Cho, Seo-young

Working Paper

Liberal coercion? Prostitution, human trafficking and policy

MAGKS Joint Discussion Paper Series in Economics, No. 44-2013

Provided in Cooperation with:

Faculty of Business Administration and Economics, University of Marburg

This Version is available at:
http://hdl.handle.net/10419/93495

No. 44-2013

Seo-Young Cho

**Liberal Coercion?
- Prostitution, Human Trafficking and Policy**

Liberal Coercion?
- Prostitution, Human Trafficking and Policy

Seo-Young Cho*

(Philipps-University of Marburg)

2013

Abstract:

Liberal prostitution policy aims at improving labour conditions for prostitutes and protecting victims of forced prostitution. Its policy orientation predicts that the policy choice of liberalizing prostitution is positively associated with better protection policy for trafficking victims and enhanced anti-trafficking measures. In this paper, I investigate empirically whether the legalization of prostitution improves protection policy for victims, as it is presumed. The results of my analysis ó using data from 149 countries for the period of 2001-2011 ó suggest that the liberalisation of prostitution does not lead to better protection and, in some cases, legalized prostitution can be detrimental to protecting victims of human trafficking.

Keywords: prostitution, victim protection, human trafficking, anti-trafficking policy

JEL Codes: J15, J16, K14, K37

---

* Chair of Empirical Institutional Economics, Faculty of Economics, Philipps-University of Marburg. Barfuessertor 2, D-35037, Marburg, Germany. Tel. 49 (0)6421-28-23996. Email: seo.cho@wiwi.uni-marburg.de

1. Introduction

Prostitution is often said to be one of the oldest occupations. However, in many countries, prostitution is prohibited for moral, public health and order reasons. Even in countries where prostitution is allowed ó such as Germany, the justifications for the legalization and the effects of liberalized prostitution still feature in public debates.

There are two main conflicting views on dealing with the question, *whether or not prostitution should be allowed*. First, abolitionists, who share their view with radical feminism, argue that prostitution is intrinsically exploitative and violates womenøs rights. Therefore, they support the prohibition of all forms of prostitution. On the other hand, there exist proponents of the legalization of prostitution whose view has originated from liberal feminism. They consider prostitution as a free choice of employment for women (and men as well to some extent) and legalization as an effective way to improve labor conditions for sex workers. The two positions also differ in dealing with the problem of forced prostitution and human trafficking (in this paper, I use both terms simultaneously, as they generally refer to the same problem as far as the focus of this paper is concerned). The former argues that the purchase of commercial sex should be criminalized in order to combat human trafficking, while the latter separates the problem from prostitution as such and proposes to fight human trafficking by implementing anti-trafficking measures, while allowing prostitution in general.

In fact, for the liberal position, reducing the problem of forced prostitution is central to the success of the policy because the liberal prostitution regime aims at improving working conditions and providing protection for prostitutes (Outshoorn 2005). On the other hand, the liberal prostitution regime is often criticized as liberating the demand for commercial sex and prostitution business only, rather than improving the working conditions of prostitutes themselves, despite advocating free choice of occupation for prostitutes (Raymond 2004). Furthermore, several recent empirical studies (for instance, Cho et al. 2013 and Jakobsson and Kotsadam 2013) suggest evidence that legalized prostitution creates a side effect inducing greater human trafficking flows into the country. Among them, Cho et al. (2013) point out that legalization tends to expand prostitution markets, possibly by de-stigmatizing demand. At the same time, the enlarged markets may also scale up the magnitudes of human trafficking inflows, if increasing demand is not met by proportionally increasing voluntary supply of

prostitution ó which potentially is the case in many developed countries where women have other employment opportunities other than prostitution. In this case, implementing stronger efforts that aim at protecting victims and fighting trafficking becomes more crucial to the liberal prostitution regime to avoid exacerbate forced prostitution.

In this paper, I investigate the policy linkage between liberalised prostitution and victim protection by setting a question, *whether or not the liberal prostitution regime leads to better protection for victims of human trafficking*. In fact, this question is not just a normative one but involves political economy issues in implementing victim protection policy. This is because the majority of victims of forced prostitution represent not only vulnerable populations but also irregular migrants from the developing world, making the implementation of the policy politically unpopular and tricky.

My empirical analysis using a global sample of data from 149 countries for the period of 2001-2011 shows that the liberal prostitution regime is at best irrelevant to victim protection, if not negative ó the negative effect found in some cases, contradicting its prescribed policy mandate. Instead, victim protection is a function of general institutional quality and gender empowerment, as well as the endogenous effect driven by the severity of the crime. On the other hand, the presence of migrant populations in a country has a negative effect on victim protection, suggesting that policy makers are reluctant to grant protection to victims of human trafficking when many migrants already exist in the country. This negative effect of migration implicates a plausible explanation as to why the policy mandate of better labour protection for victims, advocated by the liberal policy, is not fulfilled.

My paper continues in the following structure. In section 2, I discuss the liberal and abolitionist positions on the legality of prostitution in more detail. Section 3 presents the research design, including the model of victim protection, data and identification strategy. Section 4 follows with results and section 5 concludes the paper.

2. Debates on Prostitution and Human Trafficking

Human trafficking has often been discussed in the context of prostitution, as it is initially defined as transferring women (or persons) for the purpose of sexual exploitation (see the

United Nations Convention for the Suppression of the Traffic in Persons and of the Exploitation of the Prostitution of Others, 1949). Therefore, in policy debates on whether or not prostitution should be allowed, human trafficking poses a crucial question, *is human trafficking an inevitable consequence of prostitution?* Answering this question involves not only how to define victims of human trafficking but also how to view prostitutes in general. In this regard, two deeply divided positions debate and suggest different policy proposals on prostitution and human trafficking.

First, radical feminism views prostitution as a form of oppression against women. The proponents of this position argue that prostitution itself is a sexual slavery and prostitutes are victims of such sexual violence (Hughes and Roche 1999). Therefore, they do not distinguish prostitution from forced prostitution or human trafficking because, in their view, prostitution is always forced by its nature and no truly voluntary prostitution exists (Outshoorn 2005). In other words, the concept of forced prostitution is a redundancy of prostitution per se. Accordingly, radical feminists support the abolition of prostitution as the best way to protect women and fight human trafficking. In addition, they predict that legalizing prostitution will increase the demand for commercial sex and the consequent extension of prostitution markets induces more human trafficking.

On the other hand, liberal feminism opposes this view. Proponents of liberal feminism consider prostitution as a free choice of employment for women and consequently, prostitution as a legitimate occupation (Chapkis 1997). In their view, women should be allowed to be sexually active and/or support themselves financially through prostitution. According to the liberal position, prostitutes are sex workers but not victims. Liberal feminists acknowledge that the problem of human trafficking and forced prostitution exists but they distinguish it from voluntary prostitution. In other words, they argue that prostitution is not a problem but human trafficking/forced prostitution is. Accordingly, proponents of this position propose to legalize prostitution as the best way to improve labour conditions for prostitutes. In regards to human trafficking, they suggest taking separate measures under criminal law and implementing victim protection and anti-trafficking measures actions (Outshoorn 2005).

As discussed above, the two positions propose two opposing policy solutions in dealing with prostitution and human trafficking. The radical position supports the prohibition of prostitution

as the best way to reduce human trafficking, while the liberal position focuses on strengthening anti-trafficking measures instead of criminalizing prostitution as a whole.

Essentially these positions relate to their proponent's views on the standing of women in society and sexual morality: sex domination and victimization for the former vs. sex work for the latter. However, the discussions become more complicated when one takes into account the foreignization of prostitution, i.e. foreign prostitutes from developing countries dominate the supply of prostitution services in the developed world. Indeed, the foreignization of prostitution has become a widespread phenomenon in the West for the last several decades, alongside increasing international migration and income disparity across countries, as well as growing sexual liberalism in the western world (Truong 1990).

