Social Capital and Performance of Fiscal Institution in India during 1991-2012

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Abstract

This paper examines the relationship between social capital and performance of fiscal institutions using provincial sub-national state level data in India during 1991-2012. Institution in India is significant and controls fiscal performances as per social need for economic development. People participation in public affairs or simply vote turnover in general election in India is taken to measure the social trust on fiscal institution. Fiscal performance in India is based on social capital. As one percent vote turnover rate rises fiscal deficit reduces by 2.6 to 2.8 percent. Empirical findings suggest that social capital indirectly control the fiscal performance of the elected government. The results are robust to a number of control variables. The strong political trust is established through high turnover rate and vote share in the election for formation of government that create the platform for sound fiscal policy decisions.

Key Words: *Fiscal Performance, Social Capital, Trust, Reciprocity, Institution, Fiscal Deficit, Vote Turnover, Civil Society, Cooperation, Collective action.*

JEL *Classification*: Z, H3, O1

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1. Introduction

Provincial sub-national state governments in India have accumulated large fiscal deficits or government debts during 1991-2012. Why do provincial sub-national states in India raise large debts during 1991-2012? This paper focuses on possible explanation to this question analysing the role of social capital and performance of political or fiscal institutions in India. These institutions are particularly important for making fiscal policy decisions. Fiscal institutions create the environment, the incentives, the rules and the regulations under which budgets are drafted, approved, and implemented. Fiscal institutions promote fiscal discipline through proper design of fiscal policy[1]. Sometimes social and institutional framework may produce soft budget constraints that provide incentives for loose fiscal discipline. These rules highly vary over provincial sub-national state governments and thus provide a reasonable explanation for cross-section variations in debt levels or fiscal deficit performance levels[2] (Alesina and Perotti 1995; Poterba and von Hagen 1999; Persson and Tabellini 2001).

In this context we should mentioned major difference between quantitative and procedural institutions (Buchanan 1980). Quantitative rules entail tax and expenditures limitation laws, debt brakes and other formal restraints to balance the budget. Empirical observation of Bohn and Inman (1996), Poterba (1997) and Shadbegian (1998) suggest that the budget rules support the fiscal discipline for policy makers. Procedural institutions define how property rights over political decisions are acquired, and assign authority to exercise them. Persson and Tabellini (2003) observed that the constitutional design of the regime type and the electoral rules crucially and significantly shape the fiscal policy decisions. However, it is impossible to design a constitution to establish a framework of quantitative and procedural institutions that answers all future questions of a society. So, there is certain degree of uncertainty. Hence, trust becomes a crucial aspect. Without uncertainty, trust is insignificant

[1]Voters (citizens) elect politicians to make decisions about public spending and also provide the funds by paying taxes. There are two aspects (i) the principal–agent relationship between voters (the principals) and politicians (the agents), and (ii) the common pool problem of public finances - these are important for the conduct of fiscal policy. Elected politicians can extract rents from being in office. They use some of the funds entrusted to them to pursue their own interests, be it outright in corruption, for perks, etc. Voters might wish to eliminate the opportunity to extract rents by subjecting politicians to rules stipulating what they can and must do under given conditions or contracts. But the need is to react to unforeseen developments and the complexity of the situation makes the writing of such contracts impossible. Similarly, politicians cannot realistically commit fully to promises made during election campaigns. Hence, like principal-agent relations in many other settings, the voter-politician relationship resembles an "incomplete contract" (Seabright (1996), Persson *et al*. (1997a, b), Tabellini (2000), von Hagen (2002)).

[2] There is growing interest in how political and institutional factors affect fiscal performance at national level (Roubini and Sachs 1989, Hagen 1992, Alesina and Perotti 1996, 1997; Poterba 1996, Strauch and von Hagen 2000, Perotti and Kontopoulos 2002) and local levels (Dafflon 2002, Hagen and Vabo 2005).

issue because certainty ensures same outcomes with or without a trusting act involved (Guerra and Zizzo 2003). Mutual trust in the case of uncertainty reduces transaction costs and makes the institution to work smoothly (Putnam et al. 1993, Putnam 2000; Fukuyama 1995). Trust is one of the most important and highly significant components of a social capital[3], which is embed with the institution. Here, social trust plays the most important role in fiscal policy decisions. So, it is reasonable to assume that social trust/capital fosters fiscal discipline in all society.

