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The Political Economy of Decentralisation and Access to Pro-poor Social Services Delivery in Pakistan

MANZOOR AHMED

1. INTRODUCTION

A key argument made by several economists with respect to decentralisation reform is that it can reduce poverty. This assertion is based on the view that it leads to improvements in public sector services delivery. The efficient provision of public goods by the local governments may occur because of their ability to take into account local determinants while providing services, such as health and education [Oates (1972)]. It may also be due to competition, as local governments encourage the provision of efficient public services to, and lower tax burdens on the lower strata of society [Brennan and Buchanan (1980)].

Decentralisation has gained acceptance as a reform policy in many countries (e.g., Vietnam, Argentina, Colombia, Tanzania, India, Tunisia, Brazil, Bolivia, Indonesia, Ghana, and Mexico, *inter alia*),[1] following the realisation that complex political–economic and social issues might not be effectively handled by central government only [Rondinelli and Cheema (1983)]. It is widely believed that locally elected governments, imbued with fiscal and administrative authority, may perform far better and with more efficiency in terms of development, planning, and the provision of public services than a remote and centralised government. In supporting this argument, Manor (1999) considers decentralisation as an effective policy tool that may help in addressing issues such as regional inequity and disparity, poverty, and political instability.

However, opponents of decentralisation believe that it creates economic inefficiencies, increases social inequality, and adversely affects social service provisions [Slater (1989); Samoff (1990); Tanzi (1995); Blair (2000)]. Samoff (1990), for example, shows that decentralisation, when used as a policy tool, has largely been a worldwide failure. Supporting that conclusion, Slater's (1989) study of Tanzania illustrates that decentralisation failed to enhance local capacities in implanting local programmes.

Manzoor Ahmed <economist.luawms@gmail.com> is Assistant Professor of Economics and Dean, Faculty of Social Sciences, Management, and Information Technology, Lasbela University, Lasbela, Balochistan.

[1]For more in-depth discussion, see Rondinelli and Cheema (1983), Slater (1989), Manor (1999), Rao (2000), Faguet (2004), Crawford (2008), and Fausto and Barillo-Rabling (2008).

On the question of any direct effect of decentralisation on social services delivery and redistributive polices, the empirical literature is divided. Throughout the body of empirical work, the relationship of these indicators is not well elucidated. Nonetheless, whatever scant research has been done needs to be carefully reviewed. For example, Von Braun and Grote's (2000) work with respect to the cases of India, China, Egypt, and Ghana finds a negative relationship between decentralisation and expenditures on social services geared toward the poor. However, West and Wong (1995) note that decentralisation, given its flawed design (i.e., more focus on federal–provincial fiscal relations, and local governments are left entirely at the mercy of the provinces), is the prime cause of regional inequality and poverty in China.

Faguet (2004) examines the consequences of decentralisation on poverty at the national level. His results indicate how decentralisation affects the pattern of investments on social sectors and the formation of human capital. His argument supports the common assertion that decentralisation changes the pattern of public expenditures to focus more on the provision of services that are related to poverty alleviation.

Martinez-Vazquez (2001) shows that decentralisation may also alter poverty levels by changing the composition of public sector expenditures. As part of the various redistributive schemes, public resources that are given directly to poor individuals may augment their incomes. In any case, pro-poor public expenditures affect poverty, even in the absence of direct resource transfers to the poor. For example, with decentralisation, public expenditures relating to basic services such as health and education will increase. Since these services are fundamental to human development, fiscal decentralisation is likely increase the welfare of the poor.

In Pakistan, in order to decentralise the administrative and financial matters to the local level, a devolution plan was launched in 2001 that brought large-scale changes to governance and public finance of Pakistan, where several important social and economic services were devolved to local governments. Such drastic changes could bring a widespread transformation in nature, extent and magnitude of the essential social and economic service provision to common people. Apparently, the local governments because of their proximity and accountability to local people were more efficient and effective in increasing services that should benefit the local community particularly the poor and disadvantaged. Nonetheless, in spite of the importance of the matter the related literature has not provided a systematic and robust research on this issue using Pakistan as a case. This paper aims to fill this gap in the literature through a systematic theoretical and empirical research. The empirical results show that after the devolution plan in 2001 the social and economic services delivery has increased and improved.

The rest of the paper is as follows. Section 2 provides a brief description of the local government system and its evolution in Pakistan. Section 3 presents a legislative bargaining model on federalism. Section 4 discusses the hypothesis, data and methodology for empirical investigation while Section 5 presents and describes the results. Section 6 concludes the paper.