This observation on the foreign majority of prostitutes links the debates of prostitution and human trafficking with migration. The radical position of abolitionists may still remain consistent with its argument because its policy proposal is basically to criminalize (demand for) prostitution and consider all women in prostitution as victims. However, the phenomenon of foreign prostitutes is likely to challenge the liberal position by questioning whether its arguments supporting labour rights of prostitutes are still valid, given that the majority of prostitutes do not hold legal status ó as they are irregular immigrants ó and therefore are not eligible to be granted such rights under the immigration laws of most countries, regardless of the legality of prostitution.

With this respect, the fact that the majority of trafficking victims are foreign migrants further complicates the issues of strengthening victim protection. On the one hand, victim protection is an important policy objective for the liberal policy. This objective will become a more serious issue if the liberalization of prostitution does not increase the provision of voluntary prostitution services, and instead an increased demand for prostitution is filled by forced prostitution, exacerbating the problem of human trafficking as has been highlighted by several empirical studies. In this case, victim protection becomes central to the success of the liberal prostitution policy, given that improving labour conditions for prostitutes and protecting them from forced prostitution is its policy mandate. On the other hand, such protection and assistance for victims ó who are mostly irregular migrants ó may create political economy problems in pursuing the policy because granting amnesty and providing support for illegal

migrants might be an unpopular policy stance for politicians and, furthermore, can be seen as a lenient migration policy which, in turn, likely induces further illicit migration flows into the country (Simmons and Lloyd 2010).

3. Research Design

3.1. Modelling for Victim Protection

What leads to better protection for victims of human trafficking? To model my empirical analysis on this question, I propose five dimensions which are arguably crucial to determining the level of protection policy for trafficking victims.

Firstly, prostitution policy poses a central question here. Human trafficking is closely linked to prostitution because exploiting women for the purpose of prostitution is the most common form of human trafficking and this form of forced prostitution constitutes the largest fraction of trafficking victims. Likewise, the legality of prostitution not only affects the shape of prostitution markets but also the prevalence of human trafficking (Jakobsson and Kotsadam 2011). Indeed, empirical evidence indicates that liberal prostitution law induces greater human trafficking inflows because the scale effect expanding (forced) prostitution markets dominates the substitution effect replacing forced prostitution with voluntary one upon legalization, as discussed above. In addition to the empirical findings, the theoretical prediction proposed by the opponents of prostitution (=sex dominationø position) suggests that legalized prostitution is positively associated with human trafficking because prostitution is, arguably, a cause of human trafficking given its exploitative nature (Hughes and Roche 1999). On the other hand, the proponents of the legalization of prostitution (=sex workø position) have a different view on this issue. They support prostitution as a free choice of occupation and separate voluntary prostitution ó which is not a problem in their view ó from a forced one ó a criminal act (Outshoorn 2005). As discussed in section 2, these two opposite positions lead to different policy implications regarding human trafficking. The sex domination position suggests that the prohibition of prostitution itself is a key policy instrument against human trafficking, while the sex work position aims at strengthening anti-trafficking measures and victim protection in order to improve labour conditions for prostitutes, as shown in the development of the EU Anti-trafficking Convention (Outshoorn 2005).

Secondly, institutional factors most likely shape protection and anti-trafficking policy. The institutional dimension includes not only political but also economic institutions; the former concerns political commitments pursuing the policy and the latter the resources necessary for policy adoption and implementation. The influence of existing institutions is particularly important to anti-trafficking policy-making, because it is a new policy arena requiring a high level of awareness and commitment to designing and pursuing the policy (Cho and Vadlamannati 2012; Simmons and Lloyd 2010). With this regard, engagement in the international institution against human trafficking is also crucial, given that the international anti-trafficking framework provides the new definition of human trafficking and guides required policy measures and standards (see the United Nations Protocol to Prevent, Suppress and Punish Trafficking in Persons, especially Women and Children 2000, hereinafter the Anti-trafficking Protocol).

Thirdly, the dimension of gender equality is a likely to influence the policy choice of victim protection. Human trafficking is originally defined as the forced transfer of women for the purpose of forced prostitution (United Nations 1949), thus the gender aspect of human trafficking is inherent. Even if expanding the spheres of human trafficking into forced labour and labour exploitation delinking the explicitly designated gendered definition from human trafficking, the gender aspect remains, as victims of human trafficking are dominantly women and girls exploited for sexual purposes (IOM 2010). Several recent studies document empirical evidence that women's empowerment can be a driving force for better protection of trafficking victims (Bartilow 2010; Cho et al. forthcoming), possibly because female policy-makers and their constituents tend to support policies related to women's well-beings and feminized issues (Chattopadhyay and Duflo 2004). However, the impact of women's empowerment on victim protection may not be straightforward, given that the majority of victims are foreign female migrants who do not have political voice in the country where they are trafficked into and it may not be always the case that domestic women care about the well-being of foreign migrants in the same manner as they do for their own people.

Forth is the dimension of migration. Human trafficking often involves international border-crossing and transferring of migrants for the purpose of exploitation, although internal trafficking also exists. According to the IOM (2010), most victims of human trafficking are

initially migrants having fallen into trafficking during their journey to the destination country. Thus, determinants of migration often overlap with factors triggering human trafficking (Mahmoud and Trebesch 2010). With this in mind, it is reasonable to conjecture that migration affects the policy-choice of anti-trafficking. On the one hand, the existence of migrants in a destination country may affect anti-trafficking policy positively, assuming that migrants are empowered and therefore vocalize their voice in politics in their new country. On the other hand, migration may also have a negative effect on anti-trafficking policy, if local constituents are afraid of growing migrant communities in their own country and speculate that better protection for victims of human trafficking will induce more migration flows into the country.

Finally, there is the dimension of crime. The choice of crime policy is endogenous to the prevalence of the crime. It leads to the prediction that the higher the prevalence of human trafficking incidences, the stricter anti-trafficking policy is enforced. In other words, the more victims of human trafficking exist the better protection policy will be presumably implemented.

3.2. Data

The main independent variable of interest is the legality of prostitution. Following Cho et al. (2013), I construct a dummy variable of prostitution law, indicating whether or not prostitution is allowed in a country for a given year (1 being legalized prostitution and 0 otherwise). Different from Cho et al. (2013) taking the average values of the period of 1995-2003 for a cross-sectional analysis, I exploit annual variations in prostitution law from 2001 to 2011 for a panel analysis. Taking into account that the prostitution law variable is serially correlated, I further employ average values of the period of 2001-2011 and use the cross-country variations for a cross-sectional analysis in order to check for the robustness of the results. The informational sources of the prostitution law data are the Country Report on Human Rights Practice (United States Department of State 2001-2011).

The main dependent variable is the level of protection policy for trafficking victims, data taken from the 3P Anti-trafficking Policy Index (Cho et al. forthcoming). The utilization of the 3P Index has several advantages. First, the 3P Index is the only available quantitative measurement evaluating victim protection policy specifically. There exist other measurement tools of anti-trafficking policy such as the US tier-ranking (United States Department of State 2001-2013),

however the tier-ranking provides quantitative evaluation on overall anti-trafficking policy not distinguishing protection from other dimensions of anti-trafficking measures such as prevention and prosecution. Indeed, distinguishing the three dimensions of anti-trafficking policy (protection, prevention and prosecution) is important because they cover different policy objectives ó human rights, crime prevention and criminal justice, respectively ó and their policy goals may conflict each other, particularly protection ensuring the human rights of victims vs. the other two policies aiming at the reduction of human trafficking (Simmons and Lloyd 2010). In addition to that, the 3P Index includes a large number of countries (max. 185) since 2000 with annual variations, making time-series cross country analysis possible.

