DOES DECENTRALISATION ENHANCE RESPONSIVENESS TO PEOPLE'S NEED? Empirical Evidence from Pakistan

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Abstract

This paper aims at investigating the impact of decentralization on social services delivery in Pakistan. In 2001 a large-scale Devolution Reforms policy was launched aiming to devolve substantial fiscal and administrative powers to local governments from the provincial governments after restructuring and revamping the administrative, political and fiscal landscape of the local government system. The paper uses a panel dataset from 1975 to 2008 from four provinces of Pakistan in order to detect the efficacy of local governments in providing the essential social and economic services to common people particularly to the poor. The empirical results suggest that after the decentralization, expenditures on social and economic services have increased manifold. Therefore, it indicates that the decentralization in the shape of widespread devolution reform despite its loopholes was an essential structural reform with positive impact on sectors and subsectors that believed to be pro-poor.

Key words: Decentralization; Devolution Plan; Social Services Delivery; Pro-Poor; Pakistan

I.   Introduction

The Decentralization that was launched under the auspice of Devolution Plan in 2001 brought large-scale changes to governance and public finance of Pakistan, where several important social and economic services were devolved to local governments (third tier) from the federal (first tier) and provincial (second tier) of governments. Such drastic changes were expected to bring a widespread transformation in nature, extent and magnitude of essential social and economic services' delivery to common people and predominantly to those who otherwise are unable to have access to public goods and services. Presumably, the local governments because of their proximity and accountability to the local people were more efficient and effective in increasing those services delivery that should benefit more to the local community, particularly the poor and disadvantaged social groups. Nonetheless, in spite of the importance of the matter, to best of our knowledge, the related literature has not provided a systematic research to evaluate the efficacy of the Devolution Plan in providing the critical services to people in Pakistan. This paper therefore aims to fill this gap in the literature.

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After a brief description of the local government system and its evolution in Pakistan, the paper provides an empirical evaluation of the effectiveness of the Devolution Plan in terms of the improved social services delivery. And for this inquiry, the paper uses a panel dataset from four provinces of Pakistan and employs a systematic empirical method with strong theoretical premise. The Fixed Effect (FE) and Random Effect(RE) regression techniques are used to assess the impact of the Devolution Plan on some key social and economic services. The empirical results show that after the Devolution Plan when these social and economic services were devolved to local governments, their provisions were augmented and improved many folds.

Rest of the paper is organised as follows. Section II provides a historical discourse on the development of local governments and their evolution in Pakistan. Section III discusses the impact of Devolution Plan on social services provision. Section IV presents the data, methodology and hypothesis, whereas Section V discusses the empirical results and Section VI concludes.

II. Historical Background of Local Government System in Pakistan

The local government system was first introduced in the Sub-Continent in 19th century by the British India government aimed primarily to privilege the localities, yet 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 was run through an extreme 'top-down manner' with circumscribed functions of local representatives, limited only to the collections and distributions of Zakat (Islamic charitable fund) and the likes. The key administrative and even the judicial roles at the local level were performed by the agents of the central bureaucracy, mainly the Deputy Commissioner, Assistant Commissioner, Tehsildars, Naibdehsildars and Patwaris [Tinker (1968), AERC (1990)].

After the independence, a ray of critical social and economic problems such as a dysfunctional economy with a primitive agriculture sector and no industrial base, communal tensions and massive influx of refugees necessitated the country to adopt a strong central governance system, in spite of the diverse nature of country based on distinct nationality, ethnicity, linguistic and cultural background. This state of affairs, however, later on cemented the tendency towards a strong central government at the expense of sub-national governments, both provincial and local. Hence, in later part of the 1940s and the entire 1950s an ever-increasing centralisation gave birth to a powerful military bureaucracy that diluted the already limited sub-national governments [Waseem (1994), Jalal (1995) Talbot (1998)].

In 1959 the military regime of Ayub Khan[1] reintroduced the local governments after the dissolution of both central and provincial governments. Similar to pre-partition style, the local bodies system in Ayub era was overwhelmingly controlled by the central bureau-

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[1] Mohammed Ayub Khan, widely known as Ayub Khan, was the first native four-star General and the only Field Marshal of Pakistan Army. He was the first military dictator and also the self-appointed second President of Pakistan who assumed power in 1958 Pakistani coup d'état, serving in office until his forced resignation amid a popular uprising in 1969.

cracy through its appointed officials at the local level that had the discretionary power to restrict any kind of actions the elected representatives might desire to pass or implement.

