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Globalization And Macroeconomic-Instability: Analysis For Selected South Asian Countires Using Panel Data Techniques

Abstract

This study is devoted to examine the impact of globalization macroeconomic instability in selected south Asian countries during the period of 1981-2016. Panel data technique id employed. The result of Panel unit root tests suggests the use Panel ARDL. Panel ARDL results revealed that the impact of globalization forces affect negatively and significantly macroeconomic instability in the whole region. The impact of globalization on individual countries is negative and significant in the short run. Globalization forces affected macroeconomic instability comparatively high India and Bangladesh. Means both India and Bangladesh get more benefited from it. The impact of globalization is of average level on Sri Lanka, while the impact of globalization is minimum in case of Pakistan. In the nutshell, India and Bangladesh got more from the process of globalization, Sri Lanka on average and Pakistan have experienced low benefits. Therefore, this study suggests that the Government of Pakistan should adopt from the rest of the countries that how they get from the process.

KEY WORDS: Globalization, Macroeconomic Instability, South Asian Countries, Panel ARDL

1. INTRODUCTION

The advancement of science and technology, eliminations of trade barriers as well as financial and exchange rate limitations has greatly reduced the cost of transportation and communication, made globalization possible. It can be referred to the process by which the economies become closely, integrated. It was introduced in 1960s and became the most rapidly growing concept in the last decade of twentieth century (Ali, 2019; Ali, 2013; Afzal, 2007). It has been described in a variety of ways because of its dynamic virtues like cultural, economic, political and social. The main theme of this phenomenon is to share the world products and resources among economies as to increase welfare of the world inhabitants'. Political, cultural and Social globalization, involve is the generalization of democratization's policies, planning, cultures virtues and Status of media, may also have increased population's perception of the fictional

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advantages of foreign lifestyles foreign diets as well. The effect of social globalization on overweight may therefore be akin to the effect of urbanization on various technologies potentially associated either with the reduction in energy expenditure over time (Monda et al., 2007; Popkin, 1999; Rivera et al., 2002; Swinburn et al., 2011), or with more abundant supply and consumption of cheaper, higher calorie foods (Drewnowski & Popkin, 1997, 1999; Popkin & Gordon-Larsen, 2004).

Political and social globalizations are restricted due to threats to domestic vulnerability (external dependency), cultural demise and damage of cultural veracity. Moreover, it may hurt domestic economy by weakening the power free and self-decision making (Anwar, 2002) and many are hunted by the cultural domination in developing countries (Afzal, 2007). To avoid the complexity and this study restricted to economic globalization.

In economic term, globalization describes the increasing interdependence of nations through free trade. The greater access to free trade has different repercussions (beneficial and worsening) on the liberal developing economy (Ali *et al*., 2015; Afzal, 2007). Note that the variation in repercussions is explained by the country's natural resources availability, geographical location, religious and political doctrine and Social composition (Ray, 2012).

It is necessary to discuss the components of globalization i.e. trade and financial integration and Labour migration. Trade integration refers to the intensification of trade transactions across the country and considered as an engine of growth (Din *et al.,* 2003). It contributes significantly in the determination of economic development by incorporating previously unemployed resources into productive environment and makes possible transfer the benefits of technological developments through diffusion between developing and developed countries (Ali *et al.,* 2013) and growth theories by Lucas (1988) and Romer (1986). Moreover, more open economies have the opportunities to get benefits from access to external cheap resources, market extension and can get from the advanced technology (Barro & Sala-i-Martin, 1995). Free trade transactions reduced international price differences by clearing fall in supply (Price Equalization Theorem).

Financial liberalization (FDI-inflow) helps to reduce capital short fall in developing countries. it plays as a catalyst by approaching a business sector to new business environment. They seek economical resources for the sack of low cost production, and source of augmentation in technology, skill and expertise are also share through FDI. These opportunities provide strong impetus to growth and development. In the last quarter of the 20th century most of the developing countries became have an important share in the world investment. The portion of the flow of FDI to developing economies short fall (Kumar & Pradhan, 2002). It affects considerably macroeconomic performance in developing economies. Alternative views are existed regarding association of financial liberalization with productivity and resources employment. Moreover, it is one of the sources of technological diffusion and sharing expertise between developing and developed countries. Domestic growth ensures smooth supply which further reduction in prices (Ali, 2015).

Multinational corporations contributed considerably to the development process of the developing countries (Dunning, 1993). MNCs works as a suppliers of productivity resources (labour, product and Raw materials), and boost the abilities of markets and creators of jobs, means it contributes to macroeconomic performance positively. More generally, most of the economists believed that it is has employment generating property, boosts efficiency, raised exporting capacity. Moreover, it stimulates home country's resources and increase the magnitude of investment (Falki, 2009 and Khan *et al*., 2007) and provide access to employment to about 3% of the labour force worldwide: : a total of about 73 million jobs are created by it, in which about 12 million are in added to developing countries (UNCTAD, 1994).

