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Impact of Intergovernmental Fiscal Transfer on Inter-Provincial Fiscal Disparity in Pakistan

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ABSTRACT

The purpose of this research is to evaluate the disparity in the intergovernmental fiscal transfers to the sub-national governments, in the last four NFC awards specifically in the 7th NFC award in Pakistan. This study measures the disparity by employing two different approaches. Firstly coefficient of variation (C.V) approach i.e. variation in the regional own-source revenues to the variation in the total resource of regional government after inclusion of federal transfer and the own-source revenue, secondly, In addition, to estimate the impact of intergovernmental transfers on the fiscal disparity among the sub-national government this study uses panel data technique i.e. least square dummy variable (LSDV). The Results of fiscal disparity reflect that in Pakistan the disparity in combined regional own source revenue increases from 0.52 to 0.83 points during the last four NFC awards. However, at the sub-national level, the values of disparity remain constant at 0.16 in Sindh province which reflects fiscal efforts for the collection of own-source revenues among provinces. In contrast to this, the disparity increases in KPK, and its value reaches 0.240 in the existing award. The results of the empirical analysis also reveal that when the intergovernmental transfer increases by 1 percent the disparity ratio increases by 1.19 percent. While the expenditure of

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the government increases the disparity at the sub-national level as the positive sign of the model reflects. Based on the findings this study suggests that Pakistan still needs to devise a revenue-sharing formula that encourages the efforts of optimal resource generation from the regional governments.

1. Introduction

The constitution of Pakistan (1973) assigned the responsibility for the collection of revenues and the allocation of the expenditure at the different tiers of government i.e central and the sub-nationals. The high regional variation in socioeconomic characteristics may always influence regional growth. This variation is also reflected in the fiscal position of the regional governments. The study conducted by Nabi (2010) highlights that around 90percent of taxes either from direct sources or indirect sources are collected by the central government whereas only 10 percent of the taxes are collected by regional governments. Further, around 28percent of the expenditures are covered by the sub-national governments while the 72percent spends by the federal government. These imbalances between revenues and expenditures especially for the regional government called fiscal imbalances in the literature. The main aim of the study is to assess these imbalances which lead to interprovincial disparity in Pakistan.

In this regard, Pakistan has implemented multiple steps to improve the fiscal health of the sub-national governments. For instance, through the 1997 revenue-sharing formula, the central government announced fiscal incentives for the regional government to improve its fiscal position through the collection of own-source revenues (OSR). Similarly in the 7th NFC award, the devolution of general sales tax (GST) on services from the central to the sub-national governments is also a step towards fiscal decentralization in the country.

In addition to the devolution of the fiscal resource, the current revenue sharing formula also enhanced the horizontal share by 10 percent as compared to the previous awards. Overall the existing award allocated 57.5percent of federal taxes to the provinces. In contrast to the expenditure responsibility, in 2010 the 18th amendment devolved many functions to the regional governments which has also created the burden of additional expenditures on the regional governments. The consolidated expenditure of the provinces enhances from 6.2percent to 7.6percent of the GDP in the current award. While the overall federal transfers through the NFC award increase from 5.5percent to 6.3percent of GDP during the same award (Fiscal operation, 2020)

Though intergovernmental fiscal transfers play an important role to improve the fiscal

health of the sub-national governments, however, these transfers are expected to influence directly the fiscal behavior of the regional government. The study conducted by Pasha and Ghaus (1994) highlighted that In Pakistan, a one-rupee increase in federal transfers and grants may increase provincial expenditure by 0.61 rupees, whereas the remaining 0.39 rupees substitutes for provincial fiscal efforts. In other words, the fiscal behavior of the regional government reflects that the additional transfer of taxes may serve as a replacement for the fiscal efforts of the regional governments.

Therefore an in-depth analysis and evaluation of the existing fiscal position of the regional government is an important issue to analyze especially in the current context. Further, the analysis of fiscal disparity during the various revenue-sharing transfers is an important question to explore. The analysis would be beneficial to reveal how the intergovernmental fiscal transfer may have impacted the inter-provincial fiscal disparity in the country. An important aspect of the study is that it will help us to identify the existing position of inter-provincial fiscal disparity and how the regional government responses to intergovernmental fiscal transfer to reduce fiscal disparity.

In sum, the purpose of this paper is to measure the regional fiscal disparity created in previous NFC awards and especially in the 7th NFC award in Pakistan. This study aims to highlight the contribution of intergovernmental through NFC awards which have affected inter-provincial fiscal disparity. To assess the above-stated objectives, this study extracted the data from federal/provincial budget documents and economic surveys of Pakistan (various issues).

This research hence fills the gap in the knowledge by exploring the existing situation of fiscal disparity within and among the sub-national governments, especially after the 7th NFC award. Moreover, it assesses the behavior of the regional governments regarding federal transfers through the NFC award.

Overall, the article recommends that there is a strong need to encourage the fiscal health of the regional government for this purpose the inclusion of indicators or additional incentives for the growth of own-source revenue (OSR) may encourage the regional governments to improve their fiscal efforts. This will also help to overcome the fiscal imbalances within and among the sub-national governments. In addition to this, the Intergovernmental transfer may link the transfer with the collection of the regional revenues. further, the agreed formula should be announced at a regular interval of time i.e. after every 05years. It will help to address the regional fiscal issues and will also help in improving the fiscal health of the sub-national governments.