The protection sub-index of the 3P Index assesses governmental efforts in granting amnesty and providing assistance for victims of human trafficking. In doing so, the implementation of nine policy instruments ó as prescribed by the Anti-trafficking Protocol (2000) ó is taken into account. They are namely (i) no punishment of victims for the act related to their situations being trafficked; (ii) no self-identification required in order to prove their status as a victim; (iii) assistance for legal proceedings; (iv) the provision of residence permits; (v) housing services; (vi) medical care; (vii) job training; (viii) assistance for rehabilitation; and (vi) assistance for repatriation (see Cho et al. forthcoming). No punishment principle (for the violation of immigration law, for instance) is the most important requirement with a special weight, based on its emphasis in the Anti-trafficking Protocol. Policy performance is evaluated on a five-point scale, five being full compliance and one no compliance. Detailed information on the scores of the protection policy index is provided in appendix 1.

In addition to protection, the sub-dimensions of the 3P Index measuring prosecution and prevention policies are further employed as alternative measurements of the dependent variable. The former evaluates the policy adoption and enforcement punishing perpetrators of human trafficking and the latter preventive policy actions against human trafficking including public awareness programs, border control and training of governmental officials as well as policy coordination and collaboration. Alongside the protection index, these two indices have a five-point scale, the highest score being best and the lowest worst.

3.3. Empirical Strategy

The main estimation is based on time-series cross-country data from up to 149 countries for the period of 2001-2011. The sample includes as many countries as possible given the data availability of the protection index and prostitution law. The baseline model takes the following form:

$$y_{it} = \ + \ Prostitution_{it} + \ X_{it} + \ Z_i + t + u_{it} \qquad (1)$$

The dependent variable, *y*, represents the level of protection policy measured by the 3P Index, while *Prostitution*, the main independent variable of interest, is a dummy variable indicating whether prostitution is legal in country i given year t. Alternatively, the dependent variable is the policy levels of prevention and prosecution, respectively. The model is non-linear because the dependent variable has an ordinal structure of a five-point scale.

X is a vector of determinants of victim protection policy, consisting of the dimensions of institution, migration, gender and crime, as discussed in section 2. The institutional factors include income (economic factor), (control of) corruption, democracy (political factors) and the membership of the Anti-trafficking Protocol (international factor). The gender dimension is proxied with female labour force participation rates reflecting women's economic empowerment and professional engagement in society. The migration dimension is measured by the share of migrants in total populations. For the crime dimension, the levels of human trafficking in- and outflows are taken into account. The data sources and descriptive statistics are provided in appendices 2 and 3.

Vector Z includes time-invariant variables reflecting cultural factors which may influence the level of protection policy. These variables are included particularly because controlling for time-invariant effects by country-fixed effects may cause incidental parameter problems and result in biased estimations in a non-linear model (Lancaster 2000). Thus, instead of country-fixed effects, I include as many time-invariant variables as possible in order to address country heterogeneity. Accordingly, Z consists of regional dummies, share of major religions in total populations (Christian, Buddhist and Muslim) and legal origin variables, following Potrafke

(2013). Again, detailed information on these variables can be found in appendices 2 and 3. Finally, t is year-dummies reflecting time effects and u is an idiosyncratic error term.

Assuming that the impact of the legal standing of prostitution may not be contemporary, I lag the prostitution law variable for one year, in order to capture any delayed effects of prostitution policy on protection (and prosecution and prevention). In this case, the model takes the form below:

$$y_{it} = \ + \ \text{Prostitution}_{it-1} + \ X_{it} + \ Z_i + t + u_{it} \quad (2)$$

Additionally, a cross-sectional analysis taking average values of the variables between 2001 and 2011 is conducted as check for robustness, given that variations across countries dominate variations across time in the independent variable of interest, *prostitution*. However, time-series analysis is more appropriate because time effects influence the dependent variable. The cross-sectional model takes the following equation:

$$y_i = \ + \ \text{Prostitution}_i + \ X_{it} + \ Z_i + u_{it} \quad (3)$$

Given that the dependent variable has an ordinal structure (score 1 -5), the model is estimated using ordered logit with time-fixed effects for the panel analysis. However, country-specific fixed effects capturing time-invariant country characteristics are not controlled for ó besides the variables included in vector Z ó because of the incidental parameter problem, mentioned above. I will further discuss this issue and conduct additional analysis in the following sections. For the cross-sectional analysis, the dependent variable no longer has an ordinal structure by averaging values of the period of investigation and thus, OLS estimation is employed. Both in panel and cross-sectional analyses, robust standard errors are applied correcting for heteroscedasticity.

3.4. Endogeneity Concern

The baseline model above includes as many time-varying and time-invariant determinants of protection policy as possible, however the model may still be subject to omitted variable biases, as literature suggests (for instance, Fajnzylber et al. 2002). In order to address effects driven by

non-included variables, I first employ country-fixed effects estimation capturing unobserved, time-invariant effects ó mainly cultural factors in this case ó that may affect protection policy. As discussed above, the inclusion of country-fixed effects in an ordinal model leads to the incidental parameter problem resulting in biased estimation. With this in mind, I employ the Blow Up and Cluster (BUC) ordered logit two-way fixed effects estimator (Baetschmann et al. 2011), which is the method specifically designed to reduce such biases.

The BUC estimator is a modification of Das and van Soestøs (1999) method that takes advantage of the fact that dichotomizing and estimating at every possible common cutoff point (for instance, k=1,...,5 for the protection policy score) provides a consistent estimate of . Following the method proposed by Chamberlain (1980), one can perform conditional maximum likelihood (CML) estimation on all possible K-1 dichotimizations given the consistency of   (see equation i) and then combine the all possible resulting estimates and weighted by the inverse of the variance in a second step (Baetschmann et al. 2011) .

$$\wedge^{DvsS} = \arg\min_{b} (\ ^{\wedge 2^{\prime}} - b^{\prime}, í\ ..,\ ^{\wedge k^{\prime}} - b^{\prime})\ ^{-1}(\ ^{\wedge 2^{\prime}} - b^{\prime}, í\ ..,\ ^{\wedge k^{\prime}} - b^{\prime})^{\prime} \qquad (4)$$

However, Chamberlainøs method is often criticized to be imprecise under a small number of observations for some ordinal categories. To reduce this problem, Baetschmann at al. (2011) modify the estimator by estimating all dichotomizations jointly, instead of the two-step approach for combining all possible dichotomitations used by Das and van Soest (1999). The resulting BUC estimator replaces every observation in the sample by K-1 copies of itself, and dichotomizes every K-1 copy of the individual at a different cutoff point. Afterward, CML logit is estimated using the entire sample and clustering at the individual level to correct standard errors. The results of Monte Carlo simulations show that this approach dichotomizing and estimating at every possible cut-off is more consistent than any other alternatives such as Ferrer-i-Carbonell and Frijters (2004) (Baetschmann et al. 2011).

