A Tale of Two (Once Related) Countries: Inclusive Growth and Social Protection Empirics Using Structural Equation Model in Pakistan and Bangladesh

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Abstract

The stabilizing role of social protection for ensuring inclusive growth is well recognized however understanding of the mediational pathways remains limited. This study examines how institutional quality, globalization, and macroeconomic stability mediate the relationship between social protection and inclusive growth. Using data from Pakistan and Bangladesh, we develop indices for inclusive growth, social protection and macroeconomic stability from 1984 to 2020. Inclusive growth is assessed across five dimensions and thirty-three indicators, while social protection is measured through eleven key indicators in Pakistan and seventeen in Bangladesh. Macroeconomic stability is measured with two dimensions and six indicators. Employing structural equation modeling, we analyze the total, direct and mediating effects of social protection on inclusive growth, finding that investment in social protection, along with institutional quality and macroeconomic stability, significantly contributes to achieving inclusive growth in both Pakistan and Bangladesh. The study also indicates that Bangladesh is making greater strides towards achieving higher inclusive growth compared to Pakistan, largely due to its significantly higher coverage of social protection programs and its engagement in the process of globalization. A robust policy recommendation is proposed for enhancing the coverage and framework of social protection programs, as well as improving institutional transparency, to foster inclusive growth in both countries.

Keywords: *Inclusive Growth, Social Protection Globalization, Macroeconomic Stability, Pakistan, Bangladesh.*

1. Introduction

Social protection has attracted great attention intrinsically as part of the agenda of fundamental human rights as well as instrumentally for its posited role as promoter of inclusive growth (Mathers and Slater, 2014). Inclusive growth is the economic growth that creates and distributes fair opportunities among societies (OECD, 2019). United Nations highlights the global agenda of

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achieving inclusive growth by reducing poverty, protecting the environment, achieving social sustainability, ensuring prosperity for all, and creating opportunities on an equity basis (Assembly, 2019; DESA, 2018).

Development economics has been undergoing a significant shift from prioritizing economic growth to embracing inclusive growth (Abdoul and Gamil, 2021). For many years, numerous countries prioritized accelerating economic growth (Razavi et al., 2020). However, there has been a sudden global shift in development economics discourse towards inclusive growth (Vellala et al., 2014). This shift is motivated by the recognition that if growth exacerbates inequality, it will leave the poor behind. High levels of inequality can lead to macroeconomic instability and hinder overall growth (Naz and Aslam 2023).

The fundamental components of the inclusive growth are employment and productivity, development in human capabilities and social safety nets with targeted interventions through institutions and macroeconomic stability (Vellala at al., 2014). The targeted interventions i.e., institutions and the macroeconomic stability serves as the mediators to ensure the inclusive growth (Asadullah and Savoia, 2018). These interventions target the poverty and inequality and enhance the overall welfare of an economy (Abdulahi et al., 2019). Inclusive growth aims to provide equal opportunities to all individuals however, if certain segments of the population do not actively participate in the growth process, it can aggravate inequality. To mitigate such disparities and uphold the principle of equity, policymakers prioritize social protection programs and policies (Nawaz and Iqbal, 2021).

Social protection policies were firstly established after the Second World War to protect the public and workers from social risks, economic adversity and social exclusion (Cornia et al., 1989). Developing countries also experienced the paradigm shift in the post war period when United Nations came with more protected human rights, investment in human capital through social protection programs. Social protection policies got high priority to unlock the poverty traps and to improve the human, social and economic infrastructure. Hence, these economic arrangements made a way towards inclusive growth (Irfan, 2003; Merrien, 2013; DESA, 2018).

Arvanitidis et al. (2007) argue from conceptual and theoretical perspectives that social protection not only has a direct impact on inclusive growth but also enhances economic growth inclusivity by mediating through institutional quality, globalization, and macroeconomic stability. Hence, these factors not only directly contribute to achieving inclusive and sustainable growth but also serve as mediators between social protection and inclusive growth. Similarly, Ali et al. (2015) and Santos and Simoes (2021) explore various dimensions of globalization and empirically analyze its influence on social welfare policies and economic recovery across thirty-six Organization for Economic Co-operation and Development countries. This body of literature offers a theoretical framework for empirical examination of the mediating relationship between inclusive growth and social protection.

Since the 1970s, OECD countries have seen a significant increase in the inclusive growth. Their GDP has increased by about ten percent from 1973 to 1998, attributed to heightened social expenditures and effective welfare programs (Bhargava et al., 2001; Arjona et al., 2003). In context of high priority to social protection policies and paradigm shift from economic growth to inclusive growth Pakistan and Bangladesh are also dedicated to enhancing their social welfare and safety net programs to attain inclusive growth (Shah, 2020; Khatun and Saadat, 2020).

Pakistan has initiated several social protection programs since independence, including the Provincial Employees Social Security Scheme (PESSS) in 1967 (Bari et al., 2005), and additional schemes like the Worker's Children Education Ordinance and Welfare Fund Scheme in the early 1970s (Nabi, 2013). The country introduced its first conditional and unconditional cash programs, the Benazir Income Support and Ehsaas program, in 2008 (Shah, 2020).

Conversely, Bangladesh's early social protection efforts revolved around the Food-for-Work program during the 1970s crises (Kabeer and Sharma, 2009). Despite facing military regimes since

independence, the 1990s saw a resurgence of social schemes in Bangladesh with the reinstatement of bureaucracy to address poverty and vulnerability (Khatun and Saadat, 2020). Bangladesh has prioritized the development of social and human capital, contrasting with Pakistan's focus on physical infrastructure. Both countries are suffering with economic challenges such as population pressure, water scarcity, sanitation, and power shortages, hindering their potential. In continuation to this, figure 1 and 2 provides the comparison of inclusive growth and social protection between the two countries.

Figure 1: Comparison of Inclusive Growth: Pakistan and Bangladesh
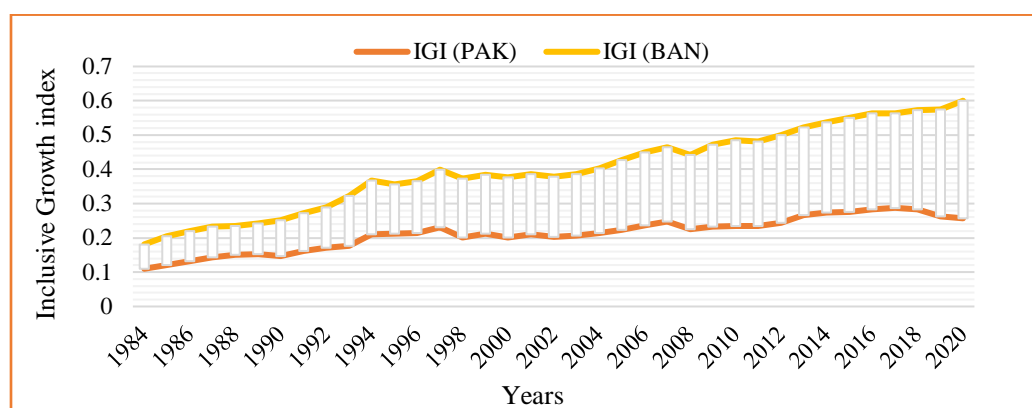
Source: Based on author's own calculations.

Figure 1 illustrates that Pakistan trails behind Bangladesh in terms of inclusive growth, with Pakistan's inclusive growth index ranging 0.11 to 0.25, while Bangladesh experiences higher inclusive growth ranging 0.18 to 0.60. Historically, Bangladesh, formerly East Pakistan, was seen as significantly behind Pakistan in development. However, upon gaining independence, Bangladesh made remarkable progress in achieving inclusive growth objectives (Asadullah et al., 2014; Alam, 2020). Its GDP has surged from USD 37.9 billion in 1995 to over nine times that amount in 2019 (Muqtada and Khatun 2020; Begum et al., 2021), propelling it to the 39th position in global GDP rankings[4]. Figure 2 compares the social protection between Pakistan and Bangladesh.

