

Quashing demand or changing clients? Evidence of criminalization of sex work in the United Kingdom

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Abstract

The use of regulation of sex work is undergoing sweeping changes across Europe and client criminalization is becoming very widespread, with conflicting claims about the intended and actual consequences of this policy. We discuss changes in demand for paid sex accompanying the criminalization of prostitution in the United Kingdom, which moved from a relatively permissive regime under the Wolfenden Report of 1960, to a much harder line of aiming to crack down on prostitution with the Prostitution (Public Places) Scotland Act 2007 and the Policing and Crime Act of 2009 in England and Wales. We make use of two waves of the British National Survey of Sexual Attitudes and Lifestyles (NATSAL2, conducted in 2000–2001 and NATSAL3, conducted in 2010–2012) to document the changes in both the amount of demand for paid sex and in the type of clients that have taken place across the two waves, and their possible implications for policies that frame prostitution as a form of crime.

JEL CLASSIFICATION

C35; J16; J22; K42

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1 | INTRODUCTION

The question of how to regulate prostitution and whether it is or not a criminal activity has long been debated and diverse agendas about gender equality, the regulation of sexuality, personal self-determination, state protectionism, public nuisance, and socioeconomic disparity are all reflected in legal and policy responses at national state level, as well as the very name the activity takes (Della Giusta, 2008; Scoular, 2010). The language of “prostitute” and “prostitution” is typically aligned with abolitionist perspectives that see the sale of sex as entailing women's exploitation and objectification, both by those who manage and create the opportunity for the sexual transaction as well as by those clients who make the purchase and maintain the demand. The language of “sex workers” and “sex work” has typically been preferred by those who emphasize women's agency in entering into commercial sex transactions (albeit under conditions of constraint) and who call for the regulation of the sale of sex as akin to the sale of nonsexual labor or services. We deliberately use the two terms interchangeably in our work, as taking positions in the ideological debate is not our scope (Weitzer, 2005 presents an excellent summary of the arguments of both sides). Whilst moral philosophers and sociologists have for some time engaged in debates on commodification, economists have traditionally kept to their consequentialist moral stance and focused on finding the best way to make “morally repugnant” transactions that have a benefit happen without eliciting such repugnance (Roth, 2007). Historical examples are the debates on blood donations and more recently reducing the repugnance itself through adequate institutional design (Elias et al., 2015). In the case of prostitution, it is interesting to note that the regulation is usually connected with democracy and economic and political rights for women, with the latter being associated with more permissive regimes towards non-organized forms of prostitution (Elias et al., 2017). It is also true, however, that countries that view prostitution as female exploitation have moved towards increasingly punitive legislation towards male clients, expecting to see a reduction in demand and consequently in supply, but there is a huge debate regarding their success.

Euchner and Knill (2015) have attempted to characterize the evolution of regulation of prostitution in Western Europe since the 1960s, and noted that whilst until the late 1990s national rules converged on the paradigm that they define of “permission without recognition” (prohibition of brothels and profit-oriented third party activity but allowing activity in flats and on streets), a marked change has since occurred with countries diverging substantially. Germany, the Netherlands and Greece have moved towards acknowledging prostitution as a regular job on one side, and Sweden, Norway, Finland, France, and Ireland have hardened their stance instead aiming to eradicate prostitution as a form of violence on the other side. In the first group of countries, the consideration of sex work as legitimate labor has led to shifting bans on outdoor and indoor prostitution subject to compliance with regulations (Netherlands since 2000, Germany since 2002). Sex workers are entitled to a number of employment-related protections under the law and local authorities required to ensure that brothels are suitably licensed and operating in accordance with relevant health and safety requirements. The abolitionist model, conversely, seeks to prohibit prostitution, facilitate exit, and punish clients and has applied in varying degrees in the United States and, more recently, Sweden, Norway, and Finland. In Sweden, it is an offense, punishable by a fine, or imprisonment for up to 6 months, to obtain a casual sexual relationship for payment. Both outdoor and indoor prostitution are prohibited, although only the clients will be criminalized. As a result, the spotlight here shines squarely on the purchaser of commercial sex, and on criminalizing his role in creating demand for the sex industry. A key rationale behind this is that prostitution is a central manifestation of

male violence against women, which in turn means that those who sell sex should not themselves be punished, since they are victims rather than criminals. True gender equality, it is argued, is attainable only when men are no longer permitted to buy, sell, and exploit women in prostitution, and the Swedish government has coupled this legislative initiative with a number of outreach programs designed to assist women who wish to leave the industry.