This paper is organized as follows: Section 2 develops the theoretical framework based

on the review of literature; section 3 focuses on the empirical model and the data sources; section 4 highlights an overview of intergovernmental fiscal relations in Pakistan while, section 5, highlights the estimation results of the study and the last section draws conclusion and policy implications.

2. Literature Review

The theoretical foundation of fiscal federalism highlights that the central government is responsible to manage macroeconomics stability, resource allocation, and redistribution of national income, Musgrave (1959). In addition to this, in a federal system of governance, the central government has more taxing powers compared to expenditure responsibilities whereas the sub-national governments have less revenue collection power compared to high expenditure responsibilities. This variation in revenues and expenditures is considered a fiscal imbalance or the fiscal gap in the literature, Shah (2006).

Fiscal inequality is defined as the difference between fiscal need and fiscal capacity. The fiscal need is the cost of providing service delivery while the fiscal capacity is the capacity to raise revenues (Tannenwald, 2002). However, for the removal of the fiscal disparity, the literature suggests that increasing transfer from the central government to the sub-national government is one way to balance the budget and overcome the regional fiscal disparity (Bird and Smart 2002)

The literature on the fiscal imbalance of the regional governments indicates that it is the inconsistency between revenue-raising and fiscal needs of the same tier of government. Boadway and Flatters (1982) reveal that in a federalism state, the revenue-sharing arrangements may remove the disparity in the state. Similarly, Garnaut and Fitzgerald (2002) argue that the equalization grants from the central government to the sub-national government may reduce regional disparities and inequalities to manage the fiscal needs and fiscal capacity of the regional government. In contrast to this, Martinez and Zhang (2008) highlight that the expenditure of sub-national government decreased the disparities for a certain time. Blochliger and Charbit (2008) indicate that the balanced budget of regional government may support providing uniform public service with the minimum tax burden.

In addition to this, McLure (1993) identifies the reasons for the imbalances that the central government collects taxes more easily at lower economic costs than sub-national governments. Furthermore, Bird (2003) argued that in many developing countries sub-national governments have limited fiscal power which is insufficient to finance their expenditure needs for providing the services.

Bird and Smart (2003) also highlight that the formula-based fiscal transfer may help the sub-national government expenditure in the same direction because this transfer is relatively transparent and predictable. Furthermore, Boex and Martinez (2007) point out the allocation may base on fair allocation, simple and transparent, and unconditional.

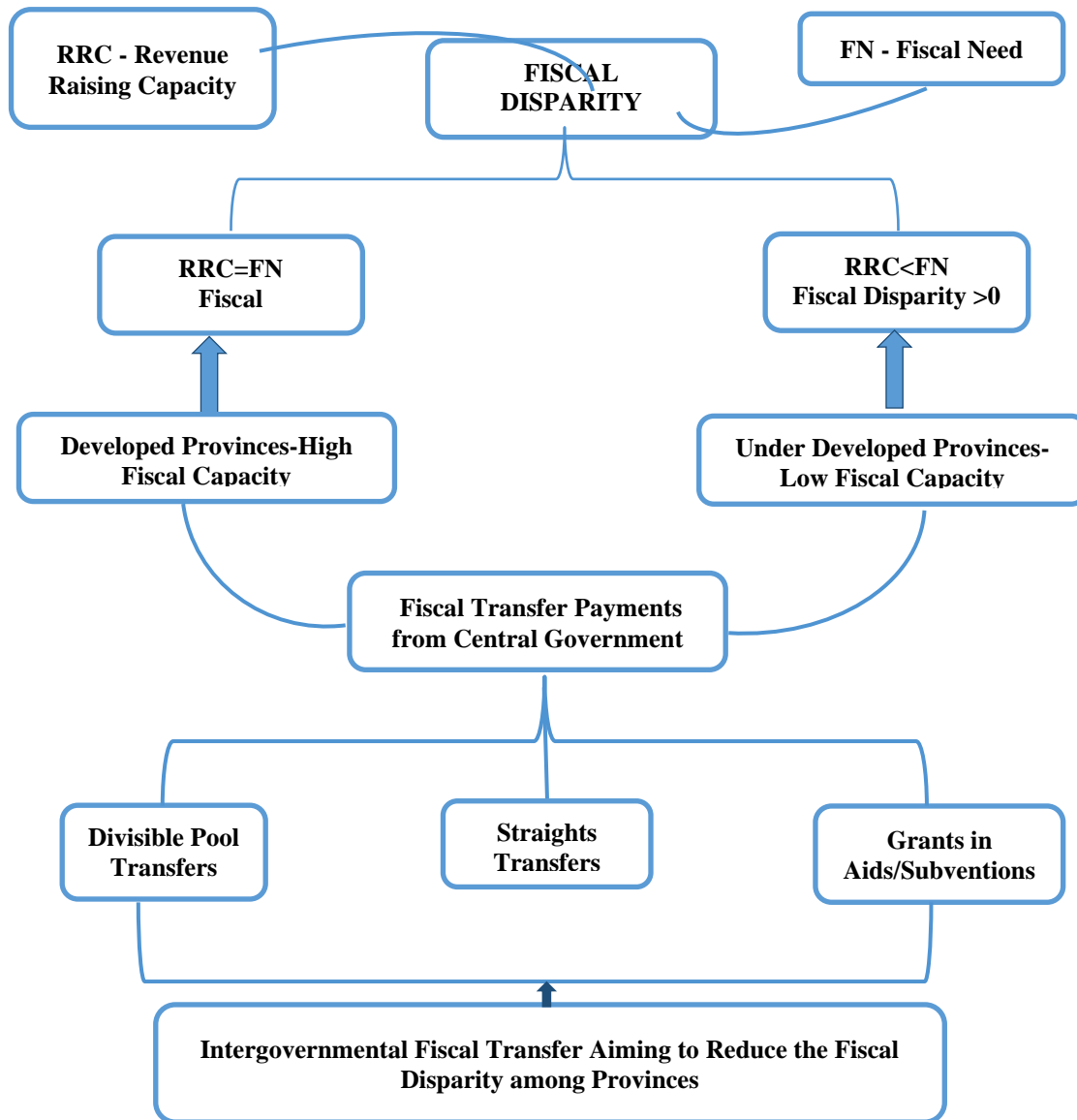
In addition to the above discussion, the literature on the behavior of sub-national government on intergovernmental fiscal transfers highlights that the federal transfer may be one of the ways that may help to address the fiscal disparity and balance regional budgets. Bahl Linn, Shah, Bird, and Smart (1992, 1994, and 2008). However, the other side of the literature also highlights the balance of resource distribution is based on the proper mechanism of intergovernmental transfers. Prud and Homme (1995) indicate that the centralized structure of the public sector produces a much-balanced distribution of resource management by directing the resources from rich to poor regions. The study on the Chinese economy reflects that in a decentralized political economy the local resource distribution inversely depends on economic growth. However, Rodríguez-Pose and Ezcurra (2009) highlight the relationship between decentralization and income inequalities.

