

Shame on you, John!

Laws, stigmatization, and the demand for sex

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Abstract

The present article contributes to the literature on prostitution by shedding light on the effects of the criminalization of buying sex on the amount of prostitution bought, as well as on the proposed theoretical mechanisms underlying this change. We find indications that criminalizing the buying of sex may decrease the quantity of sex bought. While we find that stigma influences the demand for sex, we do not find that stigma increases as a result of the law. Therefore, the possible reduced quantity of sex bought is probably due to the more direct risk of getting caught.

Keywords Gender, Law, Norm, Prostitution, Reputation, Sex, Stigma

JEL Classification J16, J22, J23

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1 Introduction

Prostitution has gained increased interest among economists in recent years (e.g. Cameron et al. 1999; Edlund and Korn 2002; Albert et al. 2007; Cunningham and Kendall 2011; Kotsadam and Jakobsson 2011; Jakobsson and Kotsadam, forthcoming). Della Giusta et al. (2008, 2009) model the market for prostitution services, recognizing the central role of stigma and reputation for both prostitutes and clients, while Della Giusta (2010) discusses how policy may affect this market via stigma and reputation. In the present study we assess whether the recent Norwegian criminalization of buying sex affected the quantity of prostitution bought. One of the main aims of this law is to change attitudes in order to reduce demand (Holmström and Skilbrei 2008; Norwegian Ministry of Justice 2008; Skilbrei 2008) and we also investigate empirically whether the law affects demand via attitudes, or more directly via the risk of punishment by the law.

Della Giusta et al. (2008, 2009) argue that social stigma is an important determinant of the quantity of sex supplied and demanded. The stigma comes from a moral judgment and, since individuals care about their social standing in society, they face potential reputation loss from buying or selling sex. Akerlof (1980) argues that the utility of an agent performing an activity depends on the beliefs and actions of other members of society. More specifically, he claims that reputation depends on adherence to a code of behavior and the proportion of community members who support the code. Prostitution is stigmatized to different degrees in different societies, leading to different market equilibria in different countries (Della Giusta et al. 2008, 2009). All else being equal, reduced stigmatization increases the marginal net gain of supplying sex, as well as the marginal willingness to pay for it. Conversely, increased stigmatization reduces the marginal willingness to buy and sell, hence reducing the equilibrium quantity exchanged.

Available economics studies of the market for prostitution services have mainly focused on pricing, and more precisely on pricing as a reflection of risk preferences (Cameron and Collins 2003; Rao et al. 2003; Moffat and Peters 2004; Gertler et al. 2005; Levitt and Venkatesh 2007; and Raj and Shah 2008). A few studies focus on trafficking (e.g. Jakobsson and Kotsadam, forthcoming), while others study the online market for prostitution (e.g.

Cunningham and Kendall, 2011a, 2011b), or attitudes towards prostitution (Della Giusta et al., 2008; Jakobsson and Kotsadam 2011; Kotsadam and Jakobsson 2011).

The present article contributes to the literature on prostitution by shedding light on the effects of the criminalization of buying sex on the amount of prostitution bought, as well as on the proposed theoretical mechanisms underlying this change. We find indications that criminalizing the buying of sex may decrease the quantity of sex bought. While we find that stigma influences the demand for sex, we do not find that stigma increases as a result of the law. Therefore, the possible reduced quantity of sex bought is probably due to the more direct risk of getting caught.

The rest of the paper proceeds as follows. In Section 2 we present our expectations and hypotheses. In Section 3 we describe the data used and present some initial analyses based on data description. In Section 4 we present a more careful empirical analysis of the data, and in Section 5 we conclude the paper.

2 Expectations

Following Della Giusta et al. (2008, 2009), the criminalization of buying sex may affect the equilibrium amount of prostitution services via several channels. Criminalization of buying sex may (i) increase clients' intrinsic feelings of guilt, (ii) increase stigmatization because other peoples' values may change, and finally (iii) imply a direct punishment on clients getting caught. The criminalization may increase the probability of getting caught as a client, as well as increasing the stigma for both clients and prostitutes through a normative channel because people may become more negative towards prostitution when it is criminalized. In trying to separate the effect via increased stigmatization from the more direct effect we present the following three hypotheses:

1. Stigma influences the demand for sex.
2. Criminalizing buying sex increases the stigma against buying sex.
3. Criminalizing buying sex decreases the quantity of sex bought.

