

**International Studies Program  
Working Paper 10-07  
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**Does Fiscal Decentralization  
Strengthen Social Capital? Cross-  
country Evidence and the Experiences  
of Brazil and Indonesia**

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# *Does Fiscal Decentralization Strengthen Social Capital? Cross-country Evidence and the Experiences of Brazil and Indonesia<sup>1</sup>*

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## **Abstract**

This paper tests the hypothesis that, by giving people more voice in the government decision-making process, fiscal decentralisation fosters social capital, measured in terms of interpersonal trust. Empirical evidence based on World Values Survey data and seemingly unrelated probit estimations for a cross-section of countries suggests that people living in federal/decentralised countries find it more important than their counterparts living in unitary/centralised countries to have voice in government decisions, which, in turn, is associated with greater social capital. The cross-country estimations are complemented by country-specific regressions for Brazil and Indonesia on account of these countries' experiences with fiscal decentralisation. The results show that the cohorts of individuals that have been exposed to decentralisation are in general more pro-voice (and trustful of strangers in the case of Brazil) than their counterparts that have not been exposed to decentralisation. These findings are not driven by the effects of political liberalisation on people's attitudes towards the importance of having voice in government decisions and interpersonal trust.

JEL Classification Number: H11, H77, H30

*Keywords:* Federalism, decentralisation, social capital, Brazil, Indonesia

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## 1. Introduction

There is a growing empirical literature on the association between institutions – for example, the structure of government and political regimes – and the development of social capital. This strand of literature favours a “top-down” approach to social capital formation that runs counter to Putnam’s (1993) society-centric “bottom-up” view, or that of Coleman (1988, 1990) and Bourdieu (1986), based on social norms and networks, where institutional settings play no role in the creation of social capital (Tarrow, 1996). This top-down approach has nevertheless been challenged on several grounds. Empirical evidence is now available suggesting that social capital is affected by the political environment (Muller and Seligson, 1994; Offe, 1999; Letki and Evans, 2005) and the organisational structure of local governments (Newton, 1976; Maloney *et al.*, 2000).

This paper empirically tests the hypothesis that fiscal decentralisation has a bearing on social capital formation to the extent that it affects people’s attitudes towards the importance of having voice in the government’s decision-making process, which I refer to “pro-voice attitudes”. A specific channel of causality is therefore proposed for the association between federalism and social capital. The underlying hypothesis is that fiscal decentralisation brings the government closer to the people: this proximity encourages the citizenry to participate in government decisions, which may foster social capital by strengthening trust among members of the community. Previous literature, including de Mello (2004), suggests that there is indeed an empirical association across countries between a variety of fiscal decentralisation indicators and social capital, measured in terms of associational activity and interpersonal trust. This is probably because the decentralisation of fiscal policy fosters the creation of a legal and governmental environment that encourages the well

functioning of communities. But no specific hypothesis or a “transmission mechanism” has so far been empirically tested.

Empirical evidence is provided in this paper using the latest (2005) wave of the World Values Survey (WVS). The WVS reports data for over 80 countries since 1981 (Inglehart *et al.*, 2004). The survey provides responses to a number of questions related to people’s attitudes to interpersonal trust and has therefore been used extensively in the empirical literature on the determinants of social capital. In particular, I use WVS responses to a question on respondents’ views on the importance of having a say in government decisions to test for the channel through which federalism may affect social capital, gauged in terms of interpersonal trust. The models are estimated by seemingly unrelated probit, when pro-voice attitudes are found to be endogenous to social capital formation, and by univariate probit, when the hypothesis of exogeneity cannot be rejected by the data.

I provide cross-sectional evidence in favour of the federalism-social capital nexus by combining information on the structure of government between federal/decentralised and unitary/decentralised States. I complement the cross-sectional analysis by focusing on the cases of Brazil and Indonesia, countries that implemented a number of wide-ranging decentralisation reforms during 1988-93 (Brazil) and from 1999-2001 (Indonesia). I pursued an identification strategy based on the exposure of different cohorts to decentralised fiscal management, which I show to be associated with pro-voice attitudes and -- through this channel -- with social capital formation. I recognize that identification is particularly challenging in the social capital literature, as noted extensively since Durlauf (2002). Because fiscal decentralisation took place in part as a result of a return to democracy in both

countries, I compare pro-voice attitudes among cohorts that came of age during periods of democratic centralism (prior to 1964-68 in Brazil and 1959 in Indonesia), political repression (1964-85 in Brazil and 1959-98 in Indonesia) and democratic decentralisation (post-1988/1993 in Brazil and post-1999/2001 in Indonesia).

