

Impact of intergovernmental fiscal transfers on gender inequality: an empirical analysis for Pakistan economy

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Abstract

Fiscal decentralization transfers the financial authorities from national government to other tiers of government for expenses and taxes. Gender equality is one of the 17 Sustainable Development Goals and current study integrates the gender in fiscal federalism in Pakistan. So this study empirically investigate the role of fiscal federalism in gender inequality in Pakistan over the period of 1990-2020. The results of the study showed that expenditure and revenue decentralization from federal government to provincial government are helpful to reduce gender inequality in Pakistan. It is found that sufficient degree of revenue decentralization is necessary along with expenditures transfers to promote gender equality in Pakistan. Various public policies suggestions comes out from this study.

Keywords: Gender Inequality, Expenditure Decentralization, Revenue Decentralization

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1. Introduction:

One of the crucial economic development objectives is to reduce gender inequality as it is closely linked to the number of other development goals (Bank, 2011; Duflo, 2012; Jayachandran, 2015). Measurement of gender inequality is more important and Sen's (2000) work on capabilities draw a broader definition of inequality. Particularly gender inequality are limits on opportunities an individual or group can choose being male or female. Equality can be understood as expanding freedom, valued outcomes and opportunities without considering the gender (Engeli & Mazur, 2018; Nussbaum, 2011; Ortenblad et al., 2017; Robeyns, 2007; Sen, 1999, 2011).

Fiscal federalism is financial relations between different units of government in federal government system. Richard Musgrave in 1959 1st time introduced the term and he argued that central or federal government should focus on income redistribution and economic stability while allocation of the resources should be the responsibility of local government. Globally all countries are facing financial, fiscal and economic crisis after pandemic 19 and it increase the need of efficient roll of all levels of government. So policy advisors emphasizing on fiscal decentralization around the world. At the same time, critics are of the view that decentralization worsens the public service delivery instead of efficient functioning. Governments at local level are inefficient so satisfactory public expenditure management systems are not present at local level for the assistance of budget and tax choice (Grisorio & Prota, 2015; Tanzi, 1996). However, for gender development, central government has less information regarding differentials in the need and preferences of women at local level. Local governments are more equipped with information about the needs of local people and it is the entry point of integrating the gender concerns.

The important distinguish between spending and tax decentralization is highlighted by (Rodden, 2002, 2003). The fiscal illusion hypothesis is based on the differential that when spending and revenue collection

responsibilities are divided and revenue-raising power remain in the control of federal government, it fiscally deceives the taxpayers. It makes impossible to them to make direct link between tax paid and quality of service they receive (Buchanan & Wagner, 1977; Sacchi & Salotti, 2016). It is evidenced by empirical literature that OECD countries those are highly revenue decentralized have better macroeconomic performance then centralized economies (Biela et al., 2013).

Globally women are more neglected from the opportunities, especially in developing economies like Pakistan. The major obstacle to human development is gender inequality and prolonged deprivations re-enforces several socioeconomic problems. Pakistan's almost 50% population are women so growth of the country crucially dependent on providing more and better opportunities to women like health, education, employment, representation etc. To increase the gender equality is not only a development goal by its own but is a primary and essential ingredient to for political and socio-economic development. Pakistan have border gender gaps in all spheres of life. According to the world economic forum, Pakistan ranked in gender equality at 145th number in 146 countries in 2022. Women in Pakistan have more inequality in economic participation and political empowerment as compare to health and education.

Inherently, fiscal federalism neither good nor bad for gender inequality (Chakraborty, 2011; Vickers, 2013). However, its impact on gender outcomes is dependent on fiscal transfer arrangements between government and institutions. Several significant determinants affects this phenomenon like institutional capacity and most importantly political will towards gender equality. Although a vast literature has analyzed the effects of fiscal federalism on various socio-economic indicators but its impact on gender related issues is scarcely analyzed. Prior to the amendments made in 2010 in 7th NFC award, political process in fiscal mechanisms has passed through many phases regarding gender. The Income Tax Ordinance, 2001, allowed a higher exemption threshold to salaried taxpayers women as a favorable treatment. However, this special relief had been drawn after the amendment. Now, no distinct tax credits or deductions applicable particularly to women in Pakistan. After 18th amendment in 7th NFC award women development is also in provincial autonomy. This scenario makes Pakistan an interesting case study to be discussed, especially when Pakistan is going towards fiscal decentralization. In multi-level fiscal federalism in Pakistan, this study helps policy makers to set practical solutions about gender inequality.

