Policy Research Journal
ISSN (E): 3006-7030 ISSN (P) : 3006-7022 Volume 4, Issue 1, 2026

NATIONAL FINANCE COMMISSION (NFC) AND INCLUSIVE SOCIAL DEVELOPMENT: A CRITICAL REVIEW OF EFFECTIVENESS OF NFC IN THE POST 18TH AMENDMENT ERA

Hidayat Ullah Khan*[1], Muhammad Tufail[2], and Muhammad Zaib[3]

*[*1]Associate Professor, Department of Economics, Faculty of Management Sciences, National University of Modern Languages (NUML), Islamabad*
[2]Lecturer, Department of Economics, Faculty of Management Sciences, National University of Modern Languages (NUML), Islamabad.
[3]MS Scholar, Department of Economics, Faculty of Management Sciences, National University of Modern Languages (NUML), Islamabad.

[*1]masmaleo@yahoo.com, [*1]hidayat.ullah@numl.edu.pk

DOI: https://doi.org/10.5281/zenodo.18240720

Keywords
NFC Awards; Fiscal Decentralization; Inclusive Social Development; FMOLS; Fixed Effects; Pakistan; Provincial Expenditure; Governance; Human Development Index (HDI).

Article History
Received: 22 November 2025
Accepted: 28 December 2025
Published: 14 January 2026

Corresponding Author: *
Hidayat Ullah Khan

Abstract
This study attempts to investigate the effectiveness of the National Finance Commission (NFC) transfers in promoting comprehensive social development in Pakistan, in the wake of the 18th Constitutional Amendment. The study uses penal data for the period of 14 years (2010 to 2023) of four provinces. The aim of the paper is to measure the impact of NFC on social development. The study employs Fully Modified Ordinary Least Squares (FMOLS) methodology to estimate long term relationships and short-term dynamics and structural shocks by employing both Fixed-Effects and Random-Effects. The results reveal that NFC transfers, to the provinces, do not significantly impact the SDI, both in short- and long-term that implies that unconditional transfers cannot cause tangible welfare improvements. Conversely, provincial health spending depicts a stronger while education expenditures have weaker but positive effect on the SDI. Moreover, structural factors, i.e. quality of governance, rate of literacy, and levels of poverty turn out to be as most important drivers of development outcomes. The study emphasizes a strong need for governance reforms and linking provincial spending with performance measures, in order to realize the dream of tangible and impactful outcomes of the fiscal decentralization on social development can be realized.

1. Introduction

In federal systems, intergovernmental fiscal transfers constitute essential tool for advancing efficiency, equality, and macro-fiscal stability (Oates, 1972; Shah & Thompson, 2004). The National Finance Commission Award (NFC), promulgated in light of Article 160 of the Islamic Republic of Pakistan's 1973 Constitution, serves as the primary mechanism for these transfers in Pakistan. The NFC Award distributes grants-in-aid to provinces and suggests that the federation and provinces split the net earnings of federal taxes (Government of Pakistan, Finance Division). Pakistan's fiscal federalism architecture has witnessed substantial changes through the course of last few decades. The 18th Amendment to the Pakistani Constitution (2010) and the 7th NFC Award (2009–10) are two significant milestones of provincial autonomy and fiscal decentralization, with aim to recalibrate federation–provinces financial distribution, enhance provincial autonomy, and strengthen sub-national services delivery in sectors particularly health and education.

The 7th NFC Award marked a watershed moment in Pakistan's fiscal federalism. It increased the provincial share of the divisible pool of federal taxes from 47.5% (in the previous award) to 56% in 2010–11, and 57.5% thereafter. The horizontal distribution formula was also broadened beyond population to include criteria such as poverty/backwardness (10.3 %), revenue generation effort (5 %), and inverse population density (2.7 %). (Ahmad et al, 2024; Pasha et al, 2000; PIDE, 2025; SPDC, 2000). The 18th Amendment concurrently devolved many subjects from the federal concurrent list to the provinces, including primary and secondary education, health service delivery and social protection. (Khalid & Hussain, 2018; SPDC, 2000) These were meant to empower sub-national governments and tailor public service delivery according to local needs, and thereby improve inclusive social development.

The association between greater fiscal autonomy and improved social development, from a normative perspective, rests on the idea that decentralized governments are expected to be closer to citizens, and are more responsive. Hence, this devolution results into tailor made policies adhering to the local contexts (Faguet, 2004; Bardhan & Mookherjee, 2006). In case of Pakistan, the enhanced transfers and devolution of power were expected to improve provinces' capacities vis-a-vis investment in human capital (health, education), reduction of regional disparities, and improvement of development indicators, e.g. the Human Development Index (HDI). In the existing literature, few studies have examined various aspects of the aforementioned channels, e.g. Khan and Malik (2022) shows that under the 7th NFC Award, health indicators improved in several provinces, e.g. life expectancy, infant mortality, and child mortality (under 5-year age), however it has significant variation across provinces and caveats around execution capacity (Khan and Malik, 2022). Similarly, studies focusing on the education sector found that despite increased resource inflows in post-7th NFC Award era, gains in indicators like gross enrollment, expected years of schooling and literacy rates are stagnant (Khan & Malik, 2022). A large number of studies focusing on Pakistan's fiscal federalism identify structural challenge, such as weak own-source revenue mobilization, vertical and horizontal imbalances, and limited provincial absorptive capacity that fizzle the potential of transfers for social development (SPDC, 2000; Ur Rehman et al., 2025).

Despite the aforementioned attempts, several gaps remain, in the existing body of literature. Firstly, there was too much focus on the short-term, i.e. post-NFC period up to 2017-18 and sector specific (e.g. health or education) instead of composite outcomes like HDI. Secondly, the post-18th Amendment period (2010–2023) has not been systematically examined province-wise using panel data with rigorous econometric techniques. Thirdly, there is limited work that integrates control variables such as governance quality (or proxies thereof), external/internal shocks (e.g., pandemic, floods) and compares multiple estimators (Fixed Effects, Random Effects, FMOLS, GMM) to test robustness of results. In other words, although the NFC mechanism has been critically discussed, little is known about how effectively the transfers have translated into inclusive social development across provinces in the devolved era. This yield both a substantive research gap and a methodological gap.

1.1. Problem Statement

Although the NFC transfers increased markedly under the 7th Award and provinces gained greater administrative autonomy under the 18th Amendment, the tangible translation of these fiscal flows into improved social development remains ambiguous. The provinces continue to lag on human development indicators despite receiving enhanced transfers (SPDC, 2000; Hussain et al., 2021). The core problem is: Are the increased NFC transfers effectively driving inclusive social development (measured by HDI) in the post-18th Amendment era, or has institutional and contextual bottleneck weakened this link? In undertaking this study, it is imperative to consider the coverage of both the size of transfers and the governing conditions and provincial social spending in health and education and the impact of major shocks such as the COVID-19 pandemic and severe floods that may moderate or mediate the relationship between transfers and the developmental outcomes.