The paper concentrates initially on the relationship between social capital and fiscal deficit and later analyses in details using the sample of major Indian provincial states over the period 1991 - 2012. Here, trust is measured in two ways (i) as the percentage vote turnover during general election in India, i.e., trust on delegates or representatives for the political institution and measuring the level of citizens' chance to express their preferences, (ii) as the performance of the delegates in the policy making body (i.e., the parliament), i.e., work efforts in the policy making institute and measuring it in terms of working days or business hours in the decision making process. Percentage vote turnover definitely helps to increase governmental responsibility and accountability. It is true that the government is forced to be responsive to citizens' preferences and underlying social contract rule, which leads to a higher level of fiscal discipline. So, our basic hypothesis is that *higher level of social trust on delegates leads to a stronger fiscal discipline*.

Institutional and Cultural frameworks typical for specific countries might influence trust. The problem is that such features cannot always be controlled in a satisfactory manner. This paper focuses on *within* country data at the state level. Here, trust variable that measures the choice behaviour expressed at the election that reduces possible subjective biases derived from survey questionnaires. Several studies work with cross-sectional data. In this paper panel data analysis allows exploiting time variation in trust.

The remainder of the paper is as follows: Section 2 provides a quick overview of the literature. Section 3 describes data and methodology adopted in this study. Section 4 discusses the results and follows the empirical implementation of the impact of trust on fiscal performance. Section 5 offers some concluding remarks.

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[3] Concept of social capital is multidimensional and it emerges from different aspects of social life. The work of Putnam (1993) and Fukuyama (1995) have renewed interest on it in the social basis of political and economic development. Putnam (1993) shows the importance of social capital for the effective governance in a democratic social system. According to Putnam (1993) social capital is the features of social organization, such as trust, norms, and networks that can improve the efficiency of society by facilitating coordinated actions.

2. Literature Review

The concept of *social capital* evolves over time[4] and it has been defined in several ways. Social capital is the network of objective relationships (structural dimension) that people and organizations have, and subjective relationships (cognitive dimension) that linked to norms and trust in other people and organizations. Initially the social organization is considered as social capital, 'facilitating the achievement of goals that could not be achieved in its absence or could be achieved only at a higher cost' (Coleman (1990)). Putnam et al (1993) provide similar characterization referring to 'the features of social organization, such as trust, norms, and networks that can improve the efficiency of society'. Whereas Fukuyama (1995) argues for certain shared norms and values that assure 'the meeting of obligation and reciprocity'. Putnam (2000) introduces the idea of social capital in terms of 'connections among individuals – social networks and the norms of reciprocity and trustworthiness that arise from them.' At individual level social capital also refers to a system of interpersonal networks (Dasgupta 2002), which enhances cooperation and collaboration that helps also to create the economic opportunities. Social capital might be considered as 'resources embedded in social networks and accessed and used by actors for actions' (Lin 2001). Social capital can be considered as the stock of active connections among individuals and also helps to resolve collective problems easily in the form of 'cooperative action' (Cohen and Prusak 2001).

The growing literature claims that repeating trustful interactions in the economy do sediment in higher levels of generalized trust, which is aggregated stock of trust. Scholars like Miguel (2003), Mogues and Carter (2005), Rupasingha et al. (2006) study the relationship between the stock of social capital and its relation to economic development, especially, low crime rates and reduction of other social problems. Countries/regions with relatively higher stocks of social capital, in terms of generalized trust and widespread civic engagement seem to achieve higher levels of growth, compared to societies with low trust (Putnam et al. 1993). Social capital contributes to economic growth by focusing the importance of trust and cooperation within firm, industry, market and the state. Thus, social capital truly greases the wheels that allow nations to advance smoothly and creates the base for economic prosperity. Economic development of a nation depends on the impact of social capital which includes social culture, social norms and regulations that promote economic reforms and development

[4] Truly the concept of social capital has a long history in the social sciences. The concept of social capital has been developed primarily in the subjects of sociology and political science. It has become popular in several fields of policymaking and research. Bourdieu (1980, 1986), Coleman (1988, 1990) and Putnam (1993, 1995, 2000) are credited for introducing the concept of social capital and popularized it.

activities. Social capital in the sense of trust among members of a civil society and social cohesion fosters institutional activities. Interactions among citizens build up social trust. Interaction between trust (thought of as an individual behaviour) and public policy seems to be important to increase the effectiveness of fiscal performance[5]. In this study we propose one of the fundamental reasons focusing on the country specific quality of informal institutions. Social capital refers to the notion of informal institutions which is a proxy of the level of generalized trust[6].