2. HISTORICAL BACKGROUND OF LOCAL GOVERNMENT

SYSTEM IN PAKISTAN

The local government system introduced in the Sub-Continent in 19th century by the British India government aimed, primarily to privilege local elites. The local government under the British *Raj* was not empowered, as it was not democratically elected. Instead, the central bureaucracy nominated the representatives of the local governments [Venkatarangaiya and Pattabhiram (1969)]. The system ran through an extreme 'top-down' style with circumscribed functions of local representatives. The key administrative role at the local level was performed by the agents of the central bureaucracy, the Deputy Commissioner, and other bureaucratic operatives, such as the Assistant Commissioner, *Tehsildars, Naibdehsildars and Patwaris* [Tinker (1968): AERC (1990)].

However, after the independence, during late 1940s and in the 1950s an ever-increasing centralisation gave birth to a powerful military bureaucracy that diluted the already limited sub-national governments [Waseem (1994); Talbot (1998)]. Similar to pre-partition style, local bodies system in the 1960s was overwhelmingly controlled by the central bureaucracy through its appointed officials at the local level who had the discretionary power to restrict any kind of action the elected representatives might desire to pass or implement. During the 1971-1977, the local governments, however. were pushed to the background and hence remained dysfunctional.

The local government system revived with the arrival of the military dictatorial regime again in 1979, where the political and administrative structure similar to the 1960s of over centralisation of administrative and economic power at the provincial and federal levels was implemented. It is interesting to note that with the death of Zia-ul-Haq and subsequently with the advent of democracy in 1988 after party-based general elections at both federal and provincial levels, the local governments were dispensed with. Thus, until the 1999 the local governments were in dormancy.

However, after the 1999 military coups d'état, the local government system was once again reinstated but this time with entirely different structure, functions and responsibilities under the auspices of the devolution plan of 2000-01.

The devolution plan clearly spells-out the expenditure and revenue raising powers and responsibilities of all three tiers of local governments. They were entitled to allocate and disburse resources according to their own priorities apparently without strong interference or direction from the upper tiers of governments (federal and provincial). However, Bahl and Cyan (2009) believe that in practice the provincial governments very often exercised control over certain expenditure areas, particularly on expenditures undertaken through "conditional transfers" from the provinces.

Another significant change accompanying the devolution plan was the introduction of a formula-based system of resource sharing between the provincial and local governments. All four provinces constituted their respective Provincial Finance Commissions (PFC) in 2001 to formulate the resource transfer mechanism and distribution of finances between the provincial and the local governments. The resource distribution criteria between provincial and local governments under the PFC is elaborated in Table 1.

Table 1

Intergovernmental Resource Transfer Criteria

Total Pool and Distribution Criteria	Punjab	Sindh	KPK	Balochistan
Local share of the Provincial Divisible Pool	39.8%	40%	40%	31%
Formula Factors with Weights	100%	100%	100%	100%
Population	75%	50%	50%	50%
Backwardness of District	10%	17.5%	25%	
Tax Collection Effort	5%	7.5%		
Fiscal Austerity	5%			
Area				50%
Development Incentive/ Infrastructure Deficiency	5%		25%	
District Governments' Deficit Transfers		25%		

Source: Shah (2004) and Sindh (2004).

As illustrated in Table 1 population was the most important criterion used by all provinces in resource distribution. Under the Local Government Budget Rules (2002), the local governments had the power to formulate their budgets and prioritise public expenditures without the legal consent of the provincial governments. The same rules categorically elaborated the procedure for budget making and its approval from the concerned local council. The local governments made the budgets once the provincial government informed the former about their share under the PFC. It was mandatory for the local councils to budget both development and non-development expenditures. The funds allocation for development expenditures were undertaken after meeting the non-development expenses.

3. A LEGISLATIVE BARGAINING MODEL OF FISCAL FEDERALISM

Consider an economy where there are two provinces, A and B; additionally, there are two districts, $i = \{1,2\}$, within each province. Individuals differ in their inherent labour productivity, denoted by s_i, which is distributed according to the density function $\gamma_i(s)$. An individual's wage rate, $w_i s_i$, is linear in the productivity parameter. An individual of type s_i, residing in district i of province A, receives utility from private consumption $c_i(s_i)$ and a district-specific public good, G_i; conversely, that individual receives disutility from the labour supply $\ell_i(s_i)$. For simplicity, we assume Cobb–Douglas preferences.

$$\ln u_i(s_i) = \ln\left(c_i(s_i)\right) + \ln\left(1 - \ell_i(s_i)\right) + \ln\left(G_i\right) \quad \ldots \quad \ldots \quad \ldots \quad \ldots \quad (1)$$

We denote the B district with ~. In other words, the utility of a type-s individual in district i of province B is

$$\ln \tilde{u}_i(\tilde{s}_i) = \ln\left(\tilde{c}_i(\tilde{s}_i)\right) + \ln\left(1 - \tilde{\ell}_i(\tilde{s}_i)\right) + \ln\left(\tilde{G}_i\right) \quad \ldots \quad \ldots \quad \ldots \quad \ldots \quad (1')$$