Figure 2: Comparison of Social Protection: Pakistan and Bangladesh
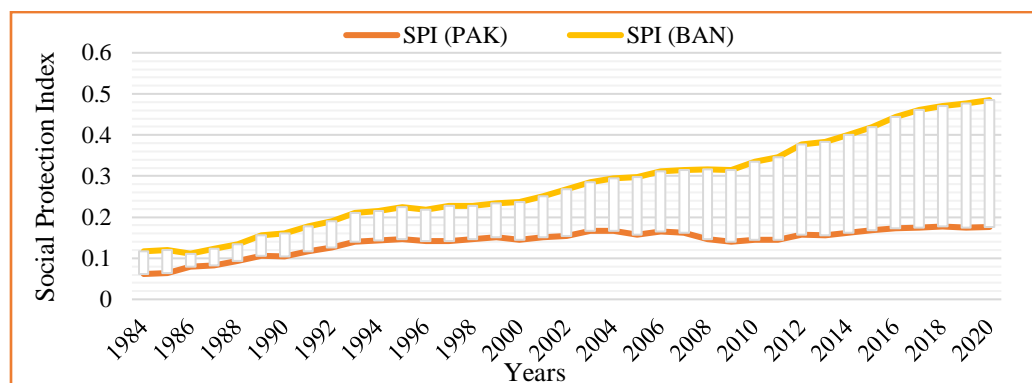
Source: Based on author's own calculations.

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[4] According to IMF database

According to our empirical data spanning from 1984 to 2020 for Pakistan and Bangladesh, Figure 2 clearly indicates that Bangladesh exhibits a more robust implementation of social protection programs compared to Pakistan. The range of the social protection program index in Pakistan falls 0.06 to 0.19, whereas Bangladesh not only has increased the number of social protection programs but also their coverage. Figure 2 illustrates that the index of social protection programs in Bangladesh ranges from 0.11 to 0.49. This indicates that Bangladesh is significantly ahead in implementing social welfare programs aimed at achieving the goal of inclusive growth.

Inclusive growth and social protection are multidimensional. In order to operationalize them, we construct composite indices and then use structural equation models, which explore the mediating role of institutional quality, globalization and macroeconomic stability in the association between social protection and inclusive growth in Pakistan and Bangladesh. We contribute to the existing literature in numerous ways. It takes the social protection, inclusive growth and macroeconomic stability as latent variables and generates unique index of these latent variables by using improved entropy weight model (IEWM). It further employs structural equation modeling approach to the time series variables. By using structural equation modeling approach study examines the total, direct and mediating impact of the social protection on inclusive growth with the set of three mediators i.e., institutional quality, macroeconomic stability and globalization.

The article is organized as follows: section 2 reviews the existing literature, section 3 discusses the theoretical framework, section 4 introduces the data, model and methodology, section 5 summarizes results and section 6 contains the conclusion and limitations.

2.   Literature Review

Although, numerous studies link inclusive growth and social protection however, divergent results are obtained in the existing literature for both theoretical and empirical literature. As few studies narrate that social protection is good for growth (Hubbard and Judd, 1987) (Aschauer, 1989) (Nawaz and Iqbal, 2021) and some supports the idea that it suppresses the growth by generating beneficiary systems (Mirrlees, 1971) (Lindbeck, 1975) (Izak, 2011) (Sakellaridis, 2009). This section of the study reviews literature both theoretically and empirically.

The literature suggests that social protection contributes positively to economic growth (David and Petri, 2013). Studies during the 1980s and 1990s indicated that social protection and institutional quality foster social cohesion (Castles and Dowrick, 1990). In the absence of annuity markets and facing borrowing constraints, social protection serves a welfare-enhancing role (Hubbard and Judd, 1987), enabling individuals to manage sickness, illiteracy, and economic risk. According to a study by ILO and UNDESA (2012), which analyzed 131 positive growth spells across 80 countries from 1984 to 2001, 42 percent of cases benefited the poor by reducing inequality, enhancing social cohesion, empowering women, and creating jobs for the poor compared to the non-poor. They suggest that linking growth with social protection can help mitigate social costs and effectively engage institutions. Nayab and Farooq, 2014; Waqas and Awan, 2014; and Ali et al., 2015 examined the impact of components of social protection programs on poverty, vulnerability, inequality. They found positive and significant impact of these programs on the components of inclusive growth in developing countries. The same had been corroborated in the US (Aschauer, 1989), for a large set of developing countries (Chu et al., 2013) and in the case of Bangladesh and Pakistan (ul-Mustafa et al.,2021). However, they measured the social protection and inclusive growth with one or few indicators and examined an impact of social protection on inclusive growth. Our study fills the gap by using multiple dimensions to measure both and examining the mediational role of selected macroeconomic variables i.e., institutional quality, macroeconomic stability and globalization between inclusive growth and social protection. Literature provides that institutional quality is highly significant and one of major concept in ensuring economic growth for inclusiveness. Kaufmann and Kraay (2002) established that higher institutional quality was necessary for higher per capita income. Grindle (2004) emphasized that

the concept of institutions is not straightforwardly linked with growth. Kwilinski et al. (2023) measured inclusive growth using four pillars and merging twelve indicators for selected EU countries. For institutional quality, they used five indicators extracted from ICRG, similar to our study. However, they used institutional quality as an explanatory variable, whereas our study employs it as a latent variable, facilitating a mediating link between inclusive growth and social protection. Their findings suggested that the digital transformation of public services and improvement of institutional quality are key policy roles for inclusive growth.

Macroeconomic stability significantly impacts growth and inclusiveness (Davoodi et al., 2021), fostering even income distribution, poverty reduction, higher growth, and improved living standards (Sajid and Ali, 2018). Ahiadorme (2022) empirically examined the role of monetary policy and macroeconomic stability in inclusive growth across 144 countries from 2000 to 2018. He measured macroeconomic stability using inflation and inclusive growth with poverty, inequality, and income distribution (a brief measurement unlike of this study). His findings suggested that developed countries exhibited more evident inclusive growth compared to developing and low-income countries. Lower inflation correlated with improved inclusive growth in both developed and developing countries.

Globalization, the third mediator in our study, impacts countries differently depending on their social, economic, and political development levels. While Least Developed Countries (LDCs) both benefit and face challenges from globalization, effective macroeconomic policies can help them to achieve inclusive growth through globalization channels. Ali et al. (2015) analyzed time series data from Pakistan (1980-2014) and found that globalization, particularly through trade openness and Foreign Direct Investment (FDI), increased employment opportunities and reduced unemployment. They suggested that collective and effective state policies toward globalization can drive growth. Shahzad and Chaudhary (2020) empirically found that globalization directly enhances inclusive growth in developed countries but has negative effects due to environmental degradation. Conversely, globalization adversely affects inclusive growth in developing countries compared to developed ones. The study recommended implementing environmental protection policies to mitigate the negative impacts of globalization on inclusive growth.

Existing literature primarily examines the relationship between components of inclusive growth and social protection. However, to our knowledge, no prior study emphasizes the need for proposing and computing indices for inclusive growth and social protection. Most studies use only a few indicators to measure both. Our study fills this gap significantly by considering broader dimensions of both inclusive growth and social protection. Each dimension is further divided into areas measured by multiple indicators, allowing us to construct comprehensive indices for inclusive growth and social protection. Additionally, we assess the impact of social protection on inclusive growth, considering the mediating role of globalization, institutional quality, and macroeconomic stability. Our analysis serves as a complementary tool to examine the role of social protection in promoting inclusive growth, not only directly but also indirectly through a set of mediators. We employ a different methodology, structural equation modeling, providing a total, direct, and indirect link between social protection and inclusive growth in Pakistan and Bangladesh.

3. Conceptual Framework

There are several theories develop the concept that refer to the trade-off between inclusive growth and social protection. These theories directly relate social spending with growth for instance Chu et al., (2003); Piece (2012); Kiendrebeogo et al. (2017); Anwar et al., (2019). The concept of social protection that stimulates the growth, is not new as number of studies suggest that social protection and safety net programs have increased growth (Castles and Dowrick, 1990; Perotti, 1992; Bari et al., 2005; Khan and Qutub, 2010 and Siddiki et al., 2014).