Secondly, besides the effects of unobserved, time-invariant variables addressed above, there might still be omitted variable biases caused by the exclusion of time-varying explanatory variables ó for instance, social development factors reflecting public awareness and attitudes towards liberalism. Taking this issue into account, I make use of instruments in order to minimize the (potential) biases. In doing so, I first exploit internal instruments by using the

system-GMM estimator developed in Arellano and Bover (1995) and Blundell and Bond (1998). This method has several advantages. It addresses not only the potential endogeneity of explanatory variables but also the effects of the lagged dependent variable and country-fixed effects. In this model, prostitution law, ratification and migration variables together with the lagged dependent variable are treated as endogenous and others as exogenous. To test for the validity of the instruments, the Hansen test on the exogeneity of the covariates is applied. The Arellano-Bond test of second order autocorrelation (which must be absent from the data) is also conducted in order to test on the consistent estimator. The results of the Hansen test and the Arellano-Bond test do not reject the specification at conventional levels (see table 5). The results of the GMM estimation are produced based on the two-step estimator developed by Roodman (2005) in Stata, including Windmeijerøs (2005) finite sample correction. The numbers of instruments are sufficiently smaller than the number of countries included in the observations, minimizing weak instrument problems (Roodman 2007).[1]

In addition to the system-GMM estimation, I also use an external instrument and conduct an ordered logit instrumental variable estimation. This approach supplements the GMM method that assumes the linearity of the model, which may not be best suited for the ordinal model with five categories. My choice of the external instrument is the abortion index, data taken from the United Nations (2007). This is an index with eight categories measuring the level of freedom for abortion (score 7 indicates that abortion is fully allowed and score 0 that abortion is fully prohibited). The justification for the selection of this instrument is that abortion policy reflects the level of liberalism particularly in the spheres of private and sex life, arguably sharing the institutional attitudes with prostitution policy. On the other hand, there is no reason to speculate that abortion policy may have a direct effect on protection policy for victims of human trafficking. Appendix 4 shows the results of the first stage regression on the explanatory power of the instrument as well as the test for the exclusion restriction, supporting the validity of the chosen instrument.[2] The first stage is estimated by a probit method taking into account that the prostitution law variable has a binary structure. In the second-stage (see table 5), ordered logit estimation is implemented by using the predicted value obtained from

---

[1] The matrix of instruments is collapsed in order to reduce the number of instruments for the efficiency.

[2] However, the Cragg-Donald first-stage F-test (Cragg and Donald 1993; Stock et al. 2002), which was additionally conducted by using the 2SLS method, fails to reject the null-hypothesis of weak instrument. It could be because of the linear assumption of the 2SLS approach. On the other hand, it may also suggest that abortion policy explains prostitution policy only to a limited extent. Given that alternative instruments are difficult to get by, I use this choice of instrument as an additional check for the results of the GMM method.

the first-stage and the results are replicated by bootstrapping and standard errors are corrected (Wooldridge 2011).

4. Results

4.1. Prostitution Law and Protection Policy Worldwide

Table 1 shows the distribution of the legal standing of prostitution, as well as protection policy performance in the world in 2010. Countries that prohibit prostitution by law (55.5%) slightly dominate countries where prostitution ó either self-employed or employed in brothels ó is legal (44.5%). Regarding the policy performance protecting victims of human trafficking, the mean score is 2.92 on the five-point scale, indicating (close to) the 'modest' level of policy performance. Specifically, about a third of the countries in the sample demonstrate the full or adequate level of compliance ó granting amnesty for trafficking victims for the violation of law due to their situations being trafficked and providing proper assistance. Another one third of the countries exercise some policy efforts to protect victims but do not ensure the principle of 'no punishment' for victims and their assistance efforts are modest, therefore received policy score 3. The last group of countries which take about 35% of the whole sample do not implement proper policy actions for victims (policy score 1 or 2). For detailed information about the protection policy scores, see appendix 1.

4.2. Baseline Results

The baseline estimation is conducted by the ordered logit panel analysis with time-fixed effects (see table 2). In this baseline model, country-fixed effects are not included due to the incidental parameter problem (Lancaster 2000). Instead, several time-invariant variables are controlled for in order to capture country characteristics and cultural factors which may affect the policy performance of victim protection. They are, namely, regional dummies, share of religions (Christian, Buddhist and Muslim) and legal origins (British, French, German, Scandinavian and Socialist). The main independent variable of interest is the prostitution law dummy indicating whether or not prostitution is legal. The other explanatory variables include income, institutional quality (control of corruption and democracy), international institution (ratification of the Anti-trafficking Protocol), gender (female labor force participation rate), migration

14

(share of migrants in total populations) and crime (in-/outflows of human trafficking), as discussed above (see section 3.1). For the prostitution law variable, both the contemporary (columns 1 and 3) and one-year lagged values (columns 2 and 4) are employed, the latter capturing delayed effects driven from prostitution policy towards protection, if any. Columns (1) and (2) show the results without controlling for time-invariant country characteristics and columns (3) and (4) are those with regional, religion and legal origin variables. Additionally, column (5) presents the results of the cross-sectional analysis without time dimensions.

The results indicate that legalized prostitution does not lead to any improvement in protection policy. Without controlling for the time-invariant effects (columns 1 and 2) and time effects (column 5), the coefficient is statistically insignificant. Taking into account the country characteristics and time effects (columns 3 and 4), the coefficient turns out to have a negative sign and it is statistically significant at 5% level. It suggests that the legalization of prostitution tends to worsen protection policy for victims of human trafficking or, at best, the legal standing of prostitution is irrelevant to the protection performance. The results are not altered by taking a one-year lagged value of the prostitution law variable.

Among the control variables, better institutional quality ó the control of corruption and democracy ó improves protection policy. Also, participation in the international anti-trafficking regime is positively associated with better protection. Women's economic empowerment provides better protection for victims of human trafficking ó the majority being women and girls. The more human trafficking is prevalent, the better protection policy is exercised, in particular, in countries receiving higher inflows of human trafficking, indicating that the policy action is endogenous to the level of the crime. There is also some evidence that economic wealth leads to better protection, possibly because of the availability of resources necessary for policy implementation. Interestingly, a higher share of migrants in populations is negatively associated with protection policy. It appears that migrant communities do not seem to play a role in ensuring human rights protection for victims of trafficking ó who are mostly irregular migrants ó and the presence of migrants, rather, leads policy makers of the country not to protect victims, possibly because a higher influx of migration alarms local populations.

Quantitatively, the legalization of prostitution decreases probabilities to fully comply with protection policy (score 5) by 1% and adequately comply (score 4) by 5% (see table 3). Also,

probabilities for modest policy performance (score 3) are reduced by 2% upon the legalization. On the other hand, probabilities for poor policy performance increase by 6% and 1% (for scores 2 and 1, respectively) with the legalization of prostitution. In other words, legalization decreases probabilities to better perform protection policy above the average score (the mean score of protection is 2.84), while it increases probabilities for poorer performance.

4.3. Extension

Now I extend the baseline model by replacing the dependent variable with the other dimensions of anti-trafficking policy ó prosecution of trafficking perpetrators and crime prevention. While protection policy reflects policy efforts for ensuring basic human rights for victims, the other two objectives stand for criminal justice and prevention directly targeting the reduction of the crime of human trafficking. Table 4 shows the results. Columns (1)-(3) present the results with prevention policy and columns (4)-(6) are with prosecution. Basically, legalized prostitution leads to negative prediction on preventive performance, while the legal standing of prostitution is irrelevant to the level of criminal justice. Taking the lagged value of prostitution law does not alter the result. On the other hand, the effects of the control variables are mostly similar to the results with protection policy above. The effects of institutional quality still hold, while the impact driven by the international anti-trafficking regime is evident only on prevention policy. The effects of gender and crime remain qualitatively unchanged, while the negative effect of migration on protection policy disappears for prevention and prosecution after controlling for time-invariant country characteristics (columns 2, 3, 5 and 6). This result seems reasonable because prevention and prosecution policies aim at reducing human trafficking ó part of illicit migration flows ó and therefore policy makers who are alarmed by large scales of migration influx do not necessarily take actions against prosecution and prevention.