During 1971-1977 when both the federal and provincial governments were run through elected representatives, the local governments however were pushed to the-backburner andhence remained dysfunctional throughout the period of this brief democratic dispensation. Nevertheless, with the arrival of the military dictatorial regime yet again in 1979, the local government system was revived with the political and administrative structure similar to that of the 1960s with the over-centralisation of administrative and economic power at the provincial and federal levels. The new Local Government Ordinance was promulgated simultaneously in 1979 from the provinces of Punjab, Sindh and KP, while in Balochistan province[2] the same ordinance was implemented in 1980 [Cheema and Mohmand (2003)]. It is worth mentioning that with the demise of Zia-ul-Haq[3] and subsequently with the advent of democracy in 1988 after party-based general elections for both federal and provincial governments, the local governments were dispensed with. Thus, till 1999 both the Pakistan Peoples' Party[4] and the Pakistan Muslim League[5] led governments put the local governments in dormancy – though the local governments' elections were held during 1990s, yet they remained powerless without any administrative and financial power.

However, after the 1999 military coups d'état,[6] 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[7].The Local Government Ordinance, which detailed the Devolution Plan, clearly spelled-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

[2] Pakistan is a federation of four federating units (called provinces), the federally administrative areas, the capital territory (comprised federal capital city of Islamabad), Azad Jammu and Kashmir (a semi autonomous territory with its own constituent assembly), and Gilgit-Baltistan. For this study we focused only on four federating units of Pakistan; firstly, the local government system is yet to be functional in other territories/regions; and secondly, the data limitation does not allow this study to extend its scope beyond these four federating units.

[3] Muhammad Zia-ul-Haq was a Pakistani General who served as the 6th President of Pakistan from 1978 until his death in 1988, after declaring martial law in 1977. He was Pakistan's longest-serving head of state.

[4] The Pakistan Peoples Party is a centre-left, socialist-progressive, and social democratic political party in Pakistan. Having a socialist agenda its political philosophy and position in the country's political spectrum is considered centre-left, involves supporting public ownership, egalitarianism, equality, and strong national defense. Since its foundation in 1967, it had been a major and influential political left-wing force in the country, governing four times at federal level with other coalition partners.

[5] The Pakistan Muslim League (Nawaz) (PMLN) is a centre-right and conservative political party in Pakistan, founded in 1985 as a major offshoot of the century old Pakistan Muslim League. Predominately a bourgeoisie and business class party, the PMLN has a strong support of right-wing section of society especially from the largest (in terms of population) Punjab province.

[6] The 1999 Pakistani coup d'état was a bloodless coup d'état in which the Pakistan Army and then Chief of Army Staff and Chairman of the Joint Chiefs of Staff Committee, General Pervez Musharraf, overthrew elected Prime Minister Nawaz Sharif and his existing elected government, on 12 October 1999. Two days later, on 14 October 1999, Musharraf declared a state of emergency and issued a Provisional Constitutional Order.

[7] The military government Pervez Musharraf introduced a Devolution Plan in 2000-1 ostensibly having: 1. To take positive measures in order to empower the marginalized, the poor and politically, economically, socially disadvantaged and the unrepresentative communities; 2, to devolve power from provincial tier to the local tier of government; 3.To make the district (local) bureaucracy answerable to the locally elected representatives, and to make the representatives accountable to the electors.

own priorities ostensibly 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 often exercised control over certain expenditure areas that were undertaken by the 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 the local/district governments. All four provinces constituted their respective Provincial Finance Commission (PFC) in 2001 to formulate the resource transfer mechanism and distribution of finances between provincial and local governments. The PFC is a formula-based resource distribution mechanism that is different from one province to another and each province formed its own PFC according to the financial conditions of the local governments and the overall socio-economic and political needs of the respective province [Manning, et al., (2003)]. It is also worth-pointing out that the PFC was a statuary body with a delegated secretariat. The Finance Minister of the province was the chairman, three district nazims, the Finance and the Planning and Development Departments' secretaries and three independent members nominated by the Governor of that province were the members of the PFC. The PFC having both development and recurring transfers ensured the allocations of resources between the provincial government and local governments, under which the provincial governments disbursed resources to local governments out of the proceeds of the Provincial Consolidated Fund (PCF) and the Provincial Allocable Amount (PAA). The PAA was distributed under the PFC ruled-based transfer mechanism in a similar head of the account, while the PCF was not defined [Cheema and Ali, (2005)].The PAA fixed for the local governments were determined and distributed on the basis of the criteria elaborated in Table 1.