The main empirical findings reported in the paper are that, at the cross-country level, respondents residing in federations/decentralised countries are more pro-voice than those living in unitary/centralised States, which, in turn, is associated with greater interpersonal trust. The country-specific evidence suggests that, in the case of Brazil, individuals who came of age during the period of democratic decentralisation (after 1988-93) are more pro-voice than their counterparts who came of age during democratic centralism or in the initial phase of military rule (until 1967). Having a say in government decisions also encourages interpersonal trust. In the case of Indonesia, individuals who came of age under democratic decentralisation (after 1999-2001) are also more pro-voice than their counterparts who came of age under undemocratic centralism (especially up to 1967 under President Sukarno's "Guided Democracy"/"Guided Economy" and in the initial period of the Suharto regime). Unlike Brazil, nevertheless, pro-voice attitudes do not seem to foster interpersonal trust in Indonesia. All in all, these findings lend further credence to the hypothesis of an association between fiscal decentralisation and social capital formation that goes beyond the effect of the political environment on attitudes towards the importance of having voice in government decisions.

The paper is organized as follows. Section 2 reviews the literature. Section 3 presents the data and reports the cross-country evidence. Section 4 discusses the

identification strategy for the country-specific analysis and reports the main findings. Section 5 concludes.

## **2. The causal mechanisms: A review of the literature**

The social capital literature has two basic strands: one is bottom-up (Bourdieu, 1986; Coleman, 1988, 1990; Putnam, 1993) and the other is top-down (Newton, 1976; Maloney *et al.*, 2000). The fundamental difference between both strands is the role of institutions, which is hypothesised not to affect social capital in the bottom-up strand. By contrast, the top-down approach posits that the structure of government and the institutional/political environment have a role to play in the formation and development of social capital.

Based on previous evidence by Newton (1976), Maloney *et al.* (2000) shed additional light on the networking capacity of local governments, which may foster associational activities in local communities. Empirical evidence is provided on the basis of the number of voluntary associations registered in the city of Birmingham in 1970 and their association with one another and the city council. A variety of formal institutional structures for cooperation are considered, including the extent of decentralisation of government decisions, the informal vehicles that might exist for engagement between local governments and associations, as well as the political environment, which may affect the willingness of local authorities to cooperate with associations of different political persuasions.

The top-down view on the association between the structure of government and social capital has been broadened in recent years. Social capital has been shown to be affected by political institutions, because the political environment provides incentives/disincentives for people to undertake collective action (Tarrow, 1994).

Lowndes and Wilson (2001) consider four interacting dimensions of institutional design within local governance that shape the creation and mobilisation of social capital: relationships with the voluntary sector, opportunities for public participation, the responsiveness of decision-making and arrangements for democratic leadership and social inclusion. The emphasis of this literature is on social connectedness through associational opportunities brought about by government (Skocpol *et al.*, 2000). On the basis of data for Swiss cantons, which have significant differences in terms of political institutions, Freitag (2006) shows that direct democracy fosters the development of social capital. Empirical evidence that political institutions create opportunity for associational activity is also available for Belgium (Hooghe, 2003).

Further developments in this literature include Wallis and Dollery (2002), who discuss ways in which the engagement of local authorities with voluntary organisations encourages social capital formation. They argue that decentralisation opens up opportunities for citizens and communities to influence the outcome of local government decisions, which may support the development of voluntary associations and local service delivery networks. But for decentralisation to enhance social capital, it needs to foster the creation of horizontal networks, rather than principal agent-type associations between local authorities (principal) and service deliverers (agents).

A separate strand of literature focuses on trust as a measure of social capital, rather than associational activity, and its link with the political environment (Muller and Seligson, 1994; Offe, 1999; Letki and Evans, 2005). Causality is most often shown to run from the political environment to social capital, rather than the converse. This association stems from the fact that the ability of government to recognise and respond to the demands of the citizenry depends on the strength of democracy (Levi,

1996; Curtis *et al.* 2001; Paxton, 2002; Stolle, 2003). However, Torcal Montero (1998) argues that the extent to which the introduction and development of new democratic institutions create social capital depends on pre-existing levels of interpersonal trust, or intergenerational differences in the extent to which citizens trust each other. The author casts doubt on the scope for political transformation to foster the accumulation of social capital on the basis of the Spanish experience, where cohort effects are shown to be important in explaining the persistence of low trust across generations despite the consolidation of democracy.