Initially, Almond and Verba (1963) investigated the concept of trust intensively. Recently the work of Putnam (1993) and Fukuyama (1995) have renewed interest on it in the social basis of political and economic development. Putnam (1993) shows the importance of social capital for the effective governance in a democratic social system. According to Putnam (1993) social capital is the features of social organization, which can improve the efficiency of society by facilitating coordinated actions.

Bourdieu (1979) and Coleman (1988, 1990) have strongly influenced the social capital literature focusing on individuals and small societal units. Portes and Mooney (2002) point out that social capital is the ability to secure resources by virtue of membership in social networks or larger social structures. Knack and Keefer (1997) investigated the impact of civic duty and trust on growth and investment rates in a cross section analysis. Knack and Keefer (1997) find a strong and significant positive relationship between social capital variables and economic growth. Looking at the public finance literature, Slemrod (1998) argues that the

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[5] Information asymmetry hampers the proper functioning of markets, and its result is the market failure. 'Benevolent Government' maximise social welfare and it can prevent market failure by providing public goods, for instance. Since information is asymmetry between government and citizens, it is difficult for citizens to evaluate the government's activities. This leads politicians and bureaucrats to behave in a way that maximises self-interest. The government is forced to be efficient to maximise social welfare, resulting in economic growth, if citizens can obtain sufficient information about the government's activities.

[6] Trust results from interactions that span co-worker, team, organizational and inter-organizational alliances. Trust is closely tied to the norms, values and beliefs of the organizational culture. Trust is the outcome of communications behaviours, such as providing accurate information, explanations for decisions and demonstrating sincere and appropriate openness. Trust is constantly changing as it cycles through phases of building, destabilization and dissolving. Trust consists of multiple factors at cognitive, emotional and behavioural levels, all of which affect individual's perceptions of trust. The degree to which person agree on who has rightful power to influence others. For the most stable, positive relationship, organizations and publics must have some degree of control over each other. So, trust can only be considered in the broader context of the relationships an organization has with its various publics. Citizens expect public organizations to do things for the society for which organizations get little or nothing in return, that is how they develop trust.

social capital derived from the willingness to pay taxes voluntarily lowers the cost of the operating government and of equitably assigning its cost to citizens[7].

The World Bank is also focusing on social capital and investigating the practical relevance of this concept[8]. There are several views on social capital (Grootaert 2001): First, the concept developed by Putnam et al. (1993) interpreting social capital as a *social network*, as networks of civic engagement facilitating *coordination and cooperation*. Second, Coleman's (1988, p. 598) approach defines social capital as "a variety of different entities", consisting of some aspects of *social structure* and facilitating certain *actions of actors*. This allows taking into account not only horizontal but also vertical social relationships. Third concept considers the social and political environment that enforces *norms* and *shapes social structures*.

Our investigation in this paper grounds basically on the third concept, which takes the more formalized institutional relationship between state and citizens at the vertical level into account. As trust is a multidimensional concept, we restrict our focus on a specific dimension: citizens' political trust. This is in line with Rothstein (2003), who argues that the explanation of social capital is much more grounded in political instead of sociological variables.

The efficient, effective and equitable operation of society not only requires the investment of money and resources, but also cooperation between individuals and institutions that constitute a society's social capital (Dasgupta and Serageldin 1999, Putnam 2000, Fahey, Nolan and Whelan 2003). Trust reflects, individual beliefs about behaviour of other people, also whether public policy institutions can be relied on to act fairly (Anderson et al 2009). Effective service delivery of public institutions is based on the assessing the trustworthiness of individuals, political parties or government. A high level of trust creates confidence in public services and it may also stimulate economic development. On the other hand, the absence of trust reduces the radius of cooperation with family and friends and make more difficult for government to rely on the support of citizens (Fukuyama 1995). Putnam's (1993) theory of social capital links trust in people and in political institutions. Putnam postulates that positive informal relations at home, at workplace and in local communities encourage people to create

[7] Aidt and Mooney (2014) support it with argument that taxpayer suffrage, where the right to vote and the obligation to pay local taxes are linked, encourages demands for retrenchment and the political budget cycle manifests itself in election year tax cuts and savings on administration costs.

[8] The rapid growth of the social capital literature underlines a widespread unease with the standard explanations for the differential political and economic performances not only across nations but also across sub-national jurisdictions (Ostrom and Ahn 2003). Many studies in the last ten years tried to check to which extent social capital can be seen as an important omitted factor in previous studies.

formal organisations that can spill up, leading to the formation of civil society institutions that represent the views of individuals to national government. So, the government engages in dialogue with civil society institutions in order to extend the radius of trust and cooperation from the lowest to the highest levels of the multilevel system that constitutes governance in India. Trust in political institutions is important to public officials and Member of Parliament (MPs) as a mark of popular respect. An extensive body of social science literature exists about the causes and correlates of political trust.

