Globalization and socio-economic structure: Evidence from selected Asian countries

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Abstract

Considering the fact that globalization shapes socio-economic structure, its effects vary substantially across countries and sectors, depending on the nature of globalization. This study empirically assesses the effects of different types on the socio-economic structure. The empirical analysis is carried out in the case of 17 non-oil producing countries of Asia and Eastern Europe covering the time period 1990-2016. This study employs the system generalized method of moment (GMM) as an estimation technique. The estimates indicate that all forms of globalization signify their role in shaping the socio-economic structure of the sample countries. In simple words, a more economic, social, and politically tied-up country results in an improvement in socio-economic structure. The empirical contribution of the paper lies in two folds. First, instead of individual indicators, the paper illustrates the effect of globalization on the complete socio-economic structure. To this end, we developed a composite index of the socio-economic structure comprising six different socio-economic indicators. Second, the paper provides empirical indications that how the complete socio-economic structure of a country is affected by different types of globalization. The results of the study suggest that selected countries should facilitate the globalization process to improve the socio-economic indicators and living standards of the masses.

Key Words: Globalization, Education, Health, Income Inequality, Size of Government, Labor Force, Urbanization

JEL Codes: F01, I2, I1, O5, H5, J2, R0

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1 Introduction

Globalization is diverse and multifaceted in nature, which covers many aspects including economic, social, and political, hence goes beyond the conventional economic sphere.4 However, with the advent of endogenous growth models in the mid-1980s economic concerns for globalization have been more hotly queried than its social concerns, hence in most of the earlier research merely the economic sphere of globalization is reflected. During the last two decades' globalization researchers moved ahead and have extended the empirical analyses from the conventional economic sphere to a broader socioeconomic sphere enclosing six social and economic aspects namely education, health, income distribution, size of government, urbanization, and female labor force participation. Hence, this study intends to investigate the effects of globalization on the socio-economic structure.

The response of globalization to the first social aspect (education) is concern, the positive impact of globalization expose different transmission channels through which globalization can improve education level of the host country. For example, some studies point out that globalization leads higher school enrolment through increase in per capita income of the host country (Dreher, 2006; Dreher & Gaston, 2008). Some studies explained the positive effect of globalization on education by its facilitation in the diffusion of favorable norms for education (Berman and Machin, 2000; Iranzo and Peri, 2009; Huisman and Smith, 2009; King et al. 2012). Conversely, some studies throw doubt on the educational benefits of globalization (Iranzo and Peri, 2009; and Fors, 2017). Similarly, in the child labor context, economic globalization posture either no or very weak negative relationship (Cigno, Rosati, and Guarcello, 2002; Edmonds and Pavcnik, 2006; Davies and Voy, 2009; Bonnal 2015), whereas social globalization signifies its negative impact on child labor (Andvig, 2001; López-Calva, 2001; Patrinos and Shafiq, 2010; Fors, 2014).

Similar to education, empirical evidence on the influence of globalization on health are also away from consensus. Studies

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[4] World Bank (2000) defines it as "globalization is the global circulation of goods, services, capital, information, ideas and people".

in favor of the positive influences of globalization on health explain its arguments in the technological diffusion perspective (Owen & Wu, 2007; Stevens, Urbach et al., 2013; Herzer, 2017).[5] Some other cast doubt on the positive influence of globalization on health and demonstrate a number of channels through which globalization could potentially harm health of population, such as social factors like income inequality (Babones, 2008; Bambra & Eikemo, 2009), political power structure (Navarro, 2009), and corporate food systems (Babones & Babcicky, 2010). Some studies argued for the social determination of health hazard, and claimed that hazards like smoking, diabetes, oral health, and cardiovascular diseases are socially determined, hence express concerns about social globalization (Blas & Kurup, 2010; David, Esson et al., 2010; Mendis & Banerjee, 2010). The existing empirical literature offers contrast views on the link between globalization and other aspects of socio-economic development such as income distribution, size of government and female labor force participation (see, for instances, Roy-Mukherjee & Udeogu, 2021; Payne, 2015; Sheng, 2015; Wong, 2016; Schrecker, 2020).

