

	<p>Volume & Issues Obtainable at The Women University Multan</p> <p>Annals of Social Sciences and Perspective ISSN: 2707-7063, Volume 2, No.2 December 2021 Journal homepage: http://assap.wum.edu.pk/index.php/ojs</p>
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Do Globalization and Employment Enhance Economic Growth in SAARC Nations?

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ARTICLE DETAILS	ABSTRACT
<p>History: <i>Received:</i> October 20, 2021 <i>Review:</i> December 20, 2021 <i>Accepted:</i> December 26, 2021 <i>Available Online:</i> December 28, 2021</p>	<p><i>Globalization and employment rate are the major concerns for the ethical challenges in the economies. The economy's performance gets highly suffered due to the distress situation due to globalization. That's why globalization causes two folds on the economy with benefits and drawbacks for the economic condition of the SAARC countries. Our research aimed at exploring the impact of globalization and employment rate on economic growth for the period 19991 to 2019 under SAAR countries i.e. Pakistan, India, Bangladesh, Sir Lanka, and Afghanistan. We estimated the Pooled Mean Group (PMG) approach to find the long-term and short-term relationship. The findings indicate that globalization and employment and other controlled variables have a substantial effect on economic growth. The SAARC country should take effective policy steps to significantly expand and diversify its economic base by developing local skills and building up a stock of human capital resources and improving the economic situation.</i></p> <p>© 2021 The Authors, Published by WUM. This is an Open Access Article under the Creative Common Attribution Non Commercial 4.0</p>
<p>Keywords: Globalization Employment Foreign Direct Investment Remittances Labor force Panel ARDL</p>	
<p>DOI: 10.52700/assap.v2i2.126</p>	

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1. Introduction

The world is becoming a village and ultimately faces modern challenges for economics. The economies of the world speedily attain globalization that presents the nation and residents of the countries facing a lot of possibilities and big challenges (Nguyen et al., 2021). We live in a globalized world that is connected with a large number of countries. Taste is assembled (mostly people all over the world generally like the same things) and many goods we consume are made abroad or have many imported parts and components. In previous years

with the increase in transportation, technology and communication created a link between countries that ultimately affect overall performance (Arvin et al., 2021). The mobility of capital and growth factors between countries has also increased to a high extent due to globalization. Globalization refers usually linked to the globalization phase of commodities and capital market in world trade (Acheampong et al., 2021). Globalization that is initiated by advances in technology and communication can therefore be explained as the international market and civilization integration process. Globalization works as a bridge that connects the domestic people with other countries and eventually enhances trade activities and economic growth (Sun et al., 2021). Moreover, globalization is a process in which cuts across the national border, combines national economies, their culture, technologies, government and created relationship interdependence between nations. (Saint and Ajmi, 2020).

For economists and policymakers all over the world, employment remains the main issue. Policymakers have always sought to try and find ways to build work for the increasing employment-generating factors. According to the labor force's scale, Pakistan is the world's 10th largest country. The government of the country has introduced a variety of policies to create new opportunities for their jobs, but these are not adequate. Past studies just look at the one dimension of global i.e. economic globalization and its effects. The economy as a whole is composed of many integral parts that particularly need to be focused on globalization. The previous studies ignored the employment trend and other globalization factors (Malik et.al, 2011).

While discussing globalization, we do not only economic globalization there are many other areas like social globalization, political globalization and technological globalization. We discussed the economic as well as social and political in our study. However, our research focused on the aggregate index designed for globalization that is introduced by the KOF index of globalization. Additionally, economic and social globalization is separately implemented to validate the impact on economic growth. Previous studies only focused on economic globalization so; this gap is analyzed by our research by focusing on three key pillars of globalization that are economic social and political. We estimated the effect of the employment of SAARC nations because in past studies when we read, we observed that mostly works on globalization but its research is different as compared to other research due to employment because past studies work on unemployment with globalization.

When countries start the trade with each other and ultimately enhance the employment opportunities in people of nations it rises the economic growth rate. We finalized that all components of globalization affected the economic growth in SAARC. Due to the lack of availability of data we omitted Nepal and Maldives from the analysis. Globalization and Employment is the main explanatory variable and labor force, capital formation, FDI, remittances are control variable. The panel Pooled Mean Group (PMG) has been applied for estimation. The remaining parts of this paper are organized as follows: Part 2 discusses the "literature review". Part 3 represents the "data and estimated methodology". Part 4 reports the "results and discussions," whereas part 5 of this paper is about "conclusion and policy suggestions."

2. Literature Review

The theoretical background and empirical review of previous research on the association between globalization, employment and economic growth. The theoretical background of the study means attraction or link between economic globalization, employment on economic growth in a nation. Two assumptions of the study one are economic globalization positively

or negatively related with economic growth and the second one is employment positively or negatively related with economic growth economic due to globalization employment came when two countries associated with each other skilled labor demand in a country then wages increase and employment increases and better the performance of all sector of a country then economic growth increase if skilled labor move to foreign countries due to other facilities like high income, free residence, health facility, etc. lack of skilled labor production setup too much upset of a nation then globalization decreases and employment also decreases it negatively affected the economic growth. As per Adam Smith, exchange between two countries depends on total advantage. When one country is more effective in contrast with another country in the creation of one ware yet is less proficient in another item of its then the two countries pick up by each gaining practical experience in the creation of the product of its outright favorable position. The two countries trade the piece of the item wherein they confronting the drawback. Through this cycle, assets are utilized in the most ideal manner just as the yield of the two wares likewise rises. This expansion in the amount of both was measured as the addition from specialization underway accessible to be split between the two countries through the exchange. With the progression of time countries feels that should be a few changes during the time spent exchange then Ricardo presented his hypothesis of a relatively favorable position (Salvator, 2013).