3 Data and descriptive statistics

We use survey responses from a longitudinal Internet-based survey sent out by TNS Gallup (www.tns-gallup.se/summary.aspx) in August 2008 and August 2009 to a random sample of 2,500 Norwegians and 3,000 Swedes aged 15–65. By the end of the second survey period, 1,034 Norwegians (41.4 percent) and 1,317 Swedes (43.9 percent) had responded to both surveys. The response rate in the first wave was 68.6 percent in Norway and 60.5 percent in Sweden. The respondents had three weeks to answer the first wave of the survey, and they received two reminders. Those who accepted to also take part in the second wave of the survey (in August 2009) had three weeks to answer, and received four reminders.¹ In August 2010 we conducted a third wave of data collection: an Internet-based survey was sent to 4,500 Danes, 4,500 Norwegians, and 3,252 Swedes aged 18–65. In total, 6,164 out of 12,252 responded (50.3 percent): 2,088 (46.4 percent) Danes, 1,705 (52.4 percent) Swedes, and 2,371 (52.7 percent) Norwegians. The respondents had three weeks to answer the survey and received three reminders.

Our sample is fairly representative regarding gender and age, while in terms of education it is biased toward the highly educated and there are serious concerns regarding non-random attrition. While this should be considered when comparing raw correlations and mean values, the problem is somewhat alleviated in the regression analyses by explicitly controlling for education and other confounding factors. For a more detailed description of the representativeness of the data, see Jakobsson and Kotsadam (2010, 2011) and Kotsadam and Jakobsson (2011). Table A1 in the appendix describes the variables used in this paper.

Below we present how the practice of buying sex differs between the three Scandinavian countries. It is important to remember that it is legal to buy and sell sex in Denmark, and illegal to buy, but not to sell, sex in Norway (since 1 January 2009) and Sweden (since 1 January 1999). We only asked the respondents if they had bought sex in the third wave of data collection (in August 2010). Only 54 of the 6,152 respondents (0.88 percent) who responded said that they had bought sex during the past six months (Table 1). Three of these were women (two in Norway, zero in Sweden, and one in Denmark) and 51 were men (20 in

¹ For more information on the data, see Jakobsson and Kotsadam (2010, 2011), and Kotsadam and Jakobsson (2011).

Norway, five in Sweden, and 26 in Denmark). That is, 1.71 percent of the Norwegian men said they had bought sex during the past six months, 0.56 percent of the Swedes, and 2.63 percent of the Danes; the difference between the countries is statistically significant according to Fisher’s exact test ($p=0.002$). These results support the expectation that buying sex should be the least prevalent in Sweden (where it has been illegal since 1999), and most prevalent in Denmark (where it is not illegal). We also have information about whether the respondents know when it is illegal to buy sex, but the shares in Table 1 do not change very much if we only consider those who know the law.

Table 1. Share and number of respondents having bought sex during the past six months

	All	Men	Women
Total sample	0.88 54	1.67 51	0.10 3
Norway	0.93 22	1.71 20	0.17 2
Sweden	0.29 5	0.56 5	0.00 0
Denmark	1.30 27	2.63 26	0.009 1

From Norway and Sweden we have data for three years (August 2008, August 2009, and August 2010). Unfortunately we do not know if any respondents bought sex in the two first time periods as they were not asked about this. They were asked, however, if they knew of anyone who had bought sex during the past six months. In all three waves we have information on moral attitudes toward buying sex so that we can see the evolution of stigmatization over time.

In Table 2 we show the share of respondents who know someone who has bought sex during the past six months (Know) and the extent to which people think it is morally wrong to buy sex (on a scale 0-10, where 10 is totally morally wrong) (Immoral). We can see that the share of people who know someone who has bought sex during the past six months has gone down between Wave 1 and Wave 2 in Norway. That is, fewer people report to know someone who has bought sex after the criminalization of buying sex, while the share is unchanged in Sweden where its legal status was unchanged.