The existing literature on the effect of globalization on the social and economic indicators is still inconclusive. This controversy in existing literature motivates us to investigate the effects of globalization on socio-economic structure. Considering the fact that globalization shapes socio-economic structure, its effects vary substantially across countries and sectors, depending on the nature of globalization. In order to make a rigorous analysis, we segregated globalization into four namely overall, economic, social, and political globalization. In addition, unlike existing literature on the subject, which used one or two components of socio-economic structure, we constructed a comprehensive index, which comprises six different social and economic indicators.[6] Hence, the contribution of this study lies in

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[5] These studies have the argument that, globalization provides opportunity for developing countries to import latest and modern health technology form developed countries.

[6] Bourguignon (2004) argues that education, health, income inequality, size of government, urbanization, female labor force participation are some of the key indicators that describe socio economic structure. Follow Bouguignon (2004) we develop a composite index of six social and economic aspects namely

two folds. First, instead of the individual indicator, the study provides empirical evidence on how globalization affects the complete socioeconomic composition of a country. Second, the paper provides empirical indications that how socio-economic structure of a country is affected by the nature of globalization. The analyses were carried out in the case of selected seventeen Asian, and Eastern European countries. Among the sample countries two (Armenia, Azerbaijan) are European countries and the remaining fifteen are Asian that covered three Asian regions; South Asia, East Asia and pacific and Central Asia.[7] We estimate growth regressions using GMM to address endogeneity and control unobserved country- specific characteristics.

The reset of the paper is organized as follows. Section 2 presents an overview of globalization and socio-economic. Section 3 discusses the methodology while section 4 presents findings and section 5 offer some concluding comments.

2 Overview of globalization and socio-economic indicators of the sample countries

This section of the study is dedicated to providing an overview of sample countries' socio-economic indicators and globalization. Instead of using an overall sample, we use regional grouping for the descriptive analyses. The sample countries are split into three geographical regions. Section 2.1 presents socio-economic and globalization indication of selected South Asian countries, whereas the subsequent sections 2.2 and 2.3 presents the state of two other regional groups.

2.1 An overview of globalization and socio-economic indicators in South Asia

While analyzing the overtime trend of globalization and different socio-economic indicators in four selected South Asian countries, a number of significant indications appear concerning their relationship. First, in the last 25 years (1990-2016) a remarkable increase in all form of globalization have been observed in these countries (see table 1). Statistics presented in

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education, health, gender equality, size of government, urbanization, and female labor force participation.
[7]See appendix A (sample of countries)

table 1 indicate that overall globalization of these economies adapts almost double from 1990 to 2016. It is important to be noted that all types of globalization steadily increased over the time. For instance, in case of Bangladesh economic globalization increased to 35 in 2016 from 9 in 1990, whereas social and political globalization increased from 7 and 52 in 1990 to 23 and 76 in 2016 respectively. Other sample countries of the region have shown a similar tendency. India is the most globally integrated country in the sample during 2016 with a score of 51, while economic and political globalization score are recorded 41 and 90 respectively. Whereas, in dimension of social globalization, Pakistan is the most socially globalized economy during 2016 in the region. According to the Data, Nepal is the least globalized economy of the region, with lowest overall, economic and political globalization.

Table: 1
Globalization in South Asia

Country	Overall Globalization		Economic Globalization		Social Globalization		Political Globalization	
	1990	**2016**	**1990**	**2016**	**1990**	**2016**	**1990**	**2016**
Bangladesh	20	42	9	35	7	23	52	76
India	30	51	19	41	8	30	73	90
Nepal	22	40	12	30	11	26	49	71
Pakistan	33	50	26	40	15	36	67	88

Source: KOF Globalization Index

Table 2 presents socio-economic indicators of selected South Asian countries. In case of income distribution, data presented in table 2 shows mix insights. For instance, in case of India and Bangladesh income distribution become worsen. The GINI coefficient increased from 30 in 1990 to 33 in 2016, whereas it increased from 38 to 45 in Bangladesh during the same period. In Pakistan and Nepal, on the other hand, income distribution has improved. For example, in Pakistan GINI coefficient declined from 34 in 1990 to 30 in 2016 while for Nepal it decreased from 36 in 1990 to 32 in 2016.