While many studies establish a connection between inclusive growth and social protection, the existing literature presents varied findings in both theoretical and empirical realms. Some studies argue that social protection fosters growth (Hubbard and Judd, 1987; Aschauer, 1989; Nawaz and Iqbal, 2021), while others contend that it hampers growth by fostering dependency among beneficiaries (Mirrlees, 1971; Lindbeck, 1975; Izak, 2011; Sakellaridis, 2009).

Inclusive growth is a novel idea having no specific bench mark of its measurement (Wang et al, 2023). If we look into the literature there are numerous modern and classical theories which measure the inclusive growth with a single or few variables (Estrada et al., 2014; Aoyagi and Ganelli, 2015; Sajid and Ali, 2018; Eboh et al., 2022). We believe that measuring inclusive growth with one or few variables do not picture the whole concept at one canvas. McKinley (2010) measures the inclusive growth with ten key indicators for the thirty-one Asian countries including Pakistan and Bangladesh. His work provides us an idea of constructing the index of inclusive growth. However, we are dividing the concept into dimensions, areas and then the indicators.

Institutions play a pivotal role in driving inclusive growth, as highlighted by Abdulahi et al. (2019) and emphasized by economists such as Nelson and Sampat (2001), and Rodrik et al. (2004). Institutions are often described as the "rules of the game" (North, 1990) or the human environment (Dunning, 2006) that shape market dynamics. Institutions supporting market development are vital for both growth and poverty reduction (Enders and Hoover, 2003; Tebaldi and Mohan, 2010). Asadullah and Savoia (2018) find that improved institutions, alongside macroeconomic stability, significantly drive inclusive growth.

Macroeconomic instability hampers growth, inclusiveness, and poverty alleviation efforts, posing challenges to labor and productive markets (Sajid and Ali, 2018). Economic volatility, high inflation, unsustainable debt, and fluctuations in exchange rates and financial markets contribute to job losses, impeding progress towards achieving inclusive growth in many developing countries which are prone to the process of globalization (Davoodi et al., 2021). Globalization is described as both subversive and addictive. It undermines the status quo and challenges vested interests, while also fueling expectations for greater material gain, freedom, and knowledge, which can be politically challenging to manage (Hameiri, 2021; Lawrence, 2023). Developing economies are major beneficiaries of globalization, reflected in social indices (Cerra, 2021; Betz and Hein, 2023). Figure 3 elaborates the conceptual framework of this study.

Figure 3:   Conceptual Framework of IGI, SPI, GLOB, MESI and IQI
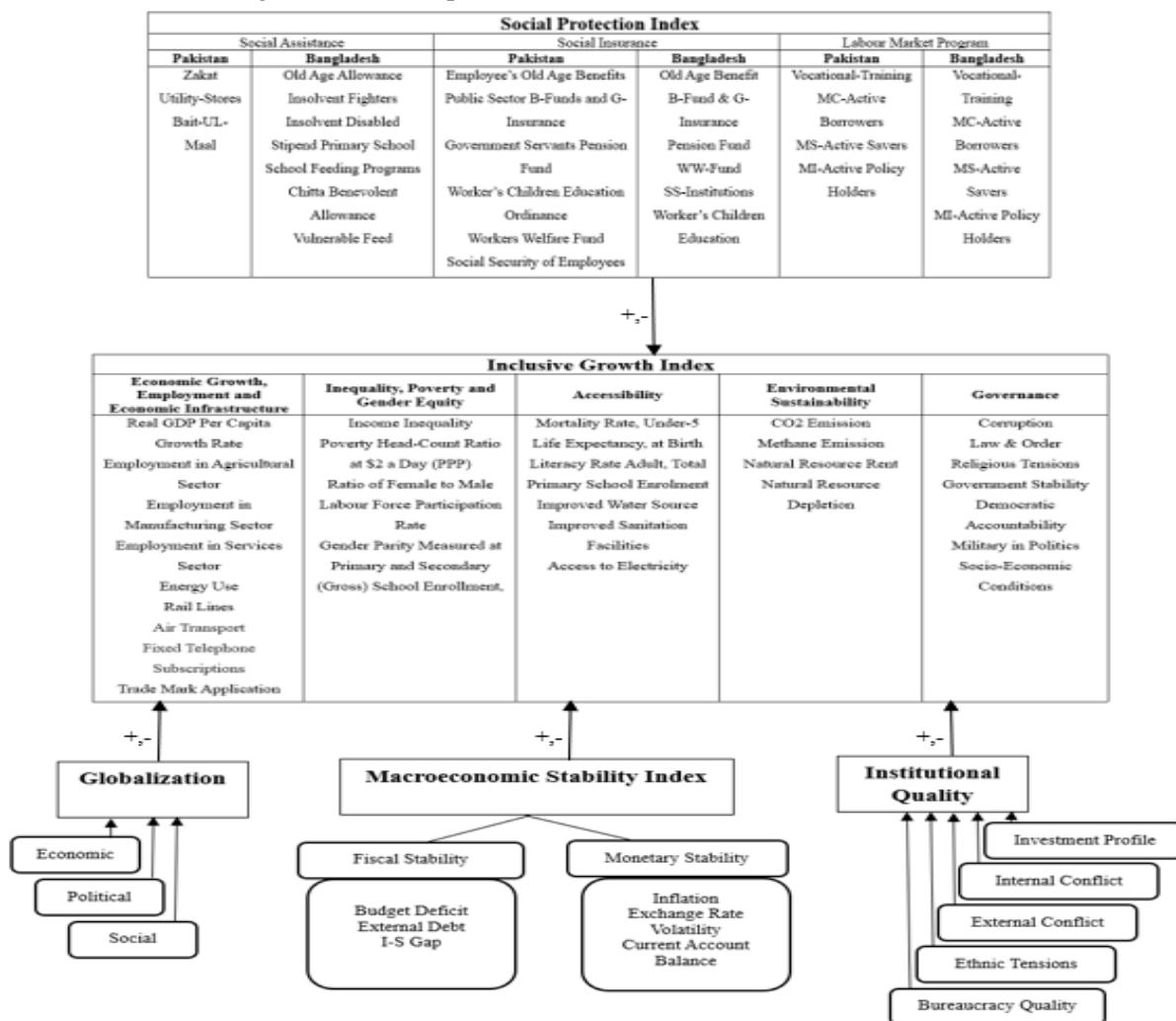
Source: Developed by author.

Figure 3 delineates the comprehensive index of each variable established within this study, alongside the prospective impact of social protection, globalization, institutional quality, and macroeconomic stability on inclusive growth. This section outlines the individual concept of each variable and the aggregate concept of our research. Subsequent sections will delve into data, models, methodologies, results, and discussions.

4.   Derivation of Data, Model and Methodology

This section introduces socioeconomic indicators used in composite indices for social protection and inclusive growth, along with their construction methods. It then outlines the structural equation model employed to estimate the impact of social protection on inclusive growth, considering potential mediating roles of macroeconomic stability, globalization, and institutional quality.

4.1 Data

Details for the macroeconomic time series variables of Pakistan and Bangladesh for the sample of 1984-2020 are outlined in table 1.