The effects of the different regulatory regimes on the extent of the market and the welfare of those involved have been widely studied, although the lack of reliable data is often mentioned as a significant obstacle. The sale of sexual services is an activity carried out by women, men, and transgender individuals mostly, although not exclusively, to cater for male demand and has been widely studied in the social sciences along a variety of dimensions including identity and rights, violence, immigration, trafficking drug abuse, HIV risks, and sex tourism (Bettio et al., 2017; Brewis & Linstead, 2000; Cunningham & Shah, 2016; Pheterson, 1995; Sánchez Taylor & O'Connell Davidson, 2010; Thorbek & Pattanaik, 2002). Supporters of the abolitionist approach cite its impact on demand, arguing that there has been a marked decline in the number of prostitutes working on Swedish streets, but there is also evidence that online prostitution has increased enormously and that there has been cross-border displacement too. One of the risks of abolitionism is that it may simply force relocation to less visible sites in which sex workers may be at increased risk of abuse, or drawn into a more competitive market in which they have to cut prices or offer riskier services to secure the business of a decreasing client base, and controversy rages over which effect has been prevalent in Sweden and neighboring countries, as reported in The Home Affairs Committee Prostitution Enquiry Report published in July 2016 (Home Office, 2016). An extensive meta-analysis of 40 quantitative and 94 qualitative studies published between 1990 and 2018 finds a positive association between repressive policing within frameworks of full or partial sex work criminalization—including the criminalization of clients and the organization of sex work—and adverse health outcomes (Platt et al., 2018). Research on sexually exploited trafficked women (Tommaso et al., 2009) shows that women who work in the streets are in some ways better off than sex workers in parlors, clubs, or hotels. Street workers enjoy more freedom of movement, suffer less physical and sexual abuse, and are more likely to have access to health services than women who work in parlors, clubs, or hotels. Agency is thus variable and it is critically affected by changes in regulation that move markets to less observable spaces. In the remainder of the paper we firstly discuss the role of stigma in prostitution, then we present policy predictions derived from a model of prostitution that includes stigma (henceforth the “stigma model” by Della Giusta, Di Tommaso, & Strøm, 2009) which suggests that increasing stigma will determine a change in the composition of clients towards those who are more risky for sex workers.

The evidence we bring indicates that the increased stigmatization of prostitution that has taken place in the United Kingdom over the period 2000–2012, during which prostitution was progressively criminalized, does not support the expectations of a significant reduction in demand as the policy intended and corresponds to a change in the type of clients that are observed through successive waves of the British National Survey of Sexual Attitudes and Lifestyles (NATSAL henceforth). We conclude that this provides further support for the idea that demand for sexual services might be inelastic to both the market price and the implicit price of stigma, whereby criminalization is not likely to be conducive to decreases in demand as is hoped for. Rather, it might jeopardize the working conditions and safety of existing prostitutes thus raising the welfare cost of abolitionism. Similar results to ours were found in the United States (in the opposite direction of course: Wakefield & Brents, 2020; Brents &

Hausbeck, 2001) and lend further support to the idea that stigmatization is a dangerous route to pursue.

2 | STIGMA AND PROSTITUTION

We exploit two NATSAL waves based on interviews in the period 2000–2001 (NATSAL2) and 2010–2012 (NATSAL3) and look for any changes in the extent and composition of demand that can be detected. Due to the limitations in the data, we are unable to use a diff-in-diff or other approaches allowing for a causal interpretation of our findings. However, by using before and after results from one of the few specialized and representative data sources on the demand of prostitution services available worldwide, we are able to provide suggestive evidence that can be used in further investigations of the treatment effect of criminalization on the demand for paid sex and should therefore be of interest to the larger body of science and policy regarding what we can learn from this policy change.

The literature has approached a number of issues related to both selling and buying sex: prices and supply characteristics (Cameron, 2002; Cameron et al., 1999; Edlund & Korn, 2002; Moffatt & Peters, 2001), demand determinants (Cameron & Collins, 2003), health risks and the effect of condom use on sex workers' earnings (Gertler et al., 2005; Rao et al., 2001), the evolution of paid sex markets and the ways in which urban spaces favor sexual transactions (Collins, 2004), the effect of men in transit on the demand for paid sex (Cunningham & Kendall, 2011), the connections with trafficking (Tommaso et al., 2009), the role of asymmetric information and transaction costs in bargaining over price and working conditions (Farmer & Horowitz, 2013; Hui, 2012; Satz, 2010).

Economic studies focusing on sex workers have engaged with compensation as partly reflecting compensation for social exclusion, risk (violence, disease, arrest, punishment), front loading in wage profile (informal pension scheme or insurance), boredom and physical effort, distaste (potential psychological and physical costs), loss of recreational sex pleasure, and anti-social and inconvenient hours. Economists have discussed prices, risks for both sex workers and clients, the role of taboos, and of agent fees (Arunachalam & Shah, 2013; Cameron, 2002). More controversially, the wages of sex workers have been described as “high” for a “low skill” occupation and explained by the loss of position in the marriage market (Arunachalam & Shah, 2008; Edlund & Korn, 2002).