1.2. Research Questions

In order to address the problem(s) stated earlier, this study attempts to answers the following research questions:

1. How much per-capita NFC transfers are a contributing factor to provincial human development (HDI) in Pakistan, over the period of 2010-2023?

2. What is the change in the impact of NFC transfers taking into account the capacity to govern, provincial social spending (health and education), and external/internal shocks (e.g. COVID -19, floods)?
3. Are the results hold, when other econometric forms, i.e., FMOLS (or any approximation thereof), Fixed Effects, and Random Effects model are applied?
4. What are the policy implications that can ensure the effectiveness of the NFC mechanism to realize of an inclusive social development at the sub-national (provincial) level in Pakistan?

1.3. Research Objectives

In line with the above questions, the research objectives will be as follows:

Objective 1: To estimate the effects of per-capita transfer of NFC in provincial HDI in Pakistan between 2010 and 2023, with governance and shock variables.

Objective 2: To test the hypothesis of whether the relationship between transfers and HDI is mediated by the capacity to govern and significant shocks (pandemic, floods).

Objective 3: To compare and apply three empirical modelling models, including FMOLS approximation, Fixed Effects, and Random Effects to ascertain robustness.

Objective 4: To identify ways and means (policy implications) to recalibrate for the next, i.e. 11^{th} NFC cycle, to better aligned transfers for inclusive social development.

1.4. Significance of the Study

This study can make a number of policy and theoretical contributions. To begin with, it can further empirically enrich the existing evidence pertaining to fiscal federalism in Pakistan, by undertaking long-term analysis (i.e. covering the post-18^{th} Amendment period covering 2010-2023) and employing sub-national (i.e. province-based) panel, which expands bi-directional variation among all four provinces to a full extent. In the existing literature, most of the studies focuses on the initial years after the Award or incorporate few outcomes such as health and education. Secondly, it employs a comprehensive empirical strategy by adding several key controls, such as governance proxy, social expenditures and externalities/shocks as well as compressed the comparative estimation thereby removing methodological scarcity in the existing literature. Thirdly, the policy implications of the results are straightforward, in that, the information produced in this paper on the interactions between transfers, governance, and shocks in influencing the social development can be used to inspire formula designs, conditionalities, and surveillance systems, as Pakistan prepares to enter the next NFC cycle. Practically, the linking of NFC transfers to the composite social outcome (HDI), instead of just spending flows, helps in changing the emphasis to the quantity of fiscal in the name of fiscal quality of sub-national governments with regards to the absorptive capacity and institutional effectiveness.

1.5. Organization of the study

The rest of the paper is organized as per following; Section 2 provides a review of the related literature, Section 3 outlines the data and methodology, Section 4 describes the empirical methodology, Section 5 comprises descriptive statistics, correlation matrix, model estimates, and robustness checks, while Section 6 presents the discussion of findings, Section 7 conclusion, and Section 8 policy recommendations

2. Literature Review

Over the last four decades, the arguments surrounding the fiscal decentralization, intergovernmental transfers and inclusive development have taken a new turn fueled more by fiscal imbalances, regional warping and the distributive effectiveness of central sub-national transfer of resources. The derivations of these theories in the early years by Musgrave (1959), Oates (1972) and Bahl et al (1992) gave the theoretical base to the interpretation of the need to have multi-tiered governments have a system of transfer to make-up the vertical and horizontal fiscal gaps. Subsequent scholarship underlined that in addition to the consideration of the efficiency, fiscal decentralization should have other socio-political goals, including equity, the empowerment of locals, and inclusive development (Bird & Smart, 2002; Shah, 2007; Rodden, 2006). This analytical revolution spurred empirical research exploring the role of resource distributions, mediated by federal fiscal setups on human development, distribution of welfare and regional convergence. In this respect, the National

Finance Commission (NFC) in Pakistan is one of the frequently discussed fiscal institutions in South Asia, and especially following the historic 7th NFC Award and the 18th Constitutional Amendment, which combined to redefine the vertical and horizontal revenue sharing. However, even with the significant policy interest, there are still gaps in the existing literature, particularly, whether an increased provincial fiscal space can result in better social outcomes. Moreover, structural flaws in expenditure absorption capacity, rent-seeking incentives, elite capture, and volatility in fiscal autonomy are the main weaknesses reported in the existing studies (Ahmed & Sheikh, 2011; Bonet, 2006; Javid & Arif, 2021). Nevertheless, there are very limited systematic quantitative inquiries into the effects of NFC transfers on indicators of inclusive development, and particularly via application of modern econometric methods, such as FMOLS, FE and RE estimators. This discrepancy reflects more universal international issues of whether greater decentralization results in the better human development or just in the transfer of administrative roles, without equitable improvements in service provision (Faguet, 2014; Smoke, 2015), for which compelling evidence from developing countries is critical. Evidence from Latin American suggests that institutional quality, political incentives, and local administrative capacity are critical determinants of the success of all fiscal transfers, which is expected to be heavily reliant on the political incentives and administrative capacity of local government. Particularly, Faguet and Sánchez (2008) uncovers that Bolivian reforms of 1994 pertaining to decentralization led to a significant increase in investment in education and water services, especially in the marginalized communities. Moreover, fiscal decentralization also helped Ecuador to improve local spending procedure but in some cases, the lack of transparency and elite capture offset expected benefits (Rodríguez-Pose & Kroijer, 2009). An in-depth analysis of the system of municipal transfer in Brazil reveal that, although the Fundo de Participação dos Municípios (FPM) enhanced fiscal equity in the country, it had diverse implications on poverty alleviation and health services provision, based on the governance efficiency of the country (Arvate et al., 2015). On the same note, the inter-governmental transfers system in Colombia had a positive impact on education and health but uneven political strength within the departments hampered even performances in social development (Bonet, 2006).