2. Gender Inequality in Pakistan

The total population of Pakistan is nearly 227 million, in 2022, people that make it 5th most populous country of the world. The males are 50.8 percent of total population while female are 49.2 percent. As per Global Gender Gap Index report 2022, rank of Pakistan in economic opportunity and participation is 145/156, for education attainment it ranks 135/156, 143/156 for health and survival and lowest rank of 95/156 for political participation. Although women participation in political representation has improved from previous years but still they are underrepresented particularly for leaderships. Still they are restrictions on them for being part of public/political sphere as systematic challenges are rising due to patriarchal nation. As per Election Commission of Pakistan, there are almost 12.5million gender gap in electoral rolls. According to calculations of UN Women, current progress rate for gender parity in national legislatures is slow. So, at this rate, parity will be achieved until 2063 in Pakistan. Women are also more affected from climate change (floods, droughts, heatwaves, cyclones etc) and Pakistan is currently ranked eighth most affected country in the world in past 20 years.

In spite of severe challenges, many advanced steps has been taken by Pakistan for protection of human rights by passing world's best popular conventions. Pakistan has also introduced the Domestic Violence against Women (Prevention and Protection) Act, Anti-Rape (Investigation and Trial) Ordinance (2020), pro-women legislation including the National Gender Policy Framework (2022) in all four provinces of Pakistan. However, laws about protection from violence and empowerment remains weak to implement though they are established in all tiers of government.

The medium and long term strategic documents reflects that government of Pakistan remained committed to women empowerment. There are policies in several institutions and ministries to enact pro-women laws and to bring gender into their planning. The vision of Pakistan 2025 is in line with Sustainable Development Cooperation Framework of United Nations 2023-2027 for Pakistan. It is also focusing on gender responsive planning and prioritizing basic rights. It also includes gender equality as central agenda for

the development of the country and increased reporting of violence against women and engagement of vulnerable and marginalized groups. The Government of Pakistan makes gender security as a key pillar in its first National Security Policy (NSP) 2022-2026. The aim of NSP is to ensure meaningful women participation in decision making, justice sector, to integrate gender equality security narratives of the country and peacekeeping.

3. Literature Review

Theoretical rationales for integrating gender inequality into fiscal federalism are asymmetrical information, accountability and suitable size of local government. Information symmetry helps in effective service delivery. The accountability is based on dual conjectures for incorporating gender into fiscal federalism. Firstly, local government is accountable to higher tier of government. Secondly, local government is also accountable to the electorates. When provision of public goods are decentralized and financial decisions are centralized, former limits the latter. The functional responsibilities of local government may lead to inefficiencies without finance decentralization.

To promote the gender equalities, fiscal decentralization holds good because the local government has better information on gender differentials about preferences and needs. Decision making at local level provides more ownership, responsibility and incentives to local representatives and information at local level often may find economical and suitable means for providing public goods and services to local community (Bardhan & Mookherjee, 1999; Stern, 2002).

Recent empirical literature also tried to investigate the fiscal federalism theorem in gender context. The transfer system, to reduce the gender inequalities, should have both specific and general purpose transfers ideally. Basic aim of general transfers is to empower all local governments to deliver public services that is determined by normative standards. While the specific transfer design is also significant as the implementation of direct program that reduce the gender inequalities would improve the female's capabilities. As a result, it would help the women to get time from unpaid activities and participate in paid market economy. Chakraborty (2011), determined the gender equity thorough fiscal federalism in India and it argued the feminization of local governance policy, coupling it with gendered fiscal devolution to local governments can allocate the public expenditures more closely to revealed preference of women. It is more favorable policy at local level to make gender responsive budgeting in India.

Several other socio-economic indicators are also investigated putting gender concern into fiscal federalism. For example, Chattopadhyay and Duflo (2004) argued that representation of female at local level is more favorable for the women in India. They found that village councils with female leaders in west Bengal are more concerned in infrastructure investment as rural women needs like fuel, roads and drinking water are more relevant to it. Moreover, if the leader of council leader is female then participants are also, most likely, females of the village in policymaking process. However, this study primarily focused on female preferences and did not investigate gender aspect. Chakraborty (2021) argued that the impact of expenditure assignment and fiscal decentralization on gender equality are majorly dependent on fiscal transfer among various tiers of government and institutional design. Some studies empirically examined gender equality in fiscal decentralization setup. Bianchi et al. (2019) empirically investigated the effect of fiscal decentralization on public services and labor markets for Italian municipalities. They concluded that female participation in labor market is increased in municipalities that raised more revenues through decentralization as compare to pre-fiscal decentralization period. Similarly, Faguet et al. (2021) investigated that how fiscal decentralization is helpful in Ethiopia and concluded that fiscal decentralization is favorable policy to raise enrolments and to improve female health in Ethiopia. Naeem, Ali and Azam (2022) investigated that how fiscal decentralization affects female human capital in Pakistan. The results of the study suggested that expenditure and revenue decentralization is helpful policy tool to improve female human capital in Pakistan.

