Pakistan Journal of Commerce and Social Sciences
2017, Vol. 11 (1), 353-388
Pak J Commer Soc Sci

Selling Souls: An Empirical Analysis of Human Trafficking and Globalization

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Abstract

This paper investigates the impact of globalization on human trafficking using a large panel data set of 169 countries from 2001 to 2011. This study explores the contribution of economic, social and political globalization in the trafficking of humans for forced prostitution, forced labor, debt bondages and child soldiers. Moreover, the study investigates the impact of globalization on source (supply) and destination (demand) of human trafficking. This study uses Probit and Oprobit models of panel data for empirical analysis. Findings of the study show that globalization facilitates human trafficking, particularly, forced prostitution, forced labor and debt bondages while it helps to suppress the demand and supply of child soldiers. The empirical analysis also reveals that these are the mostly poor countries which serve as source of human trafficking while the rich countries are destination of trafficked victims. The data series over a long period are not available and therefore the sample size is small. This research paper contributes into the literature on human trafficking and globalization by highlighting the heterogeneity of source and destiny economies in shaping the links of globalization with human trafficking. To the best of our knowledge, it is first study of its kind that provides an empirical analysis of source and destiny of human trafficking with globalization. Moreover, this study considers different dimensions of globalization and human trafficking. The main message of this research is that as globalization proceeds, human trafficking increases. Therefore, the governments of developing economies need to improve socioeconomic conditions to provide basic necessities of life at home country and the governments of developed countries need to implement strong rule of the law to discourage such practices. Our study is useful in offering insights to policy makers that how to avoid the perils of globalization.

Keywords: Human trafficking, globalization, human smuggling, probit and oprobit model.

1: Introduction

The ongoing process of globalization has created opportunities as well as challenges. One of the major challenges is increasing human trafficking all over the world. Marshall (2001) argues that increasing globalization is creating disparities between and *within*

counties. These disparities create incentives for migration in search of better quality of life. However, much of this migration is illegal or irregular, placing migrants in a highly vulnerable position and leading to humans' exploitation and trafficking.

Human trafficking inflows in a country refer to the extent of abuse and exploitation that a country tolerates against the citizens who have illegal standing in the country. It is an abysmal abuse and violence against the vulnerable people of society and among them most of the victims are foreign women (Dutch National Rapporteur 2010; German Federal Criminal Police Office 2008; UNODC, 2006). Human trafficking is defined as the extreme form of human exploitation for forced labor, slavery, prostitution, debt bondage or want of human organs, the means used in trafficking are abduction, coercion, deception and threats. Human trafficking is a crime that includes all phases of trafficking such as recruitment, shipping, allocation, and harboring of persons (United Nations Office on Drugs and Crime, 2006). All among illicit businesses, human trafficking is second after drugs dealings (Jones *et al.,* 2007). According to International Organization for Migration (2006) worldwide immigrants are exceeding 191 million. There are push and pull factors that drive these illegal activities. The humans who are most vulnerable to this abuse are actually ignorant and immature person and they are pushed out from low income countries for their dire economic conditions and pulled into high income countries (Van, 2000; Jones *et al.,* 2007).

Human trafficking is very profitable illicit business. It has low cost and high non-taxable monetary returns. According to International Children's Emergency Fund (UNICEF) 1.2 million trading of children generated $10 billion. United Nation's Interregional Crime Research Institute estimated that about $7 billion are generated every year through human trafficking. United Nation's Department of State (2006) also proposed the figures that every year about 0.6 to 0.8 million people become trapped by the trafficker's mafia. According to International Labor Organization (2005) due to human trafficking at least 2.4 million children and adults are the sufferers of sexual servitude and forced labor. Human trafficking is considered as most profitable illicit business after drug trafficking and generated the revenues of at least $30 billion (ILO, 2005; Interpol, 2009).

The literature on human trafficking offers different theories such as pull and push theory of migration, rational-choice theory, constitutive theory and structural theory. The studies of Ravenstein (1885), Sjaastad (1962), and Lee (1966) assert that every factor that shapes and strengthens movements of people is considered either a "pull" or "push factor". Push factors represent source country characteristics that trigger outflow of people or intensify the pressure to leave the home country. These factors also support human trafficking outflows, because the higher the willingness to emigrate, the more likely it is that an individual will come into contact with trafficking organizations.

In contrast, pull factors are characteristics in host countries that attract inflows of migrants. Trafficking flows also respond to such characteristic, because the main targets of trafficking organizations are vulnerable groups among the population that are highly exposed to exploitation (Castles and Miller, 2003). Traffickers incur large costs in searching potential victims. In cases of well-established routes for migrants and refugees, the costs are greatly reduced that creates and ideal market for traffickers (Salt and Stein, 1997). Trafficking organizations prefer to find victims where costs are lower (push factor), transporting the victims through less risky routs, and exploiting them where revenues are higher (pull factors) (Schloenhardt, 2001).

According to rational choice theory of human trafficking, criminals are rational beings who make decisions to commit crime based on the costs and benefits involved in the process of crime perpetration. According to Gerassi (2015) structural theories of human trafficking assert divisive legal perspectives, such as criminal treatment of those who exploit human rights or facilitate others into exploiting human rights for money. The central idea of constitutive criminology is that power and equality build socially constructed differences through which harm and deprivation is imposed on the subordinated group (Lanier & Henry, 2004). The interconnectedness of societies which cannot be seen outside of cultural and structural contexts, determines the types of crimes that are likely to be perpetrated in specific geographical communities. Constitutive criminologists perceives criminals as excessive investors in crime who could use any means necessary to achieve the desired outcomes whereas a victim is often the disabled party who experiences pain, loss and denied humanity (Lanier & Henry, 2004).

According to Hernandez and Rudolph (2015) there are three main scenarios which facilitate the process of human trafficking. First, victims incur debt from the traffickers and when fail to repay after going abroad are exploited at destination country. Seconds, victims are deceived by accepting the job offer, whole process from recruitment to reaching destination country is valid but they are deceived at destination. Third, victims are kidnapped and exploited.

The victims of the traffickers are mostly children, women and poor citizens. Global Report on Trafficking in Person (UNODC, 2009) provides the understandings of human trafficking occupation. The report illustrates that the key targets of human traffickers are women that comprises 66% of the total incidents. The report further illustrates that sexual exploitation is a key reason of trading women and girls and it covers 79% of all cases. The other key reason for trafficking is labor exploitation which composed 18% of all cases. The report also highlights that children account for more than fifth part of trafficking in person for labor exploitation.

The agents involved in this barbaric crime range from individuals to well organized organizations (UNESCO, 1994; Savona *et al.*, 1996; Schloenhardt, 1999; U.S. State Department, 2003). Traffickers trap the victims from source country and earn significant profit by selling them into the destination countries. Williamson (2017) argues that economic and gender-based inequalities may push women to seek migration, inadvertently leading women to be disproportionately victimized by trafficking.

Human trafficking also facilitates through legal channels. Traffickers offer lucrative jobs to the victims and process recruitment and transfer abroad in a legal way. Sometimes people over stay in foreign countries illegally and this also facilitates their exploitations by employees (Aronowitz, 2001).

Globalization plays a vital role in fueling this crime by increasing socio-economic disparities. Economic globalization facilitates the trade of humans through trade routes and countries boarders. Traffickers can easily manage their illicit activities by bribing the officers. The wish of getting better earning urge people to travel abroad and they are likely to be trapped by traffickers in destination countries. Hawthorne (2004) pointed out that globalization through internet assists exports of women for labor exploitation and prostitution.

According to Huges (1999), the electronic and economic globalization are closely associated with commodification of women that are traded, bought, consumed and exploited. The traffickers treat women as export goods. Global integration facilitates the traffickers to trade women from source countries to destination countries. For example, Bales (2007) gives the example of a female worker trafficked in Japan. The worker was forced to work in bar to cover the cost of 4.8 million Yens that was incurred in transporting her to Japan. Social globalization facilitates trafficker to reach the victims through newspaper and media (Peerapeng and Chaitip, 2014).

The research on this issue has been confined to case studies and anecdotal stories. Empirical aspects of these issues have been unexplored. There are few studies that empirically investigated the role of globalization in human trafficking (Danailova and Belser, 2006; Cho, 2011; Cho *et al.,* 2013) but they have not employed the broad dimensions of human trafficking. Human trafficking includes child labor, forced labor, prostitutions, debt bondage, and domestic servitude. Lack of empirical research on different dimensions of human trafficking has incited us to empirically explore the relationship between globalization and human trafficking.

Since the combating the evil of human trafficking has become a global challenge, it is important to identify its root causes. The present study identifies increasing globalization as one of the major causes of human trafficking. Since globalization is a complex and multifaceted phenomenon, it is important to explore the links of human trafficking with different forms of globalization. The main implication of this study is that globalization facilitates the illicit activities of human trafficking.

Rest of the discussion is structured as follows. Section 2 provides a review of the related literature. Section 3 presents an analytical framework for the study. Section 4 provides a discussion on data and estimation procedures, while Section 5 discusses the results. Finally, Section 6 concludes.

2: Literature Review

Theoretical literature on human trafficking considers globalization as one of the important cause of human trafficking (see Pratt, 2004; Huda, 2006; Jones *et al.,* 2007; Hoque, 2010; Chilufya and Chitupila, 2011; Zhidkova, 2015). The literature highlights that social globalization facilitates the process of human trafficking. For example, Huda (2006) argues that social globalization assists traffickers to reach the victims by increasing integration of personal contacts, information flows and newspapers. Similarly, Huda (2006) highlights the abuses of globalization that have fueled human trafficking in South Asian countries. Globalization encourages socio-economic disparities, illiteracy, endemic poverty and places women and children in submissive situation that cause the emergence of sex trafficking across regions. The alarming sexual exploitation of trafficked victims is posing severe threat to the health and quality of life.

The literature on human trafficking shows that corruption and socio-economic deprivations are the important factors that contribute positively into increasing human trafficking. In this regard, economic globalization facilitates human traffickers to transfer the victim from one country to another country (Jones *et al.,* 2007). The traffickers bribe public officers who assist them in crossing borders and conducting illegal activities. The integration of countries has also integrated the networking of human traffickers and

socio-economic problems of people in developing countries make them vulnerable to this evil (Hoque, 2010).

