

# Dynamics of Social Protection in Context of Structural and Institutional Performances: A Disaggregate Analysis for Pakistan

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Social protection is a source of socioeconomic development and an important instrument used for crisis management.

According to the ILO, 'Social security refers to protect the society with government measures against poor social and economic status in different circumstances like illness, maternity, unemployment, injury and old age'.

Social security is provided through public or collective provisions via private channels. It consists on the basic needs (medical care, education, housing, nutrition, etc.). Pakistan maintains social spending level to meet the social security standards.

After the 18<sup>th</sup> constitutional amendments and consciences on the 7<sup>th</sup> National Finance Commission (NFC) award, the paradigm was shifted to provinces for socio-economic prospect at inter and intra provincial level.

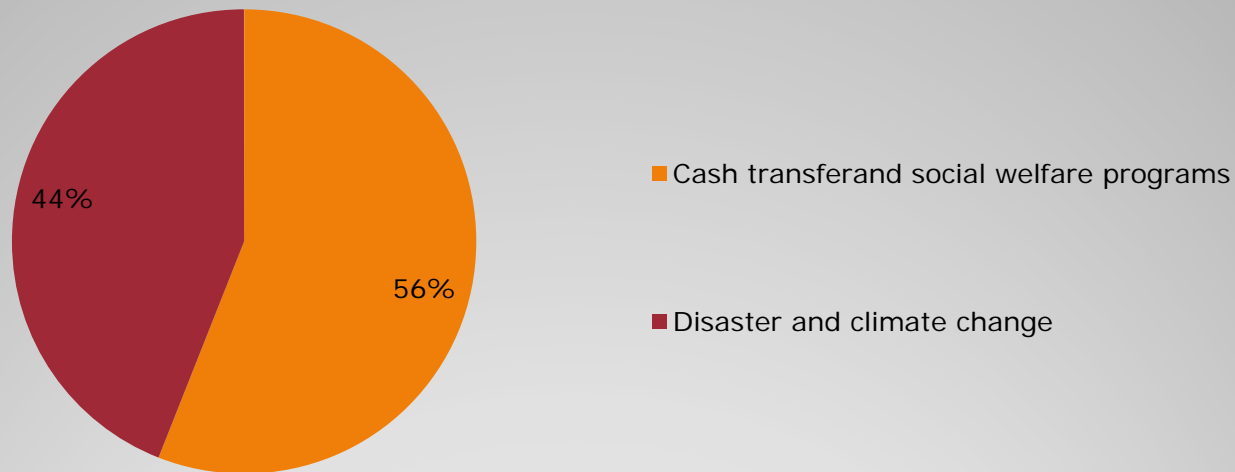
The 7<sup>th</sup> NFC award enhances the fiscal space to provinces to play their role in addressing the interprovincial inequalities. Now the provinces are responsible to develop the social sector, and the Federal Government is subject to concentrate on the budgetary allocations to develop the infrastructure, energy and invigilation to enhance social sector performance.

Social protection programs differ from province to province due to different dynamics of structural, institutional and cultural features in their respective societies.

The sustainability and continuity is too important for social protection scenarios. Further, the provinces encourage to secure the higher levels of social protection by fulfilling their needs, preferences and the financial depth.

