

“Sex for Sale: Online Commerce in the World’s Oldest Profession” by Scott Cunningham and Todd Kendall

## I. Introduction

Given the revolutionary effects of the Internet on marketing and commerce in other industries, it should come as no surprise that the web has also had a large impact on the world's oldest profession. In August of 1997, Eros<sup>1</sup> (a fee-based advertising site catering to the escort market) appeared, but even shortly before that, some prostitutes had already begun experimenting with hosting their own websites (Brooks 2009). Online prostitution activity is as old as the web itself, but seems to have reached the public eye to a much greater extent over the last year. In April, 2009, Phillip Markoff (labeled "the Craigslist Killer" by the press) was arrested for murdering a prostitute he contacted off an advertisement on craigslist.org, a major classified ad site. Earlier in 2009, Tom Dart, sheriff of Cook County, Illinois sued craigslist for allegedly facilitating prostitution, which he claimed drained police resources used in monitoring the site, referring to it as "the largest source of prostitution in the nation." Recent movies (Stephen Soderburgh's *The Girlfriend Experience*) and television shows (*Diary of a Call Girl*) have also focused on prostitutes who operate online.

In this chapter, we review some of the means by which sex is bought and sold on the Internet, and the various market institutions which have developed to facilitate online prostitution. We then turn to available data to describe the characteristics and business practices of sex workers who solicit online, illustrating how they differ from streetwalking prostitutes and from traditional stereotypes of prostitutes. Despite its social prominence, relatively little research has focused on online prostitution, so to present the most comprehensive view of the practice, we employ data from a wide range of sources. We conclude with some preliminary evidence on the effectiveness

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<sup>1</sup> <http://www.eros-guide.com>

(and limitations) of attempts to disrupt the Internet-based prostitution market, including evidence on two specific legal interventions in 2008 and 2009 aimed at online prostitution advertising.

Prostitution involves serious costs, not only to those who participate in the market (either buying or selling), but also to society. Such social costs include the transmission of sexually transmitted infections, the creation of public nuisance, disruption of marriages, exploitation, as well as human trafficking, rape, assault, drug abuse and other problems frequently associated with prostitution (Weitzer 2005). Hence, it is critical that policymakers and law enforcement officials understand the rapidly changing nature of prostitution in order to effectively reduce these harms to society.

## **II. Institutions Facilitating Prostitution Online**

In many important ways, prostitution is simply a labor market of workers who provide a service, and customers who seek such services – much like that for lawyers, teachers, or building contractors. Certainly, the purchase and sale of sex involves deeper moral issues and social concerns than does that of other services, and we do not wish to minimize the importance of these issues; however, there is pragmatic value for policymakers and law enforcement agents in understanding prostitution as a labor market in order to respond to it most effectively.

As in other labor markets, various marketing, retailing, and ancillary practices and institutions have developed to facilitate the complex market processes by which customers with diverse preferences are matched to sellers offering differentiated services of varying quality. We

describe some of the chief such institutions in this section.

Information is the most valuable commodity to buyers of sexual services. Customers want to know and compare the prices, services offered, locations, physical characteristics, and “quality” of service (such as willingness to satisfy client requests and freedom from sexually transmitted infections) offered by a wide range of different sex workers. In this aspect, customers of prostitutes are like customers for any other product or service; however, the ability to obtain such information through advertising, business reputation, word-of-mouth and other means is seriously restricted in the market for prostitution because of the regulations and statutory prohibitions associated with the industry in most locations.<sup>2</sup> These laws restrict the flow of information and so reduce the willingness of buyers to participate in the market. However, the Internet has increased substantially the ability of market participants to circumvent these limitations, leading to a virtual flood of prostitution advertising and other information being made available. This has had the effect of creating a virtual “red light” district, where prostitutes and their clients operate with relatively low risk of detection and arrest.

There are a number of websites that offer free or low-cost advertising to prostitutes. Customers can quickly browse extraordinarily detailed and colorful ads and photographs of large numbers of sex workers on national sites including [eros.com](http://eros.com), [cityvibe.com](http://cityvibe.com), [backpage.com](http://backpage.com), and the most well-known of all, [craigslist.org](http://craigslist.org). In addition, there are a number of other sites which focus on particular localities. Although the formats for advertisements vary across these services, most offer advertisers the opportunity to post large amounts of text and multiple color photographs,

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<sup>2</sup> In the United States, the exceptions are a few rural counties in Nevada, and up until very recently, Rhode Island, where indoor prostitution was legal between 2003 and November, 2009. In many other countries, prostitution is either prohibited, or severely restricted, particularly with respect to advertisement.

including sexually-explicit images. Ads frequently include information regarding the advertiser's race, age, location, telephone number and email address, willingness to travel to a client, as well as information about services offered and prices. A typical ad, posted in the Chicago "escorts" section of backpage.com on November 29, 2009, and accompanied by a photograph of a young, attractive woman of Asian descent, reads<sup>3</sup>:

**Sexy Asian Pacific \*\*GFE\*\* Up Late and Downtown – 24**

How would you like to be spoiled by a sexy and very tasty Vixxen????

I am the perfect lady that will treat you like a king.. I have an amazing 34c-25 34 figure and I know how to use it. I love to please as well as be pleased, are the guy that can please me..... I can be at your location in 20 mins or less.. I guarantee satisfaction

Jade

312\*4\*3\*7\*12\*3\*4

Outcalls only in Chicago

Doantion is \$250 hr \$200 half

Location: downtown Chicago

The many spelling and grammatical errors suggest the author is likely either poorly educated, or does not speak English as a first language; moreover, besides the poster's age (24), prices (for 30 and 60 minute sessions), location, contact information, and willingness to travel to meet a customer ("outcall"), the author of the ad also uses the code word "GFE", part of an intricate lingo widely used and understood among online prostitution market participants<sup>4</sup>. GFE is an abbreviation for "girlfriend experience," indicating that "Jade" offers emotional intimacy in her service, likely including kissing and cuddling. In a (meager) apparent attempt to avoid attention from law enforcement, the author of the post also refers to her payment as a "donation"<sup>5</sup>.

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<sup>3</sup> For the purposes of anonymity, the telephone number has been changed from that in the original ad.

<sup>4</sup> Brooks (2009) provides other examples: "CBJ" and "BBBJ" and "CBJ" represent fellatio with and without a condom, respectively, "DATY" is cunnilingus, "DFK" is deep french kissing, "FS" is vaginal sex, and "Greek" is anal receptive intercourse.

<sup>5</sup> Other slang for payment include "roses," "kisses," etc.

Advertisements like these offer vastly more information than pre-Internet methods of prostitute advertisement, such as classified ads in newspapers, business cards left near public telephones, and streetwalking, and ultimately have the potential to reach more people. Pre-Internet methods that did provide detailed information often also depended on word of mouth. In section IV below, we present some evidence that online advertisement on sites like backpage.com are incredibly popular, with, for instance, an average of 2,407 daily ads posted on just one site, craigslist.org, in New York City during the first half of May, 2009.

