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An empirical analysis of human trafficking in an era of globalization

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An empirical analysis of human trafficking in an era of globalization**Yselle F. Malah & Simplicé A. Asongu**

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Abstract

The paper explores the dark side of economic openness by examining empirically the nexus between the globalization process and human trafficking. Specifically, it is about showing in a global perspective how the growing process of free movement of people, goods, capital, services and information technology make the globe a connected web of activity for the sale and exploitation of human beings. After discussing some transmission channels through which globalization could increase this practice based on the lessons from the literature, an empirical analysis is done by employing OLS and Probit regressions on a cross-sectional model covering 130 countries worldwide. Findings, robust to the consideration of the sub-regional specificities and controlling for social, cultural and historical factors, suggest that globalization, particularly financial and cultural, favors human trafficking. In the light of these results, some policy recommendations are discussed.

Keywords: globalization, human trafficking, cross section model.

JEL Codes: F53, C21

1. Introduction

Human trafficking has developed at an immense pace over the last two centuries, and is increasingly documented by academics and international organizations. Characterized as a “repugnant market” by the Nobel Prize Alvin Roth in his book on the conception of markets, human trafficking is defined by the United Nations Convention Against Transnational

Organized Crime¹ as “...*the recruitment, transportation, transfer, or harbouring of persons by the threat of force or other forms of coercion in order to control them for the purpose of exploitation*” (UNODC, 2000). The scope of the phenomenon increasingly extends beyond the individual being exploited to broader political, social, and economic influence. According to UNODC (2018), the human trafficking market, which generates more than 32 billion US dollars in annual turnover, is considered the third most lucrative form of trafficking in the world after drug trafficking and counterfeiting. The phenomenon encompasses several types of criminal networks, the most common of which are forced labor and begging, organ trafficking and prostitution. Sexual exploitation, which accounts for nearly 60% of the causes of trafficking, is the first form of violence suffered and more than 70% of the victims are women.

This article aims to show, from an empirical point of view, how the globalization of trade and migratory flows are among the main causes of this traffic. Indeed, there is no doubt that globalization is a very controversial topic in the economic literature. On the one hand, it implies increased diversity across cultural boundaries (Mackay, 2004; Pieterse, 2019) and stimulates economic growth by allowing countries to increase their human capital, specialize in their areas of comparative advantage and allow producers and consumers to take full advantage of economies of scale (Winters, 2004; Dreher, 2006; Asongu, 2014, 2017; Grossman and Helpman, 2015). On the other hand, one of the few uncontroversial views in trade theory is that a country's openness to international trade, and more generally to global markets, affects the unequal distribution of resources (Harrisson et al., 2011; Asongu and Nwachukwu, 2017; Grossman and Helpman, 2018). This has important consequences such as the rapid increase in poverty that goes hand in hand with a deterioration of social capital, a widening gap between rich and poor, an increase in crime and corruption, and a less favourable global environment (see Wood, 1995; Stiglitz, 2002; Heine and Thakur, 2011; Asongu, 2013).

The objective pursued in this article is part of this second current of thought. Following on from the vast literature on the perverse effects of globalization, it takes a global look at the effect on human trafficking. Indeed, the existing literature on human trafficking has generally focused on the different types of victims and perpetrators, but above all on the factors behind

¹ See Article 3, Appendix II, P.42-43 of the UNODC (2003) Report.

this practice². To this end, several researchers have focused on the "classical" determinants of migration such as economic conditions (Wheaton et al. 2010), social constraints such as poverty and prostitution (Farley, 2009; Cho et al., 2013), the geographical and regional locations (Cameron et al., 2008) and the institutional framework such as the level of democracy or the rule of law (Wheaton et al., 2010; Mahmoud and Trebesch, 2010; Shavers, 2012). Regarding the specific role of globalization, studies have been conducted in various horizons and contexts and provide nuanced results that seem to provide evidence of the implications for human trafficking (Jones et al., 2007; Shelley, 2010; Duong, 2012; Cho, 2011; Cho et al., 2013).

We contribute to this literature on three levels. First, unlike most of these studies, we test this relationship on the basis of data and empirical results. Indeed, most of these studies come to conclusions about the effect of globalization or trade openness on human trafficking based on a synthesis of the literature, news reports, and primary interviews with victims or anecdotal stories³. Moreover, empirical work focuses on micro studies, which does not always allow for the generalization of results and recommendations on a global scale. To our knowledge, only the studies by Cho (2011), Cho et al (2013), Majeed and Malik (2017) have conducted an empirical analysis of this relationship from a global perspective. Following this work, our study takes a "macro" approach and considers a worldwide cross-country model. We go further by highlighting the heterogeneity of economies and the role of socio-cultural and historical factors in this relationship.