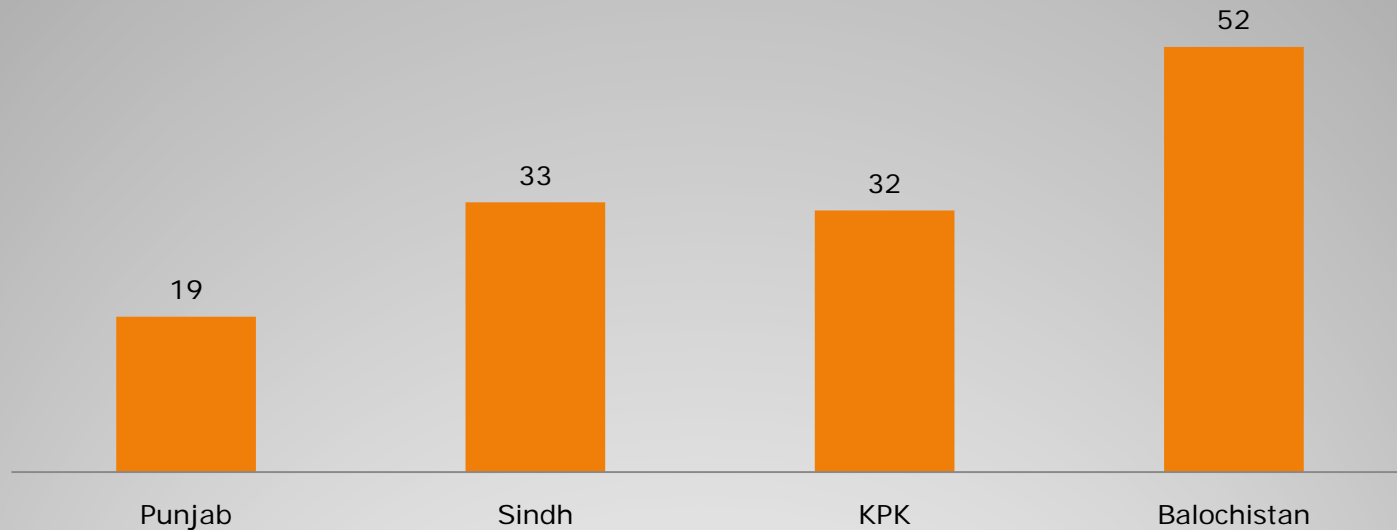
## Some Highlights

### Funds for social assistant programs in 2012



- According to World Bank (2009), Pakistan gets low position among other 87 developing countries as per the level of spending on social safety nets.

## People below poverty line (..%)



- The social safety nets in Pakistan provide least effectiveness because they feed around 18 per cent of the poorest population in the country (Nasim 2014).

# Research Objectives

- To capture difference among provinces on structural and institutional performance indicators.
- To find the allocation of Social Protection funds and degree of welfare standards of each province of Pakistan.

## Research Questions

- What are the levels of fiscal allocation done by the provincial governments for the social protection measures?
- What are the dynamics of social protection expenditures and welfare standards of Pakistan provinces?
- What are the impacts of structural and institutional features on the social protection and welfare in each province?



# Literature Review

**Institutional Performance**

**Government Efficiencies**

**Social Protection**

**Poverty Reduction and Economic Growth**

## Institutional Performance and Social Protection

- Besley, et al. (2003) ranked the developing and developed countries by using social protection and welfare expenditures. They concluded that most countries allocate their funds for social protection but, get more or less fruitless results with respect to welfare due to weak structural and institutional performance indicators.
- A pressure group is needed to raise the voice of people for social protection. Magdalena and Carly, (2012) analyzed the social protection system in Finland by using the human rights approach, concluded that, the legal and institutional framework play a vital role in confirming the benefits of individuals, as per their social rights.

## Government Efficiencies and Social Protection

- Barrientos (2007), Handley (2009), and, Holmes and Jackson, (2008) described that social protection mechanism works under different financial modes. The contribution of national government in social protection is important to sustain in the long-run.
- Francesca (2013) and Barrientos (2012) described that development of sustainable political and social environment is helpful to maintain social protection system.
- Slater and Farrington, (2009) studied the efficiency and effectiveness of social transfers. There are loop holes which are responsible for the inefficiency due to political intervention in decision making that polluted the fiscal budget allocation.
- Holzmann and Jorgensen, (1999) claimed that public intervention is better to manage income risks caused by the social structure.