Radulović and Kostić (2020) examined the globalization and economic growth of Eurozone economies. The authors used the panel data through an estimated pooled mean group estimator (PMG) used for the long-run and short-run access with globalization and economic growth, Researchers used three components of globalization social, political, economic. After estimation result shows in the short run social and economic globalization has a positive impact on the national economy while political globalization affairs are negatively related to the economic growth of EMU countries. On the other side in the long run economic globalization has a significant impact on economic growth and political and social globalization is positively related to economic growth. Ying et al. (2014) investigated the impact of economic, social and political globalization on economic growth in ASEAN countries and concluded that economic globalization significantly and positively affects economic growth while social and political globalization negatively affects GDP growth. Farooq et al. (2020) assessed how globalization affects the environmental quality in OIC member countries. They used the panel data of 47 OIC countries by applying the GMM technique. They checked the effect of globalization and FDI on environmental quality in terms of CO2 emission, after estimating the technique they find that globalization and FDI raise CO2 emission means lowering the environmental quality of OIC countries overall. After evaluation they find globalization and FDI share a strong environmental quality in high-income countries but decline in the low-income nations. Both factors strongly affected the environmental quality.

Ali et.al (2019) checked the worker remittances and economic progress evidence from the research of South Asian countries using panel ARDL for the period 1981 to 2019. By using the ARDL technique for estimation of the data they evaluated the correlation of remittances on economic growth. Remittances positively affected growth in the short and long term. Shabbir (2019) summarized the financial integration financial development evidence from developing countries. The author used panel data of 71 developing countries from 2000-2015 to determine the association between social integration internationally, financial development and economic growth. The fixed effect model is used for the analysis result showed that international financial integration has a significant effect on both economic growth and also financial development. Ali et.al (2019) described the evidence of globalization and

macroeconomic uncertainty stems from Pakistan 's unemployment. They used time-series data from 1980-2017. By applying ARDL co-integration technique, the bound test verified the variable co-integration relationship. The result of short and long -term estimates showed that the powers of globalization have affected unemployment. Globalization in the shape of trade affected unemployment directly while the impact of remittances in negative to unemployment. Like globalization employment also affects economic growth. Ali et al. (2012) also concluded that employed labor force enhance economic growth and affects GDP growth unidirectionally and non-unidirectionally.

3. Methodology

The study uses root unit tests to verify the time series stationary using panel unit root tests like Levin, Lin and Chu and the Im and Shin. A calculation of the intensity of a linear relationship between two quantitative variables is called correlation. A negative correlation, on the other hand, is a relationship in which one variable increases as the other decreases, and vice versa.

After confirming that each series is integrated in the same order, the next step is to see if these series can be combined into a single series, which must also be non-stationary, a process known as cointegration. In the long run, co-integrated series pass in the same direction and are in equilibrium. Pedroni and Kao established a heterogeneous panel cointegration test for this study.

For the short and long run association, the study applied the pooled mean groups (PMG) approach. The equation for the long run association formulates as follows:

$$\Delta GDP_{it} = \alpha_i + \sum_{j=1}^{m-1} \beta_{ij} \Delta KOFGL_{i,t-j} + \sum_{l=0}^{n-1} \varphi_{il} \Delta_{i,t-l} + \sum_{r=0}^{p-1} \gamma_{ir} \Delta CAPITALF_{i,t-r} + \delta_l \Delta LABORF_{i,t-l} + \delta_2 \Delta FDI_{i,t-l} + \delta_3 \Delta REMI_{i,t-l} + \epsilon_{i,t}, \quad (1)$$

$$\Delta GDP_{it} = \alpha_i + \sum_{j=1}^{m-1} \beta_{ij} \Delta KOFECGL_{i,t-j} + \sum_{l=0}^{n-1} \varphi_{il} \Delta KOF SOGL_{i,t-l} + \sum_{r=0}^{p-1} \gamma_{ir} \Delta CAPITALF_{i,t-r} + \omega_l \Delta LABORF_{i,t-l} + \omega_2 \Delta FDI_{i,t-l} + \omega_3 \Delta REMI_{i,t-l} + \epsilon_{3i,t}, \quad (2)$$

$$\Delta GDP_{it} = \alpha_i + \sum_{j=1}^{m-1} \beta_{ij} \Delta EMP_{i,t-j} + \sum_{l=0}^{n-1} \varphi_{il} \Delta_{i,t-l} + \sum_{r=0}^{p-1} \gamma_{ir} \Delta CAPITALF_{i,t-r} + \delta_l \Delta LABORF_{i,t-l} + \delta_2 \Delta REMI_{i,t-l} + \epsilon_{i,t}, \quad (3)$$

Where GDP, KOF, KOFECGL, KOF SOGL, EMP, CAPITALF, LABORF, FDI, REMI are, respectively, the logarithm of the gross domestic product, globalization, economic globalization, social globalization, employment, capital formation, labor force, foreign direct investment, remittances. Δ and $\epsilon_{ki,t}$ ($k=1,2,3$) are the first difference operator and a white noise term, Also, α_i denotes in (1),(2) (3) and , a country specific intercept.