Naeem and Khan (2021) empirically examined that how fiscal decentralization affects gender equality and they concluded that fiscal decentralization prompt the gender equality in developing countries. Furthermore the results of the study recommended that gender equality is more increased in low-income countries due to fiscal decentralization as compare to upper-middle income countries. Similar results are found by Naeem and Ali (2021) as, in developing Asia, fiscal decentralization improved gender equality.

The greatest risk in fiscal transfers is corruption. Voice aberrations can prompt the corruption chances at local tier of government comparative to national level. Empirical evidences in the literature indicate that decentralization can reduce accountability that results in increased corruption. For example Fan et al. (2009) empirically investigated that how political and fiscal decentralization affects the corruption in developed and developing countries. This study employed various tiers of government to measure political decentralization and used public pay roll and sub-national revenue share to measure fiscal decentralization. They suggested that larger public pay rolls and larger number of tiers of government are more indulged in corruption. While, Altunbas and Thornton (2012) suggested that increased corruption caused by fiscal decentralization can be decreased by vertical administrative decentralization. Some empirical evidence are in the favor of the argument that more involvement of females in governance arrangement can decrease the corruption chances. The incidences of corruption may affect by the personality traits like honesty, law abiding etc due to gender differences. Additionally gender differences affects the degree to access the network of corruption and poor knowledge to involve in corrupt activities. It is possible that voice of elected women will be a proxy voice as she is not empowered enough and local bodies are operated by their male relatives. It may also be the case that voice may be a “proxy voice” if the elected women are not empowered and their male relatives operate the local bodies. Anyhow, if female representatives are effectively participating at local level then they can amend financial primacies and bring more accountability that ultimately brings efficiency and quality of public goods and services.

One of significant concerns in Pakistan is Gender inequality. The 5th goal of SDG’S is to decrease the gender inequality and the review of empirical literature shows that there are no work, so far, on fiscal decentralization and gender inequality in Pakistan. So current study will fill this gap by examining the impact of decentralization of expenditures and revenue on gender inequality index in Pakistan .

Model specifications

Gender disparity or inequality can also be a statistical measure as it gives the numerical value of girl-to-boy ratio or female to male ratio for indicators like education, health income, etc. It is a human rights issue as it has efficiency and equity dimensions. It is a significant challenge to measure the gender outcomes. The model for this study is

$$GINQ_t = f(DEC_t, Z_t) \tag{1}$$

where

GINQ is gender inequality index

DEC is the fiscal decentralization measures

Z is a set of control variables,

μ Is the error term

and

$$t = 1, 2, \dots, N$$

Models of the study with gender inequality index and decentralization of expenditure and revenue become as:

$$GINQ_t = \alpha_0 + \alpha_1 EXPDEC_t + \alpha_2 COC_t + \alpha_3 DEBT_t + \alpha_4 GFCAP_t + \alpha_5 TEDU_t + \alpha_6 GDPPCG_t + \mu_{it} \tag{2}$$

$$GENEMP_t = \beta_0 + \beta_1 REVDEC_t + \beta_2 COC_t + \beta_3 DEBT_t + \beta_4 GFCAP_t + \beta_5 TEDU_t + \beta_6 GDPPCG_t + \mu_{it} \tag{3}$$

Table 1: Variables Description

Dependent Variable	Description of Variables
GINQ	Gender inequality index
Independent Variables	
EXPDEC	Expenditures Decentralization
REVDEC	Revenue Decentralization
COC	Control of corruption
DEBT	Total debt services
GFCAP	Gross fix capital formation
TED	Tertiary education expenditures
GDPPCG	GDP per capita growth rate

4. Definitions of Variables

Gender Inequality Index (GINQ) depicts inequalities regarding gender mainly in three dimensions i.e. reproduction health, education, governance and contribution to economy. Maternal mortality ratio and adolescent fertility are used to measure reproductive health. Maternal Mortality Rate is calculated number of female deaths per 100,000 live births annually, from any cause related to, or aggravated by the pregnancy or its management. Adolescent fertility rate is the number of births per 1000 women aged 15-19. To measure the women empowerment, the share of parliamentary seats held by each sex is taken. Education is measured through attainment of secondary education. Economic activity is measured through the labour force participation rate which measures the participation of men and women in the labour market. Gender Inequality Index depicts the loss in economic development due to disparities between male and female members of the society. When index has 0 value it shows that male and female are fairly equal in the society whereas when it has 1 value it shows perfect inequality between male and females in the society.