## Social Protection for Poverty reduction and Economic Growth

- In a theoretical prospect, Bonilla and Gruat, (2003) described that social protection pursue people to carry out risk for high return which moves toward the economic growth.
- Thematic (2012) reported that social protection has its long-term economic impacts on human development process with the provision of better nutrition, education and health facilities.
- Atkinson (1995) and Subbarao (1997) determined that the private social protection strategies like community based organizations are helpful to minimize adverse poverty outcomes.
- Ravallion, (2006) and Dercon, (2005) disclosed that market failure can only be adjusted by enhancing the economic efficiency. It allows households to utilize their resources in an efficient way, to have substantial level of economic growth.

# **Economic Methodology and Econometric Model**

- **Social Protection Rank Analysis**
- **Social Welfare Rank Analysis**
- **Social Protection Regression Analysis**
- **Social Welfare Regression Analysis**

# Social Protection Rank Analysis

**Rank-1:** (level of social protection expenditures)

**Rank-2:** (As per the Performance of Structural Features for Social Protection provision in provinces)

**Rank-3:** (As per the Performance of Institutional Features for Social Protection provision in provinces)

<i>Health Expenditures</i>	<i>Education Expenditures</i>	<i>Social Security and Welfare</i>	<i>Subsidies and Transfers</i>
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<i>GDP per capita</i>	<i>Working Age Population</i>	<i>Per capita GDP shock</i>	<i>Urban population</i>
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<i>Voter turnout</i>	<i>Literacy rate</i>	<i>Deviation of social spending</i>	<i>Political structure</i>
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# Social Welfare Rank Analysis

**Rank-1:** (Welfare Standards)

**Rank-2:** As per the Performance of Structural Features to maintain the Welfare Standards in provinces

**Rank-3:** As per the Performance of Institutional Features to maintain the Welfare Standards in provinces

*Life Expectancy at Birth*

*Infant Mortality Rate*

*GDP per capita*

*Working Age Population*

*Per capita GDP shock*

*Urban population*

*Voter turnout*

*Literacy rate*

*Deviation of social spending*

*Political structure*

# Social Protection Regression Analysis

$$SP_{rst} = \eta_r + \sum_{p=1}^4 \eta_{rp} SF_{pst} + u_{rst} \quad \text{for } r = 1, 2, 3, 4$$

$$\begin{bmatrix} Edu\_Exp_{1st} \\ Health\_Exp_{2st} \\ Social.S \& Welf_{3st} \\ Sub\&Trasf_{4st} \end{bmatrix} = \begin{bmatrix} \eta_1 \\ \eta_2 \\ \eta_3 \\ \eta_4 \end{bmatrix} + \begin{bmatrix} \eta_{11} & \eta_{12} & \eta_{13} & \eta_{14} \\ \eta_{21} & \eta_{22} & \eta_{23} & \eta_{24} \\ \eta_{31} & \eta_{32} & \eta_{33} & \eta_{34} \\ \eta_{41} & \eta_{42} & \eta_{43} & \eta_{44} \end{bmatrix} \begin{bmatrix} lpcgdp_{1st} \\ wapop_{2st} \\ gdpshock_{3st} \\ urbpop_{4st} \end{bmatrix} + \begin{bmatrix} u_{1st} \\ u_{2st} \\ u_{3st} \\ u_{4st} \end{bmatrix}$$

$$\Rightarrow \quad A = \eta + B * C + U$$

$$u_{rst} = \rho_r + \sum_{q=1}^4 \rho_{rq} IF_{qst} + v_{rst} \quad \text{for } r = 1, 2, 3, 4$$