One of the important aspects of globalization is Remittances; it can be described as "the amount of funds transfer back to home country by the migrants to their families is remittances (Ratha, 2005). Alternative views are existed regarding remittances and macroeconomic performance. Financial flow as remittances contributed considerably to growth and development process of the developing economies, and put pressure on the reduction in the existing gap in current account (C.A) deficit it may also cause to fall short the burden of foreign debt (Iqbal & Sattar, 2005). Financial flow in the form of remittances cause increase in domestic investment by increasing national income. Remittances are one of the important sources of income of the family members in native country which determine consumption of the society. Plain and smooth consumption guaranteed output and employment promoting by pulling aggregate demand (Pradhan *et al.,* 2008). The negative association of remittances with macroeconomic performance is also emerged in literature. Karagoz (2009) supported the view of Chami *et al.* (2005) who was of reported that worker remittances negatively contribute to economic growth by creating moral hazard effect. Gapen et al (2006) have of the view that the family members of the migrants are preferring leisure over work (Reduced supply of labour), harmful effect on output. Conversely, it is considered as threat to domestic nascent industry due to foreign competition (Kose *et al.,* 2005).

Liberalization in trade is a threat to nascent industries in most of the developing countries: the absence of protecting measures worse the situation which might affect adversely employment condition. Liberal trade completely change nature and status such abrupt changes may also cause price level. It means that trade liberalization directly and indirectly affects employment and inflation. Different arguments are presented about the association between globalization and macroeconomic performance. It contributes positively to output and employment to those economies, which are endowed with natural resources and competitive at international market. Contrariwise, it affect negatively those economies, which have no natural resource potential. The expansion in import demand and the reduction in domestic production may adversely influence output and employment in domestic economy. Conversely, the increase in export and its demand at international market might leads to the maximum utilization of productive resources source of income generation, affect positively output and employment. Strong economic status of the country increases the demand for imports. FDI and Remittances may contribute positively to employment generation through rise in

investment and consumption. Massive capital inflow in the form of remittances may cause increase the supply of money.

International transactions affect the structure and performance of the domestic. Because, these transactions affect the demand and supply of both output and resources (inputs) the economy and overall world. Such variation in demand and supply of products cause variation in price level and also demand and supply of inputs (labour and capital etc.). In the modern world, labour market depends on trade composition. More generally unskilled and semi-skilled labours are observed adversely affect by the forces of globalization in manufacturing sector; because, modern technology requires skilled labour to operate. Moreover, labour force is replaced by machines (Crankshaw, 1997).

It is of relative importance to test the variation in impacts of globalization different regions and countries different countries, having huge variation in physical and natural resources existence as well as on political and social compositions. Therefore, further research is needed to clarify the impacts of globalization on Macroeconomic instability on South Asian region and countries and countries

2. MATERIALS AND METHODS

2.1 The Model

Based on stated literature in introduction, the model of this study for macroeconomic instability is as following:

$$MEI_{it} = \beta_1 \mathrm{TOP}_{it} + \beta_2 \mathrm{FDI}_{it} + \beta_3 \mathrm{REM}_{it} + \beta_4\, \mathrm{GDI}_{it} + \beta_5 \mathrm{MS}_{it} + \varepsilon_{it} \quad (1)$$

MEI= Macroeconomic Instability TOP=Trade Openness

FDI=Foreign Direct Investment REM= Workers' Remittances

GDI=Gross Domestic Investment MS= Money Supply

ε = Normally Distributed Error Term

(Write about the expected signs of parameters)

2.2 Data Nature and Sources

The data is of panel nature. It has N=4 (Pakistan, Bangladesh, India and Sri-Lanka) and T=36 from 1980 to 2016. For the estimation purpose to assess the required objectives data are collected from World Bank (WDI).

2.3 Econometric Techniques

In the present panel the span of data is high; therefore, unit root testing is necessary prior to estimation. As the nature of the data is panel so panel unit is used here.

2.3.1. Stationerity Test (Panel)

Different unit root tests have been used in literature for the check of stationerity in case of panel data. But one of the problems associated with panel data is the

problem of cross-sectional interdependence. In case of cross-sectional interdependence 1st generation unit root tests are not suitable then we should go for the 2nd generation tests, which are suitable to test the unit root. Therefore, the problem of cross section dependence classified panel unit root tests into two categories due to heterogeneity i.e.

1st generation panel unit root tests and

2nd generation panel unit root tests

The 1st generation test comprises every tests which presume cross section independence as Levin and Lin (1992), Harris and Tzavalis (1999), Lavin, Lin and Chu (2002), Im, Pesaran and Shin (2002), Maddala and Wu (1999), Chio (1999) and Hadri (2000).

The next 2nd generation test contains the every tests that take into account cross-section dependence like, Bai & Ng (2001, 2004), Moon & Perron (2004), Phillips & Sul (2003), Pesaran (2003), Choi (2002), Fisher ADF and PP test correspondingly.

2.3.1.1. Levin, Lin And Chu Test

One of the most important unit root tests presented by Levin Lin and Chu (LLC) in 2002 to test the stationerity of the data in case of panel data. In order to check the stationerity of the data this test taking homogeneity into account. The investigation of this test is based on the assumption that the explained parameters $p_i's$ are assumed to be cross-sections dependence. The mentioned unit root test (LLC) is defined as:

ADF test for every separate sub section can be written as:

$$\Delta X_{i,t} = \Omega_i + \mho_i X_{i,t-1} + \sum_{p=1}^{\mho i} \mho_{ip} \Delta X_{i,t-p} + \epsilon_{i,t}$$

Hypotheses of the test are formulated as:

H_0: Data is non-stationery.

$$H_0: \mho_1 = \mho_2 = \cdots \mho_n = \mho = 0$$

H_1: Data is stationery.