There are three ways in which trust affects government performance according to Knack (1999). First, trust broadens government accountability. Policy decisions have to be responsive to the preferences of a large part of the population. Knack (1999), for example, provides empirical evidence, that US states with a higher social capital significantly perform better than the other states. Second, trust can facilitate an agreement, where political preferences are polarized. Third, social cohesion in a society is a breeding ground for innovations in politics. In general, the space for innovations is greater if trust between members of a society is established. If new challenges have to be tackled, governments with high social capital are more flexible in adapting to the new circumstances than regions with widespread interests. Little political polarization in regions with a strong social cohesion makes it easier for the government to implement policies preferred by the electorate. Moreover, little social fragmentation in the society reduces the asymmetry between spending claims of different interest groups and taxing decisions. Therefore, a more homogenous citizenry supports fiscal discipline.

Government accountability can be seen as the most important aspect of trust with respect to fiscal performance. Engagement, involvement and participation in political and public issues by a large part of the electorate are an important feature to hold politicians and bureaucrats accountable. If decision makers expect citizens to hold them politically accountable, they are more inclined to temper their worst impulses rather than face public protests. Political participation in general election allows citizens to discuss on developmental agenda and also definitely helps to improve political awareness. So, the government knows that citizens are discussing and monitoring their behaviour, which will produce the incentive to govern more effectively[9].

[9] Democratic citizens would like to have trustworthy institutions, and governors want to be trusted, because this can strengthen their capacity for governance, since citizens who trust are more likely to give their governors the benefit of the doubt when unpopular decisions are taken. But trust cannot be taken for granted.

There is certain amount of scepticism or distrust in political institutions by citizens. Since distrust is often thought to make people abstain from politics, scholars look at turnout at general elections. Trust is depressed when citizens believe that politicians do not care about people like themselves and are dissatisfied about how the national economy is managed. Characteristics of a country's political institutions tend to depress turnout (Rose 2004). The institutional theories (the Michigan model) stress stimuli from political mobilization and government performance. A matrix model of turnout[10] helps to account for variations in turnout as a function of the intersection between individual attributes and perceptions. Institutional stimuli come from both national and sub-national or sub-regional levels and influence individuals with varying socio-economic attributes in different states or sub-national level. It actually emphasizes the importance of cross-level perceptions involving social psychological engagement with national politics and stimuli from state or national institutions. Popular trust for civil and political institutions is vital to democracy[11]. Citizens evaluate institutions based partly on their evaluations of current institutions in comparison to past, partly on their degree of social/community sentiment and partly on their assessments of current and future economic performance. As the government is better aware of citizens' preferences, policies will better reflect citizens' needs (Boix and Posner 1998). Trust in politics measures the level of confidence citizens have in their political leaders or institutions[12]. This paper focuses on fiscal performances (deficit or public debt) as dependent variable. It is reasonable to argue that a prudent debt management and thus a certain level of fiscal discipline can be seen as a proxy for governmental performance. Vote turnovers help to increase governmental accountability, so that the government is forced to be responsive to citizens' preferences and the underlying social contract rule of law at large, favoring a higher level of fiscal discipline. Trust in particular government formation is a signal for a stronger social cohesion between the government and the electorate, which in turn results in sound fiscal policy decisions. So, our objective is to examine the following hypothesis: *Fiscal Performance inversely related to the trust in government*.

There are several views on social capital (Grootaert 2001) at macroeconomic level: First, the concept developed by Putnam (1993) interpreting social capital as a *social network*, as

[10] See Matrix Model of Turnout (Rose and Borz (2011)).

[11] See Mishler and Rose (1995) for 'Trust, Distrust and Skepticism about Institutions of Civil Society'.

[12] If the institutional structures influence the citizens and the authorities interact in a sense of collective responsibility then the system may be governed in better way and its policies may be more effective. Trust promotes effectiveness through its impact on governments' behavior.

networks of civic engagement facilitating *coordination and cooperation*. Second, Coleman's (1988) approach defines social capital as "a variety of different entities", consisting of some aspects of *social structure* and facilitating certain *actions of actors*. This allows taking into account not only horizontal but also vertical social relationships. Third concept considers the social and political environment that enforces *norms* and *shapes social structures*. Our investigation in this paper grounds basically on the third concept, which takes the more formalized institutional relationship between state and citizens at the vertical level into account.