Not many studies have focused on the demand side in great detail. However, existing studies of clients suggest that personal characteristics (personal and family background, self-perception, perceptions of women, sexual preferences), economic factors (education, income, work), as well as attitudes towards risk (health hazard and risk of being caught where sex work is illegal), lack of interest in conventional relationships, desire for variety in sexual acts or sexual partners, and viewing sex as a commodity, are all likely in different ways to affect demand. The connection between the effort and costs associated with finding a sexual partner who would readily satisfy their sexual preferences, and the straightforward and readily accessible option of sex work feature in motivations of male sex workers' clients in the United Kingdom (Campbell, 1998; Coy et al., 2007; Sanders, 2008), and in men and women clients in Australia (Pitts et al., 2004). Conservative views and viewing sex workers as socially inferior feature in accounts of clients in the West as in those of both female and male sex tourists (Marttila, 2003; Thorbek & Pattanaik, 2002; Sanchez Taylor Sánchez Taylor, 2001) and the phenomenon is obviously not limited to paid sex exchanges, being widely documented across a range of personal services

(see, e.g., Ehrenreich & Hochschild, 2003). The theme of inequality appears to be at the core of the relationship: prejudices that allow the stigmatization of another person as fundamentally “different” and inferior to oneself appear again and again in customers’ accounts (Ben-Israel & Levenkron, 2005; Blanchard, 1994; Kern, 2000; Pitts et al., 2004). Significantly, neither this research on Australia, nor our work on the United States (Della Giusta, Di Tommaso, Shima, & Strøm, 2009) found significant differences between men who had paid for sex and those who had not, but these were selected samples. When analyzing representative samples of the population which contain both clients and non-clients differences begin to emerge (Cunningham & Shah, 2016), and one can see clearly that sociodemographics, degree of conservatism and risk attitudes all play an important role in identifying demand.

3 | CRIMINALIZING PROSTITUTION IN THE UNITED KINGDOM

The United Kingdom has moved from a relatively permissive regime under the Wolfenden Committee Report in the late 1950s, according to which prostitution itself was not illegal, although many of the activities that facilitate it or flow from both its street and off-street manifestations (including soliciting, kerb-crawling, controlling prostitution for gain, etc.) were criminalized, to a much harder line of aiming to crack down on prostitution with the Policing and Crime Act of 2009. As discussed in Della Giusta (2008) and Della Giusta, Di Tommaso, and Strøm (2009), the regulatory framework within which prostitution takes place in England and Wales has undergone significant changes in recent years and taken a decisively abolitionist turn, as the Swedish approach became popular with British policy makers. In 2004, the government conducted the paying the price consultation and the resulting legislation sought to introduce a markedly more negative stance towards the industry and clients in particular, and a view of sex workers as essentially victims. The Home Office prostitution Strategy for England and Wales (2006) contained as a key element “tackling demand,” which was seen alongside “reducing supply” as crucial to eradicating street prostitution and challenging the view that street prostitution is inevitable. The strategy formally endorsed measures such as prosecutions under the kerb crawling legislation, local media campaigns including “naming and shaming” and “kerb crawler re-education programs.” The strategy also gave room to the implementation, in several parts of the country, of a raft of prosecution for kerb crawling offenses, under the Sexual Offences Act 1985. The Criminal Justice and Police Act 2001 strengthened the previous regulation and made the offense arrestable, giving the courts the power to disqualify drivers. Similarly, in October 2007, the policing Minister in Northern Ireland announced that kerb crawling would be introduced into law as a specific offense. In Scotland, the Prostitution (Public Places) Scotland Act 2007 came into force in October 2007; it criminalized “loitering or soliciting in any public place for the purpose of obtaining the services of someone engaged in prostitution.” Finally, the Policing and Crime Act of 2009 includes a number of provisions including criminalization of soliciting and making it illegal to pay for services from a prostitute whom a third person has subjected to force, threats, coercion, or deception to perform those services, irrespective of whether the customer knew or could have known about this exploitation and of the country where the sexual services are provided. Campaigning is now calling for paying for sex to be made a crime. The policy emphasizes the harms that are deemed to be inherent in prostitution and insists that those who sell sex should be seen primarily as victims—unless and until they fall foul of this categorization by refusing assistance to “exit” and opting instead

(whether by choice or circumstance) to continue to sell sex. In addition, it is based on the abolitionist conviction that reduction of women's involvement in sex work can be achieved by stricter enforcement of kerb-crawling laws that target clients.

The effects on sex workers have been very significant: Della Giusta (2008) illustrate the implications of this shift for the rights, safety, and working conditions of sex workers and the increase in their stigmatization. Here we want to see what has happened to the officially intended target of the policy, that is demand. Specifically, we investigate whether

- i. The level of demand decreased significantly following the policy changes between 2006 and 2009.
- ii. The composition of demand changed towards clients with a more risky profile for the sex workers.