$$H_1: \mho_1 = \mho_2 = \cdots \mho_n \neq \mho \neq 0, \qquad \mho < 0$$

2.3.1.2. *Im, Pesaran and Shin Test*

According to Pesaran et al. (1997) the test based on the assumption that the cross sections are independent, but in case of large data span it is not true. But Banerjee et al. (2001) is of the view that if the assumption is not valid, it will reject the null hypothesis. To overcome this problem Peasaran (2003) introduced a new panel unit root test. The equation of the test is as:

$$\Delta X_{i,t} = \delta_i X_{i,t-1} + \sum_{j=1}^{Pi} \delta_{ij} \Delta X_{i,t-1} + \gamma_{it} \_\_\_\_\_ (3.4.2)$$

The IPS test may be defined as:

$$t_{NT} = \frac{1}{N} \sum_{i=1}^{N} t_{it} \, (P_i)$$

In equation, t-statistic represent of ADF for each of the specific country. Test statistic of ADF is calculated as:

$$B_t = \frac{\sqrt{N(T)\,[t_T - E(t_T)]}}{\sqrt{var(t_T)}}$$

Hypotheses of *IPS* test:

H_0: There is Individual Unit Root in the data

H_1: No Unit Root

2.3.2. PANEL CO-INTEGRATION

To apply the co-integration test, the variables must be stationary at the same order. Ganger (1981) was firstly introduced the concept of co-integration but after that many researchers followed his works in this field and some of the researchers are Philips and Ouliaris (1990) and Engle and Granger (1987) after all, Pedroni (1995) became the pioneer researcher who investigate the characteristics of spurious regressions in similar and dissimilar panels in examining the null hypothesis of no co-integration. At last, the analysis of the null hypothesis of no co-integration developed into a co-integration analysis branch. Kao (1999) and McCoskey and Kao (1999) established another panel co-integration tests branch with the help of the co-integration null hypothesis in their consideration.

Pedroni (1995, 1997) contribute in test statistics of asymptotic distributions for dissimilar panel; these tests are relevant for particular types of direction such as fixed effects, deterministic trends, endogenous regressors, individual specific effects, etc. Pedroni (1997) investigates permit the dissimilarity of the autoregressive root covered by an alternative hypothesis which depend on the idea of Im, Pesaran (Im et al., 1997). After all the variables of interest are integrated at I(1), due to this the study implements the cointegration test for variables with the null of no cointegration under first-difference using equation 03 (Westerlund, 2007).

$$\Delta MI_{it} = \delta_i' d_t \alpha_i \left(MI_{i,t-1} - \beta_i X_{i,t-1} \right) + \sum_{j=1}^{pi} \alpha_{IJ} \, \Delta MI_{I,T-1} + \sum_{j=-qi}^{pi} \gamma_{ij} \, \Delta X_{i,t-1} + \varepsilon_{it} \quad ()$$

In above equation N is cross - sectional units and t = time. Whereas αi are the speed arrangement to equilibrium association in $MI_{i,t-1} - \beta_i X_{i,t-1}$ after an unusual impact and dt is a deterministic element. An important and negative αi recommends the existence of error correction, i.e. the long run co-integration.

2.3.3. HAUSMAN TEST

The impact of diverseness on the ways of the coefficients can be driven with the help of Haushman test. The effect of heterogeneity of the mean of coefficients can determine by Haushman test. The decision is based on the following criterion: If the parameters are in fact homogenous, the PMG estimates are more efficient than MG. In other word, the efficient estimator under the null hypothesis, which is

PMG is preferred. However, if the null hypothesis is rejected, then the efficient estimator MG, is preferred.

Then the estimates of pooled mean group believe more efficient than mean group.

Null hypothesis of the Haushman Test is that the PMG is efficient estimator (PMG prefer over MG).

In case of the rejection of the null hypothesis, it supposed that MG is efficient and it preferred over PMG and vice versa. The decision making is based on the probability values: if the probability estimate is less than 0.05 % then it will leads to the rejection H_0 (Chu and Sek, 2014).

2.3.4. *PANEL ARDL (PMG/MG)*

The autoregressive distributed lag model is one of the famous approaches as compare to other co-integration approaches because of their number of advantages in single approach. This approach is based on single co-integration and first time this technique is introduced by Pesaran and Shin (1999) and after some time this technique is expanded by Pesaran et al. (2001). The key plus advantage of this procedure is that if all variable are of I(0) or as well as stationary at first difference I(1) or also there is mixture of first difference or level we only apply this approach, we do not use any other approach, in simple words this approach does not force that there is compulsory for all variable that it must be co-integrated on the equal order. Another advantage of this approach is that it deals in long run in conjunction with in short run relationship (Dritsakis, 2011). Strong results and consistent estimates are provided by autoregressive distributed lag approach when the sample size is small of long run coefficients (Shin and Pesaran, 1999). If there is a mixture of level (raw data), first difference and second difference or any second difference present in study then this approach is not applicable (Masood et al., 2015).

Macroeconomic Instability Model

$$\Delta MI_{it} = \alpha_{it} + \lambda_{1it}\,\mathrm{MI}_{i(t-1)} + \lambda_{2it}\,\mathrm{TO}_{i(t-1)} + \lambda_{3it}\,\mathrm{FDI}_{i(t-1)} + \lambda_{4it}\,\mathrm{REM}_{i(t-1)} + \lambda_{5it}\,\mathrm{MS}_{i(t-1)}$$

$$+ \lambda_{6it}\,\mathrm{GDI}_{i(t-1)} + \sum_{j=0}^{p}\delta_1 \mathrm{MI}_{i(t-j)} + \sum_{j=0}^{p}\delta_2 TO_{i(t-j)} + \sum_{j=0}^{p}\delta_3 FDI_{i(t-j)} + \sum_{j=0}^{p}\delta_4 REM_{i(t-j)} + \sum_{j=0}^{p}\delta_5 GI$$

$$+ \sum_{j=0}^{p}\delta_6 MS_{i(t-j)} + \varepsilon_{1it} \ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots (4A)$$

3. RESULTS AND DISCUSSIONS

To carry out the required impact, different statistical and econometric tools are used. The results of these tools are presented below in turn.

