Modern slavery–an empirical analysis of source countries of human trafficking and the role of gender equality

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Preface

I wish to express my gratitude to my supervisor Andreas Kotsadam for helpful guidance, useful insight and comments while writing this thesis, especially in times where Stata and I were not thinking along the same lines.

Without fellow students and friends to share a coffee with I would not have been so motivated to study hard and write this thesis, so a big thanks to you.

I would also like to thank my mother for proofreading and my grand parents for babysitting Jakob in order for me to be able to finish my studies. Finally, I want to thank Eirik and Jakob for being there for me through this process, for holding out with a stressed wife and mother and for making me smile every day.

Abstract

There are over 20 million victims of trafficking from more than 136 countries in the world. This thesis takes a closer look at this modern form of slavery, in particular the nonlinear relation between gender equality and human trafficking outflows. My main hypothesis is that an increase in gender equality first has a positive effect on the amount of trafficking outflows and then a negative effect as countries become more egalitarian.

Using cross-national data from the World Bank and from the Trafficking in Persons Report 2006 (UNODC, 2006) I find a nonlinear relationship between female labour force participation, the share of women in parliament and trafficking outflows. In line with the literature on human trafficking I base my arguments on the assumption that factors that affect migration also affect trafficking. I argue that labour opportunities and power to make decisions for women affect the size of the trafficking outflows. In countries where women have some rights but are not seen as equal to men is where I find trafficking to be the most prominent. Information obtained through schools, Internet, mass media or migrants returning home is likely to drive the aspiration of migration in countries where there are few career opportunities and decision possibilities for women. Policies to reduce trafficking should thus aim at increasing female labour force participation and empowering women.

In order to create well-functioning policies to reduce human trafficking more research is needed. Data of good quality is essential to improve the knowledge about trafficking and this is why I end my thesis with a call for the collection of better data.

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1. Introduction

Human trafficking is an emerging crime leading millions of people into a life without control over their time, money or body. According to the Trafficking in Persons Report 2012 more than 20.9 million people are victims of trafficking. People are trafficked from over 136 different source countries and brought to over 118 host countries[1]. Due to its international character, countries need to work together to combat the problem. If we are to reduce trafficking we first need more information (UNODC, 2009 and UNODC, 2012). This thesis is an effort to contribute with some information and to shed light on what we can call modern slavery. In particular I ask whether gender equality plays a role in explaining from what countries people are trafficked.

One of the main challenges with research on human trafficking is the variation in defining the problem. Throughout this thesis I will use the definition used by the UN from the (Palermo) Protocol to prevent, suppress and punish trafficking in persons, especially women and children;

> "Trafficking in persons" shall mean the recruitment, transportation, transfer, harbouring or receipt of persons, by means of the threat or use of force or other forms of coercion, of abduction, of fraud, of deception, of the abuse of power or of a position of vulnerability or of the giving or receiving of payments or benefits to achieve the consent of a person having control over another person, for the purpose of exploitation. Exploitation shall include, at a minimum, the exploitation of the prostitution of others or other forms of sexual exploitation, forced labour or services, slavery or practices similar to slavery, servitude or the removal of organs" (United Nations, 2004, p. 42).

This definition includes some crucial features of human trafficking: the recruitment,

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[1] A figure showing the countries covered in the data collection of UNODC can be found in the appendix.

transportation and harbouring of people and the use of fraud and coercion in order to exploit individuals for profit. The use of coercion distinguishes human trafficking from human smuggling; a victim of trafficking is unlike an illegal migrant not free when the destination is reached (Hernandez & Rudolph, 2011, Danailova-Trainor & Laczko, 2010).

The main question I aim to answer is whether gender equality decreases the proportion of trafficking in human beings out of a country. My main hypothesis is that an increase in equality first has a positive effect on trafficking outflows and then a negative effect as countries become more egalitarian. Does gender equality have a nonlinear effect on human trafficking? The purpose of this thesis is to answer that question.

There are many types of human trafficking; forced labour, sex trafficking and child soldiers are among the major forms of trafficking (US, 2011). Even though a significant and increasing amount of trafficking victims are male, the majority of detected victims are still women and girls (US, 2013). This is why I chose to look at the opportunities for women and how that affects trafficking outflows. Domestic trafficking is common not only in large transitional countries but also in small countries as for instance some European countries (UNODC, 2009). Despite the large amount of internal trafficking I focus only on international trafficking in this thesis due to the lack of data that includes domestic trafficking.

The literature suggests that human trafficking is closely linked to migration (Cho, (2012), Cho (2012b), Mahmoud & Trebesch (2010), Rao & Presenti (2012), Hernandez & Rudolph (2011)). The results from Rao & Presenti (2012) imply that the problems of human trafficking cannot be solved without adressing the factors driving migration. This is why I in this thesis base my arguments on the assumption that factors that affect migration also affect trafficking.

There is no agreement in the literature on what determines human trafficking. By looking at 78 different push factors suggested in the litterature Cho (2012) finds that income, information flows through mass media and internet, the size of the food, beverage and

tobacco industries and being a transition economy are statistically significant. She argues that low income and exposure to information from abroad encourage migration while large food, beverage and tobacco industries demand a lot of low-skilled labour which put a damper on migration. When less people migrate the pool of potential trafficking victims also decreases. Being a transition economy, she argues, can lead to insecure livelihoods which can explain the increase in trafficking outflows from these economies.

Cho (2012) also looks at whether gender discrimination affects trafficking outflows. She finds no effect on either in- or outflows of trafficking but argues that it might be due to nonlinear effects. One of Hernandez & Rudolph (2011)`s hypotheses is that women's political rights have a nonlinear effect on trafficking. The signs of the coefficients suggest the hypothesis might be correct but the results are not statistically significant thus one cannot conclude that their hypothesis is right. In this thesis I will use one of the gender variables from Cho (2012), female labour force participation, as well as a variable for political participation, the share of women in parliament, to see if I get a different result and indeed if there is a nonlinear relationship.

Using cross-national data from the World Bank and from the Trafficking in Persons Report 2006 (UNODC, 2006) I find that female labour force participation does not have a statistically significant correlation with trafficking outflows, which is in line with the results from Cho (2012). I go on to use a nonlinear model and find that both female labour force participation and the share of women in parliament increase the amount of trafficking out of a country at low levels and decrease trafficking outflows for higher levels. This is in line with my hypothesis.

Following Cho (2012) I argue that income and labour opportunities affect the size of the trafficking outflows. In countries where women to some degree have equal opportunities as men they can get information about other countries through mass media and Internet as well as through their education. This combined with few career opportunities at home, I argue, may encourage them to seek work opportunities abroad. If these women are also credit constrained they become especially vulnerable to traffickers who offer work

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abroad. In countries where gender inequality is so large that women are prevented from getting an education, information and leaving their homes on their own, the likelihood of women migrating is low, which also causes the amount of trafficking from these countries to be low. The same goes for countries where men and women are close to having the same opportunities, women do not have the same incentives to migrate therefore trafficking outflows are low.

I build up my thesis by starting with some background information on human trafficking and the connection to migration, debt and gender inequality. In part 3 I present the data I will use and the empirical strategy. The models are estimated using the statistical software package StataMP 13. In part 4 I presents the results before I discuss them and conclude in part 5.

2. Literature review and theory

There is a lack of economic literature on human trafficking despite it being a multibillion business (Interpol) that has immense influence on people's lives. As stated by US President Obama;

> "It ought to concern every person, because it's a debasement of our common humanity. It ought to concern every community, because it tears at the social fabric. It ought to concern every business, because it distorts markets. It ought to concern every nation, because it endangers public health and fuels violence and organized crime. I'm talking about the injustice, the outrage, of human trafficking, which must be called by its true name – modern slavery." (US Department of State, 2013, p.7)

Regardless of Obamas concern and the raising awareness of this crime against humanity, the limited numbers of victim identification causes data collection and thus research to be difficult. The nature of trafficking, where victims are often from marginalized populations performing domestic work and have often migrated illegally, makes victim identification especially difficult (US, 2013).