TABLE 1

Intergovernmental Resource Transfer Criteria

Total pool and distribution criteria	Punjab	Sindh	NWFP	Balochistan
Local share of the Provincial Divisible Pool	39.80%	40%	40%	31%
Formula factors with weights	100%	100%	100%	100%
Population	75%	50%	50%	50%
Backwardness of district	10%	17.50%	25%	
Tax collection effort	5%	7.50%		
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, the 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 priorities public expenditures without the legal consent of the provincial governments. The same rules categorically elaborated the procedures for budget making and its approval from the concerned local council. The local governments' budget was made once the provincial government informed the local government officials and representatives 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 was undertaken once the expenses of non-development expenditure were budgeted.

A substantial descriptive literature is available that addresses the effectiveness of the decentralisation on social services provision, parallel to this there is a need for a systematic empirical research. The scope of this paper is to critically evaluate whether the performance of key public sectors that directly or indirectly affect the livelihood of people, particularly those who are otherwise socially and economically marginalized.

III. Devolution Plan: Social Services Provision

Expenditure on social services particularly on education and health has been recognised as an important source of the human development and poverty reduction. Countries like Pakistan with compelling fertility rate, widespread and chronic poverty and increasing rate of unemployment need to enhance efficiency of its public expenditure on social services. Yet despite having relatively a decent economic growth over the last five decades human development record of Pakistan has been very dismal. Many social sector indicators, chiefly health and education, lag far behind some of the neighbouring South Asian and South East Asian countries. In 2009, barring Bangladesh, Pakistan records the lowest HDI (0.499) amongst all seven countries in the region included in the sample (Table 2). Pakistan spent only 0.9 per cent and 1.8 per cent of her GDP on health and education, which is far below than other regional countries. For example, on health and education Iran spent 2.9 per cent and 4.685 per cent of her GDP, Malaysia 2 per cent and 5.789 per cent, and Bangladesh 2.234 per cent of the GDP on education. Similarly literacy rate in Pakistan (56.53 per cent) was less than the average rate of Least Developing Counties (60 per cent). And the Infant Mortality Rate(IMR), a barometer for healthcare facilities, was high compare to other countries included in Table 2. Part of the reason for this abysmal social sector performance in Pakistan has been the inadequate and ill-targeted public sector expenditures on social services.

IV. Hypothesis, Variables, Data and Methodology

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

1. *The Hypothesis*

In conventional literature of public finance, the concepts of decentralisation and social services delivery are treated as two distinct approaches. Services delivery is considered mainly as the central/provincial government addresses redistributive agenda that may best on the ground of externality and free movement of citizens [see more in, Feldstein (1975), Bird and Smart (2002), Watson and Khan (2010)], and decentralisation on the other hand is viewed purely on efficiency ground. Therefore, decentralisation may not be used as a policy reform strategy for services delivery [see more in Musgrave (1959), Oates (1972), Yilmaz and Ebel (2002)]. Nevertheless, recent trends inliterature related to development economics consider as purely a local phenomenon. The bottom-up approach to tacking services delivery is supported by the World [Crook (2002) and Shah (2004)] among others, who argue that poverty alleviation programmes need to evolve through the involvement of local people. Decentralisation, in this regard, it is adopted as major policy reform by many developing countries and international organisations for efficient public service delivery and implementation of poverty reduction programmes.The sub-national/local governments with more fiscal autonomy would increase spending on basic social and economic services that are included in this research. Therefore, it is plausible to hold that more spending on pro-people social and economics services would lead to improving their living conditions. This theoretical background leads us to construct the following hypothesis: Ceteris paribus, after the Devolution pattern of public investment changes and sectors related to social services provision receive more expenditure.

TABLE 2

Selected Social Indicators (2015)

Indicators	Pakistan	Bangladesh	India	S. Lanka	Iran	Malaysia	Thailand
Life Exp.	63	65	64	71	71	74	68
IMR	78	48	55	15	35	35	55
Health Exp. (% of GDP)	0.9	0.8	1.4	1.8	2.9	2	3.1
Literacy Rate (%)	56.53	55	N/A	90.6	85.02	92.1	96.2
Pupil-Teacher Ratio	39.69	45.76	N/A	23.15	20.34	13.25	18.44
Education Exp. (% of GDP)	1.8	2.234	4.1	2.08	4.685	5.789	4.126
Human Dev. Index	0.499	0.448	0.542	0.538	0.703	0.658	0.673

Source: WDI, World Bank (accessed on 3/01/2015)& UNDP (accessed on 3/01/2015). N/A: Not available.

2.   *Variables and Data*

The variables and the data along with their sources, type and level are reported and described in Table 3. As stated in the table Data for most of variables are drawn from the FBS (various issue); the provincial governments budget documents (various years); provincial education and health departments official documents, the Social Policy and Development Centre (2010); the State Bank of Pakistan (2010); Pakistan Economic Survey (various Issues).