3.1. Descriptive Statistics

Descriptive statistics are given in the following table:

Table-1: Results of Descriptive Statistics

	MI	**TO**	**FI**	**REM**	**DI**	**UN**	**MS**
Mn	3.989	17.285	1.907	2.011	13.382	2.929	11.28
M	4.072	18.521	2.807	6.050	8.942	3.201	12.52
Max	10.638	41.492	10.015	9.053	19.820	7.832	23.49
Min	3.486	15.244	1.614	1.852	8.241	2.751	10.24
S.D	2.138	10.042	5.047	5.805	7.328	3.017	13.04
Skew	0.807	2.525	4.013	3.002	4.241	2.183	9.525
Kurt	2.987	6.429	11.657	17.704	15.130	7.239	13.20
J-B	8.115	4.882	35.414	13.654	15.730	11.924	25.60
Prob	0.0083	0.0209	0.000	0.000	0.000	0.000	0.000
Obs	144	144	144	144	144	144	144

In the first stage descriptive statistics are carried out for 36 years and for four countries having 144 observations. The results in Table-1 show that the mean value of MI is almost 4, and its standard deviation is 2.13 and their minimum and maximum values are 10.6 and 3.4 respectively. The minimum values MI shows that a country or some countries in the panel have low level of macroeconomic instability. On the other side the panel countries have a country or set of countries which having high level of macroeconomic instability in the current globalized period. Therefore, there is a need of conducting a comprehensive study to check whether which country affected more and which one less affected. The skewness of the data shows that the distribution is moderately skewed; on the other hand the kurtosis indicates that the MI is leptokurtic, in simple words it means that it having the higher peak. In the end Jarque-Bera test indicated that the surplus MI variable is not normally distributed, the probability value is less than 0.05 which reject the Null hypothesis and accept alternative hypothesis of not normally distributed (Enders, 2004).

Similarly variables representing globalization i.e. TO, FI and REM and their means are 17, 1.09 and 2.01 respectively. It clear from the means values that countries are more integrated in term of trade as compare of other aspects of globalization. The corresponding standard deviations are 10, 5 and 5.8 respectively. The maximum values of globalization's variables are 41, 10 and 9 respectively. The minimum values of globalization's variables are 15, 1.6 and 1.8 respectively. Showing that there are nations include in this panel which contributed differently to the process globalization. The skewness and kurtosis statistics are in the table for TO, FI and REM are clear. The Jarque-Bera statistics indicated that the variables under consideration are not normally distributed, the

probability values are also less than 5%, therefore, we cannot accept null hypothesis and we concluded that data are not normally distributed.

The results in Table-1 regarding Unemployment rate variable show that the mean value of UN is about to 3 percent in the panel of the countries during 1980-2016. It has standard deviation of 3.014. The minimum values MI shows that a country or some countries include in this panel have low level unemployment rate, and a country or some countries have high level of unemployment in the panel countries. Therefore, it is necessary to investigate the impact of globalization on unemployment rate in the panel countries during the selected period of time. The results of the Jarque-Bera test show that the value of statistic is 11.9 and the probability value is 0.000 which confirm that the variable unemployment rate is not normally distributed.

Descriptive statistics are mentioned in Table-5.1 about GDI with a mean value of 13.2. The standard deviation of the said variable is 7.2. The maximum and minimum values are 19.8 and 8.4 respectively. The minimum values of gross domestic investment for the nation or nations included in the panel having a minimum gross domestic of 8.4 percent of GDP, while the maximum values of gross domestic investment at the panel represent the high level of Gross domestic investment in the panel countries. The result of Jarque-Bera statistics and probability values indicated that the variable Gross domestic investment is not normally distributed, with high value of Jarque-Bera statistic the probability values are 15.7 and 0.000 respectively, it is concluded that the variable GDI is not normally distributed.

The nature of the data is panel therefore panel unit root tests and suitable estimation techniques are used to estimate the required impacts. For stationerity checking Levin, Lin and Chu (2003) and Im, Pesaran and Shin (2002) are used and for the estimation of the parameters Panel ARDL is employed. The results of the mentioned techniques are given in detail in turn.

3.2 Panel Unit Root Tests Results

Panel unit root test are used to test the stationerity level of the panel data in case of the data having time series nature is of high status. In the present study the panel data have time span of 37 years for each of the countries. The results of the two selected penal unit root tests i.e. Levin, lin Chu and Im, Pesaran and Shin tests are given in the following table.