> "While it has been argued that factors such as poverty, inequality, limited immigration possibilities and the social and economic marginalization of women are likely to play a significant role, until very recently there had not been any research on this" (Jakobsson & Kotsadam, Forthcoming, p. 15)

Migration

Fortunately the interest in the topic is growing and so is the research pool. In line with recent research contribution I look at human trafficking as closely linked to migration and thus the factors that affect migration may also explain human trafficking (Cho, (2012), Cho (2012b), Mahmoud & Trebesch (2010), Rao & Presenti (2012), Hernandez & Rudolph (2011)). Hernandez & Rudolph(2011) find that flows of migrants and refugees between a source-host country pair increase the number of trafficked victims between those countries. Looking at data from Germany Cho (2012b) also finds evidence that migration networks increase human trafficking

inflows. "These findings suggest that trafficking mafias have a better chance of finding potential victims when there is a considerable population willing to relocate" (Hernandez & Rudolph, 2011, p. 16). Traffickers are driven by profit. They want to exploit victims where the revenues are highest but they also search to minimize the costs and the risks of trafficking. Finding potential people to traffic among those who want to migrate reduces the costs (Hernandez & Rudolph, 2011).

The hope of improved life quality abroad tempts many people into migration. Victims of human trafficking are mostly migrants who get exploited by traffickers on their way to their destination (Cho, 2012b). In a world where migration policies in developed countries are strict and the option to legally migrate is often not available, trafficking and exploitation are natural consequences (Mahmoud & Trebesch, 2010). In line with the results from Mahmoud & Trebesch (2010), that traffickers take advantage of shadow migration industries, evidence from the IOM Counter-Trafficking-Module shows that most of the victims were recruited through personal connections or agencies and not in the first run forced into migration (Cho, 2012). In short, traffickers take advantage of vulnerable people who are willing to take risks to improve their lives.

Mahmoud & Trebesch (2010) sugest two channels at work predicting the increase in individual trafficking risks when emigration increases. The first channel (demand) predicts that areas with a lot of emigration also has many potential victims of trafficking and thus it is easy for traffickers to recruite victims at a low cost. It is not easy to distinguish traffickers from middlemen offering help to emigrate illegally which makes it easier for traffickers to recruit people in areas where emigration is large. The second channel (supply) suggests that people are willing to take risks to get an opportunity to work abroad when living conditions in the region are poor. "Migrants departing from high-migration areas are likely to be negatively self-selected and share characteristics that make them more vulnerable to trafficking" (Mahmoud & Trebesch, 2010,p. 174).

Debt

Akee et al (2010) find that transportation costs play an important role in the descision to migrate. Even though travel expences have decreased it is still costly to migrate, mostly because the legal barriers to migration are high. The only option is often to

migrate illegally and in order to succefully migrate the use of intermediares is common. They have the know-how needed to cross boarders and start a new life abroad and make this their business. "The borders between smuggling and trafficking become blurred when migrants voluntarily use the services of smugglers only to find themselves in coercive situations and thus become the victims of traffickers" (Aronowitz, 2001, p. 167).

Most low-skilled migrants cannot afford to finance their migration in advance and enter a contract with the intermediares (Friebel & Guriev, 2012). Because they borrow money they are more vulnerable than other migrants (ILO, 2005). They often use their labour as collateral and it creates a debt bondage where the person can easily be exploited (Aronowitz, 2001). Because of its illegal nature, the enforcement of the contract between the migrant and the intermediare is difficult (Friebel & Guriev, 2012). Violence, threats and spiritual rituals are used to force migrants to pay their debts. The migrants fear of being deported gives the intermediares an advantage.

Evidence from Nigeria suggests that women trafficked are often offered a job abroad through an informal nettwork, consisting of people from their own area (Carling, 2005). Once they arrive to the destination they become victims of exploitative debt bondage and have to work for a few years in order to repay the debt (UNODC, 2009b). Often it is first after arrival to the destination country, when the person is not free to walk, that she can be determined a trafficked victim (Aronowitz, 2001).

The availability of information is crucial and distinguishes smuggling from trafficking. The latter involves manipulation of information where migrants do not have full information about the enforcement of the contract (Friebel & Guriev, 2006). The traffickers exploit the information gap and coerce people with hope of a better life into giving up their freedom as collateral (US, 2011).

Push factors

Human trafficking is driven by profits. Some people pay for the exploitation of humans, which causes trafficking to exist. "Poverty, unemployment, lack of opportunity, social upheaval, and political instability facilitate traffickers' ability to recruit victims, but they do not in themselves cause trafficking" (US, 2011 p.19). Still it is interesting to find out what facilitates the recruitment of victims, what drives

migration and trafficking.

The largest trafficking flows are within or out of developing countries. In spite of this, human trafficking and development have been treated as two separate policy areas. "Efforts to promote human development have not focused very much on the fight against trafficking, and policies to tackle trafficking tend not to be linked to wider measures to promote human development" (Danailova-Trainor & Laczko, 2010, p.39). The factors affecting trafficking are connected to development, which suggests that when setting policies one should look closer at the impact development has on trafficking.

Push factors refer to characteristics of the source country that lead to increased emigration. Since trafficking is closely linked to migration, the same factors also increase trafficking outflows (Hernandez & Rudolph, 2011). The most frequently reported push factors are high unemployment, segregated labour markets, gender discrimination, low life quality and the lack of opportunity to improve it, sexual or ethnic discrimination, poverty, persecution, violence or abuse, human rights violations, collapse of the social infrastructure and other environmental conditions including conflict and war (Europol, 2011).

Gender inequality

Some push factors are especially relevant for female migration. In countries where gender inequality is large, where women are economically vulnerable and do not have the capacity to make decisions, the female migratory pressure, and thus the likelihood of being trafficked, increases (Hernandez & Rudolph, 2011). Without adequate labour opportunities at home, a job abroad seems more attractive. When women are exposed to discrimination in employment combined with household duties, childcare, lack of water and electricity and lack of part-time employment opportunities, they are trapped in low-paying jobs and low-productivity businesses, often in the informal sector (World Bank, 2012).

> "An increase in female labor force participation does not always lead to economic empowerment as long as such demand for female labor is based on women's acceptance of poor payment and exploitative working conditions.

Although Stolper-Samuelson-type trade theory predicts that an increase in female labor will eventually lead to higher female wages and working conditions, empirical evidence rarely supports this theoretical prediction as long as there is an abundance of unemployed females available in those developing countries" (Cho, 2011, p.5)

When women are paid less they also have less incentive to work and they are more often in and out of the labour force. Danailova-Trainor & Belser (2006) assume that a higher amount of unemployed young women makes it easier for traffickers to recruit women. They find that when female youth employment increases by one percent, the number of trafficking victims increase by the same fraction of the population. Cho (2012) also argues that employment structures affect the vulnerability of migrants and that better employment opportunities for the unskilled workers can reduce trafficking. In the World Development Report on gender equality and development access to economic opportunities for women is one of the 4 priorities suggested in order to reduce gender gaps (World Bank, 2012). That includes relaxing women's time constraints and reducing institutional biases and information problems.

When women do not earn their own income they are less likely to make household decisions. A higher income gives more bargaining power and when women get a say, they invest more in health and in their children which makes them less vulnerable to shocks (World Bank, 2012). This can in turn reduce trafficking because women are not pushed to the limit. Women make different decisions than men, not only in the household but also when they are given political power. "Women's participation in decision-making processes is important in moving toward more gender-equal societies" (World Bank, 2012, p. 176). When women are heard, programs against trafficking are perhaps more likely to be implemented because trafficking affects women the most.

Rao and Presenti (2012) suggest two mechanisms to explain the assumption that gender inequality is seen as a push factor for trafficking. The first mechanism is that if those trafficked are economic migrants, women's decision to migrate would be affected by the expected future income for women, which is influenced by gender inequality. The second mechanism is that gender inequality, hence fewer economic

opportunities for women, makes women being valued less and reduces the costs for traffickers (Rao & Presenti, 2012). Both mechanisms are affected by the lack of labour opportunities for women.

Rao and Presenti (2012) find the only gender inequality indicator to be statistically significant was the female-male income ratio which was positively correlated with the incidence of trafficking origin. " It is in societies permissive enough to allow women to travel alone and be potential economic migrants – indeed, to have aspirations to economic mobility – that we are likely to see trafficking originate" (Rao & Presenti, 2012). Cho (2012) finds no correlation between trafficking and the gender- related indicators; Female unemployment rate, female labour force participation, women's economic and social rights, literacy rate of women 15+ and 15-24 years old. But she argues that factors that are not robust may still affect human trafficking indirectly or when interacting with other factors. Cho (2012) does find that fertility rates and the share of population under 14 have decreasing effects on trafficking outflows and suggests this is due to the fact that more children reduces women's mobility (Cho, 2012).