Chilufya and Chitupila (2011) consider globalization as the root cause of human trafficking. They argue that efforts to control the crime of human trafficking are not promising without down playing the endogenous factors at play. The leading argument of their study is that human trafficking is fed by processes and effects of globalization. Globalization negatively influences sovereignty of the domestic governments and border control. Zhidkova (2015) argues that globalization has brought about lack of border control and the demise of state sovereignty which have caused human trafficking. Moreover, they argue that globalization is also causing other types of transnational security threats such as terrorism, drug trafficking and nuclear proliferation.

The empirical literature on human trafficking highlights various factors such as inequality, poverty, unemployment as causes of human trafficking. Danailova and Belser (2006) employed the data of 27 destination countries to estimate the demand of trafficked victims and data of 31 countries to measure the supply of trafficked victims. The findings of their study show that openness of economy and higher incidence of prostitution increase the demand of trafficked victims while the supply of trafficked victims is fueled by unemployment rate of young females.

Cho (2011) empirically investigate that how social globalization influence the rights of people in a country without legal standing using a cross country set of 150 countries. The results of his study indicate that information inflow has positive and significant impact on human trafficking inflows in a country and social globalization increases the probability of human trafficking.

Cho *et al.* (2013) pointed out that legal prostitution is an important factor that promotes women trafficking. They emphasize on the scale and substitution effect of legal prostitution on women trafficking. The scale effect of legal prostitution increases the demand of prostitutes and fosters women trafficking. The substitution effect of legal prostitution offsets the demand of trafficking because legal prostitution does not need the trafficked prostitution. They used cross sectional data of 150 countries from 1996 to 2003 and tested the relationship between legal prostitution and human trafficking. They showed that legal prostitution also drives human trafficking and scale effect of legal prostitution is dominant than substitution effect. Furthermore, democracy has a positive influence on human trafficking while the rule of law offsets this monster.

Peerapeng and Chaitip (2014) investigated the role of economic globalization in human trafficking inflows in six Greater Mekong Sub-region (GMS) countries: China, Thailand, Vietnam, Myanmar, Lao DPR and Cambodia. Findings of their study predict that economic globalization particularly FDI significantly contributes in human trafficking inflows into the GMS countries. Other factors that contribute in human trafficking are exchange rate, migration, population and democracy while per capita GDP, vocational training, education and microfinance credits have negative influence on human trafficking.

Hernandez and Rudolph (2015) have investigated the factors that drive trafficking in person (TIP) from source to 13 European countries using an unbalance panel data set of 120 countries. They argue that it is not legal prostitution that fosters human trafficking but these are well defined refugee routes that facilitate it. The dire financial condition of

people in developing countries and cheap transportation and communication system incite them to travel towards rich countries for better earning. The sever border control and lack of opportunities of work in foreign country enable the human trafficker to spread their network and use people as a commodity. They proposed that human trafficking can be controlled by strengthening the institutions.

In a recent study, Jiang and LaFree (2016) investigate the relationship of trade with human trafficking using panel data containing 163 time points for 43 countries from 2003 to 2008. They argued that countries with lower level of trade exhibited high human trafficking and countries with higher levels of trade show low human trafficking. Their results showed an inverted-U relationship between trade and human trafficking.

It can be concluded that the theoretical literature predicts negative effects of globalization on human trafficking. In particular, the studies of Chilufya and Chitupila (2011) and Zhidkova (2015) consider globalization as the root cause of human trafficking. The empirical literature also supports the fact that globalization plays an important role in increasing human trade across countries. However, the empirical evidence is rater limited as studies have considered human trafficking in general ignoring its various forms that can have different relationship with globalization. Similarly, different dimensions of globalization are not considered simultaneously. Moreover, the number of countries used in the literature is limited. Finally the heterogeneity of source and destination of human trafficking in relation to globalization is virtually ignored. The present study attempts to fill these lacunas of the empirical literature using a panel of 196 countries.

3: Empirical Framework

Following the literature on human trafficking, we specify the following baseline equation to estimate the effects of globalization on human trafficking:

$$Human\ trafficking_{it} = \beta_1 + \beta_2 Y_{it} + \beta_2 Dem_{it} + \beta_3 Glo_{it} + \beta_2 X_{it} + \beta_2 Z_{it} + e_{it}$$

Where:

Y stands for natural log of per capital GDP at constant 2005 $

Glo stands for globalization

Dem stands for democracy

X is a vector of control variables

Z is a vector of regional dummies to control for the country specific characteristics in a panel dataset

Per capita GDP is an important indicator that drives the direction of human trafficking. If a country has high per capita income then it will provide more support to domestic women and its citizens and fulfill the demand of prostitution or cheap labor through inflows of trafficking victims. Similarly the poor country will be the source and supply of trafficked victims. Danailova and Belser (2006) pointed out that when PCY of a country tends to converge to PCY of developed economies then incentives for human trafficking are likely to diminish. The extant of human trafficking may depend on the extant of democracy in a country. In democratic country it is expected that elected government protect economic and social rights of voters that discourages human trafficking.

The control variables of our study are population, corruption and minimum standards adopted by government to suppress this abuse. We have introduced log of population in

our model to control the results with population because it might possible that index may overestimate human trafficking in a country with large population. Another reason is that HTI data set based on UNOCD database which is not normalized by the population size of a country (UNODC, 2006). Human trafficking is widely functioned by the criminal group so following (Cho, 2011) we have introduced control of corruption index taken from Worldwide Governance Indicators. Bureaucratic corruption facilitates successful operation of human trafficking in a country. People who are involved in human trafficking bribe public officers to assist them in their business. Bureaucrats misuse their authority to protect the criminal involved in human trafficking (Jones *et al.*, 2007).

3.1 Supply of Human Trafficking

The supply of human trafficking usually comes from poor countries where humans are treated as export goods (Danailova and Belser, 2006). We specify equations 1 to 5 to determine the impact of globalization on different dimensions of human trafficking in source countries.

$$Source\ Trafficking_{it} = \beta_1 + \beta_2 Y_{it} + \beta_3 Dem_{it} + \beta_4 Glo_{it} + \beta_5 X_{it} + \beta_6 Z_{it} + e_{it} \quad (1)$$

$$Source\ Prostitution_{it} = \alpha_1 + \alpha_2 Y_{it} + \alpha_3 Dem_{it} + \alpha_4 Glo_{it} + \alpha_5 X_{it} + \alpha_6 Z_{it} + u_{it} \quad (2)$$

$$Source\ Forced\ labor_{it} = \tau_1 + \tau_2 Y_{it} + \tau_3 Dem_{it} + \tau_4 Glo_{it} + \tau_5 X_{it} + \tau_6 Z_{it} + z_{it} \quad (3)$$

$$Source\ Debt\ bondage_{it} = \chi_1 + \chi_2 Y_{it} + \chi_3 Dem_{it} + \chi_4 Glo_{it} + \chi_5 X_{it} + \chi_6 Z_{it} + \omega_{it} \quad (4)$$

$$Source\ Child\ soldiers_{it} = \Phi_1 + \Phi_2 Y_{it} + \Phi_3 Dem_{it} + \Phi_4 Glo_{it} + \Phi_5 X_{it} + v_6 Z_{it} + \xi_{it} \quad (5)$$

3.2 Demand of Human Trafficking

The destination countries are usually rich countries (Danailova and Belser, 2006). The destination countries treat humans as imported goods from poor countries for labor exploitation, prostitution, and debt bondage and child soldiers. We specify equations 6 to 10 to determine the impact of globalization on different dimensions of human trafficking in destination countries.

$$Destination\ Human\ Trafficking_{it} + \beta_2 Y_{it} + \beta_3 Dem_{it} + \beta_4 Glo_{it} + \beta_5 X_{it} + \beta_6 Z_{it} + e_{it} \quad (6)$$

$$Destination\ Prostitution_{it} = \alpha_1 + \alpha_2 Y_{it} + \alpha_3 Dem_{it} + \alpha_4 Glo_{it} + \alpha_5 X_{it} + \alpha_6 Z_{it} + u_{it} \quad (7)$$

$$Destination\ Forced\ labor_{it} = \tau_1 + \tau_2 Y_{it} + \tau_3 Dem_{it} + \tau_4 Glo_{it} + \tau_5 X_{it} + \tau_6 Z_{it} + z_{it} \quad (8)$$

$$Destination\ Debt\ bondage_{it} = \chi_1 + \chi_2 Y_{it} + \chi_3 Dem_{it} + \chi_4 Glo_{it} + \chi_5 X_{it} + \chi_6 Z_{it} + \omega_{it} \quad (9)$$

$$Destination\ Child\ soldiers_{it} = \Phi_1 + \Phi_2 Y_{it} + \Phi_3 Dem_{it} + \Phi_4 Glo_{it} + \Phi_5 X_{it} + v_6 Z_{it} + \xi_{it} \quad (10)$$

For empirical analysis we use Probit and Oprobit models. Since our dependent variables are dichotomy and categorical variables, we cannot use convention Ordinary Least Squares (OLS), Fixed Effects and Random Effects models. Estimation of binary choice models is based on maximum likelihood method. Error term of binary dependent variable is also binary, so errors do not follow normal distribution. The errors follow binomial probability distribution. However, if data set is large, binomial distribution converges into normal distribution. Since some of dependent variables follow more than two categories, we also use Oprobit model. It is just a generalization of the binary response model.

4. Data Description

We have employed a panel data set of 169 countries across the world from 2001 to 2011 to explore the contribution of globalization and its different dimensions in human

trafficking. The data sources are: KOF index, Human trafficking indicators developed by Richard W. Frank in 2013, polity (IV) developed by Marshal *et al.* (2010), World Development Indicators (WDI) and Worldwide Governance Index. The data on per capita GDP and population is taken from WDI (2014). Per capita GDP is measured at 2005 constant $. The data on democracy is extracted from polity IV (2014). The Index lies in the range of -10 and 10 where -10 denotes complete autocracy and 10 denotes complete democracy in a country. The corruption is measured by the control of corruption in a country and data is taken from WGI (2014). The data lies in the range of -2.5 (lowest control on corruption) to 2.5 (highest control on corruption).

The data of globalization is taken from KOF index. This index covers three dimensions of globalization: economic, social and political globalization. The index of globalization is the weighted average of economic (36%), social (38%) and political (26%) globalization indexes. The data lies between 0-100 which is organized from low to high extent of globalization. Table 1 (Appendix) presents the description of different dimensions of globalization.

