



Research Article

Impact of Globalization on Human Development: A Panel Data Analysis of Selected South Asian Countries

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Abstract: This study tends to evaluate the impact of globalization on human development in developing countries. The objective has been achieved by analyzing the data of six SAARC countries (Pakistan, India, Sri-Lanka, Bhutan, Bangladesh, and Nepal) over 20 years from 2000-2019. Afghanistan and Maldives were removed from the study because of the unavailability of data. The multiple regression model is used for estimation, which includes many economic and demographic variables. The focused independent variables are the trade openness and foreign direct investment (FDI), which are used as a proxy for globalization. Other explanatory variables are GDP growth, percentage of the population using safely managed sanitation services, infant mortality ratio, maternal mortality ratio, birth rate, death rate, and dependency ratio (% of working-age population). Hausman test has indicated that the fixed effect model is appropriate for this study. The results of fixed effect estimation indicated that FDI has positive while trade openness has a negative impact on Human Development in selected South Asian countries.

Keywords: human development, globalization, trade openness

1. Introduction

As per definition, globalization is the increasing integration of economies around the world through goods, services, financial flows, and the movement of ideas and people. Besides many benefits, the accelerated pace of globalization has proven to be destructive as well. According to World bank report, between 1960 to 1980, the world's per capita income increased by 83%, while in the globalization era from 1980 till present, it fell to 33%. These figures mark question on the studies that favor the beneficial impact of globalization. Various literature supports the existence of a positive relationship between globalization (trade openness) and human development, as globalization and economic integrations have the potential to generate employment, market expansion, better use of resources, the spread of technological knowledge. However, globalization does not confirm human development, as globalization's impact is highly dependent on the country's social and institutional conditions. This effect has been widely studied in (Dash et al., 2018; Figueroa, 2014; Sabi, 2007; Salvatore & Wiley, 2004).

Developing countries (especially Pakistan, India, Nepal, Bangladesh, Bhutan, and Sri-Lanka) mostly export primary goods that have low prices and import finished goods that have higher prices. Hence, their import bill exceeds their export bill, and they have to suffer a trade deficit. This negative influence of trade openness prove the adverse

effect of globalization. However, FDI supports economic growth and thus has a positive effect on Human Development Index (HDI). In the year 2019's HDI ranking, Sri-Lanka ranked (71), India (129), Bhutan (134), Bangladesh (135), Nepal (147), while Pakistan stood with rank (152), out of 189 countries.

South Asian region constitute about 23 percent of the world's population and has potential to increase growth by trade expansion among its countries but facing challenges (Babar & Khandare, 2012). In the earlier period of the era of globalization, many developing countries have adopted trade liberalization reforms involving the reduction of import and export tariffs and non-tariff barriers. However, that increase in trade openness proved to be detrimental to economic growth by increasing inflation and lowering exchange rates (Keho, 2017). A number of studies support the idea of positive growth effects of trade openness (Chang et al., 2009; Frankel & Romer, 1999; Freund & Bolaky, 2008). Other studies oppose the existence of a positive link between trade and economic growth (Musila & Yiheyis, 2015; Polat et al., 2015; Ulasan, 2015). Most of the studies presented above, were failed in explaining the reason behind the positive or negative influence of global trade openness and economic growth. The element of resolving the issue is also missing. Therefore, this gap in the existing literature needs to be filled. The requisite compelled to present a comprehensive study that not only analyze the impact of globalization or trade openness by taking all the factors in consideration that were missing in earlier literature but also figure out the causes and present a practical approach to eliminate the issues.

This research has been done to find whether globalization is beneficial for developing countries or harmful. It has been found that almost all previous studies used the living standard indicators to study the impact of globalization on human development. Also, the influence of globalization has been analyzed in general. The contribution of this research is analyzing the impact of globalization on a dis-aggregated level using both trade and human development indicators. To achieve this objective panel data of six South Asian countries, who are associated in trade block SAARC, has been analyzed. The research proceeded employing fixed effect regression estimation. The findings of the research would benefit the developing countries specially those under study to device the policies particularly the trade policies accordingly. For instance, the countries having a negative trade and development nexus should not only increase their production in order to reduce import, but they must also identify the other factors which are causing hindrance in getting the benefits of trade like developed countries. While, those countries where globalization is supporting human development should analyze its unprecedented feature and work in direction to improve it further.