Nonlinearity

> "One of the most common assumptions about "average" trafficking victims is that they come from the poorest, most isolated communities. Studies of populations in countries of origin for transnational and internal trafficking have shown that the incidence of trafficking is highest among those who have become empowered enough to aspire to a better life but have few good options for fulfilling those aspirations" (US, 2011, p. 24)

People in the poorest regions do not have the resources to migrate (UNODC, 2010). They might not even see it as a possibility as the aspiration of an improved life often stems from the impression mass media gives of other regions or from people returning home which is less common to observe in poorer areas. The countries with highest gender inequality are often poor. In addition to the lack of resources to migrate there may also be barriers to mobility for women who may not be able to migrate alone (Jakobsson & Kotsadam, Forthcoming). The demand in host countries may also be larger for women with some level of education or for women from the middle and

upper middle classes in the developing world (Rao & Presenti, 2012). This reduces the trafficking outflows from the poorest areas.

This can explain why Rao and Presenti (2012) and Cho (2012) find no indication that gender inequality leads to more trafficking. Cho (2012) suggests herself that it might be due to nonlinearity. "Beyond a certain level of autonomy for women, allowing them to migrate, gender discrimination in education and employment plays a crucial role in pushing victims"(Cho, 2012, p.19). This may also explain why being a transition economy made a country nineteen times more likely to be classified in the highest trafficking category by UNODC (2006) (Rao & Presenti, 2012).

3. Data and empirical strategy

In spite of being one of the largest criminal industries in the world, data on trafficking in human beings is scarce. Unlike other illegal activities, like drugs and arms trafficking, not much data is collected on human trafficking. This makes research on the topic difficult. One of the main obstacles has been to find data that can be compared across regions, countries and time. The IOM Counter-Trafficking Module contains data with in-depth information on the characteristics of over 10 000 victims from 130 countries (Cho, 2012) but the dataset is not available for any other than IOM employees and thus we have not seen any analysis of this data. The lack of panel data unfortunately makes it difficult to control for unobserved country and time effects.

Data

Most researchers use the definition on human trafficking from the Palermo protocol, but in spite of this, there are still different understandings of the phenomenon and in some countries data on migrants that are smuggled and data on humans that are trafficked are mixed. Due to different understandings of the term trafficking in human beings I have chosen to use data on trafficking from one source, the United Nations Office on Drugs and Crime (UNODC), to be able to compare countries. The data is taken from the Trafficking in Person Report 2006, which documents trafficking from 127 origin countries to 137 host countries (UNODC, 2006). It is collected from various open sources that registered trafficking between 1996 and 2003. The sources used were individual source institutions, governmental institutions, NGOs, international organisations, research institutes, news agencies and national criminal justice organisations. Research teams registered 4950 accounts of trafficking into the database. The countries were classified on a scale from very low to very high in three categories, origin, transit and destination countries, according to the number of times the country was cited as being an origin, transit or destination country. One reported incident was, no matter how many victims, counted as one incident of trafficking in the database. This reduces the geographical bias (UNODC, 2006). Even though efforts were made to ensure a broad geographical coverage, there is a bias towards developed countries, a large amount of the sources are organizations with a focus on

North America and Western Europe. Another issue is that the research team based the data collection on the definition from the Palermo protocol but the source institutions may have used different definitions, which have led to an overrepresentation of sex trafficking and no account of internal trafficking. In this thesis I only look at data from countries classified as origin countries[2]. The main variable I use is trafficking outflows that takes values from 1 to 5 depending on the amount of trafficking reported out of a country.

Data on gender inequality is easily accessible and I have chosen to use data from the World Bank for the year 2006 as this is the year from which the main variable is taken. The data from the World Bank is a collection of development indicators from officially recognized international sources and is the most up-to-date data on global development (World Bank, 2014). As a proxy for gender inequality female labour force participation, measured as the proportion of the female population over 15 that are part of the labour force, and the share of women in parliament are chosen.

In order to avoid omitted variable bias I include GDP and population as control variables. They are taken from The World Bank and are an average of the World Development Indicators 1996-2003. GDP is measured per capita in 2000 US $. To see if there are other gender variables driving the result I include parental authority, inheritance, polygamy acceptance, freedom of movement, dress code in public, violence against women, son preference, women's access to land, property other than land and loans. These variables are taken from OECDs Gender, Institutions and Development database and cover 121 countries in all regions of the world. These variables are not continuous, which makes it difficult to look at nonlinearity. That is why I do not use these measures as main variables.

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[2] A figure and table of the countries included can be found in the appendix.

Table 1: Summary statistics of the main variables

	Obs	**Mean**	**Std.dev**	**Min**	**Max**
Dependent variable					
Trafficking outflows	159	2.352	1.539	0	5
Main independent variables					
Women in parliament	218	15.72	9.584	0	48.80
Labour participation	214	51.60	15.80	12.70	88.80
Control variables					
GDP	169	8.799	9.291	0.512	51.44
Population	207	28.86	115.6	0.0197	1,256
Parental authority	119	0.403	0.418	0	1
Inheritance	118	0.407	0.539	0	5
Polygamy acceptance	121	0.434	0.403	0	1
Freedom of movement	120	0.150	0.248	0	1
Dresscode in public	121	0.120	0.250	0	1
Violence against women	120	0.577	0.242	0	1
Son preference	120	0.129	0.229	0	1
Women's access to land	119	0.349	0.316	0	1
Women's access to loans	120	0.258	0.290	0	1
Women's access to property	120	0.258	0.290	0	1

Empirical strategy

I perform a cross-sectional study where I use the Ordinary Least Squares (OLS) estimation method. The baseline specification I use is:

$$\text{Trafficking outflows}_i = \beta_0 \text{Labour participation}_i + \beta_1 \text{Women in parliament}_i + \beta_2 X_i + \varepsilon_i$$

Trafficking outflows is the amount of trafficking out of country i, Labour participation is the proportion of women over 15 who take part in the labour force, Women in parliament is the rate of women in parliament, X is a vector of control variables including GDP and population and ε_i is the normally distributed error term.

My hypothesis is that there is a nonlinear relationship between gender equality and human trafficking outflows. To check for this I use this specification:

$$\text{Trafficking outflows}_i = \beta_0 \text{Labour participation}_i + \beta_1 \text{Labour participation}_i^2 + \beta_2 \text{Women in parliament}_i + \beta_3 \text{Women in parliament}_i^2 + \beta_4 X_i + \varepsilon_i$$

As robustness checks I add other gender variables as controls. I also include regional dummy variables to see if some regions drive the result. Finally I check that it is robust when using ordered logistic regression since the main variable takes 1 of 5 values. In all regressions I use robust standard errors.

4. Results

Migration

Before I start looking at how gender equality affects trafficking, I want to check that migration and trafficking are indeed correlated as recent literature suggests. To do this I use data on migration from the World Development Indicators.

Table 2: Correlation between trafficking outflows and emigration

	Trafficking outflows	Emigration	Population	GDP
Trafficking outflows	1			
Emigration	0,32	1		
	(0.00)			
Population	0,21	0,62	1	
	(0.01)	(0.00)		
GDP	-0,6	-0,11	-0,04	1
	(0.00)	(0.30)	(0.61)	

Significance level in parentheses

The result shows a positive correlation between trafficking outflows and emigration. From table 2 we also see that GDP is negatively correlated to both emigration and trafficking outflows and that population is positively correlated to the amount of emigration and trafficking out of a country. This corresponds with the migration literature.

Baseline specification

I go on performing an OLS regression of GDP and population on trafficking outflows.

Table 3: Relation between GDP, population and trafficking outflows

VARIABLES	(1) Trafficking outflows
GDP	-0.0964***
	(0.0102)
Population	0.00207***
	(0.000476)
Constant	3.144***
	(0.136)
Observations	143
R-squared	0.389

Robust standard errors in parentheses
*** p<0.01, ** p<0.05, * p<0.1

From the regression result we see that GDP has a statistically significant negative correlation with the amount of trafficking out of a country and an increase in the size of the population has a statistically significant positive correlation, which seems logical. In countries with high GDP people do not have the same need to migrate and are not as vulnerable to trafficking and in countries with a large population there are more people that can be subjected to trafficking. Since these variables are related to trafficking outflows, they are included as control variables.

The next step is to look for a correlation between the main variables women in parliament, labour participation and trafficking outflows.

