

A Reanalysis of the Equality Model in Northern Ireland

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Home / News / Northern Ireland Plan 'would not help sex workers' Belfast Telegraph News Opinion Business Sport Life Entertain. Home / Opinion / Analysis Criminalising sex work does more harm than good With Lord Morrow's Human Trafficking Bill before the Assembly, Paul Maginn and Graham Ellison argue that prohibition is not the answer Thu 17 Jan 2013 at 00:00 Belfast Telegraph News Opinion Business Sport Life Entertainment Home / News / Northern Ireland () 🕑 E Criminalising people who pay for sex won't ^{ational} political and moral help anti-trafficking fight, says police chief Belfast Telegraph News Opinion Business Sport Life Entertainn Stormont should adopt Germany's prostitution laws - where the sex trade is completely legal – in a bid to help stop human trafficking, a leading criminologist has proposed. Dr Graham Ellison was reacting to Lord Morrow's Private Member's Bill which rnational political and moral Life Entertain Only one way to beat human trafficking: B is textbook example of spin over substanc Belfast Telegraph

By Liam Clarke Wed 4 Sep 2013 at 17:30

Belfast Telegraph News Opinion Business Life Sport

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Prostitution crackdown in Northern Ir 'will put sex workers at higher risk'

Sources: From upper left, moving clockwise: Belfast Telegraph, dates: Oct., 16, 2014, Jan. 17, 2013, Oct. 22, 2014, Oct., 22, 2014, Jan. 17, 2013, Aug., 27, 2013, Sep.4, 2013

Summary

Trends

- Northern Ireland banned the purchase of sex in 2015.
- In Northern Ireland, there was a 50% reduction in people engaging in street prostitution after the ban on the purchase of sex and no identified increase in trafficking.
- A Northern Ireland DOJ-sponsored report was extensively cited in the media as having concluded that there was a 5% increase in commercial sex advertisements after the implementation of the legislation.
- However, this data was aggregated into uneven pre-legislation, 1st January 2012 - 31st May 2015 (1,246 days) and post-legislation, 1st June 2015 - 31st December 2018, (1,309 days) groups. Adjusting for these significant discrepancies, the daily rate of advertisements was lower post-legislation.
- This reanalysis identified a 28.5% reduction in the rate of commercial sex advertisements from pre-legislation (2014) to post-legislation (2017) and a 10.3% decrease in unique people advertised for sex on the most popular commercial sex website in Northern Ireland.
- Major commercial sex websites, including Craigslist and Backpage, which hosted 38% of all advertisements in 2014 were disbanded in early 2018. This likely created a displacement to other platforms, a phenomenon that has been seen in numerous other industries. This would account for the 4.8% increase in unique women observed on the Escort Ireland website in the NI DOJ-sponsored report in 2018.

Survey data

- This Department of Justice (DOJ)-commissioned report relied on survey data sourced from a sample of sex purchasers, and a sample of "online sex workers" to inform pivotal conclusions.
- There was significant selection bias in the surveys.
- Given the high percent of missing data in many survey questions, the method of omitting missing data and presenting results as a percentage of respondents who endorsed each question, rather than as a percentage of the total sample, further compromised the reliability of the findings.
- The report claims 93% of online sex workers were never victims of human trafficking. However, the figure represents only those who responded to that question. In the total sample, we can estimate that only 77.3% endorsed never being victims of human trafficking.
- Accounting for missing data, an estimated 35% of the entire sample responded affirmatively to the claim that they did not have a reduction in purchasing behavior. This is much different than the reported 53.5%.

Claims of Violence

- An unofficial online "sex worker" safety app claimed to receive more incident reports after the ban on the purchase of sex than before it.
- This has been used to undermine the ban of the purchase of sex globally.
- Public statements and press releases document that the app appears to have up to 5,892 more stated users than there are people engaging in prostitution in Northern Ireland and Republic of Ireland combined
- This same app database is used to conclude that nuisance crimes among people in prostitution increased after the legislation in Northern Ireland. However, data sourced from the Police Service Northern Ireland show that in these same years, harassment in the general population of Northern Ireland increased from 3,607 to 5,266 (46.0% increase), blackmail increased from 77 to 287 (272.73%), making off without a payment increased from 1,675 to 3,990 (138.2%), and possession of controlled substances increased from 1,420 to 2,059 (45%).

Introduction

Political decisions to legalize or criminalize prostitution would ideally be determined by comparing outcomes observed under various policies. However, in the case of prostitution, comparing relevant data for policy analysis has proven challenging due to the subjective nature of many salient outcome measures chosen in previous research (e.g., perceptions of "stigma"; Hammond & Kingston, 2014, Benoit et al., 2018, Siegel et al., 2022) or "harm" and the hidden nature of the sex trade itself.

One attempt to measure such outcomes was undertaken in Northern Ireland (NI) in a set of Department of Justice-sponsored studies conducted before and after the June 1, 2015 adoption of Article 64A in the Human Trafficking and Exploitation, Criminal Justice and Support for Victims, Act (Ellison et al., 2019; Huschke et al., 2014). The new law ratified an Equality Model-type partial decriminalization of prostitution (in this text simply referred to as *the Equality Model*),¹ in which buying sex, pimping,² and brothel-keeping was criminalized while selling sex was decriminalized.

In this paper, I contend that opponents of the Equality Model are using limited evaluations and assessments of the policy's performance in Northern Ireland to advocate full decriminalization. The potential implications of a recurring problem of surveys with large item non responses that grounded pivotal conclusions about prostitution policies will be reviewed. Highly-cited reports of increased rates of "incidents" and violence originating from UglyMugs.ie (UM),³ a safety app for "sex workers,"⁴ will be contextualized with government crime statistics over the same time period.

I review how the aggregation of administrative data from one of the most popular commercial sex websites in NI into unbalanced pre-legislation and post-legislation groups (Ellison et al. 2019, p. 85), created an artifactually-inflated appearance of commercial sex advertisements post-legislation. I further review how comparisons between unadjusted baseline indicators of the sex industry in 2014 (advertisements and estimates of unique people in prostitution) vs. unadjusted counts in 2019 were not explicitly made, which incorrectly made it appear as though there was no change in the unique people in prostitution overall. I next explore these same study findings *as reported publicly*, tracing a cascade of media misreadings which in turn appear to have had significant political influence (Human Rights Watch, 2023, ACLU, n.d.).

¹ Also referred to as the Nordic Model, End Demand Model, or partial decriminalization

² Defined as profiting from another's prostitution and possibly controlling or arranging clients for them.

³ Ugly Mugs and Escort Ireland operate in both the Republic of Ireland and Northern Ireland. Assessments have concluded prostitution in Ireland is organized and operates across the border (O'Connor, Breslin, 2020, p. 20). Ugly Mugs Ireland is not to be confused with National Ugly Mugs, which was established by the UK Home Office (Ellison et al. 2019, p. 136)

⁴ Sex work is typically a broad umbrella term for a person with any sexualized job, including webcam models, exotic dancers, dominatrixes, phone sex operators, models, and people in prostitution. It is also sometimes used as a euphemism for prostitution.

As this paper will show, a detailed review of original data indicates that the scale of the sex trade has reduced dramatically under the Equality Model.