Empirical analysis on the role of fiscal decentralisation as an institutional determinant of social capital includes the cross-country evidence reported by de Mello (2004). The author regresses social capital indicators, such as trust and a variety of associational activities constructed by averaging survey responses across countries, on conventional indicators of fiscal decentralisation used in the public finance literature, such as sub-national revenue autonomy and the gap between own revenue sources and expenditure at the sub-national level. The findings reported in the paper provide fairly strong evidence of an association between social capital and fiscal decentralisation. Nevertheless, no specific channel of causality is proposed and tested.

### **3. The cross-country evidence**

#### ***The methodology***

The basic hypothesis to be tested is that fiscal federalism/decentralisation contributes to social capital formation by shaping people's pro-voice attitudes. This hypothesis can be tested by estimating a model as follows:

$$D_i^* = \alpha_1' Federal_j + \alpha_2' C_{1i} + e_{1i},$$

(1)

$$S_i^* = \beta_1' D_i + \beta_2' C_{2i} + e_{2i},$$

where  $D_i^*$  and  $S_i^*$  are latent variables measuring individual  $i$ 's pro-voice attitudes and social capital, respectively;  $D_i$  is a dichotomous observable indicator of individual  $i$ 's pro-voice attitudes, such that  $D_i = 1(=0)$  if  $D_i^* \geq 0(<0)$ ;  $Federal_j$  is an indicator of fiscal decentralisation in country  $j$ ;  $C_{1i}$  and  $C_{2i}$  are vectors of control variables; and  $e_{1i}$  and  $e_{2i}$  are error terms.

Because attitudes towards the importance of having voice in government decisions may be endogenous to social capital formation, the univariate probit estimator would produce biased parameters. The instrumental-variable version of the conventional probit model would not be appropriate, because the indicators of social capital and pro-voice attitudes (defined below) are dichotomous. Instead, I use a maximum likelihood estimator for a seemingly unrelated bivariate probit that allows for a binary endogenous variable. The error terms are identically distributed as bivariate normal with zero mean, unit variance and correlation coefficient  $\rho$ . The hypothesis of exogeneity of  $D_i$  in System (1) is tested as  $H_0 : \rho = 0$  against  $H_0 : \rho \neq 0$  using a likelihood-ratio (LR) test, which is recommended by Monfardini and Radice (2008) for testing for exogeneity in a simultaneous estimation setting. This technique has the additional advantage that identification does not require the set of controls to differ across equations (Wilde, 2000).

***The data***

It is not easy to define social capital. Conventional definitions emphasise interpersonal trust, civic cooperation and voluntary membership/participation in secular or religious organisations. At a more general level, social capital refers to a set of rules and norms that govern social relations, economic regulations and institutions. I follow the literature and use the conventional measure of interpersonal trust available from WVS. Trust is coded using question V23 (“Generally speaking, would you say that most people can be trusted or that you need to be very careful in dealing with people?”) as taking the value of “1” if respondents selected option 1 (“Most people can be trusted”) as their answer, and “0” otherwise.

People’s pro-voice attitudes are measured by an indicator constructed using questions V71 (“If you had to chose, which one of the list of things on this card would you say is most important?”) and V72 (“And which would be the next most important?”) by giving the value of “1” to those respondents who selected option 2 (“Giving people more say in important government decisions”) in questions V71 or V72, and “0” otherwise.

To identify the federal/decentralised countries in the sample a dummy variable (federal) was constructed using the Elazar (1995) index of political institutions. The variable takes the value of “1” for Argentina, Australia, Brazil, Italy, Mexico (based on Elazar’s index) and Indonesia, which I added to the original list on the basis of the decentralisation programme implemented in 1999-2001, although Indonesia remains a unitary State (in any case, removal of Indonesia from the list does not alter the empirical findings), and “0” otherwise.

The control variables are standard in the social capital literature. They include survey respondents' age, gender, ethnicity, marital status, educational attainment, whether they are heads of households or have children, and employment status.