$$\begin{bmatrix} u_{1st} \\ u_{2st} \\ u_{3st} \\ u_{4st} \end{bmatrix} = \begin{bmatrix} \rho_1 \\ \rho_2 \\ \rho_3 \\ \rho_4 \end{bmatrix} + \begin{bmatrix} \rho_{11} & \rho_{12} & \rho_{13} & \rho_{14} \\ \rho_{21} & \rho_{22} & \rho_{23} & \rho_{24} \\ \rho_{31} & \rho_{32} & \rho_{33} & \rho_{34} \\ \rho_{41} & \rho_{42} & \rho_{43} & \rho_{44} \end{bmatrix} \begin{bmatrix} lvto_{1st} \\ llr_{2st} \\ dpess_{3st} \\ polity_{4st} \end{bmatrix} + \begin{bmatrix} v_{1st} \\ v_{2st} \\ v_{3st} \\ v_{4st} \end{bmatrix}$$

$$\Rightarrow \quad U = \rho + D * E + V$$



# Social Welfare Regression Analysis

$$WS_{gst} = \theta_g + \sum_{r=1}^4 \theta_{gr} SF_{rst} + u_{gst}^* \quad \text{for } g = 1, 2$$

$$\begin{bmatrix} LEB_{1st} \\ IMR_{2st} \end{bmatrix} = \begin{bmatrix} \theta_1 \\ \theta_2 \end{bmatrix} + \begin{bmatrix} \theta_{11} & \theta_{12} & \theta_{13} & \theta_{14} \\ \theta_{21} & \theta_{22} & \theta_{23} & \theta_{24} \end{bmatrix} \begin{bmatrix} lpcgdp_{1st} \\ wapop_{2st} \\ gdpshock_{3st} \\ urbpop_{4st} \end{bmatrix} + \begin{bmatrix} u_{1st}^* \\ u_{2st}^* \end{bmatrix}$$

$$\Rightarrow A = \theta + D * E + U^*$$

$$u_{gst}^* = \phi_g + \sum_{r=1}^4 \phi_{gr} IF_{rst} + v_{gst}^* \quad \text{for } g = 1, 2$$

$$\begin{bmatrix} u_{1st}^* \\ u_{2st}^* \end{bmatrix} = \begin{bmatrix} \phi_1 \\ \phi_2 \end{bmatrix} + \begin{bmatrix} \phi_{11} & \phi_{12} & \phi_{13} & \phi_{14} \\ \phi_{21} & \phi_{22} & \phi_{23} & \phi_{24} \end{bmatrix} \begin{bmatrix} lvto_{1st} \\ llr_{2st} \\ dpcss_{3st} \\ polity_{4st} \end{bmatrix} + \begin{bmatrix} v_{1st}^* \\ v_{2st}^* \end{bmatrix}$$