Advertisements are not the only market institution that allows customers to learn more about online sellers of prostitution. Very important facilitating elements in the market are “ratings” sites, where customers of prostitutes leave detailed “reviews” of sex workers they have met. These sites operate on principle similar to that of customer review sites in other industries, such as those popular for hotels, restaurants, and computer products. Both published sources<sup>6</sup> and our own ethnographic interviews with sex workers indicate that reviews are widely recognized as a key to business success among independently-operating workers, and prostitutes with (positive) reviews will frequently make a point to mention them in advertisements.

TheEroticReview.com (“TER”) is the most widely used prostitution ratings site in North America, and has recently begun branching out to Europe and Asia. A recent estimate indicated that TER receives between 500,000 and 1,000,000 unique visitors each month.<sup>7</sup> Since it is typical of reviewing sites, and presents national coverage with a relatively long history, we use

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<sup>6</sup> Brooks (2009).

<sup>7</sup> Richtel (2008).

data collected from the site in section III to describe the typical characteristics of online workers; therefore, we describe the site in greater detail here.

TER was established in 1998, and the number of sex workers reviewed, as well as the number of reviews, has grown substantially over the last decade as the use of the Internet for advertisement by sex workers has grown. While there exist other websites offering customer reviews on sex workers, TER is by far the largest<sup>8</sup>. As of August, 2008, there were over 500,000 reviews of more than 94,000 sex workers reviewed on the site.

The site operates as follows: after an assignation, a customer may fill out an online review form demanding very detailed information on physical characteristics, prices, and services offered, as well as ratings (on a ten-point scale) of the worker's overall appearance and "performance". All workers reviewed on TER must solicit for customers online – for instance, through an advertisement on a public classified ads site like craigslist.org, or a personal website.

TER and other similar reviewing sites allow customers to easily compare, along uniform dimensions, characteristics and prices among a large number of providers of sexual services.

Because a worker who has many reviews over a long period of time is unlikely to be an undercover law enforcement agent, a thief, or a robber, the site also allows customers to reduce their risk of arrest or victimization. The potential for arrest and social embarrassment is a major deterrent for many prospective customers, so reviewing sites potentially expand participation in the market for prostitution substantially, particularly among individuals with strong reputations

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<sup>8</sup> See Brooks (2009), Section V, subsection, "Brief Online Tour and Overview" for a list and descriptions of other sites.

in their community. This may partially be the cause of so many recent scandals involving high-profile men caught with prostitutes.<sup>9</sup>

In addition to reviewing sites, there are also a number of more informal posting boards for customers of prostitutes, where information is shared about available sellers, as well as tips for avoiding violence from prostitutes and pimps and even advice regarding law enforcement sting operations. A well-known site of this type is [usasexguide.info](http://usasexguide.info), which includes separate posting “threads” in each city, some focusing on online prostitution and others on street prostitution. Blevins and Holt (2009) summarize the conversations on this and other such sites.

So far, we have focused primarily on means by which customers gain information about prostitutes. However, given the underground nature of the industry, prostitutes also seek information about clients in order to distinguish desirable customers from law enforcement agents and those with violent tendencies, or those who are likely to be indiscreet about the assignation or carry a sexually transmitted infection.

One very common method used by online prostitutes to “screen” clients in this way is a fascinating system of “references”, by which a given prostitute will refuse to see a customer unless he can provide the names of one or two other sex workers he has seen recently. The Internet facilitates this system by allowing prostitutes to quickly find and contact (through email or otherwise) the prospective references. In this way, it becomes extremely difficult for law enforcement to arrange a meeting with a prostitute who consistently demands references. Our

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<sup>9</sup> In recent years, Eliot Spitzer, former New York governor, and Ted Haggard, an important evangelical Christian leader, were both caught using prostitutes they met online.

survey evidence (presented in Section III below) implies that roughly 59% of sex workers who operate online demand references.

Since the use of references reduces substantially the likelihood of discovery and/or arrest, why don't all prostitutes use them? There are essentially three reasons. First, a demand for references screens out police officers and dangerous clients, but it also screens out many potentially acceptable clients, who may be new to the industry or who do not frequently purchase sexual services. Prostitutes who are in need of quick cash, therefore, are much less likely to demand references than those with more patience. Second, with the reduction in advertising costs, as described above, many sellers in the online market today are not career sex workers, but instead are "moonlighters", who enter the market to cover short-term expenditures or as a part-time job. These types may not be aware of the references system, or may not feel comfortable contacting other sex workers. Finally, in many interviews with prostitutes who solicit online, workers told us that they frequently can "feel out" a client's validity through the tenor of pre-assignment discussion, and sometimes feel comfortable substituting their impressions of safety for a reference. Again, the Internet facilitates such discussion through email.

Another set of market institutions that facilitates the transmission of information about potential customers are anonymous background check services. One of the most popular of these is Room Service 2000 ("RS2K"), an independent company. Customers pay a fee to RS2K and the company performs a background check on them. If they are acceptable (presumably with no criminal record or background in law enforcement), they receive a code which they can offer to a prostitute they wish to see. The prostitute can use the code to verify the safety of the client, who

remains anonymous, through RS2K. This service helps prostitutes to screen their clients, and also provides a service to clients, who do not then need to provide personal information to a prostitute, which potentially could be used as blackmail. Such services help alleviate a myriad of concerns historically present in these markets – namely the problem of trusting a trading partner in a criminal exchange. As one sex worker wrote on a prostitution-themed online posting board, “It is a great service. It allows us providers to verify without intruding too much on a gents [sic] privacy.”

Finally, as with clients, prostitutes who solicit online also maintain private posting boards, where they discuss customers among themselves, frequently using local “white lists” and “black lists” to inform other sex workers about good and bad clients.<sup>10</sup> These sites also serve to provide information about market institutions to those new to sex work.

All of these market institutions and practices facilitate the flow of information between sellers and buyers of sexual services, and so likely have expanded participation in the market on both sides. One is, therefore, inclined to see these in a negative light, as socially destructive.

However, there is also a positive aspect to the greater flow of information as well. Many of the social harms associated with prostitution, such as public nuisance, the transmission of sexually-transmitted infections, as well as violence and ancillary crimes, are perpetuated by a lack of market information, and online institutions that increase the availability of information may, therefore, ameliorate some of these harms. For instance, online advertising undoubtedly serves to reduce the cost of participation in the market for prostitution for both customers and sellers; however, it also potentially moves some of the sex trade off street corners and alleys, where it

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<sup>10</sup> See, for instance, <http://www.nationalblacklist.com/>.

presents a visible nuisance. Similarly, reviewing sites and the reference system serve to stymie the enforcement of laws against prostitution, but they also market participants to screen out those who would perpetrate violence. Reviewing sites may even incentivize prostitutes to practice safer sex practices to reduce the likelihood of sexually transmitted infection (Cunningham and Kendall, 2009<sup>a</sup>).

For these reasons, policymakers and law enforcement agencies should tread carefully in dealing with the new market institutions and practices that have developed online so as to minimize the social costs of prostitution.

### **III. Characteristics and Practices of Prostitutes who Solicit Online**

We now turn to a description of the types of women who engage in prostitution online. For brevity, we focus on female prostitutes, but see Logan (2009) and Logan and Shah (2009) for information on the highly-developed online market for male prostitution services. The major themes of this section are the wide variety of characteristics among online sex workers, the substantial differences between these women and street-based workers, as well as traditional prostitute stereotypes, and the changes in the types of women offering sex for sale over the Internet over time.