The data of human trafficking is taken from Human Trafficking Indicators (HTI) developed by Frank (2013). It provides information that states sources, transit points and destination of human trafficking victims and what states is doing to eradicate this abuse from a country. The human trafficking variable is a dummy variable that assigns 0 if country is source or destination of trafficking in person at any form. A country can be source as well as destination of trafficking. Table 2 (Appendix) presents the description of data on various types of trafficking in person (TIP).

The data on minimum standards to stop trafficking in person (TIP) is also extracted from HTI (2013). This variable is ordinal variable having value -1, 0, 1 and 2. Where 2 refers to full measures adopted by state to stop human trafficking, 1 refers to some measures adopted by state to stop human trafficking, -1 indicates that no measure adopted by state to protect human trafficking and 0 refers that report does not mention that any measures it adopted by a state to eradicate human trafficking.

Table 1 presents correlation between human trafficking source and other explanatory variables. Human trafficking source is the supply of trafficked victims. Table 2 denotes that human trafficking source has positive relationship with population of a country and negative relationship with per capita GDP, democracy, control on corruption, minimum standards adopted by government to stop trafficking in person and globalization. The negative correlation between human trafficking source and per capita GDP predicts that the source or suppliers of human trafficking are developing or under developing countries

Table 1: Correlation Matrix of Human Trafficking Source

Variables	1	2	3	4	5	6	7
1. Human Trafficking	1.0000						
2. Per capita GDP	-0.6545	1.000					
3. Democracy	-0.0593	0.1959	1.000				
4. Globalization	-0.4732	0.7246	0.3368	1.000			
5. Population	0.0851	-0.0563	0.0293	-0.0250	1.000		
6. Corruption	-0.5373	0.8326	0.3065	0.8235	-0.0521	1.000	
7. Minstand	-0.3217	0.5873	0.1218	0.5326	-0.0513	0.5849	1.000

Table 2 denotes the correlation between human trafficking destinations with explanatory variables. The destination countries of human trafficking are actually the demand of human trafficking. Table 2 predicts that human trafficking destination has positive correlation with per capita GDP, democracy and globalization. The positive correlation between per capita GDP and destination of human trafficking indicates that most of the destination countries are developed or rich countries that that demand the TIP. Globalization is also promoting the demand of human trafficking because it has positive association with destination of human trafficking.

Table 2: Correlation Matrix of Human Trafficking Destination

Variables	1	2	3	4	5	6	7
1. Human Trafficking	1.0000						
2. Per capita GDP	0.2890	1.000					
3. Democracy	0.0640	0.1956	1.000				
4. Globalization	0.3396	0.7244	0.3366	1.000			
5. Population	0.0760	-0.0594	0.0289	-0.0265	1.000		
6. Corruption	0.2616	0.8324	0.3063	0.8235	-0.0540	1.000	
7. Minstand	0.1626	0.5887	0.1211	0.53269	-0.0520	0.5853	1.000

Table 3 presents descriptive analysis of data. The human trafficking source and human trafficking destination are the binomial variable. The other types of trafficking sources and destination are ordinal variable. Table indicates that minimum value of globalization is 19.88 that is belongs to Afghanistan in 2001. The maximum value of globalization is for Belgium in 2007. The countries which are least economically, socially and politically globalized are Niger in 2003, Myanmar in 2002 and Palau in 2001, respectively. The countries that are the most economically, politically and socially globalized are Luxemburg in 2002, Singapore in 2004 and Italy in 2009, respectively. The country having highest population and lowest control on corruption according to our data are china and Somalia in 2008, respectively. On the other hand countries having lowest population and highest control on corruption are Palau in 2001 and Finland in 2006, respectively. Table denotes that the highest per capita GDP is 86127.24$ per annum that is the per capita GDP of Luxembourg in 2007, while value of lowest per capita GDP is the per capita of Ethiopia in 2003.

Table 3: Descriptive Analysis of Data

Variables	Observation	Mean	Minimum	Maximum
Source Human Trafficking	1544	0.7292746	0	1
Destination Human Trafficking	1541	0.7715769	0	1
Source Prostitution	1544	0.6677461	0	1
Destination Prostitution	1541	0.6924075	-1	1
Source Forced Labor	1544	0.5524611	0	1
Destination Forced Labor	1541	0.5853342	-1	1
Source Debt Bondage	1544	0.0589378	0	1
Destination Debt Bondage	1541	0.0869565	0	1
Source Child Soldiers	1542	0.0324254	-1	1
Destination Child Soldiers	1541	0.0116807	0	1
Per Capita GDP	1806	10201.02	135.6436	86127.24
Democracy	1706	2.505275	-10	10
Globalization	1847	56.34768	19.88	92.37
Economic Globalization	1660	59.86071	19.63	99.03
Social Globalization	1847	48.91108	4.94	93.12
Political Globalization	1858	65.44151	13.73	98.16
Population	1859	38500000	19404	1340000000
Corruption	1684	-0.0938051	-1.924046	2.552692
Minstand	1544	-0.6139896	-1	1

Figure 1 indicates that low income countries are the source of human trafficking. While, Figures 2 & 3 show that the percentage of total middle income and high income involved in supply of trafficked victims in previous decade are 85% and 37%, respectively. Figures 4 and 5 show that 75% middle income countries and 57% low income countries are the destination of human trafficking. Figure 6 illustrates that most of the high income countries are the destination of human trafficking. The pie chart in Figure 6 indicates that 94% developed countries are the destination of trafficked victims. In nutshell, the developing countries are both source and destination of human trafficking. Whereas developed countries are mostly the destination of trafficked victims and low income countries are mostly source of trafficked victims.

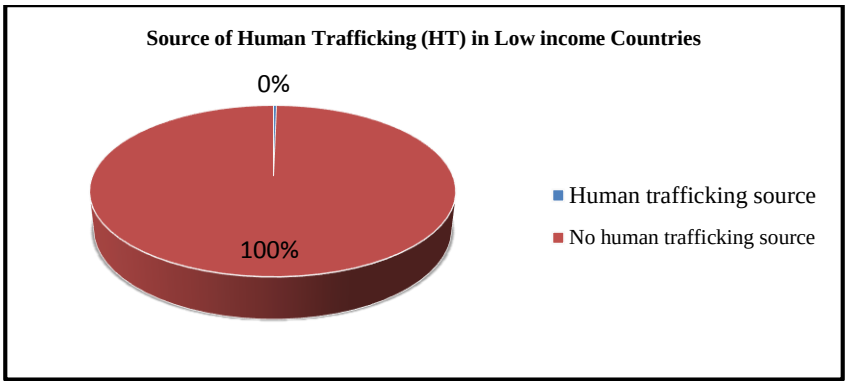

Figure1: HT in Low Income Countries

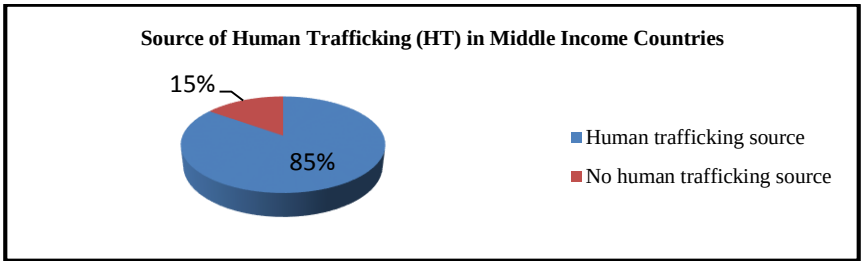

Figure2: HT in Middle Income Countries

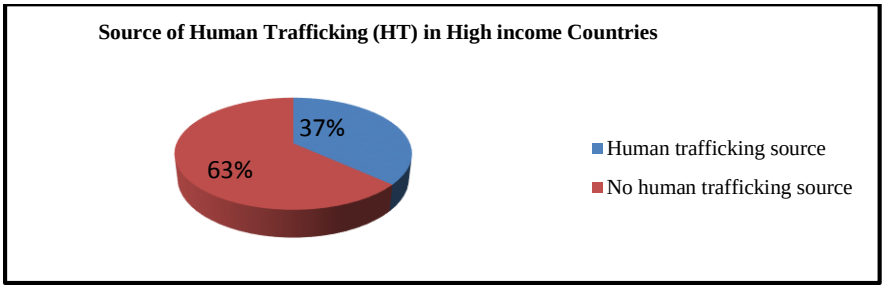

Figure3: HT in High Income Countries

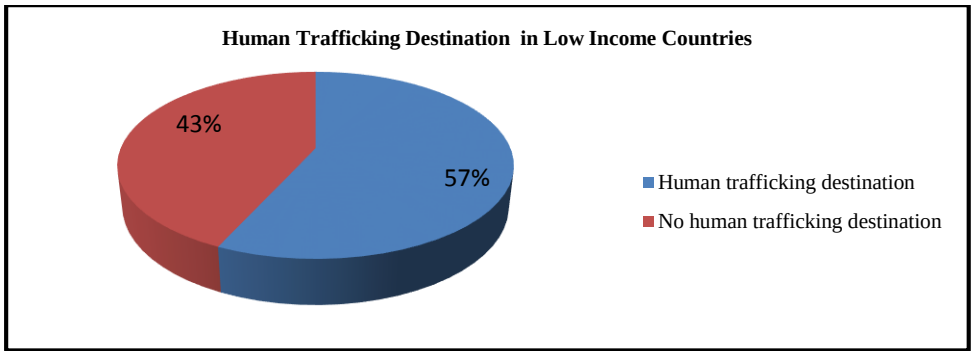

Figure 4: HTD in Low Income Countries

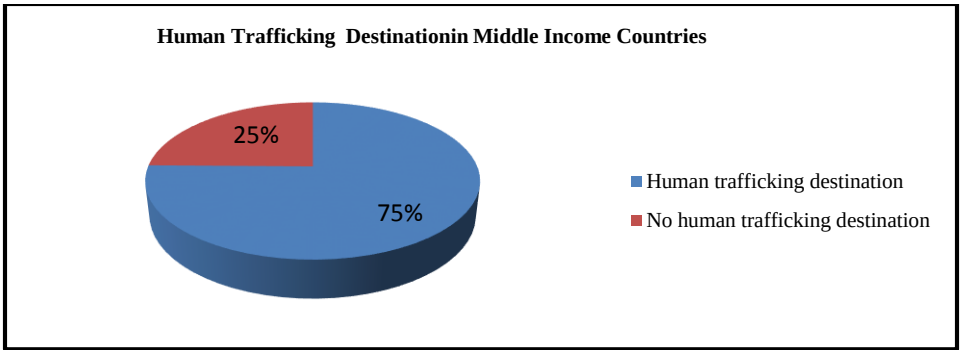

Figure 5: HTD in Middle Income Countries

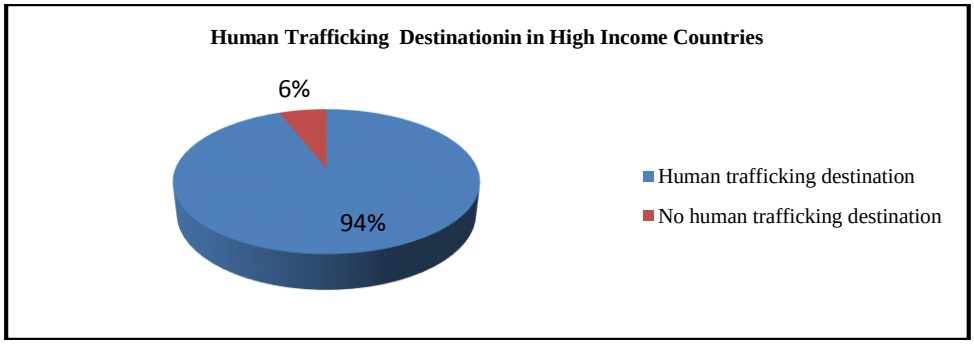

Figure 6: HTD in High Income Countries

Figures (7, 8, and 9) exhibit that most of low income countries are the source of forced prostitution. The percentages of low income, middle income and high income countries involved in supplying of trafficked victims for forced prostitution are 89%, 79% and 66%, respectively.