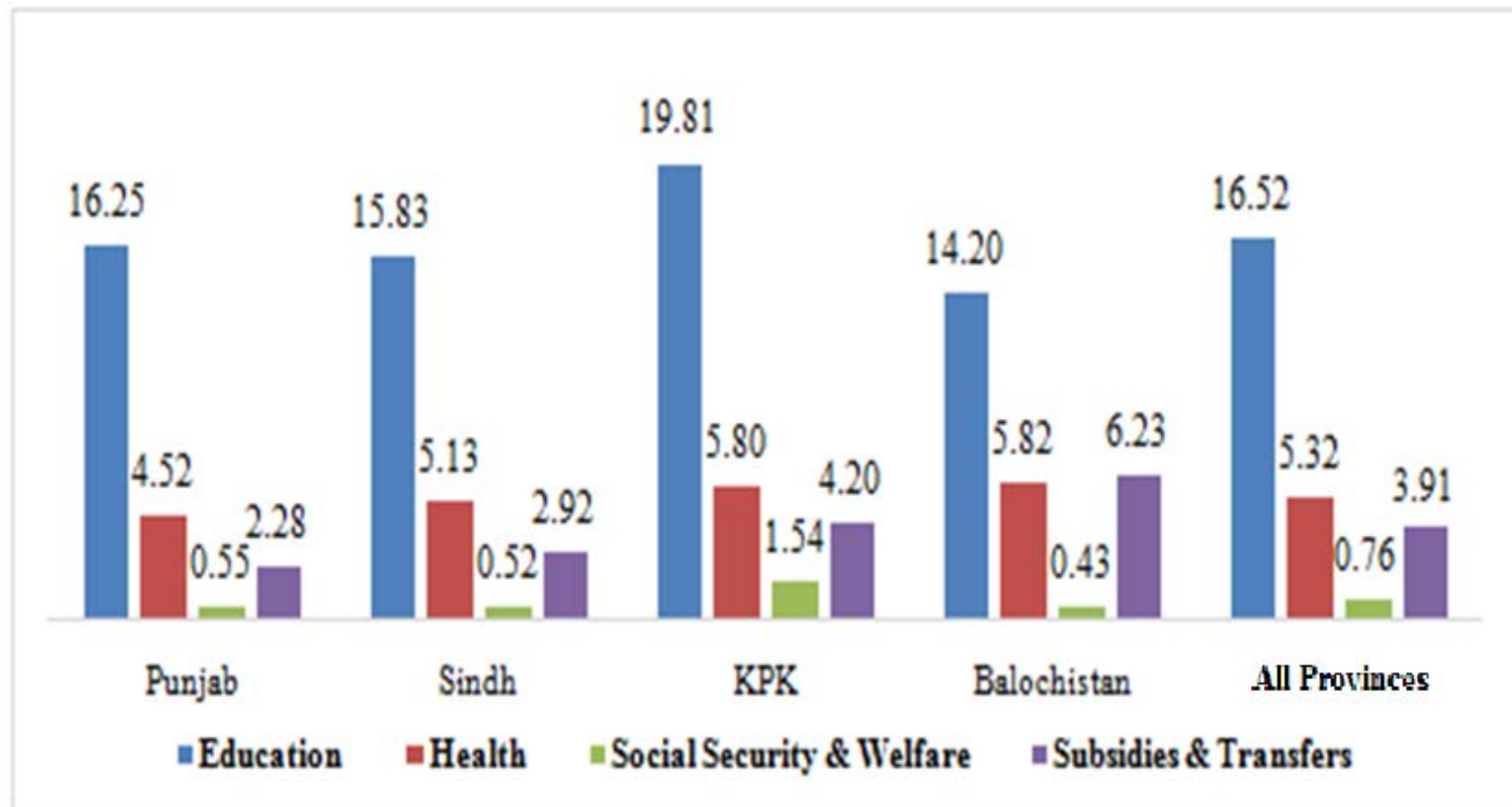
$$\Rightarrow U^* = \phi + D * E + V^*$$

# Variables and Data Sources

Type	Variable	Explanation	Data Source
Social Protection	<i>Health_Exp</i>	Health Expenditures % Total Govt. Exp.	Pakistan Statistics Year Book (1988-2012)
	<i>Edu_Exp</i>	Education Expenditures % Total Govt. Exp.	//
	<i>Social Security &amp; Welfare</i>	Social Security & Welfare Expenditures % Total Govt. Exp.	//
	<i>Subsidies &amp; transfers</i>	Subsidies & transfers % Total Govt. Exp.	//
Structural Features	<i>lpcgdp<sub>st</sub></i>	logarithmic form of per capita GDP	Bengali, K. and Sadaqat, M. (2001)
	<i>wapop<sub>st</sub></i>	working age population as a proportion of the total population	Pakistan Labor Force Survey (several years)
	<i>gdpshock<sub>st</sub></i>	GDP shock	<i>Author Estimated<sup>A</sup></i>
	<i>urbpop<sub>st</sub></i>	urban population over total population	Pakistan Labor Force Survey (several years)
Institutional Features	<i>lvto<sub>st</sub></i>	Voter turn out	Gallup Pakistan
	<i>llr<sub>st</sub></i>	Literacy rate	Provincial Development Annual Reports
	<i>dpcss<sub>st</sub></i>	Deviation in per capita social spending	Pakistan Statistics Year Book (1988-2012)
	<i>polity<sub>st</sub></i>	Political pattern (Democratic or Autocratic)	INSCR (2014)
Welfare Indicators	<i>Life Expectancy at Birth (LEB)</i>	Number of yours human expected to alive at birth	Annual Reports Published by the provincial governments
	<i>Infant Mortality Rate (IMR)</i>	Infant mortality rate for 1000 birth	