#### **A. Comparison of Online Prostitutes with Persons Arrested for Prostitution**

Despite increasing awareness of online prostitution solicitation, and some advances in attacking it, it remains the case that the vast majority of prostitutes who come into contact with law

enforcement are street-based workers (Cunningham and Kendall, 2009). Obviously, the set of prostitutes who are arrested is not a random sample of all street-based prostitutes, since presumably the more discrete and successful prostitutes avoid arrest; however, it is likely this set of sex workers who inform the beliefs of law enforcement agencies, so it is valuable to compare them with online workers.

In the FBI's classification, prostitution is a "part II" crime, for which only arrests, not actual crimes committed, are recorded in its *Uniform Crime Reports* (UCR) publications. UCR data is based on information voluntarily reported by law enforcement agencies. The FBI defines prostitution as "the unlawful promotion of or participation in sexual activities for profit," and includes in its counts not only those arrested for prostituting themselves, but also keepers of houses of prostitution, panders, and pimps (FBI, 2004).<sup>11</sup>

To gauge the typical characteristics of prostitutes soliciting online, we collected data on more than 94,000 individuals listed on TheEroticReview.com ("TER"), a site where customers review sex workers they have met. We described TER, the largest of all several similar sites, in more detail in the previous section. Table 1 illustrates the distribution of ages and races among prostitution arrests from UCR, and among TER-reviewed online sex workers during 2007 and 2008.

The top panel of Table 1 shows that women arrested for prostitution span a wide range of ages; by comparison, Table 1 suggests that most women who solicit online are relatively young, with 82% in their teens or twenties. (TER does not allow reviews of sex workers under age 18, so we

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<sup>11</sup> Those arrested for attempted prostitution are included as well.

are unable to compare the frequency of underage prostitution online and offline.) These substantial age differences suggest that women who solicit online include a higher share of those in their “prime” years for prostitution demand. Older women, who generally receive lower wages for sex work, are more concentrated in street-based environments.

The lower panel of Table 1 shows the frequency of various racial/ethnic groups among the two datasets. UCR data does not distinguish those of Hispanic origin separate from other groups; however, it is not unreasonable to believe that most Hispanic sex workers are classified as white. If so, then it is clear that workers who solicit online are substantially more likely to be white or Hispanic (66.1% total), in comparison with those who work on the street (57.6%). Moreover, Asian sex workers compose a large share (13.9%) of online workers, but a trivial share of arrests. Black sex workers, however, are much more common in the street environment than online. These racial differences may partially stem from the documented slower growth of home Internet (and especially broadband Internet) access among African-Americans;<sup>12</sup> hence, these racial frequencies may converge at some point in the future, as inequalities in Internet access diminish.

### **B. Characteristics and Business and Sexual Practices of Online Sex Workers**

As mentioned above, TER reviews are extremely detailed, and provide much additional information on the typical characteristics and business and sexual practices of prostitutes who solicit for customers online. Table 2 summarizes some of these. We calculate averages separately for 1999-2002, 2003-2005, and 2006-2008 (up through August, 2008) in order to demonstrate how sex workers who solicit online have changed over the past decade.

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<sup>12</sup> See Prieger and Hu (2008) for racial trends in internet access.

Table 2 shows that hourly wages (deflated to constant 2003 dollars in order to eliminate the effects of general inflation) are quite high, nearing or surpassing \$300 per hour in all years. This is consistent with a long history of very high wages for prostitutes.<sup>13</sup> Moreover, wages among online workers appear to have risen nearly 20% over the last ten years, suggesting increasing demand for their services and/or a relative increase in the supply of prostitutes able to charge higher prices to the online market (e.g., more attractive, better quality women).

Turning to the next segment of Table 2, which focuses on the services offered by online prostitutes, TER data indicate that sessions involving a combination of vaginal and oral sex are the most common, and are offered by over 81% of online prostitutes during 2006-08. The second most common service is manual stimulation and massage, offered by 9.3% of the sample. In comparison with surveys of street-based prostitutes (e.g., Levitt and Venkatesh, 2007), vaginal sex is much more common, and manual stimulation is much less common, among online prostitutes. This may reflect the greater perceived desirability of the women who solicit online by clients, or a lower likelihood of sexually transmitted infection. Table 2 also implies that, over time, the provision of less-risky sexual services, such as manual stimulation, have seen declines, relative to vaginal and oral sex, and group sex involving multiple sex workers.

Under the “business practices” segment, TER data shows that a typical assignment lasts around an hour, and roughly half of workers are “independent” of third-party management, such as an agency or pimp. Since one of the main functions of such managers is to screen prostitution customers, it may be that the Internet has allowed more prostitutes to perform these screening functions on their own, and so increased the ability to operate independently. The share of

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<sup>13</sup> See Edlund and Korn (2002) for details.

workers reviewed on TER who were independent declined between 1999-2002 and 2003-2005, before rising substantially in 2006-2008.

The other variables associated with business practices generally indicate high-quality services (from the perspective of clients), and improving quality over time. For instance, the share of workers who offered clients an option of either incall (assignment at the worker's location) or outcall (assignment at the client's location) rose over the sample period, as did the share of workers appearing on time for their assignments. The share of workers who "rushed" through their service (again, from the perspective of the client) has declined over the last decade.

Focusing next on sexual practices, TER data indicate that, contrary to popular stereotypes regarding prostitutes, women who solicit online appear to kiss their clients quite frequently, with 61.9% offering some form of kissing. The share of sex workers who are willing to kiss with tongue contact – a measure of (perceived) emotional attachment – has increased over the last decade from 34% to 40%. The share of online prostitutes who offer unprotected oral sex is quite high, up to 43.6% over the 2006-08 period, and the share has increased over time. Similarly, 57.1% of online prostitutes also offer cunnilingus. TER does not allow reviewers to indicate whether the prostitute offered unprotected vaginal or anal sex, but we are able to obtain some information on this question in our more detailed survey, described in subsection C below.

We have already seen that the age distribution of online workers is heavily skewed towards younger women. Table 2 indicates that distribution has been moving further in that direction over the last decade, with the share of women 25 and under growing from 47% to 58% over the

period. The racial/ethnic distribution indicates growth among Black and Hispanic workers, relative to White workers, over time. Nevertheless, Whites continue to be the majority, with a substantial share of Asian workers as well.

Finally, as suggested by the business practices variables above, it appears that most clients are generally satisfied with the services they receive from online prostitutes. The mean overall client review, on a scale of one to ten, was around seven, both on “appearance” and “performance” dimensions. Moreover, this average score has risen over time in both categories.

### **C. Additional Characteristics and Practices from Survey Data**

In order to learn more about the business and sexual practices of sex workers who solicit online, we implemented a survey of sex workers between August, 2008 and June, 2009, known as the Survey of Adult Service Providers (“SASP”). We believe SASP represents the most comprehensive sampling of online workers to date, and by correcting for the inverse probability of appearing in the survey, it is unique in the literature in its efforts to address selection bias.