3. Data and Methodology

State wise general election data are taken from the Election commission of India for the period of 1991 -2012. Vote turnover is measured as a percentage of votes casted in the general elections. Fiscal data are mainly revenue and expenditure of state governments in India. State fiscal data are available from annual state budgets in every year. Fiscal performance of states related data are collected mainly from Reserve Bank of India (RBI). Other variables are collected from relevant departments[13] of the government of India. All are time series data for each state. We compile all and obtain a panel data. So, we apply panel data analysis technique which is appropriate for this study.

In order to test whether social capital fosters fiscal discipline, we propose the following equation:

$$FD_{it} = \alpha + \beta\, SC_{it} + \lambda\, T + \eta_i + \mu Z_{it} + \varepsilon_{it} \qquad (1)$$

Where FD fiscal deficit of ith state in t year, *SC* denotes social capital, *T* is time trend, η is state effect, *Z* is other control variables[14], and ε is the disturbance term. The two sorts of regressions differ in the scaling of their left-hand variable.

4. Results

Table 1 describes the summary statistics of our focus variables in panel data set for the study period of 1991-2012. Fiscal deficit is the difference between expenditure and revenue measured rupees (Crore) in constant price at base year 2004-2005. Average value of fiscal deficit for the entire period is Rs. 43552 but standard deviation is very high. Percentage of

[13] Data related to election, fiscal institution, literacy, crime statistics and population are taken from the Election Commission of India, the Ministry of Parliamentary Affair, Ministry of Human Resource, Ministry of Home and Census of India, respectively.

[14] The regression contains also several control variables like GDP per capita, literacy rate, share of urban population, share of workforce, share of population with higher schooling, share of unemployed, share of pensioners, share of pupils, population density in a state. In order to control for time as well as state invariant factors we include fixed time *T* and fixed state η_i effects.

vote turnovers in the general election is an important variable in this study and indicates trust on political institution. Vote turnover rate varies widely (Table 1), because of several reasons for different states (Feld and Matsusaka 2003 or Feld, Schaltegger and Schnellenbach, 2004). Average vote turnover rates are 61.28 percent and 69.81 percent in Lok Sabha and Bidhan Sabha, respectively. So, more than 60 percent voters trust on political institutions (Assembly and Parliament).

Here Insert Table 1

On an average vote percentage gap between the winner and runner is about 10 percent, but seat margin is around 46. It should be noted that rejected vote is nearly 2 percent and its maximum value is 9.2 percent, which is very high. It can be interpreted that 2 percent people are not interested to reveal their choice preferences. Rejected vote may be a signal of distrust on political institution and/or its representatives. Average family size, average economic crime rate and literacy rate are 5.02, 6.91 and 72.29, respectively. Fig 1 displays the distribution of log of fiscal deficits [i.e., log(FD)]. Fig 2 shows the distribution of trust variable which follows approximately a normal distribution.

Insert Fig 1& 2

Using Indian state panel data we estimate equation (1) for level variables and also for transformation variables (i.e., log transformation or log value of original variable). Applying panel data techniques the estimated result of log of fiscal deficit is presented in Table 2.
Strong variation among states as well as over time allows exploiting *within*-state variation to identify effects of trust on performance of government. Trust has a statistically significant negative impact on fiscal discipline in all regressions, controlling for other determinants. Table 2 provides the estimated results of trust on log of fiscal deficit. The estimated coefficient of trust is negative and statistically significant. Fiscal deficit reduces by 2.6% to 2.8 % if one percent vote turnover rate rises. Coefficient of time is positive and statistically significant. It suggests that fiscal deficit increases over time. In this simple model, constant term is highly significant[15].

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[15] Constant term may turn to be insignificant incorporating other variables. On the other hand, the share of urban population pushes up debt levels. This points out to a higher governmental willingness to increase public debts in urban areas, which may be caused by specific problems of cities like social heterogeneity. The provision and

Here Insert Table 2

The results indicate that we find a fairly robust negative relationship between social trust and fiscal deficit. So, fiscal policy is strongly influenced by social trust measured in terms of vote turnover to support political agenda[16] and form the government in the country.