4.4. Test for Robustness

As presented above, the legalization of prostitution does not lead to better protection for victims of human trafficking. The results rather suggest that legal prostitution may be even detrimental to protection policy performance, contradicting the policy mandates of legalized prostitution. However, this result may have been biased by omitted variables which are not included in the baseline model. Particularly, biased estimation likely occurs as the baseline

estimation cannot control for country-fixed effects, although several important country characteristics are captured by the inclusion of cultural factor variables. Therefore, I conduct further tests addressing the effects of omitted variables which may cause endogeneity problems. First, the BUC method of ordered logit with two-way fixed-effects, described in section 3.4, is employed to minimize biased estimation caused by the omission of country-fixed effects (columns 1-3, table 5). The results show that the legalization of prostitution is irrelevant to all three dimensions of anti-trafficking policy performance – protection, prevention or prosecution.

Secondly, the system GMM method is applied (columns 4-6, table 5). The advantage of this method is that some explanatory variables can be taken explicitly as endogenous and therefore instrumented with exogenous instrumental variables. In this model, prostitution law, ratification and migration variables are considered as endogenous and the other variables are exogenous. Besides, the human trafficking flow variables, which do not have time variations, are omitted due to the inclusion of country-fixed effects. The system GMM estimation has another advantage of controlling for the past level of policy compliance – which usually has great explanatory power in explaining compliance behaviour – by including lagged dependent variables. For protection and prevention, the one-year lagged dependent variable is exploited, while for prosecution, the dependent variable is lagged for two years because second order autocorrelation, which must be absent, exists when one-year lag is employed. Alongside the results of the BUC estimations, the prostitution law variable turns out to have no impact on protection as well as the other two policy dimensions. As expected, the past level of policy performance explains the contemporary performance to a large extent. By controlling for country-fixed effects, many of the control variables lose statistical significance. However, the coefficients of income, the control of corruption, gender and migration variables are still significant with expected signs at least in one of the BUC and GMM estimations.

Thirdly, I further check the robustness of the main findings by exploiting an external instrument (columns 7-9, table 5). An instrument can reduce biases cause by the omission of relevant time-varying variables. As discussed in section 3.4, my choice of instrument is the abortion index reflecting the level of permissibility of abortion (the statistical justifications for the instrument are presented in appendix 4). The results basically endorse the main findings. Legalized prostitution does not improve the policy performance of protection and prevention, while

liberal prostitution policy worsens prosecution policy. The control variables behave similar to the results of the baseline ordered logit estimations, except the migration variable, which does not turn out to have a significant effect.

Overall, addressing the endogeneity of the model by employing various estimation methods further supports the finding that the legalization of prostitution is not a driving force for better victim protection and anti-trafficking policy. On the other hand, the detrimental effects of legalized prostitution, found in the baseline analysis, are not robustly confirmed here. It seems that liberal prostitution policy is at best irrelevant, if not detrimental, to the execution of victim protection.

Finally, I split the sample into sub-groups of countries by region (following the World Bank categorization) and conduct sub-group testing (see table 6). This approach has two motivations. First, by grouping countries based on region, unobserved country-characteristics can be further addressed. Second, sub-group estimations enable us to find different effects of liberal prostitution policy on victim protection, if any. In grouping countries, I first divide countries into OECD and developing countries (columns 1-2) and then sub-group them by region (columns 3-9). The results show that liberal prostitution policy deteriorates protection policy in East Asia and Pacific, South Asia and Eastern Europe and Central Asia. In the other regions, the effect is insignificant. For South Asia (sample size: 6), the negative effect is basically driven by Bangladesh, India and Nepal where either self-employed or brothel prostitution is allowed. For East Asia and Pacific (sample size: 14), this is because of Australia, New Zealand, Singapore and Malaysia. Eastern Europe and Central Asia has a relatively high share of countries with liberal prostitution policy ó ten countries out of 25[3] ó which contribute to the detrimental effect. In Sub-Saharan Africa, Middle East/North Africa, Western Europe and Latin America, where prostitution is either mostly prohibited (for the first two) or generally allowed (for the latter two), the legal standing of prostitution is irrelevant to victim protection. Among the control variables, most results are in line with the baseline findings. An exception is democracy that does not necessarily improve protection in OECD countries and Western Europe, where democratic regime is predominant. Interestingly, womenøs economic empowerment in Eastern Europe and Central Asia rather decreases protection for victims, indicating that gender empowerment does not always lead to better protection.

5. Conclusion

My empirical evidence suggests that liberal prostitution policy does not help liberate victims of human trafficking. Moreover, in some cases, the liberal policy may worsen protection for victims. This paper is not intended to assess the overall effect of liberal prostitution policy but to investigate specifically whether liberal prostitution policy can be a predictor of protecting (liberating) victims of forced prostitution. Insofar as the main question of my paper is concerned, the presumed positive linkage between legalized prostitution and victim protection is not empirically supported, leaving one of the main policy objectives of the liberal policy unfulfilled. The reason for such policy negligence remains to be further investigated. It could be due to low policy priority of victim protection or difficulties in implementing the policy. However, the policy choice of liberalizing the prostitution market without protecting those victimized by the market signals the problem of dualism in the liberal prostitution policy ó particularly given that most victims are irregular migrants from the developing world.

---

[3] Bulgaria, Cyprus, Czech Republic, Estonia, Kazakhstan, Kyrgyzstan, Latvia, Moldova, Poland and Slovakia.

References

Arellano, Manuel and Olympia Bover. 1995. Another Look at the Instrumental Variable Estimation of Error-components Models. *Journal of Econometrics* 68: 29-51.

Baetschmann, Gregori, Kevin Staub and Rainer Winkelmann. 2011. Consistent Estimation of the Fixed Effects Ordered Logit Model. IZA Discussion Paper No. 5443, Bonn.

Bartilow, Horace. 2010. Gender Representation and International Compliance against Human Trafficking. Unpublished paper, Department of Political Science, University of Kentucky.

Blundell, Richard and Stephen Bond. 1998. Initial Conditions and Moment Restrictions in Dynamic Panel Data Models. *Journal of Econometrics* 87: 115-43.

Chamberlain, Gary. 1980. Analysis of Covariance with Qualitative Data. *Review of Economic Studies* 104: 225-238.

Chapkis, Wendy. 1997. *Performing Erotic Labor.* New York: Routledge.

Chattopadhyay, Raghabendra and Esther Duflo. 2004. Women as Policy Makers: Evidence from a Randomized Policy Experiment in India. *Econometrica* 72(5): 1409-1443.

Cho, Seo-Young, Axel Dreher and Eric Neumayer. 2013. Does Legalized Prostitution Increase Human Trafficking? *World Development* 41: 67-82.

Cho, Seo-Young, Axel Dreher and Eric Neumayer. Forthcoming. The Determinants of Anti-trafficking Policies ó Evidence from a New Index. Scandinavian Journal of Economics.

Cho, Seo-Young and Krishna Chaitanya Vadlamannati. 2012. Compliance with the Anti-trafficking Protocol, *European Journal of Political Economy* 28: 249-265.

Cragg, John and Stephen Donald. 1993. Testing Identifiability and Specification in instrumental Variable Models. *Econometric Theory* 9: 222-240.

Das, Marcel and Arthur van Soest. 1999. A Panel Data Model for Subjective Information on Household Income Growth. *Journal of Economic Behavior and Organization* 40:409-426.

Fajnzylber, Pablo, Daniel Lederman and Norman Loayza. 2002. What Causes Violence Crime?. *European Economics Review* 46(7): 1323-1357.

Ferrer-i-Carbonell, Ada and Paul Frijters. 2004. How Important is Methodology for the Estimates of the Determinants of Happiness?. *Economise Journal* 114: 641-659.