Cunningham and Kendall (2009b) describe the survey procedure in more detail and give the full text of the questionnaire, but to summarize briefly, SASP was implemented by sending requests to all valid email addresses among TER-reviewed workers, supplemented with all sex workers who advertise on a popular national site for escort ads, eros.com. In the email, respondents were asked to click on a link that led them to the survey, hosted on Baylor University servers. Each email sent was associated with a randomly-generated string of characters, which allowed us to

prevent multiple responses from the same email, while at the same time maintaining the anonymity of the survey, which we found to be a key factor driving participation.<sup>14</sup>

We received valid responses from 685 respondents. In order to facilitate extrapolations to the population of sex workers who solicit online, we adjusted SASP responses using probability weights constructed from the distribution of age and race characteristics of all TER-reviewed workers and SASP respondents. To the extent that TER represents the best available portrait of the population of sex workers who solicit online in North America, this procedure allows us to use SASP to make general statements about the population. As a check on the validity of this assumption, we examined comparable questions between SASP and other surveys of sex workers (e.g., Church, et al., 2001, Milrod 2008), and found a close correspondence in sample averages.

The SASP data is organized into two files – a worker-level file based on responses to questions about personal characteristics and general practices, and a transaction-level file with data on the respondent's (up to) five most recent client-session transactions. Table 3 presents population-weighted averages and frequencies from SASP. The top panel summarizes variables from the worker-level file, while the bottom panel focuses on variables derived from the transaction-level file.

Table 3 again confirms that sex work is highly compensated, with the average worker receiving \$1,711 in weekly compensation. Around 25% of online prostitutes saw no customers during the last week, whether by choice or not. However, the average prostitute saw 4.1 different clients

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<sup>14</sup> Respondents were also allowed to answer survey questions by telephone with the authors or their research assistants.

during the last week, of which 2.2 were “regulars”, that is, repeat customers. New clients represent potential risks for prostitutes, and so are considered less desirable as customers.

Careers appear to be relatively long among workers who solicit online, with the average respondent indicating around 5.5 years since her first entry into sex work. Nevertheless, unlike the common stereotype regarding prostitutes, our sample indicates that this class of sex workers are relatively likely to hold private health insurance (53%), be college graduates (41%), be married (13%), and have children (38%). That many online prostitutes appear to be relatively normal members of society may be due to the fact that a significant share appear to be “moonlighters”, with 43% indicating they hold a second job outside of sex work. As noted above nearly 59% of online prostitutes demand references from other sex workers before seeing a potential customer, while 67% use other forms of screening, including Room Service 2000.

Turning to the bottom panel of Table 3, SASP confirms both the general level and trend of unprotected oral sex in TER. In SASP, which reflects online prostitution in late 2008 and early 2009, 51% of transactions involved unprotected oral sex, in comparison with 44% for 2006-2008 in TER (see Table 2). Unprotected vaginal and anal sex, however, appears to be relatively uncommon, taking place in just 5.2% and 1.1% of all transactions, respectively. 5.7% of transactions involved some form of group sex, either with multiple sex workers or multiple clients. Table 3 also shows that the average client of workers who solicit online was around 43 years old, and around 80% of these clients are White.

Overall, data from TER and SASP indicate that prostitutes who solicit online are quite different from those who operate on the street and come into contact frequently with law enforcement. They are younger, more likely to be white, and appear to break the mold of typical prostitute stereotypes.

#### **D. Cross-City Differences in Prostitution Markets**

There appear to be significant differences across cities in online prostitution markets, suggesting that regulatory and law enforcement agencies in these cities may wish to take different approaches. Table 4 summarizes some key variables from TER reviews for a set of 44 cities/regions identifiable on the site. All of the cities are in North America, except London.

Hourly wages vary substantially across cities, with average prices in the most expensive city, London, more than 2.5 times those in the least expensive city, Tijuana (wages not denominated in U.S. dollars are converted to constant 2003 U.S. dollars using the contemporaneous exchange rate). Even excluding non-U.S. cities, wages in the most expensive city (Reno) are 1.8 times more than those in the least expensive area, Indiana. In general, larger cities have higher wages, which may represent higher cost of assignment locations, such as hotel rooms, or simply a higher overall cost-of-living. The fact that two cities in Nevada have the highest wages in the U.S. may represent higher demand for sexual services associated with tourism in those locations, or it may reflect the presence of legal brothels in nearby rural counties, where sex workers are able to charge high prices due to the perception of safety among customers.

The share of online prostitutes who operate “independently”, without third-party management by an escort agency or pimp, also varies widely across cities in ways that are difficult to classify. In Montreal, only 16.5% of online sex workers operate independently, while in Tucson, the share is 90.1%. Undoubtedly, these differences may reflect varying law enforcement approaches to prostitution across cities, since one of the purposes of third-party management is to assist in protecting prostitutes from arrest. The aggressiveness with which law enforcement agencies attack escort agencies and pimps relative to prostitutes and their clients is also likely an important factor.

We also display the share of online workers in each city with “thin” body type (as noted by the customer reviewer). Differences in this variable may correspond to general patterns in population obesity across cities (women in non-U.S. cities are generally thinner, on average), but also the prevalence of drug use among prostitutes, which frequently is associated with underweight. Focusing on U.S. cities, New York and Boston have a substantially higher share of thin online prostitutes than do Orlando and Palm Springs.

The racial distribution of online prostitutes also varies across cities, largely but not entirely corresponding to population differences (note, e.g., the high share of Hispanic sex workers in Tijuana). The last column of Table 3 indicates the share of TER-reviewed workers who are teenagers. Recall TER does not allow reviewers to indicate an age below 18, but this share may also reflect underage prostitution if underage sex workers lie to customers about their age (or if reviewers lie to the site about the ages of prostitutes they have visited). Tijuana, Montreal, Salt Lake City, San Diego and Orlando all have more than 20% of online prostitutes under age 21,

while Indiana, New York, Reno have very small shares of teenage online prostitutes in their local markets.

#### **IV. Effects of Interventions Against Advertising**

Law enforcement agencies have responded in a variety of ways to the rise of online prostitution. Most police departments in major cities now apply at least some resources to tracking and combating prostitution online, including the use of sting operations and mobile arrest facilities. In section II, we discussed the various market institutions and practices facilitated by the Internet which increase the flow of information between and among prostitutes and their clients; these have had the effect of making police efforts to fight prostitution quite costly. An analysis by the Cook County Sheriff's Office found that each arrest of an online prostitute involved three police officers and 20 man-hours of time. The accounting indicated that arrests associated with persons advertising on craigslist.org alone cost the agency \$105,081 in one year, 2008.

A potentially more economical approach which has been tried with some success is to place legal and political pressure on sites that allow advertisements for prostitutes. In this section, we describe the effects of two such interventions in 2008 and 2009.

In 2008, the attorneys general of 40 states approached craigslist.org regarding its "erotic services" section, which in most cities is the largest website focused on prostitution advertisements. Craigslist has traditionally operated the site in a "laissez faire" manner, with only a skeleton crew staff and little or no purview over ads posted. Many ads, therefore, were extremely explicit, displaying pornographic photos and listing prices and detailed descriptions of

sexual services offered. As the site grew, this led to substantial community protest, leading the state attorneys general to place increasing pressure on craigslist to do more to limit the use of the site for the purposes of prostitution.

