *IMR* represents infant mortality rates. μ_i is country fixed effects, and δ_t is year fixed effects.

First, we need to decide whether equation (1) will be estimated as a Fixed-Effects (FE) or a Random-Effects (RE) model. The Hausman test indicates that a FE is more appropriate for our data. Second, we take the natural logarithm of the outcome variable (IMR), which is appropriate given that it is presumably easier to reduce higher levels of IMR

than lower levels. This is because IMR is more costly to reduce as it declines, and it cannot be reduced below zero (Ross, 2006; Gerring et al., 2012).

4. Results

Table 3 presents the results on the effect of accountability on IMR. It confirms our hypothesis that accountability has a negative effect on IMR, which is significant at 1% level of significance. This result is consistent with the previous within-country studies showing that more accountable governments have better development outcomes.

Table 3: The Effect of Overall Accountability

	(1)	(2)	(3)
VARIABLES	Infant Mortality (ln)	Infant Mortality (ln)	Infant Mortality (ln)
Accountability	-0.250***	-0.252***	-0.132***
	(0.0251)	(0.0250)	(0.0246)
Trade Liberalization	-0.00126***	-0.00129***	-0.00196***
	(0.000428)	(0.000430)	(0.000411)
Electoral Regime	0.0893***	0.0888***	0.0680***
	(0.0130)	(0.0130)	(0.0122)
Population (ln)	0.0614***	0.105***	0.723***
	(0.0198)	(0.0311)	(0.0507)
ELF	-0.0171	0.0741	-5.780***
	(0.150)	(0.514)	(0.623)
Foreign Aid	-0.00296***	-0.00312***	-0.00190***
	(0.000706)	(0.000697)	(0.000672)
Political Violence	0.0194***	0.0196***	0.0196***
	(0.00301)	(0.00297)	(0.00278)

Resource Dependence	-0.0000993	-0.000150	-0.00308***
	(0.000832)	(0.000826)	(0.000812)
Communist	-0.177***	-0.195***	-0.408***
	(0.0435)	(0.0441)	(0.0444)
Urbanization	-0.00115	-0.00129	-0.00145
	(0.000962)	(0.00102)	(0.000954)
GDP/capita (ln)	-0.338***	-0.322***	-0.212***
	(0.0198)	(0.0210)	(0.0214)
Economic Growth	0.00197***	0.00205***	0.00197***
	(0.000594)	(0.000584)	(0.000558)
Economic Inequality	-0.00145*	-0.00147*	-0.00231***
	(0.000752)	(0.000756)	(0.000708)
Infant Mortality (ln), Regional Average	0.985***	1.019***	0.549***
	(0.0202)	(0.0223)	(0.0374)
Constant	2.346***	1.672***	0.0444
	(0.311)	(0.369)	(0.366)
Observations	1442	1442	1442
R^2	0.888	0.889	0.907
Country FE		YES	YES
Year FE			YES

Note: Standard errors in parentheses. * $p < .1$, ** $p < .05$, *** $p < .01$

Table 4 presents the results on the effect of vertical accountability on IMR. It confirms our hypothesis that countries with higher level of vertical accountability will have lower IMR.

Table 4: The Effect of Vertical Accountability

	(1)	(2)	(3)
VARIABLES	Infant Mortality (ln)	Infant Mortality (ln)	Infant Mortality (ln)
Vertical Accountability	-0.224***	-0.225***	-0.0966***
	(0.0298)	(0.0295)	(0.0284)
Trade Liberalization	-0.00137***	-0.00136***	-0.00201***
	(0.000435)	(0.000437)	(0.000413)
Electoral Regime	0.101***	0.103***	0.0678***
	(0.0160)	(0.0158)	(0.0148)
Population (ln)	0.0478**	0.0780**	0.740***
	(0.0198)	(0.0313)	(0.0509)
ELF	-0.0374	0.235	-5.977***
	(0.150)	(0.522)	(0.625)

