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April 2019

The Nordic Model of Prostitution Legislation: Health, Violence and Spillover Effects

An emerging literature is studying, with the help of new types of data and clever identification strategies, the effects of different legislative measures regulating the market for sexual services. The primary target of such measures are arguably the participants in the market, prostitutes and their clients, and law and order concerns in their immediate vicinity. In a new research project, we mean to shift the spotlight on potential broader spillovers from these policies, both to other outcomes and other countries. In their presence, we cannot understand the full impact of a law change if we limit our analysis to the prostitution market in that country alone. We focus on a particular model of prostitution legislation, first adopted in Sweden in 1999 and known since as the Nordic model.

The Nordic model

The debate on prostitution legislation shares clear similarities with the standard arguments put forward for or against alcohol prohibition or drug liberalization. The criminalization of an activity is most likely shrinking the corresponding market, because it increases the cost of participation. It also functions as a signal of what a society deems acceptable or not, and coordinates behavior to potentially change social norms. At the same time, however, it pushes the remaining market into the darkness, where criminal activity potentially increases. In the specific case of the prostitution market, what is particularly feared is an increased risk of violence and general worsening of conditions for the potentially fewer sex workers.

When, in 1999, Sweden enacted the first asymmetric criminalization of prostitution, whereby buyers but not sellers of sexual services are punished, a third way between criminalization and legalization seemed to appear. This legislation would still give a clear signal on societal values, but at the same time protect the, in large part female and in large part exploited, sex workers. The model proved very successful in deterring street prostitution, and, under the catchy name of the “Nordic model”, has subsequently been adopted by Norway, Iceland, Canada, and France. It is currently under consideration in further countries as well.

This is where most reports and policy evaluations stop. In a new project at SITE, involving an international research cooperation, we propose to investigate the impacts of this legislation beyond the participants in the prostitution market. Specifically, we encompass other outcomes such as gender-based violence, health outcomes and online behavior, both within Sweden and other countries that implemented the reform, but also, most importantly, across their borders. The idea is that law changes in one country may also affect the demand and supply of prostitution in other countries, especially but not exclusively those bordering the country that enacts the law change.

Two possible channels for such cross-border effects are sex tourism and human trafficking.

This brief summarizes the preliminary evidence we collected so far.

Violence

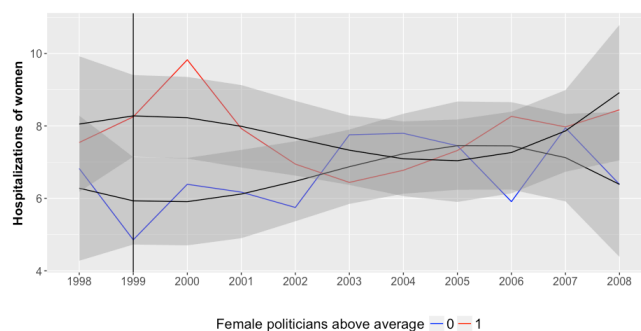
The focus on the role of policies is a recent but rapidly growing addition to the economic literature on prostitution. The risk of violence, both for the participants and within the neighboring geographic areas, is a natural area of concern for policy in relation to the sex market, and to criminal activities in general. To improve on cross-country comparisons and draw causal links from policies to outcomes, the most robust contributions in this area focus on natural experiments. Cunningham and Shah (2018) study an unintentional, and therefore unexpected and temporary, decriminalization of indoor prostitution in Rhode Island, and find that reported rape offences fall by 30%. Cunningham and coauthors (2019) also look at the geographic expansion of the erotic services section of Craigslist, a popular advertisements website, before online solicitation was banned in 2018. The possibility to use online platforms for their work, by allowing prostitutes to keep mostly indoors, and screen their potential clients to a larger extent, appears to have been very beneficial: the study finds lower female homicide rates by 10-17% when and where the service was available. Ciacci and Sviatschi (2018) find that the opening in a neighborhood of indoor prostitution establishments decreases sex crime by 7-13%, with no effect on other types of crime, arguing that the reduction is mostly driven by potential sex offenders resorting to the establishments, instead, to satisfy their needs. What is common to these studies is the finding that allowing the sex market to exist in some form is beneficial for outsiders, while indoor prostitution is safer for the sex workers themselves.

Preliminary findings from our project (Berlin et al., 2019 a) are consistent with this. We base our



strategy on a comparison, within Sweden, between counties that are above or below average in terms of representation of women among police force and elected officials (we refer to them as *treated* and *control* counties, respectively). Both these indicators have been found in previous studies to drive greater reporting and lower incidence of crimes against women (Iyer et al., 2012; Miller and Segal, 2018). Looking at population-wide rates of violence against women in Sweden, we observe an increase in assaults committed by acquaintances indoors by about 10% and an increase in rapes indoors by more than 20% in treated as compared to control counties. Since the reform is argued to have eliminated street prostitution, and pushed the remaining sex trade indoors, violence against prostitutes will be counted in the indoor assaults statistic. However, in treated counties, where we observe the increase in violent crimes against women, we at the same time find fewer convictions for buying sex. We argue therefore that the increase in assaults we observe is not likely in the context of the sex market, but rather indicates increased violence against non-prostitutes from frustrated former customers, in other words a negative externality of deterring prostitution. In order to distinguish whether this increase is only in reported or actually committed crimes, we look at hospitalizations of women for injuries that are related to sexual interactions. If we think that seeking hospital care is less sensitive than reporting a violent man to the police, the series of hospitalizations should be closer to the true violence than the convictions. Although numbers are small and differences not significant, hospitalizations spike up in treated counties directly after the reform, as Figure 1 shows. All in all, our preliminary evidence from Sweden suggests that intimate partner violence and violence on women in general might have increased as a consequence of the “Nordic model”.