Craigslist's first attempt to self-regulate was implemented on November 8, 2008, after which date the site no longer allowed advertisers to post ads for free, but charged \$5-\$10 per post.<sup>15</sup> Given that typical hourly wages in the industry surpass \$300 in many cities, one might not expect a substantial effect from such a small fee. Figure 1 displays the number of daily postings on the site in four cities, chosen for illustrative purposes: Denver, Minnesota, Philadelphia, and Seattle.

As Figure 1 shows, the fee appears to have had a surprisingly dramatic effect, reducing the number of advertisements in at least three of the four cities. Some analysts have pointed out that the key to the effect, however, was not so much the size of the fee, but the manner in which it was necessary to pay: after November 8, 2008, advertisers on craigslist had to use a credit card to post ads. While the fee is small, the credit card potentially identifies the payer, leaving traceable information that police may be able to subpoena in criminal cases. This appears to have reduced the number of individuals willing to post ads. The results of this intervention suggest that the requirement that advertisers identify themselves in some way may be an effective disruption of the market.

Despite the apparent success of the \$5-10 fee, there were continued protests against the use of craigslist for prostitution, and some state officials continued to press the site for further regulation. Several high-profile violent crimes associated with craigslist ads, including the

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<sup>15</sup> Some localities saw a \$10 increase, while others had only a \$5 increase.

Markoff murder case cited at the beginning of this chapter, kept the site in the public spotlight. The attorney general of South Carolina demanded that craigslist shut down its local erotic services posting boards in the state, or else face arrest of its management team.

Craigslist has claimed immunity from prosecution under the Communications Decency Act of 1996, which holds that websites are not legally responsible for material contributed by users. However, faced with the increasing likelihood of serious legal liabilities and costs, on May 13, 2009, craigslist closed down the erotic services sites, and replaced them with a new set of posting boards, known as “adult services”. The company also hired a staff to monitor ads on the site more closely and work with law enforcement to identify and target offenders.

Even a cursory review of the advertisements on the “adult services” sites indicates that the site is still clearly being used to solicit prostitution. However, most ads are now less explicit, prices are rarely mentioned, and images generally do not contain pornography, though they are frequently suggestive in more subtle ways. Many ads contain only a photograph and a telephone number.

Nevertheless, the disruption in service and the degree of attention given to the site had a clear and obvious immediate impact on prostitution advertising on craigslist. Figure 2 shows the number of daily ads nationally on craigslist’s erotic services before their closure, and on the adult services sites after their creation. A comparison between the number of advertisements on erotic services and the number on adult services indicates more than a 50% national decline in the immediate weeks after the change.

However, Figure 2 also suggests a major potential limitation associated with legal attacks on sites like craigslist. In the Figure, we have also plotted the number of advertisements on a rival advertising site which also caters to sex work-related classified ads, backpage.com. As an examination of Figure 2 suggests, before the closure of the erotic services sites on craigslist, backpage.com was not widely used. The closure of the craigslist sites apparently had the effect of stimulating an immediate increase in usage of backpage, as well as “jumpstarting” the site’s longer term growth. Overall, the total amount of advertising on the two sites combined, just a couple of months after the end of craigslist’s erotic services sites, was only slightly below the level reached before the closure. Yet, in order to cover the market, law enforcement must now monitor two separate sites, as opposed to one. Therefore, it is possible that the creation of additional sites to monitor may ultimately increase law enforcement costs without significant declines in prostitution transactions.

While Figure 2 plots the total national trends in advertising, Table 5 summarizes the effect of the closure of craigslist erotic services on the total number of ads posted on the two sites, by city. Clearly, some cities were more strongly affected than others, but the general pattern holds across all cities – an immediate decline in prostitution advertising, with a rebound soon following.

This example points to one of the greatest challenges law enforcement agencies face in dealing with online prostitution: after police target one site, market participants appear to be able to quickly converge on a new site. The process of moving the market from one location to another online is reminiscent of the way street-based prostitution markets may be displaced – but rarely extinguished – by police efforts.

Another potential limitation of interventions which target prostitution advertisements is that, overall, it is unclear whether limiting advertising truly reduces the profitability of sellers. In other industries where advertising expenditures have been limited by regulation, such as cigarette sales, there is some evidence that such limitations actually profited sellers by reducing the intensity of competition (Farr, et al., 2001). In the case of online prostitution advertising, many sites (including both craigslist and backpage) place the most recently posted ads at the top of the page, occupying the most valuable “real estate” on the site. Hence, when advertising is free and unregulated, sellers spend much time repeatedly re-posting ads in order to remain near the top. Limitations on advertising therefore may actually benefit prostitutes by reducing the effort they spend in re-posting. In other words, while the interventions discussed above led to a reduction in ads, they may have largely done so by reducing some of the “noise” in these markets by discouraging multiple postings, and thus actually improved the efficiency of these advertising sites.

A third problem with interventions like those attempted with craigslist in 2008 and 2009 is that, to the extent they are successful, they reduce the flow of information between and among sellers and buyers of prostitution services. This has the effect of disrupting the market and potentially limiting participation, the ultimate goal of such interventions. However, as discussed above, the institutions and practices that facilitate the flow of information in the market also serve to reduce some of the harms associated with prostitution by limiting the ability of violent individuals to participate, and by incentivizing more care in preventing the spread of sexually transmitted

infections. Police and regulatory interventions that reduce market information are, therefore, a double-edged sword.

Finally, many police agencies have actually found advertising sites like Craigslist to be valuable complements for their efforts to weed out the most serious cases of exploitation and child prostitution<sup>16</sup>. By monitoring such sites, police have, in a number of cases, been able to track lost children and heinous criminals in ways that would have been impossible otherwise. In the “Craigslist Killer” case, this is precisely how the suspect was caught. By contrast, Jack the Ripper, a 19<sup>th</sup> century serial killer who also preyed on prostitutes, was never brought to justice.

## **V. Conclusion**

The Internet has proved invaluable in reducing the time and expense of consumer searches for all sorts of consumer goods and services. Since such “search costs” are an especially large burden for consumers of prohibited goods, it is unsurprising that the Internet has impacted the market for prostitution services so substantially.

In this chapter, we have described the growth of the online prostitution market, and some of the institutions and market practices that have facilitated that growth, primarily by increasing the flow of information between sellers and buyers. New participants in the market appear to be different in important ways than those involved in prostitution before the Internet, when buyers and sellers more frequently met each other on the street or through other offline means. The new

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<sup>16</sup> Connecticut State Attorney General Richard Blumenthal has been particularly aggressive in shutting down online prostitution classified advertising like Craigslist, but Connecticut police have also noted the fact that Craigslist and other sites offer the ability to monitor prostitution and ultimately make arrests. See, for example Chambers (2009).

entrants in the world's oldest profession are younger, more likely to operate independently of an agency or pimp, and have characteristics less like those associated with the traditional prostitution stereotypes, and more like average members of society.

Law enforcement agencies face serious challenges in responding to the rise of online prostitution. The freer flow of information associated with the Internet hinders traditional police work, and increases staffing and administrative costs. Legal and regulatory interventions show more promise, but may have important unintended consequences. Overall, the best approach may be to take limited steps towards direct restrictions on online prostitution activity, while partnering with the market institutions that facilitate it in order to identify and target the most serious and problematic cases involving trafficked or exploited individuals, and children. There are also important differences in prostitution markets across cities, implying that whatever approach is taken to the rise in online prostitution, it should be carefully tailored to the local market environment.