Policy framework

The Equality Model seeks to protect and empower people in prostitution by decriminalizing the sale of sex and by enhancing social support and exit services. This allows for people in prostitution to rebuild confidence in law enforcement and to report abuse without fear of arrest. Simultaneously, this framework aims to dampen demand for commercial sex and human trafficking, and punish perpetrators of abuse by criminalizing purchasing sex, pimping, and brothel-keeping. The facilitation of prostitution is seen as exploitative and inconsistent with greater ideals of gender, racial, and economic equality, as people being purchased in prostitution are overwhelmingly female, migrant, or low-income. Under this framework, prostitution offenses have been designated as serious sex crimes, a form of violence against women, and sexual exploitation (Republic of Ireland Department of Justice, 2022). This stands in sharp contrast to prostitution legalization and decriminalization frameworks, which normalize the purchase of sex, treat purchasers of sex as valued clients, and pimps and brothel-keepers as respected managers and business owners.

Table 1

Rates of People in Prostitution by Legislative Framework

Country	Policy	Number of People in Prostitution	Measurement Year	Country Population⁵	People in Prostitution per 100,000
Sweden	Equality Model (1998)	~650 - 1,500	2006-2014	9,760,142	6.65 - 15.4
Republic of Ireland	Equality Model (2017)	~800 - 1,000 ⁶	2019	4,900,000	16.3-20.4
Northern Ireland	Equality Model (2015)	~308 ⁷	2019	1,900,000	15.8
Germany	Legalization (2002)	~150,000 - 400,000	2006-2014	81,083,600	185.0 - 493.3
The Netherlands	Legalization (2000)	~ 25,000 ⁸	2016	17,000,000	147.1
New Zealand	Full decrim. (2003)	~ 9,000 ⁹	2019	4,900,000	183.7

Note: Source for Germany and Sweden: Walby et al., 2016; for other countries, population data from UN Population Division

⁵ During measurement year; Sweden and Germany: population in 2014

⁶ O'Connor & Breslin, 2020, p. 27

⁷ Ellison et al. 2019, p. 114

⁸ Tokar et al., 2020, estimate originally from UNaids

⁹ Johnson & Pitt, 2020, p. 20

Background

The Equality Model was ratified in Northern Ireland in June 2015, through Article 64A of the Human Trafficking and Exploitation (Further Provisions and Supports For Victims) bill. The bill was drafted by Lord Morrow, with the goals of supporting victims of human trafficking and sexual exploitation, reducing the demand for sexual exploitation, and punishing those who perpetuate human trafficking and sexual exploitation (Ellison et al. 2019, p. 74). The bill has faced significant resistance during its implementation, with only 15 arrests and two convictions from 2015 to 2018 (Ellison et al., 2019, p. 51). The first prosecution for the offense of paying for a sexual service was not until 2017 – a year before the assessment of the efficacy of the law (Belfast Telegraph, 2017, October 27). Claims this was due to a high burden of proof (i.e., "*physical presence, sexual touching for sexual gratification and payment made or promised…*"; Ellison et al., 2019, p. 62) are unconvincing, considering the two successful convictions for purchasing sex under the Act involved no physical contact (Ellison et al. 2019, p. 52).

Detailed accounts of purchased sex acts are openly posted on commercial sex websites¹⁰ such as Adultwork, Escort Ireland, and on Punternet, the latter a forum in which men write reviews of "value for money; the physical and sexual attributes of women; explicit details of sexual acts demanded and performed and the degree of 'sexual satisfaction'" from the women they buy (O'Connor & Breslin, 2020, p. 21). Broad police powers, like wiretapping, sometimes cited as the reason for the successful implementation in Sweden (Ellison et al., 2019, p. 62), therefore seem unnecessary given these public confessions.

Potential Ideological leanings

During the Committee of Justice's call for written evidence on the Human Trafficking and Exploitation bill (Further Provisions and Supports For Victims), the Police Service of Northern Ireland (PSNI),¹¹ The Minister of Justice, and the principal investigator that the Ministry of Justice subsequently appointed to assess the success of Article 64A, all submitted written oppositions to the article which would later ban the purchase sex (PSNI, 2013; Logan Dalo, 2013, October 29; Ellison, 2013). Others submitted oppositions to the ban who would later be involved with the 2014 baseline estimation¹² or the 2019 follow-up assessment of the legislation,¹³ including the academic advisor of the 2019 project, and four out of five members of the 2019 Project Advisory Group. The remaining advisory group organization, Sex Workers Alliance Ireland (SWAI), is a "lobby group," which "campaigned against" (The Journal, 2015) the Equality Model in the Republic of Ireland as far back as 2015, and appealed to its followers on X (formerly Twitter) to contact

¹⁰ Commercial sex websites primarily host advertisements for prostitution (i.e. profiles of women in prostitution). Men can contact the operator of the profile, who may be a pimp or an independent woman in prostitution, to meet the woman in person for paid sex.

¹¹ National police of Northern Ireland

¹² Including: Mai, 2013; O'Neill, 2013; Belfast Health & Social Care Trust, 2013

¹³ Sanders, Scoular [academic advisor], Pitcher, Laing, Campbell, O'Neill, Hubbard, 2013; Ugly Mugs, 2013; The Rainbow Project, 2013; Belfast Health and Social Care Trust, 2013; Belfast Feminist Network, 2013

their representatives to "reject" the Equality Model framework¹⁴ throughout the European Union (Sex Workers Alliance Ireland, 2023). Numerous members involved with the 2014 and 2019 projects signed the "*Open Letter opposing the Nordic Model*" (DecrimNow, 2021)¹⁵ and made further submissions to the public consultation opposing the Equality Model in Scotland (Scoular, 2020; Mai, 2020, Sex Workers Alliance Ireland, 2020). Similarly, an individual on the 2014 advisory board distributed a link to a petition to fully decriminalize prostitution in the United Kingdom on X, asking his followers to sign it (Mai, 2019). The petition failed, with the UK Parliament responding that there was no "unequivocal evidence" that decriminalization actually promotes safety (UK Parliament, 2019).

The principal investigator of the 2019 DOJ-commissioned report had written several publications on the commercial sex trade, including, "*Criminalizing the payment for sex in Northern Ireland: Sketching the contours of a moral panic*" (Ellison, 2017) – published two years prior to the DOJ-commissioned report assessing the law criminalizing the payment for sex in Northern Ireland. This assessment concluded that not only was the legislation ineffective, but there was in fact a spike in demand for prostitution (Ellison et al., 2019, p. 12), an increase in the number of people in prostitution (Ellison et al., 2019, p. 8), as well as increased violent victimization among people in prostitution (Ellison et al., 2019, p. 13). The conclusions of Ellison et al. (2019) were covered in numerous reports which denounced the law as ineffective and even harmful, (BBC, 2019, September 19; ACLU, n.d., p.5, p. 9; Belfast Live, 2019), with the BBC claiming, "*Sex work law change 'caused spike in demand.*" The Northern Ireland DOJ responded to the research with a paper of their own claiming:

"On the basis of the findings in the research report, the Department has concluded that there is no evidence that the offence of purchasing sexual services has produced a downward pressure on the demand for, or supply of, sexual services." (Department of Justice, 2019)

Review of previous research

A baseline study commissioned by the DOJ (Huschke et al., 2014) provided a snapshot of the sex trade in Northern Ireland before Article 64A. This involved an audit of online advertisements for commercial sex as a measure of supply, supplemented by two small surveys targeting "online sex workers"¹⁶ and sex purchasers (Huschke et al., 2014, p. 127). The 2014 research concluded that human trafficking in Northern Ireland is low (Huschke et al., 2014, p. 10). However, they note that "Several interviewees described exploitative practices in the sex industry, including the recruitment of

¹⁴ Which they refer to as "Nordic Model"

¹⁵ Scoular, O'Neill, Mai, Sex Workers Alliance Ireland, Ugly Mugs Ireland, Belfast Feminist Network, The Rainbow Project, 2021;

¹⁶ Including people who are not in prostitution, but some other type of sex work. In Ellison et al. (2019) "sex work" is specifically defined as "Sex workers based on their own, or in collectives, or working through an agency, who use the Internet to market or sell sexual services either directly (i.e. interacting with clients in person e.g. escorting, erotic massage, BDSM) or indirectly (i.e. interacting with clients online e.g. webcamming)" (Beyond the Gaze, 2019).

foreign sex workers based on false promises regarding income and working conditions, and unreasonably high charges for travel arrangements" (Huschke et al., 2014, p. 10). Such "exploitative practices" constitute human trafficking under international law (United Nations, 2000).