The rest of the study is structured as follows: section 2 analyses the transmission channels. Section 3 explains the methodology and describes the data. Section 4 provides the discussion and interpretation of empirical results. Section 5 tests for the robustness of established results. Section 6 concludes with implications and future research directions.

2. Stylize facts and extant literature on how globalization facilitates human trafficking

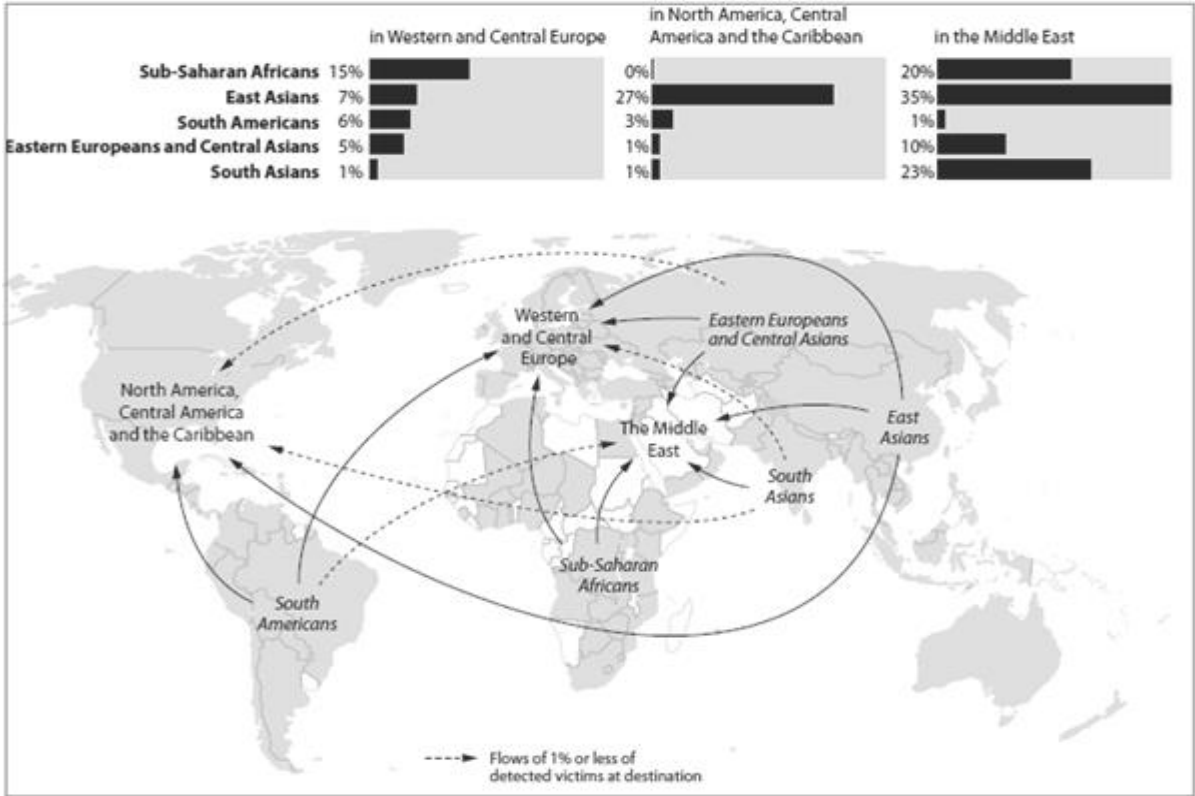
Most trafficking flows have a limited geographic scope. According to 2018 UNODC statistics, in several countries, victims are generally trafficked within the same sub-region or

² See Shelley (2010) for a comprehensive overview of the dimensions of trafficking around the world and the nature of traffickers.

³ See for example Jones et al. (2007), Majeed and Raman (2011) and Williamson (2017).

generally in close geographical proximity (Figure 1). For example, Africans south of the Sahara are trafficked and repatriated from other countries in Sub-Saharan Africa or North Africa and the Middle East. However, the sub-regions of Western and Central Europe, North America, Central America and the Caribbean, and the Middle East host the most victims of human trafficking and of diverse origins.