The research question is that, whether globalization has a positive or negative impact on HDI of developing countries. The research also tends to answer that whether countries internal features influence the HDI and globalization nexus and also identify the factors that strengthens the impact of globalization in developing countries.

This brief introduction is followed by a review of theoretical literature and a review of empirical literature in Section 2 and Section 3, respectively. The empirical framework is discussed in section 4. Preliminary data analysis and estimation results are presented in section 5. Section 6 concludes the study with policy implications and set directions for further research.

2. Review of theoretical literature

The HDI, as presented in the Asia Pacific Human Development Report (UNDP, 2019), is the measure of human development that focuses on three key dimensions, i.e., a long and healthy life, education, and standard of living. The health dimension is calculated by life expectancy at birth. The education dimension is measured by average years of schooling. Whereas, GNI per capita measures the standard of living.

The neo-classical welfare gain analysis describes that, through the exploitation of comparative advantage, a reduction in trade barriers increases trade and productivity, increases GDP through capital accumulation and reallocation of resources, but the higher growth lasts only for the transitional period. Theories that were relevant to trade openness are usually based on models of technological change. Trade can accelerate the rate of technological progress, hence productivity growth, either through an expansion of the input's markets or output's markets.

Globalization supports economic growth, but it is not necessarily sufficient for human development. As mentioned above, human development is highly dependent on other factors as well. Some countries face surplus labor issues when it increases the import of technology or machinery that reduces the need for labor for producing goods. In contrast, the movement of skilled labor from developing countries to developed countries causes brain drain in developing countries.

At the same time, these comparatively cheap labor movements result in job losses of the nationals in the host country.

Salvatore and Wiley (2004) remarked that the benefits of trade differ depending on the nature of the country. In small countries, the changes in the domestic market do not influence the international price. Thus, the trade barrier causes welfare loss in small developing countries. Whereas, changes in the domestic market of large countries causes a change in international price. Therefore, positive welfare gains are possible from the imposition of trade barriers in large countries.

The unproductive government expenditure, such as defense expenditure, indicates diversion of resources from productive activities to non-productive, such as the purchase of weapons and recruitment of productive members of society for military services. This diversion is likely to reduce general welfare, as resources available for other productive and welfare-enhancing activities will be less. As Blanton (1999) stated, "...the acquisition of arms may tempt the military to forcefully require and maintain acquiescence to the state, even at the expense of individual liberties". Thus, a negative relationship between defense expenditure as a percentage of gross national product and the human development index is predicted.

3. Review of empirical literature

In this section, some empirical studies on the relationship between globalization and human development have been presented. Since this study is using panel data for investigation; therefore, the reviewed literature mostly focuses on discussing the findings of studies that used panel data.

Olagunju et al. (2019) applying the System Generalized Method of Movement (SGMM) over the cross-country panel data of 110 developing countries from 1970 to 2015, analyzed the impact of globalization and human capital on the welfare of developing countries. The model used poverty as a dependent variable, whereas globalization and human capital were used as independent variables. The empirical result indicated that globalization reduces the poverty gap and the child mortality rate. Another indication suggests that education and the health dimensions of human capital strengthen the impact of aggregate globalization.

Dash et al. (2018) analyzed the diverse impact of globalization on human development indicators of different countries, using the pre-globalization and post-globalization period data of India, Japan, and Singapore. The period from 1969-1991 has been taken for pre-globalization analysis whereas, 1991-2014 is the period for post-globalization analysis. The comparison of findings of multiple regression analysis of each country confirmed that the impact of globalization differs significantly from country to country, depending on their economies' features.

Waheed and Tehseen (2017) investigated the effect of aggregate and disaggregate trade on Pakistan's human development, using time series data from 1980-2013. They constructed five models of human development with total trade, aggregate exports, aggregate imports, the export of primary, semi-manufactured, and manufactured goods and imports of industrial raw materials, consumer, and capital goods. They concluded that trade has a positive impact on human development in Pakistan.