Table 2. Evolution of our main variables of interest over time in Norway and Sweden

	Wave 1		Wave 2		Wave 3	
	Know	Immoral	Know	Immoral	Know	Immoral
Norway	0.099	6.822	0.068	6.770	0.063	7.084
	(0.298)	(3.132)	(0.252)	(3.088)	(0.243)	(3.088)
	1033	1033	1031	1033	2368	2370
Sweden	0.038	7.403	0.038	7.439	0.039	7.577
	(0.191)	(2.986)	(0.191)	(2.903)	(0.194)	(2.933)
	1,316	1,317	1,313	1,313	1,703	1,704

Mean values, standard errors in parentheses, and number of observations.

Regarding moral attitudes, in Norway we see a small decrease from Wave 1 to Wave 2 (not statistically significant at conventional levels) in how morally wrong people perceive buying sex to be, and then an increase. In Sweden we see a small but steady increase in how morally wrong people on average perceive buying sex to be. Regarding knowing someone who has bought sex during the past six months we see that in Sweden, where the law was unchanged, the evolution is stable and in Norway, knowing someone who has bought sex reduced by more than 30 percent when the law came into force.

In sum, what we can see here is that fewer people report that they have bought sex in Sweden (where buying sex has been criminalized since 1999) than in Norway (where buying sex has been criminalized since 2009), and that more people report that they have bought sex in Denmark (where it is not a criminal act to buy sex). We can also see a drop in the share of people who know someone who has bought sex (which can be seen as a proxy for the amount of sex bought) in Norway after the criminalization. In the next section (Section 4) we turn to a more formal analysis of the data in order to try to separate our hypotheses.

4 Results

In Table 3 (columns 1 and 2) we see that having bought sex during the last six months is most common in Denmark and least common in Sweden. The situation is similar for knowing someone who has bought sex during the last six months (columns 3 and 4). Even though this description does not prove a causal relationship, it points in the hypothesized direction: buying sex is most prevalent where it is legal and least prevalent where it is illegal.

Table 3: Cross-sectional estimates on having bought sex or knowing someone who has bought sex

VARIABLES	(1) Bought	(2) Bought	(3) Know	(4) Know
Norway	0.010** (0.004)	0.003 (0.002)	0.027*** (0.009)	0.015* (0.008)
Denmark	0.014*** (0.005)	0.007* (0.004)	0.033*** (0.009)	0.033*** (0.009)
Male		0.014*** (0.002)		0.057*** (0.006)
Age		0.000 (0.000)		-0.001*** (0.000)
Capital		0.000 (0.001)		0.001 (0.007)
Highed		0.002 (0.001)		-0.008 (0.006)
Lowed		0.001 (0.002)		0.004 (0.011)
High income		0.000 (0.001)		0.014 (0.011)
Low income		-0.000 (0.001)		-0.015** (0.007)
Observations	6,152	5,468	6,156	5,471

Sweden is the excluded country. Marginal effects after probit regressions.

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

From all three rounds of data collection we have information on whether the respondents know somebody who bought sex during the last six months. Furthermore, since we have data from both Norway (where the law changed during the period) and Sweden (where there was no legal change) before and after the legal change in Norway, we are able to conduct a difference-in-differences estimation. The average difference over time in the control group is subtracted from the average difference over time in the treatment group.

Norway and Sweden are very similar neighbouring Scandinavian welfare states with similar languages and institutions (Esping-Andersen 1990, 1999). They are also similar in other respects; for example, *The Global Gender Gap Report 2009* (Hausmann et al. 2009) ranks Norway as the third most gender-equal country in the world, and Sweden as the fourth. Since the countries are so similar, a reasonable assumption is that the variables that we study (whether the respondent knows anyone who has bought sex during the past six

months, and attitudes towards buying sex) would evolve in a similar way in both countries in the absence of a legal change. The identifying assumption we make is that, conditional on the observed individual characteristics, the change in average reporting of Norwegians (who did experience a legal change during the investigated period) would have been the same in absence of the new law as the change in average reporting during the same period in Sweden (where no such new law was implemented). Under this identifying assumption we can evaluate the causal impact of the reform. If the change in reporting would have been different in the two countries in the absence of the Norwegian criminalization this assumption is problematic. Since we do not have more than one wave of data from before the implementation of the law we cannot test this assumption, so care should be taken when making inference.