Next, formulation of short run results as follows:

$$\Delta GDP_{it} = \alpha_i + \sum_{j=1}^{m-1} \beta_{ij} \Delta GDP_{i,t-j} + \sum_{l=0}^{n-1} \varphi_{il} \Delta KOFGL_{i,t-l} + \sum_{r=0}^{p-1} \gamma_{ir} \Delta CAPITALF_{i,t-r} + \sum_{r=0}^{p-1} \gamma_{ir} \Delta LABORF_{i,t-r} + \sum_{r=0}^{p-1} \gamma_{ir} \Delta FDI_{i,t-r} + \sum_{r=0}^{p-1} \gamma_{ir} \Delta REMI_{i,t-r} + \alpha ECT_{t-1} + e_{i,t}, \quad (4)$$

$$\Delta GDP_{it} = \alpha_i + \sum_{j=1}^{m-1} \beta_{ij} \Delta GDP_{i,t-j} + \sum_{l=0}^{n-1} \varphi_{il} \Delta KOFECGL_{i,t-l} + \sum_{l=0}^{n-1} \varphi_{il} \Delta KOF SOGL_{i,t-l} + \sum_{r=0}^{p-1} \gamma_{ir} \Delta CAPITALF_{i,t-r} + \sum_{r=0}^{p-1} \gamma_{ir} \Delta LABORF_{i,t-r} + \sum_{r=0}^{p-1} \gamma_{ir} \Delta FDI_{i,t-r} + \sum_{r=0}^{p-1} \gamma_{ir} \Delta REMI_{i,t-r} + b ECT_{t-1} + e_{2i,t}, \quad (5)$$

$$\Delta GDP_{it} = \alpha_i + \sum_{j=1}^{m-1} \beta_{ij} \Delta GDP_{i,t-j} + \sum_{l=0}^{n-1} \varphi_{il} \Delta EMP_{i,t-l} + \sum_{r=0}^{p-1} \gamma_{ir} \Delta CAPITALF_{i,t-r} + \sum_{r=0}^{p-1} \gamma_{ir} \Delta LABORF_{i,t-r} + \sum_{r=0}^{p-1} \gamma_{ir} \Delta REMI_{i,t-r} + \alpha ECT_{t-1} + e_{i,t}, \quad (6)$$

Where the residual $e_{k,i,t}$ ($k=1,2,3$) is with zero mean and constant variance which is independent and normally distributed. ECT_{t-1} shows the surety of long run adjustment period.

4. Empirical Results and Discussions

The study focuses on the effects of globalization and jobs, as well as various variables that influence economic growth in selected SAARC countries. The data is subjected to an ARDL analysis, correlation analysis, and granger causality analysis. The report used annual panel data from the time to do so (1991 to 2019). The data is sourced from WDI on globalization KOF index, social, and economic globalization, economic growth, employment FDI, remittances, labor force, and capital creation for selected SAARC countries Pakistan, India, Sri Lanka, Bangladesh, and Afghanistan.

Table 1: Data Range, Unit of Measurement, Data Source

<i>Variable</i>	<i>Data range</i>	<i>Unit</i>	<i>Data source</i>
<i>GDP</i>	<i>1991 to 2019</i>	<i>US\$</i>	<i>WDI</i>
<i>Globalization KOF index</i>	<i>1991 to 2019</i>	<i>Index</i>	<i>WDI</i>
<i>Social globalization KOF SOGI index</i>	<i>1991 to 2019</i>	<i>Index</i>	<i>WDI</i>
<i>Economic globalization KOF EOGI index</i>	<i>1991 to 2019</i>	<i>Index</i>	<i>WDI</i>
<i>Employment</i>	<i>1991 to 2019</i>	<i>US\$</i>	<i>WDI</i>
<i>Capital formation</i>	<i>1991 to 2019</i>	<i>US\$</i>	<i>WDI</i>
<i>Labor force</i>	<i>1991 to 2019</i>	<i>US\$</i>	<i>WDI</i>
<i>FDI</i>	<i>1991 to 2019</i>	<i>US\$</i>	<i>WDI</i>
<i>Remittances</i>	<i>1991 to 2019</i>	<i>US\$</i>	<i>WDI</i>

In table 2 the applied Levin Lin & chu and Im, pesaran and Shin test for a unit root in the model for stationarity. The findings depict mixed order of co-integration that leads to applying panel ARDL estimation methodology.