Figueroa (2004) explained that globalization's diverse impact on human development depends upon their measurement, level of fragility, and delinquency. Data of 17 Latin American countries over the period of 1995 to 2009 has been used for analysis. The study presented three different dimensions of globalization, i.e., Economic, Social, and Political. The empirical result concluded that economic globalization adversely affects GDP per capita, life expectancy, and public investment in education in developing countries. Whereas, the effect of social globalization is otherwise. However, political globalization positively affects the GDP per capita and life expectancy, but its effect is negative on public investment in education.

Sapkota (2011) drawing attention towards the KOF Index of Globalization (which promotes human and gender development and reduces human poverty), used annual panel data of 124 developing countries from 1997 to 2006 to analyze the impact of globalization on different human aspects of development. The Generalized Least Squares (GLS) random effect estimation model's findings indicated that all three aspects of globalization, i.e., economic, social, and political, go along together to contribute the overall effect of globalization rather than contradict each other.

Sabi (2007) considering economic liberalization as a measure of the social impact of globalization applied regression analysis on a cross-section of about 150 countries, concluded that, in developing countries with low or

middle income, globalization is not related to human development ranking. Globalization exerts influence on human development only after a certain level of income. The result also confirms that globalization intensifies income inequality.

Dowrick and Golley (2004) investigated the dynamic impact of trade openness by comparing different periods of data from 1960-1970, 1970-1980, 1980-1990 of various countries. A structural model consisting of three equations, i.e., growth equation, investment equation, and openness equation, has been designed to measure the impact of policy measure on openness, the effect of openness on productivity, and investment. Results confirmed that trade openness promoted convergence in the 1960s and 1970s. However, since 1980, trade accrued benefits mostly went to the more prosperous economies, with little benefits to the less developed economies. The author explained that the difference in the impact between rich and poor economies is due to inappropriate internal policies and institutions.

Yanikkaya (2002) using two groups of trade openness measures, applied cross-country regression to a panel of over 100 developed and developing countries over the period from 1970 to 1997. The first group used various measures of trade volumes. Trade shares are found to be significantly and positively correlated with growth. In the second group, new measures of trade intensities were introduced, which are trade with OECD countries, non-OECD countries, and U.S. bilateral trade figures. Significant positive coefficients for these measures show that trade barriers are positively and, in most specifications, significantly associated with growth, especially for the developing countries.

Eufuszari (1996) examined the correlation coefficients between Dollar's openness index and set of 11 measures of human development, including the level and rate of change of the Human Development Index (HDI) between 1970-1985. The income distribution adjusted HDI, the level and rate of change of the under-five mortality rate, and the proportion of the population with access to safe water were used. The results mentioned that economies that are more open to international trade have a higher level of HDI, lower under-five mortality rates, and a higher proportion of the population with access to safe water.

The studies discussed above presented mixed results. Some investigations evaluated a positive impact of globalization on human development (Eusufzai, 1996; Figueroa, 2014; Jawaid & Waheed, 2017; Olagunju et al., 2019; Yanikkaya, 2002) while other studies observed a negative relationship between globalization and human development (Dowrick & Golley, 2004; Sabi, 2007; Salvatore & Wiley, 2004). This study attempts to identify whether the discussed relationship has any positive or negative significance for developing countries.

4. Empirical framework

From the review of the earlier theoretical and empirical literature, it has been observed that almost all previous studies used either trade indicators or living standard indicators to study the impact of globalization on human development. Many pieces of research have been done to identify the influence of globalization in general, very few works are done to analyze its impact on dis-aggregated level. The contribution of this research is analyzing the impact of globalization on a dis-aggregated level using both trade and human development indicators.