Figure 1: Transnational flows and shares of the total number of victims detected by sub region (2007-2010)



Source: UNODC elaboration of national data.

The literature on the economics of human trafficking is particularly interested in the causes of this practice, from individual to macroeconomic motivations. In this context, globalization is a relevant factor among the many determinants identified. Theoretically, the relationship between globalization and the human trafficking could pass through many channels, and is mainly based on the consequences of globalization on human rights and the living conditions of citizens.

On the one hand, globalization is the result of increased capital flows and trade that open up new opportunities for economic growth, particularly in developing countries (Arndt, 1999; Stiglitz, 2003). On the other hand, the change in adjustment that it induces is accompanied by social disintegration and an intensification of poverty (Williamson, 1997; Mills, 2009). In

fact, this process, which creates new norms, affects different aspects of human life, and the law is no exception. Indeed, if we consider globalization as a factor that allows the world to be transformed into a global village, at that moment all the human rights of the different peoples are threatened. Globalization has been cited by Leary (2003, p. 268) as a factor contributing to violations of the right to health protection and healthy working conditions, making workers more vulnerable to exploitation and human trafficking.

Otherwise, globalization induces social changes that promote religious and ethnic conflicts (Rodrik, 1997; Amavilah et al., 2017), which deteriorate human rights and living conditions of citizens, thus facilitating irregular migration in search of better living conditions. Yet, a plethora of research on the relationship between migration and human trafficking provides evidence of forced migrants to be trafficked (See for example Mahmoud and Trebesch, 2010; Yousaf, 2018).

Another channel is that of cultural imperialism induced by globalization. Indeed, based on ideology, the feeling of superiority of the dominant culture and the contempt of the dominated culture, cultural imperialism proliferates in a context of internalization (Barker, 1999; Mirrlees, 2013). This socio-cultural influence is characterized by several vectors including language dissemination, cinema, fast food, and the export of major brands; which lure victims into a sense of a better life elsewhere. The spread of world culture serves as a pull factor for the hope of a better life. The result is a proliferation of clandestine migration from developing countries to the West.

Moreover, with globalization and the improved technical advances it brings, there is a development of Information communication technology (ICT). In turn, the development of ICT facilitates human trafficking (Van Reisen et al., 2017; John, 2018). Indeed, ICTs are used in the recruitment, transportation and transfer of victims. Through internet application services such as websites, social networks and search engines, it is easy to obtain any type of information in a few seconds. Therefore, various methods are used to commit the crime of human trafficking. For example, in order to trap their victims, traffickers announce that there is a job at their disposal; then the victims accept the offers unsuspectingly and go to the places suggested by the traffickers. Another commonly used method is that the victim and the predator can meet through a social network, then the predator can send a plane ticket to the victim, and once arrived, she finds herself at the mercy of the predator away from her loved ones.

Another point is the expansion of marriages arranged by commercial intermediaries and involving women from poor countries and men from developed countries of the West; a practice that has become very common with the advent of the internet. In this context, so-called "marriage brokers" can be considered as traffickers. In addition, with the facilitation of international adoption practices, such as children born in developing countries and solicited by couples from rich countries, many children are bought or abducted by traffickers.

In sum, the process of globalization creates an environment where illicit practices cross borders, and human trafficking is one of its main consequences. It has given rise to capital flows, multiculturalism, technological development, open borders and deregulation that push individuals into the nets of human trafficking; a practice that is growing due to the lack of adequate regulations and policies. Thus, due to the uncontrolled consequences of globalization, criminals benefit from the globalized world while victims lose their basic human rights.

3. Empirical strategy

Data on human trafficking are taken from a report documented by the United Nations Office of Drugs and Crime (UNODC), which provides cross-country insights into incidences of human trafficking in 161 countries that are reported. Accordingly, it measures trafficking flows on a five point scale, ranging from 1 (very low) to 5 (very high). Data on globalization are taken from the KOF Swiss Economic Institute. The KOF globalization index measures the economic, social and political dimensions of globalization and it is expressed as the sum of exports and imports of goods and services (% of GDP). Due to the fact that the data on human trafficking are available in cross section, the corresponding data on the globalization index as well as the control variables have been brought into cross section by calculating the average per country over the entire period available.