### ***Cross-sectional regressions***

As a preliminary description of the data, 47.6% of respondents residing in the federal/decentralised countries included in the sample believe that people should have more say in government decisions, against 44.8% in the unitary/centralised States. As for trust, the proportion of respondents in the federal/decentralised countries who believe that most people can be trusted is 27.7%, against 24.1% for those residing the unitary/centralised States.

The results of the seemingly unrelated probit estimations, reported in **Table 2**, show that respondents residing in federal/decentralised countries are indeed more pro-voice than their peers in unitary/centralised States. In turn, say in government is found to foster interpersonal trust. This finding is robust to the inclusion in the regressions of conventional individual and household characteristics that are deemed to affect social capital. Married people, females and people without children appear to trust others more than unmarried people, males and people with children. Interpersonal trust also appears to rise with educational attainment. Finally, labour market status matters: the self-employed and the unemployed have less trust in others than employees, for example.

The hypothesis of exogeneity of pro-voice attitudes is strongly rejected on the basis of a likelihood-ratio test. It is therefore likely that causality may run from interpersonal trust to voice. In this case, the scope for federalism to change pro-voice attitudes would depend on the pre-existing level of social capital. This finding

underscores the need to test for, rather than taking for granted, the exogeneity of institutional settings when estimating the determinants of social capital.

**Table 1. Cross-country regressions: Bivariate probit analysis**

	Dependent variables	
	Pro-voice attitudes	Trust
Say in government		1.29 *** (0.070)
Federal/decentralised country	0.13 *** (0.016)	
Married	-0.02 (0.017)	0.10 *** (0.017)
Head of household	-0.01 (0.016)	0.01 (0.016)
Male	0.03 ** (0.015)	-0.03 * (0.015)
No child	0.03 (0.020)	0.06 *** (0.021)
Age	0.00 *** (0.001)	0.01 *** (0.001)
Primary education	-0.01 (0.021)	0.06 *** (0.020)
Secondary education	0.02 (0.019)	0.09 *** (0.020)
Tertiary education	0.10 *** (0.021)	0.26 *** (0.027)
Full-time employed	0.00 (0.019)	0.04 * (0.020)
Part-time employed	0.00 (0.028)	0.06 ** (0.028)
Self-employed	0.04 * (0.022)	-0.09 *** (0.022)
Unemployed	-0.01 (0.031)	-0.12 *** (0.031)
No. of observations		34050
LR test (Prob > chi-sq.; <i>p</i> value)		0.00

1. The seemingly unrelated probit model is estimated by maximum likelihood with robust standard errors (in parentheses) and includes an intercept (not reported). Statistical significance at the 1, 5, and 10 percent levels is denoted by respectively (\*\*\*), (\*\*) and (\*).

#### **4. Case studies: Brazil and Indonesia**

##### *The cases of Brazil and Indonesia*

The latest WVS wave contains survey responses for Brazil and Indonesia, two countries that implemented comprehensive decentralisation programmes over the last 20 years or so.

While Brazil has traditionally been structured as a federation, a new constitution was promulgated in 1988 granting the states and municipalities additional policymaking powers, especially in the revenue and expenditure areas. Important tax bases were devolved to the subnational governments, and the country's revenue-sharing system was reformed. Most provisions of the new constitution were implemented during 1989-93, including the "municipalisation" of health care and education, which placed the local government at the forefront of service delivery in the social area (Afonso and de Mello, 2002). The 1988 Constitution also placed the local governments on an equal footing with the states.

Indonesia also implemented a very ambitious decentralisation programme in 2001, based on legislation enacted in 1999, consisting of wide-ranging measures to grant the subnational jurisdictions political and policymaking autonomy in areas including revenue and expenditure functions (Alm *et al.*, 2001; World Bank, 2003; Hofman *et al.*, 2006). New provinces and local authorities were created. Intergovernmental revenue arrangements were overhauled, including through the replacement of (mainly conditional) grants from the centre by a general-purpose allocation and the sharing of revenue accruing from the exploitation of natural resources (oil/gas and forestry) with the producing regions. Personnel and assets were devolved to the regions and local governments, and the local governments were put at

the forefront of service delivery, especially in the social area.<sup>3</sup> As in the case of Brazil, the hierarchical relationship between the middle-tier jurisdictions and the local governments was abolished. “Big-bang” decentralisation allowed for increasing demands for policymaking autonomy at the subnational level to be met in a country that is characterised by considerable economic, ethnic, religious and geographic diversity. Fiscal and administrative decentralisation was deepened in 2004, when direct elections (*Pilkada Langsung*) were introduced for the province governors and heads of local governments (districts and municipalities).