The authors found that "*drug-use is not very common among respondents*..." (Huschke et al. 2014, p. 79). Of those who responded, a mere 42% claimed to drink alcohol at some point while working,¹⁷ 31% have taken painkillers while working, and 13% have done cocaine while working (Huschke et al. 2014, p. 78). The study found that "*only*" 20% of men who purchase sex in NI would stop paying for sex if it were criminalized (Huschke et al. 2014, p. 125). The report presented the Equality Model as being ineffective, unwanted, and unnecessary, while promoting full decriminalization of prostitution as the only effective alternative (Huschke et al. 2014, p. 174; 173). Despite these conclusions, the purchase of sex was criminalized one year later, in 2015. The 2019 follow-up assessment of the law was conducted in a similar manner to the 2014 baseline, yet included additional anonymous advertisement data from Lazarus Trading S.L. (Ellison et al., 2019, p. 83), the management of Escort Ireland. A condition for this data release was that "*…under no circumstances could it be used commercially or passed to any individual or organisation outside of the research team*." (Ellison et al., 2019, p. 83)

Methods

Advertisement Trend Analysis

Two different data sources were previously used to assess the trends and the scale of the sex trade in Northern Ireland and will be reanalyzed now.

- 1. Web scraped advertisement data: as reported in Huschke et al. (2014) and Ellison et al. (2019).
- Anonymous Escort Ireland administrative advertisement data: as reported in Ellison et al. (2019).

Missing Data & Item Nonresponse Estimations

Large item nonresponse values are observed for many key survey items in 2019 that were subsequently used as evidence of serious adverse impacts of the Equality Model. Since actual survey data were never made available publicly and the authors themselves never addressed the issue of what appears to be extensive missing data and associated item nonresponse bias, an effort was made to infer from the text of the reports using response percentiles and associated counts whenever possible. For example, Table 4 (Ellison et al., 2019, p. 44) shows that for item, "*If the sex worker has ever been coerced or trafficked into the sex industry*" a total of only 165 out of a possible 199 in the sample actually answered the question. In this instance, we can subtract the number of those who answered from the total sample size in order to solve for the actual number of nonrespondents (34), and then easily find the percent of nonrespondents (17%).

¹⁷ Meaning they responded "often," "sometimes," or "rarely" to using alcohol and drugs while working

Advertisement Trends Analysis Results Web Scraped Data: 2014 vs 2019

From the pre-Article 64A baseline (2014) to post-legislation follow-up (2019), there was a total decrease in the reported average daily advertisements on all commercial sex websites of 60.1% (772 vs. 308).¹⁸ Comparisons using only the three websites in both studies (Vivastreet, Adultwork, and Escort Ireland), shows a marked pre- post-law interval reduction of 45.9% (479 vs. 259.)¹⁹

From the baseline 2014 report:

"Thus, overall there is an average of 772 advertisements for sex workers available for Northern Ireland on any one day"²⁰ (Huschke et al., 2014, p. 37) [including Escort island]

In the follow-up 2019 report post-Article 64A:

"During our data scrape we identified 1,450 *advertisements for commercial sex* across the three platforms with the *daily average as follows*: Vivastreet 107, Adultwork 85 and Locanto 49. This represents a total figure of 241 across the three websites. If we combine this with the *daily average* for Escort Ireland (67) that we discussed in Chapter 6, we reach a figure of 308..." (Ellison et al. 2019, p. 114) [emphasis my own]

Therefore, on average, there were 772 daily advertisements prior to Article 64A compared to 308 daily advertisements after its ratification, a reduction of 60.1%. However, daily advertisements and "unique sex workers" are accidently conflated, with resulting confusion:

"...we reach a figure of 308 for the number of sex workers in Northern Ireland advertising per day. This figure is not dissimilar to the figure of 300-350 noted by Huschke et al. (2014) in their analysis of prostitution in Northern Ireland before the sex purchase ban came into effect" (Ellison et al. 2019, p. 114) [emphasis my own]

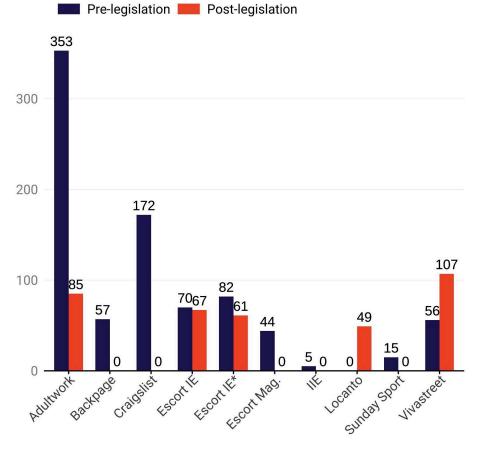
¹⁸ As will be explained later, updated data reveals this total should be 784 pre-law and 302 post-law, a 61.5% decrease. Huschke et al. further clarify that these are advertisements – not individual advertisers (Huschke et al., 2014, p. 37, 38).

¹⁹ Ås will be explained later, updated data reveals this total should be 491 pre-law and 253 post-law, a 48.5% decrease ²⁰ The number of average unique people in prostitution is estimated to be 300-350

While the average daily number of advertisements across all websites in the 2014 report equalled 772, Huschke et al. (2014) speculated that for many websites, only about one-third of those advertisements actually reflected "active sex workers," and so downwardly adjusted the 772 figure to generate an estimate of about 287-371 unique people in prostitution, a theory which was based on subjective factors such as interviews (Huschke et al., 2014, p. 38) and the research team's perception of whether an ad is authentic or not. Reductions were made to the unique people in prostitution estimates such as the removal of the "*…significant number of men advertise their services for women…*" (Huschke et al., 2014, p. 39), citing it was unlikely that men would get much business from women. They later further narrowed this estimate to 300-350, "*based on a critical assessment of the number of advertisements and our interview data…*" (Huschke et al., 2014, p. 8)







Data Source: Ellison et al. (2019); Huschke et al. (2014, p. 37, 38); "Escort IE^{*}" is from Escort Ireland admin data. "Escort IE" pre-law estimates is from a seven day random web scrape in 2014 and post- law is from admin data, for the daily average of years 2012-2018 combined. IIE = Irish Independent Escorts

However, in a critical methodological divergence, Ellison et al. (2019) reported the *unadjusted* numbers over the six day census period, leading to artificially inflated post-legislation rates due to unbalanced comparison with the markedly deflated adjusted baseline. For instance, they claim

"...511 advertisements for commercial sexual services in Northern Ireland were viewable on the Adultwork platform during the *six-day period* chosen for the scrape...We can see that the *daily average for sex workers* advertising on Adultwork in Northern Ireland was 85" [emphasis my own] (Ellison et al., 2019, p. 105), indicating that the estimated number of "sex workers" was simply the unadjusted daily mean of advertisements.