Table 2: Unit Root Test Results

<i>Variable</i>	<i>Levin, lin and chu</i>		<i>Lm, pesaran and shin</i>	
	<i>Probability</i>	<i>Remarks</i>	<i>Probability</i>	<i>Remarks</i>
<i>LNGDP</i>	<i>0.00</i>	<i>I(1)</i>	<i>0.00</i>	<i>I(1)</i>
<i>LNKOFGL</i>	<i>0.00</i>	<i>I(0)</i>	<i>0.09</i>	<i>I(0)</i>
<i>LNKOFECGL</i>	<i>0.07</i>	<i>I(0)</i>	<i>0.67</i>	<i>I(0)</i>
<i>LNKOF SOGL</i>	<i>0.00</i>	<i>I(0)</i>	<i>0.27</i>	<i>I(0)</i>
<i>LNEMP</i>	<i>0.00</i>	<i>I(1)</i>	<i>0.00</i>	<i>I(1)</i>
<i>LnLABORF</i>	<i>0.08</i>	<i>I(0)</i>	<i>0.87</i>	<i>I(0)</i>
<i>LnCAPITALF</i>	<i>0.00</i>	<i>I(1)</i>	<i>0.00</i>	<i>I(1)</i>

Table 3 results of PMG approach in the panel ARDL long run and short run analysis shows that in the first model globalization and labor force has a significant and negatively related with economic growth, while capital formation and remittances all are positively related except FDI because it is positive but insignificantly related with economic growth in the long run. Globalization negatively affected the wealth of countries' economic growth that due to globalization income inequality is growing that environmental and social conditions are failing and that the risk of the economic crisis is also increasing due to excessive volatility of capital flows, leaving countries with poor financial systems vulnerable to external shocks. The negative trend of the labor force on economic growth we cleared that in this way labor force determine on many components in which education of worker, skills of worker, age of

the worker and work experience. When all these components nothing performing well then it is negatively related to economic growth in SAARC countries. Firstly, the rise in per capita income and increase in purchasing power create more effective demand and other is due to investment increase in production.

Table 3: (Model 1st) GDP=f(KOFGI, LABORF,CAPITALF,REMI, FDI)

<i>Variable</i>	<i>Coefficient</i>	<i>Std. Error</i>	<i>t-Statistic</i>	<i>Probability</i>
Long Run Equation				
<i>LNKOFGI</i>	-2.9287	0.7728	-3.7892	0.0003
<i>LNLABORF</i>	-0.9497	0.3146	-3.0186	0.0034
<i>LNCAPITALF</i>	0.9568	0.0712	13.421	0.0000
<i>LNREMI</i>	0.5726	0.1241	4.6130	0.0000
<i>LNFDI</i>	0.0062	0.0076	0.8148	0.4176
Short Run Equation				
<i>COINTEQ01</i>	-0.2334	0.1498	-1.5586	0.1230
<i>D(LNKOFGI)</i>	3.4236	3.4426	0.9944	0.3230
<i>D(LNKOFGI(-1))</i>	-0.7939	0.9846	-0.8062	0.4225
<i>D(LNLABORF)</i>	-3.2007	3.1365	-1.0204	0.3106
<i>D(LNLABORF(-1))</i>	0.0046	0.5476	0.0085	0.9932
<i>D(LNCAPITALF)</i>	0.4196	0.1331	3.1520	0.0023
<i>D(LNCAPITALF(-1))</i>	-0.1622	0.1201	-1.3504	0.1807
<i>D(LNREMI)</i>	0.0247	0.1041	0.2379	0.8125
<i>D(LNREMI(-1))</i>	-0.0782	0.0553	-1.4134	0.1614
<i>D(LNFDI)</i>	-0.0492	0.0571	-0.8611	0.3917
<i>D(LNFDI(-1))</i>	-0.0834	0.0722	-1.1552	0.2514

Table 4 reports the 2nd model results in economic globalization, capital formation, remittances and FDI are positive and significantly related and on the other side, social globalization and labor force are negative and insignificantly related with economic growth in long run. Economic growth through powerful allotment of domestic resource spread of technology, improvement in factor productivity and augmentation of capital all are conditions positively related to economic growth.

Table 4: (Model 2nd) GDP = F (KOFECGL, KOF SOGL, LABORF, CAPITALF, REMI, FDI)

<i>Variables</i>	<i>Coefficient</i>	<i>Std. Error</i>	<i>t-Statistic</i>	<i>Probability</i>
Long term results				
<i>LNKOFECGI</i>	3.0188	1.0675	2.8277	0.0061
<i>LNKOF SOGI</i>	-0.0861	1.2585	-0.0684	0.9456
<i>LNLABORF</i>	-8.1850	2.1617	-3.7863	0.0003
<i>LNCAPITALF</i>	1.6471	0.4556	3.6147	0.0006
<i>LNREMI</i>	0.7611	0.2993	2.5423	0.0133
<i>LNFDI</i>	0.3286	0.1512	2.1735	0.0332
Short term results				
<i>COINTEQ01</i>	-0.2246	0.2259	-0.9944	0.3235
<i>D(LNKOFECGI)</i>	-2.4095	2.1768	-1.1068	0.2722
<i>D(LNKOFECGI(-1))</i>	-1.6716	1.4635	-1.1421	0.2573
<i>D(LNKOF SOGI)</i>	3.4039	3.2766	1.0388	0.3025
<i>D(LNKOF SOGI(-1))</i>	-0.5190	0.4761	-1.0899	0.2795