The literature on devolution reveals that non-pure fiscal decentralization is considered when the lower tier of government is responsible to allocate the resources. In contrast to this, pure decentralization considers when the regional governments generate OSR and do not depend on the central government's transfers to manage their expenditure.

In the context of Pakistan Ghaus, et al (2010) estimates that the 7th NFC award has made the biggest effort at ensuring equalization of regional revenues. A similar study conducted by Pasha and Ghaus (1994) indicates that in Pakistan, a one-rupee increase in federal transfers and grants will raise provincial expenditure by 0.61 rupees, whereas the remaining 0.39 rupees substitutes for provincial fiscal efforts. Further, this research also highlights the effect of regional GDP is low while the effect of provincial borrowings on provincial spending is high i.e. 0.89.

In the context of the above discussion, this study examines the position of regional fiscal disparity during the period experiencing changes in revenue-sharing formulas. This study also estimates the impact of the intergovernmental fiscal transfer on the inter-provincial fiscal disparity as said earlier. This study focuses on the regional fiscal health of the regional economies using the provincial level data throughout the period 1990–2020. Specifically, the goal is to observe whether the intergovernmental fiscal transfers from the central to the provincial government are anticipated to minimize disparity and inequality at the sub-national level.

2.1 Fiscal Equalization – Structural Relationship



3. Estimation Techniques

Martinez and Zhang (2008), measured the fiscal disparity as a ratio of the coefficient of variation of the regional own source revenues before and after the federal transfer. For empirical analysis, this study has used two different approaches to estimate the impact of

intergovernmental fiscal transfers on the inter-provincial fiscal disparity; firstly we estimate the disparity ratio is measured as the ratio of the coefficient of variations of per capita own-source revenue to the per capita resources of the sub-national governments (including the OSR and the NFC transfer). Secondly, we used the Least Square Dummy Variable (LSDV) to highlight the effect of intergovernmental transfer on the fiscal disparity among the sub-national governments. The following model has been used to estimate the regression results.

$$\text{FisDisp} = \beta_0 + \beta_1 \text{it} + \beta_2 (\text{INTTRA})_{it} + \beta_3 (\text{CE})_{it} + \beta_4 (\text{DE})_{it} + \beta_5 (\text{DV})_{it} + U_{it}$$

FisDisp = Ratio of disparity before and after federal transfers

INTTRA = Log of per capita federal transfers to the sub-national governments

CE = Per capita current expenditure of the regional governments

DE = Per capita development expenditure of the provincial governments

DV = Provincial dummies

U = Error term

t = Period between 1990 to 2020

i = Provinces

For the estimation purpose, we employ the ratio of disparity before and after intergovernmental transfers as a dependent variable. the disparity ratio is measured as the ratio of the coefficient of variations of per capita own-source revenue to the per capita resources of the sub-national governments (including the OSR and the NFC transfer). In other words, fiscal disparity is the ratio of the coefficient of variation of provincial OSR to the coefficient of variation of the total fiscal resources available to the provincial governments.

Among the explanatory variables, the per capita intergovernmental fiscal transfer reveals the role of federal transfer (through NFC awards) in reducing the fiscal disparity of the regional governments. The remaining independent variables capture the role of current and development expenditures in reducing the fiscal disparity among the provinces.