In the stigma model, criminalization increases the (implicit) price of stigma, shifting the composition of clients in favor of those with the highest reputational capacity who stand to lose less if found out. Concerning demand, criminalization may reduce the quantity of prostitution sold as well as the equilibrium price by reducing the marginal willingness to pay for sex. However, the final impact on demand crucially depends on the proportion of risky versus non-risky clients and their respective demand elasticity with regard to stigma. If risky clients prevail in the market, and aggregate elasticity with respect to stigma is low, demand will be relatively insensitive to criminalization.

4 | CRIMINALIZING PROSTITUTION IN THE UNITED KINGDOM: CHANGES IN DEMAND

The National Surveys of Sexual Attitudes and Lifestyles (“NATSAL”) are stratified probability sample surveys of the general population, resident in Britain. There have been three NATSAL in 1990, 2000, and 2010, conducted by UCL in partnership with the National Centre for Social Research and the London School of Hygiene and Tropical Medicine. The first NATSAL survey, conducted 1990–1991, was one of the largest of its kind internationally: 18,876 men and women aged 16–59 years were interviewed for “NATSAL1,” with results published in “Sexual Attitudes and Lifestyles” (Johnson et al., 1994). A second NATSAL survey was conducted in 1999–2001 (“NATSAL2”): 11,161 people aged 16–44 years were interviewed as a “core” sample, and an additional 949 people of Black African, Black Caribbean, Indian, and Pakistani ethnicity interviewed as part of an ethnic minority boost sample (National Centre for Social Research et al., 2005). The third NATSAL survey (“NATSAL3”) was conducted in 2010–2012. More than 15,000 people aged 16–74 years were interviewed. We make use of the sample aged 25–44 for both NATSAL2 and NATSAL3, given that NATSAL2 had an upper age limit of 44. We focus on respondents aged 25+ as they should have finished their education. Respondents are asked if they have ever paid for sex (homosexual or heterosexual) and asked when they last paid for sex, grouped into: the last year, in the last 5 years, and longer than 5 years ago. We divide those who have ever paid sex into experimenters (only ever paid for sex with one partner) and regulars (paid for sex with more than one partner). For the age range, we have sample size of 3523 for NATSAL2 and 2149 for NATSAL3. The sample size is larger for NATSAL2 due to the fact that only those aged 16–44 were interviewed, whilst NATSAL 3 asked those aged 16–74.

TABLE 1 Demand for paid sexual partners in NATSAL2 and NATSAL3: Descriptive statistics

Variable	NATSAL2 (partners)			NATSAL3 (partners)		
	None	One	Many	None	One	Many
Age group						
25–34	0.51	0.55	0.45	0.65	0.75	0.59
35–44	0.49	0.45	0.55	0.35	0.25	0.41
Marital status						
Currently married	0.48	0.37	0.37	0.42	0.35	0.37
Currently cohabiting	0.16	0.14	0.09	0.22	0.10	0.15
Previously married/cohabiting	0.23	0.33	0.33	0.21	0.32	0.31
Single and never married	0.14	0.16	0.22	0.16	0.22	0.18
Number of natural children (incl. stillborn and died)	1.20	0.87	0.87	0.91	0.70	0.87
White	0.85	0.84	0.79	0.87	0.85	0.83
exams2						
Degree	0.27	0.28	0.33	0.35	0.31	0.28
A level	0.11	0.17	0.15	0.14	0.16	0.15
O-level	0.43	0.40	0.39	0.41	0.42	0.43
None	0.18	0.15	0.13	0.10	0.10	0.14
Social economic background						
Managers and senior officials	0.19	0.18	0.21	0.15	0.14	0.16
Professional	0.12	0.07	0.12	0.14	0.08	0.08
Associate professional/administration	0.19	0.24	0.21	0.21	0.27	0.23
Skilled trade	0.20	0.21	0.17	0.17	0.22	0.20
elementary, process, service, and never worked	0.31	0.29	0.30	0.33	0.30	0.33
Religious	0.44	0.48	0.45	0.38	0.41	0.44
Sex between two men mostly/always wrong	0.54	0.53	0.53	0.54	0.34	0.39
One-night stands mostly/always wrong	0.38	0.23	0.20	0.35	0.27	0.23
Adultery whilst married mostly/always wrong	0.81	0.76	0.75	0.88	0.80	0.75
Alcohol						
None	0.12	0.13	0.12	0.20	0.17	0.14
Low	0.74	0.70	0.67	0.72	0.73	0.71
Moderate/high	0.13	0.18	0.21	0.08	0.10	0.15
Smoking						
Non-smoker	0.46	0.37	0.39	0.50	0.33	0.39
Ex-smoker	0.17	0.11	0.23	0.19	0.27	0.16
Light smoker	0.18	0.24	0.19	0.21	0.29	0.26
Heavy smoker	0.20	0.28	0.20	0.11	0.11	0.18
Unsafe sex in last year	0.10	0.21	0.27	0.06	0.07	0.11
Ever injected drugs	0.03	0.04	0.07	0.02	0.06	0.04