We use information from voter participation on general election for forming government to perform fiscal activities. Selecting few other fiscal indicators this paper also examines the various social determining factors. Table 3 presents the estimated results of selected few fiscal indicators as percentage of gross state domestic product (GSDP). Major fiscal variables are own tax revenue (OTR), own nontax revenue (ONTR), interest payment (IP), Non development revenue (NDR), etc. Vote margin has direct impact on all the variables except OTR. It is clear that ONTR, IP, pension (PN), custom tax (CT) and NDR improve with vote margin. Tax revenue increases with per capita state gdp (pcsgdp), which has indirect impact on interest payment, pension, custom tax and non-develop revenue. Average family size has direct effect on IP, PN, CT and NDR but indirect effect on OTR. So, associational life adversely affects direct tax while it favours IP, PN, CT and NDR. Literacy rate also behaves similar to associational life. Tax revenue (both OTR & ONTR) increases with rising crime rate. Non development revenue increases with vote margin, literacy rate and average size of associational life. Vote margin, literacy rate and average associational life directly affect on interest payment, which suggest that educated and associated people want development and they are also ready to pay for it in terms of interest payment.

Here Insert Table 3

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maintenance of city infrastructure such as higher education, traffic, public health, public security or cultural facilities require high government revenue for the city. At the same time, the tax bases in cities are sensitive to high tax burdens. People react to tax incentives and move from the city center to nearby local communities where the tax burden is lower. The asymmetry of spending claims and revenue capacity is often seen as a major driving force for problems of fiscal discipline in urban jurisdictions (Frey, 1990; Brueckner, 1983). Socio-demographical factors such as the share of elderly and the share of pupils expectably push up debt-levels, too. These two groups only perceive a small fraction of the initiated costs eventually creating pressure for higher government spending. In addition, especially pensioners have an incentive to finance public services by deficit spending in order to postpone the costs to future generations (Meltzer and Richard, 1981). The language variable is significantly negative indicating that the South Indian non-Hindi speaking people cares more about fiscal discipline than North Indian Hindi speaking counterparts. The other control variables have not a robust and significant impact on public debt.

[16] If social cohesion in the electorate is strong, it is easier for the government to implement policies according to the preferences of the electorate (Matsusaka, 2004).

To capture multifaceted features or dimensions, we construct *social capital index* using principal component analysis. The results of the Principal Component Analysis are summarized in Table 4. Social capital index has been calculated using the component loading weight. Hence, each of the elements loads powerfully onto one underlying component extracted from the data. Note that social capital index comprises both structural (i.e., associational life including political involvement) and a cultural aspects (i.e., the crime rate). So, this social capital index takes account of the dual nature of the concept.

Here Insert Table 4

Here, this study focuses on major dimension of social capital such as associational life, cultural life etc. Major components of social capital are voting turnover, average household size, literacy and crime rate. Single social capital index is formulated assigning weights, which are taken from principal component analysis (Table 4). Vote turnover rate and literacy rate have positive contribution to social capital index and indicate social preference of public goods, while average family size and crime rate assign negative value to social capital index. Table 4 presents all possible combination of major component of social capital index in India during 1991 -2012. Among our major indicators of social capital, vote turnover rate carries higher weight compare to other indicators. Negative value is associated with crime rate. It is justified because more crime rate indicates less trust prevails in the society – it is also indicate the antitrust to social development and also reveals the law and order situation or weak government or/and institution.

Table 5 and Table 6 describe the impact of the major components of social capital on revenue generation which is a vital component of fiscal performance. Revenue source of the states are mainly own tax and own nontax. Vote turnover rate is highly significant but its impact on revenue collection is different and in opposite direction, i.e., own tax revenue falls as vote turnover increases while own nontax revenue rises. It indicates that higher social (trust) capital reduces own tax (or direct tax) revenue while increases indirect tax. Crime rate has positive impact on tax revenue. This suggests that as crime rate increases social general trust is reduced thereby social capital declines which may force to increase both tax and nontax revenues. Larger size of associational life reduces tax revenues whereas literacy rate has positive impact on it. ONTR declines with increasing population density and seat margin.

Here Insert Table 5

Components of social capital are replaced by social capital index and repeat the exercise and results are presented in Table 6. Combining major social dimensions all types of social capital index has indirect effect on tax revenue but direct effect on nontax revenue. Here, higher value of social index indicates higher level of social capital that suggests less direct tax burden and more indirect tax.

Here Insert Table 6

Here Insert Table 7

Table 7 presents panel data estimated fiscal deficit. We compare results of pooled and random effect model in panel data analysis. Social capital determines fiscal deficit directly. Seat margin in the general election has strong and direct impact on determining fiscal deficit.