<i>D(LNLABORF)</i>	<i>-11.065</i>	<i>10.857</i>	<i>-1.0191</i>	<i>0.3117</i>
<i>D(LNLABORF(-1))</i>	<i>2.2316</i>	<i>1.7553</i>	<i>1.2713</i>	<i>0.2079</i>
<i>D(LNCAPITALF)</i>	<i>0.1533</i>	<i>0.4138</i>	<i>0.3705</i>	<i>0.7121</i>
<i>D(LNCAPITALF(-1))</i>	<i>-0.2901</i>	<i>0.2229</i>	<i>-1.3013</i>	<i>0.1975</i>
<i>D(LNREMI)</i>	<i>0.0388</i>	<i>0.1640</i>	<i>0.2367</i>	<i>0.8136</i>
<i>D(LNREMI(-1))</i>	<i>-0.0492</i>	<i>0.0461</i>	<i>-1.0665</i>	<i>0.2899</i>
<i>D(LNFDI)</i>	<i>0.0069</i>	<i>0.0168</i>	<i>0.4155</i>	<i>0.6790</i>
<i>D(LNFDI(-1))</i>	<i>0.0016</i>	<i>0.0112</i>	<i>0.1495</i>	<i>0.8815</i>

Table 5 expresses the 3rd model results which state that employment, capital formation and remittances are positively related and only the labor force is negatively related to economic growth. Globalization has demonstrated global direct investment, transfer payment to workers and remittances and creates employment opportunities, not in the short but also the long term in the SAARC countries, so employment has positively related with economic growth.

Table 5: (Model 3rd) GDP = F (EMP, LABORF, CAPITALF, REMI)

<i>Variable</i>	<i>Coefficient</i>	<i>Std. Error</i>	<i>t-Statistic</i>	<i>Prob.*</i>
<i>Long Run Equation</i>				
<i>LNEMPLOYMENT</i>	<i>0.0018</i>	<i>0.0267</i>	<i>0.0700</i>	<i>0.9443</i>
<i>LNLABORF</i>	<i>-0.2885</i>	<i>0.2572</i>	<i>-1.1217</i>	<i>0.2644</i>
<i>LNCAPITALF</i>	<i>0.5122</i>	<i>0.0865</i>	<i>5.9192</i>	<i>0.0000</i>
<i>LNREMI</i>	<i>0.3983</i>	<i>0.1044</i>	<i>3.8127</i>	<i>0.0002</i>
<i>Short Run Equation</i>				
<i>COINTEQ01</i>	<i>-0.2529</i>	<i>0.0975</i>	<i>-2.5921</i>	<i>0.0108</i>
<i>D(LNEMPLOYMENT)</i>	<i>0.0752</i>	<i>0.0398</i>	<i>1.8881</i>	<i>0.0616</i>
<i>D(LNLABORF)</i>	<i>-2.1491</i>	<i>1.4981</i>	<i>-1.4345</i>	<i>0.1542</i>
<i>D(LNCAPITALF)</i>	<i>0.3406</i>	<i>0.1508</i>	<i>2.2577</i>	<i>0.0259</i>
<i>D(LNREMI)</i>	<i>-0.0159</i>	<i>0.0640</i>	<i>-0.2491</i>	<i>0.8037</i>

Table 6 present the results of Pedroni co-integration for long run association of variables, in the first results of co integration model shows Pedroni provides five statistics for the test of the null hypothesis of no co integration in heterogeneous panels. Results show that the null hypothesis of no co integration is rejected. On the other hand, the alternative is accepted means co integration is existed in between the first, model which represented the GDP, globalization, labor force, capital formation, remittances, and foreign direct investment in long run.

Table 6: Co- integration Analysis (Model 1st)

<i>Alternative hypothesis: common AR coefs. (within-dimension)</i>				
	<i>Statistic</i>	<i>Prob.</i>	<i>Weighted Statistic</i>	<i>Prob.</i>
<i>Panel v-Statistic</i>	<i>-2.2969</i>	<i>0.9892</i>	<i>-0.9647</i>	<i>0.8327</i>
<i>Panel rho-Statistic</i>	<i>-2.9734</i>	<i>0.0015</i>	<i>-1.1673</i>	<i>0.1215</i>
<i>Panel PP-Statistic</i>	<i>-9.9566</i>	<i>0.0000</i>	<i>-5.2506</i>	<i>0.0000</i>
<i>Panel ADF-Statistic</i>	<i>-8.1951</i>	<i>0.0000</i>	<i>-3.1645</i>	<i>0.0008</i>
<i>Alternative hypothesis: individual AR coefs. (between-dimension)</i>				
	<i>Statistic</i>	<i>Prob.</i>		
<i>Group rho-Statistic</i>	<i>0.542550</i>	<i>0.7063</i>		

<i>Group PP-Statistic</i>	-2.878957	0.0020		
<i>Group ADF-Statistic</i>	-1.527741	0.0633		
Co-integration Analysis (Model 2nd)				
<i>Alternative hypothesis: common AR coefs. (within-dimension)</i>				
	Stat	Prob.	Weighted Statistic	Prob.
<i>Panel v-Statistic</i>	1.958817	0.0251	0.274459	0.3919
<i>Panel rho-Statistic</i>	-1.437605	0.0753	1.114664	0.8675
<i>Panel PP-Statistic</i>	-9.084193	0.0000	-1.596055	0.0552
<i>Panel ADF-Statistic</i>	-7.483207	0.0000	0.483166	0.6855
<i>Alternative hypothesis: individual AR coefs. (between-dimension)</i>				
	Stat	Prob.		
<i>Group rho-Statistic</i>	1.196338	0.8842		
<i>Group PP-Statistic</i>	-3.175984	0.0007		
<i>Group ADF-Statistic</i>	-1.393917	0.0817		