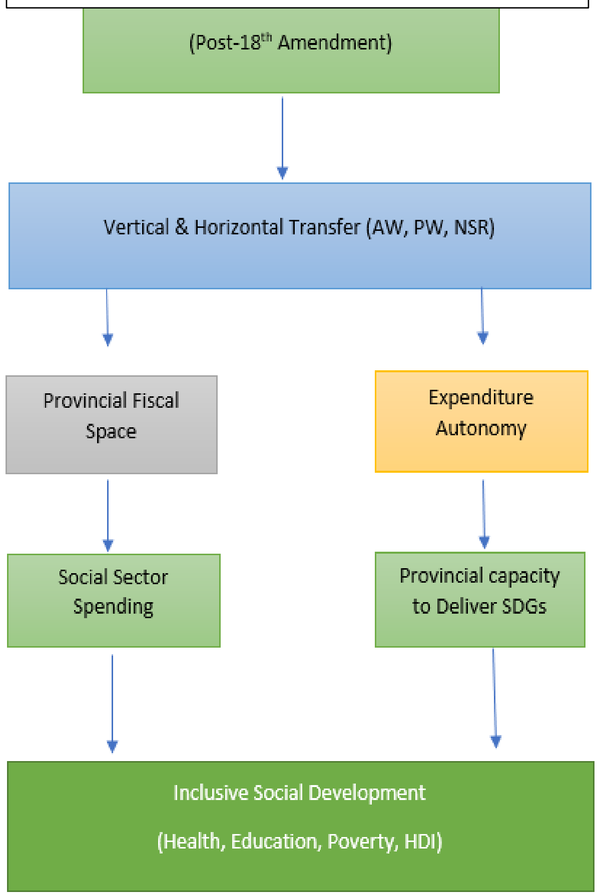
The most important point made by Latin American incentives is always to view fiscal transfers as the means of fostering inclusive development, only if they accompany the effective governing systems, reliable accountability patterns, and adequate absorption capacities on the local level. This comparative evidence provides a relevant prism in the case of Pakistan where governance structures in the post-18th Amendment are still developing. These trends are replicated in Asian case studies. The 2001 Big Bang of decentralization occurred in Indonesia, which is one of the highly recorded fiscal reforms in the developing world. In one year alone, close to one-third of the central government expenditure duties were handed over to the district governments (Hofman & Kaiser, 2004). Evidence shows that the general allocation fund, the Dana Alokasi Umum (DAU), in Indonesia formed a considerable decrease in the fiscal disparities by the regions (Eskeland and Filmer, 2007). However, as the further studies show, even with increased fiscal space, health and education outcomes improved unequally, which could be explained by the fact that effective monitoring was inadequate, and local governments had uneven political leadership (Martinez-Vazquez, & McNab, 2003). The subsequent studies show that larger the transfer, lower the maternal health, school enrolment, and rural infrastructure outcomes in districts while higher the bureaucratic capacity and democratic accountability (Lewis, 2017; Maharani, 2015). These conclusions are reflective of the Pakistani provincial concerns, where fiscal powers take control before the ability to provide social services.

Another comparative context is the post-Finance Commission reforms in India especially the 14th Finance Commission (2015-2020). The Commission significantly augmented state shares in a divisible pool of taxes, decreased tied transfers, and improved fiscal autonomy, besides other, by state governments (Rao, 2024; Singh et al, 2024). It has been found that the higher the untied fiscal transfers, the higher the expenditure by the state at the state level on health, education and social protection programs (Iqbal et al, 2012; Blöchliger & Akgun, 2018; Kim et al, 2020). However, several studies also point out that the developmental effect of these resources varies significantly between Indian states due to the interactions of fiscal decentralization, the quality of local governance, the impact of political cycles, and bureaucratic efficiency (Jena & Singh, 2021; Kalirajan, & Otsuka, 2012). For example, in the southern states, where institutions were stronger (Tamil Nadu, Kerala and Karnataka), improvements in health and education indicators were large after benevolent increases in transfers, whereas weaker-capacity states did not improve (Mohanty and Misra, 2016). The given trend echoes the Pakistani provincial environment, in which Sindh and Balochistan have the structurally disadvantaged social indicators in spite of the massive access to NFC-related resources allocated to them.

There are also potentially dangerous risks of the existence of non-centralized fiscal transfers shown in country-specific research. Surveys conducted in Brazil and Mexico have demonstrated that corruption may be encouraged by the increased fiscal autonomy in cases where there are weak local control systems of the local entities (Brollo et al., 2013; Diaz-Cayeros et al., 2014). There is also some evidence in India of whether the more untied transfers induce substitution effects, which cause states to reduce their own-source revenue efforts (Ghosh, 2020). Likewise, Indonesia also had instances of misallocated expenditures due to the precipitous decentralization that led ahead of the institutionalization (Von Luebke, 2009). These results pose important questions to Pakistan: is greater fiscal capability induced by the NFC inherently the stimulus of inclusive development results, or political-economic restraints favor its efficiency? Comparative knowledge highlights the value of political leadership, urban accountability, and institutional preparedness - variables that conclusively influence the developmental effectiveness of intergovernmental transfer.

Although there is a large body of cross-country evidence, the empirical literature the finding the relationship between NFC transfers and provincial performance, in terms of inclusive development vis-à-vis education, health, poverty reduction, and social protection in Pakistan, is limited. The existing studies are mostly descriptive, focusing on the fiscal shares, formulae, and political bargain as opposed to assessing the social effects. There are few exceptions; therefore, Shehzad, and Afridi (2024) and Ahmed (2019) find that provincial spending on social services increased after the 18th Amendment, however, whether the spending can improve social outcomes and provincial performance, is a question mark? Few studies do reveal that provincial performance is uneven owing to structural inequalities (such as Punjab has a better institutional capacity when compared to other provinces), which may affect the way the transfers are converted into developmental outcomes (Ahmed & Fatima, 2022). There is an apparent research gap on the effectiveness of the NFC in development, and there are no robust econometric evaluations using panel methods (FMOLS, FE, RE) to conduct this research.

Diagram No. 1



Source: The Diagram is created by the authors

Globally, more sophisticated econometric techniques are increasingly employed to assess the long-run and short-run consequences of the process of de-centralization on human development panel cointegration, fully modified OLS, and fixed/random effects models (Yeung, 2009; Kyriacou & Roca-Sagales, 2011; Anwar & Nguyen, 2011; Brosio, 2014). These empirical approaches allow the researchers to determine the consistency, sustained and statistically significant impacts of fiscal transfers on social indicators. However, Pakistan focused studies lack these latest methodologies, particularly with focus on the post 18th Amendment fiscal regime. This analytical shortfall also underscores the need for hardcore empirical analysis by investigating the direction and magnitude of NFC transfers on inclusive development, besides struggling with the econometric dilemma of endogeneity, cointegration, and cross-sectional heterogeneity.

All in all, fiscal decentralization can significantly enhance the inclusive development process, but it is only possible with the provision of institutional power, grass-root responsibility, and productive resource management that needed further scientific inquiry. Moreover, in the absence of these underlying conditions, even more fiscal transfers cannot lead to significant social improvements that persist in case of Latin America, India, Indonesia and Africa. Henceforth, there is a general agreement that fiscal reforms can never lead to inclusive development unless they are coupled with structural governance augmentation.

3. Theoretical Framework

The theoretical framework of this study comprises the classical fiscal federalism, the recent theory of decentralization, and the political economy of the intergovernmental transfers. According to the theory of the public sector by Musgrave (1959) and Shoup (1959), there is an allocation of fiscal responsibilities at different levels of government, with aim to ensure a sense of allocation efficiency, macroeconomic stabilization and reasonable allocation. The vertical and horizontal fiscal imbalances in multi-tiered federalism require institutionalized transfer programs, so that sub-national administrative units can have sufficient fiscal space, essential for accomplishment of their constitutionally mandated roles (Oates, 1972; Shah, 2007).