Table 1: Delineates of the Variables

Variables	Descriptions	Dimensions/Details	Sources
Inclusive Growth (IG$_t$)	Inclusive growth index comprising of five dimensions and thirty-three indicators for both Pakistan and Bangladesh	Economic Growth, Employment and Economic Infrastructure (EEE$_t$) Poverty, Inequality and Gender Equity (PIGE$_t$) Accessibility (AS$_t$) Environmental Sustainability (ES$_t$) Governance (GOV$_t$)	Author's calculated index
Social Protection (SP$_t$)	Social protection index comprising of three dimensions while eleven indicators for Pakistan and seventeen indicators for Bangladesh	Social Assistance (SA$_t$) Social Insurance (SI$_t$) Labor Market Programs (LMP$_t$)	Author's calculated index
Macroeconomic Stability (MES$_t$)	Macroeconomic stability index containing of two dimensions and six indicators for both Pakistan and Bangladesh	Fiscal Stability (FS$_t$) Monetary Stability (MS$_t$)	Author's calculated index
Globalization (GLOB$_t$)	Globalization containing three indicators for both Pakistan and Bangladesh	Economic Globalization (EG$_t$) Political Globalization (PG$_t$) Social Globalization (SG$_t$)	KOF-Index
Institutional Quality (IQ$_t$)	Institutional quality consisting of five indicators for both Pakistan and Bangladesh	Investment Profile (IP$_t$) Internal Conflict (IC$_t$) External Conflict (EC$_t$) Ethnic Tensions (ET$_t$) Bureaucracy Quality (BQ$_t$)	ICRG-Index

ICRG=International Country Risk Guide   Source: Developed by Author

Table 1 describes the variables, with inclusive growth as the dependent variable. The first dimension comprises of nine indicators: real GDP per capita growth rate (RGDPG$_t$), employment in services, manufacturing, and agriculture sectors (ESS$_t$, EMS$_t$, EAS$_t$), rail lines (RL$_t$), air transport (AT$_t$), fixed telephone subscriptions (FTS$_t$), trademark applications (TMA$_t$), and energy use (EU$_t$). The second dimension includes four indicators: poverty headcount ratio at $2 a day (POVt), income inequality (YGINI$_t$), primary and secondary gross school enrollment (GPI$_t$), and the ratio of female to male labor participation rate (LFP$_t$). The third dimension is consisted of seven indicators: mortality rate under 5 (MU5$_t$), life expectancy at birth (LEX$_t$), primary school enrollment (PEER$_t$), improved water sources (ACW$_t$), improved sanitation facilities (ABS$_t$), and access to electricity (AE$_t$). The fourth dimension comprises four indicators: CO2 emissions (CO2EM$_t$), methane emissions (MEM$_t$), natural resource rent (NRR$_t$), and natural resource depletion (NRD$_t$). The last dimension includes seven indicators: corruption (COPt), law and order (L&O$_t$), religious tensions (RT$_t$), government stability (GS$_t$), democratic accountability (DA$_t$), military involvement in politics (MIP$_t$), and socio-economic conditions (SEC$_t$).

Social protection, the independent variable, comprises of three dimensions. In the first dimension, differences exist between Pakistan and Bangladesh. For Pakistan, it includes zakat, utility stores, and bait-ul-maal, while Bangladesh's indicators encompass old age allowance, assistance for insolvent fighters and disabled individuals, primary school stipends, school feeding

programs, Chitta benevolent allowance, and support for vulnerable individuals. The second dimension is assessed through six indicators in both countries, covering employee old age benefits, public sector benevolent funds, group insurance, government servant pensions, ordinances for workers' children, workers' welfare funds, and employee social security measures in Pakistan, and similar measures in Bangladesh. Vocational training, micro credit active borrowers, savers, and policy holders measure the third dimension of social protection in both countries.

Macroeconomic stability, a mediating variable, comprises two dimensions with three indicators each in both countries. Fiscal stability is gauged by budget deficit, external debt, and investment saving gap, while monetary stability is assessed through inflation, exchange rate volatility, and current account balance. Details of globalization and institutional quality indicators are provided in Table 1. Data is sourced from various references including World Development Indicators, World Bank, UNICEF, Pakistan Economic Surveys, Bangladesh Economic Reviews, Pakistan and Bangladesh Bureau of Statistics, State Bank of Pakistan, and ICRG. Employing the improved entropy weight method (IEWM), indices for inclusive growth, social protection, and macroeconomic stability are constructed due to multiple indicators per variable. Methodology for index generation is outlined in section 4.2.

4.2   Methodology Related to Index

As previously mentioned, our approach involves dividing variables into different dimensions and treating them as latent variables based on observable indicators. Each dimension represents an index of these indicators. Various methods exist for index generation, including the Delphi Method, Principal Component Analysis (PCA), Expert Survey Method (ESM), Shannon Entropy Method, and Analytic Hierarchy Process Method (AHP) (Salabun et al., 2020). Literature indicates that the Improved Entropy Weight Method (IEWM) minimizes data variation, making it a preferred choice for index generation. Hence, we utilized IEWM to construct the indices. The following section presents a concise discussion on the process of index generation.

IEWM accurate the consistency of the indicators for research objective (Salabun et., al. 2020). To measure the m-times dimensions of the indicators, n indicators are selected. The improved entropy weight coefficient is calculated by using following formula:

$$\omega_j = \frac{G_j + 0.1 \sum_{j=1}^{n} Gj}{\sum_{j=1}^{n}\left(G_j + 0.1 \sum_{j=1}^{n} Gj\right)} = \frac{1 - H_j + 0.1 \sum_{j=1}^{n}\left(1 - H_j\right)}{\sum_{j=1}^{n}\left(1 - H_j + 0.1 \sum_{j=1}^{n}\left(1 - H_j\right)\right)}$$

After generating the weights index is calculated by following scheme

$$Index_t = \sum_{i=1}^{m}\left(\sum_{j=1}^{n} X_{ij} * W_j\right) * W_i$$

Where, X_{ij} Standardized alternative/indicator W_j = weight of indicator
          W_i = Weight of dimension layer

4.3   Model Specification

We are using structural equation modeling (SEM) to empirically examine the total impact of social protection on inclusive growth in Pakistan and Bangladesh during 1984-2020. It further measures the direct and the mediating impact. We have taken three mediators i.e., institutional quality, globalization and macroeconomic stability. In such a way our model builds three types of empirical

analysis with one methodology. Methodology related to structural equation modeling is discussed in the next section.

4.4   Econometric Methodology

Structural equation modeling defines connection between unobserved (latent) variables and observable (manifest) variables. SEM can be useful when variables are difficult to measure directly (Rabe-Hesketh et al. 2004). This study divides the latent variables into dimensions and these dimensions are measured with the indicators. The latent variables are inclusive growth, social protection, macroeconomic stability, globalization and institutional quality. SEM consists of estimating a measurement model and a structural model (Kline, 2015; Bollen, 1989), as explained below.

A.   The Measurement Model

Estimation of the structural coefficients indicating total, direct and indirect effects are subjected to prerequisites of the structural equation modeling. These requisites comprise identification, composite reliability and validity, discriminant validity and tests of model fit. If such certain criteria are fulfilled, coefficients can be estimated through path analysis. The next subsections discuss these requirements.

A.1   Identification

For estimation purposes, we check, first, that the SEM is exactly or overidentified (Ullman, 1996). The model's degrees of freedom[5] must be at least zero ($df_M \geq 0$) and a scale must be assigned to every latent variable including error terms (Kline, 2015). For the significant measurement of both latent and constructs, estimation of measurement model (through Confirmatory Factory Analysis) is the next step of the study.

A.2   Confirmatory Factor Analysis (CFA)

We use CFA to estimate the proportion of total variance in the data that is shared among the constructs or indicators of the latent variable, h^2. In a reliable model, h^2 should be greater than 0.70, which means that at least 70% of the total-indicator variance is common and no more than of 30% remains unique to each indicator separately (Mulaik, 2009a).

A.3   Reliability and Validity

Campbell and Fiske (1959) proposed using Cronbach's Alpha for the composite reliability (CR) and discriminant validity (DV) tests to assess the validity and reliability of the measurement model. However, Flora (2020) highlighted an important implication that rather to report mechanistically coefficient alpha, researchers should carefully asses the internal structure and reliability of the items. He suggested coefficient omega is a better alternative of Cronbach Alpha. Therefore, we used coefficient omega to measure the Composite reliability and validity. It is calculated by using the following formula (McDonald, 1999).

$$CR = w \; \frac{\left(\Sigma \hat{\lambda}_i\right)^2}{\left(\Sigma \hat{\lambda}_i\right)^2 + \Sigma \mathcal{V}(e_i)}$$

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[5] The degrees of freedom are equal to the difference between the number of parameters to be estimated and the number of variances and covariances of observed variables in the model.

where $\left(\Sigma\hat{\lambda}_i\right)^2$ = sum and square of unstandardized factor loadings of the common indicators
$\Sigma\mathcal{V}(e_i)$ = sum of measurement error variances error variance

Average variable extract (AVE) is the alternative to calculate the CR.