Table-2: Results of the Panel Unit Root Tests

Variable	Levin, Lin and Chu Test				Im, Pesaran and Shin Test				Outcome
	Level		First Difference		Level		First difference		
	T-stat	P-value	T-stat	P-value	T-stat	P-value	T-stat	P-value	
MI	-0.983	0.218	-3.241	0.000	-0.712	0.198	-3.319	0.000	**I(1)**
UE	-3.021	0.011	---	---	-3.010	0.009	----	----	**I(0)**
INF	0.627	0.778	-3.760	0.000	-0.968	0.678	-5.895	0.000	**I(1)**

TO	0.154	0.129	-6.686	0.000	-0.190	0.139	-7.875	0.000	**I(1)**
FDI	-0.945	0.607	-4.808	0.003	-0.931	0.599	-4.789	0.000	**I(1)**
REM	1-.358	0.519	-5.317	0.000	-1.410	0.497	-5.305	0.000	**I(1)**
GDI	-3.706	0.000	----	----	-3.673	0.000	----	----	**I(0)**
MS	-0.891	0.498	-3.418	0.001	-0.906	0.409	-4.031	0.000	**I(1)**

The bird eye view of the results presented in Table- 5.1 enable us to decide about the stationerity level variables selected for the current study based on Leiven, Lin (2003) and Chu and Im, Pesaran and Shin (2003) tests. From the results it is clear that all the variables become stationary after first difference expects unemployment and Gross domestic Investment. As the results of the unit root test are of mix order i.e. I(0) and I(1). Therefore, the results of the panel unit root suggest the use of Panel ARDL/PMG developed by Pesaran et al., (1997).

3.3. Optimal Lags Selection

Table-3: Results of the tests for Lags length Selection

Lags	**LogL**	**LR**	**FPE**	**AIC**	**SBIC**	**HQ**
0	-4829.946	NA	1.6200	106.241	106.351	106.2851
1	-4596.95	97.2602*	2.800*	102.175*	103.610*	102.7536*
2	-4653.68	28.1932	6.820	103.070	104.063	103.4707

Table-3 consists of the results for selection of the optimal lag length. If the number of lags is high in result then it is difficult to provide efficient. Because the higher number of lags increase the possibility of errors in estimation. Many criterions are available in literature for the selection of optimal lags length, but the most commonly used criterion are AIC, SBIC (Saeed, 2016). It is obvious from the above results in Table-4.4 the optimal level of lags are one lags. Therefore, this study will follow the results confirmed by AIC and SBCI for optimal lags length selection which is lags one.

3.4. Hausman Test

If the framework is in case similar, then the estimates of pooled mean group believe more efficient than mean group. Null hypothesis is that the preferred model is Pooled Mean Group (PMG). If the null hypothesis is accepted then it believed that pooled mean group is more efficient and it preferred over mean group and vice versa. If the probability value is more than 5% than we accept null hypothesis and apply PMG on the other hand if the probability value is less than 5% then we reject null hypothesis and apply MG (Chu & Sek, 2014). Following are the results of Hausman test by using the Stata 14.

Table-4: Results of the Hausman Test

	(b) **MG**	**(B)** **PMG**	**(b-B)** **Difference**

MI	-9.99	-2.97	-7.02
TO	-5.29	1.33	-6.62
FI	0.204	0.2009	0.0031
REM	-11.23	-6.03	-5.2
GDI	0.891	0.0182	0.8728
MS	-7.617	-4.023	-3.594
Probability Value = 0.610			

In above table the results shows that the probability value is more than 5% which is **0.610** so we accept null hypothesis and apply PMG estimator.

3.5. Globalization and Macroeconomic-Instability Model Results

Panel ARDL provides long run and short estimates for the panel of the countries and short run results for each of the country as well. It is more suitable because of its nature; it will explain the difference in impact of globalization on each of the country in panel.

Long-Run and Short–Run Estimates of the Macroeconomic Instability in South Asian Economies

Table-5: Dependent Variable: Macroeconomic Instability

Variables		**Coef.**	**Std. Err.**	**T value**	**Prob**
LR	**TO**	-0.72	0.201	-3.60	0.008
	FI	-0.13	0.051	-2.29	0.035
	REM	-0.17	0.023	-3.88	0.006
	MS	0.07	0.058	1.20	0.128
	GDI	-0.51	0.184	-2.771	0.019
SR					
	ECT	-0.76	0.10	-7.19	0.000
	∆TO	-0.71	0.31	-2.31	0.023
	∆FI	-0.28	5.83	-0.91	0.365
	∆REM	-0.03	0.13	-0.27	0.785
	∆MS	0.25	0.76	0.32	0.729
	∆GDI	-0.21	0.091	2.30	0.017
	Cons	1.87	0.585	3.20	0.001
	R2=0.749		**DW= 2.09**		

The above table shows the results of long and short run estimation regarding macroeconomic instability caused the changes in globalization components in South Asian countries. From this analysis we confirmed that variable 'TO' is statistically significant with a coefficient estimate of -0.72 and having probability value is 0.008. The probability is less than 0.05 which show that the said variable is significant at 5% level of significance. The negative sign of the coefficient of 'TO' variable shows, negative association between 'TO' and macroeconomic insatiability in South Asian countries. the results of the present study is in favor of trade theories: according to traditional trade theories trade is an engine of growth and provide employment opportunities by market enlargement resource sharing. The result of the present study regarding 'TO' is against with the findings of the study conducted by Rama (2003) and Siddiqui, & Iqbal (2005). According to them trade openness leads to increase macroeconomic instability in developing countries, they argued that trade openness putting developing countries in international competition which hurt them due to incompetent industrial sector. The long run results of the above table showing that variable 'FI' is statistically significant with probability value of 0.035 which is less than 5%, while the coefficient value of FI is -0.13 which showing the negative impact of FI on macroeconomic insatiability in South Asian countries. Similarly, REM is statistically significant with negative sign. Its probability value is 0.006 and coefficient value of it is -0.17. Therefore, the impact of remittances is negative and significant on MI. increase in REM will leads to decrease in macroeconomic instability in the study area. The results of is somehow against of the findings of Chami, *et al*., (2005), they argued that REM negatively affected output and employment. The overall impact of globalization factors are negative significant on Macroeconomic Instability in south Asian countries. The findings of the present study are parallel with the findings of the study conducted by Ali (2013) and Ali et al (2015). They argued that globalization in the shape of trade openness provide the opportunity of market enlargement, reduced the possibility of over production and access to foreign technology increase output and employment opportunities. Secondly, globalization in the shape of FDI increase the opportunities of employment (reduce unemployment) in developing countries. Thirdly, migration of people relatively free reduces pressure on labour market which is also a good sign for developing countries. Price differential reduces by the free flow of relatively trade. FDI cause increase in production also make sure smooth domestic supply which in turn put downward pressure on prices in developing countries. The outcome of our study contradicts with the results of the study conducted by Onwuka & Eguavoen (2007). They argued that globalization is threat and exploitation of the developing countries. Globalization is a tool through which developed countries exploit the resources of the developing countries.