Table: 2
Overview of Socio-Economic Indicators of South Asia

Country	GINI Coefficient		Primary School Enrolment		Life Expectancy Rate		Female Labor Participation		Urban Population		Public Expenditure	
	1990	2016	1990	2016	1990	2016	1990	2016	1990	2016	1990	2016
Bangladesh	38	45	80.57	114.2	58	71	38.68	40.41	20	34	107.1	106.53
India	30	33	92.77	114	57	68	27.5	24.17	26	32	101.4	102.97
Nepal	36	32	117.7	135.2	54	69	48.24	50.58	9	18	111.1	129.59
Pakistan	34	30	55.96	92.12	60	66	12.67	22.57	31	38	107.83	106.47

Source: World Bank, 2018

One conclusion that may be drawn from the analysis is that the impact of globalization on income distribution, in any direction it may be, depends upon the socio-economic structure of a country. In all selected South Asian countries, the primary enrolment rate has improved over the years, yet one of the region's lager country Pakistan is still falls 100 percent short in primary enrolment rate. To associate the outcome with the trend of globalization, it is safely concluded that in the case of South Asian economies globalization proves beneficial for primary school enrolment rate.

Like primary school enrolment, a close consideration of trends in Life expectancy over the time indicates that the size of life expectancy is modest in case of Bangladesh, India, and Pakistan; however, Nepal witnessed a significant improvement in health status over the time. Table 2 indicates that between 1990 and 2016, life expectancy in Nepal increased from 54 to 69 years. For Pakistan, Life expectancy was comparatively greater in 1990, though could not improve meaningfully over the time, hence by the end of 2016 life expectancy logged the lowest (66 years) within the region. Female labor force participation slightly increased over the time in Bangladesh, Nepal and Pakistan; however, it declined in case of India the largest economy of the region. To link the outcome with the trend of globalization, in case of India during the period overall globalization gone up from 30 to 51 (refer to table 1), however female labor force participation declines from 27.5 to 24.17 (refer to table 2).

The tends in South Asia's urbanization rate demonstrates that over the level of urbanization has risen over the period of 25 years. A close observation of trends in urbanization shows that it is slightly gone up in Bangladesh, India and Pakistan, whereas in case of Nepal it is sharply amplified from 9 percent to 18 percent during the same time. The comparison of urbanization trend with globalization trend presented in table 1 demonstrates that in selected South Asian countries urbanization is changing equivalently with globalization. Figures presents in table 2 indicates that between 1990 and 2016 no significant change has been occurred in size of government (public spending) of the selected South Asian countries except Nepal, whereas the size of

government increased from 111.1 percent in 1999 to 129.59 percent in 2016.

2.2 An overview of globalization and socio-economic indicators in East Asia and Pacific

The table 3 shows that globalization is expanding in selected East Asia and Pacific countries. For example, overall globalization has increased in Cambodia from 22 in the year 1990 to 50 in 2016. The other sample countries in region follows same trend.

Table: 3

Globalization in East Asia and Pacific

Country	Overall Globalization		Economic Globalization		Social Globalization		Political Globalization	
	1990	2016	1990	2016	1990	2016	1990	2016
Cambodia	22	50	35	65	10	28	22	66
China	36	60	24	49	21	53	56	84
Indonesia	34	57	35	59	10	34	65	87
Japan	46	67	44	50	38	68	59	89
Korea	41	64	40	59	39	52	46	90
Malaysia	56	79	66	81	44	73	58	83
Philippines	39	57	43	55	30	40	47	84
Thailand	36	71	37	70	30	63	43	79
Vietnam	24	49	32	66	10	30	34	55

Source: KOF Globalization Index

Table 4 presents socio-economic indicators of selected East Asia and Pacific countries. Data presented in table 4 shows mix trend of income distribution over the time for selected East Asia and Pacific countries. For instance, between 1990 and 2016 income distribution worsen in China that GINI coefficient gone up from 28 to 47. Similarly, in case of Indonesia, Japan, Malaysia, and Vietnam income distribution turn into worsen over the time. Contrariwise, in case of Cambodia, Korea, Philippines, and Thailand income distribution has been improved that GINI coefficient declined over the time. Like South Asia case, indication that can be extracted from the analyses is that the effect of globalization on income distribution in any direction may be, depends on the socio-economic structure of a country. Similarly, blend trend has been observed about primary enrolment rate.