Since the dependent variable (human trafficking) is categorical and ordinal, ordered Probit with robust standard errors is used for the empirical analysis. Considering the ordinal Probit model, let:

$$Y = \beta X_i + \varepsilon_i \tag{1}$$

Where Y represents the latent variable that captures the degree by which human trafficking inflows are apparent in a country i , X denotes a vector of parameters that are to be estimated while ε captures the stochastic error term. The latent variable is presented in ordinal

categories, which is coded as $1, \dots, K$. How category k responds is thus observed when the corresponding continuous response falls in the $K - th$ interval as:

$$Y = 1 \text{ if } \delta_0 < Y < \delta_1$$

$$Y = 2 \text{ if } \delta_1 < Y < \delta_2$$

$$Y = 3 \text{ if } \delta_2 < Y < \delta_3$$

$$Y = 4 \text{ if } \delta_3 < Y < \delta_4$$

$$Y = 5 \text{ if } \delta_4 < Y < \delta_5$$

Where $\delta_i (i = 1, 2, 3, 4, 5)$ denotes the unobservable parameters for thresholds that will be estimated in the model alongside other parameters. In a scenario where an intercept coefficient is integrated into the model, because it is normalized to a value of zero, only $K - 1$ supplementary parameters are estimated with β . Moreover, the probabilities for each of the observed ordinal response sum up to one, and the corresponding marginal impacts of the regressors X on the attendant probabilities are not equal to the coefficients. Hence, the corresponding marginal probabilities could thus be calculated within a Probit framework as:

$$\frac{dprob[Y_k]}{dX_k} = [\phi(\delta_{k-1} - \beta X_K) - \phi(\delta_K - \beta X_K)]\beta$$

Where $\phi(\cdot)$ is the normal density function, the threshold parameter and X is the $K - th$ explanatory variable. It includes our independent variable of interest (globalization) and control variables. The latter account for the most relevant determinants of human trafficking flows as suggested by the literature, namely: GDP per capita growth, log of population size, log of migrant workers, democratization and rule of law. According to Cho et al. (2013), richer and more populous countries experience a higher incidence of human trafficking inflows. Mahmoud and Trebesch (2010) show that potential trafficked victims might be attracted by the existence of pre-existing migrant networks. Furthermore, it is expected that, all things being equal, better rule of law would reduce trafficking flows due to traffickers facing a higher risk of being prosecuted. Likewise, more democratization could induce more open borders since it induces trade reforms that benefit the majority of society, which further promotes trade openness (Stokes, 2001), and which reduces the risk of detection for traffickers all things being equal.

The study covers 130 cross countries due to data availability constraints. The complete list of countries in the study and the definitions and sources of the variables used are provided in the

Appendix, while the descriptive analyses of the data are reported in Table 1. With regard to the proportionality between standard deviation and mean value, it appears that the human trafficking index as well as the KOF index and the set of control variables (with the exception of the rule of law) are relatively less dispersed. Regarding the collinearity diagnostic (VIF test), it appears that regressors in the model are free from collinearity, as the variance inflation factor (VIF) is less than 10 and/or the tolerance value is greater than 0.1. Otherwise, the Spearman correlation matrix indicates a significant and positive link between KOF index and human trafficking as well as population, migrant works and democratization. The rule of law is negatively correlated with this traffic.