### *Identification*

A different identification strategy is needed to estimate System (1) for a single country. WVS does not contain questions that would be useful in gauging the extent of fiscal decentralisation. In any case, even if such a question were included in WVS, it would refer to respondents’ attitudes to decentralisation, rather than their actual exposure to decentralisation. To overcome this difficulty, I use a cohort-based identification strategy consisting of comparing pro-voice attitudes across cohorts that have come of age in the pre- and post-decentralisation periods. Previous empirical literature shows that there are important cohort effects in social capital formation (e.g., Whiting and Harper, 2003) and that these cohort effects may be useful in disentangling the causality effects between changes in institutional and political settings and social capital, as discussed above.

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<sup>3</sup> The legal underpinning of fiscal decentralisation dates from 1999 through the issuance of Laws No. 22 on Regional Government and No. 25 on the Fiscal Balance between the Central Government and Regional Governments. These laws were amended in 2004. See Booth (2003) for more information on the institutional underpinnings of fiscal decentralisation in Indonesia.

In the case of Brazil, the cohort that was 18 years of age (when voting becomes compulsory) or younger in 1993, and was therefore born in 1975 or thereafter, is considered as having come of age in the post-decentralisation period. This cohort would therefore have been too young to have been exposed to the more centralist arrangements of the pre-1993 period. This identification strategy can be used to redefine System (1) as follows:

$$D_i^* = \alpha_1' A_i + \alpha_2' C_{1i} + e_{1i},$$

(2)

$$S_i^* = \beta_1' D_i + \beta_2' C_{2i} + e_{2i},$$

where  $A_i$  is a dummy variable identifying individuals born before 1975, treating the post-decentralisation cohort as the control group, and the other variables are as in System (1).

As a preliminary description of the data, the proportion of Brazilian respondents born in 1975 or thereafter who are of the view that people should have more say in government decisions is 54.9%, against 52.8% for older individuals. As for interpersonal trust, again the proportion is higher for the cohort that has been exposed to fiscal decentralisation: 10.1% of respondents believe that most people can be trusted, against 7.2% for older individuals.

In the case of Indonesia, I consider the cohort of respondents who have been exposed to decentralisation to have been born after 1982. This cohort was 18 years old in 2000, the year between enactment of the decentralisation laws in 1999 and actual implementation of decentralisation in 2001. The decentralisation cohort does appear to be more trustful of strangers: 44.3%, as opposed to 37.1%. But, unlike the

case of Brazil, the proportion of respondents who believe that people should have more say in government decisions is lower in the post-decentralisation cohort: 28% against 35.7% among the older cohort.

### *Regression results*

The results of the estimation of System (2) for Brazil and Indonesia are reported in **Table 2**. The hypothesis of exogeneity of pro-voice attitudes cannot be rejected on the basis of a likelihood-ratio test; the regressions are therefore estimated as univariate probit models. The parameter estimates lend credence to the hypothesis that the cohort that came of age before decentralisation had been fully implemented in Brazil attached less importance to having a say in government decisions than the younger cohort that came of age in the post-decentralisation period.

The findings for Indonesia are much less promising. As in the case of Brazil, the regressions are estimated as univariate probit models. But, on the basis of the estimation results, there does not seem to be a strong cohort effect explaining respondents' attitudes towards the importance of having voice in government decisions. At the same time, the indicator of pro-voice attitudes is negatively signed in the trust equation, which runs counter to our priors. It is possible that the effect on interpersonal trust of a resurgence of ethnic and religious tensions, which had been repressed under New Order (the period of authoritarian centralism under President Suharto), has outweighed that of democratic decentralisation. But it is also possible, as I argue below, that these findings may be related to the failure of the identification strategy pursued to deal with the effect of political liberalisation on survey respondents' perceptions about the importance of having voice in government decisions.