A.4 Global Fit Testing
Mooijaart and Satorra (2009) suggested that chi-square, comparative fit index (CFI), Tucker Lewis Index (TLI), and root mean square residual (RMR) are good fit measures for relatively small sample size (n<100).

B. Structural Model
Structural model estimates the structural coefficients through path analysis. The general Structural Equation Model (SEM) having all pragmatic variables is as follows (Kline, 2015):

$$Y_t = \alpha Y_t + \beta X_t + \mu_t$$

Y_t = Vector of endogenous variables
X_t = Vector of predetermined variables
α = Matrix of structural parameters measuring direct effects of endogenous variables on each other
β = Structural coefficients matrix showing direct effects of predetermined variables on endogenous variables
μ_t = Vector of residuals.

5. Empirical Findings and Discussions
The empirical findings are segmented into three parts. The first part provides detailed insights into preliminary results, including weight analysis. The second part presents empirical findings concerning to the assumptions of structural equation modeling, specifically the results of the measurement model. Upon fulfilling all the assumptions necessary for SEM, the final part presents the outcomes of total, direct, and mediating analysis. Weights for the inclusive growth, social protection and macroeconomic stability are discussed as under.

5.1A Weights Analysis of Inclusive Growth
Weights reflect the proportion of each indicator in terms of dimensionality, consistency and relative rank. Weight of each indicator shows the relative importance and share of that indicator in total score and index integrates all of the dimensions into one single value for each year. Table 2 reports the weights of each indicator and area. These weights generate the scores of constructs of inclusive growth.

Table 2: Weights for the Factors of Inclusive Growth: Pakistan and Bangladesh

Constructs of IG	Indicators	Area Weights Weights PAK/BAN	Indicator Weights Indicators	PAK	BAN
Economic Growth Employment and Economic Infrastructure	Economic Growth	0.12 0.12	RGDPG$_t$	0.12	0.12
	Employment	0.35 0.34	ESS$_t$	0.12	0.11
			EMS$_t$	0.11	0.11
			EAS$_t$	0.12	0.12
			RL$_t$	0.07	0.11
			AT$_t$	0.11	0.10

Dimension	Sub-factor	Weight	Indicator		
	Economic Infrastructure	0.53	TS_t	0.12	0.11
			TM_t	0.11	0.11
		0.54	EU_t	0.12	0.11
Poverty, Inequality and Gender Equity	Poverty	0.49	POV_t	0.26	0.26
	Inequality	0.51	$YGINI_t$	0.23	0.25
	Gender Equity	0.51	GPI_t	0.25	0.25
		0.49	LFP_t	0.26	0.24
Accessibility	Health	0.28	$MU5_t$	0.14	0.14
		0.28	LEX_t	0.14	0.14
	Education	0.28	LR_t	0.15	0.14
		0.29	$PEER_t$	0.13	0.15
	Access to Water Sanitation &	0.44	ACW_t	0.15	0.15
			ABS_t	0.14	0.14
	Electricity	0.43	AE_t	0.15	0.14
Environmental Sustainability	Pollution	0.51	$CO2EM_t$	0.26	0.24
		0.50	MEM_t	0.25	0.26
	Natural Resources	0.49	NRR_t	0.24	0.24
		0.50	NRD_t	0.25	0.26
Governance	Institutional Governance	0.44	COR_t	0.15	0.14
			$L\&O_t$	0.14	0.14
		0.43	RT_t	0.15	0.15
	Political-Governance	0.42	GS_t	0.14	0.14
			DA_t	0.14	0.15
		0.44	MIP_t	0.14	0.15
	Economic-Governance	0.14	SEC_t	0.14	0.13
		0.13			

Source: Author's own calculations.

In Table 2, it is evident that economic infrastructure holds the greatest significance in the first dimension of inclusive growth in both countries. Gender equity in Pakistan and poverty along with inequality in Bangladesh carry the maximum weight in the second dimension. The third dimension, focusing on access to water, sanitation, and electricity, holds the highest weight. In the fifth dimension, institutional governance in Pakistan and political governance in Bangladesh carry the maximum weight. The weights associated with the fourth dimension, environmental sustainability, are nearly identical and positive.

5.1B Weights Analysis of Social Protection

Pakistan and Bangladesh exhibit distinct indicators of social protection. Weights for these indicators are merged in the table 3.

Table 3:   Weights for the Factors of Social Protection: Pakistan and Bangladesh

Pakistan			Bangladesh		
Constructs of SP	Indicators	Weights IEWM	Constructs of SP	Indicators	Weights IEWM
Social Assistance	Zakat	0.34	**Social Assistance**	Old Age Allowance	0.15
	Utility-Stores	0.33		Insolvent Fighters	0.17
	Bait-UL-Maal	0.33		Insolvent Disabled	0.12
				Stipend Primary School	0.13
				School Feeding Programs	0.14
				Chitta Benevolent Allowance	0.15
				Vulnerable Feed	0.14
Social Insurance	Employee's Old Age Benefits	0.17	**Social Insurance**	Old Age Benefit	0.13
	Public Sector B-Funds and G-Insurance	0.17		B-Fund & G-Insurance	0.19
	Government Servants Pension Fund	0.18		Pension Fund	0.18

	Worker's Children Education Ordinance	0.17		WW-Fund	0.17
	Workers Welfare Fund	0.15		SS-Institutions	0.17
	Social Security of Employees	0.16		Worker's Children Education	0.16
Labor Market Programs	Vocational-Training	0.23	**Labor Market Programs**	Vocational-Training	0.22
	MC-Active Borrowers	0.26		MC-Active Borrowers	0.26
	MS-Active Savers	0.26		MS-Active Savers	0.26
	MI-Active Policy Holders	0.25		MI-Active Policy Holders	0.26

Source: Author's own calculations.

In Table 3, the indicators of social assistance for Pakistan and Bangladesh differ, yet they serve similar objectives. In Pakistan, zakat carries more weight compared to the other two indicators, whereas in Bangladesh, insolvent fighters hold the highest weight compared to other indicators. Despite these variations, both countries have almost identical indicators for social assistance. Pension funds have the highest weight in both countries, while in comparison, workers' welfare fund in Pakistan and old age benefits in Bangladesh have the lowest weight. All indicators in labor market programs exhibit similar weights in both countries, except for vocational training.

5.1C   Weights Analysis of Macroeconomic Stability
Table 4 reports the weights of the indicators of macroeconomic stability.

Table 4:   Weights for the Determinants of Macroeconomic Stability: Pakistan and Bangladesh

Constructs of MES	Indicators	Weights	
		PAK	**BAN**
Fiscal Stability	Budget Deficit	0.34	0.34
	External Debt	0.33	0.35
	Investment Saving Gap	0.33	0.31
Monetary Stability	Inflation	0.33	0.33
	Exchange Rate Volatility	0.34	0.35
	Current Account Balance	0.33	0.32

Source: Author's own calculations.

Table 4 asserts that budget deficit and exchange rate volatility in Pakistan while external debt and exchange rate volatility in Bangladesh contain the maximum positive weights. Next section of the study reports the empirical findings of the structural analysis.

5.2   Results of the Assumptions of Structural Equation Modeling
This study estimates three models by using SEM in Pakistan and Bangladesh for the empirical analysis. Before estimating the structural model, certain prerequisites need to be fulfilled, including identification, confirmatory factor analysis, convergent and discriminant validity. The results of these steps are reported as follows.

5.2A.   Identification of Structuration Equation Model (SEM)
Table 5 reports empirical results of identification. The degrees of freedom for all three models are greater than zero i.e., number of distinct sample moments are greater than number of distinct parameters to be estimated. Therefore, all three models are over-identified for both the countries.

