

# Fractionalization, Political Competition and Local Budgeting in Indonesia

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## **Abstract**

Since 2001 Indonesia has transformed from a centralised government into a highly decentralised one. Local municipal and regency governments are now responsible for local public investment and service provision, for which they receive sizable annual transfers from the central government. We seek to better understand fiscal policy by regency (*kabupaten*) governments, focusing on the role of political accountability through political competition at the regency level. Our empirical strategy is based on the idea that if ethnic and religious diversity shapes the competitiveness of local politics (elections), then ethnic and religious diversity could provide a plausible instrument for political accountability (the composition of local parliaments). We particularly focus on 2006, when the total amount of unused local government budgetary resources reached a record-high level of Rp 97 trillion (approximately, AUD 14 billion; equivalent to 3 per cent of the national GDP) due an unexpected national budget surplus from oil price shocks. The paper contributes to the literature by testing a specific mechanism through which diversity can shape economic outcomes, showing that political accountability reduces underutilized fiscal space. Our results suggest that accountability measures, on the one hand, can help to prevent malfeasance by local politicians, but on the other hand may induce inappropriate risk-minimisation behaviour. Our results on the relationship between ethnic and religious diversity and election outcomes are also a novel finding in the Indonesian context.

*Very preliminary and incomplete version.*

## Introduction

Greater political competition should generally lead to greater accountability in fiscal policy. When there is a high concentration of parties with political influence, there is greater scope for them to build up opposition coalitions that incumbent parties need to take into account. There is also greater scope for opposition parties to hold incumbent parties to account through spreading information about incumbents' behavior to a consequential set of supporters, altering parties' reputations. The extent to which such formal and informal channels of influence and accountability work to bring about effective political institutions has myriad implications for government policy and, ultimately, policy outcomes. In this paper we test the extent to which political competition leads to greater accountability in local budgeting, across hundreds of regional parliaments in Indonesia.

To measure political competition, we construct measures of political party vote share concentrations in regency (*kabupaten*) government elections. A key concern in regressing fiscal outcomes on political party concentrations directly is the endogeneity concern that these variables might be co-determined in some way. For example, it could be that there is a long-run political equilibrium in which political parties provide transfers to certain interest groups, and those groups correspondingly support the party at election time. To attempt to circumvent this issue, we work with the idea that sharing a common identity might be a key determinant of voting behavior. In particular, we focus on the idea that voters might base their voting decisions on having ethnic or religious affiliations with political candidates. If they do, then variation in ethnic and religious fragmentation across regencies could generate variation in political party vote shares across regencies. Hence we construct our instruments for political competition from measures of ethnic and religious fractionalization across districts. The key exclusion restriction is that ethnic and religious fractionalization only impacts the fiscal outcomes we look at directly through parliamentary composition.

Indonesia is a particularly suitable setting for this kind of study, and empirical strategy. The country underwent a significant decentralization of economic powers, so that since 2004 regency governments have been responsible for a range of policy decisions including in health, education, agriculture and infrastructure. In support of this massive increase in decision authority and responsibility, the local parliaments, Regional People's Representative Councils (DPRD), have seen a revival in power. The DPRDs are elected through an open-list proportional voting system, as opposed to a majority-based system, so that a broad range of political affiliations and preferences can be represented. All of these changes came about largely as a surprise shock in the aftermath of strongman President Suharto's downfall during the 1997-98 Asian Financial Crisis. Hence we can be less concerned about the endogeneity of ethnic composition due to migration in response to political changes. Finally, Indonesia is one of the largest and most ethnically diverse countries in the world. Estimation is based on elections for over 300 regency parliaments, with ethnic fractionalization measures constructed from over one thousand distinct ethnic groups.

The main outcome we focus on is the amount of budget surplus held by regency governments after the 2006 fiscal year. In 2006 central government transfers to the regency governments were far greater than usual, due to unanticipated shocks to the price of oil; Indonesia is a major

exporter of oil. Most regional governments received a positive transfer shock of over 60% to their central government transfers, and 78 districts more than doubled their expected transfer. Underutilized fiscal space held as budget surpluses could be a serious concern both because unused resources could be subject to misappropriation and corruption, and because such resources would not be utilized for the public good. Our main results show that political accountability reduces underutilized fiscal space.

Furthermore, our IV first-stage results also provide largely novel evidence on ethnically and religiously motivated voting behavior, by showing that ethnic diversity in particular is a significant predictor of fragmentation in vote shares.

### Related Literature

This paper contributes to the literature by (1) testing the causal impact of political competition on fiscal outcomes in a democratic system, and (2) providing evidence for a specific channel through which ethnic and religious fractionalization can impact policy decisions. This speaks to at least four related literatures. First, we speak to the literature on institutions by offering and testing a particular mechanism generating variation in the performance in political institutions. Second, the large literature on fragmentation, particularly ethnolinguistic fractionalization, and development outcomes, mainly using cross-country data. Third, the smaller but growing literature on the micro-channels through which identity politics can impact political outcomes, and testing of policies to reduce identity-based voting. Finally, the large literature on law and elsewhere on the operation of parliamentary systems.

First, this paper speaks to the large literature on institutions by authors such as Acemoglu, Robinson, and others, which argue that institutions (broadly defined) may be the key fundamental cause of differences in economic development across countries and regions. Recently that literature has moved into a tighter focus on specific micro-economic channels through which institutions can impact outcomes. This paper speaks to that literature by focusing on political competition and the operation of governments through fiscal policy.