Table: 4
Overview of Socio-Economic Indicators of East Asia and Pacific

Country	GINI Coefficient		Primary School Enrolment		Life Expectancy		Female Labor Participation		Urban Population		Public Expenditure	
	1990	**2016**	**1990**	**2016**	**1990**	**2016**	**1990**	**2016**	**1990**	**2016**	**1990**	**2016**
Cambodia	38	35	110.96	124.5	53	68	51	49	16	21	114	104.38
China	28	47	118.12	127.85	69	75	45	43	26	54	97.8	97.25
Indonesia	34	41	116.27	108.52	63	68	38	37	31	53	98.4	100.74
Japan	35	38	101.64	102.3	78	83	40	42	77	93	99.09	103.11
Korea	35	32	105.95	100.45	71	82	39	41	74	82	101	94.74
Malaysia	44	46	92.69	101.4	70	74	34	36	50	74	97	90.23
Philippines	47	44	110.03	106.96	65	68	36	39	49	44	105.8	102.33
Thailand	42	40	98.82	95.82	70	74	47	45	29	49	107.5	93.39
Vietnam	33	41	103.41	104.91	70	75	48	48	20	33	109.2	96.72

Source: World Bank, 2018

Statistics presented in table 4 indicates that primary school enrollment rate increased in case of Cambodia, China, Japan, Malaysia and Vietnam over the time, whereas for the rest of the selected regional countries have a declining trend.

A close observation of trends in Life expectancy over the time indicates that the size of increase in life expectancy is modest in case of Indonesia, Malaysia, Philippines, and Thailand, however Cambodia, China, and Korea witnessed a significant improvement in health status over the time. Table indicates that between 1990 and 2016, female labor force participation declined in Cambodia, China, Indonesia and Thailand, whereas increased in Japan, Korea, Malaysia and Philippines. In Vietnam female labor force participation remain the same over the time. With the passage of time level of urbanization has gone up in all selected economies except Philippines. However, the extent of increase has not been uniform across countries. In China, for instance it sharply increased from 26 in 1990 to 54 in 2016 whereas in case of Cambodia it increase from 16 to 21. Table 4 indicates that among selected regional countries Japan is the most urbanized country where 93 percent of the entire population is living in urban center by the end of 2016. Among the regional countries Cambodia is the country, which urbanization rate is recorded the lowest just 21 percent by the end of 2016. The outcome shows that in the selected East Asian economies over the time globalization and urbanization have same trend. The association between globalization and urbanization appears to be quite strong that both are moving in same direction. As far as size of government is concern, figures presented in table 4 show mixed insights. For instance, the size of government (public spending) gone up in case of Indonesia and Japan, however over the time it declines in all other selected East Asian economies.

Globalization and socio-economic indicators in Central Asia and Eastern Europe

Countries selected from this region include Armenia, Azerbaijan, Kazakhstan and Kyrgyzstan. Table 5 shows the level of globalization of these selected Central Asia, and Eastern Europe. Statistics present in table 5 indicates that between 1990 and 2016 overall globalization sharply increased and grew into

more than double during the course of 25 years. Among different type of globalization sharp increase has been observed in political globalization. In Armenia for instance, political globalization increased from 6 in 1990 to 67 at the end of 2016, similarly, in case of Kyrgyzstan political globalization rise from 8 to 66 during the same period. Table 5 indicates that among the selected regional countries Kazakhstan is most globalized country followed by Armenia, whereas Kyrgyzstan in the least globalized country at the end of 2016.

Table: 5

Globalization in Central Asia and Eastern Europe

Country	Overall Globalization		Economic Globalization		Social Globalization		Political Globalization	
	1990	**2016**	**1990**	**2016**	**1990**	**2016**	**1990**	**2016**
Armenia	27	59	51	69	19	44	6	67
Azerbaijan	24	57	31	61	27	51	11	60
Kazakhstan	31	60	52	68	26	43	11	53
Kyrgyzstan	31	55	38	62	41	40	8	66

Source: KOF Globalization, Index

Table 6 shows an overview of different socio-economic indicators of selected Central Asian and Eastern Europe economies. Data presented in the table indicate that over the time income inequality has gone up in Armenia and Kyrgyzstan, whereas came down in Kazakhstan and unchanged in case of Azerbaijan. Over the time primary school enrolment rate has declined among the selected regional countries except Kyrgyzstan, which is highest at the end of 2016 and remained same in the years 1990 and 2016.