Table 4: Correlation between trafficking outflows, women in parliament and labour participation

	Trafficking outflows	Women in parliament	Labour participation
Trafficking outflows	1.00		
Women in parliament	-0.14	1.00	
	(0.09)		
Labour participation	0.12	0.21	1.00
	(0.14)	(0.00)	

Significance level in parentheses

The share of women in parliament is negative and statistically significantly correlated to trafficking outflows. Female labour force participation is positively correlated with

trafficking outflows, but it is not statistically significant. Looking at the data I believe the model to be misspecified and when I test for nonlinearity with a Ramsey Regression Equation Specification Error Test (RESET) test, I can reject the model being linear at the 5% level. The RESET test adds higher powers of the variables to the regression to test whether the regression is linear (Wooldridge, 2010).

Table 5: RESET test of the baseline specification

VARIABLES	(1) Trafficking outflows
Labour participation	0.00629
	(0.00572)
Women in parliament	0.00301
	(0.0114)
Population	0.00207***
	(0.000475)
GDP	-0.101***
	(0.0121)
Constant	2.808***
	(0.345)
Observations	137
R-squared	0.426

Robust standard errors in parentheses
*** p<0.01, ** p<0.05, * p<0.1

Ramsey RESET test using powers of the fitted values of Trafficking outflows

Ho: model has no omitted variables

F(3, 129) =   7.46

Prob > F =   0.0001

Nonlinearity

The results from the RESET test suggest that there are nonlinearities so I add women in parliament and labour participation squared to the model.

Table 6: Nonlinear relation between women in parliament, labour participation and trafficking outflows

VARIABLES	(1) Trafficking outflows	(2) Trafficking outflows	(3) Trafficking outflows	(4) Trafficking outflows	(5) Trafficking outflows
Women in parliament	0.122***		0.118***		0.0898***
	(0.0447)		(0.0305)		(0.0312)
Women in parliament^2	-0.00349***		-0.00268***		-0.00203***
	(0.00107)		(0.000649)		(0.000662)
Labour participation		0.0187		0.111***	0.0867***
		(0.0260)		(0.0266)	(0.0272)
Labour participation^2		-7.43e-05		-0.00101***	-0.000812***
		(0.000247)		(0.000245)	(0.000251)
Population			0.00195***	0.00199***	0.00188***
			(0.000457)	(0.000467)	(0.000451)
GDP			-0.100***	-0.108***	-0.110***
			(0.0105)	(0.0114)	(0.0123)
Constant	1.644***	1.614**	2.215***	0.486	0.440
	(0.389)	(0.619)	(0.306)	(0.651)	(0.603)
Observations	148	151	138	140	137
R-squared	0.102	0.015	0.458	0.463	0.504

Robust standard errors in parentheses
*** p<0.01, ** p<0.05, * p<0.1

Columns 1 and 3 indicate a positive but decreasing relation between women in parliament and trafficking outflows both with and without control variables. Column 2 and 4 indicates a positive but decreasing relation between labour participation and trafficking outflows. The relation is statistically significant when GDP and population are added as control variables. Column 5 shows the complete model and both women in parliament and labour participation have a statistically significant positive and decreasing correlation with trafficking outflows.

Figure 1: Correlation between women in parliament and trafficking outflows
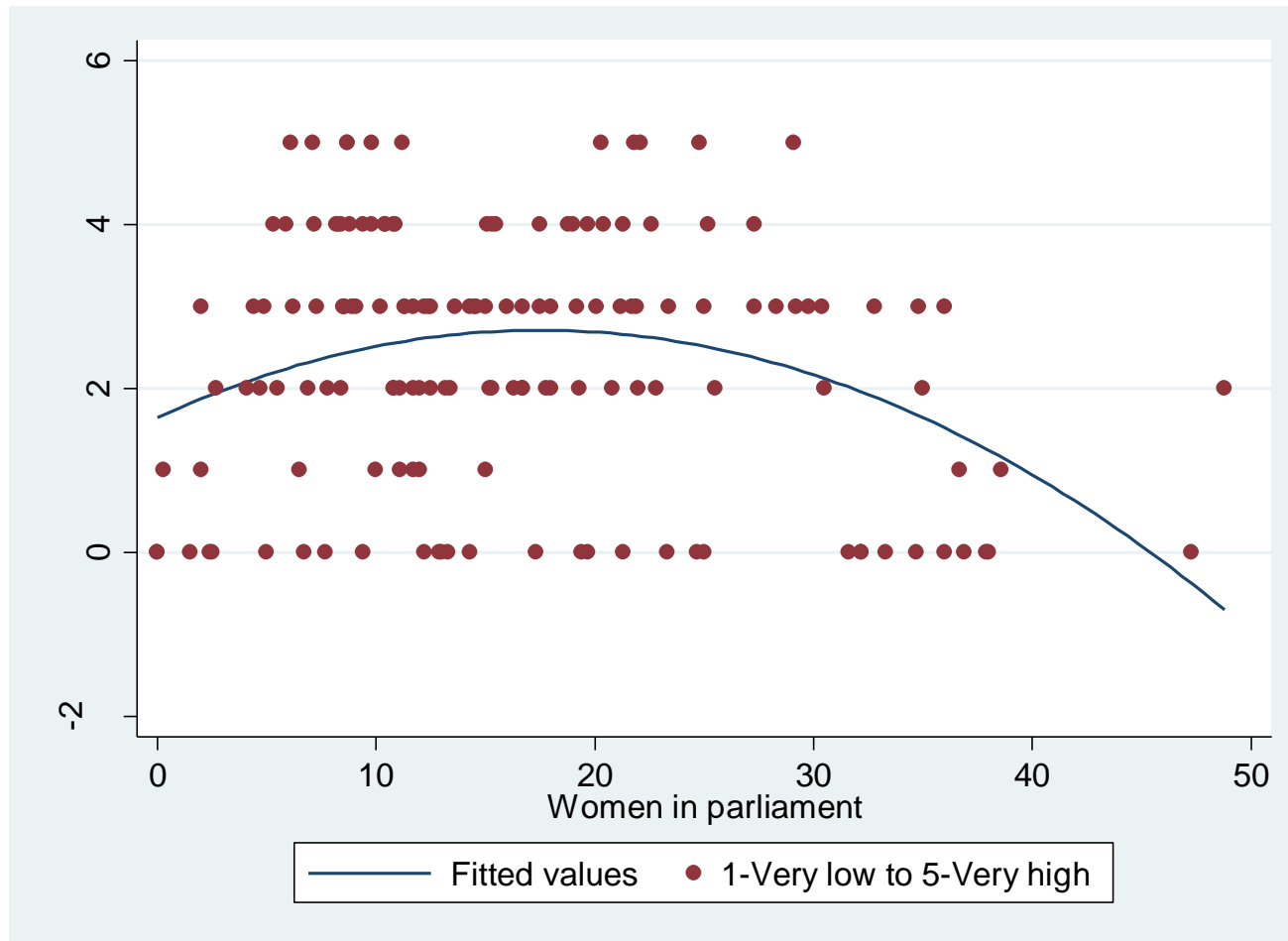
Figure 2: Correlation between labour participation and trafficking outflows
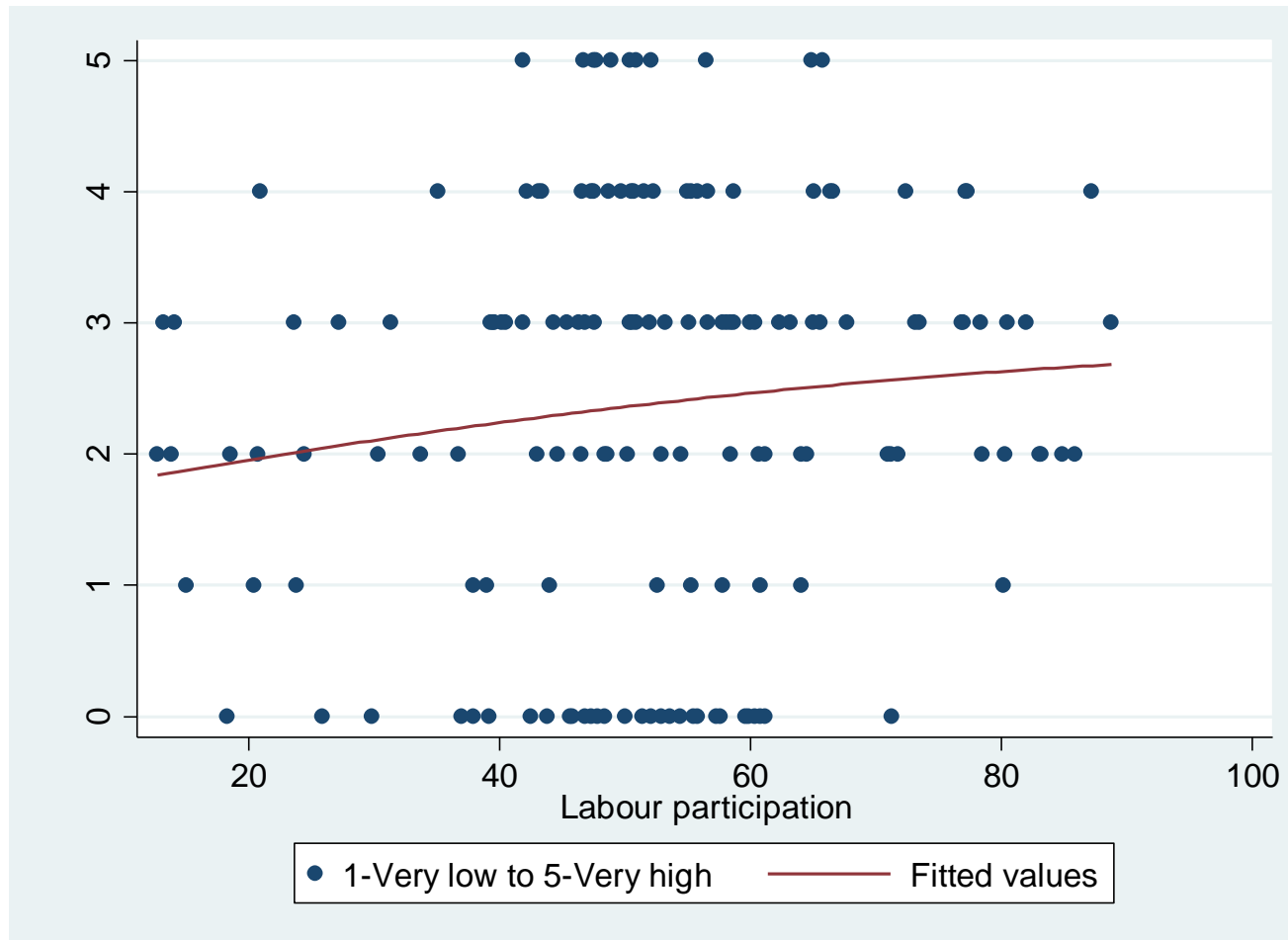
The figures show the correlation between women in parliament, labour participation and trafficking outflows. Without GDP and population as control variables the nonlinear relation between labour participation and trafficking outflows is not clear but from the regression results we see that when population and GDP are added, labour participation has a positive and decreasing correlation with trafficking outflows.