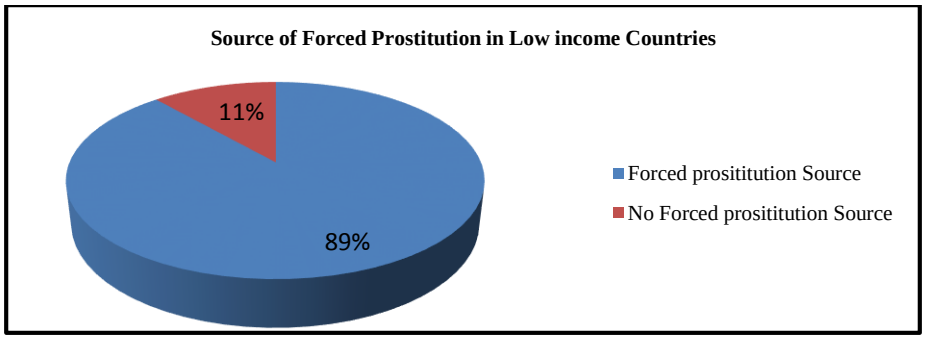

Figure 7: Psource in Low Income Countries

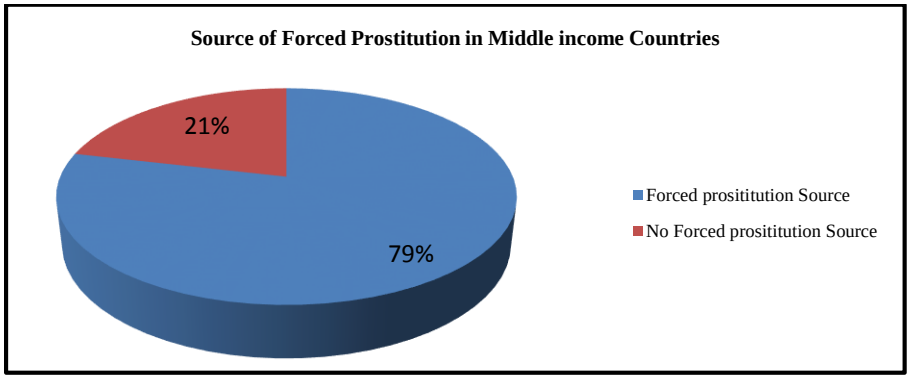

Figure 8: Psource in Developing Countries

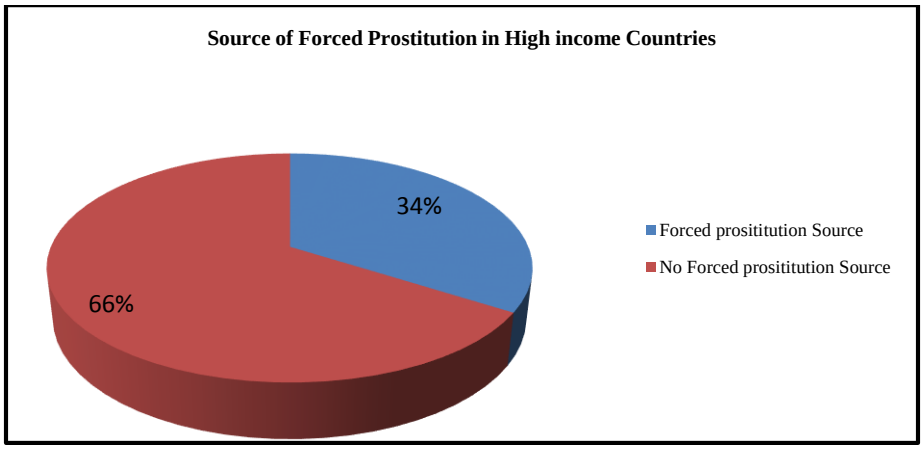

Figure 9: Psource in Developed Countries

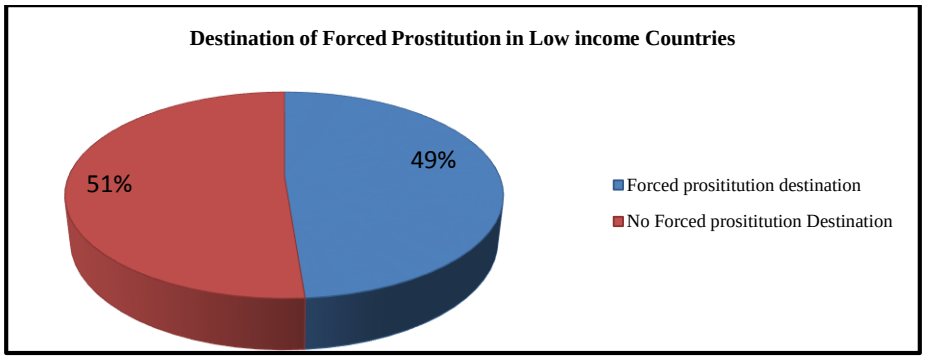

Figure 10: Pdest in Low Income Countries

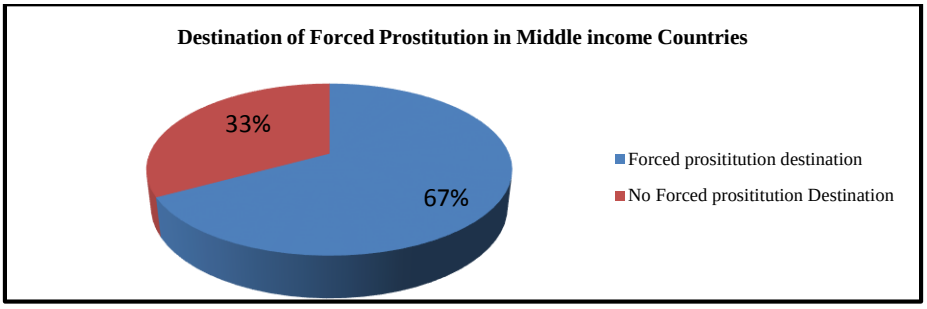

Figure11: Pdest in Developing Countries

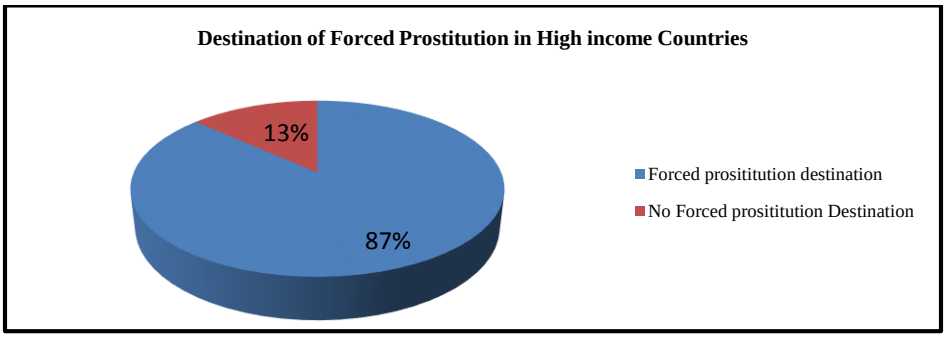

Figure 12: Pdest in Developed Countries

Figures (10, 11 and 12) show that the percentages of low income, middle income and high income countries in destination of trafficked victims for forced prostitution are 49%, 67% and 87%, respectively. It implies that most of the rich countries are the destination of forced prostitution. This study includes following regional blocks in empirical analysis: South Asia, East Asian Pacific, European and Central Asia, Latin America and Caribbean, Middle East and North Africa, Sub-Saharan Africa and European Union.

5: Empirical Results

We have employed Probit and Oprobit models for empirical analysis because of large data set. Probit model produces more efficient results than Logit model in large data set. The heterogeneity of panel data is controlled using regional dummies. The 1st column of

Table 4 presents the results of equation 1 and indicates that globalization contributes positively in human trafficking. This finding is consistent with the theoretical arguments of Chilufya and Chitupila (2011) and Zhidkova (2015). The coefficient of globalization infers that 1 unit increase in globalization increases the log odds of source of human trafficking up to 0.031 units. The coefficient on per capita GDP indicates that one unit increase in per capita GDP will abate the odd logs of human trafficking source about 1.03 units. It means when per capita income of a country will increase then the probability of a country to become a source of human trafficking will also decrease. The impacts of population and democracy are positive on human trafficking. The parameter estimate on corruption exhibits that control of corruption demotes human trafficking. This finding is consistent with Jones *et al.* (2007) who argue that bureaucrats misuse their authority to protect the criminal involved in human trafficking. In 2nd, 3rd and 4th column of Table 4 we have decomposed globalization into economic, social and political globalization, respectively. The results show that economic, social and political integration are promoting supply of human trafficking. The finding on social globalization is consistent with Pratt (2004) who argues that social globalization assists traffickers to reach the victims by increasing integration of personal contacts, information flows and newspapers. The finding on economic globalization is consistent with Huda (2006) who argues that globalization encourages socio-economic disparities, illiteracy, endemic poverty and places women and children in submissive situation that cause the emergence of sex trafficking across regions. The studies of Jones *et al.* (2007) and Peerapeng and Chaitip (2014) highlighted that economic integration facilitates human traffickers to transfer the victim from one country to another country.