The baseline estimates from Huschke et al. (2014) included the most popular websites which hosted advertisements for commercial sex at the time of the report.²¹ However, when the follow-up study was conducted in 2019, many of these outlets had shut down over human trafficking concerns (Bhardwaj, 2018; Reuters, 2018), other ethical concerns (The Guardian, 2016), or appear to not be operating for unspecified reasons. The follow-up study replaced the five websites which no longer operated or hosted commercial sex advertisements with one new website – Locanto. In 2014, ads on now-defunct sites comprised 38% of all advertisements and unique people in prostitution in Northern Ireland.

As these websites were no longer accessible by 2019, the demand was likely absorbed by websites which were still operating in the industry. This has been observed in numerous other sectors in which the departure of a competitor triggers a business surge for the remaining companies in the market, such as Byte and TikTok after Vine closed and Barnes & Noble after Borders Bookstores closed (Time, 2020; Huffington Post, 2011). Activity likely shifted to other websites such as Vivastreet, which in fact saw an uptick in popularity from 56 advertisements in 2014 to 107 advertisements in 2019.

While Vivastreet saw a large reported increase in advertisements, the stark differences in methodology between the 2014 and 2019 advertisement audit make these estimates difficult to compare. For instance, the 2014 estimate only included profiles on Vivastreet which dated back two weeks (Huschke et al. 2014, p. 24) but the second assessment included advertisements on Vivastreet from any viewable time (Ellison et al., 2019, p. 108). Ellison et al. (2019), measured the average of *six consecutive* days (Monday to Saturday, omitting Sunday – the day likely to have the least activity), while Huschke et al. (2014) estimated the average of *seven random* days (Huschke et al., 2014, p. 37). We can see from Ellison et al. (2019) that there are typically significantly more people advertised for commercial sex on Friday and Saturday in most websites (Ellison, et al. 2019, p. 110). The failure to report which days were audited in 2014 further makes this an "apples to oranges" comparison as we have no way of knowing if all measurements in 2014 were randomly on weekdays or weekends and how that impacted the estimates.

²¹ Websites in 2014 analysis include: Craigslist Personals, Backpage, Adultwork, Sunday Sport, Escort Ireland, Vivastreet, Escort Magazine, Irish Independent Escorts. Websites in 2019 analysis include: Escort Ireland, Locanto and Vivastreet

A Note on Escort Ireland

As Ellison et al. obtained anonymous administrative data from Escort Ireland, they were able to find both "unique" people in prostitution (the number of different people being advertised for sex monthly) and the average daily number of people advertised (the average number being advertised on the website every day). The latter is what is used in the 2014 and 2019 web scrape to obtain the estimates for people in prostitution since researchers were not given administrative data for other websites.

It seems that whatever method was used in 2014 likely provided a large underestimation of the number of people in prostitution, which would then make any later comparison look like an increase. This is supported by the fact that the daily number of people advertised for sex on Escort Ireland during the random 7-day webscrape in 2014 was reported as 70 (Huschke et al. 2014), however from the administrative data from Escort Ireland provided to Ellison et al. (2019) the average daily number of people advertised for sex in 2014 was actually 82 (Ellison et al., 2019, p. 88). Moreover, the post-legislation comparator is cited as 67 (Ellison et. al., 2029, p. 86). If one reads closely, one can see that the authors never actually claim that the estimate was taken post-legislation. Rather, this estimate seems to be the average daily number of people advertised on Escort Ireland across the total census period (i.e., January 1, 2012 - December 31, 2018):

"Based on our analysis of the 173,460 advertisements an average of 67 sex workers advertise every day across Northern Ireland on the Escort Ireland platform. (Ellison et al., 2019, p. 86)"

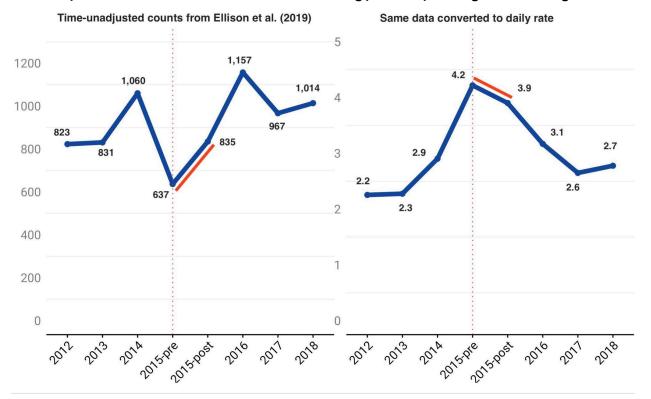
This daily average appears to have been calculated as total advertisements in census period / total days in census period (173,460/ 2,557), which is 67. The authors report that the average number of people advertised for sex daily on Escort Ireland (67) "...has remained broadly in line with that identified in the earlier DOJ research in 2014 which estimated that 70 sex workers advertise daily on the Escort Ireland platform..." (Ellison et al., 2019, p. 86). Obviously, it is not appropriate to use an estimate which spans three and a half years prior to the law as a post-legislation comparison. From the Escort Ireland administrative data, we can see the daily average number of people advertising on Escort Ireland in 2018 is actually 61, leaving us with a significant reduction in daily people advertised for commercial sex on the platform from 2014 to 2018 of 25.6% (82 vs 61).

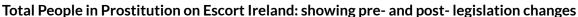
Escort Ireland Administrative Data

Although counts of webscraped advertisements are difficult to compare given these diverging methods, administrative advertisement data from Escort Ireland (provided to Ellison et al. by Lazarus Trading S.L.), gives us additional information to analyze.

This data demonstrates that the number of unique people being advertised for commercial sex on Escort Ireland had increased every year since 2012 until the implementation of the Equality Model, when an immediate reduction is seen. In 2018, the year in which Backpage and Craigslist Personals were disbanded, there was a slight increase of 47 people being advertised for sex on average as users from Craigslist Personals and Backpage, which were some of the most popular advertisement platforms in Northern Ireland in 2014 (Huschke et al., 2014, p. 37), likely shifted to other platforms. As will be explored further below, Ellison et al. (2019) reported data in raw counts across time-varying intervals, "post" legislation timeframe extending two months beyond that of "pre" legislation timeframe. This requires us to convert the data to a metric that will account for such discrepancies, in this case a rate of unique advertisers per day. This represents, on average, the number of new (unique) advertisers appearing each day during the observation period.







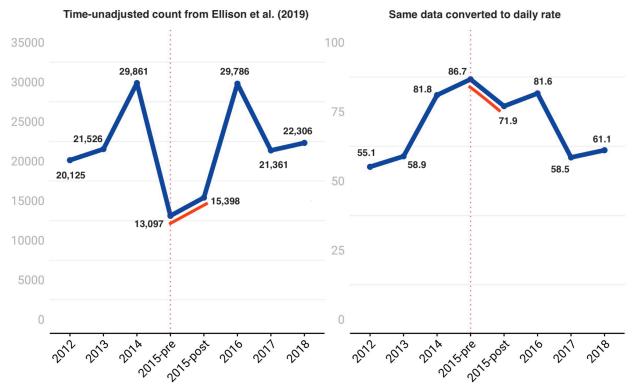
Data source. Ellison et al. 2019, p. 91; Note. "2015-pre" is 151 days (five months), "2015-post" is 214 days (seven months); Article 64A passed in June, 2015; Backpage and Craigslists Personals close in 2018; Northern Ireland

Figure 3

Ellison et al. (2019) eventually conclude that despite a decrease in unique people in prostitution immediately after the law, if the Equality Model were actually effective, one would expect the number of people in prostitution and advertisements to demonstrate a "greater tailing-off" (Ellison et al. 2019, p. 115). Although this increase in 2018 represented only 47 more people being advertised for commercial sex on average than the prior year, and was *256 less* than the year before the law was implemented, it has been enough for activists to not only discount Article 64A in Northern Ireland, but use it to actively lobby against the Equality Model globally (see discussion).