Foreign Aid	-0.00328***	-0.00342***	-0.00200***
	(0.000715)	(0.000706)	(0.000676)
Political Violence	0.0207***	0.0208***	0.0203***
	(0.00306)	(0.00301)	(0.00280)
Resource Dependence	-0.0000192	-0.000131	-0.00319***
	(0.000845)	(0.000839)	(0.000817)
Communist	-0.0930**	-0.105**	-0.376***
	(0.0434)	(0.0438)	(0.0449)
Urbanization	-0.00142	-0.00147	-0.00162*
	(0.000976)	(0.00103)	(0.000961)
GDP/capita (ln)	-0.338***	-0.325***	-0.209***
	(0.0201)	(0.0214)	(0.0216)
Economic Growth	0.00205***	0.00213***	0.00204***
	(0.000603)	(0.000593)	(0.000561)
Economic Inequality	-0.00162**	-0.00172**	-0.00246***
	(0.000763)	(0.000766)	(0.000712)
Infant Mortality (ln), Regional Average	1.009***	1.038***	0.537***
	(0.0202)	(0.0225)	(0.0377)
Constant	2.387***	1.799***	0.0206
	(0.314)	(0.375)	(0.368)
Observations	1442	1442	1442
R^2	0.885	0.886	0.906
Country FE		YES	YES
YEAR FE			YES

Note: Standard errors in parentheses. * $p < .1$, ** $p < .05$, *** $p < .01$

Table 5 shows the effect of horizontal accountability on IMR. It shows that the young democracies with stronger horizontal accountability have lower IMR.

Table 5: The Effect of Horizontal Accountability

	(1)	(2)	(3)
VARIABLES	Infant Mortality (ln)	Infant Mortality (ln)	Infant Mortality (ln)
Horizontal Accountability	-0.206***	-0.200***	-0.0932***
	(0.0214)	(0.0212)	(0.0209)
Trade Liberalization	-0.00129***	-0.00127***	-0.00197***
	(0.000430)	(0.000433)	(0.000412)
Electoral Regime	0.0667***	0.0663***	0.0540***
	(0.0120)	(0.0120)	(0.0113)
Population (ln)	0.0460**	0.0737**	0.714***
	(0.0195)	(0.0308)	(0.0516)
ELF	-0.0211	0.272	-5.737***
	(0.148)	(0.515)	(0.628)

Foreign Aid	-0.00314***	-0.00330***	-0.00195***
	(0.000707)	(0.000698)	(0.000674)
Political Violence	0.0210***	0.0212***	0.0206***
	(0.00300)	(0.00296)	(0.00278)
Resource Dependence	0.000289	0.000184	-0.00298***
	(0.000833)	(0.000828)	(0.000815)
Communist	-0.177***	-0.186***	-0.403***
	(0.0437)	(0.0443)	(0.0445)
Urbanization	-0.00152	-0.00153	-0.00160*
	(0.000961)	(0.00102)	(0.000956)
GDP/capita (ln)	-0.342***	-0.330***	-0.216***
	(0.0198)	(0.0211)	(0.0216)
Economic Growth	0.00210***	0.00219***	0.00204***
	(0.000595)	(0.000586)	(0.000559)
Economic Inequality	-0.00144*	-0.00155**	-0.00237***
	(0.000754)	(0.000758)	(0.000710)
Infant Mortality (ln), Regional Average	0.990***	1.018***	0.546***
	(0.0201)	(0.0224)	(0.0376)
Constant	2.485***	1.915***	0.142
	(0.310)	(0.370)	(0.369)
Observations	1442	1442	1442
R^2	0.887	0.888	0.907
Country FE		YES	YES
YEAR FE			YES

Note: Standard errors in parentheses. * $p < .1$, ** $p < .05$, *** $p < .01$

Table 6 presents the effect of social accountability on IMR, which shows that countries with higher level of social accountability have lower IMR. This result supports our hypothesis.