The impact of controlled variables MS and GDI on MI are also given in the above table. MS is statically insignificant and having a positive impact on macroeconomic instability, the probability value is 0.128 which is greater than 0.05 and the coefficient value is 0.07. The results of the study regarding MS is an indication towards the existence of monetary neutrality that money nothing do with the real sector of the economy. Gross domestic investment is the other important variable of the study, it is statistically significant with a coefficient value

of -0.51 and corresponding probability of 0.019, showing negative association between GDI and macroeconomic insatiability, an increase in GDI will lead a decrease in MI.

Short run results for the South Asian region is presented in above table. It is clear from the table that the variable TO is statistically significant with coefficient value of -0.71 and corresponding probability of 0.023 (less than 0.05). It means that with increase in trade activities there is reduction in MI in the short run too. FI affects MI negatively but insignificantly in short run with a probability value of 0.365 which is more than 0.05. In short run the variable REM affects MI negatively but insignificant. The coefficient value of MS is 0.25 with a probability of 0.72 which indicates that the MS affect macroeconomic insignificantly. The effect of variable GDI on macroeconomic instability is negative and significant with coefficient estimate of -0.21 and its corresponding probability value of 0.017. It is obvious result that GDI is an important variable for the determination of stability of an economy or a region. The result regarding GDI indicated that the increase GDI leads to increase output (smooth domestic supply) and employment. On the other side smooth domestic supply paly its role in the reduction of price level too. The result of GDI in the present study is in support of investment multiplier.

The value of Error correction Term (ECT) is -0.76, which is negative and statistically significant and also less than one. The negative and significance appearance of ECT confirm the long run convergence of any dis-equilibrium occurs. The estimate of the coefficient of determination 'R^2' show that the model is good fitted and the value of DW shoe that there is no serious problem of autocorrelation.

Short–Run Results for Each of the Countries

Short-run results of each of the country from the selected panel of South Asian countries are explained in turn.

PAKISTAN

Table-6 shows the results of short run estimates regarding globalization and macroeconomic instability. The variable 'TO' is statistically significant and having negative impact on macroeconomic instability, because the probability value is 0.012 (less than 0.05). The coefficient value is -0.064. Negative sign shows that there is negative relationship between Trade openness and macroeconomic instability in Pakistan in the short run, an increase in trade openness lead to the reduction in MI. The result of the present study is in favor of the studies conducted by Ali (2013), Ali et al. (2015) and Malik et al. (2011). The short run results of the variable 'FI' is statistically significant and negatively affected the dependent variable having probability value is 0.05, while the coefficient value of FI is -0.18 which showing the existence of negative effect of FI on macroeconomic instability. The coefficient of REM is -0.207 with probability value of 0.005, confirmed a significant and negative impact of the globalization in the form of REM on MI. Similarly, the variable GDI is statistically insignificant with probability value of 0.29 and the coefficient value of it is -0.39, which showing the negative but insignificant affiliation between GDI and macroeconomic instability in the economy of Pakistan. The short run impact

of MS is positive but insignificant with a probability value of 0.79. The result about MS indicated that there is a positive relationship between MS and macroeconomic instability but insignificant in Pakistan.

The value of ECT term is negative with coefficient estimate of -0.549 and statistically significant (P-value= -0.009). It shows the convergence of any distortion occur in long run equilibrium. The result of ECT term confirm long run relationship, and tell us that dis-equilibrium converge to equilibrium at a rate of 54.9 % in one year in case of Pakistan.

The results of the short run about the impact of globalization on instability are presented in Table-6 for the economy of Bangladesh. It is clear from the table that globalization's components affect negatively and significantly. The component of globalization i.e. TO is statistically significant with minus sign. The coefficient value of TO is -0.28 with corresponding value probability value is 0.017. The component FI is statistically significant and having negative sign with a coefficient of -0.22 with probability value of 0.016, which showing the existence of negative association between financial integration and instability in Bangladesh during the current period of globalization. REM also shows the negative and significant effect with a coefficient value of -0.427 and probability value is 0.012, which means that there is a negative and significant relationship between REM and instability. The results of the present study in the context of globalization are in line with the studies conducted by Eze et al. (2017), Ali (2013) and Kumar (2011). They are of the view that openness provides the opportunity to increase output and employment in developing countries by causing access to foreign capital; relatively free trade can cause reduction of general price due to arbitrage activities.