At the provincial level, the population estimates are obtained by dividing the total population on all four provinces based on their share in 1998 census. It is worth noting that provinces in Pakistan are largely demarcated on ethnic/linguistic bases and inter-provincial migration is negligible. So it is plausible to suppose that the population share of the provinces is virtually time-invariant. Besides the population being incorporated as an independent variable, the same variable is used to obtain per capita expenditures of the provinces. The data for provincial GDP is partly taken from [Bengali and Sadaqat (2006)] and partly measured by the author, using the provincial governments budget documents of various years. [Bengali and Sadaqat (2006)] study provides provincial GDP data till year 2000, and for 2000 to 2008 provincial GDP data the author extended the same data series of Bengali and Sadaqat using the same method as they did.

In order to get public expenditures, per capita income and other variables in real terms, their nominal values are deflated with the Consumer Price Index (CPI). An annual time series dataset from 1975 to 2008 is constructed, and the rationale of using year 2008 is that the local governments completed their four years tenure in 2008 and the Devolution Plan was roll-backed by the federal government that was elected in the same year. The reported data are annual because budgetary allocations to both provincial and local governments were undertaken annually therefore concerned data were made available on annual basis. The cross section comprises all four provinces of Pakistan. The summary statistics are in Table 4.

The data limitations at district level and beyond restricted our analysis to provincial level. But the local governments' expenditures are aggregated at provincial level, so the expenditures incurred at overall provincial level reflects the expenditures at district level. Furthermore,the financial and expenditure details at the provincial level provided similar information for both pre and post Devolution, thus enabling us in detecting the impact of the Devolution Reform.

3.   *The Methodology*

Following [Faguet (2004), Faguet and Sanchez (2008), Aslam and Yilmaz (2011)] we identified nine sub-sectors – the education and health are represented by two indicators – of public sector, which could impact the living standard of local commu-

TABLE 3

The Variables, Data, its Sources and Types

Variables	Sources of Data	Type of Data	Level of Data
Devolution Reform (dummy)	Not Applicable	Categorical (Dummy Variable)	Not Applicable
Population	Federal Bureau of Statistics, Government of Pakistan Economic Survey of Pakistan (Various Issues), Ministry of Finance, Government of Pakistan	Continuous Numerical Values, Expressed in Log Terms	Estimates are obtained by dividing the total population on all four provinces based on their share in 1998 census.
Per Capita GDP	Bengali and Sadaqat (2006) Federal Bureau of Statistics, (Various Issue) Provincial Governments Budget Documents, various years	Absolute Numerical Values, Expressed in Log Terms	Inflation Adjusted real values (at constant factor cost of 1980)
Agriculture Value Addition	Pakistan Year Book (various years), Statistical Division, Government of Pakistan Economic Survey of Pakistan (various Issues), Government of Pakistan Provincial Governments Budget Documents, various years	Continuous Numerical Values	Inflation Adjusted real values expressed in Per Capita Terms
Civil Work (proxy for Infrastructure Development)	Pakistan Year Book (various years), Statistical Division, Government of Pakistan Economic Survey of Pakistan (various Issues), Government of Pakistan Provincial Governments Budget Documents, various years	Continuous Numerical Values, Expressed in Log Terms	Inflation Adjusted real values (at constant factor cost of 1980)
Pop. Per Bed	Handbook of Statistics on Pakistan Economy, State Bank of Pakistan (2011)	Continuous Numerical Values	Number of in-patient beds per 100 000 population
Welfare Expenditure	Pakistan Year Book (various years), Statistical Division, Government of Pakistan Economic Survey of Pakistan (various Issues), Government of Pakistan, Provincial Governments Budget Documents, various years	Continuous Numerical Values, Expressed in Log Terms	Welfare Expenditures Constitute States Pensions, Personal Social Services, Public Services Pensions, Benefit Spending on Working Age. Inflation Adjusted real values expressed in Per Capita Terms
Public Health Expenditure	Pakistan Year Book (various years), Statistical Division, Government of Pakistan Economic Survey of Pakistan (various Issues), Government of Pakistan, Provincial Governments Budget Documents, various years	Continuous Numerical Values, Expressed in Log Terms	Inflation Adjusted real values (At constant factor cost of 1980) Expressed in Per Capita Terms
Social Sector Expenditure	Pakistan Year Book (various years), Statistical Division, Government of Pakistan Economic Survey of Pakistan (various Issues), Government of Pakistan, Provincial Governments Budget Documents, various years Social Policy Development Centre [(2000), (2007), (2012)].	Continuous Numerical Values, Expressed in Log Terms	Housing allowances and rent subsidies, Non-categorical cash benefits to low-income households, other social services i.e. support programmes such as, food subsidies, employment measures for the disabled, care services, disability benefits, etc.