Hughes, Donna and Claire Roche. 1999. *Making the Harm Visible: Global Sexual Exploitation of Women and Girls. Speaking out and Providing Services.* Kingston, RI: CATW.

International Organization for Migration (IOM). 2010. Counter Trafficking Module (CTM). Geneva.

Jakobsson, Niklas and Andreas Kotsadam. 2011. Gender Equity and Prostitution ó An Investigation of Attitude in Norway and Sweden. *Feminist Economics* (17): 31-58.

Jakobsson, Niklas and Andreas Kotsadam. 2013. The Law and Economics of International Sex Slavery: Prostitution Law and Trafficking for Sexual Exploitation. *European Journal of Law and Economics* 35: 87-107.

Kaufmann, Daniel, Aart Kraay and Massimo Mastruzzi. 2009. Governance Matters VIII: Aggregate and Individual Governance Indicators 1996-2008. World Bank Policy Research Working Paper No. 4978, Washington D.C.

Lancaster, Tony. 2000. The Incidental Parameter Problem Since 1948. *Journal of Econometrics* 95: 391-413.

Mahmoud, Toman and Christoph Trebesch. 2010. The Economics of Human Trafficking and Labor Migration: Micro-evidence from Eastern Europe. *Journal of Comparative Economics* 38(2): 173-188.

Marshall, Monty G. and Keith Jaggers. 2009. Polity IV Project: Political Regime Characteristics and Transitions, 1800-2009.

Outshoorn, Joyce. 2005. The political Debates on Prostitution and Trafficking of Women. *Social Politics* 12(1), 141-155.

Potrafke, Niklas. 2013. Policies against Human Trafficking – The Role of Religion and Political Institutions. CESifo Working Paper No. 4278, Munich.

Raymond, Janice. 2004. Prostitution on Demand. *Violence against Women* 10: 1156-1186.

Roodman, David. 2005. xtabond2: Stata Module to Extend xtabond Dynamic Panel Data Estimator. Statistical Software Components No. S435901, Boston.

Roodman, David, 2007. A Short Note on the Theme of Too Many Instruments. Center for Global Development Working Paper No. 125, Washington D.C.

Simmons, Beth and Paulette Lloyd. 2010. Subjective Frames and Rational Choice: Transnational Crime and the Case of Human Trafficking. Unpublished paper. Department of Governance, Harvard University, Cambridge.

Stock, James, Jonathan Wright and Motohiro Yogo. 2002. A Survey of Weak Instruments and Weak Identification in Generalized Method of Moments. *Journal of Business and Economic Statistics* 20: 518-52.

Truong, Than-Dam. 1990. *Sex, Money and Morality: The Political Economy of Prostitution and Tourism in South East Asia.* London: Zed Books.

United Nations. 1949. Convention for the Suppression of the Traffic in Persons and of the Exploitation of the Prostitution of Others. New York.

United Nations. 2000. Convention against Transnational Organized Crime and its Protocol to Prevent, Suppress and Punish Trafficking in Persons, especially Women and Children. New York.

United Nations. 2007. World Abortion Policies. United Nations Publication, Sales No. E.07.XIII.6. New York.

United Nations Treaty Collection. 2013. Ratification of the Protocol to Prevent, Suppress and Punish Trafficking in Persons, especially Women and Children. http://treaties.un.org/

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

United States Department of State. 2001-2013. Trafficking in Persons Report. Washington D.C.

United States Department of State. 2001-2011. Country Report on Human Rights Practice. Washington D.C.

Windmeijer, Frank. 2005. A Finite Sample Correction for the Variance of Linear Efficient Two-step GMM Estimators. *Journal of Econometrics* 126: 25-51.

Wooldridge, Jeffrey. 2011. Econometric Analysis of Cross Section and Panel Data. Cambridge: MIT Press.

World Bank. 2013. World Development Indicator. http://data.worldbank.org/data-catalog/world-development-indicators

Table 1. Distribution of Prostitution Law and Protection Policy Scores (2010, 146 countries)

Prostitution Law	Distribution	Protection Policy	Distribution
Legal	65 (44.52%)	Score 5 (best)	9 (6.16%)
Illegal	81 (55.48%)	Score 4 (adequate)	35 (23.97%)
		Score 3 (modest)	51 (34.93%)
		Score 2 (inadequate)	37(25.34%)
		Score 1 (worst)	14 (9.60%)

Table 2. Prostitution Law and Protection Policy (ordered logit, 2001-2011)

DV	Protection (1)	Protection (2)	Protection (3)	Protection (4)	Protection (5)
Prostitution Law (t)	0.06 (0.13)		-0.35 (0.15)**		-0.62 (0.44)
Prostitution Law (t-1)		0.08 (0.13)		-0.33 (0.15)**	
Income	0.17 (0.07)***	0.17 (0.07)***	-0.11 (0.11)	-0.11 (0.11)	-0.17 (0.45)
Control of Corruption	0.51 (0.12)***	0.50 (0.12)***	0.74 (0.14)***	0.74 (0.14)***	1.07 (0.63)*
Democracy	0.07 (0.01)***	0.07 (0.12)***	0.03 (0.01)**	0.03 (0.01)**	0.07 (0.05)
Ratification	0.57 (0.13)***	0.57 (0.13)***	0.49 (0.14)***	0.49 (0.14)***	1.20 (0.77)
Female Labor	0.04 (0.003)***	0.04 (0.003)***	0.03 (0.01)***	0.03 (0.01)***	0.07 (0.02)***
Migration	-0.03 (0.005)***	-0.03 (0.005)***	-0.01 (0.01)*	-0.01 (0.01)*	-0.02 (0.02)
Human Trafficking_in	0.38 (0.05)***	0.39 (0.05)***	0.47 (0.05)***	0.47 (0.05)***	0.74 (0.16)***
Human Trafficking_out	0.08 (0.05)*	0.08 (0.05)*	0.03 (0.06)	0.03 (0.06)	0.10 (0.20)
Time Effect	Yes	Yes	Yes	Yes	No
Region	No	No	Yes	Yes	Yes
Religion	No	No	Yes	Yes	Yes
Legal Origin	No	No	Yes	Yes	Yes
Observations	1,373	1,373	1,373	1,373	140
Countries	138	138	138	138	140
(pseudo)R2	0.18	0.18	0.21	0.21	0.16

Note: Standard errors are in parenthesis. Robust standard error applied. * $p<.10$, ** $p<.05$, *** $p<.01$.

Table 3. Marginal Effects, Prostitution Law and Protection Policy (ordered logit, 2001-2011)

	DV = Protection Policy				
	Score 1 (1)	Score 2 (2)	Score 3 (3)	Score 4 (4)	Score 5 (5)
Prostitution Law (t)	0.01 (0.01)**	0.06 (0.03)**	-0.02 (0.001)**	-0.05 (0.02)**	-0.01 (0.004)**
Income	0.004 (0.004)	0.02 (0.02)	-0.01 (0.001)	-0.02 (0.02)	-0.002 (0..002)
Control of Corruption	-0.03 (0.01)***	-0.13 (0.02)***	0.04 (0.01)***	0.11 (0.02)***	0.02 (0.003)***
Democracy	-0.001 (0.001)**	-0.01 (0.003)**	0.002 (0.001)**	0.004 (0.001)**	0.001 (0.0003)**
Ratification	-0.02 (0.001)***	-0.09 (0.03)***	0.03 (0.01)***	0.07 (0.02)***	0.01 (0.003)***
Female Labor	-0.001 (0.0002)***	-0.01 (0.001)***	0.002 (0.0005)***	0.005 (0.001)***	0.001 (0.0001)***
Migration	0.0004 (0.0002)*	0.002 (0.001)*	-0.001 (0.0003)*	-0.002 (0.001)*	-0.0002 (0.0001)*
Human Trafficking_in	-0.02 (0.003)***	-0.08 (0.01)***	0.02 (0.01)***	0.07 (0.001)***	0.01 (0.002)***
Human Trafficking_out	-0.001 (0.002)	-0.01 (0.01<9	0.002 (0.003)	0.005 (0.001)	0.001 (0.001)
Time Effect	Yes	Yes	Yes	Yes	Yes
Region	Yes	Yes	Yes	Yes	Yes
Religion	Yes	Yes	Yes	Yes	Yes
Legal Origin	Yes	Yes	Yes	Yes	Yes
Observations	1,373	1,373	1,373	1,373	1,373
Countries	138	138	138	138	138