Similarly, the variable GDI is statistically significant because his probability value is 0.014 which is less than 5%, while the coefficient value of GDI is -0.39 which showing the negative affiliation between GDI and macroeconomic instability. In the last, the short run results of MS show that the money supply affects MI but insignificantly having probability value of 0.819, which indicates that there is a positive but insignificant relationship between MS and macroeconomic instability in Bangladesh.

The value of ECT term is negative with coefficient estimate of -0.822 and statistically significant (P-value= -0.000), revealed that dis-equilibrium converge to equilibrium at a rate of 82.2 % in one year in the economy of Bangladesh.

The variable 'TO' is statistically significant and having a negative impact on macroeconomic instability for India, because the probability value is 0.016 which is less than 5% while the coefficient value is -0.28. The short run results of the variable FI is statistically significant and negative effect on dependent variable because his probability value is 0.000 which is less than 5%, while the coefficient value of FI is -0.14 which showing the existence of negative effect of FI on macroeconomic instability in India. In the above table the short run results of REM shows the negative and significant effect in short run relationship his probability value is 0.000 which is less than 5% so there is significant relationship is present in these variables while the coefficient value of REM is -0.20 which indicates that there is a negative relationship present in between the variable REM and macroeconomic instability in India. Similarly, the variable GDI is statistically

insignificant because his probability value is 0.25 which is more than 5%, while the coefficient value of GDI is -0.39 which showing the negative affiliation between GDI and macroeconomic instability in the economy of India. In the last the short run results of MS shows the positive and non-significant effect in short run relationship his probability value is 0.37 which is more than 5% so there is no significant relationship present in these variables while the coefficient value of MS is 0.06 which indicates that there is a positive relationship between MS and macroeconomic instability in India.

The value of ECT term is negative with coefficient estimate of -0.951 and statistically significant (P-value= -0.000). It is clear from the estimated values of ECT that dis-equilibrium converges to equilibrium at a rate of 95.1 % in one year in India.

The short run results in table-6 shows that the impact of globalization on macroeconomic instability in Sri Lanka. The variable 'TO' is statistically significant and having a negative impact on macroeconomic instability, because the probability value is 0.054 which is less than 5% while the coefficient value is -0.41. The short run results of the variable 'FI' is statistically significant and negative effect on dependent variable because his probability value is 0.000 which is less than 5%, while the coefficient value of FI is -0.06 which showing the existence of negative effect of FI on macroeconomic instability in Sri Lanka. In the above table the short run results of REM shows the negative and significant effect in short run relationship his probability value is 0.028 which is less than 5% so there is significant relationship is present in these variables while the coefficient value of REM is -0.39 which indicates that there is a negative relationship present in between the variable REM and macroeconomic instability in Sri Lanka. Similarly, the variable GDI is statistically insignificant because his probability value is 0.19 which is more than 5%, while the coefficient value of GDI is -0.95 which showing the negative affiliation between GDI and macroeconomic instability in the economy of Sri Lanka. In the last the short run results of MS shows the positive and non-significant effect in short run relationship his probability value is 0.29 which is more than 5% so there is no significant relationship present in these variables while the coefficient value of MS is 0.64 which indicates that there is a positive relationship between MS and macroeconomic instability in Sri Lanka.

The value of ECT term is negative with coefficient estimate of -0.81 and statistically significant (P-value= -0.000). It shows the convergence of any distortion occur in long run equilibrium. The result of ECT term confirm long run relationship, and tell us that dis-equilibrium converge to equilibrium at a rate of 81.0 % in one year in case of Sri-Lanka.

Table-6: Comparison of the impact of globalization on Macroeconomic Instability in each of the countries

Variables	**PAK**	**BANG**	**IND**	**SRI**

ETC	-0.549 (0.009)	-0.822 (0.000)	-0.951 (0.000)	-0.810 (0.000)
∆TO	-0.064 (0.012)	-0.28 (0.017)	-0.25 (0.012)	-0.41 (0.054)
∆FI	-0.18 (0.05)	-0.22 (0.016)	-0.14 (0.000)	-0.06 (0.000)
∆REM	-0.207 (0.005)	-0.427 (0.012)	-0.20 (0.000)	-0.39 (0.028)
∆GDI	-0.39 (0.29)	-0.39 (0.014)	-0.39 (0.25)	-0.95 (0.19)
∆MS	0.06 (0.79)	0.06 (0.819)	0.06 (0.37)	0.64 (0.29)
CONS	2.839 (0.004)	2.84 (0.000)	10.30 (0.000)	15.23 (0.000)

Table-6 is about the impact of globalization on macroeconomic instability in each of the panel countries. The values of ETC for each of the countries in above table show that any disequilibrium in the short run will converge to long run equilibrium. The impact of trade openness on macroeconomic instability are the same in sign but different in term of magnitude. In case of Pakistan the magnitude is the less and in case of Bangladesh the magnitude of impact is the maximum. The impact of financial globalization is highest in case of Bangladesh and Pakistan with a magnitude of 0.22 and 0.18. Globalization contributed in the context of remittances more efficiently in case of Sri-Lanka and Bangladesh. It is clear form the result that the impact of globalization components' is different on different countries.

4. CONCLUSION AND POLICY RECOMMENDATIONS

The world of the first half of the 20th century is comparatively closed. Cross border transactions were mostly restricted during the de-globalized era. During the second half of the 20th century both developed and developing countries tried to share their resources. The aims of the slogan of opening of the economies were the increase in output and employment, reduce poverty and improve standard of life. Globalization was generally considered as a catalyst for accelerating economic growth and employment generation. World different regions were got to gather. Like other developing regions south Asian region also moved towards integration. It is difficult to sat hundred percent correctly about the commencement of globalization in South Asian countries, but most of the literature are of the view that south Asian countries started opening of the economies during the last quarter of the 20th centurt (Afzal, 2007; Ali 2013; Nisa, 2016). Different impacts of it are observed by developing countries, some countries got tremendous growth and

development while some countries remain stagnant, even some of the developing got in worse off.