A close by observation of trends in Life expectancy over the time indicates that the size of increase in life expectancy is modest in case of Kazakhstan, and Kyrgyzstan, whereas Armenia and Azerbaijan witnessed a significant improvement in health status over the time that life expectancy grown up significantly, from 67 in 1990 to 74 in 2016 and from 64 to 70 respectively.

Table: 6
Overview of Socio-Economic Indicators of Central Asia and Eastern

Country	GINI Coefficient		Primary School Enrolment		Life Expectancy Rate		Female Labor Participation		Urban Population		Public Expenditure	
	1990	2016	1990	2016	1990	2016	1990	2016	1990	2016	1990	2016
Armenia	29	38	102.46	102.42	67	74	46	46	67	63	111.32	118.42
Azerbaijan	34	34	110.12	97.95	64	70	45	48	54	54	95.36	82.93
Kazakhstan	29	28	116	106.25	68	71	47	49	56	53	101	86.49
Kyrgyzstan	30	37	109	109	68	70	46	42	38	36	120.34	150.22

Source: World Bank, 2018

Statistics presented in table 6 indicates that over the time labor force participation rate has increased in Azerbaijan and Kazakhstan, remained same in Armenia and came down in Kyrgyzstan. In most of the selected regional economies level of urbanization declined over the time, except Azerbaijan where no change has been perceived in urbanization over the last 25 years. The table shows mix insights about the trend of the size of government. For instance, in case of Armenia and Kyrgyzstan size of government have increased, whereas declined in Azerbaijan and Kazakhstan over the last 25 years.Methodology, Variables, and Data

Our empirical objective is to investigate the effect of globalization on socioeconomic structure (SES_{it}). To meet the objectives, the following base line model has been estimated using data set of 17 Asian countries covering the time period 1990 to 2016.

$$SES_{it} = \alpha SES_{it-1} + \eta' GL_{it} + \gamma' X_{it} + \eta i + \eta t + \varepsilon it \qquad (1)$$

Where socioeconomic structure (SES_{it}) is our dependent variable in country i and period t. GL_{it} represents globalization which is our variable of interest. X_{it} represents vector of control variables. η_i is a country fixed effects, η_t is a period fixed effects and εit is error term which is normally distributed.

The socio-economic structure (SES_{it}) is the study's dependent variable and it consists of six components; education, health, government size, income disparity, female labor force participation, and urbanization.[8] We used principal component analysis to construct the composite index. To construct the index, we used percentage of variance as the weight as suggested by (Ang, 2010):

$$SES_i = W_1 X_{11} + W_2 X_{12} + W_3 X_{13} + \ldots \ldots \ldots \ldots \ldots + W_n X_{1n}$$
$$SES_i = \Sigma W_j X_{ij} \qquad (2)$$

SESi is the composite index for the ith indicator, w_j is the weight allotted to jth indicator, and x_{ij} is the value after the scale bias has been removed. Because the variable used to construct the composite index are measured in different scales, it is required to

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[8] See appendix B.

convert them into a standard comparable unit in order to avoid scale bias. To do so, we used following procedure.

$$X_{ij} = (\frac{x_{ij} - x_{aj}}{\sigma_j}) \tag{3}$$

Where, X_{ij} denotes a scale free observation x_{ij} reflect an original observation and x_{aj} is j indicator's mean and σ_j represents j indicator's standard deviation.

Globalization is the one of the independent variable that we are interested in, (Dreher, 2006) developed a globalization index and improved by (Dreher, Gaston et al., 2008) commonly known as KOF index.[9] The set of control variables was chosen because of their relevance as a driver of socioeconomic structure and their potential for influence the reaction of socioeconomic structure to globalization. Data for these variables are taken from World Bank (2019), World Development Indicators.