As far as the relationship among the variables is concerned, the dependent variable is a ratio of disparity before and after intergovernmental fiscal transfers which means that a positive sign of each coefficient in the model will show a reduction in the fiscal disparity. The same relationship is also hypothesized for regional expenditures. In contrast, the negative coefficient reflects the increase in the disparity within the sub-national government.

3.1 Data Source

The provincial-level data related to the fiscal side is collected from the Federal and Provincial Budgets documents, while the data on population is extracted from the Economic

Surveys of Pakistan. For the overall analysis, we have used the data between 1990 - 2020 i.e. $t = 30$ for all four provinces. This study used the STATA 12 software for the estimation of models.

3.2 Results of Estimation

The result section is divided into two parts. The first part highlights the assessment of intergovernmental fiscal relations and an in-depth assessment of the fiscal position of regional governments in the country while the second part evaluates the inter-provincial fiscal disparity at the regional level through the C.V approach and the LSDV techniques for assessment of the various NFC awards and the 7th award separately.

3.3 Intergovernmental Fiscal Relation in Pakistan

The intergovernmental fiscal relation in Pakistan is constitutionally protected through article 160 of the constitution of Pakistan which highlights the mechanism of intergovernmental fiscal relationship between the center and the regional governments through the national finance commission award. The principal objective of NFC is to distribute the taxes of the federal divisible pool, straight transfer, and provision of federal subventions and grants in aid after deducting collection costs among the provinces.

The nature of divisible pool taxes and the straight transfers are unconditional and are distributed through a standard formula. In contrast to this, The NFC recommended a fixed proportion of subvention/grant in aid - including special non-development grants to backward provinces or all provinces. In addition to this, the federal government has also allocated some emergency grants like revenue deficit and ad-hoc relief. These grants are also distributed under the head of non-development grants. All federal grants are funded from the federal consolidated funds.

Historically, Pakistan has distributed nine revenue-sharing awards since independence in 1947. The first revenue-sharing i.e. Raisman award was announced in 1951. The remaining awards were announced in 1961-62, 1964, and 1970 respectively. In 1971 Pakistan was divided into East and West Pakistan, and the NFC awards were re-designed in 1974 1990, 1996, and the existing NFC award in 2009. However in 2006, due to a lack of consensus among provinces on the formula the president of Pakistan announced the amendments in the distribution of revenues and grants-in-aid order 1997.

Further, the taxes in the divisible pool were limited. Table 01 reveals the historical comparison of divisible pool taxes in the last four NFC awards. In 1990 the excise duty on tobacco and sugar was part of the divisible pool it was excluded from the 5th NFC award. In addition, the federal excise duty on gas and custom duties were included in the domain of

divisible pool taxes. The 7th NFC devolved the sale tax on services to the provinces now provinces are collecting GST on services through their revenue collection authorities. However, the tax on income, sale, purchase of goods, and export duties on cotton is part of the divisible pool in these awards.

Table 01: Comparison of Divisible Pool Taxes by NFC Awards

S.no	Taxes	7 th NFC Award	6 th NFC Award	5 th NFC Award	4 th NFC Award
1	Taxes on income	✓	✓	✓	✓
2	Wealth tax	✓	✓	✓	✗
3	Capital value tax	✓	✓	✓	✗
4	Taxes on sales and purchases of import/export/produced/manufactured/consumed	✓	✓	✓	✓
5	Sale tax on services (CE mode)	✗	✓	✗	✗
6	Export duties on cotton	✓	✓	✓	✓
7	Excise duties on tobacco and tobacco manufacture	✗	✗	✗	✓
8	Excise duty on sugar	✗	✗	✗	✓
9	Custom-duties	✓	✓	✓	✗
10	Federal excise duty excluding the excise duty on gas charged at the wellhead	✓	✓	✓	✗
11	Any other Tax which may be levied by the federal government	✓	✓	✓	✗

Source: NFC reports (various years)

3.4 Straight Transfers

The straight transfer was introduced in 1990. The composition of straight transfer consists of the provincial rights on its natural resources including the royalty on crude oil and gas, excise duty and surcharge on natural gas, and hydroelectricity profit of WAPDA. The KPK received the first allocation of straights transfer in 2000-01 at a capped level of Rs.6 billion. The existing NFC has been allocating the arrears on net hydel profits and development surcharge on gas.

3.5 Subvention/Matching Grants

The fourth NFC award allocated revenue deficits grants to the provinces to finance their deficits. However, the fifth NFC linked these grant grants to smaller provinces only - with an amount of Rs.3.3billion and 4billion for KPK and Balochistan respectively. In addition, the 6th NFC extended these grants from Rs.8.7billion to Rs.27.7billion to all the provinces.

However, the additional allocation was linked to the annual growth of the net divisible pool. The existing award abolished the discretionary grants-in-aid for all the provinces except for the Sindh province. Sindh was given a grant of 0.66 percent of the provincial divisible pool to partly offset losses due to the merger of one-sixth of GST in the divisible.