Second, the paper speaks to the literature on ethnic diversity and economic performance. The literature on ethnic diversity and economic performance is summarized by Alesina and La Ferrara (JEL 2005). Other key papers include Easterly and Levine (QJE 1997). In general, there are many papers providing evidence that ethnic diversity (or “ethnolinguistic fractionalization”) can be bad, though this is not uniformly true, and there are also many cases where ethnic diversity can be positively harnessed. Alesina and La Ferrara (2005) offer a simple theoretical framework that attempts to capture this as a tradeoff between the productive benefits of diversity of inputs, against the conflicts that can arise because ethnic groups may have different preferences, lower trust, and may put relatively less value on satisfying the preferences of other groups. This conflict can inhibit the performance of formal and informal political institutions. Furthermore, voting along ethnic lines will lead to lower-quality candidates being selected, *ceteris paribus*. Much of this literature is based on broad, reduced form evidence, often across countries, and so it provides relatively less insight into specific mechanisms. Our setup allows for fractionalization to be both good and bad – either extreme (too much or too little) can be bad, but intermediate levels can lead to healthy political accountability.

Third, there is an emerging literature on identity politics which also includes tests of policies to reduce the impacts of ethnically-motivated political behavior. For example, Banerjee and Pande (2009) provide a model of identity-based politics and provide strong corroboration from elections in India. They employ a triple-differences strategy showing that a sharp increase in ethnic politics has led to lower politician quality (measured through greater corruption). Wantchekon (2003) studies the impact of randomizing political election messages in Benin, with “clientelist” treatments focusing on the ethnic origin of the candidate and typical promises to bring back pork to the ethnic group, and “national unity” treatments promising to work for policy reform and to bring peace among the ethnic groups of Benin. In the end the clientelist approach was the clear winner. Banerjee et al (2012) run an RCT in Uttar Pradesh that encourages people not to vote along caste lines (a form of ethnic identification in India). This message reduced the probability that voters choose a candidate of their own caste from 25 to 18%. Further work in Brazil and India provides information on actual political performance of candidates, which seems to reduce voting support for corrupt or ill-performing candidates.

Finally, the paper speaks to a large literature in law and other fields on the operation of democratic political systems.

The remainder of this preliminary draft proceeds as follows. The next section provides more information on the context and setting, and provides a discussion of theoretical hypotheses. The subsequent section details the data sources with an overview of descriptive evidence. We then discuss the empirical strategy, and finally present results. Additional information, graphs and tables are contained in the Appendix.

## **Setting and Hypotheses**

### Context: Indonesia

Law No. 22/1999 and Law No. 32/2004 in Indonesia devolved significant responsibilities to local (municipalities, or *kota* and regencies, or *kabupaten*) governments. Accordingly, local governments execute a wide range of responsibilities. The obligatory sectors for local government include health, education, public works, environment, communication, transport, agriculture, industry and trade, capital investment, land, cooperatives, manpower and infrastructure services.<sup>1</sup>

Along with empowering local governments, the regional autonomy policies have also significantly revived the power of Regional People’s Representative Councils (DPRD), which only served as a “rubber stamp” for central government decisions under former President

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<sup>1</sup> The following six components remain under the authority of the central government: (1) foreign policy, (2) defence, (3) security, (4) administration of justice, (5) national monetary and fiscal policy, and (6) religion.) Local governments’ comprehensive responsibilities and their new powers mean that their performance has a crucial impact on the overall development of Indonesia.

Soeharto. Since 2004, the election of district legislatures (DPRD) has used a restricted open-list proportional representation voting system.

In terms of local public budgeting, each local government has a public budget (*Anggaran Pendapatan dan Belanja Daerah*, APBD). The revenue side of these budgets consists of three main components: own-source revenue (*pendapatan asli daerah*, or PAD), balancing funds (*dana perimbangan*) and other revenue. With few exceptions (e.g. Jakarta), most local governments are highly dependent on central government transfers, namely the balancing funds or fiscal equalisation funds. These funds comprise three components: (1) shared revenue funds (Dana Bagi Hasil, or DBH), which are particularly important for resource rich districts; (2) general allocation funds (*Dana Alokasi Umum*, or DAU), which, generally speaking, account for approximately 70-80 per cent of local governments' budgets; and (3) a relatively small amount of special allocation funds (*Dana Alokasi Khusus*, or DAK) primarily for central government-led initiatives implemented in the region. Own-source revenue primarily consists of taxes and levy charges generated by local governments.<sup>2</sup>

In 2006, the realised international oil price was much higher than the assumption used in the national budget. As a result, the central government received larger revenues and had a more generous budget. Effective in 2006, DAU is specified as a fixed percentage (26 per cent) of central government revenue net of DBH transfers to the regions.<sup>3</sup> Correspondingly, the nominal DAU pool also surged a remarkable 64 per cent. In order for the additional funds to be released from the central government, local government heads were required to make revisions to the APBD report and account for extra spending.<sup>4</sup> In the end, more than half of provinces and districts received increases of over 60 per cent, and 78 districts even experienced an increase of more than 100 per cent.<sup>5</sup> With the additional funds being transferred to the local level, however, many local governments had difficulty in spending the extra budgetary resources. 96 per cent of

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<sup>2</sup> APBD=Own-source revenue +balancing fund + other revenue.