The study used nine core macro-economic variables to analyze the impact of increasing globalization and trade liberalization on developing economies' human development. The six countries under study are Pakistan, India, Sri-Lanka, Bhutan, Bangladesh, and Nepal. Data is analyzed for a period of 20 years from 2000-2019. Openness is expected to be negatively linked with HDI, as the study is for developing countries, whereas, the expected sign of FDI is positive as developing countries are overly dependent on foreign investment not only for production growth but also for development expenditures. Not only the birth rate but also the sign of death rate is expected to be positive because the increased death rate reduces excess population burden from the economy. GDP growth and access to sanitation facilities are expected to positively influence human development, unlike maternal and infant mortality rates, which are expected to negatively link with HDI. The increased ratio of the dependent population is also assumed to affect human development negatively.

$$\text{HDI}_{it} = \beta_0 + \beta_1 \text{OPEN}_{it} + \beta_2 \text{FDI}_{it} + \beta_3 \text{BR}_{it} + \beta_4 \text{DR}_{it} + \beta_5 \text{GDPGR}_{it} + \beta_6 \text{MMR}_{it} + \beta_7 \text{DEPEND}_{it} + \beta_8 \text{INFAM}_{it} + \beta_9 \text{SANAT}_{it} + \mu_{it}$$

where, HDI is Human development index, OPEN is the sum of total imports and total exports as a percentage of GDP. FDI is foreign direct investment, BR is a crude birth rate per 1000 live births, DR is death rate, GDPGR is GDP growth annual, MMR is maternal mortality ratio, DEPEND is dependent population ratio to the percentage of the working-age population, INFAM is Infant mortality rate per 1000 live births, SANAT is the percentage of the population access to necessary sanitation facilities. β_0 is a constant term, β_1 - β_9 are parameters which need to be estimated. Except GDP growth, FDI, and Access to Sanitation facilities, all the variables were taken in log form to linearize the series.

The data of six SAARC countries (Pakistan, India, Sri-Lanka, Bhutan, Bangladesh, and Nepal) over the period of 20 years from 2000-2019 has been taken from World Development Indicator (WDI) data bank and UNDP official websites. Afghanistan and Maldives were removed from the study because of the unavailability of information. The focus variables Trade openness (Sum of import and export as a percentage of GDP) and foreign direct investment are used as a proxy for globalization. At the same time, the dependent variable, the Human Development Index (HDI) is used as a measure of human development.

5. Preliminary analysis and estimation results

5.1 Preliminary data analysis

The data of each country i.e., Bangladesh, Bhutan, Nepal, India, Sri-Lanka, and Pakistan, has been evaluated and reported in Table 1 to 6. Tables 1, 3, 4, and 5 are indicating that the data of all variables of Bangladesh, Nepal, India, and Sri-Lanka are normally distributed. Whereas, in Table 2, Bhutan's descriptive statistics show that FDI and GDP growth are not distributed normally. It has been observed that the data of FDI in Pakistan is not normally distributed.

Table 1. Descriptive statistics of Bangladesh

	HDI	OPEN	FDI	DR	BR	MMR	INFAM	SANAT	GDPGR	DEPEND
Mean	0.542	37.871	0.937	5.940	21.971	283.830	41.575	37.978	6.096	58.603
Median	0.542	38.178	1.018	5.770	21.356	263.500	39.950	38.532	6.262	58.645
Max	0.614	48.110	1.735	6.883	27.493	434.000	63.900	48.233	7.863	68.950
Mini	0.470	26.858	0.095	5.529	18.184	173.000	25.100	25.644	3.833	48.952
Std. Dev.	0.046	6.464	0.436	0.440	2.975	85.495	12.276	7.287	1.002	6.247
Skew	0.017	-0.187	-0.238	0.810	0.443	0.476	0.328	-0.206	-0.391	0.071
Kurtosis	1.693	2.084	2.484	2.331	1.899	1.875	1.842	1.712	2.604	1.782
J-Bera	1.422	0.816	0.410	2.562	1.664	1.810	1.476	1.524	0.639	1.252
Prob	0.490	0.664	0.814	0.277	0.435	0.404	0.477	0.466	0.726	0.534