3.6 Horizontal Distribution of Fiscal Resources

Pakistan allocated the divisible pool taxes based on regional population share. In 2009 the 7th NFC award shifts from single to multiple indicators for the distribution of divisible pool taxes to the provinces. Table 02 explains the horizontal sharing formula and provincial shares in the last four awards in Pakistan. Due to the adoption of multiple indicators, Punjab is the only province that lost its share of around 5 percent while Balochistan gained around an additional 4 percent share from the federal government. The Sindh and KP received additional 1 percent shares in the existing revenue-sharing formula.

Table 02: Horizontal Resource Sharing Formula and Provincial Share by NFC Awards

Indicators	7 th NFC Award	6 th NFC Award	5 th NFC Award	4 th NFC Award
Population	82.0%	100%	100%	100%
Poverty or Backwardness	10.30%	✕	✕	✕
Revenue Collection/Generation	5.0%	✕	✕	✕
Inverse Population Density	2.70%	✕	✕	✕
Provincial shares by NFC Awards				
Punjab	51.74%	57.36%	57.88%	57.88%
Sindh	24.55%	23.71%	23.28%	23.28%
KPK	14.62%	13.82%	13.54%	13.54%
Balochistan	9.09%	5.11%	5.30%	5.30%
Total	100%	100%	100%	100%

Source: NFC reports (various years)

4. Overview of Fiscal Position of the Provinces

The fiscal position of subnational governments is dependent on the expenditure and the collection of revenues. Table 03 examines the provincial share of expenditure financed through own-source revenues. In 1990, the Punjab and Sindh have covered around 15 percent of expenditures from their source revenues while the KP and Balochistan financed 9 percent and 5 percent of their expenditures from provincial tax revenues. The 5th NFC award

allocated an incentive for the improvement of the collection of the OSR. The KPK enhanced its revenues and covered 15 percent of the expenditure. However, due to the devolution of the GST on services the overall fiscal position of the regional government has improved. Sindh is the only province that currently financed one-fourth of the expenditure from their OSR revenues. While the Smallest provinces financed their expenditures below 10 percent. The largest province Punjab, just slightly improved its collection of revenues.

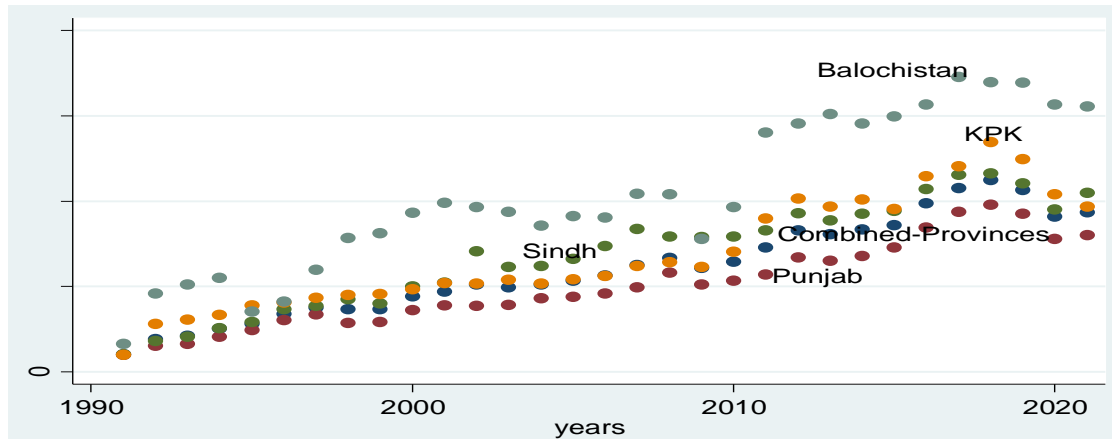
Table 03: Provincial Expenditures Financed with OSR by NFC Awards (in %)

	Punjab (Rs in Billion)			Sindh(Rs in Billion)			KPK(Rs in Billion)			Balochistan(Rs in Billion)		
	OSR	TEXP	Share	OSR	TEXP	Share	OSR	TEXP	Share	OSR	TEXP	Share
4th NFC Award	10	61	16%	4	28	14%	2	22	9%	0.48	9	5%
5th NFC Award	25	138	18%	11	64	17%	4	38	11%	1	26	4%
6th NFC Award	81	369	22%	28	210	13%	6	96	6%	3	63	5%
7th NFC Award	128	679	19%	100	446	22%	19	247	8%	7	141	5%

Source: Authors estimate from the budgets documents

The two smallest provinces have been receiving the highest per capita intergovernmental transfers from the federal government. Figure 01 indicates Balochistan receives the highest per capita intergovernmental transfer i.e. above Rs.6,000 as compared to the other provinces. However, the major jump appeared in the 7th NFC award as this award ensures a minimum of Rs.83billion to Balochistan from the divisible pool transfers. The award also transferred 1 percent of the divisible pool to the KPK in compensation for war and terror. However, in the past three decades, the provinces combined received transfers at Rs.3000 per person.