Figure 1. Hospitalizations of women



Source: Hospitalizations of women for injuries related to sex, from Berlin et al. (2019 a).

Other outcomes

Besides violence, health outcomes are also a policy relevant objective with the regulation of prostitution. Indicators such as the spread of sexually transmitted infections serve the double purpose of giving a rough indication of the changes in the size of the sexual market while at the same time enabling inference on the work environment and general living conditions for prostitutes. In a companion paper, which is underway, we examine these statistics for Sweden and Norway, in terms of within country changes but also with a mind to capture potential cross-border spillovers between the two countries.

Cross-border spillovers

In another working paper (Berlin et al., 2019 b) we study the reform enacted in France on April 13th, 2016, which removed the punishment for solicitation of prostitution (previously set to two months imprisonment plus a fine) and introduced instead a range of fines for the purchasing of sexual services, thereby, pushing the punishment to the side of the buyer. In order to study the cross-border effect of this change, we focus on the German *Bundesländer* bordering France: Baden-Württemberg, Saarland and Rheinland-Pfalz. The national law in Germany generally allows prostitution, but gives federal states the right to regulate it on a more detailed level. This generates variation at the level of the *Gemeinde*, the administrative division corresponding roughly to

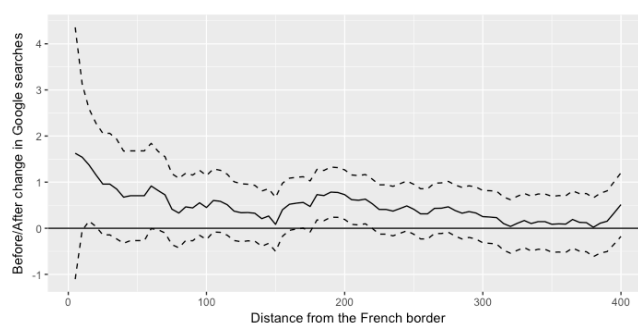


a municipality. The idea behind our analysis is to compare municipalities where prostitution is at least in part allowed with municipalities where it is banned (we refer to them as *treated* and *control* municipalities, respectively). Our preliminary results show that foreign tourism to cities where prostitution is at least partly legal increased after the reform more than to those completely overlapping with a Sperrbezirk, i.e. an area in which prostitution is banned. However, so does domestic tourism. This might be seen as a threat to our interpretation, since we can't connect this increase directly to the French reform, unless we can show that there is a dynamic adjustment of the supply of sexual services, which also attracts domestic flows. We can't isolate tourism from France in this data, so we go a step further by looking at online behavior.

Google searches

A key contribution of this project is to gather new data that haven't been analyzed to date in the existing literature. In particular, we collected detailed data on Google searches originating in France using as keywords different German cities. The idea is to capture potential deviations of search trends over time driven by prostitute customers who after the legislative change find it more attractive to look for sexual services across the German border. Preliminary findings show that after the policy change there is a larger increase in search activity for cities closer to the French border relative to cities further away. While searches are generally downward trending over time, the trend is slowed after the French reform, and this effect is stronger the closer a city is to the border, although intermittently significant. Figure 2 reports the differential increase in searches (with 95% confidence intervals) as related to the distance from the border. The negative relationship between size of the impact and distance to the border is consistent when controlling for city and time fixed effects. However, further analysis is needed in order to validate the results and control for confounding factors.

Figure 2. Google searches for German cities before and after the French reform



Source: Google Search data on searches originating in France for cities closer to VS farther from the German border than the indicated distance (in km).

We are currently repeating the same exercise at the French borders with Belgium and Spain, with searches originating in Norway around the time of the Norwegian reform (2009), and at the US-Canada border around the time of the Canadian reform (2014).

Conclusion

When adopting a version of the Nordic model in 2014, the Canadian Department of Justice stated that the “overall objectives [of the reform] are to:

- Protect those who sell their own sexual services;
- Protect communities, and especially children, from the harms caused by prostitution; and
- Reduce the demand for prostitution and its incidence.”

Research seems to show that restrictions on the sexual services market, rather than the sex trade itself, have substantial negative impacts on communities and sex workers. Nevertheless, it is understandable that legislators in many countries, sharing similar concerns and expectations as expressed by the Canadian DoJ, find it unattractive to legalize prostitution. What our project points to, then, is that when considering various forms of criminalization, it is crucial to understand how best to pursue each of these



objectives. Taking into account side-effects, or spillovers, such as the ones we highlight above, might reveal the need for complementary policies, in order to avoid unexpected and counterproductive consequences.

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