Robustness checks

As control variables I add one by one the gender variables parental authority, inheritance, polygamy acceptance, freedom of movement, dress code in public, legal indicator of violence against women, son preference and women's access to land, property other than land and loans.

Table 7: Parental authority, inheritance, polygamy acceptance, freedom of movement and dress code in public added as control variables

VARIABLES	(1) Trafficking outflows	(2) Trafficking outflows	(3) Trafficking outflows	(4) Trafficking outflows	(5) Trafficking outflows
Labour participation	0.0659**	0.0673**	0.0823***	0.0857***	0.0707**
	(0.0290)	(0.0263)	(0.0286)	(0.0304)	(0.0328)
Labour participation^2	-0.000630**	-0.000668***	-0.000756***	-0.000826***	-0.000726**
	(0.000260)	(0.000245)	(0.000265)	(0.000276)	(0.000287)
Women in parliament	0.0329	0.0793**	0.0609*	0.0617*	0.0461
	(0.0344)	(0.0342)	(0.0334)	(0.0340)	(0.0346)
Women in parliament^2	-0.000946	-0.00176**	-0.00140*	-0.00136*	-0.00110
	(0.000761)	(0.000783)	(0.000744)	(0.000753)	(0.000744)
Population	0.00183***	0.00165***	0.00179***	0.00187***	0.00199***
	(0.000377)	(0.000348)	(0.000366)	(0.000383)	(0.000424)
GDP	-0.124***	-0.127***	-0.121***	-0.114***	-0.117***
	(0.0293)	(0.0313)	(0.0334)	(0.0327)	(0.0322)
Parental authority	-0.986***				
	(0.280)				
Inheritance		-0.523**			
		(0.208)			
Polygamy acceptance			-0.464*		
			(0.262)		
Freedom of movement				-0.497	
				(0.410)	
Dresscode in public					-0.985*
					(0.571)
Constant	1.932**	1.387*	0.970	0.827	1.507
	(0.780)	(0.700)	(0.763)	(0.761)	(0.952)
Observations	96	95	97	97	97
R-squared	0.435	0.415	0.385	0.373	0.385

Robust standard errors in parentheses
*** p<0.01, ** p<0.05, * p<0.1

Table 8: Legal indicator of violence against women, son preference and women's access to land, property other than land and loans added as control variables

VARIABLES	(1) Trafficking outflows	(2) Trafficking outflows	(3) Trafficking outflows	(4) Trafficking outflows	(5) Trafficking outflows
Labour participation	0.0940***	0.0800**	0.0879***	0.0908***	0.0821***
	(0.0279)	(0.0343)	(0.0291)	(0.0284)	(0.0277)
Labour participation^2	-0.000889***	-0.000791**	-0.000815***	-0.000847***	-0.000754***
	(0.000257)	(0.000305)	(0.000269)	(0.000261)	(0.000260)
Women in parliament	0.0620*	0.0603*	0.0564	0.0581	0.0505
	(0.0369)	(0.0349)	(0.0390)	(0.0350)	(0.0352)
Women in parliament^2	-0.00134*	-0.00136*	-0.00125	-0.00128	-0.00118
	(0.000807)	(0.000762)	(0.000860)	(0.000786)	(0.000780)
Population	0.00178***	0.00238***	0.00172***	0.00175***	0.00177***
	(0.000375)	(0.000847)	(0.000358)	(0.000374)	(0.000364)
GDP	-0.120***	-0.114***	-0.128***	-0.141***	-0.131***
	(0.0328)	(0.0325)	(0.0329)	(0.0358)	(0.0320)
Violence against women	-0.199				
	(0.431)				
Son preference		-0.809			
		(0.946)			
Women's access to land			-0.505		
			(0.382)		
Women's access to loans				-0.835**	
				(0.381)	
Women's access to property					-1.004***
					(0.330)
Constant	0.633	1.027	0.880	0.920	1.150
	(0.781)	(0.895)	(0.744)	(0.766)	(0.706)
Observations	97	97	96	97	97
R-squared	0.367	0.374	0.378	0.397	0.411

Robust standard errors in parentheses
*** p<0.01, ** p<0.05, * p<0.1

I do not find that adding the gender variables as control variables alter the result except that women in parliament is no longer statistically significant when some of the control variables are added. The fact that other gender variables do not change the results suggests a strong linkage between labour opportunities for women and women's political participation and human trafficking. The results do not alter when

all the variables are included at the same time either but both labour participation and women in parliament become statistically insignificant[3].

In table 9 I have added 7 regional dummy variables. The regions are Latin America and the Caribbean (LAC), Sub-Saharan Africa (SSA), Europe and Central Asia (ECA), Middle East and North Africa (MENA), East Asia and the Pacific (EAP), North America (NA) and South Asia (SA). Both labour participation and women in parliament continue to have a positive and decreasing correlation with trafficking outflows even though the results from labour participation become statistically insignificant.

In table 10 I exclude the regions one by one and we see that none of the regions drive the result. Both labour participation and women in parliament retain a positive and decreasing correlation with trafficking outflows, although a few of the results become statistically insignificant when certain regions are excluded. That applies for labour participation when the Middle East and North Africa and Sub-Saharan Africa are excluded. When the Middle East and North Africa dummy is excluded, women in parliament also turns out to not have a statistically significant relation to trafficking outflows. This can indicate that the relation between women's labour and political opportunities are especially important in order to avoid trafficking outflows in countries located in the Middle East and North Africa.

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[3] Results from the regression with all the gender variables can be found in the appendix.