(Continues)

TABLE 1 (Continued)

Variable	NATSAL2 (partners)			NATSAL3 (partners)		
	None	One	Many	None	One	Many
Age first had intercourse						
13–15	0.25	0.33	0.35	0.27	0.34	0.43
16–17	0.39	0.39	0.28	0.36	0.40	0.31
18–19	0.20	0.17	0.21	0.21	0.19	0.18
20+	0.16	0.11	0.16	0.16	0.07	0.08
Region						
North	0.21	0.20	0.19	0.28	0.21	0.29
Midlands	0.15	0.15	0.13	0.18	0.11	0.12
Eastern	0.07	0.06	0.05	0.10	0.11	0.08
London	0.26	0.36	0.41	0.10	0.21	0.15
South East	0.12	0.11	0.07	0.12	0.15	0.14
South West	0.07	0.04	0.09	0.09	0.08	0.06
Wales	0.04	0.03	0.02	0.04	0.03	0.06
Scotland	0.08	0.05	0.04	0.08	0.10	0.10
No of obs.	3,079	187	257	1,852	105	190

Weights are provided for unequal selection probability, and we make use of these where possible as robustness checks (Table 1).

We run separate models for NATSAL2 and NATSAL3 as the sampling methods were different and the sample age ranges were different (although we do restrict the sample age range for NATSAL3). We want to exploit the policy change in 2009—however, since the policy change was universal we do not have a control group who did not experience the policy change and hence cannot use a difference-in-differences approach. We therefore compare behavior before and after the policy change using NATSAL2 prior to the policy change, and NATSAL3 after the policy change. We also in some cases compare the 25–44 NATSAL2 sample with a sample of men aged 35–54 (so the same age cohort from 2000–2001) in NATSAL3 (sample size 1478). Finally, we use two different questions, respectively having ever paid for sex and having paid in the last 5 years. While the last 5 years are clearly more informative for investigating the policy changes under examination, this considerably restricts the subsample of clients since the proportion of paying individuals practically halves when recent years are compared to the whole lifetime. Given the trade-off between informativeness and numerosity, we consider both time intervals.

Adjusting means for the sample weights (so our estimates are representative of the U.K. population), the proportion of men (aged 25–44) reporting having ever paid for sex was 12.60% (weighted 10.92) in NATSAL2, and 13.82% (weighted 13.05%) in NATSAL3 (Table 2). Little more than 5% of men aged 25–44 (6.07%, weighted 4.65%) had paid in the last 5 years in NATSAL2, 5.35% (weighted 4.58%) in NATSAL3 (Table 3). Simple *t* tests between means indicate no conventionally significant change in demand for this age group whether we look at the entire life or at the 5 years preceding the survey.

TABLE 2 Demand changes in NATSAL: Ever paid for sex

	NATSAL2 25–44	NATSAL3 25–44	NATSAL3 35–54	NATSAL3 25+
Number of observations	3,523	2,149	1,268	4,119
% Ever paid for sex	12.60	13.82	14.21	13.50
Weighted % ever paid for sex	10.92	13.05	12.99	12.73
Number ever paid for sex	444	297	210	556
One tailed <i>t</i> -test of NATSAL2 and NATSAL3 diff				
<i>t</i> -stat		–1.3074	–1.505	
<i>p</i> -value		.0956	.0662	

Note: The 35–54 *t*-test compares the 25–44 in NATSAL2.

TABLE 3 Demand changes in NATSAL: Paid for sex in last 5 years

	NATSAL2 25–44	NATSAL3 25–44	NATSAL3 35–54	NATSAL3 25+
Obs	3,523	2,149	1,268	4,119
% Paid for sex	6.07	5.35	4.33	4.49
Weighted % paid for sex	4.65	4.58	3.57	3.81
<i>N</i> paid for sex	214	115	64	185
One tailed <i>t</i> -test of NATSAL2 and NATSAL3 diff				
<i>t</i> -stat		1.1464	2.6221	
<i>p</i> -value		.1258	.0044	

Note: The 35–54 *t*-test compares the 25–44 in NATSAL2.

If we concentrate on men aged 35–54 in NATSAL3 and on the latest 5 years, the share of paying individuals went down from 5.35% (weighted 4.58%) to 4.33% (weighted 3.57%), so the recent demand for this cohort has decreased, and the decrease is statistically significant. However, it is not possible to say if this is due to the policy or an aging effect. The opposite holds if we consider the entire lifetime, although the increase that is recorded in this case does not reach conventional statistical significance. On balance all this suggests that demand hardly changed.