Columns (1-4) of Table 5 present the results of equation 6. The coefficient of globalization in 1st column denotes that 1 unit increase in globalization will results into 0.041 unit increase in log odds of destination of human trafficking. The positive and significant sign of per capita income indicates that destination of trafficked victims is rich countries. Democracy has positive impact on the source of human trafficking while negative impact on the destination of human trafficking. Corruption has also negative effect on the destination of human trafficking. The coefficient of East Asia Pacific (EAP) in 1st column of Table 5 exhibits that log odds of destination of human trafficking is 0.57 units higher than log odds of destination of human trafficking in South Asia. The destination of trafficked victims is highest in East Asia and Pacific region.

The results reported in columns (1-4) of Tables 4 and 5 indicate that social and political dimensions of globalization are promoting the destination of human trafficking while the impact of economic globalization on destination of human trafficking is positive but insignificant. The destination of human trafficking is actually referred to the demand of trafficked victims. The significance of likelihood ratio denotes that our empirical model is better than empty model.

Table 4: Human Trafficking (Source) and Globalization

Empirical Findings of Equation 1 Estimated with Probit Model				
Dependent Variable: Human Trafficking Source				
Variables	**(1)**	**(2)**	**(3)**	**(4)**
Per capita GDP	-1.04***	-0.952***	-1.025***	-0.944***
	(0.0878)	(0.0970)	(0.0936)	(0.0808)
Democracy	0.010***	0.0115**	0.0120***	0.0117***
	(0.00397)	(0.00523)	(0.00392)	(0.00394)
Globalization	0.0312***			
	(0.00791)			
Economic Globalization		0.0109*		
		(0.00592)		
Social Globalization			0.0125*	
			(0.00653)	
Political Globalization				0.0151***
				(0.00479)
Population	0.0980**	0.119**	0.113***	0.0111
	(0.0399)	(0.0477)	(0.0397)	(0.0487)
Corruption	-0.250**	-0.146	-0.125	-0.157
	(0.107)	(0.112)	(0.101)	(0.0992)
Minstand	0.0715	0.1000	0.0589	0.0592
	(0.0770)	(0.0797)	(0.0763)	(0.0765)
East Asian Pacific	-2.345	-2.494	-2.227	-2.225
	(96.00)	(118.7)	(96.02)	(95.43)
European and Central Asia	-2.880	-2.809	-2.685	-2.617
	(96.00)	(118.7)	(96.02)	(95.43)
Latin America and Caribbean	-2.383	-2.356	-2.303	-2.237
	(96.00)	(118.7)	(96.02)	(95.43)
Middle East and North Africa	-4.109	-4.286	-4.000	-3.984
	(96.00)	(118.7)	(96.02)	(95.43)
Sub-Saharan Africa	-3.273	-3.393	-3.255	-3.330
	(96.00)	(118.7)	(96.02)	(95.43)
European Union	-3.045	-2.969	-2.731	-2.703
	(96.00)	(118.7)	(96.02)	(95.43)
Others	-2.631	-2.637	-2.419	-2.359
	(96.00)	(118.7)	(96.02)	(95.43)
Constant	9.199	9.443	9.901	10.43
	(96.00)	(118.7)	(96.03)	(95.43)
Observations	1,348	1,259	1,348	1,348
LR Chi2(13)	822.46***	777.91***	810.18***	816.55***
Pseudo R^2	0.539	0.549	0.531	0.535

*** p<0.01, ** p<0.05, * p<0.1 (Standard errors in parentheses)

Table 5: Human Trafficking (Destination) and Globalization

Empirical Findings of Equation 1 Estimated with Probit Model				
Dependent Variable: Human Trafficking Destination				
Variables	**(1)**	**(2)**	**(3)**	**(4)**
Per capita GDP	0.449***	0.631***	0.439***	0.616***
	(0.0674)	(0.0741)	(0.0732)	(0.0634)
Democracy	-0.00788***	-0.00976***	-0.00610**	-0.00757**
	(0.00293)	(0.00376)	(0.00283)	(0.00296)
Globalization	0.0407***			
	(0.00681)			
Economic Globalization		0.00596		
		(0.00494)		
Social Globalization			0.0327***	
			(0.00637)	
Political Globalization				0.0187***
				(0.00366)
Population	-0.00997	0.0767**	0.0473	-0.0932**
	(0.0356)	(0.0391)	(0.0357)	(0.0426)
Corruption	-0.254**	-0.0368	-0.220**	-0.160
	(0.102)	(0.106)	(0.102)	(0.0995)
Minstand	0.0683	0.0358	0.0357	0.0627
	(0.0839)	(0.0852)	(0.0837)	(0.0837)
East Asian Pacific	0.569**	0.566*	0.710***	0.828***
	(0.267)	(0.299)	(0.267)	(0.262)
European and Central Asia	-1.134***	-0.677**	-1.174***	-0.756***
	(0.247)	(0.264)	(0.254)	(0.236)
Latin America and Caribbean	-0.715***	-0.350	-0.627***	-0.496**
	(0.238)	(0.258)	(0.238)	(0.233)
Middle East and North Africa	-0.123	-0.0394	-0.0507	-0.0461
	(0.259)	(0.286)	(0.259)	(0.257)
Sub-Saharan Africa	0.409**	0.475**	0.573***	0.441**
	(0.207)	(0.225)	(0.207)	(0.204)
European Union	-1.385***	-0.884**	-1.360***	-0.928***
	(0.339)	(0.345)	(0.346)	(0.323)
Others	-1.095***	-0.837***	-0.893***	-0.955***
	(0.295)	(0.307)	(0.292)	(0.288)
Constant	-4.308***	-5.372***	-4.487***	-3.445***
	(0.770)	(0.855)	(0.784)	(0.792)
Observations	1,344	1,255	1,344	1,344
LR chi2(13)	347.58***	287.13***	338.86***	337.93***
Pseudo R^2	0.244	0.2233	0.2378	0.2372

*** p<0.01, ** p<0.05, * p<0.1 (Standard errors in parentheses)

5.1 Trafficking for Forced Prostitution

Columns (1-4) of Table 6 present the impact of globalization and its dimensions on the source of forced prostitution (equation 2) and columns (1-4) of Table 7 present the impact of globalization on the destination of forced prostitution (equation 7).

Table 6: Forced Prostitution (Source) and Globalization

Dependent Variable: Source Prostitution				
	(Probit)	(Probit)	(Probit)	(Probit)
	(1)	(2)	(3)	(4)
Per capita GDP	-0.693***	-0.545***	-0.604***	-0.548***
	(0.0659)	(0.0687)	(0.0665)	(0.0561)
Democracy	0.0120***	0.0175***	0.0144***	0.0125***
	(0.00288)	(0.00348)	(0.00283)	(0.00289)
Globalization	0.0421***			
	(0.00676)			
Economic Globalization		0.0211***		
		(0.00473)		
Social Globalization			0.0127**	
			(0.00555)	
Political Globalization				0.0211***
				(0.00385)
Population	0.0808**	0.153***	0.112***	-0.0224
	(0.0331)	(0.0369)	(0.0323)	(0.0396)
Corruption	-0.524***	-0.423***	-0.350***	-0.414***
	(0.0897)	(0.0889)	(0.0858)	(0.0826)
Minstand	0.0835	0.0859	0.0566	0.0585
	(0.0707)	(0.0722)	(0.0692)	(0.0699)
East Asian Pacific	-0.00117	0.0309	0.148	0.184
	(0.364)	(0.380)	(0.362)	(0.361)
European and Central Asia	0.000476	0.337	0.270	0.335
	(0.355)	(0.371)	(0.357)	(0.351)
Latin America and Caribbean	0.370	0.509	0.490	0.564
	(0.353)	(0.370)	(0.351)	(0.355)
Middle East and North Africa	-1.151***	-1.160***	-1.012***	-1.018***
	(0.346)	(0.366)	(0.347)	(0.348)
Sub-Saharan Africa	-0.757**	-0.636*	-0.719**	-0.793**
	(0.329)	(0.342)	(0.332)	(0.333)
European Union	-0.479	-0.207	-0.0432	-0.0338
	(0.380)	(0.390)	(0.377)	(0.371)
Others	-0.00831	0.154	0.237	0.254

	(0.377)	(0.388)	(0.376)	(0.380)
Constant	2.787***	1.461	3.173***	4.066***
	(0.807)	(0.903)	(0.800)	(0.817)
Observations	1,348	1,259	1,348	1,348
LR Chi2(13)	644.49***	597.04***	609.14***	634.43***
Pseudo R2	0.3865	0.3835	0.3653	0.3804

Standard errors in parentheses (*** p<0.01, ** p<0.05, * p<0.1)

Table 7: Forced Prostitution (Destination) and Globalization

Dependent Variable: Destination Prostitution				
	(Oprobit)	(Oprobit)	(Oprobit)	(Oprobit)
	(1)	(2)	(3)	(4)
Per capita GDP	0.222***	0.308***	0.235***	0.368***
	(0.0517)	(0.0573)	(0.0576)	(0.0485)
Democracy	-0.00476*	-0.00789**	-0.00242	-0.00431
	(0.00272)	(0.00349)	(0.00262)	(0.00273)
Globalization	0.0408***			
	(0.00593)			
Economic Globalization		0.0163***		
		(0.00426)		
Social Globalization			0.0231***	
			(0.00517)	
Political Globalization				0.0179***
				(0.00319)
Population	0.0134	0.130***	0.0636**	-0.0612*
	(0.0299)	(0.0325)	(0.0295)	(0.0360)
Corruption	-0.287***	-0.0570	-0.182**	-0.140*
	(0.0860)	(0.0872)	(0.0845)	(0.0804)
Minstand	-0.0329	-0.0416	-0.0553	-0.0642
	(0.0722)	(0.0735)	(0.0714)	(0.0717)
East Asian Pacific	0.351	0.282	0.496**	0.616***
	(0.238)	(0.264)	(0.235)	(0.234)
European and Central Asia	-0.914***	-0.505**	-0.766***	-0.501**
	(0.227)	(0.243)	(0.226)	(0.215)
Latin America and Caribbean	-0.491**	-0.213	-0.316	-0.248
	(0.219)	(0.237)	(0.215)	(0.213)
Middle East and North Africa	-0.563**	-0.508**	-0.457**	-0.338
	(0.231)	(0.255)	(0.228)	(0.227)
Sub-Saharan Africa	0.0491	0.0540	0.175	0.0635