# Empirical Results

## Social Protection Expenditures



# Social Protection and Rank Analysis

<i>Edu_Exp</i>	<i>Rank-1</i>	<i>Rank-2</i>	<i>Rank-3</i>
<b>KPK</b>	1	1	2
<b>Punjab</b>	2	3	3
<b>Sindh</b>	3	2	1
<b>Balochistan</b>	4	4	4

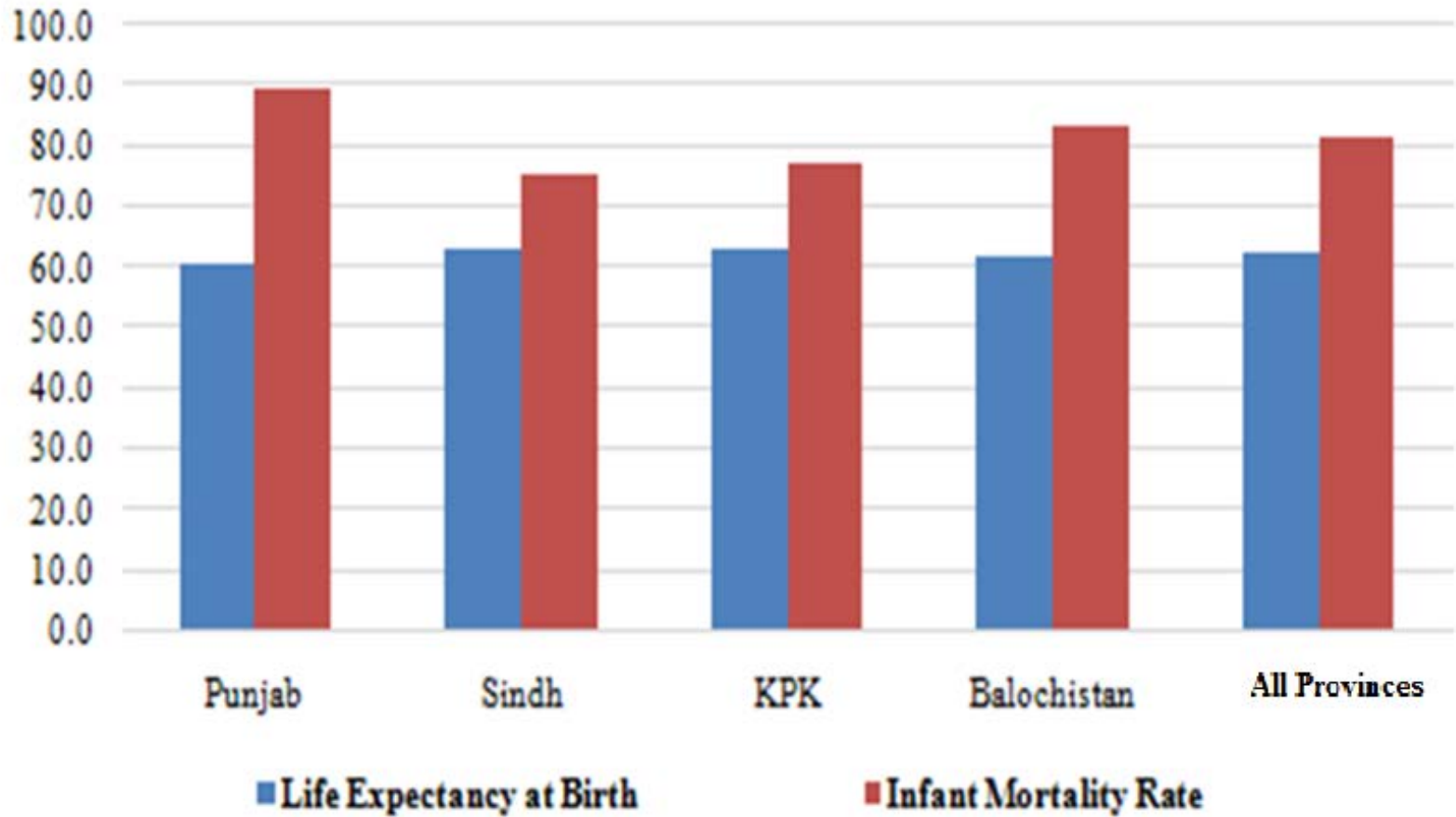
<i>Health_Exp</i>	<i>Rank-1</i>	<i>Rank-2</i>	<i>Rank-3</i>
<b>Balochistan</b>	1	4	4
<b>KPK</b>	2	1	2
<b>Sindh</b>	3	2	1
<b>Punjab</b>	4	3	3