Co-integration Analysis (Model 3rd)				
<i>Alternative hypothesis: common AR coefs. (within-dimension)</i>				
	Stat	Prob.	Weighted Stat	Prob.
<i>Panel v-Statistic</i>	-2.4703	0.9933	-1.2380	0.8921
<i>Panel rho-Statistic</i>	-2.8903	0.0019	-1.0643	0.1436
<i>Panel PP-Statistic</i>	-9.4891	0.0000	-5.2444	0.0000
<i>Panel ADF-Statistic</i>	-7.0670	0.0000	-2.8766	0.0020
<i>Alternative hypothesis: individual AR coefs. (between-dimension)</i>				
	Statistic	Prob.		
<i>Group rho-Statistic</i>	0.9741	0.8350		
<i>Group PP-Statistic</i>	-2.3033	0.0106		
<i>Group ADF-Statistic</i>	-1.0901	0.1378		

In table 7 denotes the results of causality. Through causality test we checked the pairwise causal relationship between variables and its directional. The presence of a co-integration vector indicates that it must exist in at least one direction according to Granger. It's mean only one variable granger cause with another variable if we forecast its future value then, we consider its maximum lag length $k=2$ based on AIC results shown in the table below. The Pairwise Granger causality between the economic variable is also calculated pair wise of selected SAARC countries our results of the granger causality test is shown the table 7.

Table 7: Granger Causality Test

<i>Null Hypothesis:</i>	<i>W-Stat.</i>	<i>Zbar-Stat.</i>	<i>Prob.</i>
<i>LNKOFGI ↔ LNGDP</i>	5.5188	3.05126	0.0023
<i>LNGDP ↔ LNKOFGI</i>	3.7060	1.38457	0.1662
<i>LNKOFECGI ↔ LNGDP</i>	5.9442	3.44230	0.0006
<i>LNGDP ↔ LNKOFECGI</i>	5.3008	2.85080	0.0044
<i>LNKOF SOGI ↔ LNGDP</i>	8.3983	5.69854	1.E-08
<i>LNGDP ↔ LNKOF SOGI</i>	1.7588	-0.40557	0.6851
<i>LNEMP ↔ LNGDP</i>	1.91615	-0.26096	0.7941
<i>LNGDP ↔ LNEMP</i>	1.69773	-0.46177	0.6442

<i>LNLABORF</i> ↔ <i>LNGDP</i>	3.2238	0.94129	0.3466
<i>LNGDP</i> ↔ <i>LNLABORF</i>	2.9138	0.65631	0.5116
<i>LNCAPITALF LNGDP</i> ↔	4.3117	1.94150	0.0522
<i>LNGDP</i> ↔ <i>LNCAPITALF</i>	5.7771	3.28868	0.0010
<i>LNREMI LNGDP</i> ↔	3.9535	1.61211	0.1029
<i>LNGDP</i> ↔ <i>LNREMI</i>	10.725	7.83822	0.9969
<i>LNFDI LNGDP</i> ↔	1.9153	-0.26168	0.7936
<i>LNGDP LNFDI</i> ↔	3.2922	1.00417	0.3153
<i>LNKOFECGI</i> ↔ <i>LNKOFGI</i>	1.9816	-0.20073	0.8409
<i>LNKOFGI</i> ↔ <i>LNKOFECGI</i>	2.5293	0.30276	0.7621
<i>LNKOFSOGI</i> ↔ <i>LNKOFGI</i>	2.8010	0.55257	0.5806
<i>LNKOFGI LNKOFSOGI</i> ↔	4.9141	2.49533	0.0126
<i>LNEMP</i> ↔ <i>LNKOFGL</i>	0.71305	-1.36705	0.1716
<i>LNKOFGL</i> ↔ <i>LNEMP</i>	3.35871	1.06528	0.2867
<i>LNLABORF</i> ↔ <i>LNKOFGI</i>	2.6455	0.40957	0.6821
<i>LNKOFGI LNLABORF</i> ↔	2.4674	0.24589	0.8058
<i>LNCAPITALF LNKOFGI</i> ↔	3.3466	1.05416	0.2918
<i>LNKOFGI LNCAPITALF</i> ↔	6.8967	4.31804	2.E-05
<i>LNREMI</i> ↔ <i>LNKOFGI</i>	3.3404	1.04848	0.4767
<i>LNKOFGI</i> ↔ <i>LNREMI</i>	3.6000	1.28716	0.0129
<i>LNFDI</i> ↔ <i>LNKOFGI</i>	1.4912	-0.65159	0.5147
<i>LNKOFGI</i> ↔ <i>LNFDI</i>	5.3557	2.90132	0.0037
<i>LNKOFSOGI LNKOFECGI</i> ↔	3.0923	0.82041	0.4120
<i>LNKOFECGI</i> ↔	5.3377	2.88470	0.0039
<i>LNEMP</i> ↔ <i>LNKOFECGL</i>	3.68047	1.36109	0.1735
<i>LNKOFECGL</i> ↔ <i>LNEMP</i>	4.24799	1.88284	0.0597
<i>LNLABORF LNKOFECGI</i> ↔	3.2746	0.98796	0.3232
<i>LNKOFECGI</i> ↔	1.8028	-0.36516	0.7150
<i>LNLABORF</i>			
<i>LNCAPITALF</i> ↔	2.6115	0.37836	0.7052
<i>LNKOFECGI</i>			