We now want to specifically see if clients have changed between waves, and to do this we separate clients in the three groups of those who have never paid for sex, those who have had just one paid partner, and those who have had several paid partners. To investigate the roles of education and stigma, the substitution between paid and unpaid sex, and the effect of attitudes and risky behaviors on demand we include among our dependent variables: age dummies, current marital status (currently married, currently cohabiting, previously married/cohabiting), number of natural children (including stillborn and children who have died), ethnicity (white vs. non-white), education (degree, A-level, O-level, or none), socioeconomic background (using the 2000 occupational definition for consistency between NATSAL2 and NATSAL3), whether religious, whether have conservative views (sex between two men is always/mostly wrong; one-

TABLE 4 Non clients, one paid partner, many paid partners: Average marginal effects after multinomial probit (unweighted data)

	NATSAL 2			NATSAL3		
	Never	One	Many	Never	One	Many
Age group (ref: 25–34)						
Aged 35–44	–0.044*** [0.012]	0.004 [0.008]	0.040*** [0.009]	–0.019 [0.017]	–0.019* [0.011]	0.039*** [0.014]
Marital status (single and never married/cohabiting)						
Currently married	0.022 [0.018]	0.003 [0.013]	–0.025* [0.014]	0.022 [0.023]	–0.013 [0.015]	–0.009 [0.020]
Currently cohabiting	0.058*** [0.021]	–0.003 [0.014]	–0.055*** [0.017]	0.084*** [0.026]	–0.050*** [0.017]	–0.034 [0.021]
Previously married/cohabiting	0.006 [0.017]	0.010 [0.012]	–0.015 [0.013]	–0.003 [0.023]	0.001 [0.014]	0.002 [0.019]
Number of natural children (incl. stillborn and died)	0.017*** [0.006]	–0.008* [0.004]	–0.009** [0.004]	0.014* [0.008]	–0.005 [0.005]	–0.009 [0.007]
White	0.015 [0.017]	0.009 [0.012]	–0.024* [0.013]	0.051** [0.024]	–0.006 [0.015]	–0.045** [0.020]
Highest qualification (ref: None)						
Degree	–0.054*** [0.021]	0.021 [0.014]	0.033** [0.016]	0.020 [0.029]	0.000 [0.019]	–0.020 [0.024]
A-level or equiv.	–0.072*** [0.021]	0.033** [0.014]	0.039** [0.017]	0.000 [0.030]	0.005 [0.020]	–0.005 [0.025]
O-level or equivalent	–0.033* [0.017]	0.011 [0.012]	0.022 [0.013]	0.002 [0.025]	0.006 [0.016]	–0.008 [0.020]

TABLE 4 (Continued)

	NATSAL 2		NATSAL3			
	Never	One	Many	Never	One	Many
Socioeconomic class (ref: elementary, process, service, and never worked)						
Managers and senior officials	0.002 [0.017]	-0.004 [0.012]	0.003 [0.013]	-0.024 [0.024]	0.001 [0.016]	0.022 [0.020]
Professional	0.027 [0.022]	-0.018 [0.016]	-0.009 [0.017]	0.016 [0.029]	-0.009 [0.019]	-0.007 [0.025]
Associate professional/administration	-0.005 [0.017]	0.010 [0.011]	-0.004 [0.013]	-0.032 [0.021]	0.015 [0.013]	0.017 [0.018]
Skilled trade	0.000 [0.016]	0.007 [0.011]	-0.007 [0.013]	-0.035 [0.021]	0.017 [0.013]	0.018 [0.018]
Conservative opinions						
Religious	-0.020* [0.012]	0.016** [0.008]	0.003 [0.009]	-0.035** [0.016]	0.007 [0.010]	0.028** [0.013]
Sex between two men mostly/always wrong	-0.019 [0.012]	0.007 [0.008]	0.012 [0.009]	-0.001 [0.016]	-0.010 [0.011]	0.011 [0.013]
One-night stands mostly/always wrong	0.078*** [0.013]	-0.027*** [0.009]	-0.051*** [0.011]	0.034** [0.017]	-0.002 [0.011]	-0.033** [0.014]
Adultery whilst married mostly/always wrong	0.009 [0.013]	-0.006 [0.009]	-0.003 [0.010]	0.071*** [0.019]	-0.018 [0.012]	-0.053*** [0.015]
Risky behavior						
Average weekly alcohol consumption (ref: none)						
Low	0.024 [0.018]	-0.015 [0.012]	-0.009 [0.014]	-0.043** [0.020]	0.004 [0.013]	0.040** [0.017]

(Continues)

TABLE 4 (Continued)