Source: Authors' estimation

Table 2. Descriptive statistics of Bhutan

	HDI	OPEN	FDI	BR	DR	MMR	INFAM	SANAT	GDPGR	DEPEND
Mean	0.566	97.451	1.219	20.613	6.860	269.122	37.595	60.545	7.266	59.141
Median	0.565	100.254	0.766	19.673	6.454	251.000	35.150	61.316	6.840	57.807
Maxi	0.617	116.549	6.321	27.066	8.838	423.000	57.800	69.254	18.360	77.712
Mini	0.512	75.477	-0.675	17.259	6.243	183.000	24.800	49.764	2.119	46.572
Std. Dev.	0.036	14.274	1.612	3.114	0.807	70.143	10.626	6.447	3.485	9.861
Skew	0.046	-0.178	2.181	0.695	1.241	0.704	0.498	-0.293	1.602	0.424
Kurtosis	1.397	1.600	7.139	2.204	3.276	2.389	1.937	1.752	6.366	1.959
J-Bera	2.148	1.738	30.137	2.137	5.199	1.963	1.767	1.583	18.000	1.501
Prob	0.341	0.419	0.000	0.343	0.074	0.374	0.413	0.453	0.0001	0.471

Source: Authors' estimation

Table 3. Descriptive statistics of Nepal

	HDI	OPEN	FDI	BR	DR	MMR	INFAM	SANAT	GDPGR	DEPEND
Mean	0.516	48.355	0.249	24.024	7.055	336.492	39.959	39.289	4.376	70.516
Median	0.520	46.655	0.238	22.941	6.856	314.000	38.150	39.457	4.609	71.065
Max	0.579	55.799	0.779	31.547	8.518	553.000	59.900	62.054	8.223	80.932
Mini	0.446	41.828	-0.098	19.887	6.361	186.000	26.700	15.124	0.120	56.597
Std. Dev.	0.047	4.396	0.241	3.604	0.643	117.289	10.482	15.131	1.883	7.689
Skew	-0.115	0.447	0.315	0.726	0.893	0.476	0.437	-0.075	-0.416	-0.260
Kurtosis	1.480	1.877	2.270	2.305	2.689	1.928	1.942	1.665	3.574	1.838
J-Bera	1.967	1.716	0.775	2.162	2.738	1.714	1.569	1.503	0.853	1.352
Prob	0.373	0.423	0.678	0.339	0.254	0.425	0.456	0.472	0.653	0.508

Source: Authors' estimation

Table 4. Descriptive statistics of India

	HDI	OPEN	FDI	BR	DR	MMR	INFAM	SANAT	GDPGR	DEPEND
Mean	0.576	42.812	1.628	21.672	7.703	232.918	46.795	39.462	6.675	56.495
Median	0.576	43.204	1.592	21.435	7.547	217.500	46.200	40.192	7.461	56.434
Max	0.647	55.794	3.621	26.401	8.692	370.000	66.600	59.543	8.498	64.180
Mini	0.497	25.993	0.606	17.857	7.194	145.000	29.900	16.369	3.087	49.775
Std. Dev.	0.049	9.110	0.721	2.923	0.514	74.279	11.739	13.882	1.683	4.686
Skew	-0.107	-0.411	0.887	0.182	0.575	0.453	0.157	-0.162	-0.906	0.106
Kurtosis	1.719	2.289	4.065	1.585	1.906	1.844	1.732	1.700	2.414	1.709
J-Bera	1.406	0.983	3.568	1.778	2.103	1.798	1.423	1.495	3.026	1.427
Prob	0.495	0.612	0.168	0.411	0.349	0.407	0.491	0.474	0.220	0.489

Source: Authors' estimation

Table 5. Descriptive statistics of Sri-Lanka

	HDI	OPEN	FDI	BR	DR	MMR	INFAM	SANAT	GDPGR	DEPEND
Mean	0.743	61.613	1.290	17.622	6.197	42.062	10.286	90.552	5.213	49.805
Median	0.747	53.952	1.199	17.949	6.169	39.500	10.150	90.682	5.226	49.012
Max	0.780	88.636	1.864	18.592	6.890	56.000	15.400	95.782	9.145	53.069
Mini	0.687	46.364	0.842	15.831	5.766	36.000	6.400	84.638	-1.545	47.978
Std. Dev.	0.030	13.649	0.319	0.967	0.323	6.538	2.752	3.592	2.374	1.815
Skew	-0.453	0.517	0.557	-0.522	0.400	0.709	0.221	-0.134	-0.808	0.627
Kurtosis	1.878	1.748	2.210	1.751	2.188	2.173	1.879	1.681	4.512	1.784
J-Bera	1.730	2.197	1.554	2.209	1.083	2.243	1.209	1.509	4.081	2.544
Prob	0.421	0.333	0.459	0.331	0.582	0.326	0.546	0.470	0.129	0.280