Note: Standard errors are in parenthesis. Robust standard error applied. * $p<.10$, ** $p<.05$, *** $p<.01$. Conditional marginal effects are estimated at the means of other variables for the predicted probabilities for each score of the dependent variable (protection score 1, 2, 3, 4 and 5, respectively). The marginal effects shown in this table correspond with column (3) in table 2.

Table 4. Prostitution Law, Prevention and Prosecution (ordered logit, 2001-2011)

DV	Prevention (1)	Prevention (2)	Prevention (3)	Prosecution (4)	Prosecution (5)	Prosecution (6)
Prostitution Law (t)	-0.33 (0.13)***	-0.61 (0.16)***		0.23 (0.13)	-0.09 (0.15)	
Prostitution Law (t-1)			-0.64 (0.16)***			-0.09 (0.15)
Income	0.04 (0.06)	-0.15 (0.09)	-0.15 (0.09)*	0.38 (0.07)***	-0.09 (0.10)	-0.09 (0.10)
Control of Corruption	0.91 (0.12)***	0.89 (0.13)***	0.89 (0.13)***	0.52 (0.11)***	0.46 (0.14)***	0.45 (0.13)***
Democracy	0.08 (0.01)***	0.07 (0.01)***	0.07 (0.01)***	0.05 (0.01)***	0.04 (0.01)**	0.04 (0.01)**
Ratification	0.37 (0.13)***	0.28 (0.15)*	0.28 (0.15)*	0.14 (0.13)	0.24 (0.15)	0.24 (0.15)
Female Labor	0.03 (0.004)***	0.03 (0.01)***	0.03 (0.01)***	0.02 (0.003)***	0.04 (0.01)***	0.04 (0.01)***
Migration	-0.02 (0.01)***	-0.002 (0.01)	-0.002 (0.01)	-0.02 (0.005)***	-0.003 (0.01)	-0.002 (0.001)
Human Trafficking_in	0.42 (0.05)***	0.42 (0.06)***	0.42 (0.06)***	0.36 (0.48)***	0.35 (0.06)***	0.34 (0.06)***
Human Trafficking_out	0.19 (0.05)***	0.18 (0.06)***	0.18 (0.06)***	0.57 (0.05)***	0.48 (0.06)***	0.48 (0.06)***
Time Effect	Yes	Yes	Yes	Yes	Yes	Yes
Region	No	Yes	Yes	No	Yes	Yes
Religion	No	Yes	Yes	No	Yes	Yes
Legal Origin	No	Yes	Yes	No	Yes	Yes
Observations	1,369	1,369	1,369	1,371	1,371	1,371
Countries	138	138	138	138	138	138
(pseudo)R2	0.21	0.23	0.23	0.19	0.26	0.26

Note: Standard errors are in parenthesis. Robust standard error applied. * $p<.10$, ** $p<.05$, *** $p<.01$.

Table 5. Test for Endogeneity: Prostitution Law, Protection, Prevention and Prosecution, 2001-2011

DV	Protection BUC (1)	Prevention BUC (2)	Prosecution BUC (3)	Protection GMM (4)	Prevention GMM (5)	Prosecution GMM (6)	Protection Ologit IV (7)	Prevention Ologit IV (8)	Prosecution Ologit IV (9)
DV (t-1)				0.42 (0.05)***	0.33 (0.05)***	0.55 (0.07)***			
DV (t-2)						0.13 (0.05)***			
Prostitution Law (t)	0.38 (0.83)	-0.55 (1.08)	-0.17 (0.68)	0.22 (0.20)	0.47 (0.43)	-0.03 (0.26)	0.42 (0.48)	-0.14 (0.44)	-2.12 (0.47)***
Income	2.05 (0.96)**	2.36 (1.37)*	3.62 (1.56)**	0.04 (0.06)	0.03 (0.06)	0.14 (0.07)*	-0.12 (0.12)	-0.10 (0.10)	-0.36 (0.13)***
Control of Corruption	0.42 (0.50)	1.38 (0.47)***	0.34 (0.57)	0.12 (0.08)*	0.01 (0.10)	0.003 (0.09)	0.76 (0.19)***	0.80 (0.17)***	0.91 (0.20)***
Democracy	-0.03 (0.06)	0.02 (0.06)	-0.47 (0.06)	0.02 (0.01)	0.03 (0.02)*	0.002 (0.02)	0.03 (0.02)*	0.06 (0.01)***	0.08 (0.02)***
Ratification	0.09 (0.27)	-0.20 (0.26)	-0.20 (0.31)	0.14 (0.11)	0.16 (0.11)	0.15 (0.14)	0.05 (0.15)***	0.31 (0.16)*	0.36 (0.16)**
Female Labor	0.004 (0.06)	0.05 (0.06)	0.01 (0.07)	0.01 (0.002)***	0.01 (0.003)***	0.003 (0.003)	0.03 (0.01)***	0.02 (0.005)***	0.03 (0.01)***
Migration	-0.14 (0.05)***	-0.06 (0.04)	-0.16 (0.05)***	-0.0002 (0.01)	0.02 (0.01)	-0.01 (0.02)	-0.01 (0.01)	-0.005 (0.01)	0.007 (0.01)
Human Trafficking_in							0.47 (0.06)***	0.39 (0.06)***	0.41 (0.06)***
Human Trafficking_out							0.04 (0.06)	0.18 (0.06)***	0.48 (0.08)***
Time Effect	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Country-fixed	Yes	Yes	Yes	Yes	Yes	Yes	Reg, relig, legal	Reg, relig, legal	Reg, relig, legal
Observations	4,006	3,775	3,480	1,378	1,371	1,229	1,358	1,355	1,356
Countries	146	147	139	149	149	149	136	136	136
(pseudo)R2	0.07	0.07	0.05				0.20	0.23	0.26
A-B AR(2)				0.27	0.19	0.62			
Hansen Test				0.18	0.15	0.16			
No. instruments				96	96	95			
Replication							100	100	100

27

Note: Standard errors are in parenthesis. Robust standard error applied. * $p<.10$, ** $p<.05$, *** $p<.01$. For the system GMM estimations, prostitution law, ratification, migration and the lagged dependent variable are treated endogenous and others exogenous. For the IV estimations, the external instrument is the abortion index.