	(0.198)	(0.214)	(0.196)	(0.195)
European Union	-0.502*	-0.124	-0.229	-0.0241
	(0.287)	(0.296)	(0.281)	(0.273)
Others	-0.811***	-0.644**	-0.603**	-0.609**
	(0.263)	(0.275)	(0.258)	(0.257)
Constant cut1	0.342	1.788**	0.279	-0.514
	(0.733)	(0.796)	(0.738)	(0.746)
Constant cut2	3.408***	4.724***	3.272***	2.489***
	(0.679)	(0.755)	(0.682)	(0.694)
Observations	1,344	1,255	1,344	1,344
LR Chi2(13)	274.52***	227.13***	246.40***	258.19***
Pseudo R2	0.1667	0.1505	0.1496	0.1568

Standard errors in parentheses (*** p<0.01, ** p<0.05, * p<0.1)

The results indicate that globalization and all its dimensions are facilitating the sources of forced prostitution. The coefficient of per capita GDP predicts that 1 unit increase in per capita GDP will decrease the log odds of source of forced prostitution about 0.69 units. In 1st column of Table 7 the coefficient of per capita GDP exhibits that 1 unit increase in per capita GDP will cause 0.22 unit increases in the log odds of destination of forced prostitution. Thus results predict that source of forced prostitution is poor countries while destination of forced prostitution is rich countries. This finding is consistent with Williamson (2017) who argues that economic and gender-based inequalities may push women to seek migration, inadvertently leading women to be disproportionately victimized by trafficking.

The negative sign of corruption in all columns of Tables 6 and 7 indicates that control on corruption will discourage the source and destination of trafficking for forced prostitution. The coefficient of minimum standard adopted by a country to control TIP has insignificant impact on both the source and destination of forced prostitution. Democracy in a country is promoting the source of forced prostitution while it is demoting the destination or demand of forced prostitution. Population facilitates the source of forced prostitution while its impact on the destination of forced prostitution is not robust. The results predict that destination of forced prostitution is highest in East Asia and Pacific countries. The East Asia and Pacific countries are relatively more involved in import of women for sexual exploitation than other regions of the world.

5.2 Trafficking for Forced Labor

Table 8 reports the results of equation 3 in columns (1-4) and of equation 8 in Table 9. The coefficient of globalization in column (1) predicts that 1 units increase in overall globalization will increase 0.012 unit increase in the log odds of a country to become a source of forced labor trafficking. Similarly the coefficient of globalization indicates that 1 unit increase in the overall globalization will cause 0.027 unit increase in the log odds of a country to become a destination of forced labor trafficking. All the dimensions of globalization, except social globalization in 3rd column of Table 8, are promoting the supply of trafficked victims for forced labor. Similarly all the dimension of globalization except economic globalization is facilitating the destination of forced labor. The trade

routes facilitate the successful trafficking and traffickers can use these routes for human trafficking towards destination countries.

Per capita GDP has a negative association with the source of forced labor while positive association with the destination of source labor. It predicts that supply of trafficked victim for forced labor is mainly originated from poor countries and they reached at the destination countries that are mostly rich countries. The studies of Ravenstein (1885), Sjaastad (1962), and Lee (1966) assert that every factor that shapes and strengthens movements of people is considered either a "pull" or "push factor". Thus lower GDP per capita in poor countries serves as "push factor" and higher GDP per capita in rich countries serve as "pull factor". Corruption and population has same relationship with the source of forced labor and destination of forced labor. Control on corruption debars the factors that facilitate the supply of forced labor and arrival in the destination country. Population of a country is also a factor that is positively associated with both source and destination of forced labor. The minimum standard adopted by government to stop TIP is checking the destination of forced labor in demand countries while not significantly checking the source of forced labor.

Table 8: Forced Labor (Source) and Globalization

Dependent Variable: Destination Prostitution				
	(Oprobit)	(Oprobit)	(Oprobit)	(Oprobit)
	(1)	(2)	(3)	(4)
Per capita GDP	0.222***	0.308***	0.235***	0.368***
	(0.0517)	(0.0573)	(0.0576)	(0.0485)
Democracy	-0.00476*	-0.00789**	-0.00242	-0.00431
	(0.00272)	(0.00349)	(0.00262)	(0.00273)
Globalization	0.0408***			
	(0.00593)			
Economic Globalization		0.0163***		
		(0.00426)		
Social Globalization			0.0231***	
			(0.00517)	
Political Globalization				0.0179***
				(0.00319)
Population	0.0134	0.130***	0.0636**	-0.0612*
	(0.0299)	(0.0325)	(0.0295)	(0.0360)
Corruption	-0.287***	-0.0570	-0.182**	-0.140*
	(0.0860)	(0.0872)	(0.0845)	(0.0804)
Minstand	-0.0329	-0.0416	-0.0553	-0.0642
	(0.0722)	(0.0735)	(0.0714)	(0.0717)
East Asian Pacific	0.351	0.282	0.496**	0.616***
	(0.238)	(0.264)	(0.235)	(0.234)
European and Central Asia	-0.914***	-0.505**	-0.766***	-0.501**

	(0.227)	(0.243)	(0.226)	(0.215)
Latin America and Caribbean	-0.491**	-0.213	-0.316	-0.248
	(0.219)	(0.237)	(0.215)	(0.213)
Middle East and North Africa	-0.563**	-0.508**	-0.457**	-0.338
	(0.231)	(0.255)	(0.228)	(0.227)
Sub-Saharan Africa	0.0491	0.0540	0.175	0.0635
	(0.198)	(0.214)	(0.196)	(0.195)
European Union	-0.502*	-0.124	-0.229	-0.0241
	(0.287)	(0.296)	(0.281)	(0.273)
Others	-0.811***	-0.644**	-0.603**	-0.609**
	(0.263)	(0.275)	(0.258)	(0.257)
Constant cut1	0.342	1.788**	0.279	-0.514
	(0.733)	(0.796)	(0.738)	(0.746)
Constant cut2	3.408***	4.724***	3.272***	2.489***
	(0.679)	(0.755)	(0.682)	(0.694)
Observations	1,344	1,255	1,344	1,344
LR chi2(13)	274.52***	227.13***	246.40***	258.19***
Pseudo R2	0.1667	0.1505	0.1496	0.1568

Standard errors in parentheses and *** p<0.01, ** p<0.05, * p<0.1

Table 9: Forced Labor (Destination) and Globalization

Dependent Variable: Destination of Forced Labor Trafficking				
	Oprobit	Oprobit	Oprobit	Oprobit
	(1)	(2)	(3)	(4)
Per capita GDP	0.420***	0.524***	0.404***	0.526***
	(0.0565)	(0.0594)	(0.0614)	(0.0525)
Democracy	-0.00267	-0.00411	-0.00129	-0.00253
	(0.00267)	(0.00321)	(0.00263)	(0.00267)
Globalization	0.0272***			
	(0.00577)			
Economic Globalization		0.00659		
		(0.00415)		
Social Globalization			0.0204***	
			(0.00500)	
Political Globalization				0.0131***
				(0.00323)
Population	0.157***	0.219***	0.185***	0.0984***
	(0.0287)	(0.0314)	(0.0285)	(0.0345)
Corruption	-0.520***	-0.393***	-0.495***	-0.457***

	(0.0796)	(0.0797)	(0.0792)	(0.0769)
Minstand	-0.198***	-0.207***	-0.210***	-0.222***
	(0.0637)	(0.0646)	(0.0635)	(0.0635)
East Asian Pacific	-0.0728	0.0152	0.00674	0.109
	(0.221)	(0.244)	(0.219)	(0.218)
European and Central Asia	-0.932***	-0.580**	-0.914***	-0.678***
	(0.225)	(0.240)	(0.225)	(0.215)
Latin America and Caribbean	-0.430**	-0.168	-0.357*	-0.274
	(0.216)	(0.234)	(0.214)	(0.213)
Middle East and North Africa	0.411*	0.497*	0.454*	0.533**
	(0.235)	(0.260)	(0.235)	(0.234)
Sub-Saharan Africa	0.837***	0.922***	0.919***	0.851***
	(0.197)	(0.214)	(0.197)	(0.196)
European Union	-0.557**	-0.199	-0.471*	-0.255
	(0.261)	(0.272)	(0.258)	(0.248)
Others	-0.324	-0.109	-0.242	-0.155
	(0.255)	(0.268)	(0.252)	(0.250)
Constant cut1	4.122***	5.074***	3.972***	3.528***
	(0.679)	(0.747)	(0.684)	(0.697)
Constant cut2	7.286***	8.126***	7.118***	6.686***
	(0.669)	(0.744)	(0.671)	(0.684)
Observations	1,344	1,255	1,344	1,344
LR Chi2(13)	297.96***	247.85***	292.52***	292.41***
Pseudo R^2	0.1626	0.1454	0.1596	0.1596

Standard errors in parentheses and *** p<0.01, ** p<0.05, * p<0.1

The South Asia is the major source of forced labor trafficking. While, in Middle East & North Africa, the destination of forced labor countries is significantly greater than South Asian countries. The coefficient of regional dummies in columns (1-4) of Table 9 denote that the destination of trafficked victims for forced labor is highest in Middle East and North Africa and Sub-Saharan Africa countries while lowest in European and Central Asia countries. The significance of likelihood ratios of our empirical model predicts that our model is better than the empty model with no explanatory variables.

5.3 Trafficking for Debt Bondages

The empirical findings indicate that overall globalization has a positive and significant association with the source of debt bondages victims. This finding is consistent with constitutive theory of human trafficking where harm and deprivation is imposed on the subordinated group (Lanier & Henry, 2004). However, dimensions of globalization are not significantly facilitating the factors that put a country into the list of destination of trafficking for debt bondages. It is social globalization which is mainly supporting the source of trafficking for debt bondages in a country. This finding is consistent with

Peerapeng and Chaitip (2014) who argue that social globalization facilitates trafficker to reach the victims through newspaper and media.