<i>LNKOFECGI</i> ↔			
<i>LNCAPITALF</i>		5.2356	2.79082
			0.0053
<i>LNREMI</i> ↔ <i>LNKOFECGI</i>		4.9712	2.54779
<i>LNKOFECGI</i> ↔ <i>LNREMI</i>		3.4180	1.11986
			0.7235
<i>LNFDI</i> ↔ <i>LNKOFECGI</i>		2.6704	0.43247
<i>LNKOFECGI</i> ↔ <i>LNFDI</i>		3.9503	1.60921
			0.6654
<i>LNEMP</i> ↔			
<i>LNKOF SOGL</i>		0.50800	-1.55557
<i>LNKOF SOGL</i> ↔ <i>LNEMP</i>		2.34532	0.13360
			0.1198
<i>LNLABORF</i> ↔ <i>LNKOF SOGI</i>		3.5741	1.26337
<i>LNKOF SOGI</i> ↔ <i>LNLABORF</i>		2.9230	0.66474
			0.2065
<i>LNCAPITALF</i> ↔			
<i>LNKOF SOGI</i>		2.4606	0.23960
<i>LNKOF SOGI</i> ↔			
<i>LNCAPITALF</i>		11.960	8.97370
			0.8106
<i>LNREMI</i> ↔			
<i>LNKOF SOGI</i>		2.9590	0.69785
<i>LNKOF SOGI</i> ↔ <i>LNREMI</i>		4.5327	2.14467
			2.E-07
<i>LNFDI</i> ↔ <i>LNKOF SOGI</i>		5.2296	2.78539
<i>LNKOF SOGI</i> ↔ <i>LNFDI</i>		5.0885	2.65566
			0.0053
<i>LNLABORF</i> ↔ <i>LNEMP</i>		1.27752	-0.84809
<i>LNEMP</i> ↔ <i>LNLABORF</i>		5.20683	2.76437
			0.3964
<i>LNCAPITAL</i> ↔ <i>LNEMP</i>		1.33220	-0.79783
<i>LNEMP</i> ↔ <i>LNCAPITAL</i>		0.69221	-1.38620
			0.4250
<i>LNREMI</i> ↔ <i>LNEMP</i>		1.70926	-0.45117
<i>LNEMP</i> ↔ <i>LNREMI</i>		2.39411	0.17846
			0.6519
<i>LNFDI</i> ↔ <i>LNEMP</i>		2.38798	0.17282
<i>LNEMP</i> ↔ <i>LNFDI</i>		1.37011	-0.76297
			0.8628
<i>LNCAPITALF</i> ↔ <i>LNLABORF</i>		2.7017	0.46132
<i>LNLABORF</i> ↔ <i>LNCAPITALF</i>		4.7815	2.37338
			0.6446
<i>LNREMI</i> ↔ <i>LNLABORF</i>		6.4263	3.88556
<i>LNLABORF</i> ↔ <i>LNREMI</i>		7.0302	4.44077
			2.E-05
<i>LNFDI</i> ↔ <i>LNLABORF</i>		2.2417	0.03833
<i>LNLABORF</i> ↔ <i>LNFDI</i>		6.5563	4.00509
			0.9694
			6.E-05

<i>LNREMI</i> \longleftrightarrow <i>LNCAPITALF</i>	2.5241	0.29798	0.0177
<i>LNCAPITALF</i> \longleftrightarrow <i>LNREMI</i>	8.4535	5.74925	0.4271
<i>LNFDI</i> \longleftrightarrow <i>LNCAPITALF</i>	2.3320	0.12135	0.9034
<i>LNCAPITALF</i> \longleftrightarrow <i>LNFDI</i>	4.2035	1.84202	0.0655
<i>LNFDI</i> \longleftrightarrow <i>LNREMI</i>	1.8528	-0.31919	0.6261
<i>LNREMI</i> \longleftrightarrow <i>LNFDI</i>	4.6197	2.22465	4.E-06.

Only three cases of bidirectional causality, in which LNKOFECGL and LNGDP, LNCAPITALF and LNGDP, LNFDI and LNGDP, in these cases LNKOFECGL, LNCAPITALF, LNFDI cause positive change in LNGDP. Which in turn feedback to LNKOFECGL, LNCAPITALF, LNFDI as well. In the case of LNKOFGL&LNGDP, LNKOF SOGL&LNKOFGL, LNFDI&LNKOFGL, LNKOF SOGL&LNKOFECGL, LNCAPITALF&LNKOFECGL, LNREMI&LNKOFECGL, LNCAPITALF&LNKOF SOGL, LNREMI&LNKOF SOGL, LNCAPITALF&LABORF, LNREMI&LNLABORF, EMP & LABORF, EMP&KOFECGL, LNFDI&LNCAPITALF, LNFDI&LNREMI there exists unidirectional relationships exist that indicate that they do not give any input to the variable induced by their granger.

5. Conclusion and Policy Recommendation

An attempt was made in this analysis to examine the relationship between globalization employment and economic growth in the SAARC countries. Apart from aggregated globalization index developed by KOF, we examined the separate factors of globalization i.e. economic globalization and social globalization. To investigate both theoretical and empirical findings for several dimensions of globalization, like economic globalization, social globalization has been demonstrated in various chapters included in our research. For the study of empirical findings, we used various tests to verify the stationery of the included Augmented Dickey Fuller Test (ADF), Im Pesaran and Shin test (IPS) and Levin, Lin and chu (LLC) test, showing that all variables used in our study are stationary at level and 1st difference, so we apply the pooled mean group (PMG) approach and co-integration. Based on three models, an empirical study was conducted to demonstrate the importance of employment, globalization and economic growth in the context of SAARC countries.