Ellison et al. (2019) note a 17.5% *increase* in advertisements on Escort Ireland from 2015 pre-law to 2015 post-law periods from the Escort Ireland administrative advertisement data:

"We sub-divided the data for 2015 into pre-law and post-law periods (Figure 2) to see whether the implementation of Section 64A had any immediate effect on advertising rates. We can see that in the period up to 1st June 2015 when the law came into effect there were 13,097 adverts placed on the Escort Ireland platform. After 1st June until the end of 2015, a further 15,398 adverts were placed. There was a 17.5% increase in sex worker advertising between pre and post law change periods in 2015..." (Ellison et al. 2019, p. 86)





Data source. Ellison et al. 2019, p. 88; *Note.* "2015-pre" is 151 days (five months), "2015-post" is 214 days (seven months); Article 64A passed in June, 2015; Backpage and Craigslists Personals close in 2018; Northern Ireland

However, the 2015 pre-law period in question was only five months and the 2015 post-law period was seven months. Therefore, comparing raw counts from these two varying time intervals, when the 2015 post-law period has two more months to accrue ad counts does not provide an accurate representation of the data. As can be seen from Figure 3, after adjusting for these interval discrepancies, by converting total advertisements per observation period to advertisements per day in each observation period (advertisement rate),²² the 17.5% *increase* (13,097 to 15,398) becomes a 17.1% *reduction* in advertising from 2015 pre-law to 2015 post-law (86.7 per day to 71.9 per day). According to their own benchmark, this immediate 17.1% reduction in commercial sex advertisements would be considered a direct "effect" from Article 64A (Ellison et al., 2019, p. 86).²³

Ellison et al. provide a final figure of a 5% increase in advertisements for sexual services after the law from Escort Ireland administrative advertisement data, which was aggregated into pre-legislation, 1st January 2012 - 31st May 2015 (1,246 days) and post-legislation, 1st June 2015 - 31st December 2018, (1,309 days) groups. When the roughly two-month difference in the groups are accounted for, by again converting it to the average advertisement per observation period, this publicly reported figure of a 5% increase (BBC, 2019; Belfast News Letter, 2019, Sep, 19) changes to a negligible decrease of approximately 0.04% in advertisements. It must be stressed that numerous studies have documented the dangers of making inferences from aggregated data (Bickel, Hammel, & O'Connell, 1977; Freedman, 1999; Wang & Rousseau, 2021), as this can hide important trends, which appear to have been ignored in the assessment of this policy.

Given that there are only seven yearly observations, and insufficient data to perform a comprehensive statistical analysis, what would be the most accurate way to report these observed data? We can clearly see a positive trend before the law and a negative trend after the law in both advertisements and unique people in prostitution. If we aggregate the data into pre-post groups all trends disappear, which would not accurately reflect the observed data. Simply comparing the initial observation (2012) to the final observation (2018) would not reflect the observed trend either. It would be useful to compare the final observation to a steady baseline but there was no steady baseline to compare it to, as advertising had been consistently increasing prior to the law for years. This makes the increase unlikely to be a temporary surge from the pending law and the subsequent decline unlikely to be a reflection of returning to baseline.

Article 64A passed in June 2015. I would argue that the two most useful comparisons, given the significant limitations to the available data, are:

²² This can be done by dividing the counts per observation period by the number of days in each observation period to achieve ads per day

²³ From the statement that subdividing the data for 2015 into pre-law and post-law periods would allow is to see if Article 64A had any immediate "effect" on advertising rates

- A comparison between what happened in 2015 in the months immediately prior to the introduction of the law and in the months afterwards - in order to show if there were any changes immediately after the law was passed. This shows that there was a 17.1% reduction in advertising and a 7.8% reduction in unique people in prostitution in 2015 in the months after the law was passed.
- 2) A comparison between the first full year prior to the law (2014) and the year prior to the disbandment of Craigslist Personal and Backpage (2017). This will allow us to see if the reduction was temporary or more sustained. This comparison avoids the possibility of a sudden "surge" in business in the months preceding the law skewing the data, is consistent with the first DOJ commissioned advertisement census in 2014, and avoids the likely displacement from the popular disbanded commercial sex platforms such as Backpage and Craigslist Personals in 2018. This comparison demonstrates a 10.3% decrease in unique people advertised for commercial sex on Escort Ireland from pre-legislation (2017), and a 28.5% decrease in advertisements on Escort Ireland from pre-legislation (2015) to post-legislation (2017; Ellison et al. 2019, p. 87).



Survey Data

Ellison et al. (2019) conducted two surveys; one for clients²⁴ and another for "online sex workers." Some key responses used in the study appear to have item nonresponse rates of around 55% (in this case, missing or "don't know"),²⁵ far exceeding average rates for English internet surveys – typically only 2.4% (Rittase, et al, 2020). Other well-respected surveys such as Pew Research's American Trends Panel, claim average item nonresponse rates between 1% to 2% (Asare-Marfo, 2021).

While a large degree of missing data can be problematic, the concern in this case is not primarily the missing data, but the methodology used for handling this missing data. Participant responses in both Huschke et al. (2014) and Ellison et al. (2019) were reported as proportions based on those who answered each individual item, rather than as proportions of the entire sample. Given the high item nonresponse, this method may at times yield misleading results. For instance, the report claims 93% of online sex workers were never victims of human trafficking (Ellison, 2019, p. 44). However, this figure represents only those who responded to that question (83% of the sample, n = 165). In the total sample (N = 199), only 155 affirmatively claim they had never been trafficked into the sex industry, or an estimated 77.8% (Ellison et al., 2019, p. 44). Participants who are asked sensitive questions are much more likely to not respond, or even provide false, more socially desirable responses (Tourangeau & Yan, 2007). Therefore, the results presented in the reports likely reflect the most positive of all experiences.

Other pivotal conclusions derived from the survey are undermined by similar issues. For instance, the authors claim that for "...the majority of clients in Northern Ireland the law has made no difference to how often they purchase sex with 53.5% (n=69)..." (Ellison et al., 2019, p. 126).

However, in Table 9, we see that the total number of respondents to "*Impact of law on purchasing sex...*" in NI were only 129 out of 193 in the total sample of Northern Ireland (Ellison et al., 2019, p. 127). Ellison et al. did not provide the survey in the appendix as was done in Huschke et al. (2014), however, two clear possibilities emerge.

- 1) Either skip logic was used (i.e. "*Have you purchased sex since the law yes or no?*") which would then filter respondents who said "yes" into a further series of questions regarding subsequent purchasing behavior, *or*
- 2) The survey asked all participants about their purchasing behavior after the legislation, regardless of if they actually purchased sex since the law or not.

²⁴ The client survey is separated into Northern Ireland (*n* = 193) and Republic of Ireland (*n* = 1,083) subsamples

²⁵ For question steps to avoid detections before and after law" (Ellison et al., 2019, p. 128)

Regardless of whether the survey asked all participants the question and simply omitted all missing values or if skip logic was used, only 69 people (an estimated 35%) in the entire sample responded affirmatively to the claim that they did not have a reduction in purchasing behavior – not the reported 53.5%. This would make sense given the large number of men in 2014 that claimed they would stop purchasing sex if a ban were implemented (Huschke et al. 2014, p. 125). Much of the survey results follow a similar pattern. It is reported that an overwhelming 75.9% (*n* = 82) of the respondents in Northern Ireland "...*felt that the law has had no real impact on purchasing sex and the ease with which this could be done.*" Table 10, shows that a total of only 108 respondents out of a total sample of 193 actually answered the question (Ellison et al., 2019, p. 128), and so it would appear that only 44% of participants in the sample claimed the law had no impact on the ease in which sex could be purchased, and so forth.