Table 9: Regression with all the regional dummy variables

VARIABLES	(1) Trafficking outflows
Labour participation	0.0439
	(0.0309)
Labour participation2	-0.000403
	(0.000275)
Women in parliament	0.0508*
	(0.0300)
Women in parliament2	-0.00124*
	(0.000641)
Population	0.00115***
	(0.000367)
GDP	-0.145***
	(0.0194)
EAP	0.293
	(0.336)
ECA	0.542*
	(0.300)
LAC	-0.790**
	(0.368)
MENA	-0.972**
	(0.396)
NA	2.083***
	(0.604)
SSA	-0.880***
	(0.281)
Constant	2.382***
	(0.827)
Observations	137
R-squared	0.629

Robust standard errors in parentheses
*** p<0.01, ** p<0.05, * p<0.1

Table 10: Regression with the regional dummy variables

VARIABLES	(1) Trafficking outflows	(SA excluded) Trafficking outflows	(ECA excluded) Trafficking outflows	(MENA excluded) Trafficking outflows	(EAP excluded) Trafficking outflows	(SSA excluded) Trafficking outflows	(LAC excluded) Trafficking outflows	(NA excluded) Trafficking outflows
Labour participation	0.0867***	0.0892***	0.0531*	0.0553	0.0884***	0.0471	0.108***	0.0887***
	(0.0272)	(0.0286)	(0.0288)	(0.0387)	(0.0275)	(0.0325)	(0.0287)	(0.0274)
Labour participation2	-0.000812***	-0.000829***	-0.000450*	-0.000573*	-0.000851***	-0.000220	-0.00104***	-0.000841***
	(0.000251)	(0.000262)	(0.000264)	(0.000334)	(0.000254)	(0.000320)	(0.000265)	(0.000253)
Women in parliament	0.0898***	0.0865***	0.0852**	0.0451	0.0901***	0.121***	0.0977***	0.0851***
	(0.0312)	(0.0327)	(0.0334)	(0.0379)	(0.0314)	(0.0381)	(0.0329)	(0.0310)
Women in parliament2	-0.00203***	-0.00196***	-0.00190***	-0.00121	-0.00196***	-0.00301***	-0.00212***	-0.00186***
	(0.000662)	(0.000685)	(0.000720)	(0.000733)	(0.000667)	(0.000893)	(0.000689)	(0.000661)
Population	0.00188***	0.00222***	0.00221***	0.00176***	0.00254*	0.00137***	0.00152***	0.00173***
	(0.000451)	(0.000782)	(0.000476)	(0.000433)	(0.00128)	(0.000401)	(0.000348)	(0.000357)
GDP	-0.110***	-0.108***	-0.0955***	-0.103***	-0.108***	-0.119***	-0.117***	-0.116***
	(0.0123)	(0.0123)	(0.0181)	(0.0129)	(0.0128)	(0.0153)	(0.0133)	(0.0135)
Constant	0.440	0.354	0.798	1.853*	0.367	0.968	0.138	0.483
	(0.603)	(0.624)	(0.615)	(1.107)	(0.612)	(0.667)	(0.629)	(0.603)
Observations	137	132	93	122	124	100	116	135
R-squared	0.504	0.497	0.416	0.484	0.489	0.574	0.580	0.516

Robust standard errors in parentheses
*** p<0.01, ** p<0.05, * p<0.1

When I use ordered logistic regression[4], the results are still statistically significant thus I consider the OLS results to be correct.

Limitations

The results show a clear nonlinear correlation between gender equality and trafficking outflows but we need to be careful not to interpret too much into the results due to the characteristics of the data. Without data from different time periods it is not possible to capture variations over time. As a consequence it is difficult to exclude factors that may have an effect on both gender and trafficking. Another issue is that the data on trafficking outflows is a measure for each country. This is problematic if there are large variations within one country, which is especially likely for large countries. One example would be Nigeria where there is a large amount of trafficking from certain regions as Edo and Delta and much less, or none, from other areas (Carling, 2005). There might be certain characteristics with these regions that are not captured when we look at the country as a whole.

The data is collected by UNODC's GPAT and 40% of the source institutions are located in Western Europe and North America. This may cause a bias towards countries located in these regions and the source countries of trafficked victims that are trafficked to western countries (UNODC, 2006). When I include regional dummy variables to see whether certain regions drive the results it shows that this is not the case.

I argue that the relation between gender equality and human trafficking is nonlinear. If this is incorrect, the specification of the model is wrong and the results may not be correct. One final limitation is that there might be omitted variables. This will always be a problem, but I believe that I have checked for the variables that are most relevant.

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[4] Results from the ordered logistic regression can be found in the appendix.

5. Discussions and Conclusion

In this paper I have explored the nonlinear relation between gender equality and human trafficking outflows. Being aware of the limitations due to data, I still believe there is a strong indication that gender equality is important to consider when anti trafficking policies are set. This thesis has shed light on how important it is not only to focus on host countries but also to address the push factors of migration in the source countries in order to reduce trafficking.

The results from this thesis show a correlation between migration and trafficking which makes it reasonable to make arguments based on the assumption that the push factors of migration also affects trafficking in human beings. The two channels suggested by Mahmoud & Trebesch (2010), which predicts that it is easier to recruit victims at low cost in areas with a lot of emigration and that migrants are more vulnerable than others to trafficking, can explain the connection between migration and trafficking outflows. The migration literature identify poverty as an important push factor of migration and the results in this thesis show that this is also the case for human trafficking. An increased amount of trafficking outflows from poorer countries indicates that trafficked victims seek opportunities abroad to improve their lives.

The nonlinear relationship between the proxies for gender equality and human trafficking outflows indicate that it is in countries where women have some rights but are not seen as equal to men where trafficking is the most prominent. In countries where women have acquired certain rights but do not have the same working opportunities or political power as men, trafficking flows are at its largest. Information obtained through schools, Internet, mass media or migrants returning home is likely to drive the aspiration of migration. When people think that they can improve their lives and maybe even the lives of their family members by moving abroad, it becomes tempting to migrate, legal or not. When women are migrating illegally and in addition are credit constrained, they become especially vulnerable to trafficking.

In contrast to this, women who live in countries where they are largely discriminated are unlikely to be able to migrate and women who have close to equal rights as men do not have the incentive to migrate. In areas where women have few rights, they are less likely to get information about opportunities abroad. If they, in addition, are poor, the availability of information about other areas decreases further. Women's freedom of movement in such areas can be very limited and to a large degree makes them dependent on their families or husbands. This makes migrating alone unlikely and can explain the low levels of trafficking. The low levels of trafficking outflows from countries where women are empowered are probably due to the lack of incentive for women to migrate. When women are empowered they are also more likely to know about the dangers of migrating, which makes them less vulnerable to human trafficking.

As a proxy for gender equality I have used female labour force participation and the share of women in parliament which both are positively but decreasingly related to human trafficking outflows. The lack of career opportunities and few possibilities for political participation encourage women to seek work opportunities abroad. These results confirm Cho (2012)'s argument that better employment opportunities can reduce human trafficking because it makes migrants less vulnerable. The fact that these two gender indicators in particular have an effect on trafficking, suggests that policies should aim at increasing labour opportunities for women and women's possibility to make policy descisions.

Policies to increase female labour force participation can include skills training and wage subsidies as well as child care, electricity and technology to free up women's time and give them capabilities to work. Equality in the household, where both men and women take part in the household duties, is another factor. When there is an increase in the labour opportunities for women, the return on the investment of sending girls to school increases. This may, in addition to having a value in itself, lead to greater awareness of the risks attached to migration. If the lack of labour opportunities for women is indeed a driving force of human trafficking, as this thesis suggests, then policies to create jobs for women should be a large part of policies to combat trafficking.

When women are given power to make decisions they often make different investments than men. These investments are known to be in favour of children and the health and welfare of family members. I find that the share of women in parliament affects human trafficking which suggests that increasing the participation of women in politics should be an aim, not only to reduce gender inequality in general, but also to reduce trafficking. To increase women's participation in politics, quotas have shown to have had a positive effect. Freeing up women's time is also important in order to give women the opportunity to raise their voices.

The availability of credit is connected to trafficking in two ways. First, women are less likely than men to receive credit to invest in their businesses. To enlarge microfinance initiatives and give women easier access to credit may thus create more work opportunities and reduce trafficking. Secondly, the lack of credit also leads migrants into debts with intermediaries, which makes them more vulnerable to trafficking. The solution to this problem is more difficult, but small loans to be able to migrate safely might be a solution.

The lack of labour opportunities combined with information about other countries from mass media can lead to an urge to migrate. But mass media also gives an opportunity to increase awareness of trafficking. Encouraging media to present the risks of migration and the dangers of trafficking may have a reducing effect. Information campaigns are important but it is not in itself enough. If the basic needs of women are not met, knowing the dangers related to migration will not stop women from trying to migrate.