Table 6: The Effect of Social Accountability

	(1)	(2)	(3)
VARIABLES	Infant Mortality (ln)	Infant Mortality (ln)	Infant Mortality (ln)
Social Accountability	-0.232***	-0.235***	-0.130***
	(0.0231)	(0.0230)	(0.0226)
Trade Liberalization	-0.00134***	-0.00139***	-0.00200***
	(0.000428)	(0.000430)	(0.000409)
Electoral Regime	0.0741***	0.0736***	0.0618***
	(0.0122)	(0.0121)	(0.0114)
Population (ln)	0.0659***	0.114***	0.728***
	(0.0198)	(0.0312)	(0.0503)
ELF	-0.00872	0.0581	-5.797***
	(0.149)	(0.514)	(0.621)

Foreign Aid	-0.00286***	-0.00302***	-0.00183***
	(0.000706)	(0.000697)	(0.000672)
Political Violence	0.0184***	0.0185***	0.0190***
	(0.00303)	(0.00298)	(0.00279)
Resource Dependence	0.00000819	-0.0000323	-0.00300***
	(0.000831)	(0.000824)	(0.000811)
Communist	-0.196***	-0.216***	-0.422***
	(0.0438)	(0.0446)	(0.0446)
Urbanization	-0.00130	-0.00148	-0.00152
	(0.000960)	(0.00101)	(0.000951)
GDP/capita (ln)	-0.340***	-0.324***	-0.213***
	(0.0198)	(0.0210)	(0.0214)
Economic Growth	0.00197***	0.00205***	0.00196***
	(0.000594)	(0.000584)	(0.000557)
Economic Inequality	-0.00164**	-0.00163**	-0.00239***
	(0.000751)	(0.000754)	(0.000706)
Infant Mortality (ln), Regional Average	0.983***	1.018***	0.549***
	(0.0202)	(0.0223)	(0.0372)
Constant	2.350***	1.631***	0.0232
	(0.310)	(0.369)	(0.365)
Observations	1442	1442	1442
R^2	0.889	0.889	0.908
Country FE		YES	YES
Year FE			YES

Note: Standard errors in parentheses. * $p < .1$, ** $p < .05$, *** $p < .01$

From Tables 3-6, we also find that social accountability has the strongest effect on IMR. Table 7 presents the results of the model in which we simultaneously estimate the effects of vertical, horizontal, and social accountability on IMR.

Table 7: Effect of Vertical, Horizontal, and Social Accountability

	(1)	(2)	(3)
VARIABLES	Infant Mortality (ln)	Infant Mortality (ln)	Infant Mortality (ln)
Vertical Accountability	-0.0706**	-0.0761**	-0.0201
	(0.0358)	(0.0351)	(0.0329)
Horizontal Accountability	-0.0900***	-0.0725**	-0.00774
	(0.0334)	(0.0330)	(0.0312)
Social Accountability	-0.127***	-0.142***	-0.116***
	(0.0370)	(0.0367)	(0.0345)
Trade Liberalization	-0.00125***	-0.00129***	-0.00199***
	(0.000428)	(0.000429)	(0.000411)
Electoral Regime	0.0983***	0.0987***	0.0680***
	(0.0157)	(0.0155)	(0.0147)
Population (ln)	0.0591***	0.108***	0.722***

	(0.0196)	(0.0313)	(0.0515)
ELF	-0.0189	0.0235	-5.756***
	(0.145)	(0.513)	(0.626)
Foreign Aid	-0.00287***	-0.00303***	-0.00184***
	(0.000705)	(0.000695)	(0.000672)
Political Violence	0.0185***	0.0185***	0.0189***
	(0.00303)	(0.00298)	(0.00280)
Resource Dependence	-0.0000240	-0.0000980	-0.00301***
	(0.000831)	(0.000823)	(0.000812)
Communist	-0.185***	-0.203***	-0.416***
	(0.0444)	(0.0449)	(0.0453)
Urbanization	-0.00112	-0.00126	-0.00147
	(0.000959)	(0.00101)	(0.000955)
GDP/capita (ln)	-0.339***	-0.322***	-0.214***
	(0.0197)	(0.0210)	(0.0215)
Economic Growth	0.00196***	0.00204***	0.00196***
	(0.000593)	(0.000582)	(0.000557)
Economic Inequality	-0.00146*	-0.00149**	-0.00236***
	(0.000750)	(0.000752)	(0.000708)
Infant Mortality (ln), Regional Average	0.981***	1.017***	0.553***
	(0.0201)	(0.0223)	(0.0377)
Constant	2.406***	1.692***	0.0434
	(0.308)	(0.370)	(0.368)
Observations	1442	1442	1442
R^2	0.890	0.890	0.908
Country FE		YES	YES
Year FE			YES