Source: Authors' estimation

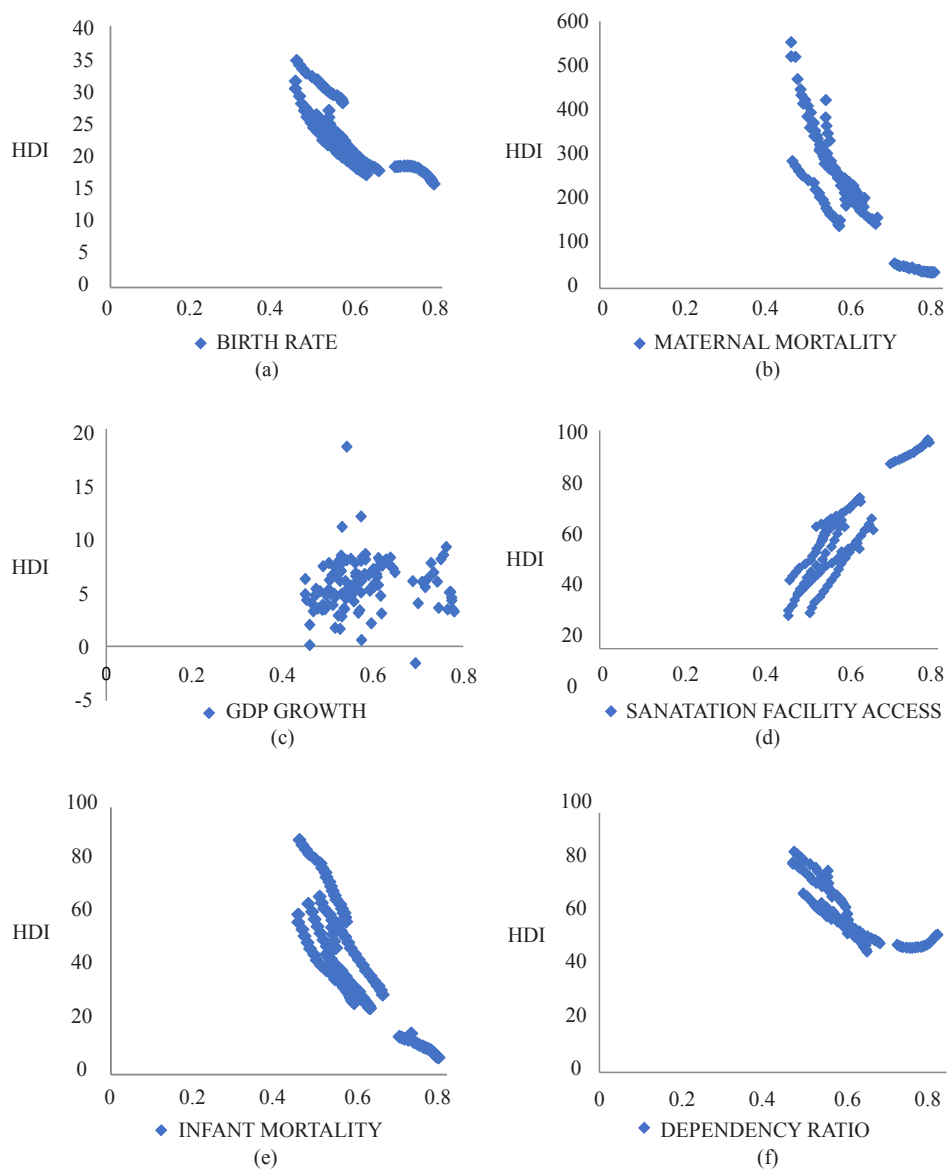
Table 6. Descriptive statistics of Pakistan