Table 1: descriptive analyses

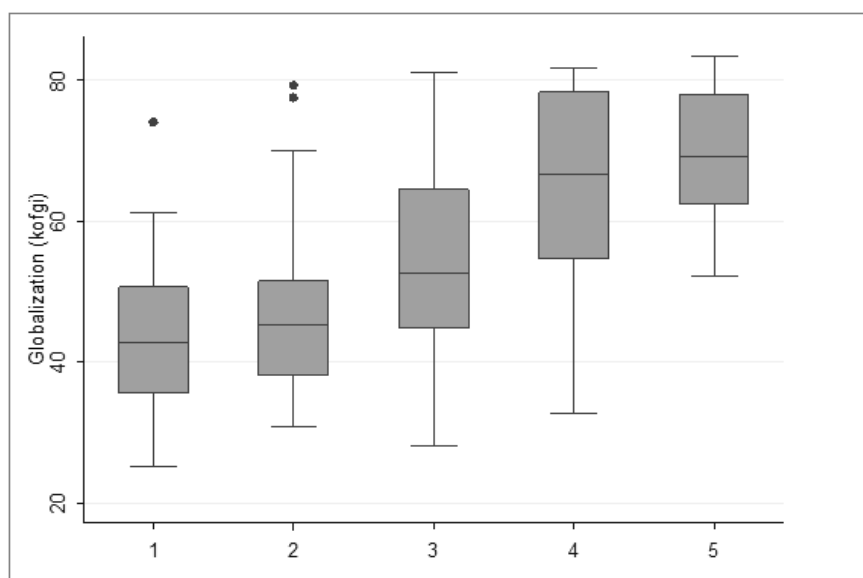
Variable	Summary statistics					VIF Test		Spearman's correlation matrix						
	Obs	Mean	S.D.	Min	Max	VIF	TV	(1)	(2)	(3)	(4)	(5)	(6)	(7)
(1) Human Trafficking	130	2.64	1.19	1.00	5.00			1						
(2) KOF index	130	52.74	14.80	25.22	83.43	5.09	0.19	0.53*	1					
(3) Population (log)	130	15.98	1.73	11.16	20.81	2.04	0.49	0.34*	0.02	1				
(4) Migrant workers (log)	130	12.70	1.59	8.09	17.04	2.48	0.40	0.51*	0.37*	0.67*	1			
(5) GDP per capita growth	130	2.26	1.83	-1.82	10.31	1.20	0.83	0.17	0.08	0.00	-0.17	1		
(6) Polity 2	117	3.22	6.68	-10.00	10.00	1.78	0.56	0.29*	0.60*	0.07	0.16	-0.05	1	
(7) Rule of Law	130	-0.03	1.01	-1.68	1.98	4.33	0.23	-0.45*	0.83*	-0.12	0.22	0.14	0.53*	1

Source: authors' calculations. **Note:** S.D, VIF and TV denote standard deviation, variance inflation factor and tolerance value, respectively. Mean VIF = 2.82. *p < 0.01.

4. Preliminary findings

Before presenting the results of the estimates, we first observed graphically the average trend of globalization according to the level of human trafficking. In this respect, and as evidenced by the box plots shown in Figure 2, it is apparent that the countries where the level of human trafficking is highest (i.e. 4 and 5) also correspond to those where the average level of economic, social and political globalization is high.

Figure 2: Box plots of globalization by levels of human trafficking



Source: Authors

The results from estimating equation (1) are summarized in Table 2. For purposes of comparison, we also present the corresponding OLS estimate. We first estimate the specific effect of globalization on human trafficking, and then control this effect with some control variables.

Table 2: Baseline

	Dep. Variable: Human trafficking			
	(OLS)	(OLS)	(Probit)	(Probit)
KOF globalization index	0.044***	0.023*	0.045***	0.028*
	(0.006)	(0.013)	(0.007)	(0.016)
Population (log)		0.123		0.162*
		(0.078)		(0.096)
Migrant workers (log)		0.238***		0.287***
		(0.087)		(0.100)
GDP per capita growth		0.116**		0.140**
		(0.058)		(0.069)
Polity 2		-0.002		-0.001
		(0.016)		(0.019)
Rule of Law		0.150		0.187
		(0.159)		(0.196)
Observations	130	117	130	117
R-squared	0.291	0.447	-	-

Source: authors estimates. **Note:** $p < 0.10$, $** p < 0.05$, $*** p < 0.01$. Robust standard errors in parentheses

Overall, the results based on the OLS and Probit estimates suggest a positive and statistically significant nexus between globalization and human trafficking, with the magnitude of the effect slightly high in Probit regressions compared to the corresponding OLS regression. These results suggest that an increasingly integrated global economy allows human trafficking

to flourish. Indeed, as odious as it is, this activity remains a supply and demand issue that has become all the more rewarding for traffickers with the advent of globalization. Moreover, globalization promotes interdependence between countries in the trade and transfer of commodities. However, in developing countries, citizens often find themselves without adequate education and skills to compete in a changing workforce. Moreover, in these countries, which are very often the factories and workshops of developed countries, there is a high demand for cheap labor, leading to trafficking and exploitation of desperate workers.

Regarding controls variables, we find that human trafficking is positively related with economic development and migrant worker stocks. As immigrants are mostly considered foreigners in their host countries, they do not have the same protections and rights as citizens (Engstrom, 2006), and are therefore more vulnerable to exploitation and other harms.

5. Robustness check

5.1 Taking into account sub-regional specificities

The preceding results confirm our hypothesis of a positive nexus between globalization and human trafficking. As has been apparent in Figure 1, traffic intensity varies significantly from one region to another. To this end, we test in this section whether this result is sensitive to the heterogeneity of our sample. Given the cross sectional nature of the dataset, it is not possible to control for heterogeneity by including country fixed effects. To mitigate this, regional fixed effects are included in order to capture at least some heterogeneity across the group of countries.