Ultimately, there is likely no complete solution to the problem of prostitution – online or off. However, by better understanding the market, we hope that policymakers and law enforcement agencies can more effectively direct limited resources to best benefit the common weal.

**Table 1: Comparison of Age and Race Characteristics of Prostitutes among TER (Online) and UCR (Law Enforcement) Datasets**

		<b>TER (2007/2008) Full Sample</b>	<b>UCR Female Arrests (2007)</b>
Age Group	18-20	12.9%	13.2%
	21-25	44.8%	18.3%
	26-30	24.3%	14.6%
	31-35	10.2%	13.2%
	36-40	4.6%	14.6%
	41-45	2.2%	12.8%
	46+	1.2%	11.0%
Race	Asian	13.9%	2.2%
	Black	13.2%	39.2%
	White	50.6%	57.6%
	Hispanic	15.5%	N/A
	Unknown/Other	6.9%	0.9%

Notes: Age and race are as estimated by the reviewing client for TER data, and as recorded by arresting agency for UCR data.

**Table 2: Mean Values of Key Variables for Sex Workers Reviewed on TheEroticReview.com  
1999-2002, 2003-2005, and 2006-2008**

Category	Variable	1999-2002	2003-2005	2006-2008
Wage	Avg. real hourly wage (\$2003)	\$263.13	\$281.80	\$313.35
Advertised Service	Vaginal sex and fellatio	71.4%	77.1%	81.3%
	Anal sex	2.0%	2.0%	2.5%
	Massage with manual stimulation	19.5%	13.1%	9.3%
	Massage with fellatio	3.3%	2.4%	1.6%
	Bondage/S&M	1.8%	2.0%	1.4%
Business Practices	Group sex	1.5%	3.0%	3.7%
	Avg. length of session in minutes	64.2	64.5	61.0
	Independent of third-party manager	53.1%	45.3%	58.4%
	Incall only (worker provides location)	38.0%	35.0%	31.0%
	Outcall only (client provides location)	20.9%	16.5%	12.9%
	Offers both incall and outcall	40.6%	48.3%	56.0%
	Showed up on time	93.1%	93.8%	94.3%
Sexual Practices	Rushed service	26.6%	26.3%	23.7%
	Does not kiss	42.0%	35.7%	38.2%
	Kisses, no tongue	23.8%	22.8%	21.7%
	Kisses with tongue	34.2%	41.5%	40.2%
	Offers no oral sex	16.3%	13.7%	11.0%
	Offers oral sex with condom	48.8%	42.8%	45.5%
	Offers oral sex without condom	34.8%	43.5%	43.6%
Offers cunnilingus	55.8%	58.2%	57.1%	
Age (As Estimated by Client)	18-20	8.2%	10.4%	13.2%
	21-25	38.8%	44.4%	44.8%
	26-30	28.7%	25.6%	23.8%
	31-35	14.8%	11.3%	10.1%
	36-40	5.8%	5.2%	4.7%
	41-45	2.5%	2.2%	2.2%
	46 +	1.3%	0.9%	1.1%
Race/Ethnicity	White	54.0%	52.0%	51.7%
	Black	7.3%	8.7%	12.3%
	Asian	16.4%	17.4%	14.8%
	Hispanic	12.8%	13.5%	14.2%
	Foreign	7.9%	6.9%	5.2%
	Other	1.6%	1.6%	1.8%
Reviews	Avg. appearance review (1-10)	7.0	7.3	7.4
	Avg. performance review (1-10)	6.7	7.1	7.1
N	Number of observations	15,008	30,257	34,042

Notes: All values in table are sample means. Date ranges refer to the year a worker was first reviewed.

**Table 3: Population-Weighted Means of Key Characteristics and Practices among Sex Workers  
Based on 2008-2009 Survey of Adult Service Providers**

<b>Variable</b>	<b>Mean</b>	<b>Observations</b>
<b>Worker-Level Characteristics</b>		
Avg. weekly earnings (all)	\$1,710.84	593
Any clients last week	75.5%	601
Avg. # clients last week	4.1	598
Avg. # "regular" clients last week	2.2	595
Avg. # new clients last week	1.9	595
Avg. years since entry into prostitution	5.5	599
Have health insurance	52.7%	597
Have second job	43.7%	597
College graduate	41.4%	602
Married/Cohabiting with partner	13.0%	603
Demands references from clients	58.6%	608
Uses other screening methods with clients	67.0%	608
<b>Transaction-Level Characteristics</b>		
Fellatio with condom	50.2%	2,426
Fellatio without condom	31.2%	2,426
Vaginal sex with condom	69.0%	2,457
Vaginal sex without condom	5.2%	2,457
Anal sex with condom	4.9%	2,480
Anal sex without condom	1.1%	2,480
Group sex	5.5%	2,519
Avg. age of client	43.0	2,399
Client white race	80.2%	2,443
Client black race	5.0%	2,443
Client Hispanic race	3.5%	2,443
Client Asian race	7.4%	2,443

Notes: Data are drawn from Survey of Adult Service Providers (SASP). Survey responses are weighted by population means within each age-race cell, taking all TER-reviewed workers as the population.