Balancing fund =shared revenue funds (DBH)+general allocation funds (DAU)+ special allocation funds (DAK).

DBH=DBH from tax +DBH from resources.

DAU=Base Allocation (BA) + Fiscal Gap (FG)

FG=Expenditure Needs (EN) (based on formula)-Fiscal Capacity (FC)

EN = [0.3\*Population Index + 0.1\* 1/HDI + 0.15\*Area Index + 0.3\*Cost Index +0.15\*Regional GDP per capita Index] \* Average Expenditure of sub-national Government

FC=PAD+DBH

Therefore, total balancing funds=BA+EN-PAD+DAK. See Fadliya and McLeod (2010) for an in-depth discussion on the essential elements of balancing funds and associated incentive issues.

<sup>3</sup> Some changes have taken place in the DAU allocation calculation, in particular the fiscal gap formula.

Specifically, the weights used to calculate EN (Expenditure Needs) changed in 2006: the weights for population and construction were reduced, those for area increased, HDI remained unchanged and GRDP was introduced. In addition, from 2006, DAU covers the full wage bill of each sub-national government before applying the formula as opposed to previously, where DAU covered only a portion of the wage bill. FG (Fiscal Gap = Expenditure Needs- Fiscal Capacity) is allocated to the districts pro rata of their FG. Overall, about 50 per cent of the total DAU pool is distributed using the FG formula.

<sup>4</sup> The usually problematic APBN-P in mid-year was not changed significantly in 2006. The mid-year revisions were only marginal as a result of the vastly improved budget preparation with the adjusted oil price assumption.

<sup>5</sup> In 2006, the DAK was dedicated to infrastructure of basic services and its coverage expanded to new local infrastructures.

local governments (354 out of 370 for which data were available) registered a surplus. Among them, 191 recorded a surplus equivalent to at least 20 per cent of total discretionary spending.<sup>6</sup>

Accumulating unspent budget funds is a relatively new phenomenon in Indonesia. Since decentralisation, sub-national governments have accumulated a significant amount of reserves. Between 2001 and 2005, provinces and district governments built up more than Rp.35 trillion in reserves – equivalent to about 21 per cent of (2005) sub-national expenditure and 1.4 per cent of 2005 GDP. In part, due to the additional transfer from central government in 2006, the total reserves accumulated by local governments reached a record level of Rp. 97 trillion, equivalent to about 3 per cent of Indonesia's GDP (World Bank 2007). These large sums of untapped reserves stood in stark contrast to deficiencies in funds committed for badly needed infrastructural development and provision of public services, such as education and health.

On the expenditure side, the largest spending item of local governments is on government administration. In 2006, it absorbed on average 38 per cent of total local budget, including salaries and allowances for public servants and their travel costs.<sup>7</sup> Around 25 per cent of APBD was spent on investment and 14 per cent on goods and services. Another 5 per cent of the budget was used for maintenance.

In addition, Law No.22/1999 on regional administration stipulates that DPRD members would elect and control the heads of local governments (i.e., regents of regencies and mayors of municipalities). However, as democratisation deepened, Law No.32/2004 revised Law No.22/1999 and removed the DPRDs' rights to select regional heads. Beginning in 2005, local government heads are increasingly being directly elected for the first time in an electoral process that is still rolling out as heads of governments come to the end of their respective terms. Under the new law, regional heads are directly elected by the constituencies, which restored some balance between executives and legislatures. The system of selection of local heads enters the regressions as a control.

### Theoretical Implications

Despite the magnitude of the phenomenon, to the best of our knowledge, there has been very limited discussion on the issue of underutilised fiscal space of local governments in Indonesia. Notably, the World Bank report in 2007 on Indonesia's public spending (World Bank 2007) paid some attention to the growing reserves at the local level and outlined four contributing factors to this phenomenon: (1) delay in the approval process of the local government budget; (2) delay in central government transfers to the local level; (3) direct central government spending crowding out local spending; and (4) the limited capacity of sub-national governments. While these factors, to different extents, all played a role in the accumulation of large reserves, an important aspect that has not been addressed is the issue of how local governments make and implement

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<sup>6</sup> Discretionary spending is defined as total expenditure minus routine spending such as wage bill for personnel. 84 of them had surplus of the size at least 20 per cent of their total expenditure.

<sup>7</sup> Author's calculation based on the 370 districts for which data are available. According to World Bank (2007), Indonesia spends about 25 per cent of all public expenditure on personnel. Specifically, districts account for more than two-thirds of total civil personnel spending, equivalent to 41 per cent of Indonesia's total government apparatus spending.

decisions in practice. Hence we control for these and other stories while focusing on the political competition channel.