The results in Table 3 suggest that even controlling for sub-regional specificities (i.e. Column 9), the nexus between globalization and human trafficking is still positive, although the level of significance differs according to sub-regions. Regarding the specific effect of each regional dummy, East Asia and Pacific has a significant and positive effect on human trafficking, while Central Europe and Asia has a negative effect. On the other hand, in the general model with all regional dummies, only the Organisation for Economic Co-operation and Development (OECD) has a positive effect: a result that is not surprising given the significant weight of these countries in the world economy and world trade.

Table 3: Sub-regional specificities

	Dep. Variable: Human trafficking								
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
KOF globalization index	0.023	0.027	0.026	0.024	0.028*	0.027*	0.031*	0.048**	0.041*
	(0.016)	(0.018)	(0.016)	(0.018)	(0.016)	(0.016)	(0.016)	(0.019)	(0.024)
Population (log)	0.151	0.162*	0.175*	0.164*	0.162*	0.161*	0.087	0.153	0.071
	(0.096)	(0.095)	(0.101)	(0.096)	(0.095)	(0.094)	(0.102)	(0.096)	(0.111)
Migrant workers (log)	0.294***	0.287***	0.278***	0.302***	0.281***	0.291***	0.350***	0.281***	0.339***
	(0.100)	(0.100)	(0.104)	(0.105)	(0.102)	(0.098)	(0.109)	(0.099)	(0.118)
GDP per capita growth	0.134*	0.138*	0.144**	0.146**	0.140**	0.141**	0.102	0.145**	0.100
	(0.070)	(0.074)	(0.071)	(0.071)	(0.069)	(0.068)	(0.077)	(0.068)	(0.080)
Polity 2	-0.004	-0.001	0.008	0.000	-0.001	-0.002	0.007	-0.001	0.016
	(0.020)	(0.019)	(0.021)	(0.020)	(0.019)	(0.021)	(0.019)	(0.019)	(0.026)
Rule of Law	0.128	0.191	0.192	0.214	0.176	0.194	0.098	0.049	-0.166
	(0.214)	(0.204)	(0.197)	(0.207)	(0.198)	(0.212)	(0.203)	(0.202)	(0.296)
OCDE	0.409								0.755*
	(0.403)								(0.454)
SSA		-0.034							0.190
		(0.307)							(0.420)
MENA			0.311						0.499
			(0.342)						(0.458)
South_Asia				-0.321					0.270
				(0.456)					(0.622)
Nord_America					0.332				0.148
					(0.509)				(0.699)
Latin_America_Caribbean						0.067			0.018
						(0.387)			(0.483)
East_Asia_Pacific							0.777*		0.905
							(0.405)		(0.572)
Europe_Central_Asia								-0.576**	-0.410
								(0.262)	(0.469)
Observations	117	117	117	117	117	117	117	117	117

Source: authors. **Note:** Probit estimates. $p < 0.10$, $** p < 0.05$, $*** p < 0.01$. Robust standard errors in parentheses. OECD, SSA and MENA refer respectively to the Organization for Economic Co-operation and Development, Sub-Saharan Africa and Middle East and North Africa.

5.2 Controlling for socio-cultural and historic covariates

Another robustness test that we perform is to test if the socio-cultural and historical framework matter. More specifically, we account for group heterogeneity amount countries by including in the regression Catholic, Muslim and Protestant religions; ethnic and language fractionalization; and legal origin covariates (Table 4).

Table 4: additional covariates

	Dep. Variable: Human trafficking			
	(1)	(2)	(3)	(4)
kof globalization index	0.030*	0.027	0.027*	0.032*
	(0.017)	(0.019)	(0.016)	(0.019)
Population (log)	0.144	0.099	0.171*	0.057
	(0.097)	(0.105)	(0.100)	(0.113)
Migrant workers (log)	0.328***	0.389***	0.294***	0.478***
	(0.104)	(0.107)	(0.100)	(0.123)
GDP per capita growth	0.067	0.179**	0.136*	0.118
	(0.084)	(0.075)	(0.070)	(0.088)
Polity 2	-0.025	0.001	-0.004	-0.023
	(0.023)	(0.020)	(0.020)	(0.024)
Rule of Law	0.178	0.126	0.216	0.099
	(0.235)	(0.224)	(0.203)	(0.264)
Catho80	-0.003			-0.010*
	(0.005)			(0.006)
Muslim80	-0.010**			-0.014***
	(0.005)			(0.005)
Protmg80	-0.007			-0.006
	(0.007)			(0.007)
Fract_Ethnic		-0.896		-0.967
		(0.682)		(0.684)
Fract_Language		0.655		0.529
		(0.529)		(0.514)
legor_fr			0.189	0.600**
			(0.232)	(0.288)
Observations	113	113	114	110