**Table 4: Wages and Selected Characteristics of TER-Reviewed Workers, by City**

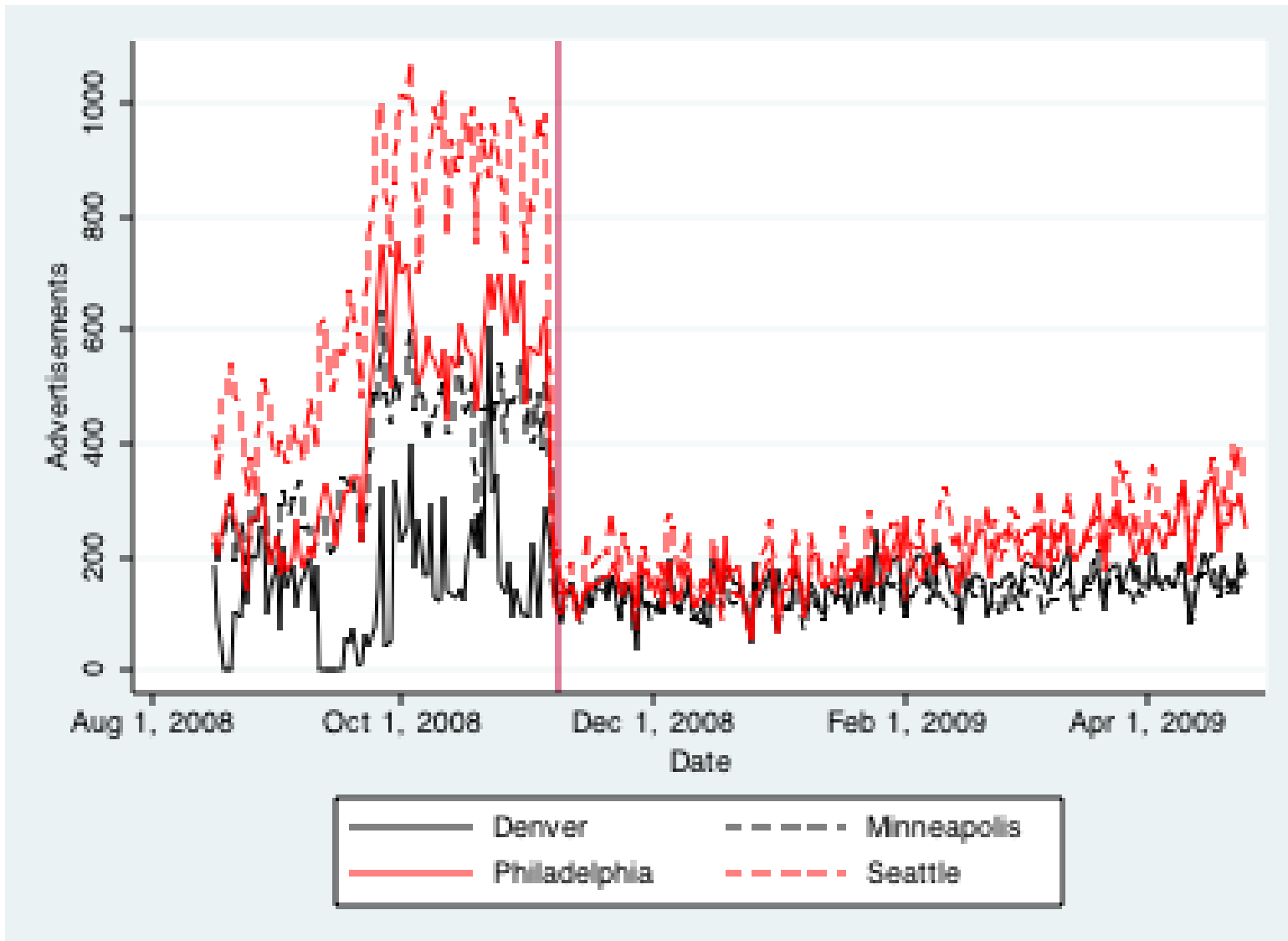
	Obs.	Hourly Wage		Independent	Body Thin	White	Black	Hispanic	Age 18-20
		Level	Index						
London	1,932	\$477.35	100.00	25.31%	38.51%	39.29%	2.74%	8.28%	11.23%
Reno	274	\$445.20	93.26	53.28%	30.66%	74.82%	5.47%	8.39%	7.66%
Las Vegas	1,772	\$417.29	87.42	73.42%	31.26%	64.40%	6.66%	9.65%	10.05%
Atlanta	3,503	\$376.30	78.83	54.67%	32.54%	46.33%	24.55%	18.07%	10.48%
Salt Lake City	316	\$328.73	68.87	56.01%	34.18%	68.35%	12.66%	10.13%	23.10%
Chicago	3,562	\$325.88	68.27	52.16%	32.93%	56.20%	12.07%	11.76%	13.50%
Toronto	1,735	\$322.72	67.61	29.91%	37.06%	51.24%	3.75%	7.38%	12.85%
New York City	7,145	\$322.26	67.51	36.67%	37.87%	34.28%	7.66%	18.74%	7.26%
Phoenix	2,240	\$309.02	64.74	64.78%	31.52%	65.94%	7.90%	14.15%	12.59%
New Orleans	234	\$304.01	63.69	52.99%	34.19%	78.63%	9.40%	3.85%	9.40%
Columbus	339	\$302.99	63.47	61.65%	29.79%	87.02%	6.19%	2.36%	10.62%
Tampa	991	\$301.91	63.25	70.03%	29.77%	73.26%	7.06%	8.68%	9.08%
Palm Springs	71	\$298.65	62.56	71.83%	25.35%	54.93%	7.04%	16.90%	8.45%
Boston	2,554	\$298.43	62.52	37.51%	36.37%	63.19%	7.48%	13.27%	10.06%
Philadelphia	1,272	\$293.05	61.39	46.93%	33.81%	51.42%	14.94%	12.42%	10.93%
Miami	2,499	\$292.34	61.24	40.26%	34.37%	45.50%	7.63%	36.13%	12.04%
Los Angeles	8,615	\$291.74	61.12	63.77%	32.83%	36.39%	10.44%	14.27%	8.79%
Orlando	290	\$290.89	60.94	78.28%	24.83%	55.86%	12.07%	20.69%	20.00%
San Diego	1,881	\$288.84	60.51	78.79%	30.57%	52.74%	13.40%	15.68%	21.11%
New Mexico	53	\$288.28	60.39	81.13%	32.08%	64.15%	11.32%	11.32%	5.66%
Orange County	1,611	\$287.99	60.33	62.69%	32.34%	40.84%	8.13%	12.79%	14.84%
Tucson	121	\$287.54	60.24	90.08%	29.75%	75.21%	4.13%	8.26%	14.05%
Austin	372	\$284.05	59.51	66.94%	31.18%	66.40%	6.45%	14.25%	10.75%
Washington, DC	4,647	\$283.88	59.47	47.04%	31.93%	38.84%	18.76%	18.61%	9.83%
Jacksonville	11	\$282.62	59.21	81.82%	27.27%	72.73%	9.09%	18.18%	9.09%
Hawaii	303	\$280.67	58.80	54.46%	30.03%	53.80%	5.28%	4.29%	12.54%
Nashville	193	\$280.29	58.72	80.31%	27.98%	81.35%	13.47%	1.55%	12.95%
Detroit	1,026	\$277.17	58.06	63.26%	27.39%	67.45%	17.64%	8.58%	11.89%
Vancouver	805	\$271.43	56.86	48.70%	32.67%	73.17%	1.12%	4.84%	12.42%
Dallas	2,045	\$271.19	56.81	69.34%	30.22%	70.42%	10.27%	7.73%	10.32%
Minnesota	1,681	\$268.85	56.32	70.55%	30.64%	65.08%	15.23%	7.61%	14.87%
San Francisco	5,740	\$265.86	55.69	58.21%	36.36%	38.89%	7.72%	10.12%	12.40%
Montreal	774	\$264.44	55.40	16.54%	43.93%	63.95%	2.45%	4.78%	24.16%
Denver	1,366	\$264.24	55.36	51.83%	34.77%	68.96%	5.34%	11.13%	8.93%
Houston	1,588	\$263.20	55.14	37.91%	31.49%	59.07%	8.63%	21.54%	9.07%
Cleveland	692	\$261.55	54.79	70.52%	34.25%	69.36%	16.91%	7.51%	11.71%
Seattle	1,527	\$260.73	54.62	51.60%	34.25%	71.19%	6.09%	6.75%	13.00%
Gold Coast CA	191	\$260.52	54.58	54.97%	29.32%	45.03%	5.76%	10.99%	13.61%
Portland	673	\$254.75	53.37	87.07%	26.60%	76.97%	7.88%	4.90%	11.29%
New England	678	\$253.19	53.04	54.28%	35.10%	53.54%	7.96%	9.00%	8.55%
New Jersey	2,491	\$252.59	52.92	27.90%	32.80%	42.60%	8.19%	24.93%	11.64%
Carolinas	1,584	\$252.09	52.81	49.05%	29.29%	76.33%	12.37%	4.73%	11.36%
Indiana	282	\$251.94	52.78	55.32%	29.43%	86.17%	3.55%	3.19%	6.74%
Tijuana	222	\$170.97	35.82	30.18%	35.14%	1.35%	0.45%	95.95%	27.48%