An individual of type s_i in district i of province A receives an after-tax wage income, as well as a federal transfer b; both are used for private consumption:

$$c_i(s_i) = (1-\tau) w_i s_i \ell_i(s_i) + b \quad \ldots \quad \ldots \quad \ldots \quad \ldots \quad \ldots \quad (2)$$

where τ is the federal income tax rate. Consequently, in province B:

$$\tilde{c}_i(\tilde{s}_i) = (1-\tau)\tilde{w}_i\tilde{s}_i\ell_i(\tilde{s}_i) + b \qquad \ldots \quad \ldots \quad \ldots \quad \ldots \quad \ldots \quad (2')$$

We will suppress the ~ when there is no ambiguity (i.e., when we calculate the derivations for province A, and can always obtain the corresponding quantities for province B by adding ~). We assume the district-specific wage rate to be linear in that district's development expenditure, D_i, and that the "base wage" w are the same across districts—namely:

$$w_i = wD_i \qquad \ldots \quad \ldots \quad \ldots \quad \ldots \quad \ldots \quad \ldots \quad \ldots \quad (3)$$

$$\tilde{w}_i = w\tilde{D}_i \qquad \ldots \quad \ldots \quad \ldots \quad \ldots \quad \ldots \quad \ldots \quad \ldots \quad (3')$$

3.1. Economic Equilibrium

Maximising (1) s.t. (2) we derive the labour supply function and the corresponding indirect utility function:

$$\ell_i(s) = \frac{1}{2} - \frac{\theta}{2wsD_i} \qquad \ldots \quad \ldots \quad \ldots \quad \ldots \quad \ldots \quad \ldots \quad (4)$$

$$U(\tau, ws, \theta, D_i, G_i) \equiv \max_{c_i(s),\ell_i(s)} U_i(s) = ((1-\tau)ws)\left(D_i + \frac{\theta}{ws}\right)^2 \frac{G_i}{D_i} 2^{-2}, \qquad \ldots \quad (5)$$

where

$$\theta \equiv \frac{b}{1-\tau} \qquad \ldots \quad \ldots \quad \ldots \quad \ldots \quad \ldots \quad \ldots \quad \ldots \quad (6)$$

3.2. Government Budgets

Each province is given a budget, R and $\tilde{R}$, by the federal government, to use on development expenditure and the public goods in each of the two districts:

$$R = D_1 + D_2 + G_1 + G_2 \qquad \ldots \quad \ldots \quad \ldots \quad \ldots \quad \ldots \quad (7)$$

$$\tilde{R} = \tilde{D}_1 + \tilde{D}_2 + \tilde{G}_1 + \tilde{G}_2 \qquad \ldots \quad \ldots \quad \ldots \quad \ldots \quad \ldots \quad (7')$$

The federal government collects tax revenue from wage income and distributes it to the provinces, in addition to providing the federal subsidy.

$$R + \tilde{R} + Nb + \tilde{N}b = \tau\left(Y_1 + Y_2 + \tilde{Y}_1 + \tilde{Y}_2\right) \qquad \ldots \quad \ldots \quad \ldots \quad \ldots \quad (8)$$

where

$$Y_i = \int_s wD_i s\ell_i(s)\gamma_i(s)ds \qquad \ldots \quad \ldots \quad \ldots \quad \ldots \quad \ldots \quad (9)$$

3.3. The Provincial Legislative Bargaining Game

We assume a simple alternating-offer bargaining game, as in Marsiliani and Renström (2007). Take province A, with two elected representatives (types s_1^* and s_2^*). If district 1 is the larger of the two districts, we assume that district 1 makes the first offer. District 2 can accept or reject it. If district 2 rejects it, then one representative is chosen at random to make the final offer. (The game could be extended to several rounds, without altering the qualitative properties.) In the final round, if district *i* is chosen to make the final offer, it will maximise its own utility subject to (7), thus implying the setting $D_j = G_j = 0$. Maximising (5) subject to (7) provides the optimal level of development expenditure and of the public goods when the entire budget is used in district *i*, and the resulting indirect utility function is:

$$D_i = R\frac{1+m_i(R)}{4} \quad \ldots \quad \ldots \quad \ldots \quad \ldots \quad \ldots \quad \ldots \quad (10)$$

$$G_i = R\frac{3-m_i(R)}{4} \quad \ldots \quad \ldots \quad \ldots \quad \ldots \quad \ldots \quad \ldots \quad (11)$$

$$V\left(\tau, ws_i^*, \theta, R\right) \equiv \max_{D_i, G_i} U_i(s_i^*) = R^2\left(3-m_i(R)\right)^3\left(1+m_i(R)\right)\left((1-\tau)ws_i^*\right)16^{-2}, \quad \ldots \quad (12)$$

where

$$m_i(R) \equiv \sqrt{1-8\frac{\theta}{ws_i^* R}}. \quad \ldots \quad \ldots \quad \ldots \quad \ldots \quad \ldots \quad \ldots \quad (13)$$