(Continued)

TABLE 3 *(Contd.)*

The Variables, Data, its Sources and Types

Variables	Sources of Data	Type of Data	Level of Data
Devolution Reform (dummy)	Not Applicable	Categorical (Dummy Variable)	Not Applicable
Education Expenditure	Pakistan Year Book (various years), Statistical Division, Government of Pakistan Economic Survey of Pakistan (various Issues), Government of Pakistan, Handbook of Statistics on Pakistan Economy, State Bank of Pakistan (2011)	Continuous Numerical Values, Expressed in Log Terms	Inflation Adjusted real values (at constant factor cost of 1980) Expressed in Per Capita Terms
Number of Teachers	Provincial Education Departments' Official Documents 50 Years of Pakistan in Statistics Pakistan Economic Survey, Government of Pakistan	Absolute Discrete Numerical Values	Data Expressed in Thousands
Health Expenditure	Pakistan Year Book (various years), Statistical Division, Government of Pakistan Economic Survey of Pakistan (various Issues), Government of Pakistan, Handbook of Statistics on Pakistan Economy, State Bank of Pakistan (2011) Provincial Health Departments Official Documents	Continuous Numerical Values, Expressed in Log Terms	Inflation Adjusted real values (at constant factor cost of 1980) Expressed in Per Capita Terms
Number of Doctors/ Paramedics	Provincial Health Departments' Official Documents	Absolute Discrete Numerical Values	Data Expressed in Thousands
Irrigation Expenditure	Provincial Governments Budget Documents, various years Provincial Health Departments Documents	Continuous Numerical Values, Expressed in Log Terms	Inflation Adjusted real values (at constant factor cost of 1980) Expressed in Per Capita Terms
Rural Development Expenditure	Provincial Governments Budget Documents, various years	Continuous Numerical Values, Expressed in Log Terms	Inflation Adjusted real values (at constant factor cost of 1980) Expressed in Per Capita Terms

nities in general, and the poor and marginalised social groups in particular. (These sectoral variables are described in Appendix Table A). Normally the social service/ public good provision is 'measured in quality adjusted units of output, separated by the type' [Faguet (2004)]. For instance, the number of enrolment or drop put ratio of students as proxy variables could better reflect the correct delivery of services. However, given the data constraint we measured the real investment quantity in terms of

TABLE 4

Descriptive Statistics

Variables	Obs.	Mean	Std. Dev.	Min	Max
Devolution reform (dummy)	136	0.235294	0.425751	0	1
Population (in millions)	136	28.08185	23.86578	3.59	90.07
Per Capita GDP	136	4008.559	1264.578	2239	7686
Agriculture Value Addition*	136	1136.948	288.9449	696.947	1948.87
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	6.94184
Public Health Expenditure*	136	2.116858	3.431105	0	19.1197
Social Sector Expenditure*	136	43.49989	50.24139	1.19149	249.262
Education Expenditure*	136	44.64446	47.66713	0.12627	223.656
Number of Teachers	136	320	20.44	121	1219
Health Expenditure*	136	9.672765	10.01052	0.23104	40.754
Number of Doctors/Paramedics	136	75	15.31	2	616
Irrigation Expenditure*	136	5.469899	4.801413	0.17711	24.1072
Rural Development Expenditure*	136	1.794452	5.016514	0	39.6818

* Value Expressed in Per Capita term

public expenditures on these sectors. This approach, although restricted us from analysing whether the centralisation enhanced the quality of delivery of the public goods (for example, in case of education, adequate supply of school text books, teaching equipment and teacher training courses), it enabled us in comparing pre and post decentralisation reforms in terms of the inter-sectoral resource allocations, as well as 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 2001 and afterward (2001 to 2008) and 0, otherwise (i.e., from 1975 to 2000). Following [Neyapti (2010)] per capita GNP is used to proxy for the overall level of 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 with larger population receive better treatment than less populated ones.

Variables institutionalisation and distribution of land and tenancy reforms, equality among the various communities, ethnic harmonisation and openness to trade are likely to increase the accessibility of communities to social services [Ali, et al. (2005)]. But due to data limitations these variables are treated time-invariant so not included in the analysis. It is important to note that the socio-economic structure remained almost

same during both the dictatorial and democratic regimes, thus the findings of this paper may not be affected because of not including these variables.

Any systematic change in political or economic system in Pakistan, such as external shocks, donor funding or any national policy initiatives that have similar effect on all provinces or any other time-specific variations are captured by the year dummies. The Punjab and Sindh's with much higher share in federal resource allocations to provinces may have a better fiscal capacity to allocate resources to local governments after the Devolution Plan, which may lead to have more resource allocations to social services sector. Following this proposition a dummy variable is used to capture the Punjab and Sindh effect.