Note the significant selection bias in the survey: the participants were recruited from an active sex purchasing website *after* a law was passed introducing criminal penalties for purchasing sex – essentially guaranteeing that only the most determined to break the law would even be included in the analysis.²⁶ However the findings were used to conclude:

"What is evident from the above analysis of client responses in Northern Ireland and the Republic of Ireland is that two of the foundational canons of the Nordic model: the deterrent effect of the criminal law and a drying-up of demand appear to have little empirical substantiation..." (Ellison et al. 2019, p. 131).

The 2014 report did provide the survey in the appendix, however, authors report responses primarily with percentages with no associated counts. Moreover, it appears in the text, these percentages are rounded to whole numbers, making accurate calculations based on these reports alone challenging. Yet, based on available data, the nonresponse rate for critical questions remains high. For example, it appears anywhere from 17-32% did not answer the question about their age at which they first sold sex.²⁷ From the statement that only 4% of people "*were under the age of 18 when they first started selling sexual services*..."²⁸ (Huschke et al., 2014, p. 41) one would reasonably assume that around 96% of the "online sex workers" only began engaging in prostitution over the age of 18, but taking missing data into account, out of the entire sample, an estimated ~64.1 - 80.4%, affirmatively stated they began selling sex over 18. This is more consistent with what has been documented in international literature which documents a large proportion of adults in prostitution had been victims of child sexual exploitation (Abel et al., 2007; Zumbeck et al., 2003).

²⁶ Finding a random selection of sex purchasers in the general public would be extremely difficult. Since such random selection is difficult, such surveys are not the best way to make inferences on prostitution policy

²⁷ This can be reasoned because the report claims "5 sex workers (4%)" were under the age of 18 when they began prostitution. When reporting percentages, it appears Huschke et al. rounded to the nearest whole number. Therefore "4%" could be anything from 3.5%, in which case we can estimate anywhere from ~143 respondents answered (since 5 is 3.5% of 142.9) to 4.4%, in which case we can estimate ~114 individuals answered (since 5 is 4.4% of 113.6).
²⁸ When someone is sold for sex under the age of 18 it is human trafficking and child sexual exploitation under international law

It can also be estimated that anywhere from 28.9-48.5% of participants did not respond to whether they had ever been victims of human trafficking.²⁹ These apparent high item nonresponse rates, in conjunction with the method of omitting missing data and reporting as percentages of those who did respond, significantly alter the interpretation of the findings and undermine the validity of the substantive conclusions made in these reports.

Claims of Increased Violence and Abuse

Data sourced from the self-reported Ugly Mugs Ireland (UM) database was used as essential evidence of an increase in harassment, violence, and fear after the ban of the purchase of sex in both Northern Ireland (Ellison et al., 2019) and Republic of Ireland (Human Rights Watch, 2023), despite most "reports", (cumulative from 2016-2019) in Northern Ireland primarily consisting of non-criminal complaints such as *client no shows*, n = 922, and *being suspicious*, n = 97 (Ellison et al. 2019, p. 144).

Ellison et al. (2019, p. 133) claim it is a "fact" that UM is "trusted by sex workers," making it "more reliable than official data." It is noted that the majority of survey and interview respondents used the app (Ellison et al., 2019, p. 136), which would not be surprising given that the authors recruited participants for their survey on this app (Ellison et al. 2019, p. 2). This doesn't reflect the app's popularity nor does it indicate that data from this app is reliable or trusted. It should be noted that UM was founded as an offshoot of the commercial sex website, Escort Ireland, although UM claims they are no longer affiliated (Irish Independent, 2019, March 27). In an interview in the Irish Independent, the director of Sex Workers Alliance Ireland (SWAI), Kate McGrew, revealed even more inconsistencies in user data reporting, casting further doubt on the reliability of the UM data. She claims:

"The number of sex workers using UglyMugs.ie has remained steady at between 6,000 and 7,000 per year. The number of incidents reported from 2015-2017 was 4,278. Since the law change [in the Republic of Ireland], from 2017-2019, incidents rose to 10,076. According to the report, crime has increased 90% whereas violent crime specifically has increased 92%³⁰ [in the Republic of Ireland]" (Irish Independent, 2019, March 27).

From this statement, UM appears to have up to 5,892 more users on the UM app (6,000-7,000 users) than there are people engaging in prostitution in Northern Ireland and Republic of Ireland combined (308 in Northern Ireland, 800 - 1,000 in Republic of Ireland) (Ellison et al., 2019; O'Connor & Breslin, 2020, p. 27), leading us to question whether users on the app are people

²⁹ This can be reasoned from the statement "3%...(n = 3)" claimed to have been trafficked (Huschke et al., 2014, p. 133) three is 3% of 100 - not the true sample of 171 (range calculated as above).

³⁰ The claim of a "92%" increase in violence has taken a life of its own, with many believing or implying that this statistic comes from verified police reports – not anonymous phone app submissions.

engaging in prostitution or some other population whose clients were not *driven underground* – one popular argument against the Equality Model (Amnesty International, 2013).

Despite the unreliability in this database, the UM data is used to conclude:

"It may simply be a coincidence that some crimes and anti-social / nuisance behaviours against sex workers have increased with the change in the legislative framework, but this is something that sex workers claimed would happen before the legislation was implemented... Certainly, what is not in doubt is that the terrain of commercial sex now seems much riskier and more underground than it was previously with both clients and sex workers taking steps to avoid detection. For a law whose rhetoric is about ending violence against women it is somewhat paradoxical that it appears to have subjected many women (and of course male sex workers) to a highly unsafe work context, resulting in a heightened state of anxiety." (Ellison et al., 2019, p. 142)

However, this purported increase in nuisance crimes was observed in the general population as well. Data sourced from the Police Service Northern Ireland (PSNI, 2022) show that in the same years as the UM Northern Ireland data, 2014/15 to 2018/19, harassment in the general population of Northern Ireland increased from 3,607 to 5,266 (46.0% increase), blackmail increased from 77 to 287 (272.73%), making off without a payment increased from 1,675 (PSNI, 2022) to 3,990 (138.2%), and possession of controlled substances increased from 1,420 to 2,059 (45%).

There are further claims that, from some of the seven narrative interviews of those who worked after Article 64A, that the legislation was seen as a cause for an increased demand for unsafe sexual activity (Ellison et al. 2019, p. 164, 165). Similar narrative interviews conducted among women in prostitution in Ireland in 2009 – eight years prior to the Equality Model – "disclosed an increasing demand for unprotected sex and sexual practices, including anal sex, which were profoundly damaging to women's sexual, reproductive, mental and physical health…" (O'Connor & Breslin, 2020, p. 20). A recent study shows high rates of strangulation during sex among American college students, and that 14.4% of women aged 18-24 had anal sex in the last 90 days. Anal sex was "…often marked by pressure, coercion, lack of communication, fear, and pain among women…" (Herbenick et al., 2021). In 2014, research commissioned by the Swiss federal police, a country with legalized and regulated prostitution, demonstrates that individual women in prostitution and legal brothels were increasingly forced to offer unprotected sex due to market saturation from prostitution legalization:

"Due to the oversupply in the sex work market, prices are coming under pressure, which means that more and more women and businesses, for example, are having sexual intercourse without offer condom [sic]. In order not to lose customers, other [legal brothel] operators and individual women are increasingly forced to offer this as well."