If district 2 is not chosen in the final round, then since $G_2 = 0$, it follows that $V_2 = 0$. If district 2 is chosen in the final round, the utility is given by (13). If we denote the probability that district 1 is chosen as *p*, then the expected utility of district 2 entering the final round is:

$$E[V_2(R)] = (1-p)R^2\left(3-m_2(R)\right)^3\left(1+m_2(R)\right)\left((1-\tau)ws_2^*\right)16^{-2} \quad \ldots \quad \ldots \quad (14)$$

Thus, district 2 accepts any proposal that satisfies

$$\left((1-\tau)ws_2^*\right)\left(D_2+\frac{\theta}{ws}\right)^2\frac{G_2}{D_2}2^{-2} \geq (1-p)R^2\left(3-m_2(R)\right)^3\left(1+m_2(R)\right)\left((1-\tau)ws_2^*\right)16^{-2} \quad (15)$$

When district 1 makes the first offer, it maximises its own utility, subject to both (15) and (7).

Note that this problem can be written as:

$$\max_{D_1, D_2, R_2}\left((1-\tau)ws_1^*\right)\left(D_1+\frac{\theta}{ws_1^*}\right)^2\frac{R-R_2-D_1}{D_1}2^{-2}, \quad \ldots \quad \ldots \quad \ldots \quad \ldots \quad (16)$$

subject to

$$\left((1-\tau)ws_2^*\right)\left(D_2+\frac{\theta}{ws_2^*}\right)^2\frac{R_2-D_2}{D_2}2^{-2} \geq (1-p)R^2\left(3-m_2(R)\right)^3\left(1+m_2(R)\right)\left((1-\tau)ws_2^*\right)16^{-2} \quad (17)$$

The first-order conditions imply that (9), (10), and (11) hold for the respective districts evaluated at R_1 and R_2, respectively. R_2 is chosen at the level where (17) holds with equality—that is:

$$D_i = R_i \frac{1+m_i(R_i)}{4} \quad \ldots \quad \ldots \quad \ldots \quad \ldots \quad \ldots \quad \ldots \quad (18)$$

$$G_i = R_i \frac{3-m_i(R_i)}{4} \quad \ldots \quad \ldots \quad \ldots \quad \ldots \quad \ldots \quad \ldots \quad (19)$$

$$V\left(\tau, ws_i^*, \theta, R_i\right) = R_i^{\,2}\left(3-m_i(R_i)\right)^3\left(1+m_2(R_i)\right)\left((1-\tau)ws_i^*\right)16^{-2} \quad \ldots \quad \ldots \quad (20)$$

for i = 1,2 and

$$R_2^{\,2}\left(3-m_2(R_2)\right)^3\left(1+m_2(R_2)\right) = (1-p)R^2\left(3-m_2(R)\right)^3\left(1+m_2(R)\right). \quad \ldots \quad (21)$$

Equations (18)–(21) completely characterise the bargaining equilibrium as a function of the provincial budget R, the federal tax rate τ, and the benefit rate θ. The same equations are obtained for province B, using the ~ notation.

3.4. Federal Decision-Making

We characterise the situation where one district within one province dominates at the federal level. That situation can occur when the finance minister comes from one of the provinces. The finance minister decides the allocation to the provinces, R and $\tilde{R}$, taking into account the bargaining game at the provincial level, so as to maximise its own utility. At first, it could look as if the finance minister would set R for the other province to zero. This is not the case, as production there would then stop, and no taxes could be collected from that province. Instead, it is optimal to maximise the net tax revenue from the other province. Suppose the finance minister comes from province A; then, $\tilde{R}$ is chosen so that

$$\max_{\tilde{R}} \tau\left(\tilde{Y}_1 + \tilde{Y}_2\right) - \tilde{N}b - \tilde{R}, \quad \ldots \quad \ldots \quad \ldots \quad \ldots \quad \ldots \quad \ldots \quad (22)$$

subject to (4), (9), (18), and (21).

The first-order condition to (22) gives $\tilde{R}$ as a function of τ, θ, w, etc.

$$\tilde{R} = \tilde{R}(\tau, \theta, w) \quad \ldots \quad \ldots \quad \ldots \quad \ldots \quad \ldots \quad \ldots \quad \ldots \quad (23)$$

Differentiating (23), and evaluating within a symmetric equilibrium (where the two districts within a province are equal), we obtain

$$\frac{\partial \tilde{R}}{\partial \theta} = \frac{\tilde{R}}{\theta}\frac{1}{\left(1-\phi_{\tilde{R}}\right)^2 + \phi_{\tilde{R}}^{\,2}}. \quad \ldots \quad \ldots \quad \ldots \quad \ldots \quad \ldots \quad \ldots \quad (24)$$