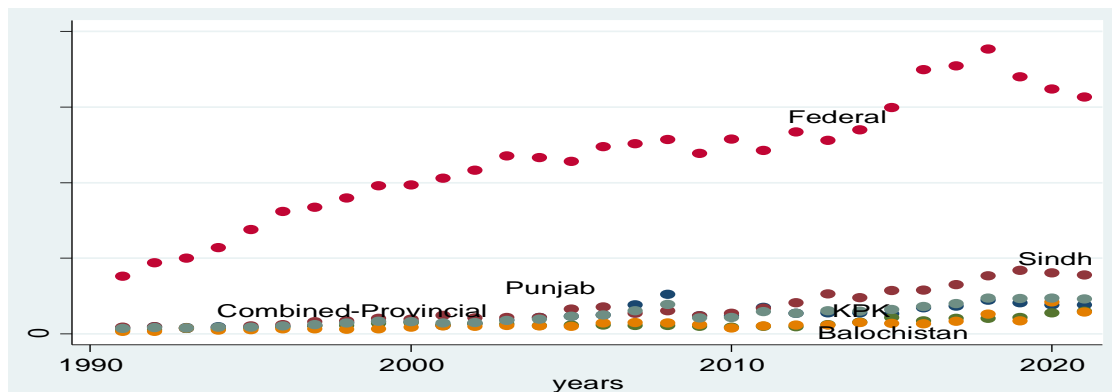
Figure 01: Per Capita NFC Transfer by Provinces



Source: Federal and provincial budgets documents (various years)

Figure 02 highlights the per capita own-source revenue of federal and provincial governments. On average the per capita revenue enhanced from Rs.3000 to 7000 during the past three decades while the combined provincial revenue reached only Rs.2000 per person. At the regional level, Sindh province collected the highest revenue compared to Balochistan province which collected the lowest revenues. However, Punjab collected more own-source revenues as compared to KPK province in the past three decades.

Figure 02: Per Capita Own Source Revenues by Governments

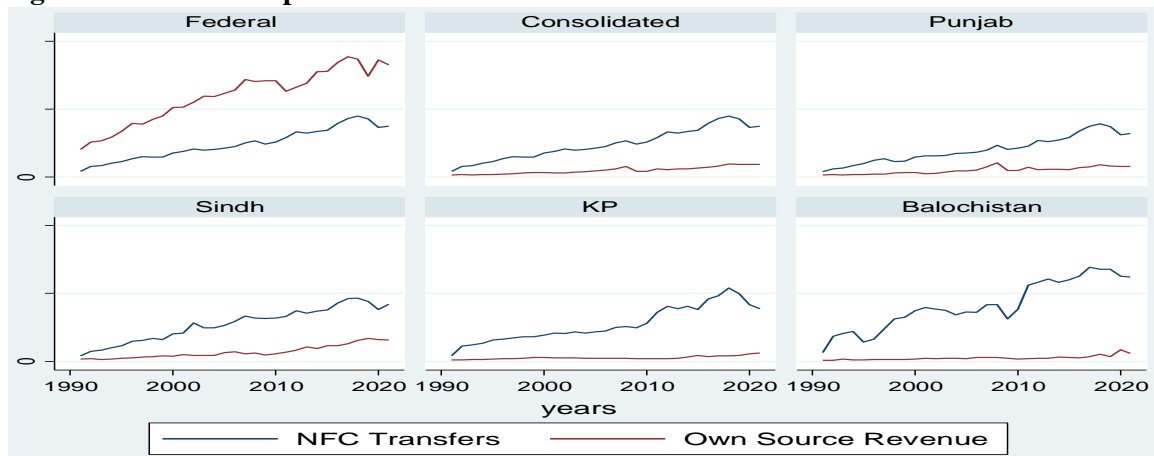


Source: Federal and provincial budgets documents (various years)

Figure 03 exhibits the relationship between provincial own-source revenues and the intergovernmental fiscal transfer among the provinces. At the federal level, the trend highlights that when the federal government enhances the share of intergovernmental transfer through NFC awards, in parallel to the NFC share, the federal government also increases the

tax revenues, which shows the fiscal efforts of the federal government to collect more revenues. While at the sub-national level, the gap between the regional revenues and the federal transfer increases sharply in the past three decades. However, a major jump was observed in the Balochistan and the KPK provinces.

Figure 03: Relationship between OSR and NFC Transfers



Source: Federal and provincial budgets documents (various years)

4.1 Descriptive Statistics

In this section, we examined the fiscal disparity among the regional governments for the different NFC awards. The fiscal disparity is measured for each province separately and combined for all provinces as well.

As discussed in the previous section, the expenditure is highly decentralized whereas the revenues remain highly centralized. The disparity ratio of the consolidated regional revenues reflects that the disparity in the own source revenues of the sub-national government has increased since 1990. The ratio ranges from 0.52 to 0.83 points, as in the 7th NFC award the fiscal disparity is high as its value is above 0.84 points. It means the consolidated provincial fiscal efforts have not increased as the rate of federal transfer has increased. However, the average regional revenues increased and reached Rs.1320 per person

Table 04 reveals the inter-provincial disparity across provinces. The variation in OSR over time increased in Balochistan and KPK provinces and reaches 0.28 points, which is the highest among the four provinces. While the OSR of these provinces has just reached Rs 671 and Rs 553 in these provinces respectively. Only Sindh province reveals the constant trend in the fiscal disparity across provinces. This means, that Sindh put comparatively better fiscal efforts as compared to other provinces. In addition, the devolution of GST has created a strong fiscal position for Sindh due to the large fiscal base that exists because of having a

mega city - Karachi. While the two provinces have not improved the OSR revenues. Punjab is the largest economy which contributes around half of the national income according to Pasha (2015) but still, its CV values of the OSR enhanced from 0.13point to 0.15 in the past four NFC awards. The Average per capita OSR revenues of the two provinces like Punjab and Sindh are above the four consolidated revenues while the two smallest provinces i.e. KP and Balochistan have around 50 percent below the consolidated per capita revenue.