**Table 5: Average Daily Sex Work-Related Advertisements on Craigslist.org and Backpage.com Before and After Closure of Craigslist “Erotic Services” Sections, By City**

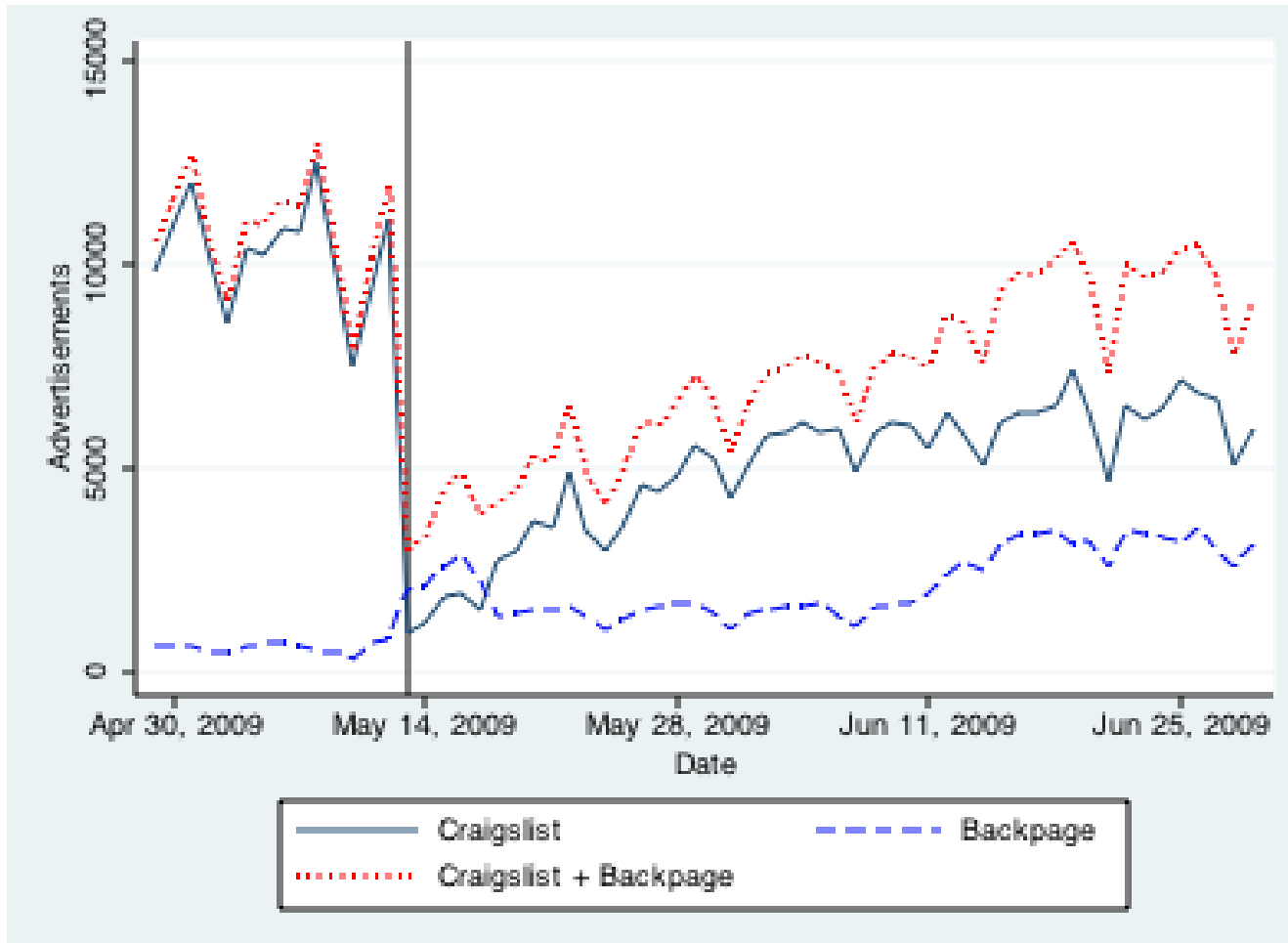
City	2 Weeks Before Change	2 Weeks Following Change		2-6 Weeks Following Change	
	Avg. daily ads	Avg. daily ads	% diff. with before change	Avg. daily ads	% diff. with before change
New York	2,813.9	1,167.1	-58.5%	2,123.6	-24.5%
San Francisco	1,316.3	436.9	-66.8%	844.4	-35.9%
Los Angeles	1,075.1	442.4	-58.8%	790.9	-26.4%
Washington DC	617.7	225.3	-63.5%	446.7	-27.7%
Chicago	549.9	230.3	-58.1%	412.0	-25.1%
Las Vegas	495.3	242.0	-51.1%	412.9	-16.6%
Dallas	470.6	237.6	-49.5%	315.1	-33.0%
Atlanta	469.6	192.6	-59.0%	348.4	-25.8%
New Jersey	438.5	185.1	-57.8%	367.6	-16.2%
Seattle	331.0	133.6	-59.6%	202.9	-38.7%
Boston	273.1	103.8	-62.0%	180.1	-34.0%
Philadelphia	252.2	108.9	-56.8%	232.5	-7.8%
Houston	227.4	110.6	-51.4%	202.1	-11.1%
Denver	213.4	118.6	-44.4%	177.9	-16.6%
Minneapolis	205.4	93.9	-54.3%	150.7	-26.6%
Miami	190.3	165.4	-13.1%	277.2	+45.6%
Orlando	174.0	100.7	-42.1%	143.2	-17.7%
Tampa	158.6	71.0	-55.2%	117.6	-25.9%
Portland	143.3	65.3	-54.4%	98.0	-31.6%
Austin	113.2	49.9	-56.0%	100.5	-11.2%
Detroit	98.6	30.9	-68.7%	72.6	-26.4%
New Orleans	58.9	28.1	-52.2%	52.0	-11.7%
Salt Lake City	49.7	26.9	-45.8%	45.6	-8.3%
Tucson	48.9	21.9	-55.1%	36.7	-25.0%
Columbus	34.4	13.8	-59.9%	22.9	-33.4%
Cleveland	34.1	26.9	-21.3%	44.5	+30.4%
Nashville	32.7	18.6	-42.9%	32.8	+0.4%
Reno	31.2	8.9	-71.6%	14.4	-53.9%
Hawaii	25.6	12.6	-50.7%	22.2	-13.6%
New Mexico	17.9	8.3	-53.8%	15.8	-11.9%
<b>TOTAL</b>	10,960.9	4,677.9	-57.3%	8,304.7	-24.2%

Notes: Craigslist closed its “erotic services” advertising sections on May 13, 2009, replacing them with a more closely-monitored “adult services” section. Counts of advertisements from both “erotic services” and “adult services” are included in these totals.

Figure 1 - Effect of Nov 8 2008 price increase at Craigslist "erotic services" for four US cities



**Figure 2 - National Daily Advertisements at Craigslist and Backpage  
Before and After the May 13 2009 Replacement of Erotic Services with Adult Services**



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