Notice that by (6), $b = (1-\tau)\theta$; then,

$$\frac{\partial}{\partial b}\left(\frac{\tilde{R}}{\tilde{R}+b}\right) = \frac{b}{(\tilde{R}+b)^2}\frac{\partial \tilde{R}}{\partial b} - \frac{\tilde{R}}{(\tilde{R}+b)^2} = \frac{\theta}{(\tilde{R}+b)^2}\left(\frac{\partial \tilde{R}}{\partial \theta} - \frac{\tilde{R}}{\theta}\right) = \frac{\tilde{R}}{(\tilde{R}+b)^2}\frac{2\phi_{\tilde{R}}\left(1-\phi_{\tilde{R}}\right)}{\left(1-\phi_{\tilde{R}}\right)^2 + \phi_{\tilde{R}}^{\,2}} > 0, \quad \ldots \quad (25)$$

Where the second equality follows from (6)—i.e., from $b = (1 - \tau)\ \theta$—and the last equality from Equation (24). Then, we have:

> **Proposition:** *In the bargaining equilibrium, the ratio of the local expenditure to the total expenditure is increasing in the federal government transfer rate that inherently enables the provincial governments to allocate more resources to the local governments.*

The proposition implies that if the transfer rate, *b*, is larger, then decentralisation is greater. Larger allocations to subnational governments increase the expenditures on sectors and subsectors that are pro-poor. Thus, it is worthwhile to note that unlike a conventional approach that would consider counter-productive the role of subnational government in redistribution, we instead postulate that subnational governments is both effective and productive in making redistributive policies.

4. HYPOTHESIS, DATA AND METHODOLOGY

4.1. Hypothesis

We postulate that since the local governments are more responsive to local people's needs because of being accountable to them, the pattern of investment may be in the favour of those sectors that can deliver benefits to the poor. Given this, the paper tests the following hypothesis:

> ***Hypothesis:*** *Ceteris paribus*, after the decentralisation, pattern of public investment changes and sectors related to social services provision receive more expenditure.

4.2. Data

Data (as reported in Table 2) are drawn from various sources including the FBS (various issue), provincial governments budget documents (various years), SPDC (2010, 2007, 2012), State Bank of Pakistan (2010) and *Pakistan Economic Survey* (Various Issues). For provincial population estimates, we divide total population on in four provinces based on their shares in 1998 census. Provinces in Pakistan are largely demarcated on ethnic/linguistic bases and inter-provincial migration is negligible. Therefore, it is plausible to expect that the population share of the provinces is virtually time-invariant. In addition, we use population as an independent variable. The same variable is used to obtain per capita expenditures of the provinces.

In order to get public expenditures, per capita income and other variables in real terms, their nominal values are deflated with the GDP deflator. An annual time series dataset from 1975 to 2008 is constructed, because the local governments completed their four years tenure in 2008 and next elections were suspended until the time of writing. The reported data are annual because budgetary allocations to both provincial and local governments were undertaken annually and the data are available on annual basis. The cross section comprises all four provinces of Pakistan.

Table 2

Descriptive Statistics

Variables	Obs.	Mean	Std. Dev.	Min	Max
Devolution Reform (Dummy)	136	0.235294	0.425751	0	1
Decentralisation	136	0.087414	0.069814	0.01	0.37
Population (in Millions)	136	28.08185	23.86578	3.59	90.07
Per Capita GDP	136	4008.559	1264.578	2239	7686
Agri. Value Add.*	136	1136.948	288.9449	696.9466	1948.867
Civil Work *	136	20.8603	85.585	0.3527	842.806
Pop. Per Bed	136	1508.684	171.6524	1269	1963
Welfare Expenditure*	136	0.731106	1.011983	0.00322	6.941837
Public Health Expenditure*	136	2.116858	3.431105	1.01345	19.11971
Social Sector Expenditure*	136	43.49989	50.24139	1.191492	249.2615
Education Expenditure*	136	44.64446	47.66713	1.126267	223.6559
Health Expenditure*	136	9.672765	10.01052	0.231037	40.75399
Irrigation Expenditure*	136	5.469899	4.801413	0.177114	24.1072
Rural Development Expenditure*	136	1.794452	5.016514	1.22011	39.68176

* Value Expressed in Per Capita term.

The data limitation at district level and beyond restricted our analysis to provincial level. Since the provincial governments' expenditure *largely* reflect the local governments' expenditure—as shown in the Table 2—virtually the local governments use 40 percent of the total provincial expenditures, hence local governments' expenditures are reflected at overall provincial expenditures. Therefore, it may be plausible to use the provincial level data for local level analysis. Further, the financial expenditure at provincial level provided similar information for both pre and post devolution plan that enables us in detecting the impact of the devolution plan reforms.