*The role of political liberalisation*

The identification strategy pursued so far would be flawed if there were omitted effects correlated with decentralisation. Political liberalisation, which took place from the late 1970s through the mid-1980s in Brazil and after the demise of the Suharto regime in Indonesia in 1998, is very likely to be an omitted variable in the estimations. To a certain extent, it can be argued that fiscal decentralisation was a by-product of political liberalisation in both countries, which empowered the lower levels of government against the centralist forces that shaped the period of authoritarian rule.

Table 2. **Probit regressions: Brazil and Indonesia**

	Brazil		Indonesia	
	Pro-voice attitudes	Trust	Pro-voice attitudes	Trust
Pro-voice attitudes		0.22 *		-0.18 **
		(0.125)		(0.090)
Cohort born up to 1975 (Brazil) and 1982 (Indonesia)	-5.50 ***		-0.78	
	(0.544)		(1.944)	
Married	0.30	0.11	0.62	-0.06
	(0.240)	(0.133)	(0.659)	(0.105)
Head of household	-0.10	0.47 ***	0.32	0.19 *
	(0.198)	(0.144)	(0.345)	(0.108)
Male	0.31	-0.07	-0.51 **	0.01
	(0.192)	(0.129)	(0.257)	(0.101)
No child	-0.03	0.09	-0.28	-0.09
	(0.201)	(0.169)	(0.527)	(0.122)
Age	0.00	0.01	0.00	0.01 *
	(0.028)	(0.005)	(0.086)	(0.004)
Primary education	-0.65 **	0.27	-0.15	-0.35 **
	(0.287)	(0.173)	(0.727)	(0.141)
Secondary education			-0.31	0.08
			(0.314)	(0.110)
Tertiary education	0.39	0.49 ***	0.16	0.03
	(0.377)	(0.163)	(0.389)	(0.116)
Full-time employed	-5.77 ***	4.78 ***	0.34	0.14
	(0.716)	(0.270)	(0.272)	(0.101)
Part-time employed	-5.23 ***	4.40 ***	0.06	0.14
	(0.728)	(0.385)	(0.127)	(0.122)
Self-employed	-5.93 ***	4.57 ***		
	(0.723)	(0.315)		
Unemployed	-12.01 ***	4.81 ***		
	(0.493)	(0.374)		
No. of observations	886	878	1111	985
Pseudo R-sq.	0.04	0.08	0.03	0.02

1. The univariate probit models are estimated by maximum likelihood with robust standard errors (in parentheses) and include an intercept and interaction terms between the cohort dummy and the regressors in the say in government equation (not reported). Omitted regressors were dropped due to collinearity. The  $p$ -value of the LR statistic associated with the null hypothesis that  $\rho$  (the correlation coefficient between the error terms of the two equations) is equal to 0 is 0.32 for the ML estimation of a seemingly unrelated bivariate probit on say in government and trust in the case of Brazil and 0.35 in the case of Indonesia. Statistical significance at the 1, 5, and 10 percent levels is denoted by respectively (\*\*\*), (\*\*), and (\*).

It is therefore important to disentangle the effects on social capital associated with fiscal decentralisation from those arising from the return to democracy. Again, there are no obvious instruments in responses to WVS questions that could be used to this end. My identification strategy is therefore to split the pre-decentralisation cohort

in different sub-cohorts and test for the sign and significance of the associated regression coefficients. In doing so, System (2) can be redefined as:

$$D_i^* = \alpha_1' \sum_{t=1}^k A_{it} + \alpha_2' C_{1i} + e_{1i}, \quad (3)$$

$$S_i^* = \beta_1' D_i + \beta_2' C_{2i} + e_{2i},$$

where  $t$  identifies the different  $k$  pre-decentralisation cohorts, treating the post-decentralisation cohort as the control group, and the other variables are as in System (2).

### *The case of Brazil*

In the case of Brazil, a coup brought a military government to power in 1964, ushering in a period of successive administrations that ended in 1985, when a civilian president took office. But treating the period 1964-85 as homogeneous would be too simplistic, because political institutions changed during the military governments. A sub-period can be identified between the suppression of a number of civil liberties in 1968 and a political amnesty enacted in 1978. The periods 1964-68 and 1978-85 can therefore be considered as transition phases within the broader period of military rule.