5. Conclusion

This paper provides evidence for the hypothesis that social capital influences fiscal performance. Empirical results in India suggest that social capital indirectly control the fiscal performance of the elected government. Fiscal deficit reduces by 2.6% to 2.8 % if one percent vote turnover rate rises. The strong political trust is established through vote turnover and vote share in the election for formation of government that create the platform for sound fiscal policy decisions and hence the lower public deficits. The results are robust to a number of control variables and inclusion of additional variables. We use information from direct voter participation on political issues and government formation. In order to take both aspects of trust into account – trust among members of a society and trust between the incumbent and the constituency – we collected data from all general elections held during 1991-2012. These results are consistent with those reported by Putnam et al. (1993) from Italian regions, Keefer and Knack (1997) or Zak and Knack (2001) from cross-country regressions or Knack (1999) from US state governments for government performance.

The results presented in this paper as well as in previous studies underline the importance of social capital as an essential aspect for the well functioning of a government and the institutional architecture in place. However, the understanding of how social capital is built and how government can foster trust remains a fruitful field for further research.

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Table 1: descriptive statistics of major variables for the period of 1991-2012

Variable	**Observations**	**Mean**	**Std.Dev**	**Min**	**Max**
Fiscal deficit	630	43552.06	87077.41	-13837	669437.4
Log(FiscalDeficit)	630	8.5924	3.2863	-9.535	13.41
Vote turnover LS	614	61.28	12.12	25.68	91.77
Vote turnover BS	612	69.81	11.14	23.82	91.82
Winner Seats	612	81.58	58.1	16	224
Winner Vote	612	37.6	8.998	18.75	71.09
Runner Vote	603	27.54	8.99	7.88	49.27
Voter rejected (%)	612	2.01	2.0	0	9.19
Seat Margin	612	45.94	43.84	1	190
Vote margin	612	10.47	11.77	-8.84	70.41
Economic Crime rate	336	6.91	4.21	0.84	29.58
Literacy rate	336	72.29	9.43	47	94.21
Average Family Size	336	5.02	0.56	3.6	6.4

Table 2: Regression results of trust on log value of fiscal deficit

Variables	Random-Effect GLS regression			Fixed-Effect (within) regression		
	Coefficient	t-value	p-value	Coefficient	t-value	p-value
Trust	-0.0280964**	-2.3	0.022	-0.0260539**	1.97	0.049
T	0.201015***	16.77	0.000	0.2011422***	16.62	0.000
Constant	8.433497***	10.58	0.000	8.359413***	10.62	0.000
R^2 (within)	0.3378			0.3378		
R^2 (between)	0.0481			0.0458		
R^2 (overall)	0.2079			0.2066		
Sigma_u	1.8308			1.8516		
Sigma_e	1.6604			1.6604		
Rho	0.5487			0.5543		
No. of Obs.	586			586		

Note: '***', '**' and '*' denote the level of statistical significance at 1%, 5% and 10%, respectively.

Table 3: OLS estimated results of selected few fiscal indicators measured in % of GSDP

Variables	OTR	ONTR	IP	PN	CT	NDR
Vote margin	-0.062*** (-4.89)	0.3162*** (9.58)	0.0208*** (3.31)	0.0124** (2.12)	0.525*** (5.5)	0.3607*** (9.28)
Eco Crime rate	0.0738* (1.74)	0.312*** (2.82)	0.0274 (1.3)	-0.038* (-191)	-0.21703 (-0.68)	0.2107 (1.62)
Literacy rate	-0.092*** (-3.86)	-0.039 (-0.63)	0.0592*** (5.02)	0.073*** (6.64)	0.6474*** (3.61)	0.3282*** (4.5)
Pop density	-0.00009 (-0.93)	-0.0007*** (-2.8)	-0.0001*** (-2.77)	-0.0001** (-2.21)	-0.00078 (-1.08)	-0.0008*** (-2.72)
Avg Family Size	-1.358*** (-4.38)	.6637 (0.82)	0.82735*** (5.39)	0.514*** (3.59)	8.3186*** (3.56)	4.078*** (4.29)
Pcsgdp	0.00005*** (5.41)	0.00003 (1.23)	-0.00002*** (-4.99)	-.0003*** (-6.06)	-0.00032*** (-4.66)	-0.00012*** (-4.14)
Constant	17.981*** (6.85)	-2.544 (-0.37)	-5.302*** (-4.08)	-4.72*** (-3.89)	-63.105*** (-3.2)	-35.185*** (-4.38)
R^2	0.2759	0.3700	0.2828	0.3427	0.2813	0.4138
Adj.R^2	0.2508	0.3481	0.2579	0.3198	0.2564	0.3935
N	180	180	180	179	180	180

Note: Numbers in parentheses are t-values. '***', '**' and '*' denote the level of significance at 1%, 5% and 10%, respectively.