Source: authors. **Note:** Probit estimates. $p < 0.10$, $** p < 0.05$, $*** p < 0.01$. Robust standard errors in parentheses. Catho89, muslim80 and protmg80 refers respectively to the percentage of the population belonging to the Roman Catholic religion, the Muslim religion or the protestant religion in 1980. Fract_Ethnic, Fract_Language and legor_f refers respectively to the probability that two randomly selected persons from a given country will not belong to the same ethnic group or will not speak the same language; and the country origin's legal system in terms of French Civil Law.

Here again results confirm those obtained previously on a positive relationship between globalization and human trafficking. Furthermore, it is apparent that religion, particularly Catholic and Muslim faiths, are negatively linked to human trafficking. This result confirms that of a study by Cho (2012) which suggests that countries with a high proportion of religious citizens are less prone to the practice of human trafficking. Conversely, the results reveal that the dummy representing civil law has a positive relationship, meaning that this legal system does not appear to have criminal protections and civil remedies for victims of this practice.

5.3 Others forms of globalization

It is also tested how the different forms of globalization affect human trafficking. For this purpose, we distinguish economic globalization (trade and financial); social globalization

(interpersonal, informational and cultural) and political globalization (embassies, international treaties and belonging to multilateral development institutions) indexes. While overall results in Table 5 reveal consistent positive nexuses, such relationships are significant only for the financial and cultural dimensions of globalization.

This result can be explained by the fact that financial exchanges, being one of the main causes of globalization, are often at the origin of clandestine financial networks and illicit activities such as money laundering and drug trafficking. Indeed, trafficking is an economic enterprise, providing traffickers with technological capabilities and financial resources to boost their activities. The new technologies brought about by financial globalization help traffickers with secure logistics and communication that prevent them from being arrested. In addition, the global culture that globalization induces, very often serves as a pull factor creating the hope of a better life elsewhere. Unfortunately, this often results in the phenomenon of illegal immigration, which makes the practitioners more prone to the risk of trafficking.

Table 5: Different forms of globalization

	Dep. Variable: Human trafficking					
	(1)	(2)	(3)	(4)	(5)	(6)
Trade Globalisation	0.012 (0.010)					
Financial Globalisation		0.019* (0.011)				
Interpersonal Globalisation			0.018 (0.012)			
Informational Globalisation				0.013 (0.012)		
Cultural Globalisation					0.019* (0.009)	
Political Globalisation						0.012 (0.013)
Population (log)	0.185* (0.099)	0.199* (0.104)	0.256** (0.126)	0.180 (0.111)	0.228** (0.098)	0.058 (0.115)
Migrant workers (log)	0.321*** (0.092)	0.306*** (0.096)	0.273** (0.107)	0.298*** (0.104)	0.285*** (0.097)	0.336*** (0.095)
GDP per capita growth	0.117* (0.069)	0.149** (0.068)	0.130* (0.072)	0.130* (0.073)	0.064 (0.068)	0.159** (0.070)
Polity 2	0.013 (0.017)	0.007 (0.017)	0.007 (0.018)	0.005 (0.018)	-0.006 (0.019)	0.002 (0.021)
Rule of Law	0.344** (0.171)	0.291* (0.161)	0.277 (0.173)	0.316* (0.169)	0.268 (0.178)	0.352** (0.170)
Observations	117	117	117	117	116	117

Source: authors. **Note:** Probit estimates. p < 0.10, ** p < 0.05, *** p < 0.01. Robust standard errors in parentheses.

6. Concluding implications and future research directions

The current paper has investigated the nexus between the globalization process and human trafficking from a global perspective. The empirical analysis based on a cross-section of 140 countries shows that, overall; the globalization process as measured by the KOF index, favours human trafficking. Contrary to existing work, we have corroborated this evidence by

taking into account regional specificities as well as socio-cultural and historical factors. Moreover, we have also shown that financial and cultural globalization dimensions are the most conducive to this practice.