Intergovernmental transfers, therefore do not aim only to balance revenue shortfalls, but to involve provinces through development or states to put money in common goods like sanitation, water, health, and education social protection (Bird and Smart, 2002; Rodden, 2006). Moreover, the decentralization theory meant for increasing fiscal autonomy, will further enhance allocative efficiency, owing to the reason that subnational governments are more aware of the local needs and preferences (Bahl et al, 1992; Faguet, 2014). Besides, the decentralization-development hypothesis theory that states that greater the provincial fiscal decentralization and space, higher the resources responsibility and management strength, better the human and service provision to the mass's development outcomes (Yeung, 2009; Smoke, 2015). Conversely, political economy structures suggest downsides of fiscal decentralization, as centralization results into better quality of institutions, forms of governance, and alignment of incentives (Rodríguez-Pose, & Krøijer, 2009; Brollo et al., 2013).

Application of the aforementioned theories on Pakistan, in the backdrop of the 7th NFC Award and the 18th Constitutional Amendment, that aim at significant institutional changes via redistribution of the revenue, power, and spending roles to provinces. Theoretically, the subsequent larger provincial shares out of the divisible pool and greater financial autonomy should promote the inclusive development by increasing the social-sector expenditures. The real effect of fiscal decentralization on social development, dependents on the capacity of the provinces to mobilize the fiscal resources into a successful service delivery. Moreover, the lack of robust and appropriate accountability mechanisms, unbalanced administrative capacity, the presence of weak governance structure might undermine the projected relationship between the fiscal decentralization and social development (Ahmed &Sheikh, 2011; Bonet, 2006).

The proposed theoretical frameworks are operationalized in this study, to identify the long-run and short-run empirical determinants as induced by NFC transfers on inclusive development indicators, i.e. education, health, employment, and poverty were analyzed. According to the theoretical work, the following hypothesis will be tested:

- **H1:** Whether increased transfers (NFC) lead to significant improvements in inclusive development outcomes, across the provinces?
- **H2:** Whether the impact of transfers depends on the province's governance quality, expenditure capacity, and ability to utilize development budgets effectively?
- **H3:** Is the long-run relationship between fiscal transfers and inclusive development is stronger than short-run fluctuations, given the nature of social investments?

4. Methodology

In this study, we use quantitative research design, which utilizes provincial level panel data of Pakistan, over a period of 14 years, after the 18th Amendment. The sources of data include provincial financial reports, NFC Award reports, Pakistan Social and Living Standards Measurement survey, and other related reports of the Pakistan Bureau of Statistics reports.

This study uses of a national and sub-national (provincial) balanced panel data between for a period of 2010 and 2023, with the aim of assessing the long-run and short-run impacts of the National Finance Commission (NFC) transfers on inclusive social development (ISD) during the period of post-18th Amendment time. For the empirical analysis we will use Human Development Index (HDI) is a proxy for inclusive Social Development (SD). The empirical approach of this study is well grounded in a fiscal federalism theory, i.e., guaranteed constitutional transfers of the resources to provincial governments and their effects on health, education, and welfare spending. This study incorporates descriptive statistics, correlation, co-integration diagnostics, and several alternatives of panel estimation (FMOLS, Fixed Effects (FE), Random Effects (RE)) via its methodology, to simultaneously address two aspects of the fiscal development relationship, including structural and contemporary aspects.

We, initially, compute descriptive statistics and correlation matrices to assess variables behavior, distributional properties, and preliminary associations among NFC transfers, social sector expenditures, and ISD indicators. Given the time-series nature of each provincial unit, panel unit root tests are employed to determine the stationarity properties of all series, confirming that the majority of variables are stationary. To verify the existence of a shared long-run equilibrium, the paper estimates the long-run coefficients using Fully Modified Ordinary Least Squares (FMOLS), which corrects for serial correlation and endogeneity arising from the cointegrating vector. FMOLS is preferred at this stage because it generates unbiased long-run estimates even with endogenous regressors, which is likely in the fiscal federalism context, wherein social development outcomes simultaneously influence political and fiscal decision-making.

To capture short-run responsiveness and heterogeneity across provinces, we further employ Fixed Effects (FE) and Random Effects (RE) panel estimators. The fixed effects (FE) model takes into account time variant effects and holds constant the difference in historic institutional, governance, and administrative mechanisms, unobservable provincial characteristics. The random-effects (RE) estimator is further used to capture cross-sectional variation and find the correlation of provincial-specific effects with the regressors. The consistency of RE and FE is then tested by using Hausman test to ensure that the right models are selected.

In all the models used, for ISD the paper uses Human Development Index (HDI) is a proxy for the dependent. The magnitude of the transfers of NFC is the most important explanatory variable with provincial spending on health, education, and welfare as the additional transmission of the NFC. Where there is appropriate data availability and diagnostics model performance, there are control variables of macroeconomic stability and structural provincial factors.

This comprehensive methodology of combining FMOLS/FE/RE provides a strong methodological triangulation: FMOLS is expected to find the structural long-run equilibrium, FE can reveal empirical within-province short-run dynamics, once the unobserved heterogeneity is taken care of, and RE can capture inter-province variation. Collectively, these estimators form a strong empirical story on the way federal-provincial fiscal transfers lead to greater social development results. This multi-facet approach is in compliance with international best practices of assessing intergovernmental fiscal mechanisms and analyzing the developmental implications of the NFC awards in Pakistan, therefore, this model is empirically reliable.

4.1. Econometric Model Specification

As mentioned in the preceding section, we employ the descriptive statistics and correlation matrices to identify the distributional characteristics and the temporal trends, and the verify the multi-collinearity. Based on the correlation analysis, we find that NFC transfers and inclusive development were meaningfully correlated. Realizing that fiscal transfers and inclusive development are a long process, the study began with panel unit-root tests that was applications of the Levin Lin Chu as well as Im Pesaran Shin statistics. The study used Fully Modified Ordinary Least Squares (FMOLS) to estimate the long-run connection amid NFC transfers as well as inclusive development. FMOLS is suitable in those situations when the fiscal impacts are drawn in the long horizons, such as in the case of the social returns to investments in education and health. In order to estimate short-run intra-provincial variations, both fixed-effects (FE) model and the random-effects (RE) model were fitted.

$$\begin{aligned} HDI_{it} = \beta_0 + \beta_1 NFCT_{it} + \beta_1 Gov_{it} + \beta_1 HEPC_{it} \\ + \beta_1 EEPC_{it} + \beta_1 PHC_{it} + \beta_1 LR_{it} \\ + \beta_1 Covid\_Shock_{it} \\ + \beta_1 Flood\_Shock_{it} + U_{it} \end{aligned}$$