<i>Social Security &amp; Welfare</i>	<i>Rank-1</i>	<i>Rank-2</i>	<i>Rank-3</i>
<b>KPK</b>	1	4	4
<b>Punjab</b>	2	1	2
<b>Sindh</b>	3	3	3
<b>Balochistan</b>	4	2	1

<i>Subsidies &amp; Transfers</i>	<i>Rank-1</i>	<i>Rank-2</i>	<i>Rank-3</i>
<b>Balochistan</b>	1	1	1
<b>KPK</b>	2	2	2
<b>Sindh</b>	3	3	4
<b>Punjab</b>	4	4	3

*Source: Author's estimation*

## Welfare Standards



# Welfare Standards and Rank Analysis

LEB	Rank1	Rank2	Rank3
KPK	1	1	2
Sindh	2	3	3
Balochistan	3	4	4
Punjab	4	2	1

*Note: Life Expectancy at Birth (LEB)*

IMR	Rank1	Rank2	Rank3
Sindh	1	4	4
KPK	2	3	3
Balochistan	3	2	1
Punjab	4	1	2

*Note: Infant Mortality Rate (IMR)*

## Regression analysis for Structural Features and Social Protection

Variable	<i>Edu_Exp</i>	<i>Health_Exp</i>	<i>SocialS &amp;Welf</i>	<i>Sub &amp;Trasf</i>
<b>LPCGDP</b>	-101.776 (-5.186) *	-13.768 (-3.330) *	11.626 (2.663) *	-20.063 (-3.334) *
<b>WAPOP</b>	-28.507 (-1.393)	-16.970 (-3.938) *	-7.789 (-1.711) **	-20.581 (-3.281) *
<b>GDP SHOCK</b>	29.484 (-5.422) *	3.294 (-2.875) *	3.434 (2.839) *	-0.426 (-0.256)
<b>URBPOP</b>	69.292 (-4.096) *	10.144 (2.846) *	-9.615 (-2.555) *	12.755 (2.459) *
<b>C</b>	375.007 (-5.628) *	57.043 (-4.064) *	-36.748 (-2.479) *	78.783 (3.855) *
<b>R-squared</b>	0.395	0.300	0.159	0.309
<b>Adjusted R-squared</b>	0.368	0.269	0.122	0.279
<b>F-statistic</b>	14.838	9.739	4.290	10.185
<b>Prob. F-statistic</b>	0.000	0.000	0.003	0.000

Source: Author's estimation, Note: Social Security and Welfare (SS&W), Subsidies and Transfers (S&T), Note: \* and \*\* significant value at 5% and 10% level of significance.