4.3. Methodology

Following Faguet (2004), Faguet and Sanchez (2008) and Aslam and Yilmaz (2011) we identified nine sub-sectors of public sector which could impact the living standard of local communities in general and the poor and marginalised social groups in particular. (These sectoral variables are described in Appendix A). Normally the social service/public good provision is 'measured in quality adjusted units of output, separated by the type' [Faguet (2004), p. 876]. Given the data constraint, we measured the real investment quantity in terms of public expenditures on these sectors. This approach although restricted us from analysing the effectiveness of the Devolution on the quality of delivery of the public goods. It enabled us in comparing the pre and the post Devolution in terms of the inter-sectoral resource allocations and the pattern of public sector investments.

The dependent variables are the inflation-adjusted annual per capita amount of investments undertaken in each sector. 'Population per bed' variable is not expressed in per capita term. The primary independent variable is the Devolution Reform, which is captured by a dummy variable that takes 1 on 2002 and afterward (2002 to 2008) and zero otherwise (i.e. from 1975 to 2001). Following Neyapti (2010), per capita GNP is used to proxy for the overall level development. Arguably population – which is an important time-variant factor— can affect the extent and magnitude of the social services

[Aslam and Yilmaz (2010)], and regions/provinces , where the more populated areas receive better treatment than less populated ones.

The following model is constructed and statistically estimated using a panel dataset (34*4):

$$Sec_{it}=\alpha+\beta(FD_{it})+\beta_2(PDum_{it})+\beta_3(YDum_{it})+\beta_4(Dev_{it})+\beta_5(Pop_{it})+\beta_6(GDP_{it})+e_i+\mu_{it} \quad \ldots\ldots (26)$$

The subscripts (*it*) stand for province *i* at time *t*. (Sec_{it}) alternatively represents all sectors included in the analysis. (FD_{it}) is the expenditure decentralisaion. ($PDum_{it}$) is the provincial dummy and ($YDum_{it}$) is the year dummy. The provincial and time dummies expectedly capture all of the characteristics associated with the provinces at a given time. (Dev_{it}) is the dummy variable for the devolution plan. The Devolution dummy (Dev_{it}) represents the role of local governments and other institutions that came into effect after the devolution plan. (Pop_{it}) is the population of the provinces expressed in million and (GDP_{it}) is real per capita GDP described in 1980 constant price terms. The per capita GDP of provinces is expected to control for the overall economic condition of the provincial economy among other things. The impact of province level per capita GDP and expenditure on social and economic services is expected to be positive: higher average per capita income of one province may lead to increase in the expenditures on above services because of the additional resource availability to that province from own revenue sources.

5. EMPIRICAL RESULTS AND DISCUSSION

For each service, a Fixed Effect model is estimated separately and results are reported in Table 3. We find that the devolution plan variable is significant and positive (negative sign for population per bed as expected) across all social and economic indicators. In above equation the positive coefficients of FD_{it} (β_1) and Dev_{it} (β_2) suggest that the expenditures on that service have increased at a faster rate as compared to the pre devolution period, *ceteris paribus*. This leads us to conclude that the decentralisation has been effective in terms of increasing the expenditures on social and economic services. It therefore suggests that the devolution reforms on average have been effective in provision of social and economic services provided to local communities. Thus, it is plausible to conclude that following the devolution, the magnitude of all nine vital socio-economic services has increased.

As the major objective of the decentralisation to local levels was to make the public services accessible to the local people and the improvement of social infrastructure, it is reasonable to group the included services into two broad categories: 1. economic services and 2. social services. The economic services include development expenditures on sectors such as agriculture, civil work, water management and rural development, whereas the social services include health, education, water supply and sanitation facility, and social welfare and recreational services

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Table 3

Determinants of Public Expenditures on Rural Development, Agriculture and Civil Work, Education, Basic Healthcare Indicators, Water and Sanitation, Social Welfare and Water Management