4.2 **Data Sources and Data Description**

Variables	Description	Data Source
NFC Per Capita	Per capita National Finance Commission (NFC) transfers received by each province from the federal divisible pool, calculated by dividing total provincial NFC allocations by provincial population. Expressed in constant 2020 PKR ('000) to adjust for inflation.	NFC Award documents, Ministry of Finance (Pakistan), Provincial Finance Accounts, Pakistan Bureau of Statistics (PBS) for population data
Social Development Index (SDI) – Proxy: Human Development Index (HDI)	Social Development Index (SDI) is proxied by the provincial Human Development Index (HDI) due to the unavailability of a consistently constructed provincial-level SDI over the study period. HDI is a composite indicator capturing multidimensional social development outcomes and widely use in empirical literature.	United Nations Development Program (UNDP) ,Pakistan Provincial Human Development Reports, Pakistan Bureau of Statistics, Planning Commission of Pakistan
Governance	Proxy indicator capturing the quality of provincial governance and institutional effectiveness. Measured using composite governance indicators (e.g., control of corruption, government effectiveness)	Worldwide Governance Indicators (WGI), Election Commission of Pakistan, Provincial government reports (compiled and standardized by authors)
Health Expenditure	Per capita provincial public health expenditure, including spending on hospitals, preventive healthcare, immunization, and health infrastructure. Measured in constant 2020 PKR ('000).	Provincial Budget Statements, Finance Department (Provincial), Pakistan Economic Survey
Education Expenditure	Per capita provincial public education expenditure covering primary, secondary, and tertiary education, including recurrent and development spending. Measured in constant 2020 PKR ('000).	Provincial Budget Statements; Education Department Reports, Pakistan Economic Survey
Poverty Head Count	Percentage of population living below the national poverty line at the provincial level, reflecting income-based deprivation and welfare conditions.	Pakistan Social and Living Standards Measurement (PSLM) Surveys, Pakistan Bureau of Statistics
Literacy Rate	Percentage of population aged 10 years and above who can read and write with understanding, measured at the provincial level.	Pakistan Social and Living Standards Measurement (PSLM) Surveys, Pakistan Bureau of Statistics
Covid_Shock_2019	Dummy variable capturing the external shock of the COVID-19 pandemic. Takes value 1 for years affected by COVID-19 (2020–2021) and 0 otherwise.	Government of Pakistan COVID-19 Situation Reports, WHO, Ministry of National Health Services
Shock_Flood	Dummy variable capturing major internal climatic shocks due to floods. Takes value 1 in years with severe flood events affecting a province and 0 otherwise.	National Disaster Management Authority (NDMA) Pakistan Meteorological Department, EM-DAT International Disaster Database

5. Empirical Results

Table 1 documents per-capita NFC transfers (constant 2020 -2023 PKR) between provinces between the years 2010-2023. There is an upward trend in all the provinces during the sample period, although the rate of increase is not even, as it represents the disparities in population weights, tax-sharing formula, and fiscal requirements. The entire aggregate share is always given to Punjab due to its population size, but Baluchistan is given the assurances of the adjustment at the basis of the population in the 7th NFC award. Sindh and Baluchistan tend to record better transfer values in terms of per-capita, which is an indication of favorable formula modifications.

Table 1: Per Capita NFC Transfers (At 2020 constant PKR '000) – Provincial Level (2010–2023)

Year	Punjab	Sindh	Khyber Pakhtunkhwa	Baluchistan
2010	32.2	41.5	51.3	56.8
2011	33.4	43.2	52.1	58.5
2012	34.1	44.5	53	59.2
2013	35.3	45.8	54.2	60.7
2014	36.7	47	55.9	62.1
2015	38.2	48.8	57.1	63.8
2016	39	49.6	58.4	64.3
2017	40.2	50.8	59.6	65.1
2018	41.5	52.3	60.7	66.4
2019	42.8	53.9	62	67.9
2020	43.4	54.6	63.1	68.5
2021	44.8	55.8	64.2	69.1
2022	45.6	57.1	65.5	70.2
2023	46.9	58.4	66.8	71.6

Descriptions: 1. Data Source: Ministry of Finance (Finance Division), 2. The table is generated by the authors.

Table 2: Descriptive Statistics of Key Variables (2010–2023)

Variable	Obs.	Mean	Std. Dev.	Min	Max
Human Development Index (HDI) – Proxy for SDI	56	0.575	0.083	0.41	0.71
Per Capita NFC Transfers (constant 2020 PKR '000)	56	42.85	11.23	21.55	65.1
Per Capita Public Health Expenditure (PKR '000)	56	6.84	1.91	3.25	10.5
Per Capita Public Education Expenditure (PKR '000)	56	8.15	2.3	4.3	12.65
Governance Quality Index	56	0.51	0.12	0.29	0.72
Provincial Poverty Headcount (%)	56	26.55	5.86	16.5	37.9
Literacy Rate (%)	56	61.8	9.45	41.2	75.6
COVID-19 Shock Dummy (2020–2021 = 1)	56	0.14	0.35	0	1
Flood Shock Dummy (Major Flood Years = 1)	56	0.18	0.38	0	1

Descriptions: 2. Data Source: Ministry of Finance (Finance Division) and Pakistan Bureau of Statistics, 2. The table is generated by the authors.

Table 2 of descriptive statistics indicates that there is high disparity within the provinces in terms of HDI/SDI, literacy, poverty incidence, and governance indicators. This heterogeneity creates a fantastic empirical setting in which panel estimation can be applied and endorses that it is necessary to have a fixed-effect model to adjust against the characteristics of the provinces that lack variation over time.

Long-Run Relationship: FMOLS

Model A- Table-3. FMOLS (pooled OLS with Newey-West HAC SE; max.lag = 1)

Variable	Co-efficient.	Std. Error	t-stat	p-value
Constant	0.049705	0.121812	0.408	0.6832
NFC Per Capita	0.001497	0.002564	0.5839	0.5593
Governance	0.914836	0.363332	2.5179	**0.0118**
Health Expenditure	−0.004581	0.01782	−0.2570	0.7971
Education Expenditure	0.00928	0.010011	0.927	0.3539
Poverty Head Count	−0.003062	0.000945	−3.2388	**0.0012**
Literacy Rate	0.003303	0.000814	4.0599	**0.00005**
Covid_Shock_2019	0.017913	0.00794	2.2561	**0.0241**
Shock_Flood	0.007124	0.007327	0.9723	0.3309

Descriptions: 1. The table is generated by the authors.

Model A approximates long-run commonplace connections among encompassing social development and essential clarifying factors. The NFC transfers coefficient is not insignificant but positive, which means that the growth of the fiscal space alone cannot lead to the contemporaneous improvement of the composite index of social development. This is in line with causal literature on decentralization in which unconditional grants can only be fungible and transferred to non-social recurrent spending unless complemented by better governance and capacity (Bardhan and Mookherjee, 2006; Brollo et al., 2013).