Table 04: Average Per Capita CV of Own Source Revenue by Awards

	Mean Four Provinces	C.V- Four Provinces	Mean- Punjab	C.V Punjab	Mean- Sindh	C.V Sindh	Mean- KPK	C.V KPK	Mean Balo	C.V- Baloc
4th NFC Award	65	0.529	96	0.130	115	0.150	49	0.149	35	0.395
5th NFC Award	145	0.554	198	0.130	284	0.170	98	0.113	75	0.121
6th NFC Award	276	0.696	487	0.340	634	1.290	161	0.276	112	0.047
7th NFC Award	1320	0.844	1537	0.150	3159	0.160	671	0.240	553	0.289

Source: Authors estimate from the budgets documents

5. Estimation Results

For the empirical analysis of the study, we estimated the impact of intergovernmental fiscal transfers on the regional disparity during the period of the past four NFC awards as said earlier. The aim is to examine how these factors may have affected the fiscal disparity of the regional governments.

Table 05 presents the summary of the variable used in the model. The average disparity found is around 2 point. As discussed in the earlier section, the high value of the ratio indicates the level of fiscal disparity before and after transfer in the fiscal health of the own source revenues of the provincial governments. At the provincial level, the per capita current expenditures reach Rs.2665 while the per capita development expenditures reach below Rs.1000. However, the federal transfer stands at Rs.5274 per person.

Table 05: Summary of the Variables

Variable	Number of Observation	Mean	Std. Dev.	Min	Max
Fiscal Disparity	120	2	2	0.021	15.232
Per Capita Federal Transfers	120	5274	5333	312	24252
Per Capita Current Expenditures	120	2665	1189	664	5970
Per Capita Development Expenditures	120	872	525	133	2306
Per Capita Total Expenditures	120	3535	1643	884	8179

Source: Authors estimate from the budgets documents

Table 06 reports the results of the LSDV model, estimated for the different NFC awards. Here, the positive coefficient of total federal transfer reveals that the federal transfer in Pakistan has increased the fiscal disparity in the country. According to the results, a 1 percent increase in the total federal transfer has increased the disparity in the OSR of the regional government by 1.195percent during the last four NFC awards while it has increased the disparity by around 0.335percent without controlling the 7th NFC award.

As far as the role of current expenditures is concerned, at the regional level, the positive coefficient of current expenditures indicates that if the current expenditures increased by Rs. 1 then the fiscal disparity will be increased by 0.084paisa with the 7th NFC award, while the disparity will be reduced by 0.087paisa controlling for the 7th NFC award. However, excluding the role of the latest award, the development expenditures reduced the fiscal inequality by Rs.0.183paises while increasing the disparity by Rs.0.184paises during the different NFC awards. The results reflect that as the federal transfer increased the regional government did not focus on the collection of provincial revenues.

The results also highlight the provincial positions of fiscal disparity during the different NFC awards; the disparity in the Sindh province is statistically insignificant. However, the highest coefficient value of the disparity ratio is revealed by Balochistan province i.e. around 3.24 which shows the low level of fiscal efforts for the collection of OSR.

The positive coefficient of disparity ratio indicates that the fiscal position has decreased with a rate of 5.119 in the 7th NFC award while the overall disparity has reduced by 6.03 without controlling for the 7th NFC award.

Table 06: Regression Results of the Fiscal Disparity

Variables Details	LSDV-With 7th NFC Award	LSDV- without 7th NFC Dummy
	Model 01	Model 02
Fiscal Disparity (Coefficient)	-5.119	-6.036
(P-Values)	0.162	0.028
Log of Per Capita Federal Transfer	1.195	1.335
(P-Values)	0.044	0.004
Per Capita Regional Current Expenditures	0.084	-0.087
(P-Values)	0.063	0.046
Per Capita Regional Development Expenditures	0.184	-0.183
(P-Values)	0.009	0.009
Dummy Variable -7th NFC	0.282	
(P-Values)	0.705	
Sindh	0.326	0.310
(P-Values)	0.558	0.575
KP	1.041	1.011
(P-Values)	0.048	0.051
Balochistan	3.249	3.204
(P-Values)	0.000	0.000
F-Statistics	3.260	3.810
(P-Values)	0.003	0.002
R-Square	0.169	0.1683
Adjusted R-Square	0.117	0.1241
Roost MSE	1.926	1.914
Number of observations	120	120

P values indicate a significance level

6. Conclusion and Policy Recommendations

This paper examines the existing position of fiscal disparity of the sub-national government and explores to what extent the intergovernmental fiscal transfer has reduced the fiscal disparity across provinces. For the existing fiscal disparity, the paper used the ratio of C.V for the regional OSR and federal transfer. This paper adopts a panel data approach and

employed techniques i.e. LSDV model to evaluate the impact of the intergovernmental fiscal transfer on inter-provincial fiscal disparity for the last four NFC awards.