Table 5:   Identification of Structural Models

Calculation of Degree of Freedom			
$SP_t{\rightarrow}IQ_t{\rightarrow}IG_t$			
	PAK	BAN	
No. of sample moments	65	66	
No. of predicted parameters	26	25	**Over Identified**
Degree of freedom	**39**	**41**	
$SP_t{\rightarrow}GLOB_t{\rightarrow}IG_t$			
No. of sample moments	56	66	
No. of predicted parameters	26	27	**Over Identified**
Degree of freedom	**30**	**39**	
$SP_t{\rightarrow}MES_t{\rightarrow}IG_t$			
No. of sample moments	56	55	
No. of predicted parameters	23	24	**Over Identified**
Degree of freedom	**33**	**31**	

Source: Author's own calculations.

After identification check, results of confirmatory factor analysis (CFA) are as follows.

5.2B   Results of Confirmatory Factor Analysis (CFA)

Table 6 reports the factor loadings of three models for mediating analysis for Pakistan and Bangladesh (1984-2020).

Table 6:   Factor Loadings of Factors for the Variables

Model 1: $SP_t{\rightarrow}IQ_t{\rightarrow}IG_t$				Model 2: $SP_t{\rightarrow}GLOB_t{\rightarrow}IG_t$				Model 3: $SP_t{\rightarrow}MES_t{\rightarrow}IG_t$			
Variables	Factors	**PAK**	**BAN**	Variables	Factors	**PAK**	**BAN**	Variables	Factors	**PAK**	**BAN**
Social Protection	SA_t	0.951	0.903	Social Protection	SA_t	0.931	0.932	Social Protection	SA_t	0.791	0.922
	SI_t	0.965	1.003		SI_t	1.006	0.973		SI_t	0.996	0.987
	LMP_t	0.852	0.798		LMP_t	0.899	0.814		LMP_t	0.732	0.804
Institutional Quality	IP_t	0.751	0.756	Globalization	$EGLOB_t$	0.862	0.915	Macroeconomic Stability	FST_t	0.760	1.134
	IC_t	0.817	0.765		$PGLOB_t$	0.916	0.847		MST_t	0.790	0.701
	EC_t	0.711	0.715		$SGLOB_t$	0.927	1.02				
	ET_t	0.701	0.716								
	BQ_t	0.990	0.979								
Inclusive Growth	EEE_t	0.926	0.943	Inclusive Growth	EEE_t	0.870	0.968	Inclusive Growth	EEE_t	0.872	0.953
	$PIEG_t$	0.923	0.911		$PIEG_t$	0.931	0.932		$PIEG_t$	0.936	0.922
	AS_t	0.984	0.998		AS_t	0.986	0.988		AS_t	0.990	0.992
	ES_t	0.996	0.956		ES_t	0.980	0.939		ES_t	0.977	0.958
	GOV_t	0.801	0.844		GOV_t	0.863	0.869		GOV_t	0.855	0.841

Source: Author's own calculations

Factor loadings are the correlation coefficient between variable and the factor (Ullman, 1996). An acceptable value of factor loading is more than 0.5 and when it is greater than or equal to 0.7 the factor is considered a good measure of each latent factor (Bollen, 1989; Hair et al., 1999). All the loadings reported in table 8 are more than 0.70. Therefore, the factors considered extract the adequate variance and are consistent with the latent variables. The concept of confirmatory factor analysis is incomplete without underpinning the empirical score of the composite reliability and convergent validity (Fornell and Larcker, 1981). Therefore, table 7 reports on the composite reliability and convergent validity of factors

Table 7: Composite Reliability and Convergent Validity of Factors

Model 1: $SP_t \rightarrow IQ_t \rightarrow IG_t$				Model 2: $SP_t \rightarrow GLOB_t \rightarrow IG_t$				Model 3: $SP_t \rightarrow MES_t \rightarrow IG_t$			
Variables	**Factors**	**CR(w)**	**AVE**	Variables	**Factors**	**CR(w)**	**AVE**	Variables	**Factors**	**CR(w)**	**AVE**
PAK SP **BAN**	SA_t	0.901	0.851	PAK **SP** BAN	SA_t	0.961	0.861	PAK **SP** BAN	SA_t	0.963	0.818
	SI_t				SI_t				SI_t		
	LMP_t	0.986	0.819		LMP_t	0.986	0.826		LMP_t	0.913	0.824
PAK IQ **BAN**	IP_t	0.988	0.861	PAK **GLOB** BAN	$EGLOB_t$	0.933	0.816	PAK **MES** BAN	FST_t	0.851	0.728
	IC_t				$PGLOB_t$				MST_t	0.984	0.888
	EC_t				$SGLOB_t$	0.995	0.856				
	ET_t	0.995	0.868								
	BQ_t										
PAK IG **BAN**	EEE_t	0.996	0.863	PAK IG BAN	EEE_t	0.920	0.931	PAK IG BAN	EEE_t	0.977	0.862
	$PIEG_t$				$PIEG_t$				$PIEG_t$		
	AS_t				AS_t				AS_t		
	ES_t	0.989	0.792		ES_t	0.899	0.884		ES_t	0.962	0.824
	GOV_t				GOV_t				GOV_t		

CR: Composite reliability   AVE: Average variable extract   Source: Author's own calculations.

The threshold levels for composite reliability and convergent validity are more than 0.60 and 0.50, respectively (Bacon et al., 1995;(Hair et al., 1999). CV and AVE of all the variables for the three models are more than these threshold levels. Table 8 report results of discriminant validity.

Table 8: Discriminant Validity of Factors

Model 1: $SP_t \rightarrow IQ_t \rightarrow IG_t$				Model 2: $SP_t \rightarrow GLOB_t \rightarrow IG_t$				Model 3: $SP_t \rightarrow MES_t \rightarrow IG_t$			
Pakistan											
	SP_t	IQ_t	IG_t		SP_t	$GLOB_t$	IG_t		SP_t	MES_t	IG_t
SP_t	0.922*			SP_t	0.928*			SP_t	0.904*		
IQ_t	0.803	0.928*		$GLOB_t$	0.887	0.903*		MES_t	0.803	0.853*	
IG_t	0.842	0.647	0.929*	IG_t	0.850	0.748	0.964*	IG_t	0.813	0.719	0.928*
Bangladesh											
	SP_t	IQ_t	IG_t		SP_t	$GLOB_t$	IG_t		SP_t	MES_t	IG_t
SP_t	0.964*			SP_t	0.909*			SP_t	0.968*		
IQ_t	0.929	0.985*		$GLOB_t$	0.857	0.949*		MES_t	0.944	0.935*	
IG_t	0.811	0.729	0.944*	IG_t	0.822	0.810	0.923*	IG_t	0.680	0.516	0.942*

Square root of AVE is reported in diagonal and other elements are the squared correlation between the variable.   Source: Author's own calculations.

For the significant discriminant validity square root of AVE should be greater than squared correlation between two variables. Result of discriminant validity shows that all variables have valid differentiated constructs.

5.2C   Results of Model-Fit/Model Testing

We test the model's goodness-of-fit through Chi-Square, TLI, CFI and RMR as suggested by Bollen (1989), Hair et al. (1999) and Kline (2015) These are the feasible goodness-of-fit tests for small sample sizes i.e., n < 100. Table 9 reports the results of goodness-of-fit testing.

Table 9:   Model Testing for SEM Analysis

| Fit Index	Recommended Value	Model 1: SP$_t$→IQ$_t$→IG$_t$		Model 2: SP$_t$→GLOB$_t$→IG$_t$		Model 3: SP$_t$→MES$_t$→IG$_t$	
		PAK	BAN	PAK	BAN	PAK	BAN
χ^2 /df	≤ 5	3.708*	3.852*	2.100*	4.761*	3.324*	4.213*
CFI	≥ 0.9	0.969*	0.979*	0.937*	0.961*	0.978*	0.959*
TLI	≥ 0.9	0.912*	0.918*	0.909*	0.901*	0.916*	0.912*
RMR	< 0.08	0.003*	0.004*	0.002*	0.002*	0.001*	0.003*

*indicates= good model fit   Source: Author's own calculations.