## Regression analysis for Institutional Features and Social Protection

<i>Variable</i>	<i>Edu_Exp_R</i>	<i>Health_Exp_R</i>	<i>SocialS &amp;Welf_R</i>	<i>Sub &amp;Trasf_R</i>
<b><i>C</i></b>	16.293 (-1.346)	1.386 (0.564)	-1.268 (-0.412)	3.720 (0.880)
<b><i>LVTO</i></b>	6.684 (-0.702)	2.814 (1.456)	2.623 (1.083)	-3.489 (-1.049)
<b><i>LLR</i></b>	-17.002 (-1.951)**	-3.662 (-2.070)*	-1.684 (-0.759)	1.116 (0.367)
<b><i>DPCSS</i></b>	0.012 (-3.261)*	0.041 (4.099)*	0.019 (2.039)*	0.073 (0.541)
<b><i>POLITY</i></b>	0.430 (-3.531)**	0.095 (3.847)*	-0.016 (-0.522)	-0.076 (-1.791)**
<b>R-squared</b>	0.276	0.328	0.052	0.060
<b>Adjusted R-squared</b>	0.244	0.298	0.011	0.019
<b>F-statistic</b>	8.669	11.090	1.253	1.461
<b>Prob. F-statistic</b>	0.000	0.000	0.294	0.221

*Source: Author's estimation, Note: \*and \*\* significant value at 5% and 10% level of significance respectively.*



## Structural and Institutional Features and Welfare Standards

<i>Type</i>	<i>Variable</i>	<i>LLEB</i>	<i>LLEB_R</i>	<i>LIMR</i>	<i>LIMR_R</i>
<b>Structural Features</b>	<i>C</i>	0.770 (13.457) *		4.506 (16.805) *	
	<i>LPCGDP</i>	0.308 (18.243) *		-0.779 (-9.863) *	
	<i>WAPOP</i>	0.157 (-8.933) *		-0.394 (4.780)	
	<i>GDPSHOCK</i>	0.015 (3.188) *		0.041 (1.893) *	
	<i>URBPOP</i>	0.194 (13.322) *		-0.478 (7.022) *	
	<b>Institutional Features</b>	<i>C</i>		0.014 (1.213)	
<i>LVTO</i>			-0.013 (-1.469)		0.044 (1.039)
<i>LLR</i>			0.004 (0.525) *		-0.012 (-0.306)
<i>DPCSS</i>			0.046 (0.131)		0.073 (2.161) *
<i>POLITY</i>			0.027 (-2.210) *		-0.061 (2.233) *
<b>R-squared</b>		0.822	0.090	0.579	0.130
<b>Adjusted R-squared</b>		0.814	0.050	0.561	0.091
<b>F-statistic</b>		104.724	2.255	31.316	3.391
<b>Prob. F-statistic)</b>		0.000	0.069	0.000	0.012

*Source: Author's estimation, \* significant value at 5% level of significance.*

# Findings

## Balochistan

- Balochistan prefers to spend more on health and, subsidies & transfers as compared to the other social protection channels.
- It has a big tendency to allocate funds in health sector but shows the least structural and institutional features in utilizing these funds optimally. Also it performs well for provision of subsidies and transfers as compared to other provinces in Pakistan.

## Sindh

- Sindh is at third position in creating a fiscal space for all social protection indicators and represents a poor structural and institutional performance especial for the provision of social security & welfare and Subsidies & Transfers.
- Welfare standards are little good but have poor structural and institutional performance to maintain such standards.

## **KPK**

- KPK gives more preference to education and, social security & welfare.
- By considering the structural and institutional features, it is concluded that KPK shows better performance in education.
- As KPK create a good fiscal space for social security and welfare purpose but it holds least structural and institutional performance.

## **Punjab**

- In this comparison Punjab is at the second position, for provision of funds for social security and welfare, and has good structural and institutional features for delivering it in respective manners.
- It is showing a low fiscal space for the provision of health services, subsidies & transfers, and the structural and institutional performances are too low for these heads.

***Thank You***