To re-estimate the pro-voice attitude equations, I consider eight sub-cohorts of individuals born before 1975: those born before 1939, during 1940-44 (aged 18 during 1958-62), during 1945-49 (aged 18 during 1963-67), during 1950-54 (aged 18 during 1968-72), during 1955-59 (aged 18 during 1973-77), during 1960-64 (aged 18 during 1978-82), during 1965-69 (aged 18 during 1983-87) and during 1970-74 (aged 18 during 1988-92). The periods of interest are those related to political repression after 1964-68 and liberalisation after 1978-85.

The literature on the links between decentralisation and political liberalisation in Brazil highlights the scope for decentralisation (political and fiscal) to boost government accountability at the local level, which would strengthen democracy, or alternatively to fragment political power among a large number of actors at the different levels of administration, which could undermine democracy by empowering local interest groups and encouraging rent seeking (Montero, 2000). Avritzer (2000) deals with the association between political liberalisation and associational activity, which has increased sharply since the return of democracy. The study by Fonseca (2007) on the decentralisation of health care in the 1990s shows that fiscal decentralisation and political liberalisation are closely intertwined and that decentralised fiscal management has strengthened participatory democracy. Wood and Murray (2007) review the experience of a growing number of Brazilian municipalities with participatory budgeting since decentralisation and underscore the role of decentralisation in enhancing participation in government decisions.

The results reported in **Table 3** show that the cohorts that came of age before 1968, a period of democratic centralism prior to the 1964 coup and in the early years of military rule, were less pro-voice than the cohort of individuals that turned 18 once decentralisation had been enacted and implemented during 1988-93. In turn, the cohorts that turned 18 during transition periods, such as that of tightening repression during 1968-72 and gradual liberalisation during 1978-82, appear to be more pro-voice than the reference cohort. This suggests that decentralisation affects people's attitudes towards the importance of having voice in government decisions in a manner that goes beyond the political environment.

Table 3. **Brazil: Probit regressions**

	Pro-voice attitudes
Cohort born before 1939	-6.41 *** (0.748)
Cohort born during 1940-44	-0.52 (1.056)
Cohort born during 1945-49	-6.05 *** (0.858)
Cohort born before 1950-54	6.21 *** (0.683)
Cohort born before 1955-59	-6.84 *** (0.720)
Cohort born before 1960-64	5.93 *** (0.432)
Cohort born before 1965-69	-0.75 (0.686)
Cohort born before 1970-74	6.51 *** (0.425)
No. of observations	884
Pseudo R-sq.	0.10

1. The univariate probit model is estimated by maximum likelihood with robust standard errors (in parentheses) and includes an intercept and interaction terms between the cohort dummies and the regressors (not reported). The  $p$ -value of the LR statistic associated with the null hypothesis that  $\rho$  (the correlation coefficient between the error terms of the two equations) is equal to 0 is 0.06 for the ML estimation of a seemingly unrelated bivariate probit on say in government and trust. Statistical significance at the 1, 5, and 10 percent levels is denoted by respectively (\*\*\*), (\*\*), and (\*).

### *The case of Indonesia*

I used the same cohort-based identification strategy as in the case of Brazil to deal with the effect of decentralisation on pro-voice attitudes in Indonesia. Because decentralisation was implemented in 2001, I consider the post-decentralisation cohort as that of individuals born after 1984 (who turned 18 in 2002). Again, the periods of interest from the point of view of controlling for the effects of changes in the political landscape on attitudes towards voice are those starting in 1959, when President Sukarno, Indonesia's first president, introduced "Guided Democracy" and "Guided

Economy”, which gave him almost dictatorial powers, and the Suharto regime (1966-68 through 1998).<sup>4</sup>

There is a growing literature on the links between fiscal decentralisation and democratisation in Indonesia. As in the case of Brazil, it has been argued that decentralisation may be conducive to participatory democracy or, alternatively, that it may empower local elites. Takeshi (2006) presents a case study of participatory development and village empowerment in Bandung, West Java. The author shows that the decentralisation of fiscal management and increased political competition brought about by the return to democracy has strengthened accountability and fostered cooperation among local officials and civil society. Another strand of literature discusses the transition from centralised authoritarianism under Suharto’s New Order regime to democratic decentralisation under *Reformasi* and the problems associated with local capture and the exacerbation of ethnic and religious tensions that had been repressed under New Order (Aspinall and Fealy, 2003; van Klinken, 2008).