Variables	Pub. Exp. Rural Dev. φ ψ	Agri. V. Add ψ	Pub. Exp. Civil Work φ ψ	Public Exp. Education. φ ψ	Pub. Exp. on Basic Health φ ψ	Pop. Per Bed	Pub. Exp. On Water and Sani. φ ψ	Public Exp. On Social Welfare φ ψ	Public Exp Irrigation. φ ψ
Models	Fixed Effect	Fixed Effect	Fixed Effect	Fixed Effect	Fixed Effect	Fixed Effect	Fixed Effect	Fixed Effect	Fixed Effect
Devolution Reform (Dummy)	10.69**	0.303***	5.434***	3.733***	3.094***	-297.3**	55.79***	5.272***	3.079***
	(5.068)	(0.093)	(1.036)	(0.192)	(0.159)	(12.401)	(10.083)	(0.527)	(0.225)
Fiscal Decentralisation	0.817**	0.820**	0.753*	0.275***	0.249***	0.399**	0.868***	0.268***	0.861***
	(0.457)	(0.344)	(0.391)	(0.713)	(0.754)	(0.488)	(0.090)	(0.074)	(0.091)
Population	0.0474	0.00694***	0.00701	0.0176***	0.0086***	2.569***	0.846***	0.0236**	0.0164***
	(0.379)	(0.002)	(0.021)	(0.006)	(0.003)	(0.326)	(0.209)	(0.011)	(0.005)
Per Capita GDP	0.00148	0.000134***	-0.000803**	0.000183**		0.026***	-0.007**	-0.0005***	0.000015*
	(0.004)		(0.000)	(0.0334)		(0.005)	(0.004)	(0.000)	(0.000)
Constant	2.213	6.588***	5.346***	2.538***	1.452***	175.1***	36.54***	-0.707	1.861***
	(12.901)	(0.087)	(0.963)	(0.217)	(0.113)	(12.910)	(9.369)	(0.489)	(0.209)
Year Dummy	Included	Included	Included	Included	Included	Included	Included	Included	Included
N	136	136	136	136	136	136	136	136	136
R^2 (Within)	0.1678	0.8807	0.5832	0.9563	0.9753	0.9875	0.7105	0.9003	0.9490
R^2 (Between)	0.1693	0.0121	0.2980	0.492	0.8590	0.9007	0.8347	0.120	0.6256
R^2 (Overall)	0.1693	0.4461	0.4475	0.9027	0.8628	0.2553	0.6430	0.6458	0.6668
F/WaldChai2	1.57 (0.09)	20.45 (0.0000)	3.88 (0.000)	81.34 (0.000)	114.02 (0.000)	293.. (0.000)	6.80 (0.000)	25.03 (0.000)	51.62 (0.000)

φ Value expressed in log form; **ψ** values are in million Rs.; Panel regressions have robust standard error in parentheses.
* $p < 0.10$, ** $p < 0.05$, *** $p < 0.0$

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54:4, Part II (Winter 2015) pp. 471–486

The relationship between public expenditure with education and decentralisation variables is positive and significant. Healthcare variables (annual expenditures on healthcare and population per bed) maintain positive (negative) and strongly significant coefficient *vis-à-vis* the decentralisation indicators, suggesting that health services have increased in both quantity proxied by expenditures and quality proxied by population per bed after the devolution reforms.

The impact of decentralisation on local level is not limited to social services. Likewise, the economic services such as agriculture, infrastructure development (proxied by civil work) and water management have registered a marked improvement in post devolution period.

Interestingly, these outcomes are in accordance with our theoretical prediction; that is, socio-economic services may be better provided by the sub-national government as compared to their central counterpart. In the same vein, it is also in the line of the empirical literature [for instance, Faguet (2004)] that shows that the local governments because of the better local knowledge are more effective in providing these social services.

As far as other explanatory variables in the regressions analysis are concerned, the per capita GDP is positively correlated with education expenditures. The population variable has showed either unexpected (negative) sign or appeared insignificant vis-à-vis all socio-economic services except health indicators. The negative coefficients of the population in relation to services like education, water and sanitation and civil work suggest that the per capita investment on such services were higher in Balochistan. This may explain that in Balochistan with very vast land and disperse population the per capita cost of providing a certain social or economic service remains much higher as compared to other provinces.

In general, the overall fit of the regression models is consistent with the decentralisation literature because it explains up to 70 percent or more of the variation in social service delivery (reflected by the R-squares of each model).

Hausman Tests with Chi2 (10) and P. Values 116.46 (0.00), 106.88 (0.00), 2.35(0.00), 70.41 (0.00), 38.42 (0.00), 33.74 (0.00), 56 (0.00), 40(0.00), 92(0.00) for first to nine models respectively allow us to select the Fixed Effect models for the final estimation. A major threat to validity of our outcomes could come from the time-variant factors that simultaneously correlate with services and the Devolution indicators, which may create the problem of endogeneity. This would occur if the federal and provincial governments' choices of devolution were purposely based on quality and quantity of social and economic indicators of localities. As the devolution plan was a nation-wide policy, applied to all local governments in Pakistan, endogeneity should not be a major issue.

6. CONCLUSION

To garner a better theoretical understanding, we developed a legislative bargaining model of fiscal federalism. The model explicitly contains welfare dimension that relates to the pro-poor services delivery. The model shows that fiscal transfers have empowered sub-national governments to spend more on basic social and economic sectors. We empirically tested this proposition, which suggests an overall positive and statistically

significant relationship between decentralisation and pro-poor social services delivery. The empirical evidence shows that the devolution significantly changed the size and magnitude of social and economic investments.

The efficacy of the decentralisation at local level is evident much more in services like rural development and water management facilities than the education. This indicates the presence of the local elite capture on which an extensive fiscal federalism literature [permanent among them is Bardhan and Mookherjee (2005)] exists. That is because political representatives may award work on irrigation projects and other related physical infrastructure to locals as political patronage.