2.3 Estimation Strategy

The empirical model presented in equation 1 postures some issues for estimation. In order to cope the issues, we approach to estimation with a multiple steps using some specification tests. In first step the (Breusch and Pagan, 1979; Hausman,1978) and serial correlation test was used to identify appropriate estimation strategy. We may fairly conclude that that our model is dynamic in nature on the outcomes of diagnostic tests. The suitable estimation technique for a dynamic panel model is GMM based on Arellano and Bond (1991) and Arellano and Bover (1995). In case of panel data GMM estimators has advantage over other estimators with three different aspects. First, GMM estimators handle the issues of serial correlation, and heteroskedasticity, hence provides efficient estimation than the simple Pooled OLS or 2SLS estimators (Söderbom, 2009). Second, GMM estimators capture the unobserved effects through regression differences or though instruments, therefore overcoming the problem of omitted variable bias. Third, it also utilizes internal instruments using lag of dependent and previous

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[9] This index is updated annually, which is openly available at
https://globalization.kof.ethz.ch/query

observations of explanatory variables, and hence avoiding endogeneity problem. Equation 1 can be written as follows after accounting for time specific effects.

$$SES_{it} = \alpha SES_{it-1} + \eta' GL_{it} + \gamma' X_{it} + \text{ŋ}i + \varepsilon_{it} \qquad (4)$$

The process of estimation evolves by taking first differences which will remove the unobserved period and country specific effects, hence ruling out the possibility of omitted variable biasness therefore equation 2 take the following form;

$$SES_{it} - SES_{it-1} = \alpha(SES_{it-1} - SES_{it-2}) + \eta'(GL_{it} - GL_{it-1}) + \gamma'(X_{it} - X_{it-1}) + (\varepsilon_{it} - \varepsilon_{it-1}) \qquad (5)$$

We assume that the new error term $(\varepsilon_{it} - \varepsilon_{it-1})$ is not serially correlated and the explanatory variables are uncorrelated with error terms. In the case of this study, the GMM dynamic panel estimator have the following moment conditions:

$$E[SES_{it-2} \cdot (\varepsilon_{it} - \varepsilon_{it-1})] = 0 \qquad (6)$$

$$E[GL_{it-2} \cdot (\varepsilon_{it} - \varepsilon_{it-1})] = 0 \qquad (7)$$

$$E[X_{it-2} \cdot (\varepsilon_{it} - \varepsilon_{it-1})] = 0 \qquad (8)$$

For $t = 4 \ldots \ldots T$ as we have a short sample size of cross-sectional, hence we have restricted our moment conditions to three only. (Roodman, 2007) argued that so many moment conditions should create over fitting bias. The GMM estimators based on equations 4, 5, and 6 are called the difference GMM estimators. However, the difference GMM estimator has some important deficiencies (see, for instance, Alonso-Borrego & Arellano, 1999; Bond et al., 2001).Hence, we employ the system GMM estimator developed by (Arellano & Bover, 1995; Blundell and Bond,1998). The moment conditions for the regression in levels are given as.

$$E[SES_{it} \cdot (\text{ŋ}i + \varepsilon_{it})] = 0 \qquad (9)$$

$$E[GL_{it} \cdot (\text{ŋ}i + \varepsilon_{it})] = 0 \qquad (10)$$

$$E[X_{it} \cdot (\text{ŋ}i + \varepsilon_{it})] = 0 \qquad (11)$$

Using moment conditions presented in equations (6), (7), (8), (9), (10), and (11) we can generate GMM estimates by the following formula developed by (Arellano & Bond,1991), and (Arellano & Bover 1995)

$$\hat{\theta} = (\acute{X}Z\hat{\varphi}^{-1}\acute{Z}X)^{-1}\acute{X}Z\ \hat{\varphi}^{-1}\acute{Z}\ \bar{S} \tag{12}$$

Where θ is the vertor of parametes, $\acute{X}$ is the matrix of independent variables, including lag of dependent variable fixed first in differences and then in levels. Z is the matrix of instruments, φ is the constant estimate of the variance-covariance matrix of the moment conditions. $\bar{S}$ is the dependent variable fixed both in differences and levels. The consistency of GMM estimator depends on the validity of instruments used.