	HDI	OPEN	FDI	BR	DR	MMR	INFAM	SANAT	GDPGR	DEPEND
Mean	0.516	31.082	1.242	30.712	7.715	200.498	71.663	47.278	4.436	73.907
Median	0.522	31.486	0.853	30.210	7.627	195.000	71.250	48.266	4.703	72.869
Max	0.560	35.682	3.668	34.703	8.862	286.000	87.800	59.869	7.667	85.048
Mini	0.449	25.306	0.383	28.250	6.942	140.000	57.200	31.366	1.607	65.515
Std. Dev.	0.035	3.096	0.979	1.889	0.614	46.745	9.669	9.0541	1.731	6.517
Skew	-0.499	-0.283	1.486	0.679	0.384	0.373	0.120	-0.278	0.009	0.311
Kurtosis	2.069	2.109	3.859	2.363	1.862	1.847	1.7432	1.781	2.306	1.723
J-Bera	1.555	0.926	7.978	1.874	1.570	1.569	1.364	1.496	0.401	1.680
Prob	0.459	0.629	0.019	0.392	0.456	0.456	0.506	0.473	0.818	0.432

Source: Authors' estimation

Figure 1(a) is representing a negative relationship between HDI and birth rate. It is confirmed in Figure 1(b) that HDI and maternal mortality rate possess a negative relation. Figure 1(c) is showing no significant connection between HDI and GDP growth. However, a positive relationship has been seen in Figure 1(d), between HDI and sanitation facilities access. Both infant mortality rate and dependency ratio shows a significant negative relation in Figure 1(e) and Figure 1(f), respectively.

The correlation matrix in Table 7 shows that trade openness is positively linked with HDI. Also, its relation is positive with FDI. The correlation matrix suggests a negative connection of HDI with birth and death rate, but the relationship it shows between sanitation facility and GDP growth is positive. While presenting a negative relation between human development and infant mortality rate. The correlation matrix also indicates that the dependency and maternal mortality rates are negatively correlated with HDI.



Source: Authors' estimation

Figure1. Scatter plot of HDI and explanatory variables

Table 7. Correlation Matrix

	HDI	FDI	SANAT	GDPGR	MMR	BR	DR	INFAM	DEPEND	OPEN
HDI	1									
FDI	0.199	1								
SANAT	0.911	0.167	1							
GDPGR	0.074	0.461	0.043	1						
MMR	-0.873	-0.283	-0.865	-0.013	1					
BR	-0.776	-0.132	-0.640	-0.226	0.546	1				
DR	-0.546	0.002	-0.518	-0.094	0.472	0.718	1			
INFANM	-0.854	-0.031	-0.759	-0.107	0.605	0.935	0.746	1		
DEPEND	-0.806	-0.206	-0.649	-0.222	0.684	0.909	0.701	0.824	1	
OPEN	0.252	0.182	0.429	0.283	-0.096	-0.478	-0.245	-0.434	-0.352	1

Source: Authors' estimation

5.1 Model estimation results

As this study uses panel data for estimation, therefore our first concern is to determine whether the fixed-effect or random-effect model is appropriate. For the selection of a fixed-effect model or random-effect model, the Hausman test has been employed. Hausman test detects endogenous regressor or predictor variable in regression model. The null hypothesis of Hausman test is that the preferred model is random effect. While the alternative hypothesis is that the fixed effect model is appropriate. Results in Table 8, indicate that the fixed effect model is appropriate for this study, as the null hypothesis has been rejected. Therefore, we employed a fixed-effect model for our estimation.

Table 8. Hausman test result for model selection

Test Summary	Chi-square statistic	Degree of freedom	Probability
Period Random	21.757	9	0.0097

Source: Authors' Estimation

Table 9 shows the results of Fixed effect model. Similar to the study of Yanikkaya (2002), the estimation result shows that for countries (Pakistan, India, Sri-Lanka, Bhutan, Bangladesh, and Nepal), GDP growth has a significant positive impact on HDI. However, the coefficient is small, that is, every one percent increase in GDP growth will raise the HDI level up to 0.002 only. The impact of trade openness supported to be positive by many works of literature like Waheed and Tehseen (2017), Olagunju (2019), Figueroa (2014) but in our case the impact is negative, which proved the statement of Salvatore and Wiley (2004) and Dash et al. (2018). The result of trade openness and HDI relation exhibit that every 1% increase in trade openness will decrease HDI by 0.045.