Columns (1-4) of Table 10 present the results of equation 4 and columns (1-4) of Table 11 present the results of equation 9. The coefficient of per capita GDP is negative in 1st to 4th column of table 10 and positive from column (1-4) of Table 11. The sign of coefficients of per capita GDP predicts that the source countries of victims of debt bondages are poor or developing countries while the destination countries of victims of debt bondages are rich or developed countries. The coefficient of regional dummies in columns (1-4) of Table 11 denote that destination points of debt bondages victims is highest is Middle East and North Africa countries and lowest in European and Central Asia countries. The significance of likelihood ratios confirms the reliability of empirical model.

Table 10: Debt Bondage (Source) and Globalization

Dependent Variable: Source of Debt bondages				
	(1)	(2)	(3)	(4)
Per capita GDP	-0.201	-0.0427	-0.267**	-0.0828
	(0.125)	(0.123)	(0.134)	(0.110)
Democracy	-0.00821**	-0.0134***	-0.00682*	-0.00726*
	(0.00370)	(0.00436)	(0.00364)	(0.00373)
Globalization	0.0274**			
	(0.0112)			
Economic Globalization		0.00724		
		(0.00900)		
Social Globalization			0.0268***	
			(0.00956)	
Political Globalization				0.00624
				(0.00645)
Population	0.236***	0.258***	0.260***	0.229***
	(0.0539)	(0.0597)	(0.0534)	(0.0622)
Corruption	-0.593***	-0.710***	-0.645***	-0.470**
	(0.203)	(0.226)	(0.207)	(0.193)
Minstand	0.251*	0.336**	0.256*	0.211
	(0.136)	(0.145)	(0.138)	(0.136)
East Asian Pacific	4.851	4.728	5.021	4.589
	(150.9)	(181.1)	(168.1)	(152.6)
European and Central Asia	3.968	3.924	3.938	3.842
	(150.9)	(181.1)	(168.1)	(152.6)
Latin America and Caribbean	3.456	2.661	3.577	3.171
	(150.9)	(181.1)	(168.1)	(152.6)
Middle East and North	3.777	3.701	3.870	3.448

Africa				
	(150.9)	(181.1)	(168.1)	(152.6)
Sub-Saharan Africa	3.315	3.050	3.519	2.950
	(150.9)	(181.1)	(168.1)	(152.6)
South Asia	5.176	5.172	5.258	4.729
	(150.9)	(181.1)	(168.1)	(152.6)
Others	4.375	4.345	4.524	4.069
	(150.9)	(181.1)	(168.1)	(152.6)
Constant	-9.695	-10.02	-9.425	-9.125
	(150.9)	(181.1)	(168.1)	(152.6)
Observations **LR chi2(13 Pseudo R2**	1,348 245.92*** 0.3944	1,259 242.95*** 0.4232	1,348 247.63*** 0.3971	1,348 240.56*** 0.3858

*** p<0.01, ** p<0.05, * p<0.1 (Standard errors in parentheses)

Table 11: Debt Bondage (Destination) and Globalization

Dependent Variable: Destination of Debt bondages				
	(1)	(2)	(3)	(4)
Per capita GDP	0.397***	0.384***	0.394***	0.433***
	(0.0838)	(0.0921)	(0.0911)	(0.0809)
Democracy	-0.000404	-0.00243	0.000451	-0.00102
	(0.00496)	(0.00665)	(0.00491)	(0.00500)
Globalization	0.0100			
	(0.00872)			
Economic Globalization		0.00250		
		(0.00648)		
Social Globalization			0.00420	
			(0.00656)	
Political Globalization				0.00795
				(0.00575)
Population	0.0745*	0.0704	0.0774*	0.0361
	(0.0410)	(0.0491)	(0.0407)	(0.0504)
Corruption	-0.237*	-0.124	-0.200	-0.212*
	(0.128)	(0.130)	(0.123)	(0.117)
Minstand	0.122	0.128	0.120	0.0939
	(0.0950)	(0.0969)	(0.0954)	(0.0957)
East Asian Pacific	1.584***	1.540***	1.527***	1.574***
	(0.241)	(0.227)	(0.236)	(0.233)
European and Central Asia	-0.305	-0.303	-0.344	-0.312
	(0.320)	(0.323)	(0.319)	(0.317)

Latin America and Caribbean	0.0681	0.0138	-0.00396	0.0452
	(0.341)	(0.341)	(0.333)	(0.331)
Middle East and North Africa	1.626***	1.450***	1.555***	1.618***
	(0.246)	(0.242)	(0.234)	(0.238)
Sub-Saharan Africa	0.611*	0.563	0.506	0.527
	(0.361)	(0.353)	(0.348)	(0.330)
South Asia	1.384***	1.355***	1.278***	1.313***
	(0.394)	(0.398)	(0.376)	(0.372)
Others	0.850***	0.800***	0.817***	0.831***
	(0.259)	(0.255)	(0.258)	(0.255)
Constant	-7.330***	-6.619***	-6.906***	-6.959***
	(1.142)	(1.358)	(1.059)	(1.070)
Observations	1,344	1,255	1,344	1,344
LR Chi2(13)	249.45***	218.53***	248.53***	250.07***
Pseudo R2	0.3049	0.2895	0.3038	0.3057

*** p<0.01, ** p<0.05, * p<0.1 (Standard errors in parentheses)

5.4 Trafficking of Child Soldiers

The trend of exploiting children in civil and other international war has been increasing. This issue has captured the attention of anthropologists. Rosen (2007) consider the problem of child soldiers as a modern international humanitarian and human rights crisis which derives from an emerging transnational "politics of age". The child soldiers are also facilitated by human trafficking. Tables 12 and 13 present the impact of globalization on source and destination of child soldiers, respectively. Columns (1-4) of Table 12 present the results of equation 5 and columns (1-4) of Table 13 present the results of equation 10.

The results show that globalization does not facilitate the trafficking of child soldiers. Therefore we can infer that does not facilitate all kinds of trafficking it might have negative association. This finding is not consistent with Rosen (2007) who considers global politics as cause of trafficking of child soldiers. The law enforcement agencies are able to check the child soldiers through flow of information and global integration of the countries. Globalization helps the law enforcement agencies by flow of information to eradicate the adverse form of child exploitation. The flow of information and exchange of books and newspapers among different countries bring awareness and help to fight against this abuse.

Table 12: Child Soldiers (Source) and Globalization

Source of Child Soldiers is Dummy Variable				
Dependent Variable: Source of child soldiers trafficking				
Variables	Oprobit	Oprobit	Oprobit	Oprobit
	(1)	(2)	(3)	(4)
Per capita GDP	-0.114	-0.116	-0.166*	-0.279***
	(0.0815)	(0.0829)	(0.0946)	(0.0648)
Democracy	-0.00889***	-0.00945**	-0.0107***	-0.00915***
	(0.00320)	(0.00402)	(0.00308)	(0.00321)
Globalization	-0.0307***			
	(0.00930)			
Economic Globalization		-0.0219***		
		(0.00682)		
Social Globalization			-0.01*	
			(0.0081)	
Political Globalization				-0.0128**
				(0.00546)
Population	0.0424	-0.0327	0.00495	0.0928
	(0.0492)	(0.0516)	(0.0483)	(0.0579)
Corruption	0.131	-0.0435	0.0550	0.0546
	(0.131)	(0.132)	(0.130)	(0.127)
Minstand	0.160	0.155	0.153	0.154
	(0.114)	(0.116)	(0.114)	(0.113)
Constant cut1	-5.062***	-5.794***	-5.024***	-4.638***
	(1.003)	(1.073)	(1.005)	(1.007)
Constant cut2	-0.0469	-0.831	-0.0602	0.316
	(0.975)	(1.039)	(0.970)	(0.981)
Observations	1,345	1,256	1,345	1,345
LR chi2(6)	89.90***	69.05***	82.50***	84.47***
Pseudo R2	0.178	0.1525	0.1631	0.1670

*** p<0.01, ** p<0.05, * p<0.1 (Standard errors in parentheses)

Table 13: Child Soldiers (Destination) and Globalization

Destination Of Child Soldiers Is Coded On Ordinal Scale				
Dependent Variable	**Destination of Child Soldiers Trafficking**			
	(1)	(2)	(3)	(4)
Variables	Probit	Probit	Probit	Probit
Per Capita GDP	-0.137	-0.0441	-0.0095	-0.373**
	(0.173)	(0.196)	(0.196)	(0.172)
Democracy	0.00895	3.72e-05	0.00637	0.00639
	(0.00577)	(0.00620)	(0.005)	(0.00557)
Globalization	-0.0609**			
	(0.0239)			
Economic Globalization		-0.0357**		
		(0.0155)		
Social Globalization			-0.102***	
			(0036)	
Political Globalization				-0.0141
				(0.0112)
Population	0.279**	0.0827	0.132	0.252*
	(0.116)	(0.110)	(0.112)	(0.129)
Corruption	-1.240***	-2.008***	-1.08**	-1.52***
	(0.469)	(0.510)	(0.531)	(0.458)
Minstand	0.465	0.573**	0.534*	0.376
	(0.284)	(0.285)	(0.303)	(0.273)
Constant	-4.223**	-3.079	-2.376	-4.198**
	(2.145)	(2.156)	(2.536)	(2.119)
Observations	1,344	1,255	1,344	1,344
LR Chi2(6)	56.55***	55.90***	61.9***	50.40***
Pseudo R2	0.3434	0.3636	0.3761	0.3060

*** p<0.01, ** p<0.05, * p<0.1 (Standard errors in parentheses)

Similarly trade routes among countries also help law enforcement agencies to chase the traffickers while crossing the borders. Table 10 illustrates that per capita GDP has also negative relationship with the source and destination of child soldiers. The log odds of rich countries to be listed in source and destination countries of child soldiers are relatively less than poor countries. Control on corruption will decrease the log odds of a country being in the list of destination of child soldiers while it has insignificant influence on the source of child soldiers. Democracy debars a country being a source of child soldiers while it does not significantly preclude a country to be listed as destination of child soldiers. The minimum standards adopted by government to preclude human trafficking for child soldiers are not enough to check this abuse; conversely it is supporting the trafficking of child soldiers. Population of a country is not facilitating the factors that list it in a source of child soldiers but it has positive association with the destination of child soldiers. The countries having less population need to rely on foreign

soldiers to fight in wars or conflicts for them. For this purpose they exploited most vulnerable creatures that are children. The significance of the likelihood ratios testifies the validity of empirical model.