Table 4: Principal Component Analysis (PCA) and Social Capital Index

A: SCindex

Component Measure	Component Loading
Vote turnover	0.5729
Econ Crime rate	-0.1601
Avg (min)Association size	-0.583
Literacy rate	0.5534
Eigenvalue	1.76948
Percentage variation	44.24

Note: SCindex is generated using above weights.

B: SC

Component Measure	Component Loading
Vote turnover (LS)	0.6113
Vote turnover (BS)	0.6032
Econ Crime rate	-0.2701
A.F. Size [Association size]	-0.4352
Eigenvalue	2.1063
Percentage variation	52.66

Note: SC is generated using above weights.

C: SCC

Component Measure	Component Loading
Vote turnover (LS)	0.6754
Vote turnover (BS)	0.6219
Econ Crime rate	-0.3040
Eigenvalue	1.8478
Percentage variation	61.59

Note: SCC is generated using above weights.

Table 5: Major dimensions of social capital and revenue performance

Variables	OTRGSDP	ONTRGSDP
Vote turn over	**-0.099*** (-9.65)**	**0.1028*** (3.07)**
Eco Crime rate	0.08496** (2.35)	0.171* (1.72)
Literacy rate	0.0433*** (3.03)	-0.066*** (-2.9)
Pop density	-0.00004 (-0.79)	-0.0003*** (-3.47)
A. F. Size	-1.24*** (13.23)	0.313 (0.75)
Seat margin	-0.0005 (-0.16)	-0.0123*** (-4.89)
Constant	15.56*** (11.26)	-0.902 (-0.2)
R^2	0.2252	0.0488

N	180	180

Note: Numbers in parentheses are t-values. '***', '**' and '*' denote the level of significance at 1%, 5% and 10%, respectively.

Table 6: Social Capital Index and Revenue performance

A: Using Scindex		
	OTRGSDP	ONTRGSDP
Scindex	**-0.045*** (-4.64)**	**0.048* (1.68)**
Pop density	0.00015*** (6.07)	-0.0003*** (-6.4)
Seat margin	-0.00006 (-0.02)	-0.015*** (-9.21)
Constant	9.67*** (11.6)	0.306 (0.16)
R^2	0.056	0.0281
B: Using SC		
	OTRGSDP	ONTRGSDP
SC	**-0.04002*** (-3.52)**	**0.03626* (1.74)**
Seat margin	0.00013 (0.03)	-0.00035 (-0.03)
Literacy rate	-0.03098 (-1.23)	-0.10656 (-1.34)
Lnpcsgdp	1.4182*** (3.63)	3.133** (2.53)
Lnpopdensity	0.6253*** (4.44)	-1.704*** (-3.81)
Constant	-6.846** (-2.04)	-16.64 (-1.56)
R^2	0.3209	0.1362
Adj R^2	0.3007	0.1105
N	174	174
C: Using SCC		
	OTRGSDP	ONTRGSDP
SCC	**-0.0372*** (-3.6)**	**0.5691* (1.74)**
....	**....**	**...**

Note: Numbers in parentheses are t-values. '***', '**' and '*' denote the level of significance at 1%, 5% and 10%, respectively.

Table 7: Panel data estimated fiscal deficit

Variables	Pooled	Random effect
SC	343.67*** (3.47)	272.72* (1.72)
Seat margin	156.8*** (4.76)	78.373** (1.96)
Literacy rate	159.79 (0.88)	-37.62 (-0.13)
Pop density	1.246* (1.65)	1.42 (0.97)
Pcsgdp	-0.0908 (-1.12)	-0.1185 (-1.07)
constant	-40438.4*** (-3.27)	-16542.4 (-0.82)

R^2	0.1045	0.0909
R^2 (between)		0.2311
R^2 (within)		0.004
N	335	335

Note: Numbers in parentheses are t-values. '***', '**' and '*' denote the level of significance at 1%, 5% and 10%, respectively.

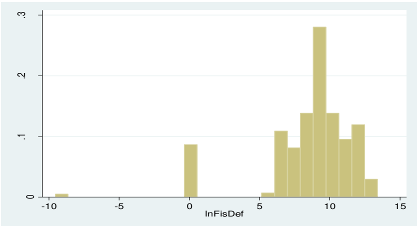

Fig 1: Distribution of log(FD)

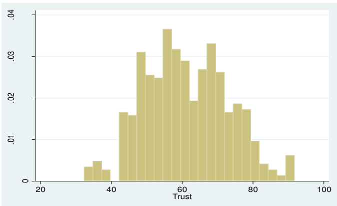

Fig 2: Distribution of Trust variable