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

$$Sec_{it} = \alpha + \beta\,(PDum_{it}) + \beta_2\,(YDum_{it}) + \beta_3\,(Dev_{it}) + \beta_3\,(Pop_{it}) + \beta_3\,(GDP_{it}) + e_i + \mu_{it} \quad (1)$$

The subscripts (it) stand for province i at time t. (Sec_{it}) alternatively represents all sectors included in our analysis. ($PDum_{it}$) is the provincial dummy and ($YDum_{it}$) is the year dummy. The provincial and time dummies are supposed to capture all of the characteristics associated with the provinces at a given time. (Dev_{it}) is the dummy variable for the Devolution. The Devolution dummy (Dev_{it}) represents the role of local governments and other institutions that came into effect after the implementation of 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 the overall economic condition of the provincial economy among other things. The relationship of the 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 the expenditures on these services because of the additional resources availability to that province from its own revenue sources. In above (equation 1) the positive coefficient of Dev_{it} (β_3) suggests that the expenditure on that respective service has increased at a faster rate compare to the pre Devolution period, ceteris paribus. This leads us to conclude that the Devolution has been effective in terms of increasing the expenditures on social and economic services. Conversely, the negative coefficient suggests an adverse impact, and the zero or very close to zero shows no impact. In other words, the expenditures on these services, which thus far were undertaken by provincial governments, remained persistent and increasing with the same rate irrespective of being devolved to local governments.

We may have unobservable province specific time-invariant characteristics with independent effect on the level and magnitude of the social and economic services delivery. Then the use of the standard Ordinary Least Squared (OLS) would cause unobserved heterogeneity and produce biased results. Thus, a firsthand remedy comes

to mind is the FE and RE estimations method that allows us accounting for unobservable province-specific effects. For the sake of comparison we estimate the OLS though the OLS results are not reported here, as OLS in panel dataset is likely to produce spurious results. A major threat to the validity of our outcomes could possibly occur due to the time-variant factors that simultaneously correlate services and the Devolution indicators, which may create the problem of endogeneity. This would occur if the federal and provincial governments' choices of Devolution Plan 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 potentially be a major issue.

V. Empirical Results and Discussions

For each service two models (Random Effects and Fixed Effects) are finally estimated separately and their results are reported in Tables 5 to 7. In order to choose between the FF and RE models the Hausman Test is conducted for all the models reported in below tables. We have not failed to reject the null hypothesis of no correlation between province unobserved fixed effects and the explanatory variables. The Hausman Test that approximately follows a Chi-Square distribution with 10 degree of freedom is less than 1 per cent, which therefore suggests for the Fixed Effects estimations for all models. We find that the Devolution/decentralisation indicator is significant with positive sign (negative sign for population per bed as expected) across all social and economic indicators for both models. It thus suggests that the Devolution Plan on average has been effective in the delivery of social and economic services provided to local communities. It is plausible to conclude that following the Devolution Plan the magnitude and the scale of all nine vital socioeconomic services have increased.

As the major objective of the Devolution Plan was to make the local public services accessible to the local people and to improve the social and economic 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. The public expenditure on education is strongly correlated with the Devolution Plan indicator with positive coefficient significant at less than 1 per cent. It is important to highlight that the level of significance and sign of coefficient remains persistent regardless of model is used, though the magnitudes differ with different models. Healthcare variables (annual expenditures on healthcare and population per bed) maintain positive (negative) and strongly significant coefficient vis-à-vis the Devolution Reform variable, which suggests that health services have increased in both quantity – proxy by expenditures-and quality – proxy by population per bed after the Devolution Reforms.

TABLE 5

Determinants of Public Expenditures on Rural Development,
Agriculture and Civil Work, and Number of Teachers