Table 6. Prostitution Law and Protection Policy by Region (ordered logit, 2001-2011)

Country groups	OECD (1)	Developing (2)	S.S. Africa (3)	E.Asia-Pacific (4)	South Asia (5)	E.Europe/C.Asia (6)	Western Europe (7)	Latin America (8)	MENA (9)
				DV= Protection Policy					
Prostitution Law (t)	-0.05 (0.47)	0.10 (0.13)	0.40 (0.27)	-2.43 (0.96)**	-16.97 (6.08)***	-0.56 (0.30)*	-0.57 (0.57)	0.17 (0.63)	1.20 (1.77)
Income	0.74 (0.43)*	0.13 (0.07)*	-0.17 (0.15)	0.06 (0.59)	18.88 (9.98)*	0.40 (0.20)**	2.01 (0.63)***	-0.40 (0.37)	-0.07 (0.39)*
Control of Corruption	-0.33 (0.32)	0.30 (0.14)**	-0.08 (0.27)	1.73 (0.83)**	2.43 (1.72)	1.07 (0.47)**	-0.20 (0.43)	1.28 (0.40)***	1.35 (0.62)**
Democracy	-0.37 (0.18)**	0.07 (0.01)***	0.06 (0.03)*	0.20 (0.06)***	0.10 (0.12)	0.01 (0.03)	-0.44 (0.23)*	0.15 (0.04)***	-0.16 (0.08)**
Ratification	0.93 (0.35)***	0.59 (0.14)***	0.32 (0.28)	0.38 (0.46)	-2.01 (4.68)	-0.01 (0.42)	1.28 (0.42)***	1.23 (0.56)**	1.47 (0.69)**
Female Labor	0.07 (0.02)***	0.03 (0.004)***	0.02 (0.007)***	0.08 (0.04)**	0.75 (0.27)***	-0.06 (0.03)**	-0.005 (0.03)	0.07 (0.03)***	0.09 (0.03)***
Migration	0.002 (0.02)	-0.01 (0.006)	0.11 (0.04)**	-0.04 (0.05)	-1.99 (0.83)**	-0.03 (0.03)	-0.07 (0.03)**	-0.27 (0.08)***	-0.04 (0.02)***
Human Trafficking_in	0.42 (0.14)***	0.28 (0.05)***	0.13 (0.12)	-0.76 (0.40)*	2.58 (2.29)	0.39 (0.14)***	0.63 (0.16)***	0.78 (0.21)***	1.11 (0.27)***
Human Trafficking_out	-0.09 (0.13)	0.26 (0.05)***	0.74 (0.19)***	0.58 (0.25)**	23.58 (12.16)*	0.31 (0.14)**	0.09 (0.17)	0.07 (0.18)	0.26 (0.28)
Time Effect	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Region	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Religion	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Legal Origin	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Observations	292	1,081	343	139	55	257	231	201	152
Countries	28	110	35	14	6	25	22	21	18
(pseudo)R2	0.12	0.12	0.11	0.17	0.56	0.19	0.16	0.22	0.25

Note: Standard errors are in parenthesis. Robust standard error applied. * $p<.10$, ** $p<.05$, *** $p<.01$.

Appendix 1. 3P Policy Index ó Protection (Cho et al. forthcoming)

Score 5: The country does not punish victims of trafficking for acts related to the situations being trafficked; does not impose the self-identification of victims; and exerts STRONG efforts to give victims information on, and assistance for, relevant court and administrative proceedings, as well as support for the physical, psychological and social recovery of victims such as housing (shelter), medical assistance, job training, (temporal) residence permit, and other assistance for rehabilitation and repatriation.

Score 4: The country does not punish victims of trafficking for acts related to the situations being trafficked; does not impose the self-identification of victims; and exerts MODERATE efforts to give victims information on, and assistance for, relevant court and administrative proceedings, as well as support for the physical, psychological and social recovery of victims such as housing (shelter), medical assistance, job training, (temporal) residence permit, and other assistance for rehabilitation and repatriation.

Score 3: The country does not punish victims of trafficking for acts related to the situations being trafficked; does not impose the self-identification of victims; and exerts LIMITED efforts to give victims information on, and assistance for, relevant court and administrative proceedings, as well as support for the physical, psychological and social recovery of victims such as housing (shelter), medical assistance, job training, (temporal) residence permit, and other assistance for rehabilitation and repatriation. Or, if the country fails to ensure that victims of trafficking are never punished for acts related to the trafficking itself or the consequences of being trafficking BUT exerts STRONG/Moderate efforts in protecting victims, the country qualifies for score 3.

Score 2: The country fails to ensure that victims of trafficking are punished for acts related to the trafficking itself or to the consequences of being trafficked; and there is limited assistance and support for court proceedings and the recovery of victims. Or, the country does not punish victims of trafficking in persons for acts related to the situations being trafficked; however, does not provide any assistance or support for recovery, rehabilitation and repatriation.

Score 1: The country punishes victims of trafficking in persons for acts related to the situations being trafficked; and does not provide any assistance and support.

Appendix 2. Descriptive Statistics

Variable	Obs.	Mean	Std. Dev.	Min.	Max.
Prostitution Law	1,373	0.48	0.50	0	1
Protection	1,373	2.86	1.07	1	5
Prevention	1,369	3.30	0.99	1	5
Prosecution	1,371	3.69	1.21	1	5
Income (log)	1,373	7.78	1.62	4.42	10.64
Ratification	1,373	0.57	0.49	0	1
Democracy	1,373	3.85	6.40	-10	10
Control of Corruption	1,373	-0.08	1.02	-1.82	2.56
Migration	1,373	7.78	12.85	0.04	86.83
Female Labor	1,373	58.47	16.46	13.5	90.5
Human Trafficking_in	1,373	2.41	1.45	0	5
Human Trafficking_out	1,373	2.50	1.58	0	5
Abortion Index	1,358	4.29	2.42	0	7

Appendix 3. Data Sources and Definition

Variable	Description	Source
Prostitution Law	Dummy. 1 indicates prostitution being legal and 0, otherwise.	Cho et al. (2013)
Protection	Protection policy measure. Scale 5 (full compliance) to 1 (no compliance).	Cho et al. (forthcoming)
Prosecution	Prosecution policy measure. Scale 5 (full compliance) to 1 (no compliance).	Cho et al. (forthcoming)
Prevention	Prevention policy measure. Scale 5 (full compliance) to 1 (no compliance).	Cho et al. (forthcoming)
Control of Corruption	Measure of control of corruption, with higher values corresponding to better outcomes.	Kaufmann, Kraay and Mastruzzi (2009)
Democracy	Measure of democracy. Scale 10 (full democracy) to -10 (full autocracy).	Marshall and Jaggers (2009)
Ratification	Dummy. 1 being a member of the Anti-trafficking Protocol and 0, otherwise.	United Nations Treaty Collection (2013)
Income	Per capita income in 2000 constant prices.	World Bank (2013)
Female Labor	Female labor force participation rate.	World Bank (2013)
Migration	Share of migrants in total populations.	World Bank (2013)
Human Trafficking_in	Human trafficking inflow measure. Scale 5 (very high) to 0 (no flow).	United Nations Office on Drugs and Crime (2006)
Human Trafficking_out	Human trafficking outflow measure. Scale 5 (very high) to 0 (no flow).	United Nations Office on Drugs and Crime (2006)
Abortion Index	Abortion policy measure. Scale 7 (fully allowed) to 0 (fully prohibited)	United Nations (2007)

Appendix 4. Test for the Instrument

4.1. First-stage Regression (probit)

DV	Prostitution Law
Abortion Index	0.2
	(0.03)***
Control Variables	Yes
Time Effects	Yes
Region	Yes
Religion	Yes
Legal Origin	Yes
Observations	1,417
Countries	136
Period	2001-2011
(pseduo)R2	0.53

4.2. Exclusion Restriction (ordered logit)

DV	Protection
Abortion Index	0.02
	(0.04)
Control Variables	Yes
Time Effects	Yes
Region	Yes
Religion	Yes
Legal Origin	Yes
Observations	1,353
Countries	138
Period	2001-2011
(pseduo)R2	0.21

Note: Standard errors are in parenthesis. Robust standard error applied. * $p<.10$, ** $p<.05$, *** $p<.01$.