Note: Standard errors in parentheses. * $p < .1$, ** $p < .05$, *** $p < .01$

After accounting for country and year fixed effects, only social accountability is statistically significant in explaining the variations in IMR across young democracies (Column 3). This result strongly suggests that among young democracies, the countries with stronger social accountability have lower IMR, accounting for the roles of vertical accountability, horizontal accountability, trade liberalization, electoral regime, population, urbanization, GDP per capita, economic growth, economic inequality, and a regional average IMR.

Improvements in vertical and horizontal accountability may not lead to a government that is more responsive to the needs of the poor. One possible explanation for this could be

that despite election quality and suffrage to include more poor populations, they may not be actively voting (Larcinese, 2005). Therefore, given the incentive structure politicians face, they may be responding to the needs of a wealthier class in the society. Our finding of vertical accountability not having a significant effect on IMR, controlling for the roles of horizontal and social accountability, is contrary to the previous studies applying the Meltzer-Richard model. Our result is more aligned with this alternative explanation. Our findings support the argument that civil society organizations, media, and other mechanisms for empowering citizens have positive impacts on the responsiveness of the government to its citizens, and in particular, the responsiveness of government to the development of the poor. Moreover, we find that the relative effect of aggregate accountability on IMR is stronger than the effect of social accountability. This may suggest that what is best for development outcomes is when the three types of accountability are working together to reinforce one another.

The control variables are highly significant except urbanization (Column 3, in Tables 3-7). Income inequality is one factor through which accountability may affect IMR. Controlling for it, we find that the countries with stronger accountability have lower IMR.

4.1. Robustness Checks

To check if our findings about the relative roles of the three types of accountability are

Table 8: Effect of Accountability on Under-5 Mortality rates

	(1)	(2)	(3)	(4)	(5)
VARIABLES	Under-5 Mortality (ln)	Under-5 Mortality (ln)	Under-5 Mortality (ln)	Under-5 Mortality (ln)	Under-5 Mortality (ln)
Vertical Accountability	-0.105*** (0.0295)			-0.0254 (0.0342)	
Horizontal Accountability		-0.0974*** (0.0217)		-0.00629 (0.0324)	
Social Accountability			-0.137*** (0.0235)	-0.122*** (0.0359)	
Accountability					-0.146***
					(0.0256)
Trade Liberalization	-0.00244***	-0.00239***	-0.00243***	-0.00241***	-0.00238***