Variables	Public Exp. on Rural Development		Agriculture Valued Addition		Annual Public Exp. on Civil Work		Number of Teachers	
Models	RE	FE	RE	RE	RE	FE	RE	(FE)
Devolution Reform	8.918**	10.69**	0.288***	1.926***	1.926***	5.434***	0.221***	1.323**
	(4.353)	(5.068)	(0.078)	(0.233)	(0.233)	(1.036)	(0.111)	(0.218)
Punjab–Sindh (Dummy)			0.748***					
			(0.092)					
Population	-0.128*	0.047	-0.0138***	(0.004)	(0.004)	(0.007)	-0.23**	-0.112***
	(0.074)	(0.379)	(0.002)	(0.003)	(0.003)	(0.021)	(0.006)	(0.009)
Per Capita GDP	0.00507***	0.001	0.000195***	0.0001**	0.0001**	-0.0008**	0.003**	0.0021**
	(0.002)	(0.004)		(0.043)	(0.043)	(0.000)	(0.221)	(0.033)
Constant	7.480	2.213	6.342***	4.078***	4.078***	5.346***	5.086***	6.433**
	(6.675)	(12.901)	(0.068)	(0.278)	(0.278)	(0.963)	(0.176)	(0.317)
Year Dummy	Included	Included	Included	Included	Included	Included	Included	Included
N	136	136	136	136	136	136	136	136
R^2 (Within)	0.1633	0.1678	0.8656	0.7452	0.7452	0.5832	0.7353	0.8332
R^2 (Between)	0.9968	0.1693	0.8848	0.0282	0.0282	0.2980	0.0282	0.212
R^2 (Overall)	0.2202	0.1693	0.8658	0.729	0.729	0.4475	0.727	0.9011
F/WaldChai2	33.88	1.57	638.70	296.77	296.77	3.22	297.77	82.34
	(0.005)	(0.090)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)

Note: Panel regressions robust standard error in parentheses *p< 0.10, **p< 0.05, ***p< 0.0.

TABLE 6

Determinants of Expenditures on Education
and Basic Healthcare Indicators

Variables	Annual Public Exp. on Education		Annual Public Exp. on Basic Health		Population per Bed		Number of Doctors Paramedics	
Models	RE	FE	RE	RE	RE	FE	RE	FE
Devolution Reform	1.926***	3.733***	3.454***	3.094***	-125.5***	-297.3***	111.7***	321.5**
	(0.233)	(0.192)	(0.172)	(0.159)	(29.124)	(12.401)	(18.113)	(10.509)
Punjab-Sindh (Dummy)			0.000692					
			(0.123)					
Population	(0.004)	-0.0176***	-0.006***	0.0086***	3.721***	-2.569***	4.221***	3.332***
	(0.003)	(0.006)	(0.002)	(0.003)	(0.458)	(0.326)	(0.332)	(0.421)
Per Capita GDP	0.0001**	0.00183**			-0.045***	0.0206***	0.032***	0.0286***
	(0.043)	(0.033)			(0.010)	(0.005)	(0.011)	(0.008)
Constant	4.078***	2.538***	1.714***	1.452***	1642.9***	1750.1***	1533.8***	1211.2***
	(0.278)	(0.217)	(0.117)	(0.113)	(39.431)	(12.910)	(38.211)	(121.971)
Year Dummy	Included	Included	Included	Included	Included	Included	Included	Included
N	136	136	136	136	136	136	136	136
R^2 (Within)	0.7452	0.9563	0.9696	0.9753	0.7330	0.9875	0.7113	0.7872
R^2 (Between)	0.0282	0.4920	0.8594	0.8590	0.9132	0.9007	0.9132	0.7007
R^2 (Overall)	0.7290	0.9027	0.9659	0.8628	0.7843	0.2553	0.3866	0.3553
F/WaldChai2	296.77	81.34	2893.90	114.02	357.00	293.00	344.00	267.00
	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)

Note: Panel regressions robust standard error in parentheses *$p < 0.10$, **$p < 0.05$, ***$p < 0.0$.

TABLE 7

Determinants of Expenditures on Water and Sanitation,
Social Welfare and Water Management

Variables	Annual Public Exp. on Water and Sanitation		Annual Public Exp. on Social Welfare		Annual Public Exp. on Water Management	
Models	RE	FE	RE	(RE)	(RE)	FE
Devolution Reform	39.55***	55.79***	4.499***	5.272***	2.513***	3.079***
	(7.309)	(10.083)	(0.443)	(0.527)	(0.167)	(0.225)
Punjab-Sindh (Dummy)	44.67***		0.76		0.953***	
	(8.692)		(0.527)		(0.199)	
Population	-1.231***	-0.846***	-0.0204*	0.0236**	-0.01***	-0.01***
	(0.175)	(0.209)	(0.011)	(0.011)	(0.004)	(0.005)
Per Capita GDP	0.0012	-0.007**	0.0001	-0.0005***	0.002***	0.0001*
	(0.002)	(0.004)	(0.000)	(0.000)	(0.000)	(0.000)
Constant	6.589	36.54***	-1.956***	-0.707	1.057***	1.861***
	(6.390)	(9.369)	(0.388)	(0.489)	(0.146)	(0.209)
Year Dummy	Included	Included	Included	Included	Included	Included
N	136	136	136	136	136	136
R² (Within)	0.6918	0.7105	0.8829	0.9003	0.9427	0.9490
R² (Between)	0.9761	0.8347	0.5224	0.1200	0.9096	0.6256
R² (Overall)	0.7885	0.6430	0.8586	0.6458	0.9419	0.6668
F/WaldChai2	369.00	6.80	601.30	25.03	1604.82	51.62
	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)

Note: Panel regressions robust standard error in parentheses *$p< 0.10$, **$p< 0.05$, ***$p< 0.0$.