5.5 Marginal Effects

Table 14 presents the marginal effects of globalization on human trafficking source and destination. In order to simplify the interpretation of the results we have estimated the marginal impact of globalization on human trafficking. Table 14 reports the marginal impact of explanatory variables on the source of human trafficking. Table 15 denotes the marginal impact of explanatory variables on the destination of human trafficking. The 1st column of table 14 reports that one standard deviation increase in globalization will increase the probability of a country being in the category of source of human trafficking about 0.5%. Globalized country will have more probability of being in the category of the source of force prostitution and forced labor while have less probability of being in the category of the source of trafficking of debt bondages and child soldiers. Similarly Table 15 denotes that one S.D increase in globalization is increasing the probability of a country to become of destination of human trafficking and it other form except the destination of child soldiers. The positive association of per capita GDP with source of trafficking and negative association of per capita GDP with destination of human trafficking denotes that rich countries have more probability for destination of trafficked victims while poor countries have more probability for source of trafficked victims.

Table 14: Marginal Effect of the Source of Human Trafficking and its Various Forms

Variables	Source Human Trafficking	Source Prostitution	Source Forced Labor	Source Debt Bondage	Source Child Soldiers
Per Capita GDP	-0.202*** (0 .015)	-0.217*** (0 .018)	-0.2139*** (0.02049)	-0.0102** (0.0051)	-0.00497 (0.00362)
Democracy	0.003 *** (0 .000)	0 .004*** (0 .001)	0 .00464*** (0.0011)	-0.00048** (0.0002)	-0.00039** (0.00016)
Globalization	0 .005*** (0 .001)	0.014*** (0 .001)	0 .00401** (0 .00202)	0.00090* (0.0005)	-0.00134*** (0.0004)
Population	0 .022*** (0 .006)	0 .033 *** (0 .009)	0 .06765*** (0 .01104)	0.02197*** (0.0036)	0.00185 (0.00215)
Corruption	-0.012 (.0175)	-0.167*** (0 .026)	-0.0621** (0.0298)	-0.02207*** (0.0076)	0.00573 (0.0059)
Minstand	0 .014 (0 .012)	0.011 (0 .020)	-0.01958 (0.02411)	0 .00204 (0.0063)	0.00700 (0.00507)
Predicted Value	0 .897	0.746	0.591	0.0218	0.0178

*** p<0.01, ** p<0.05, * p<0.1 (Standard errors in parentheses)

Table 15: Marginal Effect of the Destination of Human Trafficking and Its Various Forms

Variables	Destination Human Trafficking	Destination prostitution	Destination forced labor	Destination Debt bondages
Per capita GDP	0 .076*** (0.014)	0 .0502*** (0.015)	0.1134*** (0.0177)	0 .06114*** (0.007613)
Democracy	-0.0013** (0.0007)	-0.0008 (0.0008)	-0.00048 (0.00097)	-0.00084* (0.00046)
Globalization	0 .00373*** (0.0014)	0 .0083*** (0.0016)	0.000486 (0.0018)	-0.00174** (0.00080)
Population	.0193634** (0.00770)	0.0202** (0.0086)	0 .06655*** (0.009785)	0.01886*** (0.0041)
Corruption	-0.00931 (0 .0224)	-0.0343 (0.0251)	0.07437*** (0 .0262)	-0.00085 (0.0119)
Minstand	-0.0020 (0. .01996)	-0.0076 (0.0219)	-0.08283*** (0.0219)	-0.019565** (0.0091816)
Predicted value	0.823	0 .733	0.6115	0 .06014

*** p<0.01, ** p<0.05, * p<0.1 (Standard errors in parentheses)

6. Conclusion

This study investigates the impact of economic, political, social and overall globalization on various forms of human trafficking by employing a large panel data set of 169 countries from 2001 to 2011. The empirical findings show that globalization has a positive association with the source and destination of human trafficking for forced prostitution, forced labor, and debt bondages. The results are consistent with the theoretical studies of Chilufya and Chitupila (2011) and Zhidkova (2015) which consider globalization as the root cause of human trafficking. However, the results also indicate that globalization decrease the trafficking of child soldiers. This finding is inconsistent with Rosen (2007) who considers global politics as the cause of trafficking of child soldiers.

The empirical results for the separate modeling of source and destination of human trafficking reveal that these are the poor countries which are the source of different forms of human trafficking while the rich countries are destination of trafficked victims. Women and children are the most vulnerable to human trafficking. The negative sign of corruption in different models indicates that control on corruption discourages the source and destination of trafficking.

6.1 Contribution of the Study

The research on the perils of globalization for human rights has been confined to case studies and anecdotal stories. There are few studies which empirically investigated the relationship of globalization with human trafficking (Danailova and Belser, 2006; Cho, 2011; Cho *et al.* 2013). However, the extant empirical literature has virtually ignored the complexity of the research problem by simply analyzing the narrow concepts of globalization and human trafficking. The literature ignores the broad dimensions of human trafficking such as child labor, forced labor, forced prostitution, debt bondage, and domestic servitude. Moreover, the empirical evidence is rater limited as the number of countries used in the empirical studies is small which cannot be generalized at global level. To the best of our knowledge, this is the first empirical study of its kind that

empirically analyzes the links of three dimensions (economic, social and political) of globalization with different forms of human trafficking using a large panel of 169 countries. Furthermore, this study contributes for the first time into the empirical literature by highlighting the heterogeneity of source and destiny economies in shaping the links of globalization with human trafficking.

6.2 Research Limitations

The sensitively analysis for this research is limited as only selective causes of human trafficking are used to test the sensitivity of results. The robustness of results can be checked by incorporating other control variables such as government spending for development purposes. This study uses three dimensions of globalization while a disaggregated analysis of different forms of globalization such as different forms of social globalization is not conduced. Moreover, the mediating role of corruption to explain the links of human trafficking with globalization is not analyzed in this study.

6.3 Future Research Recommendations

Future studies can use structural equation modeling to analyze the role of mediating variables such as corruption in shaping the relationship of globalization with human trafficking. The distribution of depend variable (human trafficking) also matters in explaining the human trafficking consequences of globalization. For this, a quantile regression analysis can be helpful for better understanding of the relationships between globalization and human trafficking. Since both globalization and human trafficking comprise multiple dimensions, a Principle Component Analysis (PCA) can be conducted to capture the maximum variation of different measures of globalization and human trafficking.

6.4 Policy Recommendations

Since findings of the study suggest that the destination countries are the rich countries, destination countries need to adopt effective measures to protect the rights of people without legal standing in the country. National governments need to assure socio-economic rights of women and provide them opportunity to escape from financial problems. Moreover, governments need to provide education and job opportunities to women. Mass media should cooperate with government in this issue by awakening awareness among vulnerable citizens about evading the human traffickers. Finally, to escape the dark aspects of globalization control on corruption should be assured as bureaucratic corruption facilitates the successful supply of trafficked victims.

Acknowledgement: It is to acknowledge that this study has been substantially benefited from the constructive comments received from two anonymous reviewers.

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APPENDIX

Table 16: The KOF Index of Globalization

	Variables	Weights
Overall Globalization	Economic Globalization	(36%)
	Social Globalization	(38%)
	Political Globalization	(26%)
Economic Globalization [36%]	***I) Actual Flows***	(50%)
	Trade (Percent of GDP)	(22%)
	Foreign Direct Investment, Stocks (Percent of GDP)	(27%)
	Portfolio Investment (Percent of GDP)	(24%)
	Income Payments To Foreign Nationals (Percent of GDP)	(27%)
	Ii) Restrictions	(50%)
	Hidden Import Barriers	(24%)
	Mean Tariff Rate	(28%)
	Taxes On International Trade (Percent Of Current Revenue)	(26%)
	Capital Account Restrictions	(23%)
Social Globalization [38%]	***I) Data On Personal Contact***	(33%)
	Telephone Traffic	(25%)
	Transfers (Percent of GDP)	(3%)
	International Tourism	(26%)
	Foreign Population (Percent Of Total Population)	(21%)
	International Letters (Per Capita)	(25%)
	Ii) Data On Information Flows	(35%)
	Internet Users (Per 1000 People)	(36%)
	Television (Per 1000 People)	(38%)
	Trade in Newspapers (Percent of GDP)	(26%)

	Iii) Data on Cultural Proximity	(32%)
	Number of McDonald's Restaurants (Per Capita)	(44%)
	Number of Ikea (Per Capita)	(44%)
	Trade in Books (Percent of GDP)	(11%)
Political Globalization [26%]	Embassies in Country	(25%)
	Membership in International Organizations	(27%)
	Participation in U.N. Security Council Missions	(22%)
	International Treaties	(26%)

Table 17: Description of Human Trafficking Index

Human Trafficking
Human Trafficking: It is a binomial variable that is coded one if country is a source or destination of any kind of trafficking in persons and zero otherwise. The data for source and destination has been recorded separately in the original data source.
Forced Prostitution: Source of prostitution trafficking is a dummy variable which value is one if report states that country is source of forced prostitution and sexual exploitation of women and children zero otherwise. The destination point of trafficking for prostitution is ordinal variables ranges between -1 to 1. Where -1 indicate that country is not a destination of prostitution trafficking, 0 indicates that report does not mention that country is destination of prostitution trafficking and 1 indicates that country is a destination of forced prostitution of trafficked victims women.
Forced Labor: Source of labor trafficking is a binary variable which values one if report indicates that country is a source or destination for any type of forced labor including agricultural work, construction, sweatshops, involuntary servitude, domestic servitude, bonded labor, begging, and various forms of forced child labor and zero otherwise. In data of source of forced labor there is not a signal value of a country that indicates that it is not a source of any kind of trafficking for forced labor. The destination point of trafficking for forced labor is ordinal variables ranges between -1 to 1. Where -1 indicate that country is not a destination of forced labor trafficking, 0 indicates that report does not mention that country is destination of forced labor trafficking and 1 indicates that country is a destination of forced labor trafficking .
Debt Bondage: It is a dummy variable and coded one if the report indicates country is a source or destination for any form of debt bondage, including children paying off adults' debt or migrants paying off broker's fees for relocation and employment and coded zero in alternative case.
Child Soldiers: The variable of child soldier's source is ordinal variable lies in the range of -1 to 1. Where -1 indicate that country is not a source of trafficking for child soldiers, 0 indicates that report does not mention that country is source of trafficking for child soldiers and 1 indicates that country is a source of trafficking for child soldiers. The variable of destination of child soldiers trafficking is binomial variable because there is not a single value which indicates that country us not a destination of child soldiers trafficking, however report do not mention for few countries that it is a destination of child soldiers trafficking. The variable is coded one if report indicates that country is a destination of trafficked children to fights in wars and civil conflicts and zero in alternative case.