It is important to mention that for low levels of gender equality a small improvement might actually lead to increased risk of trafficking. This does not lead to the conclusion that one should not promote equality. Equality between genders is valuable on its own, and this thesis does not suggest that one at some level should work against it. It rather encourages putting in place policies that raise equality by a large amount. The findings in this thesis also call to mind that policies to reduce human trafficking are especially important in transition economies and in countries where gender equality is improving but still has a way to go.

Research suggestions

Human trafficking is a large field with a lot of research opportunities that cries out for researchers. I would go as far as calling it a shame that we do not have more knowledge about this topic, as more research is crucial in order to abolish modern slavery. When one gets better data it would be interesting to take a closer look at characteristics of the victims, the traffickers and factors that push victims into trafficking. Is it indeed the aspiration for a better life that drives women into migration and then into trafficking? What distinguishes traffickers from intermediaries that facilitate illegal migration? And are the factors that push men and children into trafficking the same as they are for women?

With micro data one can look at internal trafficking which constitutes a large part of the trafficking in the world. Are there certain push factors that are especially prominent when one looks at regions with a lot of trafficking within countries? Are these factors different from the factors that lead to international trafficking? In order to create policies that work well in reducing human trafficking these questions and many more are important to answer.

Policies targeting source countries are important, but that does not mean that one should not in addition focus on the host countries. This thesis has not investigated the demand for trafficked victims in host countries, but there is no doubt that human trafficking would not exist if not for the fact that some people pay for the work of trafficked victims. It is therefore important to continue to have anti trafficking policies in host countries. This includes severe punishment of traffickers and policies that aim at changing norms, making it unacceptable to buy services from people who have been trafficked.

Finally, I want to end my thesis with a call for the collection of better data and for sharing the data collected so that research on this important topic can continue to improve.

6. References

Akee, R. K., & et.al. (2010). Ethnic Fragmentation, Conflict, Displaced Persons and Human Trafficking: An Empirical Analysis. *Discussion Paper No. 5142* .

Aronowitz, A. A. (2001). Smuggling and trafficking in human beings:The Phenomenon, The markets that drive it and the organisations that promote it. *European Journal on Criminal Policy and Research , 2001* (9), pp. 163–195.

Bettio, F., & Nandi, T. K. (2009). Evidence on women trafficked for sexual exploitation: A rights based analysis. *European Journal of Law and Economics (2010) 29:15–42* .

Carling, J. (2005). *Fra Nigeria til Europa Innvandring, menneskesmugling og menneskehandel.* International Peace Research Institute, Oslo (PRIO), Oslo.

Cho, S.-Y. (2012b). Human Trafficking, A Shadow of Migration. Evidence from Germany. *Discussion papers 1246* .

Cho, S.-Y. (2011). Integrating Equality Globalization, Women's Rights, Son Preference and Human Trafficking. *Discussion papers No.73* .

Cho, S.-Y. (2012, February). Modeling for Determinants of Human Trafficking. *Discussion papers No.216* .

Danailova-Trainor, G., & Belser, P. (2006). Globalization and the illicit market for human trafficking: an empirical analysis of supply and demand. *Working Paper No. 78* .

Danailova-Trainor, G., & Laczko, F. (2010). Trafficking in Persons and Development: Towards Greater Policy Coherence . *International Migration , 2010* (48), pp. 38-83.

Europol. (2011). *Trafficking in Human Beings in the European Union.* Europol Public Information, Europol.

Friebel, G., & Guriev, S. (2012). Human Smuggling. *Discussion Paper No. 6350* .

Friebel, G., & Guriev, S. (2006). Smuggling humans: A theory of dept-financed migration. *Journal of the European Economic Association* (Vol 4), pp. 1085-1111.

Hernandez, D., & Rudolph, A. (2011). Modern Day Slavery: What Drives Human Trafficking in Europe? . (No. 97).

ILO. (2005). *A global alliance against forced labour* . Global Report under the Follow-up to the ILO Declaration on Fundamental Principles and Rights at Work 2005 , International Labour Office, Geneva.

Interpol. (n.d.). *www.interpol.int.* Retrieved 01 25, 2014 from Crime-areas/Trafficking-in-human-beings: http://www.interpol.int/Crime-areas/Trafficking-in-human-beings/Trafficking-in-human-beings

IOM. (2011). *Counter Trafficking and Assistance to Vulnerable Migrants.* Annual report of activities, International Organisation for Migration, Geneva.

Jakobsson, N., & Kotsadam, A. (Forthcoming). The Economics of Trafficking for Sexual Exploitation .

Kangaspunta, K. (2003, December). Mapping the inhuman trade: Preliminary findings of the database on trafficking in human beings. *Forum on Crime and Society Vol. 3, Nos. 1 and 2* .

Kelly, E. (2005). You Can Find Anything You Want: A Critical Reflection on Research on Trafficking in Persons within and into Europe. *International Migration* (43(1–2)), pp. 235–65 .

Mahmoud, T. O., & Trebesch, C. (2010). The economics of human trafficking and labour migration: Micro-evidence from Eastern Europe. *Journal of Comparative Economics 38 (2010) 173–188* .

Rao, S., & Presenti, C. (2012). Understanding Human Trafficking Origin: A Cross-Country Empirical Analysis. In *Feminist Economics* (pp. 18:2, 231-263). Feminist Economics Publication details.

United Nations. (2004). United Nations Convention Against Transnational Organized Crime and the Protocols Thereto. Vienna: United Nations Office on Drugs and Crime.

UNODC. (2009). Global Report on Trafficking in Persons - Human Trafficking-A Crime that shames us all. United Nations Office on Drugs and Crime.

UNODC. (2012). Global Report on Trafficking in Persons. *United Nations publication. Sales No. E.13.IV.1.* Vienna: United Nations Office on Drugs and Crime.

UNODC. (2010). *Toolkit to Combat Smuggling of Migrants* . United Nations Office on Drugs and Crime, Vienna.

UNODC. (2006). Trafficking in Persons: Global Patterns. Vienna: United Nations Office on Drugs and Crime.

UNODC. (2009b). *Transnational Trafficking and the Rule of Law in West Africa: A Threat Assessment.* United Nations Office on Drugs and Crime, Vienna.

US. (2011). *Trafficking in Persons Report.* United States of America Department of States.

US. (2013). *Trafficking in persons report.* United States of America Department of States.

Wooldridge, J. M. (2010). *Econometric analysis of cross section and panel data* (Second ed.). Massachusetts: The MIT Press.

World Bank. (2014). *data.worldbank.org*. Retrieved 03 05, 2014 from http://data.worldbank.org/data-catalog/world-development-indicators

World Bank. (2012). *Gender equality and Development.* World Development Report, The World Bank, Washington, DC.

Data sources:

Female labour participation rate:

http://data.worldbank.org/indicator/SL.TLF.CACT.FE.ZS

Women in parliament:

http://data.worldbank.org/indicator/SG.GEN.PARL.ZS

GDP per capita:

http://data.worldbank.org/indicator/NY.GDP.PCAP.CD?page=1

Population:

http://data.worldbank.org/indicator/SP.POP.TOTL

Gender variables:

http://stats.oecd.org/Index.aspx?DatasetCode=GID2

Net migration:

http://data.worldbank.org/indicator/SM.POP.NETM

Appendix

Figure 3: Countries covered in the data collection of UNODC (UNODC, 2009)

Table 11: Description of the variables

	Description	Source
Dependent variable		
Trafficking outflows	The amount of trafficking out of a country (between 1=Very low and 5=very high)	UNODC 2006
Main independent variables		
Women in parliament	Share of women in parliament	World Bank
Labour participation	Proportion of the female population (15+) in the labour force	World Bank
Control variables		
GDP	GDP per capita in thousands. Measured in 2000 US $. WDI 1996-2003	World Bank
Population	Population in thousand. WDI 1996-2003	World Bank
Parental Authority	Parental authority granted to father and mother equally (between 0=yes and 1=no).	OECD
Inheritance	Inheritance practices in favour of male heirs (between 0=no and 1=yes).	OECD
Polygamy acceptance	Acceptance or legality of polygamy (between 0=no and 1=complete acceptance / legality).	OECD
Freedom of movement	Freedom to move freely outside of the house (level of discrimination between 0=none and 1=high).	OECD
Dresscode in public	Obligation to wear a veil in public (level of discrimination between 0=none and 1=high)	OECD
Violence against women	Legal indicator of violence against women (between 0=legislation in place and 1=no legislation	OECD
Son preference	Son preference (missing women) (between 0= no women missing and 1- many women missing)	OECD
Women's access to land	Women's access to land ownership (between 0=full and 1=impossible).	OECD
Women's access to loans	Women's access to bank loans (between 0=full and 1=impossible).	OECD
Women's access to property	Women's rights to own property other than land (between 0=full and 1=no).	OECD
Emigration	Net total of migrants 2009-2013. Only countries with net emigration are included.	World Bank