Conversely, the coefficient of the governance quality is large and significant which suggests that structural cross provincial inequalities in institutional strength are a strong predictor of social progress at the long run. On the same note, literacy is positively related, but poverty is considerably negative. These data confirm the significance of investments in human capital over the long run and the socioeconomic organization. The improved fiscal transfers in social development in better human capital, and poorer provinces are more effective in converting poverty into better social development, which strengthens the conceptual framework offered above.

Interestingly, the provincial health and education expenditure coefficient on FMOLS are small and non-significant. This can probably be explained by the fact that the estimator is pooled meaning it includes between, but not within, province variations. Since investments in health and education are cumulative in nature and are susceptible to inconsistencies in reporting these short run estimators can give more credible evidence.

The correlation between the COVID -19 dummy and the positive significant coefficient is under 0.05. Although the opposite of expectations, the positive value might be attributed to higher emergency spending during the pandemic, such as vaccination, growth of health infrastructure, and large packages of federal and provincial social spending in the form of Ehsaas and other programmes.

Short-Run Within-Province Dynamics: Fixed Effects
Model B- Table-4. Fixed Effects (LSDV with province and year dummies; cluster-robust SE by province)

Variable	Coef.	Std. Error	t-stat	p-value
Constant (FE intercepts)	0.365202	0.079343	4.6029	0.0001
NFC Per Capita	−0.000346	0.000963	−0.3590	0.7196
Governance	0.004138	0.015537	2.6633	**0.0488**
Health Expenditure	0.012507	0.005065	2.4695	**0.0135**
Education Expenditure	0.00115	0.005672	0.2028	0.8393
Poverty Head Count	0.000285	0.000189	1.5095	0.1312
Literacy Rate	−0.000184	0.000192	−0.9539	0.3401
Covid_Shock_2019	0.043397	0.00898	4.8327	**0.0001**
Shock_Flood	0.001117	0.003641	0.3068	0.759

Descriptions: 1. The table is generated by the authors.

The credibility of short-run causal interpretation of Model B is the most plausible since the Hausman test that was used in the analytical stage attests to this fact. The fixed-effects model attributes time-invariant provincial heterogeneity including political histories, baseline governance culture, institutional capacities and the within-province time variation.

The most important conclusion is that the transfers of NFC are statistically not significant. Although the resources have been greatly decentralized since the 18 th Amendment, yearly NFC increments are not directly translated into SDI gains. The result directly answers the Research Question457, and the previous literature described the developmental effect of fiscal decentralization relying on the institutional capacity and expenditure mix, with no regards to the amount of funds (Faguet,2014; Bahl, 2007).

In comparison, health spending also has a positive impact that is strong and statistically significant. Substantively, an increase in health expenditure of PKR 1,000/capita results in an increase in SDI of about 0.0125, which corresponds to about 0.15SD of SDI distribution (Table-4). Since the HDI index is sensitive to health-related indicators, this finding has an economic significance and confirms the necessity of specific health investments.

Education expenditure, however, shows no statistically significant effect. The negative sign (albeit insignificant) might reflect inefficiencies in provincial education spending, such as high salary-based recurrent spending and weak monitoring of learning outcomes. A growing literature indicates that education expenditure alone does not guarantee improved learning or attainment without governance reforms and school accountability systems (World Bank; ASER Pakistan).

Shock variables behave differently in the FE framework. The COVID-19 dummy is highly significant and positive. As noted earlier, this may reflect emergency health and social protection interventions that temporarily boosted measured components of the SDI. The flood dummy remains insignificant, possibly due to measurement limitations provincial-level dummies cannot capture localized destruction or lagged effects of reconstruction.

Governance becomes insignificant in the FE model, indicating that governance differences operate more strongly across provinces than within provinces over time. This confirms that significant institutional change is slow and structural, aligning with decentralization theory that institutional capacity is the binding constraint on development outcomes.

Random Effects (Model C): Complementary Cross-Sectional Insights

Model C Table-5. Random Effects (Random intercept Mixed LM; *z*-statistics)

Variable	Coef.	Std. Error	z-stat	p-value
Constant	0.081459	0.088045	0.9252	0.3549
NFC Per Capita	0.002197	0.00138	1.5918	0.1114
Governance	0.128175	0.238654	0.5371	0.5912
Health Expenditure	0.030064	0.007197	4.1772	**0.00003**
Education Expenditure	0.010016	0.005607	1.7864	0.074
Poverty Head Count	0.000109	0.000333	0.3274	0.7434
Literacy Rate	0.000483	0.000327	1.476	0.14
Covid_Shock_2019	0.004257	0.003523	1.2082	0.227
Shock_Flood	0.000326	0.003206	0.1018	0.9189

Descriptions: 1. The table is generated by the authors.

Model C (RE) captures both within- and between-province variation under the assumption that unobserved province-specific effects are uncorrelated with regressors. Although the Hausman test favors FE for causal inference, RE estimates remain informative for descriptive cross-sectional interpretation.

Under RE, health spending again shows a strongly positive effect, reinforcing the centrality of health sector investment. Education expenditure becomes marginally significant, suggesting that between-province heterogeneity partly explains the inconsistent effects in FE. NFC transfers remain insignificant, confirming the broader pattern.

Unlike FE, some structural variables—poverty and literacy—demonstrate statistical significance in RE, consistent with the pooled FMOLS results. This triangulation strengthens the conclusion that structural human capital factors and governance capacity shape cross-provincial inequality in social development, even if within-province changes over time are modest.

6. Discussion

The persistent insignificance of the per-capita NFC coefficient across estimators is one of the most important results. It suggests that the sheer volume of unconditional transfers within the same year does not automatically convert into measurable improvements in composite social development. Fungibility and poor targeting. Transfers that are not tied to specific performance or investment objectives can be fungible and used for non-social purposes (Brollo et al., 2013; Bardhan & Mookherjee, 2006). If provinces use NFC receipts for recurrent or politically salient non-social expenditures, the net effect on HDI will be muted. The contrasting positive coefficients on actual health spending support the idea that what is spent matters more than what is transferred. The strong FMOLS governance coefficient but its disappearance in FE indicates that between-province governance differences (persistent institutional strengths/weaknesses) explain cross-sectional variation in SDI, but *within-province year-to-year improvements in governance* are small. Thus, provinces with better institutions translate transfers into development, whereas weaker provinces do not (Faguet, 2014). This explains a null pooled NFC effect: transfers help only where governance converts them into effective spending.

Why health spending matters more than NFC transfers as such: health outlays directly affect mortality, morbidity and service coverage inputs that rapidly (relative to education) influence HDI components such as life expectancy and access to services. This confirms the paper's objective to examine not only transfer magnitude but spending composition and absorptive use (Khan & Malik, 2022; SPDC, 2000). Governance, literacy and poverty are structural, persistent characteristics across provinces. Their cross-province variation explains overall differences in human development, but within-province short-term changes over 2010–2023 are relatively small and statistically hard to detect in the FE framework.