Banerjee and Pande (2009) provide a useful framework to think about identity-based voting. Although the model is specified broadly in order to cover a number of means of identity-based voting, including ethnic, religious, and class-based voting, as in this paper their empirical evidence is mainly derived from ethnically-based voting (based on caste affiliation). In any case, their paper outlines a model in which voters can be attracted to a candidate both because the candidate has high objective “quality” (i.e., raw administrative and organizational skill) and because of identity-based attraction. In their model it does not matter if the latter attraction is due to ethnic candidates genuinely being able to deliver more resources to their own ethnic group, or perhaps because voters choose candidates they identify with due to common ethnic background, cultural symbols, etc. The key point is that the presence of identity voting generates a tradeoff between pure quality and identity preference, which can lead voters to choose lower-quality candidates based on identity. They then analyze how this tradeoff changes as they vary two key parameters: the numerical dominance of the majority population group, and the extent of own-group preference among voters. They derive the predictions that increasing either of these variables lowers the quality of winning politicians from the numerically dominant group, and reduces the average winner-loser quality gap. These effects will matter most in districts with greater heterogeneity in the size of identity-voting blocks. In their empirical work they find supportive evidence, including that dominance of a single voting block lowers the quality of politicians on average.

The outcomes we focus on are slightly different – fiscal choices of the regency government. On the other hand, the intuition of a basic model would be similar, in terms of the model of voter decision-making. In our case the outcomes of interest are different – rather than politician quality (revealed through measures like corruption), we focus on fiscal decisions by the local government. In our case the idea is that *if* voters select politicians based at least partially on salient identity ties like ethnicity, then this will generate variation in political competition based on underlying levels of ethnic and religious heterogeneity. Hence ethnic heterogeneity leads to political competition, which leads to budgeting outcomes. We expect that political competition is a good proxy for political accountability (that having more competitor parties around will hold the strongest incumbent party to account). This should lead to “more responsible” budgeting behavior.

## **Data and Descriptive Evidence**

### Sources

Budgeting data comes from the APBD budget statistics from the Directorate General of Fiscal Balance, Indonesian Ministry of Finance. These statistics are made publicly available online.<sup>8</sup> The total number of districts that have realised budget information in 2006 is 370, just over 80 per cent of all districts. Districts of Jakarta are not included in the 370 districts. Initial comparison of the key characteristics of the 370 districts with the others suggests differences

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<sup>8</sup> <http://www.djpk.depkeu.go.id/datadjpk/131/>

exist in some but not in all aspects. The potential sample selection issue will be addressed formally in the updated version of this study.

Data on ethnic and religious population shares come from data compiled from the Indonesian census, which is collected by Badan Pusat Statistik. Data for control variables comes from other Indonesian statistics extracts. Political fragmentation measures are based on available data on Indonesian election vote shares from the 2004 and subsequent elections.

### Descriptive Evidence

Descriptive evidence on the relationship between key variables in the regression analysis is provided in the figures in the Appendix.

## **Empirical Specification and Strategy**

### Empirical Specification

Our main regression specification in a 2SLS setup is as follows:

1. First stage:  $PFI = \alpha_0 + f(\beta, frag) + X' \gamma_{PFI} + \eta$
2. Second stage:  $Outcome = \zeta_0 + \delta PFI + X' \gamma_{outcome} + \varepsilon$

Where PFI is an index of political fractionalization,  $f(\cdot)$  represents a linear or quadratic function of fragmentation measures (measures of ethnic and religious diversity), and  $X$  represents other controls. The other controls include measures that account for other theories behind budget surpluses, such as lack of local implementation capacity and variation in budget receipts due to ownership of natural resources.

We consider a number of measures of frag, including based on a Herfindahl measure, a Theil index of inequality and a polarization index. In the end we focus on results from the Herfindahl measures, but the other results are broadly similar. For political fragmentation, PFI, we focus similarly focus on the Herfindahl measure.

### Empirical Strategy

Our empirical strategy relies on the exclusion restriction that ethnic and religious fractionalization only impacts final fiscal policy outcomes through political fractionalization in the DPRD (i.e., political competition). We argue that this restriction is valid for a few reasons. First, we focus on policy decisions that are the direct domain of the kabupaten government. This can be contrasted with looking at broader development outcomes, which would more naturally be a function of local institutions outside of the DPRD itself. Second, due to the open list voting system to select the DPRD, its composition should largely reflect the full spectrum of heterogeneity in voter preferences, without the truncation that would occur in a majority-based system. Hence the composition of the DPRD really should “sop up” heterogeneity in the electorate quite effectively. Third, some of the identification probably comes from the non-linear



transformations of population level statistics that we carry out in constructing our key variables. To contradict the exclusion restriction, one needs to develop a rather complex story about specific ways in which local ethnic and religious heterogeneity might manifest themselves in terms of the way the local political decision-making process works.

## **Results**

Preliminary results are reported in the Appendix, in three tables:

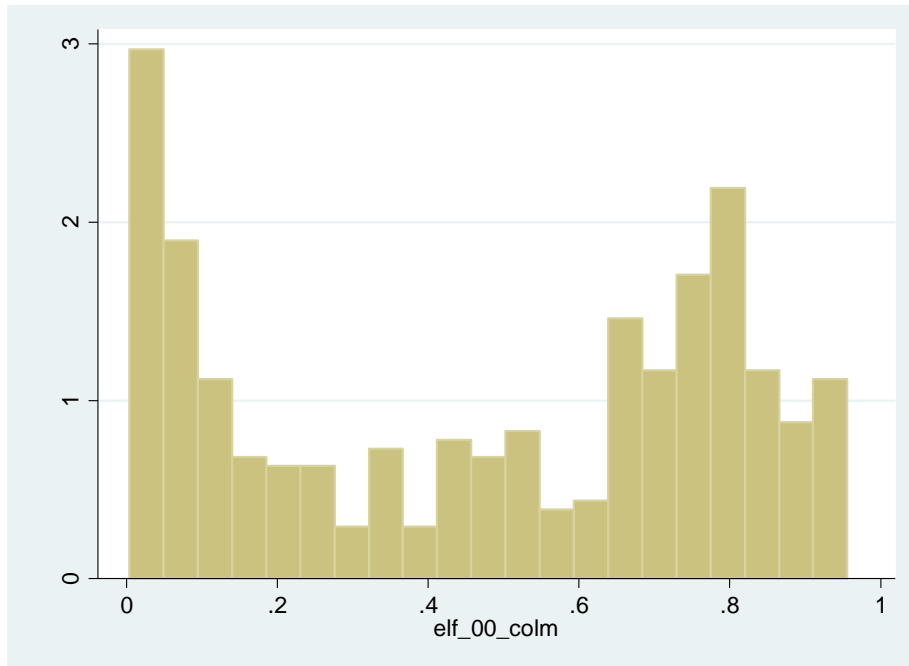
1. Estimation results from OLS regressions.
2. Estimation results from the first stage of the IV regression (which provides the results on the relationship between ethnic fragmentation and political fragmentation).
3. Estimation results from the second stage of the IV regression.

We see that the OLS estimates of interest are of the same sign but smaller magnitude than the corresponding IV estimates. In addition, the OLS estimates are insignificant. In other literature similar patterns are interpreted as evidence that the OLS estimates are biased downwards due to attenuation bias from measurement error.

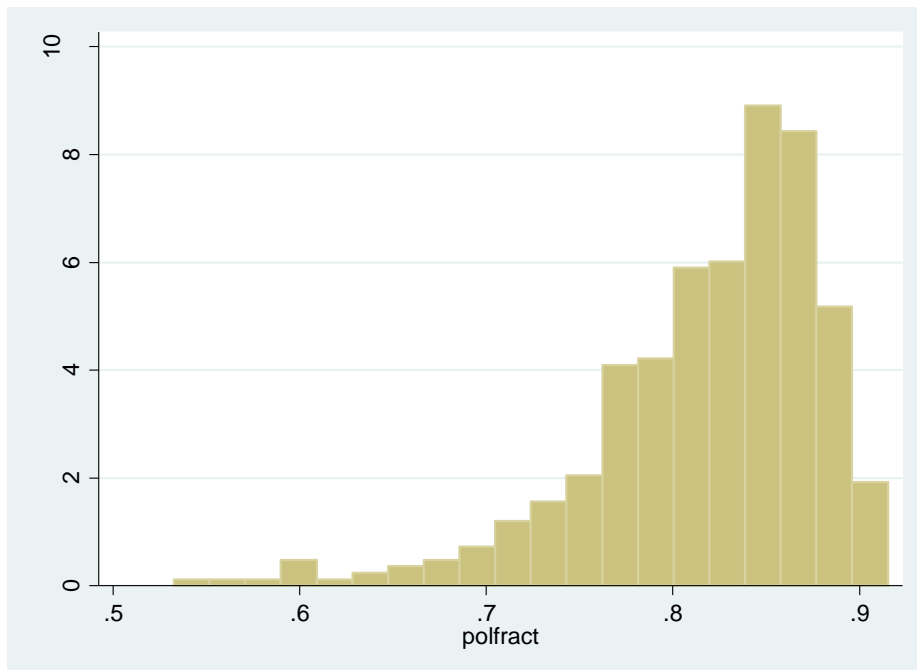
The middle three IV regressions pass Hansen's J test of over identifying restrictions to indicate that the instruments are valid. Following the rule of thumb for an F test of 10 for weak instruments, the instruments appear to be slightly weak in most specifications, with an F value slightly under 10 in most cases.