The impact of Devolution Plan is not limited to social services. The economic services such as agriculture, infrastructure development (proxy by civil work) and water management have registered a mark improvement after the Devolution Plan. Similar to the social indicators, the Devolution Reforms coefficient has a strong and positive association with the agriculture value addition, expenditure on civil work and others. Again, the nature of the relationship and the level of significance are not changing while applying different models. Interestingly, these outcomes are in accordance with our theoretical prediction; that is, socio-economic services may be better provided by the subnational government compare to their central counterpart. In the same vein it is also in the line of the empirical literature (for instance, [Faguet (2004)] shows that the local governments because of the better local knowledge are more effective in providing these social services.

As for the other explanatory variables in the regressions analysis are concerned, the per capita GDP is positively correlated to education expenditures, although with the coefficient close to zero. However, the association of the per capita GDP and the health indicator is mixed. For instance, for the Random Effects model the relationship between the population per bed and the GDP per capita is negative which is of course what was predicted. Nevertheless, when it comes to the Fixed Effect models estimations – that basically is the actual model for final analysis based on the explanation given above – the coefficient of per capita GDP maintains a positive and statistically significant slope vis-à-vis the health indicators. Similar to the education and health indicators, the GDP per capita association with the other included outcomes variables – economic and social alike – is mixed. The variable either appears irrelevant in explaining any change in the services or relevant in some of the cases, the agriculture for instance, is not consistent across different models, if both significant and consistent then retains a coefficient that is close to zero. But the relationship between the per capita GDP and the services is somewhat not unexpected.

That is because considering the geographical conditions and the demographic composition of the provinces in Pakistan the per capita GDP is unlikely to capture the overall development level of provinces. Hence, the expenditures on these services may not follow an identical trend. For example, Balochistan and Sindh due to the numerous political and economic reasons witnessed a sharp decline relative to the per capita GDP compare to Punjab [Bengali and Sadaqat (2006)]. However, the rate of change in public expenditures on socio-economic services has been increasing more or less with the similar rate as in other two provinces. Of the other control variables, the population has either showed 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 the fact 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 compare to other provinces.

Similarly, the Punjab-Sindh dummy variable was positive and maintained a statistically significant association with most of the outcomes variables. For those services where it had a negative relationship, its coefficients are not reported. This finding perhaps reflected the differential effects of the Devolution Reform between bigger (more populous), socioeconomically better developed and more influential in national polity province(s) compared to the other two provinces, particularly Balochistan where the Devolution Plan has not been as affective as in its counterparts. In general, the overall fit of the regression models is consistent with the decentralisation literature because it explains up to 70 per cent or more of the variation in social service delivery, as reflected by the R-squares of each model.

VI. Conclusion

After outlining a brief history of the system of local government in Pakistan, the paper discussed the Devolution Plan that was implemented in 2001. This was followed by a critical examination of the impact of the Devolution Plan on selected number of the essential social and economic services. The empirical evidence shows that the Devolution significantly changed the size and magnitude of social and economic investment. The relationship between the Devolution Plan/Reforms indicator and the majority of socio-economic variables is robust and insensitive to the use of different specification techniques implying that the public investment in human and social services, that by and large improved the living conditions of poor, have increased significantly following the introduction of the decentralisation reforms since 2000-01.

To sum up, the empirical evidence shows that the decentralisation initiatives that were undertaken through large Devolution Reforms have increased the overall delivery of those social and economic services that are considered to more people centric. The efficacy of the Devolution Reforms is evident more in services like Rural Development and Water Management facilities than, say, Education. Such empirical evidence indicates the presence of the local elite capture on which a whole range on fiscal federalism literature (permanent among them is Bardhan and Mookherjee, 2005) suggests. Because establishments in the shape of irrigation projects and small size physical infrastructure investments in rural areas may be given to local elites from the local representatives as political patronage.

The constraints experienced with data made it difficult to draw a definite conclusion on the skewness of the social services 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 Devolution Plan 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 have a positive impact on the poor and disadvantaged communities.

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APPENDIX

TABLE A

Variables Used to Determine Sectoral Allocation Public Resources

1. Police	8. Irrigation
2. Public health	9. Rural Development
3. Social Services	10. Transport and Communication
4. Education	11. Civil Work
5. Health	12. Number of Teachers
6. Social Security and Welfare	13. Number of Doctors
7. Agriculture	