3 Empirical findings and discussion

As stated in introduction that the main objective of the study is to examine the effect of globalization on socio-economic structure, consequently, the findings of the study mainly emphasize on effects of globalization and its different dimensions on socioeconomic structure.

Table 7 shows the empirical results of our recommended empirical model, in which we regressed Socio-economic Structure (SES_{it}) on various globalization proxies as well as a set of control variables. Results presented in table 7 shows that in Model_1 (column 2) the coefficient of our variable of interest that overall globalization (OG_{it}) has a positive and statistically significant coefficient indicating their valuable impact on socio-economic structure of the sample countries. The following reasons may explain why. First, globalization have to carry out positive impact on life expectancy as indicated by Owen and Wu (2007), Bergh and Nilsson (2010), Stevens, Urbach et al. (2013), and Herzer (2017) and argue that globalization proves beneficial for health in a sense that it ease transmission of modern health technology among trading partners. Second, globalization may also pose positive impact on gross enrolment as (Congdon Fors, 2017) indicated that globalization always proves beneficial for

primary school enrolment.[10] Correspondingly, two other indicators of our composite socio-economic index are female labor force participation and size of government, which should travel in same direction with globalization. Received literature on the subject, for instance, Mujahid (2014) set up positive association between globalization and female labor force participation. Similarly, Meinhard and Potrafke (2012) and Adam and Sakyi (2012) derived positive association of government's size with globalization.

Table: 7
Regression Results (Dependent variable is socioeconomic structure)

Variables	Model_1	Model_2	Model_3	Model_4	Model_5	Model_6
SES_{it-1}	0.636*** (10.54)	0.662*** (13.14)	0.654*** (8.47)	0.652*** (9.08)	0.751*** (14.82)	0.691*** (7.88)
$PCGDPG_{it}$	0.001** (3.58)	0.001** (2.51)	0.001** (2.42)	0.001** (3.54)	0.001** (2.80)	0.002** (3.10)
$PhyC_{it}$	0.012*** (3.54)	0.014*** (3.57)	0.011*** (3.24)	0.024*** (3.25)	0.019*** (7.89)	0.012*** (3.25)
$OGOLB_{it}$	0.014*** (4.68)	-----	------	--------	------	-------
$EGOLB_{it}$	-----	0.012** (2.78)	-------	--------	-------	-------
$SGOLB_{it}$	------	------	0.014*** (3.85)	--------	-------	-------
$PGOLB_{it}$	------	-----	------	0.011*** (3.54)	-------	-------

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[10] Descriptive analysis presented in section 2 also indicates that in sample countries globalization, life expectancy, and primary school enrolment rate move positively with time.

FDI_{it}	------	-----	------	------	-0.0161*** (3.44)	-------
TO_{it}	-------	-----	-------	-----	--------	-0.001 (0.32)
Constant	-1.34*** (6.68)	-1.23*** (7.36)	-1.23*** (4.08)	-1.39*** (7.97)	-0.69*** (3.50)	
No. of Obs.	442	442	442	442	442	442
No. of inst.	243	242	243	243	243	243
2nd. Order serial correlation test	0.472	0.44	0.45	0.49	0.5	0.53
Sargan test	12.33	11.09	12.92	12.44	11.49	13.25
p-value	0.96	0.96	0.95	0.91	0.95	0.89

Note: *, ** and *** represents level of significance at 10%, 5% and 1% respectively. The value of t-statistics are in parenthesis. Equations are corrected for heteroscedasticity where required.

In model_2 (column 3) we replaced overall globalization ($OGOLB_{it}$) with economic globalization ($EGOLB_{it}$) which have positive sign (0.012) and statistically significant at 5 percent. Like overall globalization this indicates that countries, which have more outer-oriented economic policies have relatively stable socio-economic structure. This indication links our results with received literature discussed in introduction, for instance Sapkota (2010), Meinhard and Potrafke (2012) among others argue that economic globalization proves to be beneficial to the socio-economic structure of the tied up countries. The result is also in line with our descriptive depiction discussed in section two that over the time in sample countries economic globalization and most of the socio-economic indicators are moving in same direction.