In Table 4 we present results for a linear probability model (results are very similar using probit or logit regressions instead). The coefficient of main interest is that for Norway*After, which captures the average effect of people who reside in the treatment area (Norway) in the post-reform period (Wave 2 and Wave 3). We see that the Norwegian law clearly had an impact on whether people knew someone who had bought sex during the last six months, both without controls (Column 1) and when controls are included (Column 2).

Table 4. Difference in differences estimation on knowing someone who has bought sex

VARIABLES	(1) Baseline	(2) Controls
Norway	0.063*** (0.010)	0.055*** (0.011)
Norway*After	-0.035*** (0.010)	-0.034*** (0.011)
Male		0.062*** (0.006)
Age		-0.001*** (0.000)
Capital		-0.007 (0.008)
High education		-0.020*** (0.007)
Low education		-0.018* (0.009)
High income		0.011 (0.015)
Low income		-0.012* (0.007)
Wave 1	-0.001 (0.006)	0.000 (0.006)
Wave 2	0.000 (0.005)	0.003 (0.005)
Constant	0.038*** (0.004)	0.071*** (0.014)
Observations	8,764	7,894
Individuals	5,292	4,776

Sweden is the excluded country. Robust standard errors in parentheses. *** p<0.01, ** p<0.05, * p<0.1

So far we have seen that people report buying more sex where it is legal to do so and they are also more likely to report knowing someone who has bought sex during the last six months when buying sex is legal. We also find that when the law changes, fewer people report knowing someone who has bought sex recently. An inherent problem with individual reporting in this setting is that the legal change may affect the reporting of individual actions. That is, there may be less willingness to report doing an activity if it is illegal than if it is not. However, the fact that we use an anonymous Internet survey should decrease this problem, in comparison with interviews or written surveys. Therefore, we believe that the

results point toward less demand for sex when it is illegal (hypothesis 3). The proposed mechanism for this change has been argued theoretically to be working via increased stigmatization (Della Giusta et al. 2008, 2009), and this view is shared by the Norwegian government, which wanted to change attitudes via the law in order to change demand (Holmström and Skilbrei 2008; Norwegian Ministry of Justice 2008; Skilbrei 2008). We will examine this claim more closely in what follows.

The necessary conditions for the mechanism to be valid are that moral attitudes (either at the individual level or at the societal level) affect the demand for buying sex and that the law affects individual attitudes. In Table 5, column 1, we see that societal attitudes toward prostitution are most negative in Sweden (the excluded category), less negative in Norway, and least negative in Denmark. In column 2 we furthermore show that individual attitudes are correlated with the propensity to buy sex. That is, individuals who think buying sex is immoral buy less sex. Furthermore, the difference between Sweden and Denmark in the propensity to buy sex is reduced by more than two-thirds once we control for individual attitudes as compared to the difference without controlling for attitudes and is no longer statistically significant (compare the coefficient on Denmark in Table 5 with the coefficient on Denmark in Table 3). The difference between Sweden and Norway is more than halved once individual level attitudes are controlled for. As can be seen in column 3, the situation is similar for knowing someone who has bought sex. Hence, there is clear support for the claim that attitudes matter (hypothesis 1), but the relationship need not be causal. Yet it is likely that if attitudes are affected, demand will change. The next question is: does the law affect attitudes toward prostitution (hypothesis 2)? This is examined in Table 6.

Table 5. Relationship between attitudes and buying sex

VARIABLES	(1) Immoral	(2) Bought	(3) Know
Norway	-0.533*** (0.065)	0.005* (0.003)	0.026*** (0.005)
Denmark	-1.963*** (0.082)	0.004 (0.003)	0.005 (0.006)
Immoral		-0.002*** (0.000)	-0.011*** (0.001)
Constant	7.482*** (0.045)		
Observations	10,853	6,145	10,836
R-squared	0.051		

Sweden is the excluded country. Robust standard errors in parentheses. *** p<0.01, ** p<0.05, * p<0.1. Column presents coefficients after a linear regression, and columns 2 and 3 presents marginal effects after a probit regression. Pooled regression over all three waves.