	(0.000429)	(0.000428)	(0.000425)	(0.000427)	(0.000426)
Electoral Regime	0.0817***	0.0660***	0.0742***	0.0819***	0.0829***
	(0.0154)	(0.0118)	(0.0118)	(0.0153)	(0.0127)
Population (ln)	0.591***	0.565***	0.579***	0.573***	0.572***
	(0.0529)	(0.0536)	(0.0523)	(0.0535)	(0.0526)
ELF	-4.694***	-4.451***	-4.512***	-4.468***	-4.470***
	(0.649)	(0.653)	(0.645)	(0.650)	(0.646)
Foreign Aid	-0.00185***	-0.00180**	-0.00168**	-0.00168**	-0.00174**
	(0.000702)	(0.000701)	(0.000698)	(0.000698)	(0.000698)
Political Violence	0.0248***	0.0251***	0.0234***	0.0233***	0.0240***
	(0.00291)	(0.00289)	(0.00290)	(0.00291)	(0.00289)
Resource Dependence	-0.00361***	-0.00339***	-0.00341***	-0.00343***	-0.00349***
	(0.000849)	(0.000847)	(0.000842)	(0.000844)	(0.000842)
Communist	-0.344***	-0.372***	-0.392***	-0.385***	-0.379***
	(0.0466)	(0.0463)	(0.0463)	(0.0471)	(0.0461)
Urbanization	-0.00340***	-0.00339***	-0.00330***	-0.00324***	-0.00320***
	(0.000998)	(0.000994)	(0.000988)	(0.000992)	(0.000990)
GDP/capita (ln)	-0.193***	-0.200***	-0.197***	-0.197***	-0.196***
	(0.0224)	(0.0224)	(0.0222)	(0.0223)	(0.0222)
Economic Growth	0.00182***	0.00182***	0.00175***	0.00174***	0.00175***
	(0.000583)	(0.000581)	(0.000579)	(0.000579)	(0.000579)
Economic Inequality	-0.00293***	-0.00284***	-0.00286***	-0.00283***	-0.00276***
	(0.000739)	(0.000738)	(0.000733)	(0.000735)	(0.000735)
Under-5 Mortality (ln), Regional Average	0.575***	0.584***	0.588***	0.592***	0.590***
	(0.0391)	(0.0391)	(0.0387)	(0.0392)	(0.0388)
Constant	0.914**	1.039***	0.915**	0.935**	0.942**
	(0.383)	(0.383)	(0.379)	(0.383)	(0.380)
Observations	1442	1442	1442	1442	1442
R^2	0.912	0.912	0.913	0.913	0.913
Country FE	YES	YES	YES	YES	YES
YEAR FE	YES	YES	YES	YES	YES

Note: Standard errors in parentheses. * $p < .1$, ** $p < .05$, *** $p < .01$

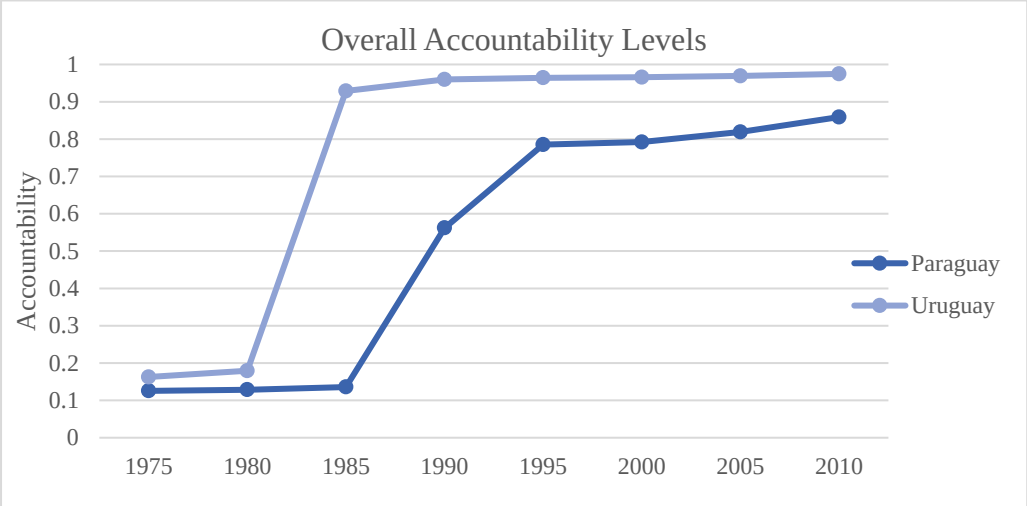
sensitive to our choice of IMR as an indicator of development, we replicate our empirical analysis with under-5 mortality rate, another indicator of development, as the outcome variable. Table 8 presents the results. The results are very similar to our results for IMR. That is, countries with stronger accountability have lower under-5 mortality rates amongst the young democracies, and social accountability is the most dominant one.