Fiscal decentralization has two measures i.e. expenditure and revenue decentralization. Expenditure decentralization is the ratio of provincial government expenditures to the total government expenditures (provincials plus federal). Revenue decentralization is the ratio of the provincial government's revenue to the total government revenue (provincials plus federal).

Several economic and no-economic factors explain gender inequality; hence, various control variables are included in the models. Economic growth is hindered by corruption as it increases cost, lowers productivity, discourages investment, loss of confidence on public institutions, weakness the public financial management system, limit the development of small and medium-sized enterprises and undermine the investment in social sectors like health and education. Gender inequality is also another major cause of corruption that ultimately slows down the economic growth. Furthermore, skewed public expenditures in favor of rich, investment concentrated towards unproductive projects, regressive tax system, reinforcing patterns of unequal asset ownership, adding a higher level of risk to the investment decisions of low-income individuals, and siphoning funds away from essential public services are other consequences of corruption. All these factors limits the equal distribution of opportunities, thereby increase inequalities in society. Control of corruption is used to measure the strength and effectiveness of institution. The huge debt obligations have adverse effects on economy as a whole.

If large payments goes in debt obligation, it cuts the expenditures on most of the developmental and non-developmental projects so total debt services is taken as a control variable. Tertiary education refers to all formal post-secondary education, including public and private universities, colleges, technical training institutes, and vocational schools.

Tertiary education has a significant role to foster the economic growth, in accessing the opportunities

and for boosting the public welfare. Innovations are dependent on well-educated public as they are well paid because of more productivity hence can well-manage the economic crises. So skillful labor force having access to post-secondary education is precondition of economic development. The benefits of tertiary education are not limited to just an individual but to the whole society. As per the World Bank 2021, tertiary education gives, 17%, greater economic return as compare to primary and secondary education 10% and 7% respectively. Income is total output of a country and instrumental in formation capital. More income of households enables them to provide more education to females. Therefore, higher per capita income plays an important role to reduce gender inequality. Income is measured through GDP per capita growth.

5. Data Source and Methodology

For empirical analysis, annual time series data from 1990-2020 is used for all variables in this study. Data on gender inequality is obtained from IMF database. Various issues of Pakistan Statistical yearbook are used to get the data on fiscal decentralization. While data on other control variables like tertiary education expenditures, total debt services and gross fixed capital formation and GDP per-capita growth is derived from WDI published by World Bank 2022. Control of corruption is taken from World Governance Indicators (2022).

Unit root is the problem of time series data and it causes spurious regression (Nelson and Ploser, 1982). To ensure the stationarity of data, ADF unit root test is employed. Autoregressive Distributive Lag (ARDL) bounds testing approach developed by Pesaran et al., (2001) is employed to empirically investigate the problem. ARDL is utmost advanced technique of co-integration and also has numerous theoretical and technical benefits as compare to traditional methods.

6. Results and Discussion

The long-run results presented in the table 2 show that gender inequality is negatively affected by both measures of fiscal decentralization that states that increasing the decentralization, both in spending and revenue-raising, decrease the gender inequalities in Pakistan. The results of the study are related to theoretical foundation of fiscal decentralization presented by Oates (1972). Public service are better delivered in decentralized system as local government has greater information regarding to specific gender needs in their localities. Moreover, local government can manage the check and balance of efficient local institutions. The internal and external economies increase the production and greater opportunities to take place for women.

Recent empirical studies also support these results as several studies showed that greater gender equality can be achieved through fiscal decentralization (Stotsky, 2019), (Naeem & Khan, 2021). Rajaraman and Saha (2008) in India, Martinez-Vazquez and Yao (2009) in developing economies and Faridi et al. (2012) in Pakistan found that both expenditure decentralization and revenue decentralization are helpful to increase employment level. Gender inequalities can increased if women do not have access to economic activities and remain poor. Female poverty caused by underemployment worsens the disparity in gender relations (Kelkar, 2005). However fiscal decentralization is helpful policy (Bianchi et al., 2019). Gender equality and equity is strategic objective of all developed and developing economies and fiscal decentralization can affect the gender inequality through direct and indirect channels. Economic stability is one of major indirect channels. Women participation in the economy does not only promote growth, but it also expands the economies, alleviates demographic shifts, contributes to financial sector stability (Kochhar et al., 2016). Fiscal decentralization is significant to improve female related indicators as it improves female health (Faguet et al., 2021) and female employment (Bianchi et al., 2019).