For recommended value see Bollen (1989) Hair et al., (1999) and Kline (2015). All the models' fit indexes have acceptable ranges (see table 9). The empirical findings of the measurement model reveal that constructs are consistent and reliable for the estimation of structural model for both countries.

5.3   Results of Structural Model for Mediation Analysis

In this section, we present the total, direct, and mediating effects of social protection on inclusive growth. The findings also highlight the mediational impact of institutional quality, macroeconomic stability, and globalization on inclusive growth in Pakistan and Bangladesh (1984-2020). Structural equation modeling estimation is conducted using AMOS-18. Empirical results are depicted in Figures 4, 5, and 6. Additionally, for quick reference, tables 1 and 2 are included in Appendix-I.
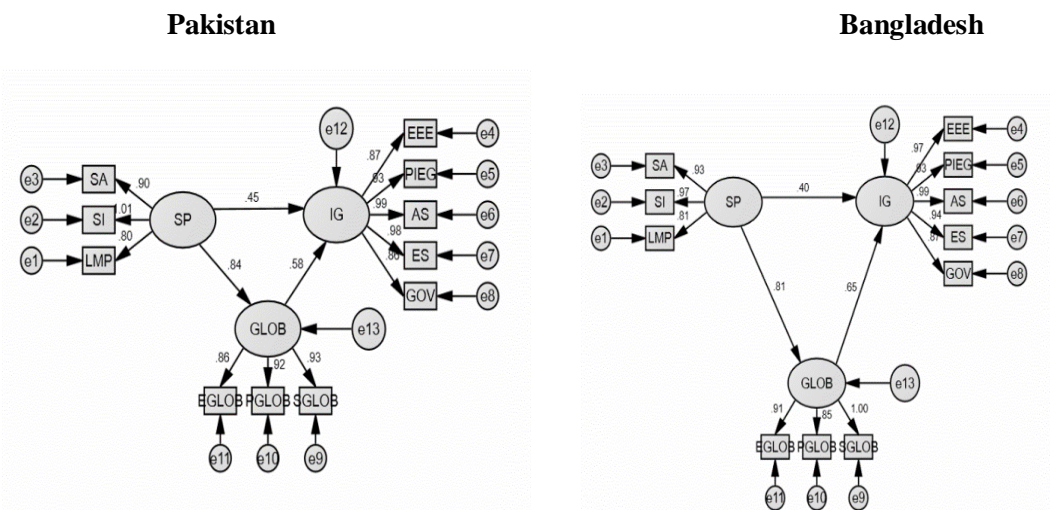
Figure 4: Mediating Role of Institutional Quality

Pakistan   **Bangladesh**
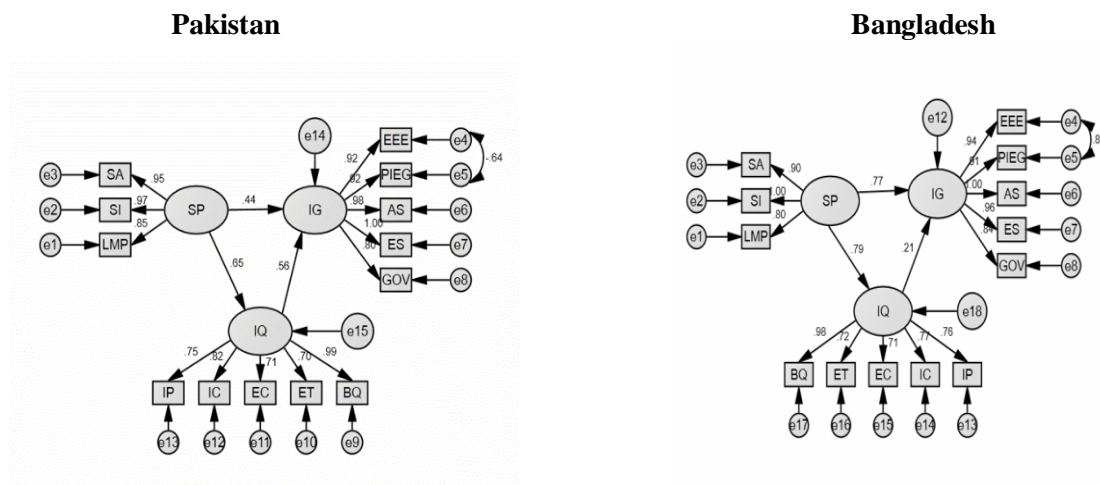
Source: Based on author's calculations

Figure 5: Mediating Role of Globalization

Pakistan   **Bangladesh**
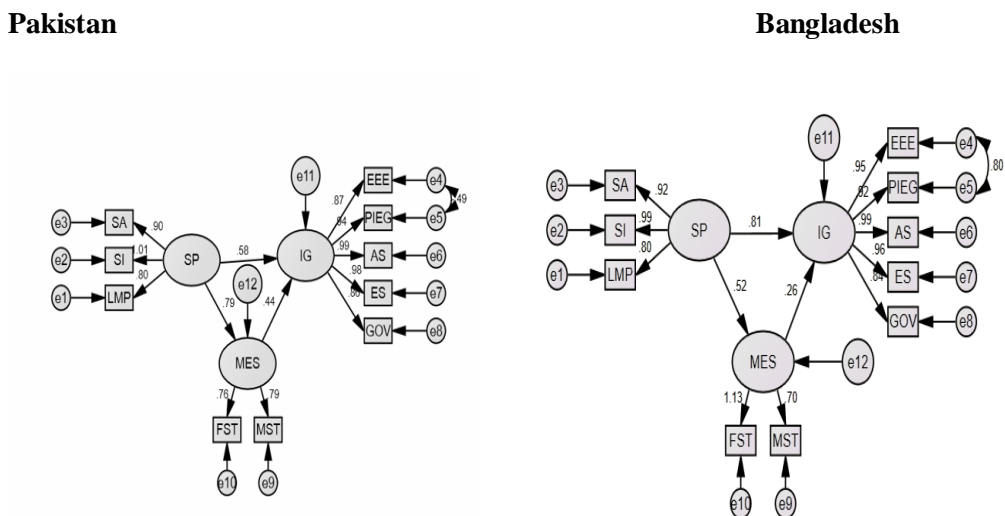

Source: Based on author's calculations

Figure 6: Mediating Role of Macroeconomic Stability

Pakistan   **Bangladesh**

Source: Based on author's calculations

5.4   Discussions

In figure 4, 5 and 6 we find that social protection, institutional quality, globalization and macroeconomic stability all have statistically significant positive total impact on inclusive growth.

A comparative analysis based on the structural equation modeling, results demonstrated in figure 4, 5 and 6 clearly indicate that the total impact of social protection on inclusive growth having institutional quality and macroeconomic stability as mediators is smaller in Pakistan as compared to Bangladesh. Total impact of social protection on inclusive growth having different mediators is robust in direction and significance. Results show that social protection is good for inclusive growth in Pakistan and Bangladesh both. Findings are consistent with Perotti (1992)

Hassan (2014) Castles and Dowrick (1990) and Alderman and Yemtsov (2014) as they find that social protection makes the institutions, markets and society cohesive, helps to keep the individuals into the mainstream of the economy; therefore, it is good for growth. The findings area also in tune with Arjona et al. (2003) who find that Micro finance and credit schemes and active saving plans are helpful for productive employment and inclusive growth. Our findings are contradicting to the findings of Sakellaridis (2009), Hansson and Henrekson (1994) and Izak (2011). They empirically demonstrated that social protection suppresses the growth and discourages people from work. However, our findings are contradicting to theoretical predictions of Lindbeck (1975) and Mirrlees (1971) who found that increased social protection expenditures are bad for growth.

The total effect sizes of the institutional quality, globalization and macroeconomic stability on inclusive growth are similar to social protection. With other factors constant one standardized unit increase in institutional quality, globalization and macroeconomic respectively enhances the inclusive growth positively and significantly by 0.554, 0.582 and 0.445 standardized units in Pakistan while 0.206, 0.653 and 0.263 standardized units in Bangladesh. The findings show that macroeconomic stability and institutional quality have a lower direct impact in Bangladesh as compared to Pakistan.