5. A Comparative Analysis of Uruguay and Paraguay

During the late 20th century, Latin America underwent the longest and deepest wave of democratization. Between 1974 and 1999, 16 countries in the region had a democratic transition. While Latin America is known for low levels of accountability and high levels of

corruption, Uruguay stands from the rest. Here we look at Uruguay more carefully for its high levels of accountability and comparatively better development outcomes. Evidence suggests that Uruguay's success stems mainly from vast improvements made in vertical and social accountability. In contrast, Paraguay has lower levels of accountability and, possibly at the expense of that, lower levels of development.[11] Figure 3 shows a comparison of the progression of overall accountability levels in Uruguay and Paraguay. Figure 4 highlights the differing levels of social accountability between the two countries.

Figure 3. Uruguay and Paraguay overall accountability levels



Source: Varieties of Democracy Dataset (2017)

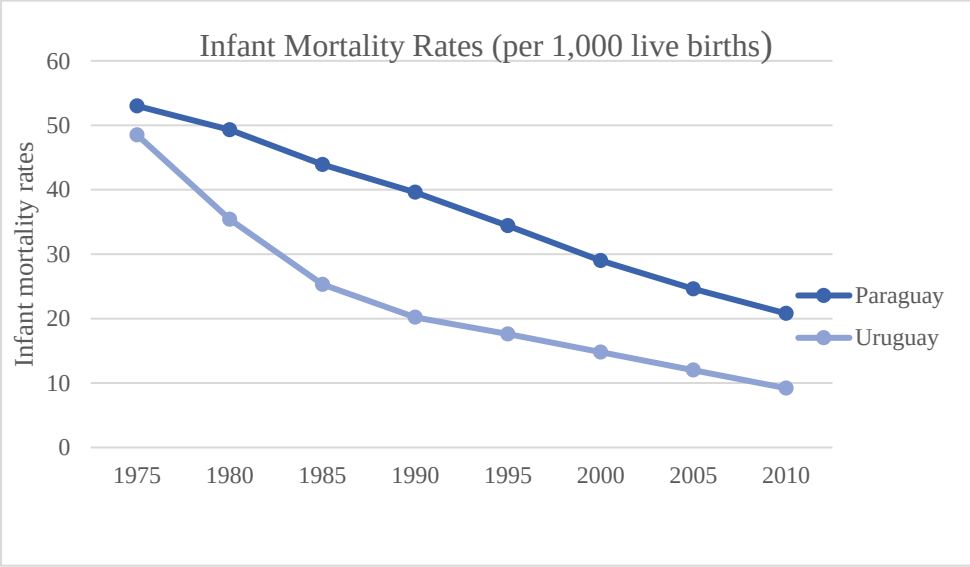
[11] As with any country comparison, they are not perfectly comparable. Paraguay is a land-locked country, and it was under a 35-year dictatorship. Uruguay is on the coast and it was under an authoritarian rule for 12 years. These differences may be also contributing to their differing development outcomes.

Figure 4. Uruguay and Paraguay Social Accountability Levels

Source: Varieties of Democracy dataset (2017)