7. Conclusion

This study examined the effectiveness of Pakistan's post–18th Amendment fiscal decentralization architecture, focusing specifically on whether provincial shares allocated through the NFC Awards have translated into meaningful gains in inclusive social development between 2010 and 2023. Using an enriched provincial panel dataset and multiple complementary estimators—including a long-run FMOLS approximation and short-run FE and RE models—the study provides a comprehensive empirical assessment of the links between fiscal transfers, social sector spending, governance, shocks, and a composite index of inclusive social development (SDI).

Overall, in all the model specifications observed, strong and homogenous finding exists: the per-capita transfers implanted in the National Fiscal Centre, regardless of the implantation in their current unconditional model, does not have a statistically significant increase in measures of social development. It goes without saying that the effect of such transfers has increased the fiscal space of provinces, but the increase has not, in and of itself, resulted in quantifiable improvements in human development indicators or a reduction of inter-provincial inequalities. This conclusion not only directly answers the initial research question of the present study; it is also consistent with an extensive literature on comparative analysis suggesting that fiscal decentralisation should not be equated with irrational welfare benefits in the absence of a other reforms in governance; institutional strengthening, and specific expenditure programmes.

The analysis also shows that health spending is a predictor of gains in the Social Development Index (SDI) at a statistically significant, consistent level, especially in the desired Fixed-Effects model that adjusts the model in favor of provincial heterogeneity that are not observed. This empirical finding supports a fact that the distribution pattern, combined with the effectiveness of how funds are absorbed, have a directive effect on developmental outcomes than the actual amount of transferred resources. In comparison, education expenditure does not show such a discordant behavior, as the coefficients remain mostly insignificant and are akin to the longstanding antagonisms in the realm of the educational sector in Pakistan where often an influx of financial resources can be of no value when it comes to actual learning outcomes.

The shocks analysis shows that there is an unanticipated positive correlation between the COVID-19 pandemic and the SDI in the Fixed-Effects model and the Fully Modified OLS model. Such a counter-intuitive outcome is credibly attractive to the rise in emergency health expenditure and the growth of social protection programmes which accompanied the crisis to rise transiently and boost some aspects of SDI. Flood shocks by contrast are always statistically unimportant, probably because it uses binary indicators house province-wide rather than intensities or lagged variables, which could use the long-term economic and social after-effects of climatic disasters.

When combined, the results provide three general lessons. First, NFC transfers in their unconditional version do not have the institutional power to affect the outcome of development and, thus, the need to introduce performance-driven designs validates the necessity to adopt them. Second, the second engine of inclusive social advancement in Canada is provincial institutional capacity and specific sectoral expenditure, particularly in health, which is consistent with the international evidence that stresses on the quality rather than the quantity of spending. Third, the difference between the provinces regarding the quality of the governance, the long-term and long-lasting human-capital disparities, and socioeconomic performance follows the development due to the prevalence of such disparities between the provinces, which implies that the equalization goals of the NFC might be only partially accomplished despite the increased fiscal autonomy.

Logical implications are policy implications. The following actions would reap significant benefits on the decentralization structure in Pakistan: (i) the use of NFC tranches based on performance improvement depending on proven improvement of health, education and reduction of poverty factors; (ii) better emphasis on the enabling of the provincial structures of managing public financial resources; (iii) strict and open monitoring of development spending and finally, the institutionalizing of shock-sensitive budgeting such that the vulnerability to climate changes and pandemics be expressly reflected in provincial funding formulae. The results provided in this paper should be further developed in future research which will necessitate the application of dynamic panel estimators as well as incorporating lag structures and considering the strategies used in identification of causation based on the prism of political-economy or formula-based variations in exogenous.

Finally, even though the NFC has been critical in transforming the fiscal federalism in Pakistan, it developmental influence is still dependent on the quality of governance, the level of sectoral prioritization as well as the institutional capacity of the provincial level. Without specific changes, a simple order to raise fiscal allocations cannot make the inclusive social development of the 18th Amendment a reality. The evidence above provides an opportune and empirically-based foundation on how to re-invent fiscal decentralization, and how to make provincial public service delivery more efficient and equitable.

8. Policy Implications

The findings suggest that the development of provincial financial escape as various NFC grants have been a sufficient factor but not a sufficient one towards inclusive growth. Provinces which were able to turn fiscal space into better health outcomes realised quantifiable improvement in SDI, which supports the so called expenditure quality thesis which has occupied a central position in the scholarship of decentralisation.

Reforms in the policy should cover:

1. NFC-based allocations, specifically, to health and basic education, geared toward quantifiable, objective results.
2. Enhanced provincial public financial management (PFM) systems in order to enhance the rate of budget execution and reduced leakage.
3. The increase of provincial level administration by lightened budget, social audit and community-based monitoring systems.
4. Shock-responsive financing mechanisms, incorporating climate and pandemic risk into resource allocation formulas.

References

Ahmad, I., Iqbal, N., & Khalid, M. (2024). Fiscal Federalism in Pakistan. *The Pakistan Development Review*, 47-52.

Ahmed, M. (2019). Fiscal decentralization and social sector outcomes in Pakistan. *Pakistan Development Review, 58*(3), 245–268.

Ahmed, Q. M., & Sheikh, M. R. (2011). The 7th NFC Award: An analysis of Pakistan's intergovernmental fiscal architecture. *Lahore Journal of Economics, 16*(SE), 15–38.

Anwar, S., & Nguyen, L. P. (2011). Financial development and economic growth in Vietnam. *Journal of Economics and Finance*, *35*(3), 348-360.

Arvate, P. R., Avelino, G., & Lucinda, C. R. (2015). Fiscal decentralization and educational performance: Evidence from Brazil. *Economics of Governance, 16*(1), 1–22.

Bahl, R. W., Linn, J. F., & Banque mondiale. (1992). *Urban public finance in developing countries* (Vol. 165). New York: Oxford University Press.

Bardhan, P., & Mookherjee, D. (2006). Decentralisation and accountability in infrastructure delivery in developing countries. The Economic Journal, 116(508), 101-127.

Bird, R., & Smart, M. (2002). Intergovernmental fiscal transfers: International lessons for developing countries. *World Development, 30*(6), 899–912.

Blöchliger, H., & Akgun, O. (2018). Fiscal decentralisation and economic growth.

Bonet, J. (2006). Fiscal decentralization and regional income disparities: Evidence from the Colombian experience. The Annals of Regional Science, 40(3), 661-676.

Brosio, G. (2014). Decentralization and public service delivery in Asia. Asian Development Bank Economics Working Paper Series, (389).

Brollo, F., Nannicini, T., Perotti, R., & Tabellini, G. (2013). The political resource curse. *American Economic Review, 103*(5), 1759–1796.