This paper also highlights that Sindh has improved its fiscal position compared to other provinces as reflected by the results. Similar case for Punjab province, the positive coefficient reflected the same in the model. The other provinces like KP and Balochistan have not improved their fiscal efforts to collect the OSR. These provinces finance only 8 percent and 5 percent of total expenditures from their OSR.

The overall conclusion is that the inter-provincial fiscal disparity is high even after the 7th NFC award. This paper also finds that regional government responds differently to intergovernmental fiscal transfers in Pakistan. The main reason for the existing inter-provincial fiscal disparity is the high variation in the tax base. As we highlighted that the share of tax collection is highly centralized compared to expenditure decentralization. Further due to the small tax base provinces like KP and Balochistan still depends on federal transfers.

For the policy level, this article indicates that Pakistan still needs to devise a revenue-sharing formula that encourages the efforts of optimal resource generation by the regional governments. However, the NFC secretariat may link the intergovernmental fiscal transfer with the fiscal efforts of the provincial governments. As Pakistan has implemented those practices in the previous award. For the horizontal distribution of resources, the inclusion of the indicators that supports the fiscal efforts may improve the fiscal position of the regional governments. In addition to this, the future NFC awards in Pakistan may ensure to be announced at a regular interval of time because this may help to strengthen fiscal federalism and address the upcoming fiscal challenges on time.

References

- Bahl, R. W., & Linn, J. F. (1992). *Urban public finance in developing countries*. The World Bank.
- Bahl, R., & Bird, R. (2008). Subnational taxes in developing countries: The way forward. *Public Budgeting & Finance*, 28(4), 1-25.
- Bengali, K., & Sadaqat, M. (2005). *Regional accounts of Pakistan: Methodology and estimates, 1973-2000*. Social Policy and Development Centre.
- Bird, R. M., & Smart, M. (2002). Intergovernmental fiscal transfers: International lessons for developing countries. *World Development*, 30(6), 899-912.
- Bird, R., Dafflon, B., Jeanrenaud, C., & Kirchgässner, G. (2003). Assignment of responsibilities and fiscal federalism. *Federalism in a changing world: Learning from each other*.
- Blöchliger, H., & Charbit, C. (2008). Fiscal equalisation. *OECD Journal: Economic Studies*, 2008(1), 1-22.

- Boadway, R., & Flatters, F. (1982). Efficiency and equalization payments in a federal system of government: A synthesis and extension of recent results. *Canadian journal of economics*, 613-633.
- Boex, J., & Martinez-Vazquez, J. (2007). Designing intergovernmental equalization transfers with imperfect data: Concepts, practices, and lessons. In *Fiscal Equalization* (pp. 291-343). Springer, Boston, MA.
- Ezcurra, R., & Rodríguez-Pose, A. (2009). 17 Measuring the regional divide. *Handbook of regional growth and development theories*, 329.
- Garnaut, R., & FitzGerald, V. (2002). Issues in Commonwealth–state funding. *Australian Economic Review*, 35(3), 290-300.
- Ghaus, A. A., Pasha, H. A., & Kemal, A. R. (1994). Dynamic Budgetary Consequences of the 1991 NFC Award [with Comments]. *The Pakistan Development Review*, 33(4), 627-645.
- Ghaus-Pasha, A., Pasha, H. A., & Zubair, A. (2010). Fiscal equalisation among provinces in the NFC awards. *The Pakistan Development Review*, 563-576.
- Martinez-Vazquez, J., Qiao, B., & Zhang, L. (2008). The role of provincial policies in fiscal equalization outcomes in China. *China Review*, 135-167.
- Martinez-Vazquez, J., Qiao, B., & Zhang, L. (2008). The role of provincial policies in fiscal equalization outcomes in China. *China Review*, 135-167.
- McLure Jr, C. E. (1993). Economic, administrative, and political factors in choosing a general consumption tax. *National Tax Journal*, 46(3), 345-358.
- Musgrave, R. A. (1959). *The theory of public finance; a study in public economy*. Kogakusha Co..
- Nabi, I., & Shaikh, H. (2010). *Fiscal Federalism in Pakistan: A radical departure and some new challenges*. Development Policy Research Center Working Paper, LUMS, Lahore.
- Pakistan Fiscal Operation 202. Published by Ministry of finance, Government of Pakistan
- Pasha, H. A. (2015). Growth of the provincial economies. Institute for Policy Reforms (IPR). <http://ipr.org.pk/wp-content/uploads/2016/04/GROWTH-OF-PROVINCIAL-ECONOMICS-.pdf>.
- Prud'Homme, R. (1995). The dangers of decentralization. *The world bank research observer*, 10(2), 201-220.
- Shah, A. (2006). Fiscal decentralization and macroeconomic management. *International Tax and Public Finance*, 13(4), 437-462.
- Tannenwald, R. (2002). Interstate fiscal disparity in 1997. *New England Economic Review*, 17-34