Another consideration when empirically assessing the effect of decentralisation and democratisation on attitudes towards voice is that Indonesia has a long tradition of associational activity. Unlike Brazil, participation in political and social organisations, such as labour unions, women’ organisations and peasants’ associations, has been fairly common in Indonesia since the 1950s and 1960s. But the type associational activity of the 1950s and 1960s is often argued to be very different from the recent experience following the return to democracy and decentralisation under *Reformasi* (Aspinall, 2004; Antlov, 2005). In the 1950s and 1960s,

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<sup>4</sup> Gen. Suharto assumed effective power in March 1966, when President Sukarno issued a decree ordering him to restore peace and order, but took office as Indonesia’s second president in 1968. See Tikson (2008) for an overview of Indonesia’s political reform since independence.

associational activity was highly politicised and emerged from a deeply polarised civil society during the decolonisation and immediate post-colonial periods. As such, it likely contributed to social divisiveness and socio-political conflict, rather than enhancing civility and social capital. By contrast, the associational activity that flourished with the return to democracy is more conducive to social capital accumulation, especially because it has evolved in a policy setting that favours local self-government.

The results reported in **Table 4** show that the cohorts that came of age under undemocratic centralism, especially up to 1967 under President Sukarno's "Guided Democracy"/"Guided Economy" and in the initial period of the Suharto regime, are considerably less pro-voice than the post-decentralisation cohort. This is an interesting finding, because, as in the case of Brazil, attitudes towards voice seem to differ between environments characterised by centralised and decentralised policymaking, while controlling for the concomitant effects of the political environment. Of course, caution needs to be exercised when interpreting the results, because the return to democracy is relatively recent in Indonesia, which complicates identification.

Table 4. **Indonesia: Probit regressions**

	Pro-voice attitudes
Cohort born during 1940-44	-5.65 *** (0.758)
Cohort born during 1945-49	-1.39 * (0.790)
Cohort born before 1950-54	-0.34 (0.460)
Cohort born before 1955-59	-0.21 (0.418)
Cohort born before 1960-64	-1.08 ** (0.477)
Cohort born before 1965-69	-0.58 (0.380)
Cohort born before 1970-74	-0.20 (0.428)
Cohort born before 1975-79	-0.16 (0.321)
Cohort born before 1980-84	-0.22 (0.568)
No. of observations	1085
Pseudo R-sq.	0.07

1. The probit models are estimated by maximum likelihood with robust standard errors (in parentheses) and includes an intercept and interaction terms between the cohort dummy and the regressors (not reported). The dummy variable identifying the cohort born before 1939 was dropped due to collinearity. The  $p$ -value of the LR statistic associated with the null hypothesis that  $\rho$  (the correlation coefficient between the error terms of the two equations) is equal to 0 is 0.06 for the ML estimation of a seemingly unrelated bivariate probit on say in government and trust. Statistical significance at the 1, 5, and 10 percent levels is denoted by respectively (\*\*\*), (\*\*), and (\*).

## 5. Conclusions

There is a long tradition of research on social capital, pioneered by Putnam and others, that considers institutions to be exogenous to social capital formation. Social capital is related to social norms and networks, which are hypothesised not to be affected by institutions. Instead, this paper argues that institutional settings, such as the vertical structure of governments, can have a bearing on social capital formation by shaping people's attitudes towards the importance of having voice in government decisions. To test the exogeneity hypothesis, the social capital equations were

estimated using a seemingly unrelated probit model. Interpersonal trust is the measure of social capital used in the empirical analysis.

This paper reports empirical evidence on the basis on cross-country data from the latest wave of the World Values Survey that people living in federal/decentralised countries are more pro-voice and more trustful of strangers than their counterparts in unitary/centralised States. Evidence for Brazil and Indonesia is reported on the basis of an identification strategy that uses cohort effects to compare respondents' pro-voice attitudes and interpersonal trust. This strategy allows for controlling for the impact of political liberalisation. The results for Brazil suggest that cohorts that have been exposed to decentralisation tend to be more pro-voice and trustful of strangers. Decentralisation also does appear to have an effect on people's pro-voice attitudes that goes beyond the political environment. The findings are less clear-cut for Indonesia, probably reflecting the fact that experience with political liberalisation and fiscal decentralisation is relatively recent. There is, nevertheless, evidence suggesting that those cohorts that were exposed to centralised policymaking under authoritarian rule may well be less pro-voice than their younger cohorts who came of age in the current period of democratic decentralisation.

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