Díaz-Cayeros, A., Magaloni, B., & Ruiz-Euler, A. (2014). Traditional governance, citizen engagement, and local public goods: evidence from Mexico. World development, 53, 80-93.

Eskeland, G. S., & Filmer, D. (2007). Autonomy, participation and learning: Findings from Argentine Schools, and implications for decentralization. Education Economics, 15(1), 103-127.

Faguet, J. P. (2014). Decentralization and governance. *World Development, 53*, 2–13.

Faguet, J. P., & Sánchez, F. (2008). Decentralization's effects on educational outcomes in Bolivia. *World Development, 36*(11), 2183–2203.

Ghosh, A. K. (2020). The Paradox of 'Centralised Federalism': an analysis of the challenges to India's federal design. *ORF Occasional Paper*, *272*, 15-17.

Ghaus-Pasha, A., Pasha, H. A., & Khan, A. H. (2000). Devolution and Fiscal Decentralisation. The Pakistan Development Review, 981-1011.

Hofman, B., & Kaiser, K. (2004). The making of the big bang and its aftermath: A political economy perspective. Reforming Intergovernmental Fiscal Relations and the Rebuilding of Indonesia. Cheltenham, UK: Edward Elgar, 15-46.

Iqbal, N., Din, M. U., & Ghani, E. (2012). Fiscal decentralisation and economic growth: role of democratic institutions. The Pakistan Development Review, 173-195.

Shehzad, M., & Afridi, M. "18th Amendment: Boon and Bane for Federalism in Pakistan" Political and Economic Challenges to the Federalism in Pakistan, retrieved from http://theses.iiu.edu.pk:8002/greenstone/collect/electron/index/assoc/HASH9404/60c36aed.dir/doc.pdf, September 2025.

Jena, P. R., & Singh, A. (2021). Assessing the credibility of sub-national budgets in India. *Perspectives*.

Kim, A., Kim, J., & Park, J. (2020). Fiscal decentralization and inclusive growth: A study focusing on income redistribution. Journal of Logistics, Informatics and Service Science, 7(2), 25-44.

Khalid, I., & Hussain, M. N. (2018). Financial federalism in Pakistan: implications for centre-province relations. Journal of Political Studies, 25(01), 33-54.

Kalirajan, K., & Otsuka, K. (2012). Fiscal decentralization and development outcomes in India: An exploratory analysis. World Development, 40(8), 1511-1521.

KuLewis, B. D. (2017). Local government spending and service delivery in Indonesia: the perverse effects of substantial fiscal resources. Regional Studies, 51(11), 1695-1707.

Martinez-Vazquez, J., & McNab, R. M. (2003). Fiscal decentralization and economic growth. *World development*, *31*(9), 1597-1616.

Khan, M. B., & Malik, Z. K. (2022). Fiscal Decentralization Under the 7th NFC Award and Its Implications on Improvement in Education in Pakistan. *Journal of Managerial Sciences*, *16*(2), 31-48.

Kyriacou, A. P., & Roca-Sagalés, O. (2011). Fiscal and political decentralization and government quality. *Environment and Planning C: Government and Policy*, *29*(2), 204-223.

Hussain, S., Hali, S. M., Ahmad, R., Iqbal, S., & Iftikhar, H. (2021). Fiscal decentralization and poverty alleviation: A case study of Pakistan. Poverty & Public Policy, 13(2), 139-154.

Mardiasmo, D., & Barnes, A. (2015). Accountability in Indonesian local government. *International Journal of Public Sector Management, 28*(1), 5–30.

Maharani, A. (2015). *Decentralisation, performance of health providers and health outcomes in Indonesia*. The University of Manchester (United Kingdom).

Mohanty, A. R., & Mishra, B. R. (2016). Fiscal performance index of the states in India. Prajnan, 45(3), 247-266.

Musgrave, R. A. (1959). Taxes and the Budget. Challenge, 8(2), 18-22.

Nguyen, T., & Anwar, S. (2020). Fiscal decentralization and public service outcomes: Evidence from ASEAN. *Economic Modelling, 85*, 71–82.

Oates, W. E. (1972). Fiscal Federalism, Harcourt Brace Jovanovich. *New York*, *35*.

Pakistan Institute of Development Economics – PIDE. (2025). NFC at a Crossroads Revisiting Fiscal Federalism in Pakistan, retrieved from https://pide.org.pk/research/nfc-at-a-crossroads-revisiting-fiscal-federalism-in-pakistan/ dated November 5, 2025.

Rao, M. G. (2024). Indian Fiscal Federalism in Practice. *Fiscal Policy and Public Financial Management*, 209.

Rodden, J. (2006). *Hamilton's paradox: the promise and peril of fiscal federalism* (Vol. 2). Cambridge: Cambridge University Press.

Rodríguez-Pose, A., & Krøijer, A. (2009). Fiscal decentralization and economic growth in Central and Eastern Europe. Growth and change, 40(3), 387-417.

Ahmed, S., & Fatima, A. (2022). Impact of Intergovernmental Fiscal Transfer on Inter-Provincial Fiscal Disparity in Pakistan. *Journal of Applied Economics & Business Studies (JAEBS)*, 6(1).

Shah, A. (2007). *A practitioner's guide to intergovernmental fiscal transfers.* World Bank.

Shah, A., & Thompson, T. (2004). *Implementing decentralized local governance: a treacherous road with potholes, detours, and road closures* (Vol. 3353). World Bank Publications.

Shoup, C. S. (1959). The theory of public finance. The American Economic Review, 49(5), 1018-1029.

Singh, R., Bhattacharjee, S., & Nandy, A. (2024). Fiscal decentralization for the delivery of health and education in Indian states: An ongoing process is more desirable than a policy shift. Journal of Policy Modeling, 46(2), 254-271.

Smoke, P. (2015). Rethinking decentralization: Assessing challenges and opportunities. *Public Administration and Development, 35*(1), 18–27.

Social Policy and Development Center – SPDC. (2000). Fiscal Decentralisation: Lessons from the South Asian Experience, Retrieved from https://www.spdc.org.pk/publications/fiscal-decentralisation-lessons-from-the-south-asian-experience dated September 28, 2025.

Ur Rehman, Z., Khan, I. H., Rehman, A. U., & Masheed, Q. (2025). Devolution and Fiscal Decentralization for Accelerating Regional Development in South Asia: Problems and Prospects. In Making Democratic Decentralization Work in South Asia: Looking Back and Ahead (pp. 211-228). Cham: Springer Nature Switzerland.

Warburton, E. (2018). Politics of local governance in Indonesia. Contemporary Southeast Asia, 40(3), 397–423.

Von Luebke, C. (2009). The political economy of local governance: findings from an Indonesian field study. Bulletin of Indonesian Economic Studies, 45(2), 201-230.

Yeung, R. (2009). The effects of fiscal decentralization on the size of government: A meta-analysis. Public Budgeting & Finance, 29(4), 1-23.