One of the study's objectives is to empirically examine the mediating role of institutional quality, globalization, and macroeconomic stability, and to generate a comparative analysis between Pakistan and Bangladesh. In the mediating model involving institutional quality, globalization, and macroeconomic stability, the empirical findings disclose that a one standardized unit increase in social protection directly increases inclusive growth by 0.441, 0.446, and 0.583 standardized units in Pakistan, and by 0.789, 0.389, and 0.809 standardized units in Bangladesh, with given ceteris paribus. The Direct effects are statistically significant at 1%. The direct contribution of social protection having mediational role of macroeconomic stability in Pakistan and having globalization in Bangladesh is greater than the other direct effects. Empirical findings show that macroeconomic stability and globalization are playing more significant roles in Pakistan and Bangladesh, respectively.

The mediational roles of institutional quality and macroeconomic stability in Bangladesh are significantly weak compared to Pakistan: 0.166 and 0.135 standardized units in Bangladesh versus 0.361 and 0.348 standardized units in Pakistan. Bangladesh has formal and centralized national policies to regulate social protection programs however these are less integrated. Because with every change in the government in Bangladesh policies also do change (Kabeer and Sharma, 2009). Pakistan has less integrated institutional mechanism to better execute the social protection programs therefore empirical findings identify their limited impact. Macroeconomic stability also remained venerable over the decades in Pakistan hence are less contributive to growth (Kabeer and Sharma, 2009). Results are consistent with the Woolcock et al., (2002) and Ahmed (2018)'s theoretical assumptions, who find that strong institutional structure is necessary condition and social protection is the sufficient condition for inclusive growth.

The findings suggest that globalization is complementing the social protection programs and has high significant impact on inclusive growth as compared to institutional quality and macroeconomic stability in both countries. One standardized unit increase in social protection paired with free and liberal markets, fewer restrictions on trade and innovative productive markets (mediating role of globalization) increases the inclusive growth significantly by 0.490 standardized units in Pakistan and 0.527 standardized units in Bangladesh. These findings are congruous with Ali et al., 2015, and Santos and Simoes, 2021, but contradict Tanzi (2000). He finds that ability of the government to provide the social protection in the presence of globalization reduces significantly. Free agility of the factors of production, dilating of electronic commerce reduce the tax revenues and affect the protection plans adversely (Tanzi 2000).

6.   Conclusion and Policy Suggestions

The notion of inclusive growth addresses pervasive disparities in income and opportunities. Consequently, there is a global shift in focus from mere economic growth to inclusive growth. Objective of achieving the inclusive growth involves diverse strategies, with social protection emerging as a key factor. It aids in mitigating poverty, inequality, health issues, educational disparities, and unemployment by providing financial support to those at risk of social exclusion. Social protection programs paired with robust mediating macroeconomic variables play an important role to alleviate poverty, reduce income inequalities and generate the productive employment opportunities thereby, promoting inclusive growth. Therefore, the primary focus of this study is to examine the impact of social protection for promoting inclusive growth in Pakistan and Bangladesh. This study empirically examines the total, direct and mediating impacts of social protection on inclusive growth having institutional quality, macroeconomic-stability and globalization as mediators in both countries for annual time series data (1984-2020). Social protection, inclusive growth, institutional quality, globalization and macroeconomic stability are taken as latent variables. Weights of the constructs of latent variables and their data is generated through the indexing approach i.e., improved entropy weight method (IEWM). While, data for the institutional quality and globalization is source through ICRG and KOF-index respectively. A structural equation modeling (SEM) approach is used for the estimation of coefficients for total and direct impact of social protection on inclusive growth and mediating role of institutional quality, globalization and macroeconomic stability between them.

Based on the findings, we conclude that social protection and welfare programs have a positive effect on inclusive growth in both Pakistan and Bangladesh. A significant contribution of the study to the literature is analyzing the mediating role of institutional quality, globalization and macroeconomic stability between social protection and inclusive growth in Pakistan and Bangladesh. The empirics are aligned with theory and also consistent to the experiences of both countries. Institutional quality and macroeconomic stability are subtle, feeble and have chronic uneven structure therefore, when they are inserted as mediator. The direct effect of social protection on inclusive growth for both is more than the indirect but positive and significant. Focus on improving the institutions, fiscal and monetary policy and elevate their quality is needed to attain the objective of inclusive growth in both Pakistan and Bangladesh. Empirical findings also show that institutional quality and macroeconomic stability have weaker indirect impacts in Bangladesh towards inclusive growth when compared with Pakistan. Meanwhile mediation of globalization has greater contribution to ensure inclusive growth in Bangladesh as compared to the Pakistan. Partial and significant mediation of institutional quality, globalization and macroeconomic stability are the findings of the study. Hence, Social protection is significantly contributive towards inclusive growth but its coverage is still limited in both countries.

Empirical findings divulge that both Pakistan and Bangladesh are struggling with chronic macroeconomic instability and weak institutions. To address this, the government should establish a stable macroeconomic framework with low inflation and balanced internal and external finances. This framework should be resilient against global financial crises, domestic supply constraints, limited domestic savings, energy shortages, and increasing conflict and terrorism. Furthermore, leveraging globalization can promote inclusive growth. However, to maximize its effectiveness as a mediator, policies aimed at accelerating its socioeconomic and political benefits are necessary for both countries.

This research has generated a unique index of inclusive growth, social protection and macroeconomic stability for mediating analysis. Study in future can be further extended for more in-depth analysis by incorporating moderators of the social protection and inclusive growth. First order structural equation modelling can be extended to second-order analysis.

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Appendix-I: Results of Total, Direct and Mediational Analysis

Table 1:   Results of Total Analysis

	Pakistan		Bangladesh	
Model 1: $SP_t \rightarrow IQ_t \rightarrow IG_t$		Mediating Variable: Institutional Quality		
	Total Effect(β)	p-value	Total Effect(β)	p-value
$SP_t \rightarrow IG_t$	0.802	0.000	0.935	0.000
$IQ_t \rightarrow IG_t$	0.554	0.000	0.206	0.000
Model 2: $SP_t \rightarrow GLOB_t \rightarrow IG_t$		Mediating Variable: Globalization		
$SP_t \rightarrow IG_t$	0.936	0.000	0.926	0.000
$GLOB_t \rightarrow IG_t$	0.582	0.000	0.653	0.000
Model 3: $SP_t \rightarrow MES_t \rightarrow IG_t$		Mediating Variable: Macroeconomic stability		
$SP_t \rightarrow IG_t$	0.931	0.000	0.940	0.000
$MES_t \rightarrow IG_t$	0.445	0.000	0.263	0.000

p-value indicates exact level of significance   Source: Author's own calculations.

Table 2:   Results of Direct and Mediation Analysis

	Pakistan		Bangladesh	
	Effect(β)	p-value	Effect(β)	p-value
Model 1: $SP_t \rightarrow IQ_t \rightarrow IG_t$		Mediating Variable: Institutional Quality		
Direct Impact				
$SP_t \rightarrow IG_t$	0.441	0.000	0.789	0.000
Mediating Impact				
$SP_t \rightarrow IQ_t \rightarrow IG_t$	0.361	0.000	0.166	0.001
Model 2: $SP_t \rightarrow GLOB_t \rightarrow IG_t$		Mediating Variable: Globalization		
Direct Impact				
$SP_t \rightarrow IG_t$	0.446	0.000	0.398	0.000
Mediating Impact				
$SP_t \rightarrow GLOB_t \rightarrow IG_t$	0.490	0.000	0.527	0.000
Model 3: $SP_t \rightarrow MES_t \rightarrow IG_t$		Mediating Variable: Macroeconomic stability		
Direct Impact				
$SP_t \rightarrow IG_t$	0.583	0.000	0.809	0.000
Mediating Impact				
$SP_t \rightarrow MES_t \rightarrow IG_t$	0.348	0.001	0.135	0.000

p-value indicates exact level of significance   Source: Author's own calculations.