Table 9. Estimation results of fixed effect model

Variable	Coefficient	Standard Error	t-Statistic	Probability
Constant	0.688	0.088	7.792	0.000
OPEN	-0.045	0.009	-4.593	0.000
FDI	0.003	0.002	1.433	0.155
BR	0.016	0.063	0.254	0.799
DR	0.234	0.028	8.224	0.000
GDPGR	0.002	0.001	2.179	0.032
MMR	-0.024	0.019	-1.274	0.206
DEPEND	-0.355	0.055	-6.456	0.000
INFAM	-0.107	0.021	-5.037	0.000
SANAT	0.096	0.016	5.894	0.000
Adj.R ²	0.988		F-statistic	366.297
DW Statistic	0.579		Probability (F-stat.)	0.000

Source: Authors' Estimation

Although Foreign direct investment shows a positive influence which supports the study of Sharma and Gani (2004), however, it is not statistically significant. Dependent population ratio has a highly significant negative impact on HDI. Higher ratio of dependent population means less labor force participation, in countries like Pakistan, India, Bangladesh, Bhutan, women's life is limited to house hold work and the societal norms restrict women to participate in labor force. The low HDI of selected South Asian countries is a result of such societal norms, as no country will progress well if almost half of its population does not participate in labor force. The coefficient of DEPEND indicates that every 1%

increase in the ratio of dependent population will decrease the Human Development Index level by 0.36.

It has been observed that maternal mortality ratio and infant mortality ratio has a negative relation with HDI, which is an obvious and expected result as the countries that thrive for the development of its citizens would give priority to health sector. However, the result of birth rate, and death rate indicates that both variables have positive impact on HDI. Although, the birth rate is statistically insignificant. While in developing economies, the increased death rate reduces the economic burden, and hence it has significant, positive impact, that is, every 1% increase in death rate increases the Human Development Index level by 0.23.

Increased access to sanitation facilities has a highly significant positive impact on human development. Every 1% increase in the population access to necessary sanitation facilities would boost the level of HDI by 0.96. The result confirms the study of Eufuszari (1996).

The goodness of fit stood at 98.8%, which confirms that the model is a good fit model. Although Durban Watson indicates the presence of autocorrelation, however for the panel data study with a period of fewer than 30 years, it is not worth concerning. The probability of F-statistic shows that the model is overall statistically significant.

6. Conclusion and policy implications

Based on estimation results, it can be concluded that the impact of trade openness on human development is harmful to developing countries as it has been expected and supported by many earlier literatures like (Dowrick & Golley, 2004; Figueroa, 2014; Sabi, 2007; Salvatore & Wiley, 2004). This negative impact of globalization is mainly due to the internal features of the country. It has also been observed that the countries facing negative trade openness and HDI relations have a high dependent population ratio, high infant and maternal mortality rates, and lack of basic facilities like sanitation services. The result confirms the study of Eufuszari (1996). Although the impact of foreign direct investment is positive, it is insignificant because in developing the private and public investment is low. Therefore, growth depends on FDI, but the host country could not get all its benefits as the investment made by external sources repatriate the profit to their own country.

An increase in birth rate is positively linked with HDI, as the cause of increased birth rate is associated with improved health facilities in the country. However, it is insignificant because it increases the dependent population ratio in the country. As population density is usually high in developing countries, the population increase results in an excess burden on the economy. Therefore, in developing economies, the increased death rate reduces the economic burden and thus sheds a positive impact on the overall human development index.

It has been suggested that developing countries should initiate to produce finished goods and should strive to increase their export and decrease imports. The government should strive to reduce maternal mortality and infant mortality, provide access to sanitation facility, and encourage the female labor force's participation. Institutions should be developed to provide technical skills to the public for greater labor force participation.

This research can be further proceeded by considering more countries in the sample. A comparative analysis of developed countries and developing countries can also be made to analyze globalization's diverse impact.

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