	NATSAL 2			NATSAL3		
	No. partners					
	Never	One	Many	Never	One	Many
Moderate/high	-0.006 [0.022]	-0.012 [0.015]	0.018 [0.017]	-0.081*** [0.029]	0.004 [0.019]	0.077*** [0.024]
Smoking (ref: never smoked)						
Ex-smoker	-0.009 [0.016]	-0.017 [0.012]	0.026** [0.012]	-0.018 [0.020]	0.031** [0.012]	-0.013 [0.017]
Light smoker	-0.018 [0.015]	0.016 [0.010]	0.002 [0.012]	-0.036* [0.019]	0.020 [0.012]	0.016 [0.016]
Heavy smoker	-0.031** [0.015]	0.025** [0.010]	0.006 [0.012]	-0.048** [0.024]	0.011 [0.016]	0.037** [0.019]
Unsafe sex in last year	-0.095*** [0.015]	0.030*** [0.010]	0.065*** [0.011]	-0.013 [0.027]	-0.009 [0.019]	0.022 [0.021]
Ever injected drugs	-0.044* [0.026]	0.000 [0.019]	0.044** [0.019]	-0.064 [0.039]	0.037* [0.023]	0.026 [0.033]
Age first had intercourse (ref: 16–17)						
Aged 13–15	-0.051*** [0.014]	0.007 [0.009]	0.044*** [0.011]	-0.050*** [0.018]	0.007 [0.011]	0.043*** [0.015]
Aged 18–19	-0.005 [0.016]	-0.013 [0.011]	0.018 [0.012]	0.006 [0.021]	-0.008 [0.013]	0.002 [0.017]
Aged 20+	-0.010 [0.018]	-0.016 [0.013]	0.027* [0.014]	0.066** [0.027]	-0.037** [0.018]	-0.029 [0.023]

TABLE 4 (Continued)

	NATSAL 2			NATSAL3		
	No. partners					
	Never	One	Many	Never	One	Many
Region (ref: North and Yorkshire)						
Midlands	0.000 [0.019]	0.004 [0.013]	-0.004 [0.015]	0.030 [0.024]	0.000 [0.016]	-0.031 [0.020]
East	0.011 [0.025]	0.003 [0.017]	-0.014 [0.020]	-0.001 [0.027]	0.021 [0.017]	-0.020 [0.023]
London	-0.030* [0.016]	0.013 [0.011]	0.017 [0.013]	-0.055** [0.025]	0.039** [0.016]	0.016 [0.021]
South East	0.028 [0.021]	-0.001 [0.014]	-0.027 [0.017]	-0.038 [0.024]	0.027* [0.015]	0.011 [0.020]
South West	-0.003 [0.024]	-0.020 [0.018]	0.023 [0.018]	0.007 [0.030]	0.018 [0.019]	-0.024 [0.026]
Wales	0.049 [0.033]	-0.009 [0.022]	-0.040 [0.028]	-0.027 [0.036]	-0.004 [0.027]	0.031 [0.028]
Scotland	0.047* [0.026]	-0.018 [0.018]	-0.029 [0.021]	-0.039 [0.028]	0.023 [0.018]	0.016 [0.023]
Observations	3,523	3,523	3,523	2,147	2,147	2,147
Log likelihood	-1499	-1499	-1499	-965.3	-965.3	-965.3
LR Chi ²	249.1	249.1	249.1	157.3	157.3	157.3

Note: Standard errors in brackets.
 *** $p < .01$. ** $p < .05$. * $p < .1$.

night stands are always/mostly wrong; adultery whilst married is always/mostly wrong), alcohol consumption (none, low, moderate/high), smoking (nonsmoker, ex-smoker, light smoker, heavy smoker), whether had unsafe sex in last year, whether ever inject drugs, age first had intercourse (those who have never had sex are omitted-126 in NATSAL2 and 74 in NATSAL3), and region (North East and North West combined with Yorkshire, West and East Midlands combined). Table 4 presents a multinomial probit model of client types, with average marginal effects (an average across marginal effects for each individual) on the probability of having ever paid for sex, which provide the effect of a change in an explanatory variable on each of the categories.

Clients after the policy change are more likely (as compared to NATSAL2) to have many partners, be older, religious, consume alcohol, and to have had intercourse at a younger age. Those who have just paid for one partner are fewer, not cohabiting, more likely to be ex-smokers and more likely to be in London.

The multinomial estimation was repeated for clients having paid for sex in the 5 years prior to the survey (after assigning individuals having paid for sex only earlier to the “never” category). Results are weaker but broadly consistent with those referring to the “ever paid” clients, which is hardly surprisingly given the drop in numbers. We report these results in the online Appendix (Table S3) alongside two additional tables. Table S1 shows marginal changes for demand measured by “whether paid for sex in last five years,” comparing NATSAL2 and 3 for the age range 25–44 and also NATSAL3 restricted to the 25+, NATSAL3 with income (which was sadly not included in NATSAL2) and NATSAL3 for the 34–54 sample (those who were therefore 25–44 at the time of NATSAL2). Finally, Table S2 reports weighted results for robustness (results are not altered), presenting the means of our variables by client type to assess changes in relative proportions within each wave.