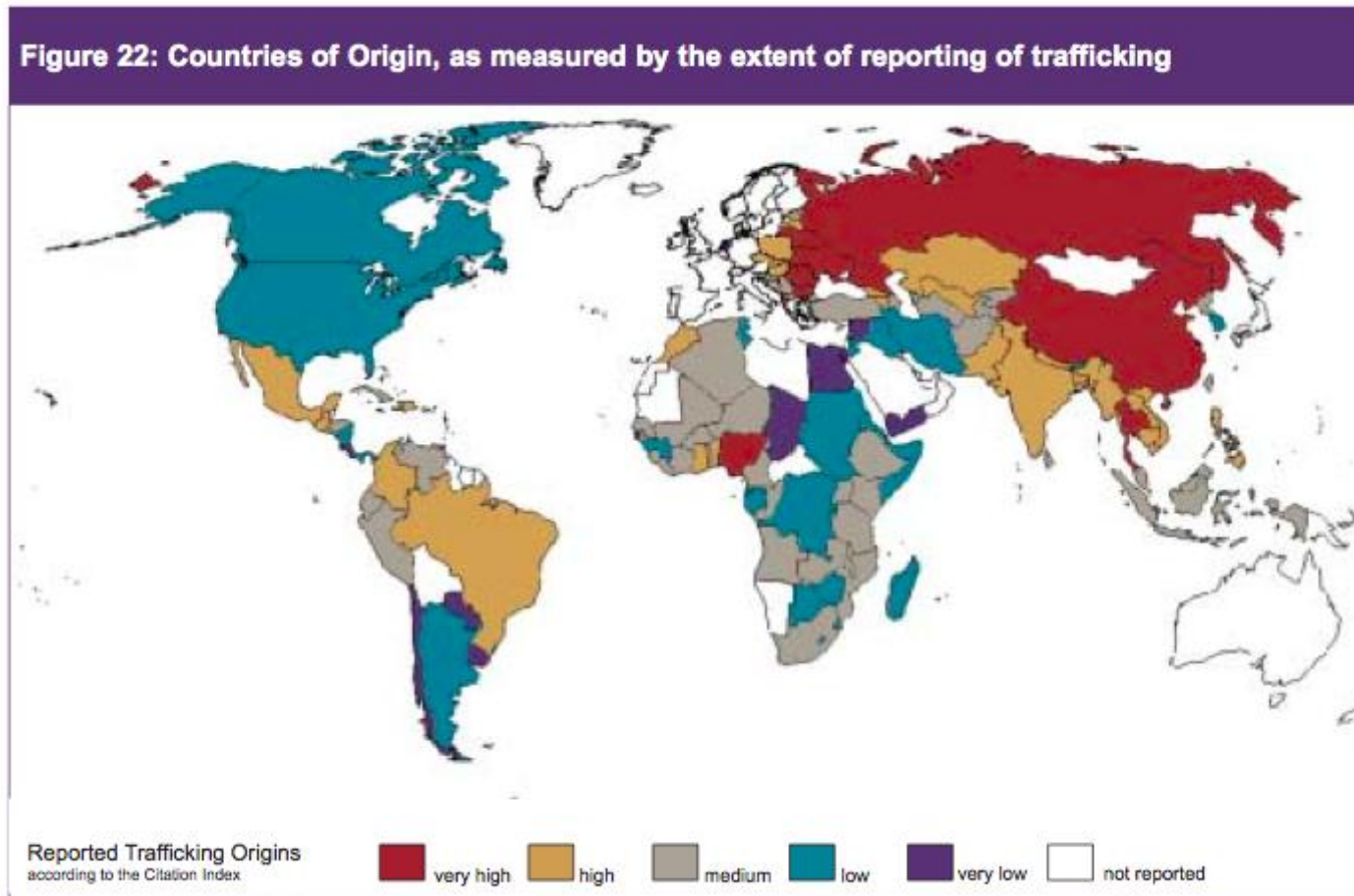*Figure 4: Source countries of human trafficking (UNODC, 2006)*

Figure 22: Countries of Origin, as measured by the extent of reporting of trafficking

Reported Trafficking Origins according to the Citation Index — very high | high | medium | low | very low | not reported

Table 12: UNODC source countries of human trafficking

Very high	High	Medium	Low	Very low
Albania	Armenia	Afghanistan	Argentina	Brunei
Belarus	Bangladesh	Algeria	Bhutan	Darussalam
Bulgaria	Benin	Angola	Botswana	Chad
China	Brazil	Azerbaijan	Burundi	Chile
Lithuania	Cambodia	Bosnia and Herzegovina	Canada	Costa Rica
Nigeria	Colombia	Burkina Faso	Cape Verde	Egypt
Rep of Moldova	Czech Rep	Cameroon	DR Congo	Fiji
Romania	Dominican Rep	Congo	Djibouti	Jamaica
Russian Federation	Estonia	Cote d'Ivoire	Equatorial Guinea	Macao
Thailand	Georgia	Croatia	Eritrea	Netherlands
Ukraine	Ghana	Cuba	Gabon	Paraguay
	Guatemala	Dem People's Rep of Korea	Gambia	Syrian Arab Rep
	Hungary	Ecuador	Guinea	Uruguay
	India	El Salvador	Iran	Yemen
	Kazakhstan	Ethiopia	Iraq	
	Lao People's Dem Rep	Haiti	Jordan	
	Latvia	Honduras	Lebanon	
	Mexico	Hong Kong	Lesotho	
	Morocco	Indonesia	Madagascar	
	Myanmar	Kenya	Maldives	
	Nepal	Kosovo	Nicaragua	
	Pakistan	Kyrgyzstan	Panama	
	Philippines	Liberia	Rwanda	
	Poland	Malawi	Rep of Korea	
	Slovakia	Malaysia	Somalia	
	Uzbekistan	Mali	Sudan	
	Vietnam	Mozambique	Swaziland	
		Niger	Tunisia	
		Peru	US of America	
		Senegal	Zimbabwe	
		Serbia and Montenegro		
		Sierra Leone		
		Singapore		
		Slovenia		
		South Africa		
		Sri Lanka		
		Macedonia		
		Taiwan		
		Tajikistan		
		Togo		
		Turkey		
		Turkmenistan		
		Uganda		
		United Rep of Tanzania		
		Venezuela		
		Zambia		

Table 13: Regression with the gender variables

VARIABLES	(1) Trafficking outflows
Labour participation	0.0504
	(0.0330)
Labour participation^2	-0.000530*
	(0.000290)
Women in parliament	0.0415
	(0.0447)
Women in parliament^2	-0.00117
	(0.000958)
Population	0.00175**
	(0.000808)
GDP	-0.135***
	(0.0388)
Parental authority	-0.952**
	(0.372)
Inheritance	-0.371**
	(0.166)
Polygamy acceptance	0.150
	(0.325)
Freedom of movement	0.558
	(0.570)
Dresscode in public	-0.544
	(0.609)
Violence against women	-0.0576
	(0.459)
Son preference	0.0741
	(0.954)
Women`s access to land	0.671
	(0.536)
Women`s access to loans	-0.268
	(0.454)
Women`s access to property	-0.611
	(0.472)
Constant	2.523**
	(1.040)
Observations	93
R-squared	0.486

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

Table 14: Ordered logistic model

VARIABLES	(1) Trafficking outflows
Labour participation	0.140***
	(0.0488)
Labour participation^2	-0.00132***
	(0.000461)
Women in parliament	0.132**
	(0.0604)
Women in parliament^2	-0.00300**
	(0.00141)
Population	0.00413**
	(0.00189)
GDP	-0.193***
	(0.0277)
cut1	
Constant	0.876
	(1.126)
cut2	
Constant	1.674
	(1.113)
cut3	
Constant	3.064***
	(1.141)
cut4	
Constant	4.645***
	(1.185)
cut5	
Constant	6.291***
	(1.234)
Observations	137

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