Similarly, the other two forms of globalization, social globalization ($SGOLB_{it}$), and Political globalization ($PGOLB_{it}$)

in model_3 (column 4), and model_4 (column 5) enters the model with expected positive signs, which are statistically significant at 1 percent. This signifies the role of social and political globalization in the shaping of socio-economic structure of the sample countries. To be exact more social and political tied-up of countries results in an improving of socio-economic structure. Our findings are in line with the findings of Dreher, Gaston et al. (2008) who found positive effect of social and political globalization on income inequality. Similarly, Rafat, Emadzadeh et al. (2013) supporting the claim that socially and politically tied-up countries have relatively higher life expectancy. In the same way, Meinhard and Potrafke (2012) argue for the positive effect of social and political globalization on the size of government.

Model-5 and model_6 give the results of the sensitivity analysis that foreign direct investment (FDI_{it}), and trade openness (TO_{it}) are used as proxies of economic globalization. Remarkably, FDI which is one of the indicator of economic globalization enters the model with negative sign that is statistically significant at 1 percent. This implies socio-economic structure of country gets worse as FDI surges. The result is in line with Ucal, Haug et al.(2016), who argues for adverse effect of FDI on income equality in both short run and long run. Similarly, Seguino (2007), Pradhan (2006), Cooray, Gaddis et al. (2012) argued for negative effect of FDI on female employment. The coefficient of (TO_{it}) is negative, but not statistically significant.

Control variables per capita GDP ($PCGDP_{it}$), physical capital ($PhyC_{it}$), are common to all our specifications. Results presented in table 7 shows that in all specifications per capita GDP ($PCGDP_{it}$) holds positive sign which is statistically significant. This implies that countries with high per capita income manage to pay better for socio-economic structure. Similarly, our second control variable physical capital ($PhyC_{it}$) also has a positive sign and is statistically significant, showing that an increase in physical capital amends socio-economic structure of the sample countries. The model is dynamic as the lagged dependent variable (SES_{it-1}) has been introduced as an explanatory variable. The coefficient of SES_{it-1} is positive and highly significant in all specifications. This indicates that existing socio-economic structure of a country is affected by its lag socio-economic structure that a country holds.

4   Conclusion

The primary goal of study, as stated in the introduction, is to examine the effects of globalization on socio-economic structure. However, unlike received literature on the subject, the empirical contribution of this paper lies in to two folds. First, instead of individual indicator, the paper provides empirical evidence on how globalization affects the complete socio-economic structure of a country. Second, the paper provides empirical indications that how socio-economic structure of a country is affected by the nature of globalization, hence overall globalization is segregated into its three types.

The finding of the study indicate that all forms of globalization signify its role in the shaping of socio-economic structure of the sample countries. To be the exact more economic, social, and political tied-up country results in an improving of socio-economic structure. In addition, the empirical evidence indicates that when we used FDI as a proxy of economic globalization, it enters the model with negative sign that is statistically significant. According to the results of the study, FDI has capacity to deteriorate socio-economic structure of the sample countries. All our control variables enter significantly and with positive signs in all specifications.

The results of the study have important implications for the policy makers. The study suggest that selected developing countries should facilitate the process of globalization. However, economic globalization and more specifically FDI can deteriorate the socio-economic structure of the host country. Hence, developing countries should incentivize the multinational corporations to allocate resources to health and education particularly in rural areas.

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Appendix

Table: A
Sample of Countries

i.	South Asia (4 countries)
Bangladesh, India, Nepal, Pakistan	

ii.	East Asia and Pacific (9 countries)
Cambodia, China, Indonesia, Japan, Korea Republic, Malaysia, Philippines, Thailand, Vietnam	

iii.	Central Asia and Eastern Europe (4 countries)
Armenia, Azerbaijan, Kazakhstan, Kyrgyzstan	

Table: B
Composite Index of Socio-Economic Structure

Variable	Proxy	Data Sources
Income inequality	GINI-Coefficient	UNU Wider, WIID3b
Size of government	Gross national expenditure (% of GDP)	World Bank (2018), WDI
Urbanization rate	Urban population (% of total)	WDI
Female labor force participation	Labor force, female(% of total labor force)	WDI
Health	Life expectancy at birth, total (years)	WDI
Education	School enrolment, primary (% gross)	WDI