As we have information on attitudes in both Norway and Sweden, before and after the legal change in Norway we are able to apply a difference in differences estimation (as in Table 4) in investigating the effects of the legal change on attitudes towards buying sex in Norway. We find no indication that the law affected moral attitudes towards buying sex. Hence, while attitudes toward prostitution are important for demand, laws do not necessarily affect them (hypothesis 2). Laws do, however, seem to reduce demand anyway. The most likely channel is therefore that the risk of getting caught increases and that the punishment, either in terms of loss of reputation or the actual punishment, deters people from buying sex. It is important to note that even though the stigmatization of buying sex is higher in Sweden and even though it was not affected directly by the law, it is still high.

Table 6. Do laws affect attitudes, Difference in difference estimates

VARIABLES	(1) Immoral	(2) Immoral
Norway	-0.516*** (0.114)	-0.457*** (0.119)
Norway*After	-0.051 (0.100)	-0.0586 (0.106)
Male		-1.980*** (0.080)
Age		0.021*** (0.003)
Capital		0.032 (0.107)
High education		0.420*** (0.082)
Low education		0.249* (0.137)
High income		-0.242 (0.167)
Low income		0.172* (0.098)
Wave 1	-0.148** (0.069)	-0.168** (0.070)
Wave 2	-0.131** (0.059)	-0.157*** (0.061)
Constant	7.587*** (0.066)	7.386*** (0.187)
Observations	8,770	7,901
Individuals	5,295	4,779

Sweden is the excluded country. Robust standard errors in parentheses. *** $p < 0.01$, ** $p < 0.05$, * $p < 0.1$.

5 Conclusions

The present article contributes to the literature on prostitution by shedding light on the effects of the criminalization of buying sex on the amount of prostitution bought, as well as on the proposed theoretical mechanisms underlying this change. We find indications that criminalizing buying sex may decrease the quantity of sex bought (hypothesis 3). We also find that attitudes are important in explaining the difference between countries in the reported amount of sex bought (hypothesis 1). However, we do not find that attitudes are affected by the law (hypothesis 2). Therefore, the possibly reduced quantity of sex bought is

more likely due to the direct risk of getting caught. Stigma may still be important, however, and the level of stigmatization may have been at a sufficiently high level in Norway even before the law for the risk of getting caught to simply give the stigmatization an effective channel to affect reputation.

In order to generalize the results, a few caveats are necessary – especially since we might underestimate the effects of legal change. First of all, it is likely that laws affect the quantity of prostitution and attitudes more over longer time periods. It is therefore important to keep in mind that the results of this paper concern the short-run effects of laws on attitudes. Also, since we are unable to distinguish between any “direct effect” of the law and the effect attained via the media debate, a related issue is that the media discussion had started before the first wave of the survey was distributed. In addition, it was at this point clear that the law would be implemented. Both these factors are likely to add to the underestimation of the effects of the law reported in this paper.

A final caveat is that the legality of prostitution may affect the reporting of individual actions, without affecting the actions themselves. Although this should not be a major problem in an anonymous Internet survey – especially as our results about knowing someone who has bought sex point in the same direction – it is important to keep in mind while interpreting the results.

We suggest that further research should be undertaken to investigate the longer-run effects of laws on behavior and attitudes, and the effects of different types of laws and in different contexts. More research with a causal interest on the links between attitudes and behavior is also needed.

Acknowledgements We acknowledge funding for the conducted survey from Norwegian Social Research (NOVA), the Norwegian Justice Department, the Swedish Crime Victim Compensation and Support Authority, and Wilhelm and Martina Lundgrens Vetenskapsfond 1. We wish to thank seminar participants at Stockholm University, and Jon-Ivar Elstad for useful comments and suggestions.

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Appendix

Table A1. Variable description

Variable	Explanation
Bought	= 1 if the respondent reported to have bought sex during the past six months.
Know	= 1 if the respondent knows of an acquaintance who has bought sex during the past six months.
Immoral	Answer to the question <i>"In your opinion, is it morally acceptable or morally unacceptable to buy sex?"</i> ranging from 0 for <i>Totally morally acceptable</i> to 10 for <i>Totally morally unacceptable</i> .
Male	= 1 if respondent is male.
Age	respondent age.
Capital	= 1 if respondent lives in the capital city
High education	= 1 if respondent has at least some university education.
Low education	= 1 if respondent only has elementary education or less.
High income	= 1 if respondent earns >45,000 SEK per month, or >600,000 NOK per year.
Low income	= 1 if respondent earns <20,000 SEK per month, or <200,000 NOK per year.