(Biberstein & Killias, 2015, p. 95, 96)

Similar reports were documented in 2022, with Swiss NGOs claiming men are increasingly "*demanding*" unprotected sex (Boulevards, 2022, p. 7). This trend of men pressuring women to engage in unsafe sexual practices *globally* is consistent with the experiences shared by some of the authors' seven interviewees. There is no evidence to believe this is attributable to prostitution legislation in Northern Ireland.

What About the Republic of Ireland?



Despite the Republic of Ireland (ROI) and Northern Ireland being different countries with different legislative bodies, many organizations and apps, such as Escort Ireland and Ugly Mugs Ireland operate across the border.

The Republic of Ireland implemented the Equality Model in 2017. Prior to the vote on the law, the media was flooded with stories warning about the dangerous and "cruel" bill (The Times, 2016). There was subsequently a significant amount of media coverage surrounding claims of a 92% increase in violent crime among "sex workers" on the Ugly Mugs Ireland app after the law was implemented. Sensationalized media reports included pictures of scantily clad women standing on street corners (The Irish Independent, 2019)

The UM database likely does not primarily consist of people in prostitution at all, let alone street prostitution, given the number of users in the database appear to exceed the number of estimated people in prostitution in Ireland and Northern Ireland combined by thousands. This all raises questions about the role of the media, who appeared to eagerly amplify such claims without a critical assessment of the data. These media reports fail to contextualize the reported incidents within broader crime trends in the Republic of Ireland, which also witnessed a dramatic increase in crime from 2015 to 2019. From Eurostat data (Eurostat, 2022), all violent crimes increased in the population, including: Attempted Murder (107% increase); Murder (10% increase); Serious assault (43.4% increase); and Rape (60% increase).

O'Connor & Breslin (2020, p. 74) found no spike in violence among women in prostitution in ROI after the law. There was an increased willingness among women to report violent crimes (O'Connor, Breslin, 2020, p. 102), more satisfaction with welfare checks from the Gardai (ROI national police), and a better relationship with the Gardai. Crimes committed against women in prostitution have resulted in numerous convictions (O'Connor, Breslin, 2020, p. 121) resulting in significant sentences that have ranged from two to 20 years imprisonment (O'Connor, Breslin, 2020, p. 100).

Representativeness

Marked demographic differences in study participants make survey data not appropriate for inferential purposes among the intended population. According to Huschke et al. (2014, p. 45), "[the data] *suggest that the majority of sex workers who work in Northern Ireland are foreign nationals...*" however only 44% of survey participants were not UK or Irish nationals (Huschke et al., 2014, p. 44). Only 26.3% of interviewees in the 2014 report were not UK or Irish nationals (Huschke et al., 2014, p. 49). Shockingly, nearly 16% of respondents in the 2014 online sex worker survey had obtained a PhD or Master's degree – further leading us to doubt how accurately this represented people in prostitution in Northern Ireland. This issue has previously been criticized (Belfast News Letter, 2019, September 20).

Of the interviewees represented in quotes in the text of Ellison et al. (2019), 100% were reportedly United Kingdom nationals, and almost half of all participants interviewed did not work before the legislation (Ellison et al. 2019, p. 31), making it impossible for them to give accurate comparisons about the environment of the sex trade pre- and post- legislation or provide responses that accurately reflect the population of people predominantly in prostitution in Northern Ireland (migrant women).

Discrepancies

A juxtaposition of policy reviews from countries adopting a full decriminalization vs. Equality Model framework reveals striking variability in the critical benchmarks used as evidence of what constitutes a "successful" policy outcome. For instance, the government-sponsored evaluations of New Zealand's Prostitution Reform Act (2003)³¹, which enacted full decriminalization of prostitution, took place five years after the enforcement of the law, and yet demonstrated few objective benefits within the pages of the reports. In their own words:

"The Committee has commented elsewhere that stigmatisation is still attached to the sex industry, and it will take time before it dissipates" (Prostitution Law Review Committee, 2008, p. 58).

"It is a truism that traditions and attitudes developed over many years cannot be changed overnight" (Prostitution Law Review Committee, 2008, p. 168).

"There was still limited reporting of such [violent] incidence to the police, but this is *likely* to improve in time as their [people in prostitution] confidence grows" (Abel et al, 2007, p. 173). [emphasis my own]

³¹ New Zealand was cited as a model of success in Huschke et al. (2014, p. 170, 173).

"In some cases, it has been shown that there is little change following the enactment of the PRA, but it is too soon to see many differences" (Abel et al. 2007, p. 175).

"Sex workers have been a marginalized and vulnerable population and have experienced much stigmatisation and exclusion from society. This cannot change rapidly with the enactment of a law and so the full health and safety benefits may only be seen in a number of years' time" (Abel et al., 2007, p. 175). [emphasis my own]

Despite such findings, researchers claimed the policy was a success, citing the inevitable benefits would emerge in time (Abel et al., 2007, p. 175). Such conclusions have gone widely unchallenged by the government, NGOs, global health organizations or media. A follow-up assessment was never conducted to see if these theorized improvements ever came to fruition – it was simply decided the model was a success and would be a success globally. These conclusions seem much different from those in the assessment of the Equality Model in Northern Ireland, which took place three years after the law and only one year after the first prosecution for paying for sexual services. In response to the clear reduction in advertisements for commercial sex and individual people in prostitution immediately after the ban on the purchase of sex:

"...Article 64A was only enforced with a warning or caution for the first 12 months, so perhaps sex workers and clients felt that they would not be subject to the full rigours of the law at this early stage. More likely, however, the period 2014 to 2016 was simply reflecting a natural growth in high advertising rates which has subsequently declined due to numerous factors. *Of course, it could be that Article 64A has slowed this growth*. But if this is the case, then the effect has been short-lived and advertising rates have increased again from 2017 to 2018. As such, if Article 64A has had an effect it may be the rather paradoxical one of reducing prostitution to the level that existed before the law came into operation." (Ellison et al. 2019, p. 86) [emphasis my own]

"The Nordic model of criminalisation of demand, on which Section 64A is modelled is based on the premise that it will end demand for commercial sexual services. If this were the case, then we should have expected to see a greater 'tailing off' in the supply of prostitution services and sex worker advertising during the period following the implementation of Article 64A. This has not occurred." (Ellison et al. 2019, p. 115)

"Focusing on yearly fluctuations in advertising rates, however, hides the bigger picture: Namely, that when looked at *in the aggregate* advertising rates for commercial sexual services in Northern Ireland have increased in the period following the implementation of Article 64A. This increase is from 84,609 advertisements pre-law, to 88,851 advertisements post-law. This is a percentage increase of 5%" (Ellison et al. 2019, p. 87) [emphasis my own] These conclusions are curious: how could one reasonably see a "tailing off" after three years of a law and only one year after the first prosecution? While the authors appeal to their audience to not focus on "*yearly fluctuations*" (Ellison et al. 2019, p. 87) in their "trend analysis," an entire legislative framework is discounted globally based on a yearly fluctuation of an average of 47 people advertised for commercial sex in 2018. Why is the "big picture" – that both advertisements and unique workers reduced immediately after the law – considered irrelevant, but full decriminalization in New Zealand is considered a glowing success based on the mere possibility that one day it *could* be a success? The claim is so far-fetched that it defies all reason.

We need some standards and we need to stick with them.