## Appendix

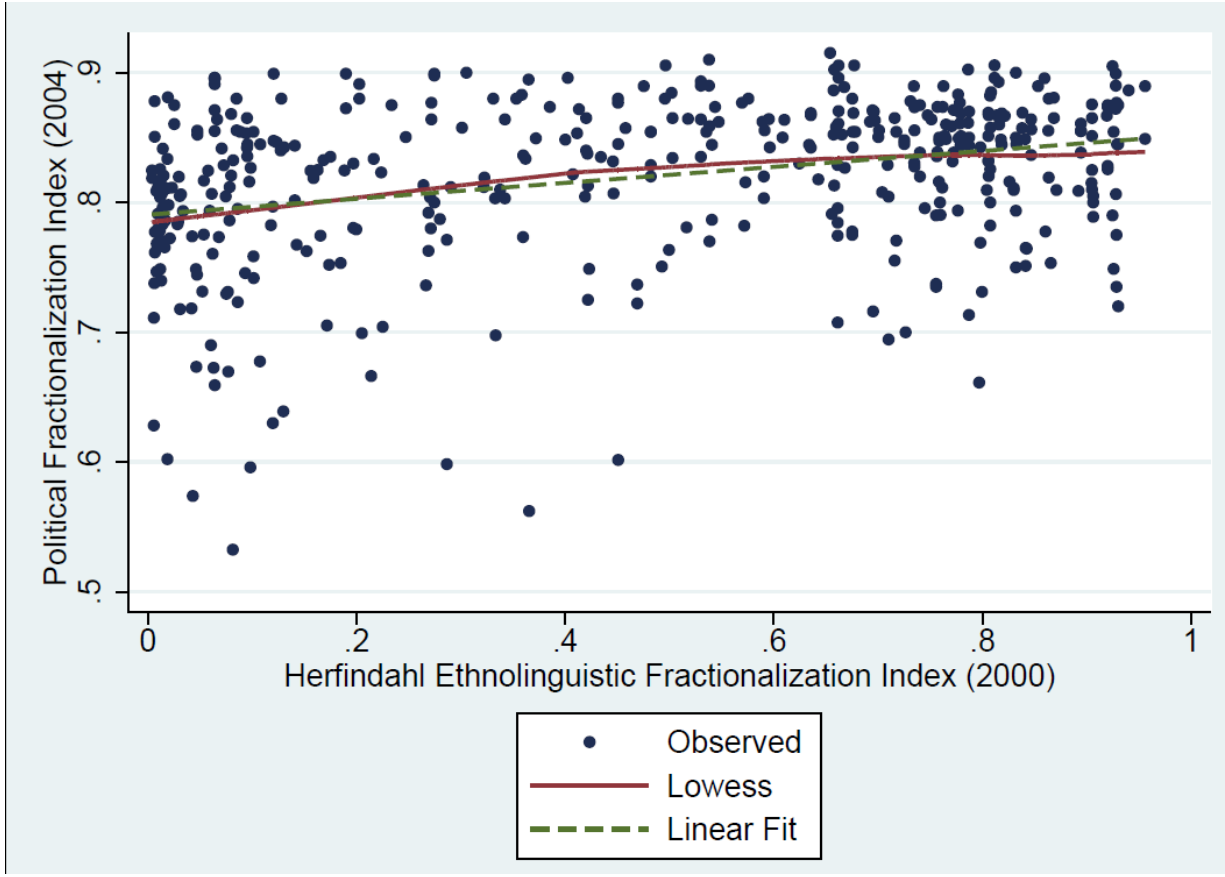
### Figures



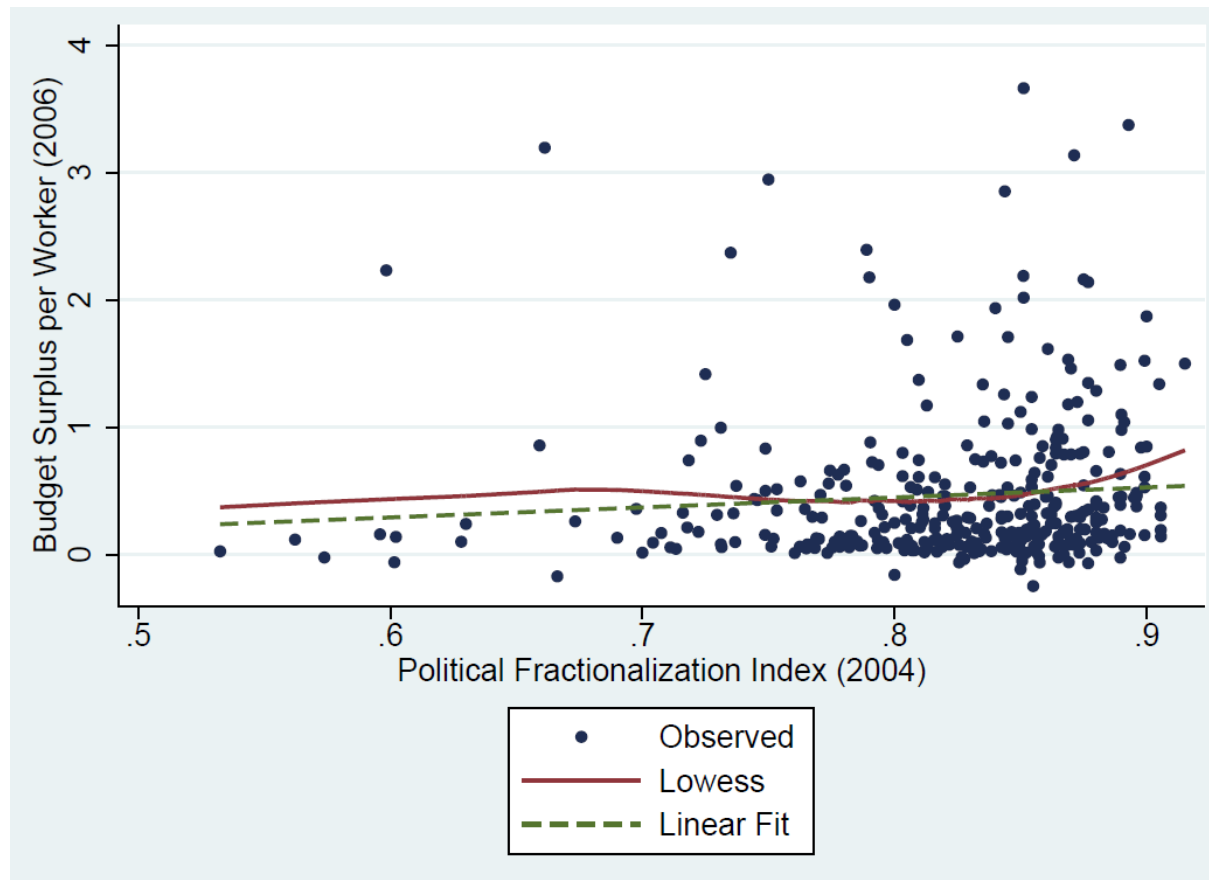
Histogram of the distribution of the Herfindahl-based index of ethnolinguistic fractionalization.