Table 2. Long run results of fiscal decentralization and gender inequality

Variables	Expenditure Decentralization	Revenue Decentralization
EXPDEC	-0.101 (0.003)	
REVDEC		-0.284 (0.091)
COC	-0.045 (0.166)	-0.097495 (0.041)
DEBT	-0.0023 (0.0827)	0.0002 (0.7838)
GFCAP	-0.0022 (0.032)	0.0012 (0.524)
TEDU	-0.0151 (0.002)	-0.0044 (0.007)
GDPPCG	-0.2349 (0.0023)	-0.1871 (0.116)
C	2.6463 (0.000)	1.983 (0.029)
ECM	-0.583 (0.000)	-0.9941 (0.000)
Adjusted- R ²	0.79	0.85
D.W	2.1	2.5

Note: Parenthesis have p-values.

Cavalieri and Ferrante (2016) found that tax revenues collected by local governments along with lower transfer dependency from central government lowers the infant mortality rate in Italy. Moreover, benefits of fiscal decentralization vary in regions and it is more favorable for poor regions. As Naeem et al. (2021) supported these results by finding fiscal decentralization decreased reduce gender disparity in education in Pakistan. However in fiscal decentralization process, the revenue collection power by lower tiers of the government is required to increase as it rises the social advantages of decentralization (Iqbal et al., 2013; Naeem, Ali, & Ahmad, 2022).

Social indicators are not always by fiscal federalism as stated by its traditional theory. It may even, at times, worsen the indicators, if local governments is not much capable to administer the public services competently (Smith, 1985). Institutional weakness at provincial level may lead to more corruption and can increases the gender inequity. A strong dedication to fiscal decentralization has become an vital element of donor supported anti-corruption approaches as expected increases in the accountability and reduced preference of bureaucrats (Steinberg, 2001). Fiscal decentralization shows positive impacts on public service delivery in health and education for emerging and developing countries but there is a need for favorable institutional and political environment (Sow & Razafimahefa, 2015). Therefore, the results proved that fiscal decentralization improved the gender equality but it effect significantly when augmented by control of corruption. Hence, it is proved that control of corruption and fiscal decentralization are interdependent.

Surprisingly, debt services plays an important role and surprisingly, it decreases the gender inequalities in Pakistan. Education decrease the gender inequality in Pakistan. The positive association between education and gender equality is supported by several studies such as Okonkwo (2013) in Nigeria, Marphatia and Moussié (2013) in rural Nepal, Kostenko et al. (2016) in Arab world, Ralsmark (2017) in fifteen European countries, Cannonier and Mocan (2018) in Sierra Leone. Growth in per capita income has negative impact on gander inequality it shows that people are not spending much on female’s health and education with increasing their income. As, people in low income group have very little resources for health and education so there is no debate about allocation of the resources between male and females of the house for human capital. However, in lower middle class group has less resources leftover for human capital so priority is always given to male members of the house. It also follows the Kuznets’s hypothesis that inequality first increases with increase in income and then falls in second phase.

7. Conclusion and Policy Recommendations

The female segment of the society faces much discrimination and it became the important agenda of development. Fundamental traditional, cultural and socio-economic inflexibilities in developing societies create misrepresentations that ultimately raise biasedness against females. Pakistan is also a developing country so gender inequalities are observed in several sectors like employment discrimination in labour market, access to several public services, resource distribution within households, within the power structure of the economy etc. Keeping in view this scenario of Pakistan and 18th amendment of giving women development to provincial autonomy, this study hypothesized that fiscal decentralization may decrease the gender inequality in Pakistan. It is found that both expenditure and revenue decentralization is significantly reduce gender inequalities in Pakistan. It is suggested that revenue decentralization is necessary part of decentralization as only expenditure decentralization is not sufficient. Imbalances between spending and revenue raising autonomy leads to crisis in institutions. Revenue raising autonomy stimulates positive exert anilities that reduces the gender inequalities. Corruption is the most important factor to be addressed to achieve the outcomes of fiscal decentralization. Results of the study suggests that governance of the provincial institutions should be efficient otherwise; fiscal decentralization can worsens the outcomes of the gender policy. It should be acknowledged that to reduce the gender inequality is a slow process as many challenges linked to it are deeply rooted and biases in attitude of the humans.

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