Globalization's measure is tested against macroeconomic instability in South Asian Countries. Different measures are taken for the representation of globalization in literature, but globalization is defined and measure by Trade openness, Financial Integration and Workers Remittances for the sake of simplicity and based on data availability regarding the selected penal of countries. Different perceptions are existed in literature about the impact of globalization on macroeconomic performance of developing countries. Globalization affects different countries varyingly depends on the status and social and political structure, geography, natural resource availability. Globalization is investigated against regarding growth, development, poverty reduction and income inequality etc. but it is not examined against macroeconomic stability/Instability. Therefore, this study aimed to investigate the impact of globalization on macroeconomic instability in South Asian Region. The nature of the data is panel having N=4 and T=36. Time period of the research study is enough long. Therefore, unit root testing is necessary for the testing of stationerity of the data. Levin, lin and Chu and Im, Pesaran and Shin panel unit root tests are used for the investigation purpose. It is found that the variables are of mix order of stationerity i.e. I(0) and I(1). Lag length selection is based on AIC and SBIC and it is decided that the best lag length is one lags. After lags length selection, Hausman Test is used for the decision of whether PMG or MG should be used for the estimation of the required estimates. PMG is preferred over MG. Panel ARDL results are presented for long run and short and for only short for the individual countries as well. It is conclude that globalization affect macroeconomic instability both in long run significant, while the impact of globalization FI and REM are insignificant in the short run. It means that with increase in globalization's factors there is a decrease in macroeconomic instability South Asian countries in the long run, while in the short run only TO significantly decrease MI in the study area.

The impacts of Globalization on individual countries (Pakistan, Bangladesh, India and Sri-Lanka) are quite different. In case of Pakistan the factors of globalization affect negatively significantly to MI. TO, FI and REM affect significantly MI in the short run, while the impact of GDI and MS is insignificant in the long run. Furthermore, long run relation id confirmed by the ECM which statistically significant with a negative. Any distortion in the long run equilibrium will be adjusted with speed of about 51% in one year.

The impact of globalization components on MI are in Bangladesh is negative in significant in short. It means with the increase in components of globalization i.e. TO, FI and REM leads to decrease MI. Moreover, the impact of control variable GDI is statistically significant with negative sign. It means that with increase in gross domestic investment there is decrease in MI. The impact MS is insignificant which means that there is no contribution of money supply of in the determination of MI. The ECT is negative and significant, which means that long run existed. The speed of adjustment towards long run relationship is of 82.2% in one year.

Globalization forces i.e. TO, FI and REM affect MI negatively and significantly. Other important variables i.e. GDI and MS are insignificant. Furthermore, long run relationship is confirmed by the ECT which statistically significant with a negative. Any distortion in the long run equilibrium will be adjusted with speed of about 95% in one year.

In case of Sri-Lanka the impact of globalization's aspects have significant contribution in the determination of MI in short run negatively. Both of the control variables have no significant contribution in the determination of MI. ETC term has negative and significant coefficient which show convergence and existence of long run relationship.

POLICY IMPLICATION

The prime objective of the present study is to investigate the impacts of globalization on macroeconomic instability in south Asian countries. The outcomes of the study enable us to suggest policy measure to get benefit from the beneficial process of globalization. In the light of outcomes of the study following policies are suggested:

- As globalization is founded effective and significant in the determination of macroeconomic instability. With increase in globalization forces macroeconomic instability decreases in individual country cases and for the overall region as well. Globalization may be used as policy tool to decrease macroeconomic instability in
- Developing countries. Suitable steps may be taken to increase trade activities with suitable policies i.e. to increase export rather than increase imports. Imports of luxury goods put pressure on trade balance. FDI provide the opportunity technological diffusion (from developed to developing countries), in the form of investment in resource oriented economies by the developed economies to get benefit from the low-priced resources. FDI also cause import of skill and technical expertise from developed to developing countries. Migration of labour force reduces pressure on domestic resources and also decreases the shortage funds in developing countries in the shape of remittances. On the other side developed countries have the shortage of human resource and they can get from overpopulated labour market of the developing countries. In this way both developed and developing countries can get from the process of globalization through human resource sharing. South Asian region is one of the most important region the regarding labour exporter of the world. South Asian region is one of the most populous regions of the world and having no impact of labour migration because of high population growth rate among the developing world.

Brain drain is not a serious issue for developing region like south Asian region.

- In order to accelerate output and employment which make sure macroeconomic stability on one side, but on the other side it may hurt the trade balance due to increase high growth rates. Increase in income of the developing countries and massive inflow of capital to developing countries increase the demand for import of luxury goods. Massive imports leads to trade deficit. It may affect labour market adversely due to replacement of domestic output by foreign. Furthermore, the government may increase the benefits with the implementation of suitable trade policies. The expertise of the domestic labour may be improved by investing in human capital in-order prevent domestic labour market from destruction due to competition at international market.

- Financial flow is necessary for enhancing economic growth and employment generation in developing countries. But, inflow and outflow should be taken into consideration in order to avoid any uncertainty. Foreign investment should be encouraged by creating healthy atmosphere.

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