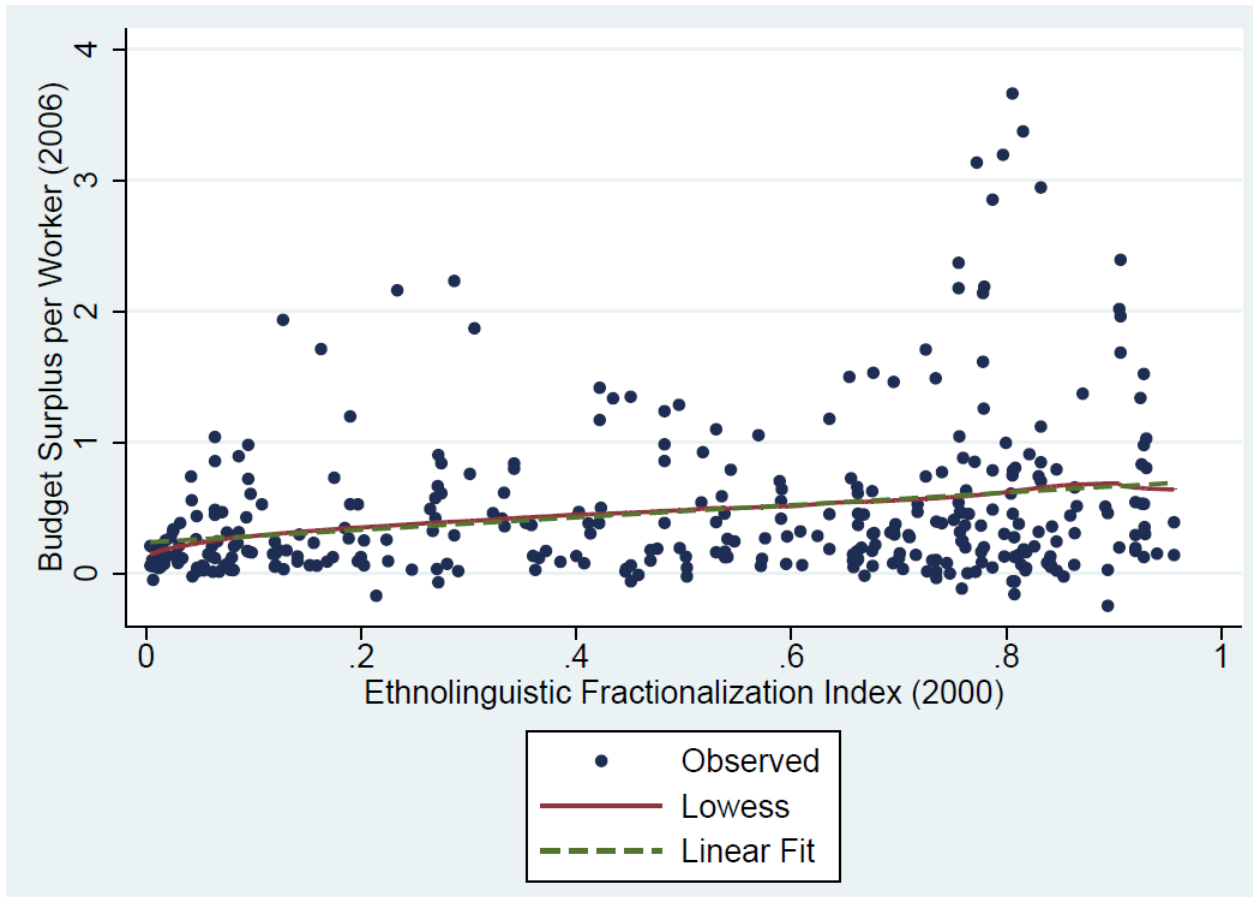
Histogram of the distribution of the Herfindahl-based index of political fractionalization.



Ethnolinguistic fractionalization index against political fractionalization index (both Herfindahl). Essentially the “first stage” of the IV.



Budget surplus (per worker) against political fractionalization index. Essentially the “second stage” of the IV.



Budget surplus (per worker) against ethnolinguistic fractionalization index. The direct effect of ELF on budget outcomes.

## Tables

### OLS regression estimates

	(1)	(2)	(3)	(4)
	surp_pw	surp_pw	surp_pw	surp_pw
polfract	0.722 (1.183)	-1.256 (0.979)	-1.128 (0.948)	-1.533 (1.095)
ymin05_pw		0.008 (0.007)	0.007 (0.006)	0.007 (0.007)
mining5005		-0.021 (0.119)	0.008 (0.114)	-0.039 (0.125)
scholyr05		-0.128* (0.058)	-0.114 (0.079)	-0.109 (0.077)
ln_re_ttl_dapat		2.780*** (0.803)	2.610** (0.853)	2.656* (1.186)
rdau06re		-0.160 (0.727)	-0.387 (0.760)	-0.595 (1.279)
size06m		-22.445 (41.043)	-14.168 (44.135)	-11.880 (52.108)
disprov06m		1.020 (1.193)	1.018 (1.222)	0.695 (1.297)
ln_tpop05		-1.538*** (0.324)	-1.567*** (0.320)	-1.579*** (0.339)
jawa			0.436* (0.209)	0.523* (0.204)
status			-0.005 (0.202)	-0.110 (0.215)
rtrw9905				-0.018 (0.086)
shr_dpt_asli				-2.655