Given the motivation for this study, these results suggest two main recommendations for countries actively participating in the globalization process. First, it is more than important to rethink the notions of "legal" and "illegal" in a globalized context. Indeed, as mentioned in the UNODC (2018) report, while the number of countries implementing the protocol to punish trafficking in persons that came into force in 2003 has almost doubled in recent years, many countries, particularly in Africa do not have the necessary instruments. Convictions occur in only a few countries and are not always commensurate with awareness. Second, a stronger international mechanism is needed for monitoring trends in trafficking of persons, including scope, price, and demand, in order to gather more information on the market for these crimes to inform policy interventions. To this end, the challenge should be for the services concerned to collaborate more closely with the UNODC in order to create the statistical information that is indispensable to a policy of fighting this scourge, which unfortunately our lack of knowledge only exacerbates.

As an implication for future research, it should be noted that this study raises only one corner of the veil of this practice by focusing on human trafficking. However, global knowledge of human trafficking does not yet exist due to the lack of internationally standardized data, which hinders the sharing of information between countries and prevents the establishment of global recommendations. Indeed, to date, there is no information on the constituent elements of contemporary slave markets (trafficking, supply, demand, price), nor on the type of slavery. Future studies could consider illicit drug markets, for which the UNODC has a great deal of information, and which takes into account information on the entire value chain (from production to consumption), on various types of drugs (cocaine, opium, *inter alia*) and on several markets (European Union, United States, Iran, Afghanistan, *inter alia*).

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Appendices

Table A1: Lists of study countries

Albania, Algeria, Argentina, Aruba, Australia, Austria, Bahrain, Bangladesh, Belgium, Belize, Benin, Bhutan, Bosnia and Herzegovina, Brazil, Brunei Darussalam, Bulgaria, Burkina Faso, Burundi, Cambodia, Cameroon, Canada, Chad, Chile, China, Congo Dem Rep, Congo Rep, Costa Rica, Cote d'Ivoire, Croatia, Cyprus, Czech Republic, Denmark, Djibouti, Dominica, Dominican Republic, Ecuador, Egypt, El Salvador, Equatorial Guinea, Estonia, Ethiopia, Fiji, Finland, France, Gabon, Gambia, Georgia, Germany, Ghana, Greece, Guatemala, Haiti, Honduras, Hungary, Iceland, India, Indonesia, Iran, Iraq, Ireland, Israel, Italy, Jamaica, , Japan, Kazakhstan, Kenya, Korea Rep, Kuwait, Kyrgyz Republic, Lao PDR, Latvia, Lebanon, Liberia, Libya, Lithuania, Luxembourg, Malawi, Malaysia, Maldives, Mali, Mexico, Moldova, Morocco, Mozambique, Myanmar, Netherlands, New Zealand, Niger, Nigeria, Oman, Pakistan, Panama, Paraguay, Philippines, Poland, Portugal, Qatar, Romania, Russian Federation, Saudi Arabia, Senegal, Serbia, Sierra Leone, Singapore, Slovak Republic, Slovenia, South Africa, Spain, Sri Lanka, Sudan, Sweden, Switzerland, Syrian Arab Republic, Tajikistan, Tanzania, Thailand, Togo, Trinidad and Tobago, Turkey, Uganda, Ukraine, United Arab Emirates, United Kingdom, United States, Uzbekistan, Venezuela, Vietnam, Yemen, Zambia, Zimbabwe.

Source: authors' construction.

Table A2: Data sources and description

Variables	Definitions	Sources
Human trafficking	Reported incidences of human trafficking inflows. Score 0 (no flows) and 5 (very high flows).	UNODC
Trade Globalisation	Comprehensive indicator covering the economic, social and political aspects of globalization.	KOF
Migrant workers (log)	Personal remittances comprise personal transfers and compensation of employees.	WDI
GDP per capita (log)	Gross domestic product divided by midyear population.	WDI
Polity 2	Level of democratization: $-10 \leq \text{Autocracy} < 6$; $6 \leq \text{Democracy} \leq 10$	CSP
Rule of Law	Perceptions of the extent to which agents have confidence in and abide by the rules of society.	WGI
Catho80, musilm80, protmg80	Percentage of the population belonging to the Roman Catholic religion, the Muslim religion or the protestant religion in 1980.	La Porta et al. (1999)
ethnic and Language fragmentation,	Probability that two randomly selected persons from a given country will not belong to the same ethnic group or will not speak the same language.	Alesina et al. (2003)
legor_fr	The dummy variable for the origin of the French Civil Law legal system.	La Porta et al. (1999)

Source: authors' construction.