Discussion

This paper documents the reduction in the number of prostitution advertisements (28.5%) and the number of unique people in prostitution (10.3%) on the most popular commercial sex website in Northern Ireland after the implementation of the Equality Model. While there was technically an observed 61.5% decrease in total web scraped advertisements pre-post legislation, drawing parallels between the 2014 and 2019 advertisement audit is not reliable given the significant diverging methods researchers used to obtain this data. The reduction in online prostitution indicates a decrease in prostitution as a whole, as multiple recent estimates claim that prostitution in Northern Ireland is sourced almost entirely through the internet (Ellison et al., 2019; Huschke et al., 2014). Moreover, it does not indicate a shift to the street sector, as Northern Ireland also witnessed a 50% reduction in on-street prostitution after the Equality Model (Ellison et al., 2019, p. 100, 122).

These findings contradict the widely-cited conclusion of Ellison et al. (2019), which claims,

"Certainly, the evidence from Northern Ireland based on a comparison of the before and after data suggests very strongly that Article 64A has had minimal to no effect on the demand for prostitution, the number of active sex workers in the jurisdiction and on levels of human trafficking for sexual exploitation" (Ellison et al. 2019, p. 167).

The discrepancies in our findings are due to the fact that:

- 1) Ellison et al. (2019) did not appear to consider the numerous disbanded commercial sex websites from 2014 in their findings, missing a clear displacement in the industry
- 2) the large adjustments from advertisements to unique people in prostitution made in 2014 were not made in 2019
- 3) highly cited administrative data from Escort Ireland was aggregated, and did not take varying-time intervals into account

These results build on the findings of Ekberg (2004), who observed a dramatic 30-50% decrease in street prostitution in Sweden (Ekberg, 2004, p. 1193) after the implementation of a ban on the purchase of commercial sex and a further estimated 75% to 80% decrease in buyers in Sweden (Ekberg, 2004, p. 1193).

Similar findings were observed in Cunningham and Shah (2014, p. 17) when the volume of commercial sex advertisements and unique weekly people being advertised for sex in Rhode Island increased by over 100 percent immediately following decriminalization of indoor commercial sex in 2003 and decreased immediately following re-criminalization in 2009. There was also an immediate increase in total reviews of women in prostitution and a reduction in total reviews after re-criminalization in 2009 (Cunningham and Shah, 2014, p. 54). The findings are further consistent with findings that rates of people in prostitution are dramatically lower in countries that have implemented the Equality Model than in countries that have implemented legalization policies (Walby et al., 2016).

While the current data suggests that Article 64A was successful in reducing the scale of the sex trade, the limited data restricts our ability to perform a more thorough statistical analysis.

Potential Explanations

The observed reduction in the scale of the sex trade could potentially be explained by the normative and punitive aspects of the framework. Purchasing sex is seen as aberrant and sex purchasers are punished for their behavior. Reasonably, when expecting personal repercussions (either, socially or legally) offenders have a greater likelihood of stopping the negative behavior than if it is accepted or rewarded. This conclusion is supported by the 2019 survey data, which demonstrated that of the participants who claimed they intended to stop purchasing women for commercial sex because of the law, most claimed fear of police attention and media shaming as the primary driving factors (Ellison et al., p. 127). Given that fear of arrest is the primary deterrent to purchasing women in this sample of highly determined offenders, it is disheartening that the Northern Ireland DOJ has been so reluctant to enforce the law. Implementation is key. If police refuse to enforce the law, sex purchasers may realize that arrest (and associated public shaming) is not realistic, which may lead to an increase in purchasing behavior.

Limitations

A limitation of the current paper is that the original raw data from the surveys were not available, and therefore missing item responses had to be inferred where possible. In absence of the raw data, inferences on survey data should be viewed as general estimations. The accuracy of missing data estimation in Huschke et al. (2014) was further constrained by the primary authors' practice of reporting percentages in whole numbers.³²

³² With the exception of several barcharts

Consequences

Unfortunately, some in the public have been acting in good faith on the information given, often with significant consequences. The American Civil Liberties Union's (ACLU)³³ policy brief, "*Is Sex Work Decriminalization the Answer?*" which advocates full decriminalization (ACLU, n.d) of prostitution heavily cites data and conclusions derived from Ellison et al. (2019), where "sex worker" is defined as a person with an "online" sexualized job, although the ACLU themselves specifically defined "sex worker" in their report as "*…the exchange of sexual acts for something of value, i.e., the buying and selling of sexual acts, or prostitution…*" (ACLU, n.d). This has been associated with advocacy groups and legislators globally making strong claims about prostitution legislation supported partially upon survey data gathered from individuals who may have never been in the same physical space with their clients.

The ACLU further uses data from Ellison et al. (2019) to claim that,

"The research overwhelmingly suggests that criminalization of sex work, including criminalization of buying, but not of selling, sex known as the "end-demand" or "Nordic" model, increases the risk of violence and threatens the safety of sex workers.... An assessment of the impact of legislation that changed sex work from being legal for both buyer and seller to criminalizing the buyer, i.e., an end-demand model, in Northern Ireland concluded that there was little overall impact on supply or demand, but that online solicitation increased, whereas street-based solicitation decreased..." (ACLU, n.d., p. 5)

and

"...Sex workers in Northern Ireland reported an increase in requests for unsafe sex practices following a change from legalized prostitution to an end- demand model that criminalized buyers." (ACLU, n.d., p. 9)

During debates in Spain regarding the possibility of implementing the Equality Model, Human Rights Watch,³⁴ published an article on the "*Dangerous Sex Work Law*" (the Equality Model):

 ³³ A non-profit organization based in the United States that advocates and litigates on behalf of various social issues such as reproductive choice and LGBTQ+ causes. They now advocate for full decriminalization of prostitution.
 ³⁴ An international NGO that conducts research, investigations and performs advocacy on social issues such as LBGTQ+ rights

"Research commissioned by the Northern Ireland Department of Justice showed 'no evidence' that the 2015 criminalization of the purchase of sex led to a decrease in demand for sexual services, and had a 'limited deterrent effect on client behaviour'...Statistics from UglyMugs.ie, a sex worker organization based in Ireland, showed a 92 percent jump in reports of violent crime against sex workers in the country the first two years after the country adopted the Nordic Model in 2017..."

Endorsement by such organizations has been associated with a flurry of laws in America using the appeal to authority fallacy as their primary support, most recently in New York, Massachusetts, and Vermont, which all seek to implement full decriminalization of prostitution (selling, purchasing, brothels, and pimping) with lobbyists citing the reported success of full decriminalization in New Zealand and the alleged failure of the Equality Model in Ireland and Northern Ireland. The text of New York State Senate Bill S6419 (NY Senate, 2019, June 10), directly cites several organizations that have endorsed decriminalization – the ACLU, Human Rights Watch, and others – in order to bolster the credibility of their position. Many of the cited organizations either directly or indirectly (via the ACLU) reference data from Northern Ireland and Ireland, as a source for their pro-full decriminalization stance, reasoning that if the Equality Model was ineffective – even harmful – in Northern Ireland and Ireland – the same results would be seen in America.

Conclusion

This paper documents the reduction in the scale of the sex industry (as measured by decreased advertising, decreased numbers of people being advertised for commercial sex online, and decrease in the number of people in street prostitution) in Northern Ireland after Article 64A (the Equality Model), which banned the purchase of sex. Claims of violence in the aftermath of the Equality Model were refuted and contextualized within broader crime trends of the country. These findings contribute to the understanding of the Equality Model, especially as they pertain to online commercial sex, and will allow for more informed policy decisions moving forward.

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ABOUT NORDIC MODEL NOW!

Nordic Model Now! (NMN) is a secular feminist grassroots group campaigning for the abolition of prostitution and related practices, and for the Nordic Model approach to prostitution. NMN is run entirely by unpaid volunteers and receives no corporate or public funding and relies entirely on donations from supporters.

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