				(1.393)
pns05				0.000 (0.000)
Constant	0.180 (0.983)	-14.099* (6.591)	-11.692 (7.318)	-11.500 (12.238)
Observations	370	347	347	323

Standard errors in parentheses

\*\*\*  
 ="\* p<0.05      \*\* p<0.01      p<0.001"

IV First-stage regression estimates

	(1)	(2)	(3)	(4)	(5)
	polfract	polfract	polfract	polfract	polfract
elf_00_colm	0.088*** (0.012)	0.064*** (0.016)	0.067*** (0.020)	0.070*** (0.020)	0.086*** (0.026)
relig_00_colm	0.106* (0.045)	-0.003 (0.054)	-0.001 (0.054)	0.005 (0.057)	-0.003 (0.056)
elf_00_colm*relig_00_colm	-0.175** (0.057)	-0.019 (0.070)	-0.022 (0.071)	-0.036 (0.076)	-0.021 (0.075)
ymin05_pw		-0.000 (0.000)	-0.000 (0.000)	-0.000 (0.000)	-0.000 (0.000)
mining5005		-0.001 (0.008)	-0.001 (0.008)	-0.003 (0.008)	-0.003 (0.008)
scholyr05		0.008** (0.003)	0.009** (0.003)	0.009** (0.003)	0.009** (0.003)
ln_re_ttl_dapat		-0.027 (0.017)	-0.029 (0.018)	-0.047 (0.025)	-0.047 (0.025)
rdau06re		-0.051 (0.034)	-0.053 (0.035)	-0.097* (0.044)	-0.100* (0.044)
size06m		-0.493 (0.527)	-0.500 (0.529)	-0.338 (0.573)	-0.276 (0.579)
disprov06m		0.137*** (0.031)	0.134*** (0.032)	0.122*** (0.034)	0.120*** (0.034)
ln_tpop05		0.015* (0.007)	0.015* (0.007)	0.021** (0.008)	0.021** (0.008)
jawa			0.005 (0.013)	0.009 (0.013)	0.011 (0.013)
status			0.006 (0.011)	0.000 (0.011)	-0.000 (0.011)



rtrw9905				-0.025** (0.008)	-0.025** (0.008)
shr_dpt_asli				-0.259*** (0.074)	-0.263*** (0.074)
pns05				0.000 (0.000)	0.000 (0.000)
eth_majority					0.015 (0.011)
Constant	0.780*** (0.007)	0.909*** (0.177)	0.930*** (0.184)	1.134*** (0.301)	1.107*** (0.304)
Observations	431	346	346	322	322
r2	0.120	0.174	0.175	0.240	0.243

Standard errors in parentheses

\*\*\*  
 ="\* p<0.05            \*\* p<0.01    p<0.001"

IV second stage regression estimates

	(1)	(2)	(3)	(4)	(5)
	surp_pw	surp_pw	surp_pw	surp_pw	surp_pw
polfract	13.178*** (3.544)	-14.280** (5.220)	-12.465* (5.290)	-13.780* (5.617)	-8.991* (4.335)
ymin05_pw		0.004 (0.008)	0.003 (0.007)	0.005 (0.007)	0.006 (0.006)
mining5005		0.003 (0.151)	0.021 (0.142)	-0.039 (0.156)	-0.039 (0.136)
scholyr05		0.019 (0.084)	0.005 (0.092)	0.023 (0.087)	-0.028 (0.086)
ln_re_ttl_dapat		2.273** (0.821)	2.232** (0.833)	1.984 (1.158)	2.246 (1.183)
rdau06re		-1.281 (1.009)	-1.278 (0.971)	-2.204 (1.539)	-1.574 (1.492)
size06m		-10.890 (41.106)	-6.822 (43.059)	-2.346 (50.095)	-6.071 (50.755)
disprov06m		2.793 (1.452)	2.566 (1.545)	2.225 (1.620)	1.627 (1.476)
ln_tpop05		-1.339*** (0.320)	-1.384*** (0.307)	-1.290*** (0.314)	-1.404*** (0.331)
jawa			0.285 (0.264)	0.437 (0.254)	0.471* (0.222)
status			-0.032 (0.222)	-0.214 (0.240)	-0.173 (0.218)
rtrw9905				-0.295 (0.167)	-0.187 (0.129)
shr_dpt_asli				-6.551** (2.538)	-5.027* (2.118)

pns05				0.000 (0.000)	0.000 (0.000)
Constant	-10.067*** (2.875)	0.076 (8.652)	-0.229 (8.206)	3.741 (13.234)	-2.218 (13.247)
Observations	369	346	346	322	322
idstat	31.993	20.772	15.499	15.584	15.949
idp	0.000	0.000	0.001	0.001	0.003
widstat	13.210	7.337	5.319	5.426	4.171
jp	0.023	0.848	0.907	0.910	0.010

Standard errors in parentheses

= "\*" p<0.05      \*\* p<0.01      \*\*\* p<0.001"