Constraint experienced with data made it difficult to draw a definite conclusion on the skewness of the social service provision. The data issue also limited this research from measuring and analysing the quality of these services in terms of units of output rather than sticking only to the supply of such services measured through public expenditures. More research is required to investigate the effectiveness of the decentralisation to local level in enhancing the quality of 'untargeted services' that potentially affect the local communities without any differentiation. Theoretically, not skewed and untargeted pattern of service distribution is likely to impact positively the poor and disadvantaged communities more as compared to their rich counterparts. Moreover, the paper suggests more research to assess the impact of 18th Amendment to the Constitution of Pakistan in 2010 on services provision that abolished concurrent list and subsequently devolved constitutional, administrative and economic powers to sub-national governments.

APPENDIX A

Variables Used to Determine Sectoral Allocation of Public Resources

1	Water and Sanitation	5	Agriculture (Agriculture Value Addition)
2	Education (primary and Tertiary)	6	Irrigation
3	Health (Basic Health Care)	7	Rural Development
4	Social Security and Welfare	8	Civil Work

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Comments

It is a decent effort discussing the effects of decentralisation on the service delivery. This paper focusses on Pakistan and explores the effects for its troubled history of decentralisation. Author touches upon a very important topic and has tried to identify the effects of decentralisation on certain sectors that can bring a positive change in people's life. The paper contains both the theoretical models as well as the empirical estimation however there are still issues that need reconsideration. Main comments as are follows:

(1) Introduction offers a good collation of literature, while the historical background makes it obvious that the local government system in Pakistan was not fully functional. This clarifies why the topic presented in this paper has largely remained neglected in Pakistan.

(2) Section 4 mentions nothing about the devolution plan so the title needs to be changed.

(3) In the data section 5, CPI is used as a deflator; however, it would be better to use GDP deflator to deflate different series because the author is mainly dealing with aggregated data for public sector expenditures.

(4) Furthermore, initially the paper conveys that the focus is on the third tier of the government but suddenly the econometric analysis is conducted at the provincial level instead; this is inconsistent with the initial build up of the paper. The author gives only four lines to justify this and assumes that Provincial expenditures reflect local spending. However, it can be seen at Table 1 (page 4), that only 40 percent of provincial proceeds are allocated to the districts in each province.

(5) Devolution reform is presented with the help of a dummy variable; despite the initial theoretical debate that *higher transfer rate* will depict greater decentralisation. The problem with dummy variable is that it can take only two values i.e. "zero" and "1"; where zero would mean no decentralisation that goes against the spirit of what the author wants to emphasis. Therefore, it would be helpful if the author can also use the conventional revenue/expenditure proxies to represent decentralisation to make the argument convincing and to get the analysis consistent with the theoretical section.

(6) Furthermore, the decentralisation dummy takes the value of 1 only for the period 2001-2008 and zero otherwise (1975-2000). This reflects that author is not convinced about the earlier attempts for decentralisation. Yet again the conventional proxy might be more helpful than the dummy as it can overcome this issue. Similarly, the dummy should take value 1 after year 2002, i.e. a completed year of the implementation of devolution plan.

(7) This paper uses 4 different methods for estimation, however, Fixed Effects (FE) seems plausible as the provinces are inherently quite different from each

other. Moreover, the OLS with year and province dummies will represent the Least squares dummy variable (LSDV) estimator i.e. equivalent to the Random effects (RE-GLS) model so there is no need for the two simultaneously: this is also clear from empirical results as the two regressions give similar results. In fact, Hausman test is basically used to help us identify the appropriate techniques out of RE and FE. Therefore, the authors should include only those results in the main text that are most appropriate.

(8) It is surprising to see that public expenditures on health (at Table 3) has, at certain year taken the minimum value of zero; this needs to be checked again and corrected.

(9) The dependent variables include certain sectors which are beyond the effective administrative control of the district governments like police, agriculture, irrigation etc. In fact focus should be on the most obvious social sector where the impact of decentralisation is most obvious, especially when the period under focus is so short i.e. 2002-2008. Another important matter to consider is that of the concurrent list which could only be liquefied in 2010; this puts a question mark on the analysis, questioning provincial capacity to make a change during the study period.

(10) It is uncommon to use a single model to judge nine different socio-economic services/sectors, hence the author should rethink about it. Moreover, the author can use other important variables like development spending, federal transfers, international aid/assistance etc. to explain the provincial social sectors.

(11) Lastly, the paper unnecessarily puts more weight on the federal transfers to proxy empowered subnational governments. Instead, whether the provincial revenues comes from the own source revenues or the federal transfers, in both the cases it will represent a financially capable/empowered sub national government.

To conclude, this paper reflects the hard work done by the author; still better synergy should be built between the theoretical and the empirical part. Moreover, the empirical part needs serious reconsideration. Hence, provided that the issues in estimation are resolved, this paper offers a good contribution to literature.

Iftikhar Ahmad

Pakistan Institute of Development Economics,
Islamabad.