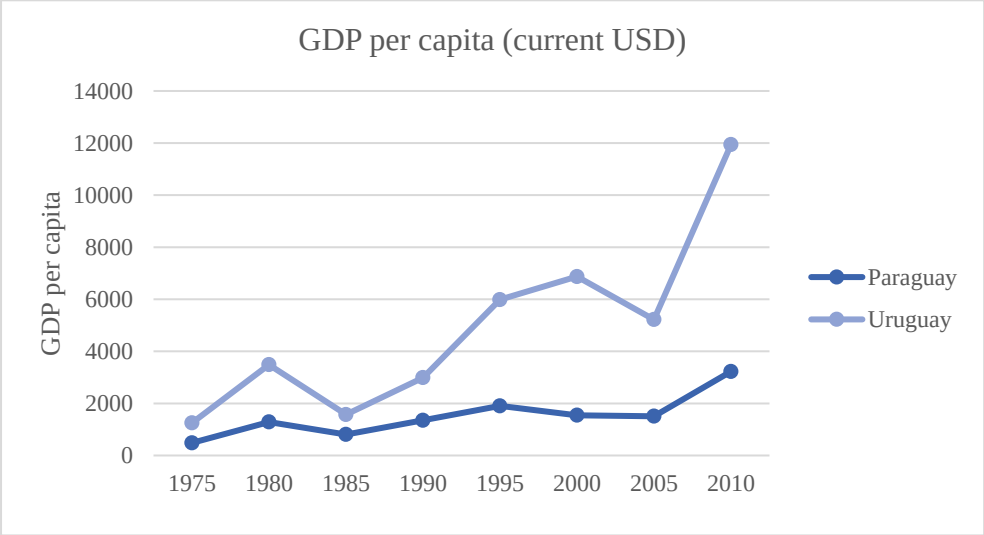
The figure 5 and 6 show differences in the levels of income and IMR between the two countries.

Figure 5. Uruguay and Paraguay infant mortality rates



Source: The World Bank (2011)

Figure 6 – Uruguay and Paraguay GDP per capita



Source: World Bank National Accounts data, and OECD.

5.1. Uruguay

In 1973, Uruguay underwent a military coup that resulted in an authoritarian regime. President Juan María Bordaberry was democratically elected in 1972, but later, in 1973, participated in a self-coup. The authoritarian rule ended in 1984, with a restoration of democratic elections and the election of President Sanguinetti. Today, Uruguay is a representative democracy that holds regular elections every five years (Rivoir and Landinelli, 2017). It has very high electoral participation, with 90.5% in 2014 (Rivoir and Landinelli, 2017). Since 2002, democracy in the country has ranked among the top three in the region by *Latin American Democratic Development Index*, and more recently, Uruguay has risen to the number one position. The *Corruption Perception Index* by Transparency International ranked Uruguay as the least corrupt country in Latin America. Among the data collected by V-Dem, Uruguay has ranked the highest amongst the countries that had a democratic transition during the "third wave" in overall accountability, social accountability, and vertical accountability. Prior to its democratic transition, however, its levels of accountability were extremely low, matching that of other countries in the region.

Uruguay's relative strength in good governance and low corruption has not always been the case. Historically, like many Latin American countries, clientelism was common practice (Buquet and Rafael, 2016). During 1960s, the two major parties in the country built their support by handing out public resources in return for political loyalty (Buquet and Rafael, 2016). Essential for this to work were the institutions set in place that allowed for the parties to have easy access to public resources, and to then distribute at the expense of the common good. During 1990s, however, the country saw change, leading clientelism to be less effective, and perhaps causing it to be the relatively successful country it is today.

A significant agent for institutional change in Uruguay was ordinary citizens working with the elite class following the reemergence of democracy in the country (World Bank, 2017). This focus on active participation from the citizens was mainly led through *Frente Amplio*, a leftist coalition party created from the efforts of social groups building coalitions with interest groups that shared similar interests (World Bank, 2017). Driving the agglomerate party was the ideals of bottom-up participation in politics. This new coalition greatly shaped politics in Uruguay. It not only increased party competition, but *Frente Amplio* brought into the public arena new demands for "equitable access to public resources, accountability, and better-quality services" (World Bank, 2017). This led to healthy political engagement, meaning politicians now selected based on how they delivered on their platforms. This increased the opportunity cost of clientelism. Uruguay serves as an example of how citizen agency can restructure the incentives politicians face (World Bank, 2017).