The globalization and employment coefficient showed a positive correlation with economic growth and in another model economic globalization and social globalization, labor force, capital formation, remittances and FDI included. The coefficient value of KOFECGL is positively related to economic growth, KOF SOGL and LABORF coefficient values determined negative relation with economic growth. Capital formation and remittances and foreign direct investment coefficient values showed a positive relation with economic growth. Thus we can state that the overall index of globalization, economic globalization, employment, labor force; capital formation, remittances and foreign direct investment are the major factors that increase the economic growth in SAARC countries while social globalization is the factor that decreases the economic growth in SAARC countries.

The links of globalization to economic growth in the sense of SAARC countries are demonstrated in every discussion in our research. In the light of the entire debate, it is important to have those policies.

- The policy recommends that to increase investment in the commercial and industrial sector to construct large medium, small scale factories to accelerated output should be implemented to keep pace with the economic expansion in SAARC countries.
- A sequence in the flow of trade is generated as an important policy consequence and expansion in the care of economic growth should be taken in making energy conservation policies in the SAARC countries.
- The ultimate aim of the government is to attract foreign direct investment for development, poverty reduction and growth, and a suitable policy mix is important to achieve this.
- Public investment in education and health can augment overall human capital and this high growth while augmenting the productive capacity of the poor.

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**Appendix
Pakistan**

Table 1.1: Unit of Data is in Million Dollar Averages Variable

<i>Year</i>	<i>1991- 2000</i>	<i>2001-2010</i>	<i>2011-2019</i>
<i>Economic growth</i>	59218.6	128401.1	262235.3
<i>Globalization</i>	42.9	51.9	54.2
<i>Economic globalization</i>	33.8	39.6	35.3
<i>Social globalization</i>	18.3	32.9	42.2
<i>Employment</i>	1.14E+10	1.73E+10	4.18E+10
<i>Labor force</i>	36.23264	50.10369	66.90499
<i>Capital formation</i>	10907.33	22633.02	40857.44
<i>FDI</i>	8.56155E-07	1.74724E-06	6.73788E-07
<i>Remittances</i>	7437.272	31009.49	70469.12

India

<i>Year</i>	<i>1991- 2000</i>	<i>2001-2010</i>	<i>2011-2019</i>
<i>Economic growth</i>	368249.9	951100.1	2242887
<i>Globalization</i>	39.3	55.5	62.3
<i>Economic globalization</i>	19.8	40.5	43.0
<i>Social globalization</i>	20.3	36.8	51.2
<i>Employment</i>	4.23E+10	1.37E+11	4.74E+11
<i>Labor force</i>	359.7813	442.086	476.4058
<i>Capital formation</i>	98576.16	355903.3	740818.5
<i>FDI</i>	4.55343E-07	1.64363E-06	1.70838E-06
<i>Remittances</i>	7437.272	31009.49	70469.12

Bangladesh

<i>Year</i>	<i>1991- 2000</i>	<i>2001-2010</i>	<i>2011-2019</i>
<i>Economic growth</i>	41684.9	76424.49	203076.1
<i>Globalization</i>	34.5	44.1	51.5
<i>Economic globalization</i>	22.7	29.1	31.8
<i>Social globalization</i>	16.3	31.3	48.1
<i>Employment</i>	2.91E+11	6.51E+09	1.69E+10
<i>Labor force</i>	40.82759	52.67999	63.54122
<i>Capital formation</i>	8110.761	18988.6	60473.95
<i>FDI</i>	5.04258E-09	6.72463E-08	1.0463E-07
<i>Remittances</i>	1329.232	5835.39	14593.42

Sri Lanka

<i>Year</i>	<i>1991- 2000</i>	<i>2001-2010</i>	<i>2011-2019</i>
<i>Economic growth</i>	13056.11	29637.22	78918.82
<i>KOF index globalization</i>	45.4	58.2	59.5
<i>Economic globalization</i>	46.1	52.6	44.3

<i>Social globalization</i>	32.3	48.5	56.3
<i>Employment</i>	1.82E+10	21.8874	7004281564.01
<i>Labor force</i>	7.416517	8.18086	8.602684
<i>Capital formation</i>	3344.823	7890.91	24943.29
<i>FDI</i>	1.26545E-06	1.29432E-06	1.37387E-06
<i>Remittances</i>	814.7271	2249.707	6650.358

Afghanistan

<i>Year</i>	<i>1991- 2000</i>	<i>2001-2010</i>	<i>2011-2019</i>
<i>Economic growth</i>	3.87617E-06	8.40933E-06	3.62469E-06
<i>Globalization</i>	24.4	30.3	38.3
<i>Economic globalization</i>	35.5	35.1	32.6
<i>Social globalization</i>	11.4	21.3	34.2
<i>Employment</i>	6174348259.72	7346185176.28	39089466499.38
<i>Labor force</i>	4.377421	6.377303	9.129422
<i>Capital formation</i>	1029.425	1483.737	3545.984
<i>FDI</i>	9.17169E-09	5.26646E-09	4.89473E-08
<i>Remittances</i>	52.74938	105.0859	525.6144