All in all, although of course we cannot establish causal links we can certainly observe that after the policy changes culminating in 2009 demand has not changed significantly, and the profile of clients has changed to one who paid for many partners, that also have a risky profile that raises concerns (alcohol use and intercourse at early age), and has been discussed in the context of public health in Jones et al. (2014).

5 | CONCLUSIONS

As economists, we believe that public policy ought to be based on relative welfare considerations. In other words, under which arrangements are the actors, and the public, better off? As more countries follow the model of criminalization it will become possible to have a more careful assessment of its effects on welfare, but the case for it is certainly not clear cut. Criminalization typically hopes to quash demand, but the evidence is mixed, and ours, though not causal, not supportive.

Poor responsiveness of demand to deterrence—in our case criminalization of clients—is contemplated by different theoretical approaches but leads to similar policy indications. In the stigma model we used for our investigation, the final impact of criminalization on demand may be modest, if negative, depending on the distribution of clients with respect to risk and the resulting, aggregate elasticity of price with respect to stigma.

According to Loewenstein (Loewenstein, 1996; Loewenstein, 2000), so called “visceral factors” may be responsible for poor responsiveness to deterrence of the supply of acts made illegal—buying sex in our case. Loewenstein has long drawn economists’ attention to the

influence on behavior of “visceral” factors, namely immediate emotional experiences such as anger, fear, thirst, hunger, or sexual desire. The author argues that such factors have been traditionally discounted by economists, but in “hot” states, where visceral factors are operative, individuals “who otherwise display ‘normal’ decision-making behavior... behave in ways that give the appearance of extreme discounting of the future” (Loewenstein, 2000, p. 430, quoted by Cawley & Ruhm, 2011, p. 62). Ghasemi (2015) reviews 15 empirical studies on differential responsiveness to deterrence and finds confirmation that the response is significantly weaker for “crimes” where visceral factors play a stronger role. In the studies reviewed by Ghasemi, the crimes seen to be more affected by visceral factors are murder and assault (versus, say, property crimes) but buying sex would also fit this category. The author argues that in these cases prevention, not deterrence should be considered by policy makers.

Becker’s rather different theoretical framework leads to not too dissimilar suggestions. In his original model on crime and punishment (Becker, 1968), sensitivity of crime supply to deterrence is captured by two elasticities respectively measuring how the amount of punishment and the probability of apprehension (and conviction) vary in response to variations in the number of offenses. If the supply of crime is inelastic in both respects, deterrence will not maximize social welfare. In the case of criminalization of prostitution, this obtains if risky clients of prostitution have a low elasticity to the amount of punishment and/or try to reduce the risk of apprehension and conviction by moving to secluded locations.

Becker returns to the same point with a later model, co-authored with Grossman and Murphy (Becker et al., 2006) where the government optimizes expenditure to curb supplies of illegal goods and services by maximizing a welfare function that depends on the difference between the social and private values of consumption of the goods made illegal. In the model, optimal expenditure also depends on the elasticity of demand for these goods, and the implication is that, if demand is inelastic, it does not pay to make goods illegal, unless important, negative externalities make their social value negative. Using this argument and producing evidence of low demand elasticity, Cunningham and Finlay (2015) recently questioned the effectiveness of interventions aimed at methamphetamine input markets.

In this line of reasoning it would still pay to make goods illegal if important negative externalities were involved, and in the case of prostitution, violence might be seen as one such externality. We would argue, however, that violence may increase with criminalization, not the opposite. Sex workers, or prostitutes, face risks to their health, risks of violent assault, and risk of fraud (not getting paid for their services). Clients face also health risks, reputational risks and, where prostitution occurs in criminal environments, risks of violence too. These risks are going to be higher where prostitution is criminalized, partly because criminalization makes collaboration with both medical personnel and law enforcement more difficult. Criminalization of sex work also makes the detection of under-age or trafficked people more difficult. For both clients and for sex workers, demand-side and supply-side, criminalization pushes the market into secluded and, for the workers, isolating places. Flats, clubs and massage parlors are more separate from the rest of society. The welfare of sexually trafficked women decreases in these dangerous environments. Our analysis of the move towards criminalization in the United Kingdom suggests that this has not decreased demand and possibly changed the profile of clients in ways that may worry those who are concerned about the welfare of prostitutes as well as public health. By and large, clients of sex workers tend to be risk-takers. There is a high correlation between paying for sex and engaging in other risky behaviors. To some of these men, criminalized prostitution is actually more attractive than decriminalized or legal sex work, and these are not the ones we necessarily want to encourage.

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