Uruguay's changes in practice have led to politicians being rewarded based on how they distribute public goods. To illustrate this, we can examine Uruguay's president until 2020, Tabaré Vázquez. Beginning his political career as mayor of Montevideo, Vázquez focused on integrating citizens more directly into politics. His policies included implementing communal centers, which allowed for citizen monitoring of government

actions and participatory budgeting, along with citizens actively participating in the creation of policy (Canel, 2001). An example of policy success in the country is the Uruguayan tax reform that was passed in 2006. The goal behind the progressive personal income tax was to increase redistribution by reducing the tax burden on the poorest taxpayers and increasing tax revenue (World Bank, 2017). When proposing the reform, the government was transparent in publishing the expected impact of the reform and publicizing the government's commitment to fighting tax evasion. Through the information accessible to the public, the government was able to convey that the tax would only affect those from the higher incomes, effectively leading to the reform passing (Ruis, 2013). This push from the government in access to information stifled the effect economic elites could have had on the bill passing. The tax reform not only passed, it was effective in reducing inequality (Martorano, 2014).

It is difficult to deny that this higher level of government accountability and active citizen participation may have had positive effects on for Uruguay's development. Uruguay has relatively high human development, as measured by the human development index, ranking only slightly below Chile and Argentina in the region (OECD, 2014). Further, the reported life satisfaction in the country is above the average for the region (OECD, 2014).

These advances may have been helped by its social policy, including creation of a new ministry, the Ministry for Social Development; and an anti-poverty program, National Action Program Against Social Emergency (Barrett et al., 2008). This anti-poverty program provided a monthly allowance, known as the "citizen income" to low-income families. In 2006, the program provided for approximately 350,000 individuals, which amounts to covering most of the poorest in the country (Barrett et al., 2008).

5.2. Paraguay

Paraguay also transitioned to a democracy in 1989. The levels of government accountability in the country, however, did not increase at the rate as in Uruguay (Figure 3-

4). It has been argued that Paraguay still has an authoritarian tradition, associated with weak civil society, high judicial corruption, and low levels of transparency (Nickson, 2011).

In this environment, it easy for powerful groups to capture the public policy-making process. Richards (2008) considers Paraguay a "predatory state," where leadership is not exercised in the best interest of society-at-large. The weak democracy and limited accountability in the country result in limited public policies aimed at providing for the marginalized groups (Duarte-Recalde, 2017). For example, unlike Uruguay, a tax bill proposed in 2006 to introduce personal income taxation was rejected four times (Nickson, 2011).[12] Unlike Uruguay, where citizen participation has been encouraged by the government, in Paraguay, peasant organizations that seek to enact social accountability, addressing the issue that 77% of Paraguay's arable land is controlled by 1% of the nation's landowners (Duarte-Recalde, 2017). Not surprisingly, while Paraguay has seen rapid economic growth, it has not been inclusive. Paraguay has remained at a relatively lower development level compared to Uruguay.

6. Conclusions

We examine the role of overall accountability and the relative roles of vertical, horizontal, and social accountability in explaining the variation in development outcomes amongst young democracies. Utilizing a panel data for 64 countries, covering the period of 1974-2010, we estimate both one-way and two-way fixed effects models. Our results show that the overall accountability and the three different types of accountability have negative effects on IMR amongst young democracies. In addition, we show that social accountability is more powerful in explaining the variation in IMR across the countries. In other words, among the young democracies, the countries with stronger institutions of accountability have

[12] In 2013, Paraguay finally passed its first income tax bill. It is at a low 10%, and even so, few individuals are expected to actually pay it, as loopholes and exemptions are widespread (Faruqee and David, 2018).

lower IMR, which is a powerful indicator of development. To generate further insights from our findings, we conduct a comparative analysis between Uruguay and Paraguay regarding for their levels of government accountability and development.

Our study contributes to the literature by documenting the relative roles of different types of accountability in explaining the development outcomes amongst countries that a democratic transition in the late 20th century. Our findings suggest that policies that improve access to information, specific social accountability policies like participatory budgeting, and citizen monitoring of social spending may lead to improvements in development outcomes.

Almost two decades have passed since the end of the "third wave" of democracy. This time has allowed for a reflection on what features may explain the variations in development outcomes among the young democracies. Our study suggests that social accountability is one such factor.

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